INFORMATION QUALITY OF ACCOUNTING INFORMATION SYSTEMS AND THE FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN MERU COUNTY, KENYA

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Abstract

Accounting Information System (AIS) is one of the important systems in organizational operations. AIS is used in capturing, processing, storing and distributing information. Recently, more and more digital and online information has been utilized in Accounting Information Systems for decision-making. Organizations need to take action, put such systems at the forefront, and consider both the system and the human-related factors while managing their Accounting Information Systems. In managing an organization and implementing a financial internal control system, the role of an Accounting Information System is crucial. The study aimed at providing an understanding of the influence of information quality of Accounting Information Systems on microfinance institution's financial performance in Meru County, Kenya. The objective of the study was to assess the information quality on the financial performance of microfinance institutions in Meru County, Kenya. The study was guided by adverse selection theory. The study employed both descriptive and inferential statistics; a target population of 316 was identified for the study with a sample size of 177 respondents identified through the application of Yamane's formula. Structured closed and open ended questionnaire were the main data collection tool. Data was analyzed by the use of SPSS version 29. The collected data

was analyzed by use of descriptive statistics. The study established that the information quality variable influences the financial performance of MFIs in Meru County. The study concluded that information quality positively influences the financial performance of microfinance institutions. The study recommends management should keep improving the information quality of AIS to continue its improvement of financial performance. The study contributes to broadening the knowledge of the role of AIS on financial performance by financial institutions in Kenya.

Keywords: Accounting Information System, Financial Performance, Financial Institutions, Information Quality, Micro Finance

INTRODUCTION

Accounting Information System (AIS) is a combination of equipment, people, policies and established procedures that function together in data collection and transforming it into useful information (Aladejebi *et al.,*2019). AIS can also be described as a formalized system of gathering, organizing and communicating accounting information on organizational functioning (Raed, 2017). AIS consists of six primary components that work together as a system namely; the people, AIS procedures, instructions, data, software, information technology infrastructure and internal controls (Karodia *et al.,* 2017).

AIS is aimed at availing information on organization operations in supporting employees, owners of businesses and customers' activities in a timely and effective way (Trofimova *et al.*, 2019). Essentially AIS is a system of assembling facilities and personnel by provision of information that supports management in decision making (Khan, 2017). In a nutshell, AIS is concerned with acquiring, processing and communicating data that is crucial in organizations and institutions day to day operations (Dang, 2019). AIS helps organizations in availing crucial financial information that aids in decision making that influences the financial performance of institutions. Reliable AIS is installed within an institution to assist managers get vital information on financial performance. This function is a routine and automatic system for data gathering, processing and communication to help in achieving the overall objectives of the organization (Gautam, 2018).

Financial performance is the measure of an organization's achievement of the goals, policies and operations stipulated in monetary terms. It involves financial health and can be compared between similar firms in the same industry (Agola, 2014). A Microfinance Institution (MFI) is a type of financial organization that gives small loans to individuals who wouldn't otherwise be able to obtain credit. MFIs are financial institutions that accept deposits, offer checking accounting services, make business, offer personal loans and offer basic financial

products to individuals and businesses. MFIs in Kenya offer small loans, or micro-loans, to people unable to access conventional loan services. A deposit-taking microfinance business, or MFI, is defined by the Microfinance Act of 2006 as a business in which the owner/operator regularly represents themselves as receiving deposits. Microfinance institutions in Kenya vary in size and function with some organizations focusing entirely on microfinance services. Kenya has 14 fully operational Micro Finance Institutions all of which are regulated and monitored by the Central Bank of Kenya (CBK) as per the laws of Kenya Banking Act cap 488 (CBK, 2020).

Data that is presented in a way that aids in decision-making is called information. The degree to which the data regularly satisfies the needs and expectations of all knowledge workers who depend on it to carry out their tasks is known as information quality. Achieving information quality is a continuous activity, according to Davoren (2019), in financial institutions that primarily rely on consumer information for day-to-day operations. Decision-making within organizations and external regulatory compliance are significantly impacted by the quality of information found in AIS (Bai *et al.*, 2017). In the knowledge-based and data-intensive economy, the quality of information is crucial (Al-Dalaien et *al.,* 2018). According to Hla *et al.,* (2015) the impact AIS has made the ability of companies to develop, use and track data on financial transactions in facilitating management decision making, internal controls, and quality of the financial reports. AIS relies on the information quality of output information as poor quality information leads to poor results (Xu, 2016). The Accounting Information System is the basis to rely on in reaching a good decision, the absence leads to incorrect decisions, which causes loss to the organization leading to poor financial performance (Alali, 2014).

Statement of the Problem

Globally, the MFIs sector has been expanding rapidly, and it now constitutes a sizeable portion of the formal financial system (Akong'a, 2019). However, as the corporate environment changes, information technology advances, and globalization takes hold, the microfinance sector and all of its participants are undergoing fast change (Kayed, 2021). Ndatenyirigira, (2023) carried out a study on AIS effects on the financial performance of commercial banks in Rwanda and established a positive relationship between AIS and the financial performance of banks. The research suggested that comparable studies be conducted in other nations in the area and by other financial institutions to compare the results, which made this study necessary to close the contextual gap.

Hassan *et al.,* (2018) investigated the impact of AIS on the financial performance of Indian SMEs and established a significant positive relationship. Studies reviewed were mainly carried out on the effect of AIS on the financial performance of SMEs and commercial banks and

therefore, there is a need to undertake a similar study in other financial institutions mainly MFIs to bridge the conceptual gap. There has been an upsurge of financial cyber-crimes in recent years in Kenya and other countries brought about by advancements in computer technology involving financial institution employees in collusion with fraudsters and cyber criminals (Alshawi, 2014). According to (Iskander, 2019) most MFIs have been unable to crack down on such malpractices because the AIS in place is not effective in mitigating and eliminating cybercrimes and attacks committed by cyber criminals leading to loss of money thus affecting the financial performance of financial institutions.

According to Kurgat (2012), MFI managers and accountants have been reported to misuse microfinance institution funds and apportion blame on AIS in place. Muiruri (2019) highlighted the lack of adequate AIS infrastructure as a challenge facing the delivery of quality customer service leading to poor financial performance of financial institutions. Owing to these challenges associated with AIS, thus there is a need to carry out a study to investigate the influence of information quality of Accounting Information System on the financial performance of MFI in Meru County, Kenya. The study therefore, seeks to fill this information gap by investigating the influence of information quality of Accounting Information System on the financial performance of MFIs in Meru County.

Objective of the Study

To find out the influence of information quality of the Accounting Information System on the financial performance of Micro Finance Institutions.

Hypothesis of the Study

$H_0 1$: There is no significant influence of information quality of the Accounting Information Systems on the financial performance of Micro Finance Institutions.

LITERATURE REVIEW

Theoretical Literature

The study was guided by Adverse Selection Theory (AST)which was postulated by Stiglitz and Weiss in 1981. The theory was founded on hidden information focusing on involuntary default risks. The theory states that default arises involuntarily due to wealth shocks that make customers unable to service their loans. The theory is premised on the assumption that bankers cannot differentiate customers of various levels of risk, and that loan agreement is put through restricted accountability. In other words, if the returns of the project are below their obligation, the borrower is bound to shoulder the obligation with no liability to service the loan out of pocket.

AST is therefore restricted to involuntary loan default. This means the theory assumes that borrowers honor their loan obligation when they are capable and as it falls due (Romney, *et al.*,2015).

The AST is employed in the study to show how people are willing to pay high interest rates charged by MFIs on loans. MFIs make profits from the interest rates charged on loans. According to this theory, the MFIs should amass as much data as possible regarding the borrower and their credit history to minimize loan default and the rate of interest they should attach to the loan to attract as many borrowers as possible and ensure loan repayment is prompt. AST can be applied by MFIs in charging high interest rates on loans and charging them higher rates for the risk they take.

In general, adverse selection refers to a situation when buyers and sellers have information about a particular component of product quality that the seller does not, or vice versa; in other words, it is an instance of asymmetric information being used. When one side of a transaction possesses more material knowledge than the other, this is known as asymmetric information or information failure. This is achieved through data mining to find as much information as possible about the credit history of the borrower. Prudent use and quality of data minimize losses leading to improvement in financial performance. The theory, therefore, underpins the variable data quality since it's the veracity of the information that determines the success of the outcome of a decision made based on the information from AIS.

Adverse selection theory has been criticized for suffering adverse selection when he cannot identify the risks associated with different projects when lending credit. In that, the lender prefers the safest project. The theory has also been criticized for increasing the costs since consumers lack the information held by the sellers and producers creating an asymmetry in the market. This may lead to lowering consumption as buyers may be at war on the quality of products that are in the market for sale (Dawn, 2009).

Empirical Review

A study by Lee *et al.,* (2016) on the influence of AIS information on profitability of Korean manufacturing firms using mixed designs method to analyze data. The study mainly relied on secondary data sources. The findings revealed a positive relationship between AIS application and financial performance. In a related study, Pallathadka (2016) investigated the impact of AIS information on corporate social responsibility in India's media industry and its effect on financial performance. The study used logistic regression to analyze data and established a positive impact of AIS information on the industry's financial performance. AIS was found to be applied

in easily accessing the customers by attracting them to advertise their products and services through the media houses thus helping them in improving their financial performance.

Ali (2019) studied the effect of AIS information quality and organizational effectiveness: the moderating effects of organizational culture among conventional and Islamic banks. The study used descriptive statistics, Pear Karson's correlation coefficient and logistic regression models to analyze the collected data. The results revealed that information quality had a significant positive effect on the financial performance of Islamic banks. The study concluded that up-to-date technology enabled the bank to serve customers efficiently. The study recommended banks keep upgrading their AIS to keep pace with the changes in technology.

Misra (2021) studied the connection between AIS information application and corporate social responsibility in European multinational corporations and organization's financial performance. The findings revealed that AIS has an impact on organizational performance when applied to all the stakeholders. The impact however appeared to differ between well-established and respected businesses and corporate with shaky reputations. Kingwara (2020) on the other hand examined the influence of application of AIS information on corporate financial performance using logistic regression analysis. The findings revealed a significant correlation between AIS usage and financial performance.

Chimwele (2017) studied the relationship between AIS information application as a strategic practice and the organizational performance of firms listed in the Nairobi Stock Exchange (NSE). The study targeted 62 firms and companies listed in the NSE by the year 2014. The study collected qualitative and quantitative information for analysis. The data was analyzed using chi-square and two-way analysis of Variance (ANOVA). The study revealed an average positive correlation between AIS information and organization performance. Ng'anga (2018) studied the effect of AIS information application on corporate social responsibility (CSR) and profitability of commercial banks in Kenya. The study targeted operational commercial banks in Kenya between the years 2013 to 2017 and descriptive statistics and the Chi-square test of independence. The results revealed that commercial banks that used AIS information enabled customers to assess services anytime and anywhere they are based by leveraged technology.

Numerous studies have been reviewed as part of empirical literature to identify the information gaps. The findings reveal that the application of AIS has an impact on the financial performance of organizations both public and private based entities. However, the revealed studies mainly focus on large firms and organizations in the global and regional business arena. Apart from the study reviewed in Uganda SMEs limited information exists on the application of AIS by MFIs in the region. Hence, the study attempts to investigate the influence of information quality on the Accounting Information System of Microfinance Institutions in Meru Town, Meru County.

Conceptual Framework

The study was guided by the conceptual framework shown below in Figure 1. Information quality was the independent variable while financial performance of MFIs measured by Return on Assets (ROA) was the dependent variable.
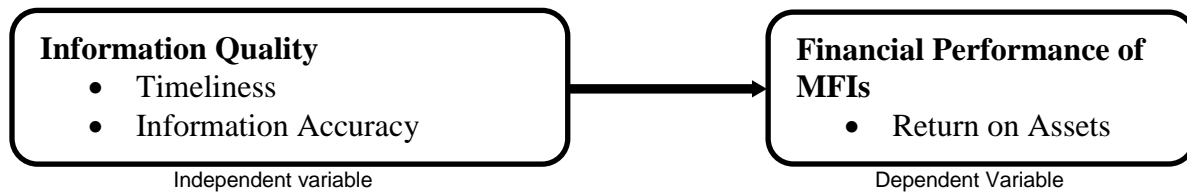

Figure 1: Conceptual Framework

METHODOLOGY

Research Design

Descriptive research was adopted for the study because it involves the collection of data and description of events and then the organization, tabulation, depiction, and description of data (Bell *et al.*, 2018). This research design was ideal for this study as it enables the study to obtain information that describes the influence of AIS on the financial performance of MFIs in Meru County without manipulation of variables.

Target Population

The target population for this study was 316 employees working in MFIs in Meru County. A sample size of 177 respondents was identified through the application of Yamane's formula and selected through simple random sampling. The respondents for the study were branch managers, sales and marketing managers and other employees who interact with implemented AIS daily in the process of performing their duties in MFIs in Meru.

Research Instruments

The study used both primary and secondary data. The closed-ended and open-ended structured questionnaire collected primary data while secondary data from audited financial statements of MFIs was collected using a secondary data collection form.

Data Collection Procedure

Drop and pick strategy was utilized to allow respondents adequate time to respond to the questionnaire and provide concrete information comprehensively at their convenient time (Kothari, 2010). Secondary data on the financial performance of MFIs was obtained from the

Central Bank of Kenya (CBK) annual supervisory reports and audited financial statements from MFIs.

Data Analysis

Descriptive statistics was used to analyze the data. Descriptive statistics illustrate numerically the contents of the information obtained. Multiple Linear Regression (MLR) was used to analyze the data to determine the relationship between the independent and the dependent variables. Diagnostic tests such as normality tests, multicollinearity tests and autocorrelation tests were carried out. The following regression function was formulated;

$$Y = a + \beta_1 X_1 + e_i$$

The regressor variable was X_4 information quality and β_4, was the coefficient of the independent variable which was Information quality. While a represents the Y-intercept and e_i represents the error term. Y is the dependent variable (Financial performance) of the study.

FINDINGS AND DISCUSSIONS

Response Rate

A total of 177 questionnaires were distributed and 135 were returned for analysis representing a response rate of 76.3% which is statistically suitable for the study (Mugenda & Mugenda, 2013).

Descriptive Statistics for Information Quality

The study sought to determine the influence of information quality of Accounting Information Systems and the financial performance of Micro Finance Institutions. The questions were based on a five-point Likert scale. The results on the extent of agreement with statements regarding the variable are illustrated in Table 1 below:

Table 1: Descriptive Statistics for Information Quality

Statement	N	Mean	SD
AIS stores and retrieves information quickly	135	4.31	.696
AIS makes integration among branches efficiently	135	4.41	.737
AIS makes information more credible and understandable	135	4.36	.777
The information provided helps in making decisions	135	4.37	.643
Cash flow information and forecasts is generated from the system	135	4.19	.839
The organization's information is secure	135	4.39	.703
Audit schedules can be extracted from the system	135	4.33	.790
Information Quality and Financial Performance	**135**	**4.34**	**.740**

Information quality is a measure of the value that the information provides to the user of the information obtained. Quality information can vary among the users and the use the information is intended for. The degree of quality of information increases objectivity. Based on this fact the study sought to investigate the effect of information quality on financial performance of MFIs by use of descriptive statistics. The results of descriptive analysis (M = 4.34, SD = .740) show a high level of agreement between information quality and FP of MFIs in Meru County.

Financial Performance of MFIs in Meru County

The financial performance of MFIs in Meru County was measured through the use of secondary data from total assets and annual profits. The results are illustrated in Table 2 below;

Table 2: Financial Performance of MFIs in Meru County

Financial Year	Total Assets (Millions Ksh.)	Annual Profits (Millions Ksh.)	Return on Assets (ROA) (%)
2018	236.2	49.3	20.87
2019	252.1	53.3	21.14
2020	445.4	64.9	14.57
2021	502.1	82.3	16.39
2022	516.4	98.4	19.05

The results in Table 2 on the financial performance of MFIs show that the total assets grew over the period under study from Ksh. 236.2 million to 516.4 while the annual profits grew from Ksh. 49.3 million to 98.4. ROA shows the profitability of MFIs to its assets. Table 2 indicates that MFIs operating in Meru County are making enough profits to remain operational in the region. The findings indicate that AIS adopted by MFIs in Meru County are helping in improving financial performance. The findings are in agreement with Maina (2018) who studied the application of AIS by DT-SACCOS in Kenya and found that AIS has a significant and positive effect on FP.

Inferential Statistics

Inferential statistics, as defined by Mugenda and Mugenda (2013), is the process of assessing the result and making inferences from data that fluctuate randomly. Linear regression analysis was used to determine the influence of the information quality of the Accounting Information System on the financial performance of Micro Finance Institutions. The results are shown in Table 3, Table 4 and Table 5 respectively.

Table 3: Model Summary for Information Quality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.218[a]	.048	.040	.013

The R value for Information quality is 0.218 In this case 21.8%, indicates a good level of prediction. R^2 (Squared) is the coefficient of determination which is the proportion of the variance in the FP that can be explained by information quality. This means the premise control explains 4.8 % of the variation; hence this is a good model.

Table 4: ANOVA for Information Quality

Model		Sum of Squares	df	Mean Square	F	P - Value
1	Regression	1.311	1	1.311	6.395	.0127[a]
	Residual	26.279	128	.205		
	Total	27.589	129			

The Table shows that information quality is statistically significant and predicts the FP (F= 6.395, p < .05). Hence this indicates the regression model is a good fit for the data. Therefore, the null hypothesis that there is no relationship between the information quality and FP of MFIs is rejected. The findings support the alternate hypothesis that there is a statistically significant positive relationship between Information quality and FP. The findings agreed with Bai *et al,* (2017) results that the quality of information contained in AIS has a significant impact on internal organization decision making and external regulatory compliance. The study findings were in line with Ali (2019) results, which revealed that information quality had a significant positive effect on the financial performance of Islamic banks.

Table 5: Regression Coefficients for Information Quality

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	P - Value
1	(Constant)	-2.258	.154		-14.619	.000
	Information quality	.199	.079	.218	-2.527	.013

The value of the beta coefficient for information quality is (β = .199, p < .05) indicating a unit change in information quality increases FP of MFIs by .199 holding all other factors constant. This shows that information quality is statistically significant in influencing the FP of MFIs. The study findings concur with a study by Romney *et al., (*2021) who established that information quality provides direction in decision making providing an advantage to the

institutions through quality information which is key in meeting stakeholder's expectations in the market. The findings established a statistically significant positive relationship between information quality and FP.

CONCLUDING REMARKS

Summary of Main Findings

The aim of undertaking the study was to determine the influence of information quality on Accounting Information System of the financial performance of MFIs operating in Meru County. The constructs were timeliness and information quality of the AIS as measured by information quality. The linear regression model shows that one unit change in information quality increases financial performance by 0.199 as explained in the equation $Y = -2.258 + 0.119X_1$. The findings agreed with Bai *et al,* (2017) results that the quality of information contained in AIS has a significant impact on internal organization decision making and external regulatory compliance. Misra (2021) studied the connection between AIS information application and corporate social responsibility in European multinational corporations and organization's financial performance. The findings revealed that AIS has an impact on organizational performance when applied to all the stakeholders.

Conclusion

The study was to assess the influence of information quality of the Accounting Information System and the financial performance of Micro Finance Institutions. The null hypothesis stated that there is no statistically significant positive relationship between information quality and FP of MFIs in Meru County. The findings of the study indicated that information quality was statistically significant at $\beta = .199$ when $p = .000, < .05$) and positively related to the Financial Performance of MFIs in Meru County thus the null hypothesis was rejected.

Scope for Further Study

The study recommends that further study should be carried out to examine the effect of information quality of Accounting Information System on the financial performance of MFIs in other counties in Kenya to determine whether the study would arrive at similar findings and generalize the findings. From the study, a recommendation was further made to study the challenges facing the use of AIS by customers seeking services in MFIs branches countrywide.

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