



Assessment of Information Controls and SACCOs' Financial Performance: *Evidence from Kenya's Public Transport Sector*

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Abstract :

Public commuter transport sector is a key social facility that not only provides mobility, but also generate jobs and enable economic growth. In Kenya, the sector adopts a privately owned para-transit mode, that operates along largely defined routes, and are managed by SACCOs. This study focused on the effect of general information controls and application controls on the financial performance of the public commuter transport sector SACCOs. The study adopted a mixed method approach in data collection that included collection of primary data through the use of questionnaires, while secondary data was obtained from audited financial statements of the public commuter transport sector SACCOs. Key informant interviews were also conducted. The study was anchored on the agency theory to assess the effect of the information flow on financial performance, and to establish if strong IT controls mechanism enhanced performance. The study discovered a unique peculiarity in that independent variables account only 7.6% of the financial performance of the public transport sector SACCOs, implying that strong IT controls did not account for financial performance in the public commuter transport sector SACCOs. The study recommend the implementation of a risk-based approach to Information Controls, in which the SACCOs identify and prioritize high-risk areas that require stringent controls while allowing more flexibility in lower-risk areas to mitigate the risk of poor financial performance.

Keywords: *Application controls, information controls, financial performance, SACCOs.*

I. Introduction

The efficacy of Information Communication (IT) controls in any entity is pivotal for safeguarding assets, ensuring data accuracy, and sustaining operational efficiency. Information is data that has meaning and therefore useful for decision-making. Communication on the other hand, entails the exchange of useful and meaningful information among people and organizations to assist in making decisions and coordinating activities (Ndungu, 2013). For information to be communicated effectively, information technology (IT) systems are used and they encompasses measures that enable the identification and recording of transactions, timely preparation of records, correct transaction recording, and proper presentation of the prepared financial reports. These are part of Internal control (IC), and encompasses processes, policies, and techniques established by an organization to ensure financial information integrity, enhance efficiency, encourage greater accountability and inhibit fraud and manipulation (Kipkirui, Naibei, & Langat, 2022).

The Kenyan public road transport is generally structured as a private operation, and the service largely dominated by buses, minibuses, three-wheeled motorcycles (referred as Tuk-tuks), and motor bikes (generally referred as boda-bodas). The industry players are required to adhere to government policies to have efficient and effective public road transport (NTSA, 2023). The Government of Kenya also require that all public transport operators belong to a specific SACCO to enhance order and control (Gathungu, Wasike and Bor, 2018).

The public transport sub-sector however, faces fundamental challenges that impact the operators' ability to achieve effectiveness, efficiency and profitability of operations (Muturia, 2013). According to the SASRA report (2022), the non-deposit taking SACCOs which are inclusive of public transport sector SACCO's account for 14.37% of the total Sacco assets in Kenya, compared to a 85.76% asset base of the Deposit taking SACCOs. This explains an investment loss through poor exploitation of resources used to generate income, poor record keeping and compliance issues; and has in turn, negatively affected the financial performance of the public transport sector SACCO's (Cheptoo, & Memba, 2017). The constant technological changes in the business world have transformed most of the processes in business entities. This has impacted the accounting sector with most of processes being done by computerized systems. This has made the accounting work much easier and hence improvement in the

overall organizational performance. With the advancement in IT systems, there is a faster flow of information and the lead time taken to prepare the information has been reduced. The impact of IT in the business world has been recognized as essential in the growth of an organization (Chevers, Chevers, & Lewis, 2014). However, the scalability and cost-management are among the key emerging concerns, hence the need for organizations to ascertain the best way to manage the IT systems (Mwangi, 2015). Financial performance equates to the overall financial health of an organization (Weinzimmer, Michel, & Robin, 2021), and involves the measure of how an entity generates income through the utilization of its assets. Analysis of the financial performance helps determine a business's structure, effectiveness, potential future growth and overall performance. Financial Performance can be expressed in different forms such as; asset return (ROA), investment return (ROI), equity return (ROE), sales' return, capital employed return and growth in sales (Mwende, 2021). The study adopted ROA as a key indicator of financial performance; and sought to investigate the effect of information technology (IT) controls on their financial performance. Specifically, the study examined the effect of application controls; and general information controls to assess the effect of information controls on the financial performance of public transport sector SACCO's in Murang'a County, Kenya.

1.1 Statement of the Problem.

The government of Kenya requires that all public transport operators belong to a specific SACCO to enhance order, stability, and promote efficiency of the transport sector (Bor & Osodo, 2019). The sector, however, faces fundamental challenges that impact the operators' ability to achieve effectiveness, efficiency and profitability of operations (Muis, 2017). According to the SASRA (2022) report, there has been investment loss through the exploitation of resources used to generate income, poor record keeping and compliance issues; despite having the Ministry of Cooperatives Society regulating the sector. This in turn affects the financial performance of the SACCOs negatively (Hanniel, 2017). Despite having over 1000 public transport SACCOs in Kenya today, the PSV owners in the transport sector face the risk of losing money by joining poorly internally managed SACCOs with unreliable financial reports (Gathungu, 2018). Further, despite having the 19 transport sector Saccos within Murang'a County, only one Sacco has attained registration under SASRA. There is need to give attention to the internal Controls that guide the daily operations of the SACCOs in the transport sector gives a close look at the general information and application controls in place in order to establish their effect on SACCOs financial performance.

1.2 Objective of the study.

1.2.1 General Objective:

To assess the effect of information controls on the financial performance of transport sector SACCOs in Kenya.

1.2.2. Specific Objectives

1. To appraise the effect of application controls on the financial performance of transport sector SACCOs.
2. To investigate the effect of general controls on the financial performance of transport sector SACCOs.

1.3 Research Hypotheses

- H₀₁: Application controls have no statistically significant influence on financial performance of transport sector SACCOs.
 H₀₂: General information controls have no significant influence on financial performance of transport sector SACCOs.

2. Theoretical Framework

The study was anchored on two main theories, (i) Agency theory, and (ii) Contingency theory. The agency theory demonstrates an agency association where the principal engages the agent to undertake some tasks on the principal's behalf. To ensure a balance between their interests, the agency theory recommends that the two enter into a contract for the principal's benefit. This aid in ensuring that the interests of the principal are prioritized. In the context of information flow, the associated controls are essential in enhancing the functionality of the agency. Additionally, the contingency theory provide a basis for assessing the extent to which one thing depending on the other (Daft, 2012). In this study's context, the financial performance depends on the functionality and usefulness of different variables including various internal controls included, where the effectiveness of its internal controls is also contingent on the caliber of the personnel employed. This points to the need to appraise the effectiveness of information controls in place, and the subsequent application controls.

For effectiveness, the information recorded in SACCOs ought to be consistent and accurate for easy consumption by the staff (Akouatcha, 2021); be correct and timely (Odek, 2019); and be done in all organizational departments to ensure awareness of responsibilities and even their execution (Muthusi, 2017). However, Kandia (2017) avers that the SACCOs never had adequate utilization of the IT controls; yet according to Ndungu (2013); there should be a smooth flow of information in every department of the organization. Findings by (Muthusi, 2017) showed that incomplete, inaccurate and false reports were amongst the cause of SACCO inefficiencies; and recommended that reliable and available information was crucial for decision-making purposes. A related study by Meshack (2021) examined the TQM practices' impact on the organizational performance of the commuter-transport sector in Kenya, and found a need for structured IT knowledge to aid in assessing organizational risks. This finding is collaborated by the assertion that auditors have a hard time estimating inherent risk levels when carrying out their substantive procedures in environments where IT knowledge is deficient, compared to highly computerized organizations (ICPAK, 2011).

3. Research Methodology

The methodology section outlines how the study is conducted. This includes scope of the study, the sample, data and sources of data, the study's variables and analytical model. These are as follows:

3.1 Research design and scope

The study adopted a descriptive design, to analyze the effect of information controls have on the financial performance of SACCOs in the transport sector in Murang'a County. Murang'a County is well-known as having supported the establishment and

growth of productive saving and credit cooperative societies since the colonial period. With the devolution, the number of SACCOs in the county had grown to about four hundred and twenty-seven (427) inclusive of the 19 public transport sector SACCO's by 2017 (Gathungu, Wasike, & Bor, 2018). The study analyzed financial performance of the years 2017 to the year 2021 which were readily available at the County government office.

3.2 Sample

The study targeted 19 public transport sector SACCO's operating within Murang'a County, and having their main offices in Murang'a County. The study targeted SACCOs listed under the County Ministry of Cooperative Development. Respondents comprised the administrative staff of the selected SACCOs.

3.3 Data and Sources of Data

Both quantitative and qualitative methods of research were adopted to collect information. Secondary data for the study was obtained from audited financial reports was analyzed using a data collection sheet to aid in better interpretation of the financial performance of the public transport sector SACCOs. Additionally, questionnaires were used to collect data from respondents regarding the information controls in place. Questionnaires were used to collect the primary data through the drop-and-pick method. The questionnaires were given to the respondents, requiring them to rate the variables demonstrating their opinions on a Likert scale of 5-1 ranging from 'highly agree' to 'highly disagree'. The ethical concerns were upheld throughout the whole study process. All authorization deemed necessary for the study was duly obtained, and personal consent sought from the participants. The respondents were not required to indicate their details hence the assurance of the data confidentiality.

3.4 Data Analysis and Presentation

A linear regression model was used to determine the extent of the effect of the IT controls on the financial performance of the public transport sector SACCO's. The multiple regression analysis was applied to assess the significance of the existing relationship between the variables of the research. The general model for predicting the direct IT control's effect on the financial performance of public transport sector SACCO's in Murang'a County was of the structure:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon, \quad \text{where;}$$

Y = Financial performance of SACCOs in the transport sector in Murang'a County,
 X_1 = Application controls,
 X_2 = General information controls,
 ε = Error term representing other excluded factors.
 β_0 = Constant, and,
 β_1 to β_2 = Coefficients of regression for application and general information controls.

4. Results and Discussions

4.1 Descriptive Analysis

The study achieved 84.2% response rate. This was deemed appropriate for analysis of data, reporting and generalization in regards to the targeted population. The respondents were asked to state the extent of how the IT controls in the transport Saccos performed in regards to the financial performance perspectives given in a 5-point Likert scale. The scale ranged from "Highly Agree" (1) to "Highly Disagree" (5). The findings indicated that IT controls adopted in the public transport sector SACCO's had no significant effect on the financial performance (Mean=4.35, S.D=0.495). Respondents did not agree that application controls within the SACCOS contributed towards the SACCOS' financial performance with a mean of 4.28 and SD of 0.478. As to whether the general information controls contributed towards the SACCOS financial performance, respondents also disagreed with a mean of 4.41 and SD of 0.511.

Descriptive data

	N	Mean	Std. Deviation
Password management policy	32	4.28	0.958
Accounting systems for financial transactions	32	4.69	0.592
Data backup and recovery procedures	32	4.41	0.712
Use of it for smooth flow of communication	32	3.75	0.880
New employees training on information systems	32	3.91	0.995
Strategy for document disposal	32	4.44	0.716
Management of information systems	32	4.50	0.762
Overall statistic		4.35	0.754

Summary of findings on dependent variable

The analysis of Secondary data reflected fluctuations in the financial performance of public transport sector SACCOs. The ROA increased from 1.66 in 2017 to 2.75 in 2018, a dip to 1.36 in 2019, a slight increase in to 1.88 in 2020; and a sharp decline to 0.88 in year 2021. The study conducted a establish the effect of IT controls on the reported financial performance.

4.2 Inferential analysis

Regression analysis was conducted to establish the effect of IT controls on the dependent variable. Summarized model tests and regression analysis results(extracts) are presented below:

		<i>Return on Assets</i>	
Pearson Correlation	Return on Assets		1.000
	IT Controls		-0.255
Sig. (2-tailed)	Return on Assets		.00
	IT Controls		0.159
N	Return on Assets		32
	IT Controls		32
		<i>Return on Assets</i>	<i>IT Controls</i>
N	Valid	32	32
	Missing	0	0
Skewness		-.263	.109
Std. Error of Skewness		.414	.414
Kurtosis		-1.891	-.390
Std. Error of Kurtosis		.809	.809

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.276 ^a	.076	.013	.936

a. Predictors: (Constant), General information Controls, Application controls

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.102	2	1.051	1.200	.316 ^b
	Residual	25.398	29	.876		
	Total	27.500	31			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), General information controls, Application controls

Study findings indicate that IT controls contributed only 7.6% of the variation in financial performance as indicated by an R squared of 0.076. This was however a infinitesimal contribution compared to the remaining 92.4% of the financial performance being as a result of other attributable factors. ANOVA results for the two variables, general information and application controls and the financial portrayed a P value of 0.316 which was higher than the critical value of 0.05, supportive of the fact that IT controls had no significant effect on the financial performance of the public transport sector SACCO's.

From the findings , the study concluded that IT controls had no significant effect on the financial performance of the public transport sector SACCO's. Though unexpected, the study findings were consistent with findings in a regional study by Ndifon and Ejom (2014) who in a study on the impact of internal control activities on financial performance of tertiary institutions in Nigeria, arrived at a conclusion that there is a negative relationship between internal control activities and financial performance. However, a majority of related study findings contrast the finding by pointing that ICT controls have substantial effect on the financial performance. Muthusi,(2017); Ibrahim,(2018); Nyumoo (2020). To confirm the findings, the study further sought to establish the variables' significance level together with the coefficients attributed to them by conducting tests for direct relationships. Findings showed that there was a positive but insignificant relationship between application controls and financial performance (p-value = 0.999>0.05), but a negative insignificant relationship between general information controls and financial performance (p-value= 0.265).

Information Technology controls are meant to ensure the reliability of information systems within an organization, the expectation, therefore, would be that the controls would aid in a faster flow of information to the relevant people and hence faster decision-making..The study's key informants opined that overly tight controls often lead to micromanagement and excessive oversight, resulting in operational inefficiencies. This resonates with Ndifon and Ejom (2014) who argued that strict controls

deter employees from taking calculated risks or making real-time decisions and often results in employees feeling constrained in their roles. In the context of the scope of the study, this was affirmed by the fact that respondents portrayed a negative opinion on IT controls which were not also properly established and implemented.

5. Conclusion and Policy Recommendations

From the findings of the study, the IT controls within the public transport sector SACCO's only contribute 7.6% of the financial performance which is relatively low. Given the divergent findings of this study to a majority of other related studies, the study recommends the implementation of a risk-based approach to Information controls, in which the public transport sector SACCO's should identify and prioritize high-risk areas that require stringent controls while allowing more flexibility in lower-risk areas. This is in order to allow a focus on areas critical to mitigating the risk of poor financial performance. Further, the study recommends targeted training be done to ensure SACCO employees understand the utilization, and the importance of controls while encouraging them to make decisions within defined boundaries, fostering a sense of ownership.

6. Limitations of the Study

Some of the respondents were reluctant to provide the researchers with the necessary information due to the competitive nature within the sector. Further, there were gaps as some of the SACCOs had not been consistent in preparation of financial statements during the five years under study. The extent of information and digital literacy also played out during the quantitative data collection phase. Interventions, including one-on-one assistance was done to ensure those with lower literacy were still able to participated fully. This however, extended the data collection period.

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