

Relationship Between Environmental and Social Accounting Practices on Risk Management among Non-Governmental Organizations in Kajiado County, Kenya

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DOI: <https://doi.org/10.47772/IJRISS.2026.100600915>

Received: 20 June 2026; Accepted: 26 June 2026; Published: 08 July 2026

ABSTRACT

Non-Governmental Organizations (NGOs), now legally recognized as Public Benefit Organizations (PBOs) following the operationalization of the Public Benefit Organizations Act, 2013 and the gazettement of the Public Benefit Organizations Regulations, 2026, operate in increasingly complex environments characterized by financial uncertainty, donor dependency, climate-related risks, governance challenges, reputational pressures, and heightened stakeholder expectations. These challenges have intensified the need for robust governance, accountability, and enterprise risk management systems that enhance organizational resilience and long-term sustainability. Globally, the establishment of the International Sustainability Standards Board (ISSB) and the issuance of IFRS S1 and IFRS S2 have repositioned sustainability accounting from a voluntary reporting practice to a strategic framework for identifying, assessing, and communicating sustainability-related risks and opportunities. In Kenya, this agenda is reinforced by Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA), the national roadmap for implementing the IFRS Sustainability Disclosure Standards, and the operationalization of the PBO Act, all of which promote transparency, accountability, prudent resource management, and sustainable organizational governance. Despite these developments, empirical evidence on the relationship between sustainability accounting and risk management within NGOs remains limited. This study examined the relationship between environmental and social sustainability accounting practices and risk management among NGOs in Kajiado County, Kenya. Anchored on Stakeholder Theory and Social Contract Theory, the study adopted a cross-sectional mixed-methods research design. Data were collected from 93 registered NGOs using structured questionnaires and key informant interviews. Quantitative data were analyzed using descriptive statistics, Pearson's correlation, and simple linear regression, while qualitative data were analyzed thematically. Environmental sustainability accounting had a positive and statistically significant relationship with risk management ($r = 0.208$, $p = 0.046$) and significantly predicted risk management ($\beta = 0.344$, $p = 0.046$), although its explanatory power was modest ($R^2 = 0.043$). Social sustainability accounting demonstrated a stronger positive relationship ($r = 0.498$, $p < 0.001$) and significantly predicted risk management ($\beta = 0.491$, $p < 0.001$), explaining 24.8% of the variation ($R^2 = 0.248$). Qualitative findings showed that environmental sustainability accounting was largely compliance-driven, whereas social sustainability accounting was more deeply embedded in stakeholder engagement and organizational decision-making, making it more effective in managing operational and reputational risks. The study concludes that both dimensions significantly enhance organizational risk management, although social sustainability accounting exerts a stronger influence. It recommends integrating sustainability accounting into governance, strategic planning, and enterprise risk management frameworks as a strategic management tool rather than merely a reporting or compliance function.

Keywords: Sustainability Accounting, Environmental Sustainability Accounting, Social Sustainability Accounting, Risk Management, Non-Governmental Organizations, Kenya.

INTRODUCTION

Non-Governmental Organizations (NGOs) play a critical role in delivering essential services, promoting social development, and addressing environmental and economic challenges, particularly in low- and middle-income countries. However, NGOs operate in increasingly complex and uncertain environments characterized by financial instability, donor dependency, reputational risks, and evolving socio-environmental demands (Ebrahim, 2019; Jordan & van Tuijl, 2018). These challenges have heightened the need for effective risk management systems that enable organizations to anticipate, monitor, and respond to both internal and external risks. In this context, sustainability accounting has emerged as a key approach for enhancing organizational accountability, transparency, and resilience (Burritt & Christ, 2018; Schaltegger & Burritt, 2019).

Sustainability accounting extends traditional financial reporting by incorporating environmental and social dimensions into organizational measurement and decision-making processes (Bebbington et al., 2021). Environmental accounting focuses on integrating ecological considerations such as resource use, environmental costs, waste management, and environmental reporting into organizational systems (Schaltegger et al., 2020). Social accounting, on the other hand, emphasizes stakeholder engagement, social impact reporting, community participation, fair labor practices, and accountability to beneficiaries and the public (Gray, 2021; Unerman & O'Dwyer, 2021). Together, these dimensions are increasingly recognized as important tools for strengthening organizational performance and managing risks associated with sustainability challenges.

Globally, there is growing evidence that sustainability accounting contributes to improved risk management by enhancing risk identification, compliance, and strategic decision-making (Aven, 2016; Hopkin, 2018). Environmental accounting practices enable organizations to anticipate ecological risks, comply with regulatory requirements, and mitigate environmental impacts that may threaten operations and reputation (Adams, 2017; Schaltegger et al., 2020). Similarly, social accounting practices strengthen stakeholder relationships, improve transparency, and enhance organizational legitimacy, which are critical in reducing reputational and operational risks (Freeman et al., 2020; Suchman, 1995). In NGO contexts, where trust and accountability are central to sustainability, these practices are particularly important.

Despite this growing recognition, empirical studies on sustainability accounting have largely focused on corporate and private sector organizations, with limited attention given to NGOs, particularly in developing countries (Adams, 2017; Bebbington et al., 2014). In Kenya, existing research has predominantly examined financial accountability, donor reporting, and governance structures, with less emphasis on environmental and social accounting as integrated components of risk management (Mohamed & Makori, 2022; Mutua, 2023). Moreover, most studies have been conducted at national or organizational levels without providing context-specific insights into how sustainability accounting practices operate within counties characterized by environmental vulnerability and resource constraints.

Kajiado County presents a unique context for examining these relationships. The county is characterized by semi-arid conditions, climate variability, resource scarcity, and diverse socio-economic challenges, all of which expose NGOs to significant environmental and social risks. NGOs operating in this region are required to balance donor expectations, community needs, and regulatory requirements while managing operational uncertainties. In such contexts, environmental and social sustainability accounting practices may play a critical role in strengthening organizational resilience and improving risk management outcomes.

Problem Statement

Non-Governmental Organizations (NGOs) are increasingly expected to demonstrate accountability, transparency, and resilience in environments characterized by financial uncertainty, environmental vulnerability, and growing stakeholder scrutiny. At the same time, NGOs face multiple operational risks, including donor dependency, funding volatility, reputational threats, community dissatisfaction, and changing socio-environmental conditions, all of which can undermine program continuity and organizational sustainability (Ebrahim, 2019; Jordan & van Tuijl, 2018). Effective risk management is therefore critical to ensuring that NGOs remain responsive, credible, and sustainable in delivering development interventions. Sustainability accounting has been identified as a potentially important mechanism for strengthening organizational accountability and

risk preparedness by integrating environmental and social considerations into reporting, planning, and decision-making systems (Burritt & Christ, 2018; Schaltegger & Burritt, 2017). Environmental accounting can support the identification and monitoring of ecological and compliance-related risks, while social accounting can enhance stakeholder trust, social legitimacy, and early detection of relational and reputational threats (Freeman et al., 2020; Gray, 2010). Despite this potential, empirical evidence on the relationship between environmental and social sustainability accounting and risk management within NGOs remains limited, particularly in developing country contexts.

In Kenya, existing studies have largely focused on financial accountability, governance, and donor reporting in NGOs, with limited attention to environmental and social sustainability accounting as integrated components of risk management (Mohamed & Makori, 2022; Mutua, 2023). Furthermore, most available studies have been conducted in corporate or urban institutional settings, leaving limited context-specific evidence on NGOs operating in environmentally and socially vulnerable counties such as Kajiado. This is a significant gap because NGOs in such contexts face heightened environmental and community-related risks, making sustainability accounting potentially more relevant to organizational resilience and risk management. Without empirical evidence on how environmental and social sustainability accounting practices relate to risk management, NGOs may continue to treat these practices as donor compliance obligations rather than as strategic tools for strengthening institutional resilience. This study therefore sought to address this gap by examining the relationship between environmental and social sustainability accounting practices and risk management among NGOs in Kajiado County, Kenya.

Purpose of the Study

The purpose of this study was to examine the relationship between environmental and social sustainability accounting practices and risk management among Non-Governmental Organizations in Kajiado County, Kenya. The study aimed to assess whether environmental accounting practices, including environmental reporting and resource management, and social accounting practices, such as stakeholder engagement and social impact reporting, are associated with improved risk management outcomes. By providing empirical evidence from a county-level NGO context, the study sought to contribute to the growing body of knowledge on sustainability accounting and its relevance to organizational resilience and accountability.

Study Hypotheses

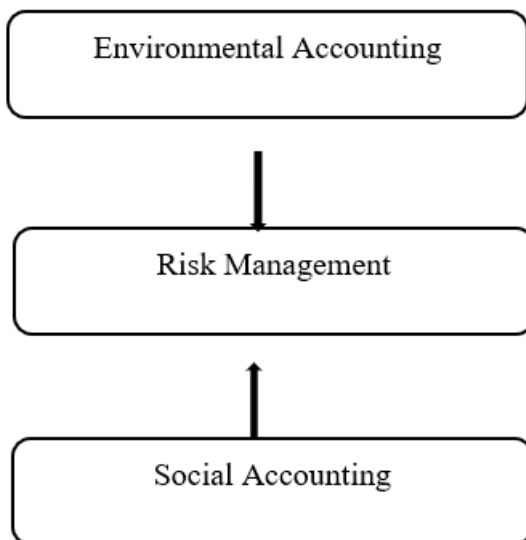
To guide the empirical investigation, the study tested the following null hypotheses:-

H01: Environmental accounting practices have no statistically significant relationship with risk management among Non-Governmental Organizations in Kajiado County, Kenya.

H02: Social accounting practices have no statistically significant relationship with risk management among Non-Governmental Organizations in Kajiado County, Kenya.

Conceptual framework

The study was guided by a conceptual framework that examined the relationship between sustainability accounting practices and risk management among NGOs in Kajiado County. Environmental accounting practices and social accounting practices constituted the independent variables, while risk management constituted the dependent variable. Environmental accounting was measured through sustainable procurement policies, environmental risk audits, eco-certification initiatives, integration of environmental sustainability into budgeting, and environmental reporting practices. Social accounting was measured through diversity and inclusion initiatives, social impact reporting, fair wage practices, community participation, and monitoring of social performance indicators. Risk management was conceptualized as the organization's ability to identify, assess, monitor, mitigate, and control risks affecting organizational operations and sustainability. The framework was anchored on Stakeholder Theory and Legitimacy Theory, which suggest that organizations strengthen accountability, legitimacy, and resilience through responsible environmental and social practices.



Study Design

This study employed a cross-sectional mixed-methods design to examine the relationship between environmental and social sustainability accounting practices and risk management among Non-Governmental Organizations in Kajiado County, Kenya. The design enabled the collection of both quantitative and qualitative data concurrently, allowing for triangulation of findings and a more comprehensive understanding of sustainability accounting practices and organizational risk management.

Study Setting

The study was conducted in Kajiado County, Kenya, a semi-arid county characterized by environmental vulnerability, socio-economic diversity and faces complex socio-cultural dynamics among the Maasai community. It has active presence of Non-Governmental Organizations engaged in health, education, environmental conservation, community development, and humanitarian support. The county presents a relevant setting for this study due to the diverse operational challenges faced by NGOs, including resource constraints, donor dependency, environmental risks, and community accountability demands. These contextual conditions made the county appropriate for assessing the relationship between sustainability accounting practices and risk management within NGO operations.

Study Population

The study population comprised all registered Non-Governmental Organizations operating in Kajiado County as well as key organizational officers involved in financial reporting, sustainability practices, governance, and risk management. The primary respondents included finance managers, project managers, monitoring and evaluation officers, and administrative officers who were knowledgeable about the organization's environmental accounting, social accounting, and risk management systems. In addition, key informants were drawn from selected NGO leadership and management teams to provide qualitative insights on sustainability accounting implementation and organizational risk management practices.

Sample Size and Sampling Procedure

A census approach was adopted in this study to include all accessible registered NGOs operating in Kajiado County. A total of 104 registered NGOs were targeted for participation. Out of these, 93 completed responses were obtained and included in the final analysis, representing a response rate of 89.4 %. The study targeted one respondent per NGO, preferably the officer most knowledgeable in financial accountability, sustainability reporting, or risk management. For the qualitative component, key informants were purposively selected based on their managerial or supervisory roles within the organization and their direct involvement in strategic planning, reporting, or oversight functions.

Data Collection Methods and Tools

Data were collected using a structured questionnaire and a key informant interview guide. The structured questionnaire was administered to NGO representatives and captured information on environmental accounting

practices, social accounting practices, and risk management practices. The questionnaire items were measured using a five-point Likert scale ranging from strongly disagree to strongly agree. Environmental accounting items focused on areas such as environmental reporting, sustainable resource use, and environmental risk awareness, while social accounting items assessed stakeholder engagement, community participation, social impact reporting, and accountability practices. Risk management was operationalized using five key dimensions adapted from contemporary risk management literature: risk identification, risk assessment, risk monitoring, risk mitigation, and risk control. Risk identification assessed the extent to which organizations systematically identify potential operational, financial, environmental, and reputational risks. Risk assessment examined the evaluation of risk likelihood and potential impact. Risk monitoring focused on continuous tracking and review of risk exposure. Risk mitigation measured the existence and implementation of strategies aimed at reducing identified risks, while risk control assessed the effectiveness of internal controls and corrective actions in managing organizational risks. Respondents rated each item using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Composite risk management scores were generated by calculating the mean scores across all risk management indicators, with higher scores representing stronger risk management practices.

Qualitative data were collected through key informant interviews to explore contextual experiences, implementation challenges, and practical perspectives on sustainability accounting and risk management within NGOs. Open-ended responses were also used to capture additional views on major organizational risks, challenges in implementing sustainability accounting, and recommendations for strengthening risk management.

Operationalization of Risk Management

Dimension	Indicator
Risk Identification	Organization regularly identifies key operational risks
Risk Assessment	Risks are formally assessed and prioritized
Risk Monitoring	Risks are continuously monitored and reviewed
Risk Mitigation	Risk mitigation measures are implemented
Risk Control	Internal controls effectively manage identified risks

Pre-Testing, Validity, And Reliability

The data collection tools were pre-tested among selected NGOs outside the study area to assess clarity, relevance, and consistency of the questionnaire items and interview guide. Content validity was ensured through expert review by academic supervisors and alignment of the tool items with the study objectives and variables. Reliability of the quantitative questionnaire was assessed using Cronbach's alpha coefficient, and necessary adjustments were made to improve internal consistency prior to the main data collection. The internal consistency of the measurement scales was assessed using Cronbach's alpha coefficient. Constructs with alpha coefficients exceeding the recommended threshold of 0.70 were considered reliable for analysis. The results confirmed acceptable levels of reliability for the environmental accounting, social accounting, and risk management scales, indicating that the questionnaire items consistently measured their respective constructs. The final instrument was considered suitable for use after refinement based on pilot feedback and reliability testing.

Data Analysis

Quantitative data were entered and analysed using IBM SPSS Statistics Version 28. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondent characteristics and the level of adoption of environmental accounting, social accounting, and risk management practices. Inferential analysis included Pearson correlation analysis to examine the strength and direction of the relationships between environmental accounting, social accounting, and risk management. In addition, simple linear regression analysis was used to determine the extent to which environmental and social sustainability accounting practices predicted risk management among NGOs. Simple linear regression was selected because the primary objective of the study was to examine the individual relationship between each sustainability accounting dimension and risk management. The approach provided a clear assessment of the direct influence of environmental accounting and social accounting practices independently. However, future studies may employ multiple regression analysis or Structural Equation Modelling (SEM) to simultaneously examine the

influence of additional organizational and contextual factors and to assess potential mediating and moderating relationships. Qualitative data was obtained from key informant interviews and open-ended questionnaire responses were transcribed, organized, and analysed thematically. The qualitative findings were used to complement and contextualize the quantitative results, particularly in relation to the implementation of sustainability accounting practices and the practical challenges faced by NGOs in managing organizational risks.

Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional ethics review structures, and research authorization was secured from the appropriate regulatory authorities prior to data collection. Participation in the study was entirely voluntary, and informed consent was obtained from all respondents before data collection commenced. Confidentiality and anonymity were maintained throughout the study by excluding personal identifiers from the data collection tools and reporting findings in aggregated form. Access to the raw data was restricted to the researcher and the academic supervisors only.

RESULTS

Environmental Accounting Findings

Descriptive Analysis of Environmental Accounting Practices

Environmental accounting practices were measured using five indicators: integration of sustainable procurement policies, conduct of environmental risk audits, pursuit of eco-certifications (e.g., ISO 14001), integration of environmental sustainability in budgeting, and donor-required environmental reporting. Table 1 presents the descriptive statistics.

Table 1: Descriptive Statistics for Environmental Accounting Practices (n = 93)

Environmental Accounting Practice	Mean	Std. Deviation
Integration of sustainable procurement policies	4.37	0.69
Conduct of environmental risk audits	4.33	0.65
Pursuit of eco-certifications (e.g., ISO 14001)	4.33	0.66
Integration of environmental sustainability in budgeting	4.19	0.71
Donor-required environmental reporting	4.43	0.63

The results indicate consistently high levels of agreement across all environmental accounting practices. Donor-required environmental reporting recorded the highest mean score ($M = 4.43$, $SD = 0.63$), suggesting that environmental accountability requirements from donors strongly shape organizational environmental practices. Integration of sustainable procurement policies ($M = 4.37$, $SD = 0.69$) and the conduct of environmental risk audits ($M = 4.33$, $SD = 0.65$) also demonstrate strong institutional commitment to environmental responsibility.

The pursuit of eco-certifications ($M = 4.33$, $SD = 0.66$) reflects substantial engagement with formal environmental standards, while integration of environmental sustainability into budgeting processes recorded a slightly lower but still high mean score ($M = 4.19$, $SD = 0.71$). Overall, the findings suggest that environmental accounting practices are widely embedded among NGOs in Kajiado County.

Correlation Analysis

A Pearson product-moment correlation analysis was conducted to examine the relationship between environmental accounting practices and risk management. Composite indices were computed by averaging the respective items for each construct ($n = 93$).

Table 2: Pearson Correlation Matrix for Environmental Accounting and Risk Management (n = 93)

Variables	Environmental Accounting	Risk Management
Environmental Accounting	1	
Risk Management	0.208*	1
Sig. (2-tailed)	0.046	
N	93	93

The results presented in Table 2 show that environmental accounting practices had a positive and statistically significant relationship with risk management among NGOs in Kajiado County ($r = 0.208$, $p = 0.046$). Since the p-value was less than 0.05, the relationship was considered statistically significant at the 5 percent level. The positive correlation coefficient indicates that NGOs with stronger environmental accounting practices tended to report better risk management outcomes. However, the strength of the relationship was weak, suggesting that although environmental accounting is associated with improved risk management, its contribution on its own may be limited. This implies that environmental accounting practices support risk management, but they are likely to be more effective when complemented by other organizational and institutional factors.

Regression Analysis

A simple linear regression analysis was conducted to determine the effect of environmental accounting practices on risk management among NGOs in Kajiado County. Environmental accounting was treated as the independent variable (composite index), while risk management was treated as the dependent variable (composite index).

Table 3: Regression Results for Environmental Accounting and Risk Management (n = 93)

Model Summary	Value
R	0.208
R ²	0.043
Adjusted R ²	0.033
F-statistic	4.108
p-value (F)	0.046

Predictor	Unstandardized β	Std. Error	t-value	p-value
Constant	2.775	0.737	3.766	0.000
Environmental Accounting	0.344	0.170	2.027	0.046

The regression results indicate that environmental accounting practices have a positive and statistically significant effect on risk management ($\beta = 0.344$, $p = 0.046$). Since the p-value is less than 0.05, the effect is statistically significant at the 5% level. The coefficient of determination ($R^2 = 0.043$) shows that environmental accounting explains approximately 4.3% of the variation in risk management among NGOs in Kajiado County. Although the explanatory power of the model is relatively low, the overall regression model is statistically significant ($F = 4.108$, $p = 0.046$), suggesting that environmental accounting contributes meaningfully to predicting risk management effectiveness. The positive regression coefficient further implies that a one-unit increase in the level of environmental accounting adoption is associated with a 0.344-unit increase in the risk management score. Based on these results, the null hypothesis stating that environmental accounting practices have no significant effect on risk management is rejected. There is sufficient statistical evidence to conclude that environmental accounting practices significantly influence risk management among NGOs in Kajiado County. The findings indicate that while environmental accounting practices exert a statistically significant influence on risk management, their overall explanatory contribution remains modest. This suggests that environmental accounting supports risk mitigation and strengthens organizational control mechanisms, but it does not solely determine risk management effectiveness. Other institutional factors such as governance structures, leadership quality, financial capacity, and internal management systems are likely to play complementary roles. Nonetheless, the statistical significance of the relationship underscores the importance of integrating environmental considerations into organizational operations, particularly in enhancing regulatory compliance, identifying ecological risks, and reinforcing accountability frameworks within NGOs.

The qualitative findings supported the quantitative results by indicating that environmental accounting practices among NGOs in Kajiado County were generally implemented at a basic level and were often driven by donor compliance requirements. Interview participants noted that although environmental concerns such as waste management and responsible resource use were recognized, they were not always integrated into formal accounting and risk management systems. This suggests that environmental accounting was present but not yet fully institutionalized within many NGOs, which may explain its relatively weak but significant relationship with risk management.

Social Accounting Findings

This section presents findings related to the second research objective, which sought to examine the influence of social accounting practices on risk management among NGOs in Kajiado County. The analysis includes descriptive statistics, correlation analysis, regression analysis, and hypothesis testing.

Descriptive Analysis of Social Accounting Practices

Social accounting practices were measured using five indicators: promotion of diversity and inclusion in recruitment and retention, regular social impact reporting, provision of fair wages compared to industry standards, integration of community participation in project planning and implementation, and monitoring and reporting of social performance indicators. Table 4 presents the descriptive statistics for these measures based on responses from 93 NGOs.

Table 4: Descriptive Statistics for Social Accounting Practices (n = 93)

Social Accounting Practice	Mean	Std. Deviation
Promotes diversity and inclusion	4.15	0.86
Regular social impact reporting	4.08	0.81
Fair wages compared to industry standards	4.09	0.89
Community participation in project planning	4.08	0.86
Monitoring and reporting social performance indicators	4.16	0.82

The results indicate high levels of agreement across all social accounting practices. Monitoring and reporting of social performance indicators recorded the highest mean score ($M = 4.16$, $SD = 0.82$), closely followed by promotion of diversity and inclusion ($M = 4.15$, $SD = 0.86$). These findings suggest that NGOs in Kajiado County demonstrate strong commitment to structured social accountability and inclusive employment practices.

Provision of fair wages ($M = 4.09$, $SD = 0.89$), regular social impact reporting ($M = 4.08$, $SD = 0.81$), and integration of community participation in project planning ($M = 4.08$, $SD = 0.86$) also recorded high mean scores, indicating that social accountability mechanisms are widely practiced within the sector. Overall, the descriptive findings suggest that social accounting practices are strongly embedded among NGOs in the study area.

Correlation Analysis between Social Accounting and Risk Management.

A Pearson product-moment correlation analysis was conducted to examine the relationship between social accounting practices and risk management among NGOs in Kajiado County. Composite indices were computed by averaging the five social accounting items and the five risk management items for each of the 93 organizations.

Table 4.5: Pearson Correlation Matrix for Social Accounting and Risk Management (n = 93)

Variables	Social Accounting	Risk Management
Social Accounting	1	0.498**
Risk Management	0.498**	1

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

$p < 0.001$

The results indicate a moderate positive and statistically significant relationship between social accounting practices and risk management ($r = 0.498$, $p < 0.001$). Since the p-value is less than 0.01, the relationship is statistically significant at the 1 percent level.

The correlation coefficient suggests that NGOs with higher levels of social accounting adoption tend to demonstrate stronger risk management practices. Compared to environmental accounting ($r = 0.208$), the relationship between social accounting and risk management is considerably stronger, indicating that social accountability mechanisms may play a more substantial role in enhancing risk management effectiveness within the NGO sector.

Regression Analysis for Social Accounting and Risk Management.

A simple linear regression analysis was conducted to determine the effect of social accounting practices on risk management among NGOs in Kajiado County. Social accounting was treated as the independent variable (composite index), while risk management was treated as the dependent variable (composite index).

The results indicate that social accounting practices have a positive and statistically significant effect on risk management ($\beta = 0.491$, $p < 0.001$). Since the p-value is less than 0.01, the effect is statistically significant at the 1 percent level. The coefficient of determination ($R^2 = 0.248$) shows that social accounting explains approximately 24.8% of the variation in risk management among the surveyed NGOs. The overall regression model is statistically significant ($F = 29.94$, $p < 0.001$), indicating that social accounting is a strong predictor of risk management effectiveness. The positive regression coefficient implies that a one-unit increase in social accounting adoption is associated with a 0.491-unit increase in the risk management score.

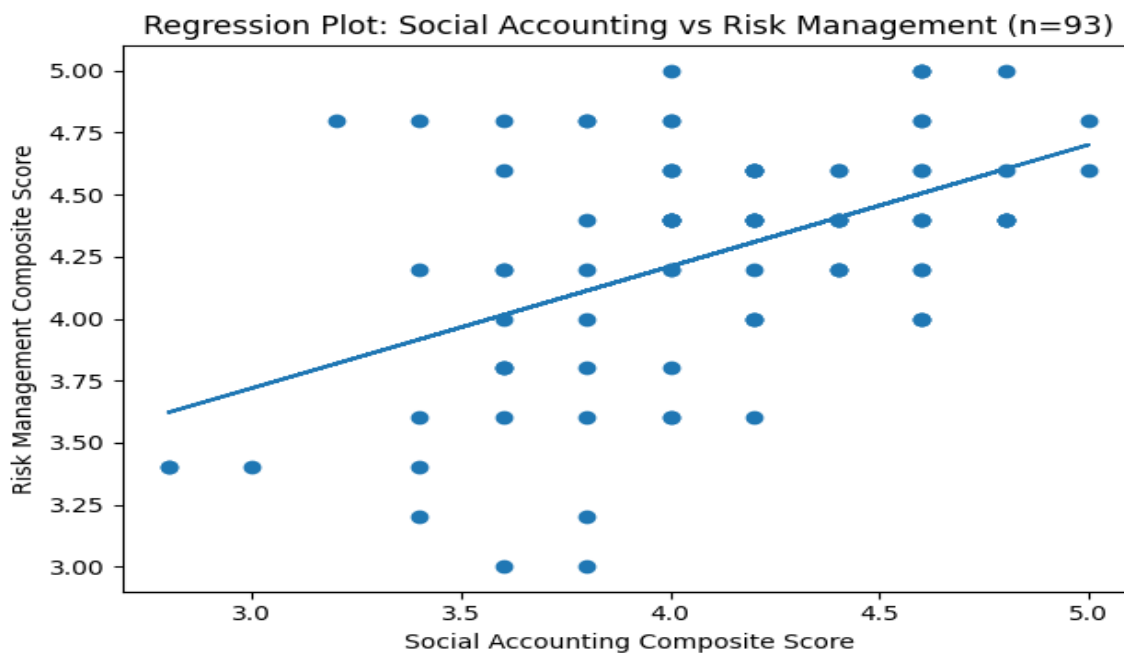


Figure 1: Regression Plot of Social Accounting and Risk Management (n = 93)

The scatter plot with the fitted regression line (Figure 1) visually illustrates the positive linear relationship between social accounting and risk management. The upward sloping regression line confirms that higher levels of social accounting adoption are associated with higher levels of risk management effectiveness. The distribution of data points around the regression line further supports the statistical findings, showing a consistent positive association across the participating NGOs.

Based on these results, the null hypothesis stating that social accounting practices have no significant effect on risk management is rejected. There is sufficient statistical evidence to conclude that social accounting practices significantly influence risk management among NGOs in Kajiado County. Overall, the findings demonstrate that social accounting practices contribute substantially to strengthening risk management systems within NGOs. Compared to environmental accounting, social accounting exhibits stronger explanatory power, suggesting that stakeholder engagement, social performance monitoring, fair compensation, and community participation mechanisms may play a more direct role in enhancing organizational stability, legitimacy, and reputational risk mitigation. Although social accounting does not fully explain variations in risk management, its influence is both statistically significant and practically meaningful within the NGO sector.

The qualitative findings supported the quantitative results by indicating that social accounting practices were among the most visible and actively implemented sustainability dimensions within NGOs. Respondents frequently highlighted stakeholder engagement, community consultations, beneficiary accountability, and social reporting as central aspects of their organizational operations. Many participants noted that maintaining strong

relationships with communities and donors was critical not only for accountability but also for identifying and responding to social and operational risks. These findings help explain why social accounting demonstrated the strongest relationship with risk management in the quantitative analysis.

DISCUSSION OF FINDINGS

Environmental Accounting and Risk Management

The findings revealed that environmental accounting practices had a positive and statistically significant influence on risk management among NGOs in Kajiado County ($\beta = 0.344$, $p = 0.046$). This finding suggests that environmental sustainability initiatives contribute to organizational preparedness by enhancing environmental awareness, regulatory compliance, and the identification of potential ecological risks. The findings are consistent with Schaltegger et al. (2020), who reported that environmental accounting enhances organizational preparedness through improved environmental monitoring. Similar results were reported by Adams (2017). However, the relatively low explanatory power observed in the present study contrasts with findings from large corporate settings where environmental accounting demonstrated stronger predictive influence, suggesting contextual differences between NGOs and corporate environments. Despite its statistical significance, environmental accounting explained only 4.3 percent of the variation in risk management ($R^2 = 0.043$), indicating relatively limited explanatory power. The relatively low explanatory power suggests that environmental accounting represents only one component of a broader organizational risk management system. Risk management effectiveness within NGOs is likely influenced by multiple organizational factors including leadership effectiveness, internal control systems, donor dependency, and financial capacity. Therefore, environmental accounting should be viewed as a complementary rather than a standalone determinant of risk management effectiveness.

Christensen et al. (2021) similarly argues that sustainability reporting enhances organizational transparency and accountability, thereby improving the quality of risk-related decision making. The present findings support this view by demonstrating that environmental accounting contributes positively to risk management among NGOs, although its influence remains relatively modest. Asogwa et al. (2021) observed that NGOs often implement sustainability reporting primarily to satisfy accountability and stakeholder expectations rather than as a strategic management tool. This finding is consistent with the qualitative evidence from this study, which suggests that environmental accounting practices are largely donor-compliance driven. Sisaye (2021) emphasizes that sustainability accounting frameworks strengthen organizational legitimacy by responding to stakeholder information needs. The significant relationship observed between environmental accounting and risk management supports the argument that accountability mechanisms contribute to organizational resilience.

Social Accounting and Risk Management

The study established that social accounting practices had a positive and statistically significant effect on risk management among NGOs in Kajiado County ($\beta = 0.491$, $p < 0.001$). The findings indicate that organizations with stronger stakeholder engagement mechanisms, comprehensive social impact reporting systems, inclusive community participation frameworks, and robust accountability structures tend to demonstrate more effective risk management practices. These practices facilitate timely identification of emerging operational, reputational, and stakeholder-related risks, enabling organizations to respond proactively and strengthen their overall resilience. The findings are consistent with Stakeholder Theory, which posits that organizations create long-term value by maintaining transparent, accountable, and mutually beneficial relationships with key stakeholders. For NGOs, whose legitimacy and sustainability largely depend on donor confidence, beneficiary trust, community support, and regulatory compliance, effective social accounting provides critical information that strengthens organizational responsiveness and supports informed decision-making. By systematically capturing and communicating social performance, NGOs are better positioned to anticipate stakeholder concerns, manage expectations, reduce conflicts, and mitigate risks associated with programme implementation, funding continuity, and organizational reputation. The findings are also consistent with those of R. Edward Freeman et al. (2020), who argue that strong stakeholder engagement enhances organizational resilience by improving trust, collaboration, and information exchange. Similarly, Gray (2021) observed that social accountability mechanisms strengthen organizational legitimacy by increasing transparency and facilitating the early identification and management of emerging risks. These findings further support the growing sustainability accounting agenda promoted through the ISSB's IFRS S1 and IFRS S2, which emphasizes that sustainability-related information

should be integrated into governance, strategy, and enterprise risk management to improve organizational resilience and long-term value creation.

Further, the relatively higher explanatory power of social accounting ($R^2 = 0.248$) compared to environmental accounting ($R^2 = 0.043$) suggests that social sustainability practices are more closely aligned with the operational realities of NGOs. Unlike environmental initiatives, which are often project-specific or compliance-driven, social accounting is embedded in the day-to-day interactions between NGOs and their stakeholders. Consequently, strong stakeholder relationships, effective communication channels, transparent reporting systems, and meaningful community participation contribute significantly to reducing operational, financial, reputational, and strategic risks, thereby enhancing organizational stability, institutional resilience, and long-term sustainability.

Comparative Interpretation of Environmental and Social Accounting

Although both environmental and social sustainability accounting practices were positively associated with risk management, social accounting demonstrated considerably greater explanatory power than environmental accounting. Specifically, social accounting explained 24.8% of the variation in risk management ($R^2 = 0.248$), compared to only 4.3% for environmental accounting ($R^2 = 0.043$). This suggests that stakeholder-centred accountability practices have a more substantial influence on strengthening risk management among NGOs than environmental practices, which are often implemented primarily to satisfy donor requirements, regulatory expectations, or project-specific compliance obligations. The stronger influence of social accounting can be attributed to the operational nature of NGOs, whose success depends largely on maintaining strong relationships with donors, beneficiaries, local communities, employees, government agencies, and other stakeholders. Social accounting practices, such as stakeholder engagement, social impact reporting, beneficiary participation, transparency, and accountability, facilitate effective communication, strengthen organizational legitimacy, and promote early identification and resolution of operational, financial, reputational, and strategic risks. Consequently, NGOs that institutionalize these practices are better positioned to anticipate emerging challenges, respond to stakeholder concerns, and sustain organizational resilience in dynamic operating environments.

Conversely, the relatively weak explanatory power of environmental accounting suggests that environmental sustainability practices, while important, may not yet be sufficiently integrated into the strategic and operational functions of many NGOs in Kajiado County. Environmental accounting appears to be largely compliance-oriented and project-driven rather than embedded within enterprise-wide risk management systems. This limits its capacity to significantly influence broader organizational risk management outcomes. The findings further indicate that sustainability accounting does not operate in isolation but within a broader organizational and institutional environment. Factors such as governance quality, leadership effectiveness, organizational culture, internal control systems, organizational size, financial capacity, donor dependency, regulatory requirements, and technological capability are likely to influence both the adoption of sustainability accounting practices and the effectiveness of organizational risk management systems. This observation is consistent with contemporary sustainability accounting literature, which views organizational resilience as the product of multiple interrelated governance, strategic, and institutional factors rather than sustainability accounting practices alone. Future studies should therefore incorporate these organizational and contextual variables to develop more comprehensive models explaining risk management within NGOs and other nonprofit organizations.

Theoretical Implications

The findings provide empirical support for both Stakeholder Theory and Legitimacy Theory within the NGO context. Consistent with Stakeholder Theory, social accounting practices demonstrated a stronger influence on risk management, suggesting that effective stakeholder engagement, community participation, and accountability mechanisms enhance organizational resilience by facilitating trust, information exchange, and early risk identification. The findings also support Legitimacy Theory by demonstrating that environmental and social accounting practices contribute to organizational credibility and accountability, thereby strengthening institutional capacity to manage operational and reputational risks. By extending these theoretical perspectives to NGOs operating in a resource-constrained county context, the study contributes new evidence on the role of sustainability accounting in strengthening organizational resilience beyond the traditional corporate sector.

Practical Implications

The findings have important implications for NGO managers, donors, policymakers, regulators, and development partners. First, sustainability accounting should be integrated into enterprise risk management systems rather than being treated solely as a compliance or donor reporting requirement. Integrating environmental and social information into governance structures, strategic planning, budgeting, performance monitoring, and decision-making enables organizations to identify, assess, and respond proactively to emerging sustainability-related risks. Second, NGO managers should prioritize strengthening stakeholder engagement mechanisms, social accountability systems, and community participation frameworks, as these demonstrated the strongest influence on organizational risk management. Investment in transparent reporting systems, beneficiary feedback mechanisms, and stakeholder communication can significantly enhance organizational resilience and institutional credibility. Third, environmental sustainability accounting should be embedded within organizational planning, resource allocation, and operational decision-making rather than being implemented only at project level or for regulatory compliance. Strengthening environmental risk assessments and integrating climate-related considerations into organizational planning will improve preparedness for increasingly complex environmental and operational risks. Finally, the findings have broader policy relevance. They support the direction of emerging international sustainability reporting frameworks, particularly IFRS S1 and IFRS S2, which emphasize integrating sustainability-related risks into governance, strategy, and enterprise risk management. Although these standards are not mandatory for NGOs, they provide useful principles that can strengthen accountability and risk management within nonprofit organizations. Similarly, the findings align with Kenya's Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA), and the operationalization of the Public Benefit Organizations Act, 2013 through the Public Benefit Organizations Regulations, 2026, all of which promote transparency, good governance, prudent resource utilization, and institutional accountability.

Study Limitations

This study employed a cross-sectional research design, which enabled the examination of relationships between sustainability accounting practices and risk management at a single point in time. While the design was appropriate for identifying associations among the study variables, it does not permit definitive conclusions regarding causality. Consequently, although environmental and social accounting practices were found to be significantly associated with risk management outcomes, it cannot be conclusively established that these practices directly cause improvements in risk management. Future studies should employ longitudinal research designs to examine how sustainability accounting practices influence risk management outcomes over time and to establish stronger causal inferences. The study relied primarily on self-reported questionnaire responses obtained from organizational representatives. Such responses may be susceptible to social desirability bias, recall bias, and respondent subjectivity, potentially leading participants to overstate the extent of sustainability accounting implementation or risk management effectiveness. To mitigate this limitation, quantitative findings were complemented with qualitative evidence obtained through key informant interviews. Nevertheless, future studies may benefit from incorporating documentary analysis, external audits, and objective organizational performance indicators.

Conclusion

The study concludes that both environmental and social sustainability accounting practices contribute positively to risk management among NGOs in Kajiado County. Environmental accounting supports risk preparedness through environmental awareness, compliance, and monitoring activities, although its influence remains relatively modest. Social accounting demonstrated a stronger and more substantial effect on risk management, highlighting the importance of stakeholder engagement, social accountability, and community participation in strengthening organizational resilience. The findings suggest that sustainability accounting should be viewed not merely as a reporting or donor compliance requirement but as a strategic management tool capable of enhancing organizational risk management effectiveness. NGOs that successfully integrate environmental and social accountability mechanisms into their operational and strategic processes are more likely to strengthen their capacity to anticipate, manage, and respond to emerging risks.

Recommendations for future studies

Future studies may examine sustainability accounting practices within the context of evolving global reporting frameworks such as IFRS S1 and IFRS S2, which increasingly emphasize the integration of sustainability disclosures with strategy and risk management processes. Such investigations would provide further evidence on how emerging sustainability reporting standards influence organizational resilience and accountability. Future studies could also extend this research by incorporating broader institutional variables to provide a more comprehensive understanding of sustainability accounting and risk management in NGOs. Particular attention should be given to potential mediating mechanisms such as stakeholder trust, regulatory compliance pressure, and organizational legitimacy, which may help explain the relatively weak explanatory power of environmental accounting observed in this study. In addition, moderating factors such as donor dependency, leadership structure, and internal control systems should be examined to determine how contextual conditions influence the relationship between sustainability accounting practices and risk management effectiveness. Longitudinal and comparative research designs are recommended to establish causal relationships and enhance the generalizability of findings across different regions, sectors, and categories of NGOs. Such designs would also help capture the dynamic nature of sustainability accounting practices and their evolving influence on risk management outcomes over time. Methodologically, future research should adopt advanced analytical techniques such as Structural Equation Modelling (SEM) to assess direct, indirect, and interaction effects among sustainability accounting dimensions and risk management. Emerging areas such as digital sustainability reporting systems, ESG analytics, and artificial intelligence-enabled risk monitoring should also be explored to understand how technological innovations may enhance the effectiveness of sustainability accounting in strengthening risk management.

REFERENCES

1. Adams, C. A. (2017). The sustainable development goals, integrated thinking and the integrated report. *Sustainability Accounting, Management and Policy Journal*, 8(3), 1–20.
2. Asogwa, I. E., Varua, M. E., Humphreys, P., & Datt, R. (2021). Understanding sustainability reporting in non-governmental organisations: A systematic review of reporting practices, drivers, barriers and paths for future research. *Sustainability*, 13(18), 10184. <https://doi.org/10.3390/su131810184>
3. Aven, T. (2016). Risk assessment and risk management: Review of recent advances on their foundation. *European Journal of Operational Research*, 253(1), 1–13. <https://doi.org/10.1016/j.ejor.2015.12.023>
4. Bebbington, J., Unerman, J., & O'Dwyer, B. (2021). *Sustainability accounting and accountability* (2nd ed.). Routledge.
5. Burritt, R. L., & Christ, K. L. (2018). Industry 4.0 and environmental accounting: A new revolution? *Asian Journal of Sustainability and Social Responsibility*, 3(1), 23–38. <https://doi.org/10.1186/s41180-018-0020-y>
6. Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory CSR and sustainability reporting: Economic analysis and literature review. *Review of Accounting Studies*, 26(3), 1176–1248. <https://doi.org/10.1007/s11142-021-09609-5>
7. Ebrahim, A. (2019). Measuring social change: Performance and accountability in a complex world. *Stanford Social Innovation Review*, 17(3), 40–47.
8. Freeman, R. E., Dmytriiev, S., & Phillips, R. A. (2020). Stakeholder theory and the resource-based view of the firm. *Journal of Management*, 46(7), 1–22.
9. Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability ... and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society*, 35(1), 47–62. <https://doi.org/10.1016/j.aos.2009.04.006>
10. Hopkin, P. (2018). *Fundamentals of risk management: Understanding, evaluating and implementing effective risk management* (5th ed.). Kogan Page.
11. Jordan, L., & van Tuijl, P. (2018). *NGO accountability: Politics, principles and innovations*. Routledge.
12. Mohamed, A., & Makori, D. (2022). Mohamed, A. I., & Makori, D. (2022). Strategic financial practices and funding sustainability of non-governmental organizations in Kenya: A case of Islamic Relief Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, 4(2), 1–10. <https://doi.org/10.35942/ijcfa.v4i2.248>

13. Mutua, A., & Ibembe, J. D. B. (2020). Risk management processes and functional performance in non-governmental organisations of Kenya. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, 1(1), 28–44.
14. Schaltegger, S., Burritt, R., & Petersen, H. (2020). *An introduction to corporate environmental management: Striving for sustainability*. Routledge.
15. Sisaye, S. (2021). The influence of non-governmental organizations (NGOs) on the development of voluntary sustainability accounting reporting rules. *Journal of Business and Socio-economic Development*, 1(1), 5–23. <https://doi.org/10.1108/JBSED-02-2021-0017>
16. Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610. <https://doi.org/10.2307/258788>
17. Tanaka, Y., & Yamamoto, K. (2020). *Market size and entrepreneurship*," *Journal of Economic Geography*, Oxford University Press, vol. 12(6), pages 1139-1166, November.
18. Unerman, J., & O'Dwyer, B. (2021). NGO accountability and sustainability issues in the changing global environment. *Public Management Review*, 17(7), 1–12.