

MAKERERE UNIVERSITY BUSINESS SCHOOL

RISK MANAGEMENT PRACTICES, PROJECT RESILIENCE AND SUSTAINABILITY OF NGO PROJECTS IN WAKISO DISTRICT, CENTRAL UGANDA

BY

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(PLAN A)

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DECLARATION

I hereby declare that this research dissertation is my original work, and it has never been submitted to any other institution of higher learning for any award.

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APPROVAL

This is to certify that this dissertation has been submitted with our approval as research supervisors.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Project sustainability is a critical aspect of contemporary project management discourse, gaining global recognition for its imperative role in ensuring the long-term viability and impact of development initiatives (Silvius & Schipper, 2018). At a global level, sustainable project management addresses economic, social, and environmental challenges inherent in project implementation (Silvius & Schipper, 2018). This perspective is increasingly relevant in Africa, where projects often navigate complex issues like resource scarcity, social inequality, and environmental degradation (Müller et al., 2019). In Uganda, a developing nation marked by rapid socio-economic changes, the sustainability of NGO sector projects is paramount, given their significant role in driving development in areas such as health, education, and poverty alleviation.

Although some scholars such as Kerzner & Kerzner (2018) and Zou et al. (2018) posit a strong theoretical link between project sustainability, risk management, and resilience, empirical evidence remains inconclusive, especially in developing country contexts. This suggests a need to validate whether these relationships hold true in specific contexts like Wakiso District, where practical challenges such as limited resources, institutional capacity, and community dynamics may alter the effectiveness of such practices.

The Triple Bottom Line (TBL) theory, which emphasizes the integration of environmental, social, and economic aspects, offers a valuable framework for this study (Elkington, 2018).

Despite recognition of these best practices, NGO projects in Uganda continue to face significant sustainability challenges.

In Wakiso District, a significant number of NGO sector projects fail to maintain their impacts post-implementation. For instance, a report by the Uganda Bureau of Statistics (2020) highlighted that over 30% of these projects encounter sustainability issues, particularly due to inadequate capacity building and weak risk management strategies. Njoroge and Ndiang'ui (2019) also reported that many development projects in Uganda do not achieve long-term benefits, with some being abandoned or becoming ineffective once initial funding ceases. These challenges underscore the need for stronger risk management and resilience-building practices to ensure the sustainability of NGO projects in Uganda.

While the existing literature has examined individual aspects of risk management and resilience (e.g., Aven, 2016; Manyena et al., 2019; Duchek, 2020), there is limited empirical research that comprehensively assesses how these elements both individually and collectively influence the sustainability of NGO sector projects within the unique socio-economic context of Uganda. This study, therefore, addresses both individual contributions and the combined effect of risk management practices and project resilience on project sustainability, filling a notable empirical gap. This gap is significant, considering Uganda's developmental challenges and the pivotal role NGOs play in addressing them. Therefore, this study seeks to examine the relationship between risk management practices, project resilience, and the sustainability of NGO sector projects in Wakiso District.

1.2 Problem statement

The pursuit of sustainability in project management is paramount, particularly within the non-governmental organization (NGO) sector, where the longevity of project benefits is crucial (Elkington, 2018). However, in Wakiso District, education-related NGO projects face significant sustainability challenges. A concerning number of these projects fail to sustain their impacts post-implementation, with over 30% encountering sustainability issues, often due to insufficient community involvement and limited capacity building (Uganda Bureau of Statistics, 2020; Wakiso District Local Government report, 2022). Njoroge and Ndiang'ui (2019) also highlight the prevalence of project abandonment post initial funding periods.

There are indications that inadequate risk management practices and low project resilience play a contributing role. These factors are widely recognized in literature as critical for sustaining project outcomes (Kerzner & Kerzner, 2018; Bourne, 2018; Zou et al., 2018). Ignoring these aspects could perpetuate a detrimental cycle of dependency, inefficient resource utilization, and diminished donor confidence. Therefore, there is a critical need to examine the relationship between risk management practices, project resilience, and the sustainability of NGO sector projects in Wakiso District.

1.3 Purpose of the Study

The purpose of the study was to examine the relationship between risk management practices, project resilience, and sustainability of NGO sector projects in Wakiso District.

1.4 Objectives of the study

I. To examine the relationship between risk management practices and project sustainability
II. To examine the relationship between risk management practices and project resilience

III. To examine the relationship between project resilience and project sustainability

IV. To examine the mediating effect of project resilience on the relationship between risk management practices and project sustainability

1.5 Research Questions

I. What is the relationship between risk management practices and project resilience?

II. What is the relationship between risk management practices and project resilience?

III. What is the relationship between project resilience and project sustainability?

IV. What is the mediating effect of project resilience on the relationship between risk management practices and project sustainability?

1.6 Scope of the Study

1.6.1. Conceptual Scope

The conceptual framework of this research is focused on investigating the interrelationships between Project Risk Management Practices, Project Resilience, and Project Sustainability in the NGO sector in Central Uganda. Specifically, the study aims to explore how effective risk management practices, including the identification and mitigation of risks, influence the sustainability of projects. Additionally, the study delves into the concept of project resilience, exploring how the ability of projects to adapt to and recover from challenges contributes to their long-term sustainability. The overarching goal is to understand how these variables synergistically affect the sustainability of NGO sector projects in Central Uganda, an area that has seen limited comprehensive research.

1.6.2. Geographical Scope

Geographically, the research was conducted in Wakiso District, focusing on a diverse range of NGO projects within this area. Wakiso District is selected due to its unique position as both urban and peri-urban, featuring a high concentration of developmental projects. This region is particularly notable for its dynamic socio-economic environment and cultural diversity, which provide a varied context for NGO projects. The urban setting of Wakiso, coupled with its peri-urban expanses, presents a mix of challenges and opportunities that are pivotal for examining the effectiveness of project management practices in the NGO sector. Additionally, Wakiso District hosts a significant percentage of Uganda's population, contributing to its importance as a representative location for this research.

1.6.3. Time Scope

The time scope for this research covered projects initiated and implemented between 2018 and 2024. This period is significant due to the evolving nature of NGO management practices and the dynamic socio-political landscape in Uganda. By focusing on this timeframe, the study aims to capture contemporary challenges and innovations in project management within the NGO sector. The actual research was conducted from July 2024 to September 2024, allowing for the inclusion of the most current data and reflecting the latest trends and developments in project risk management, resilience, and sustainability in the NGO sector in Central Uganda.

1.7 Significance of the Study

This research offers valuable insights for various stakeholders.

NGOs, particularly those operating in Uganda and similar contexts, will find the study's findings essential. The research can help these organizations refine their project management strategies,

focusing on risk management, stakeholder engagement, and resilience building. This, in turn, could lead to more sustainable project outcomes and strengthen their advocacy efforts for development projects.

Academics and researchers in the fields of development studies, project management, and non-profit management will benefit from the comprehensive data and analysis provided by this study. It contributes to the existing body of literature by exploring the interconnectedness of risk management, resilience, and sustainability in NGO projects, particularly within a developing country context.

The findings will be significant for local communities and civil society organizations in Central Uganda and beyond. By underscoring the importance of resilient project structures, the study can empower communities to demand greater involvement and better management in future NGO projects, leading to outcomes more aligned with their needs and expectations.

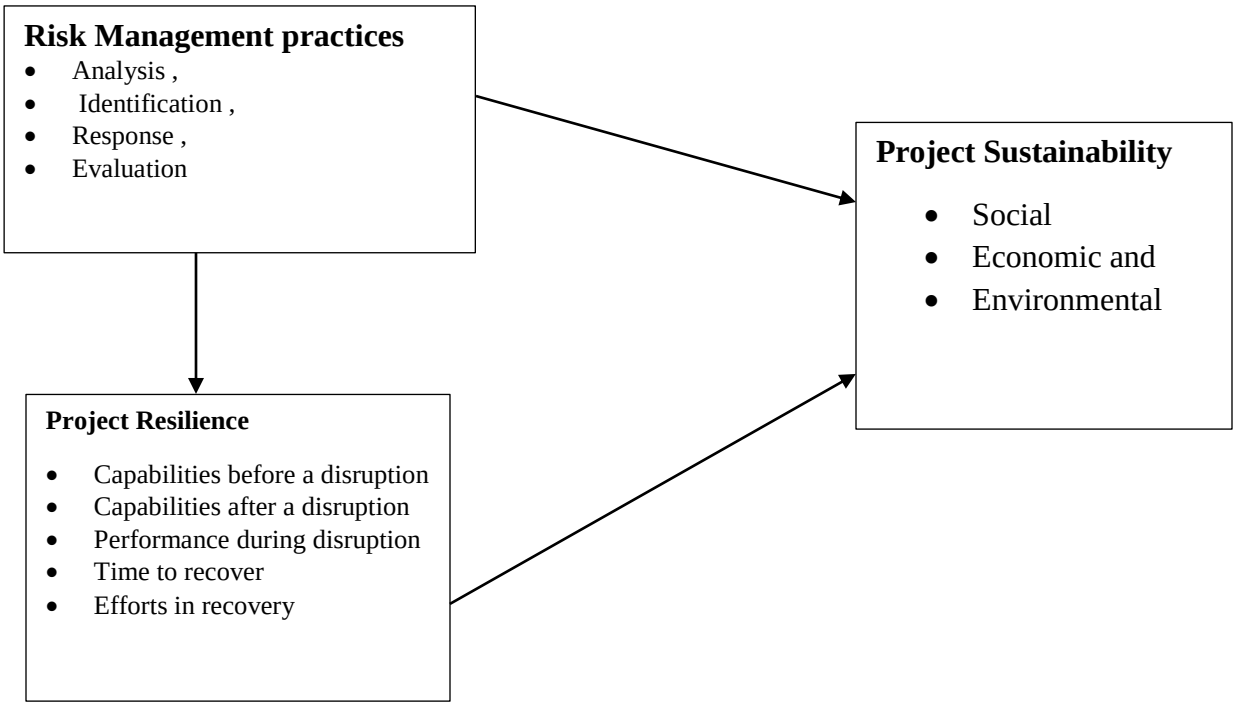
Development agencies such as the United Nations, USAID, and various international donors will find this research valuable for designing and implementing sustainable development projects in Uganda and similar settings. The insights into the dynamics of risk management, stakeholder engagement, and project resilience can assist these agencies in creating more impactful and enduring development initiatives.

Companies involved in providing services or support to NGO sector projects can leverage the study's insights to enhance their collaboration strategies and project management practices. This can lead to more successful partnerships, improved corporate social responsibility profiles, and potentially more business opportunities.

The media can utilize the findings of this study to raise public awareness about the critical role of sound project management practices in the success and sustainability of NGO projects. Increased public knowledge and discourse can lead to greater scrutiny and support for improved standards in NGO project management.

Lastly, the study's findings will contribute to Uganda's broader national development objectives by offering evidence-based recommendations for enhancing the sustainability of NGO projects. This is crucial for achieving sustainable development, improving social welfare, and elevating the quality of life for the Ugandan population.

1.8 Conceptual Framework



Source: – Adopted from the works of Aven and Renn (2020), Kerzner and Kerzner (2018), Duchek (2020), Manyena et al (2019), Hopkin (2018) as well as Sheffi and Rice (2020).

In the above conceptual framework, the variables of interest are Risk Management Practices, Project Resilience, and Project Sustainability, each with specific indicators. For Risk Management Practices, the indicators include Analysis, Identification, Response, and Evaluation. Project Resilience is indicated by Capabilities before a disruption, Capabilities after a disruption, Performance during disruption, Time to recover, and Efforts in recovery. Lastly, Project Sustainability is evaluated in terms of its Social, Economic, and Environmental dimensions.

The conceptual framework suggests a set of relationships between the variables. Firstly, Risk Management Practices are expected to directly influence Project Sustainability; effective risk analysis, identification, response, and evaluation are postulated to enhance the project's longevity and its social, economic, and environmental outcomes.

The variable of Project Resilience is depicted as a mediator in this framework. The resilience of a project, its ability to maintain capabilities, withstand disruptions, and recover effectively, is suggested to mediate the relationship between Risk Management Practices with Project Sustainability. Projects with higher resilience are posited to maintain their sustainability better in the face of challenges, thereby potentially strengthening the positive effects of comprehensive risk management on sustainable outcomes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Review

The Triple Bottom Line (TBL) theory, a concept introduced by John Elkington in 1994, revolutionized the way businesses and organizations measure and report their performance. Moving beyond the traditional accounting focus on profitability, the TBL theory posits that organizations should commit to focusing on environmental and social concerns just as they do on financial profits, hence the "triple" bottom line (Elkington, 1997). This approach advocates for the evaluation of an organization's impact and success in three areas: social equity, economic prosperity, and environmental quality.

The key elements of the TBL theory consist of "people, planet, and profit," which correspond to the social, environmental, and economic dimensions of an organization's activities. These elements assert that a balance between these dimensions can lead to a sustainable and equitable growth strategy for both organizations and societies (Slaper & Hall, 2011). The major assumptions underlying the TBL theory include the notion that long-term economic success cannot be achieved without considering the social and environmental impacts of business activities. It assumes that an integrated approach to these dimensions is not only ethically right but also beneficial for organizational resilience and sustainability.

However, the TBL framework is not without its weaknesses or limitations. One critique is that it can be challenging to measure and compare the social and environmental bottom lines with the same rigor and precision as financial outcomes. The subjectivity in measuring societal and ecological impacts can lead to inconsistent and non-comparable data (Norman & MacDonald,

2004). Furthermore, the theory has been criticized for not providing a clear guidance on how to prioritize or trade-off between the three dimensions when they are in conflict.

In the context of this study, the TBL theory is highly relevant. It provides a foundational theoretical framework for understanding the multifaceted concept of project sustainability within the NGO sector in Central Uganda. The theory supports the idea that sustainability is not solely about economic gains but also includes social impacts and environmental stewardship, which align with the study's focus on the social, economic, and environmental indicators of project sustainability. By applying the TBL theory, the study acknowledges the complex interplay between these dimensions and reinforces the importance of considering a broad range of factors when assessing the sustainability of NGO projects. This alignment with TBL theory could provide a more holistic understanding of project sustainability.

2.2 Conceptual Review

2.2.1 Risk Management Practices

Risk management practices within project management are a critical set of processes designed to identify, assess, and prioritize risks followed by the allocation of resources to minimize, control, and monitor the probability and impact of unfortunate events or to maximize the realization of opportunities (Project Management Institute, 2017; Saynisch, 2019). Modern risk management is not just about preventing losses but also about recognizing that taking calculated risks can be a strategic tool to achieve greater project success. It requires a systematic approach to identifying and acting on potential project risks, ensuring that decisions are informed and aligned with the organization's risk tolerance and strategic objectives (Aven, 2016; Zou et al., 2020).

The first indicator, Analysis, involves a detailed examination of the potential risks that a project could face. This indicator entails the use of qualitative and quantitative techniques to understand

the likelihood of a risk occurring and its potential impact on the project objectives. Tools such as SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), PESTLE analysis (Political, Economic, Social, Technological, Legal, Environmental), and risk matrices are commonly employed to systematically analyze risks (Hopkin, 2018; Manyena et al., 2019).

Identification is the process of determining which risks may affect the project and documenting their characteristics. This step is foundational, as it sets the stage for how the rest of the risk management process will unfold. It involves gathering input from all stakeholders and using tools such as brainstorming, checklists, and expert interviews to compile a comprehensive list of possible risks (Teller et al., 2014; Zou et al., 2018).

Response refers to the development of options and actions to enhance opportunities and to reduce threats to the project's objectives. It includes the selection of risk response strategies such as avoidance, transference, mitigation, or acceptance. The chosen strategies are often dependent on the risk's priority, its impact on project objectives, and the cost-effectiveness of the response options (Olson & Wu, 2018; Aven & Zio, 2018).

Finally, Evaluation is the process of monitoring and reviewing the risk management practices and the outcomes of risk responses. This indicator involves regularly analyzing the effectiveness of the risk management plan and making adjustments as necessary. It ensures that risks are effectively managed over the course of the project and that the risk management strategies continue to align with project goals and the organization's risk appetite (Aven & Zio, 2018; Zou et al., 2020).

2.2.2 Project Resilience

Project resilience in the context of project management refers to the ability of a project to anticipate, prepare for, respond to, and adapt to incremental changes and sudden disruptions to maintain its core function and integrity. It is a vital component for the long-term success and sustainability of projects, particularly in environments marked by uncertainty and change. Resilience in projects involves not only risk management and mitigation but also strategic planning and project execution that enable the project to withstand and emerge stronger from adversity (Walker & Salt, 2012; Hayes & Westrup, 2020).

Capabilities before a disruption involve the inherent strengths and resources a project possesses that allow it to withstand pressures and shocks. This indicator is about proactively building a robust project structure that can endure disruptions without significant performance degradation. It encompasses the design of flexible project plans, the development of skilled project teams, and the establishment of strong leadership and governance structures (Manyena et al., 2019; Saynisch, 2019).

Capabilities after a disruption measure the project's ability to restore or even improve its functionalities post-disruption. This indicator reflects the adaptive capacity of a project, highlighting the importance of learning, innovation, and continuous improvement in strengthening the project's resilience. It is about the project's capacity for transformation and growth following a challenging event (Kendra & Wachtendorf, 2018; Reed et al., 2020).

Performance during disruption focuses on how a project functions in the midst of a disruptive event. It is a direct measure of a project's resilience, gauging how well project goals and outcomes are sustained when faced with unforeseen challenges. This could include maintaining

project timelines, quality standards, and stakeholder communication under duress (McManus et al., 2018; Manyena et al., 2019).

Time to recover is an indicator of the project's responsiveness and efficiency in returning to its planned state or better after a disruption. This metric assesses the speed of recovery processes and the promptness of actions taken to mitigate the impact of the disruption, which are critical for minimizing downtime and cost overruns (Duchek, 2020; Sheffi & Rice Jr, 2021).

Efforts in recovery pertain to the actions taken to bring the project back on track following a disruption. This includes the mobilization of resources, the application of lessons learned, and the execution of recovery strategies. It reflects the project team's commitment to overcoming the disruption and improving future project resilience (Gunderson, 2018; Manyena et al., 2019).

Project resilience is thus an essential quality of sustainable project management, allowing projects to navigate the challenges and uncertainties of their environments. The indicators of project resilience offer a comprehensive view of a project's ability to endure and evolve, emphasizing the need for both preventative strategies and effective recovery mechanisms

2.2.4 Project Sustainability

Project Sustainability is a foundational concept in project management, epitomizing the project's capacity to endure its operations and benefits over time without exhausting resources or disrupting essential systems (Silvius & Schipper, 2018; Elkington, 2018). It aligns with the principle of meeting present needs while ensuring the ability of future generations to meet their own, emphasizing a balanced approach to development that considers a wide range of impacts.

The Social dimension of sustainability evaluates the project's impact on individuals and communities, including its contribution to social equity, enhancement of living standards,

promotion of social inclusion, and fair distribution of benefits among stakeholders (Dyllick & Muff, 2018; Manetti, 2020). Social sustainability is vital for generating community support and maintaining the ethical validity of a project.

Assessing the Economic indicator involves evaluating the project's financial viability and its contribution to economic development (Savitz, 2018; Kerzner & Saladis, 2020). This includes determining whether the project generates economic benefits such as profitability, cost savings, and employment opportunities without externalizing costs. Economic sustainability ensures the project's ability to attract investment, create value, and support the economic well-being of the community and stakeholders involved.

Examining the Environmental dimension of sustainability entails evaluating the project's impact on natural resources and ecosystems, focusing on resource utilization, waste generation, and overall ecological footprint (WCED, 2018; Reed et al., 2020). Environmental sustainability aims to minimize adverse environmental impacts, conserve biodiversity, and promote responsible resource utilization to ensure the resilience and health of ecological systems.

2.3 Relationships between the variables

2.3.1 Risk management practices and project sustainability

The interplay between risk management practices and project sustainability is a subject of considerable academic inquiry and practical importance. It is commonly acknowledged that the disciplined application of risk management methodologies enhances the likelihood of achieving sustainable project outcomes (Kerzner & Saladis, 2020). The rationale is that by systematically addressing potential risks, projects are better equipped to ensure their economic, social, and environmental objectives are met and maintained over time.

A robust risk management process typically begins with the identification and analysis of potential uncertainties that may affect project goals. This strategic foresight allows for the preemptive planning of interventions, which is fundamental to sustaining project initiatives. For example, Schwalbe (2018) argues that such proactive measures can preserve the project's value proposition, particularly in volatile or unpredictable environments. The response phase in risk management, which involves the implementation of strategies to mitigate identified risks, is another pivotal determinant of sustainability. Tailoring these strategies to foster long-term benefits can lead to sustained social impact and environmental conservation, reinforcing the project's enduring legacy. According to Carvalho and Rabechini (2019), the adaptability embedded in risk response mechanisms is a critical success factor for the continued relevance and viability of projects.

However, the literature also presents caveats regarding the potential constraints of risk management on sustainability. Some scholars suggest that an overemphasis on risk avoidance might inhibit innovative approaches necessary for sustainability (Zou et al., 2020). This perspective highlights a paradox where overly stringent risk management could limit a project’s ability to adapt and evolve with changing sustainability demands.

Moreover, the evaluation component of risk management is essential in aligning project activities with sustainability goals. Continuous monitoring and learning from the risk management process ensure that projects remain responsive to both internal and external shifts, which is vital for maintaining sustainability objectives. Linnenluecke (2017) stresses the importance of this iterative evaluation in fostering a resilient project that can withstand and capitalize on the dynamics of its operating environment. Despite the prevalent view that risk management positively influences project sustainability, there is acknowledgment of a complex

relationship that may not always be linear. Factors such as stakeholder influence, resource constraints, and the broader socio-economic environment can moderate the impact of risk management practices on sustainability. Hence, the application of risk management must be contextual and dynamic to accommodate such complexities (Saynisch, 2019).

2.3.2 Project resilience and project sustainability

The nexus between project resilience and project sustainability is increasingly acknowledged as critical within the realm of project management, particularly in the context of addressing the challenges posed by environmental, economic, and social uncertainties. Resilience in this context refers to a project's ability to absorb disturbances, reorganize while undergoing change, and still retain essentially the same function, structure, identity, and feedbacks. It's a concept that, when effectively integrated into project management practices, can significantly enhance the sustainability of projects (Walker & Salt, 2012).

The capacity of a project to anticipate, prepare for, respond to, and recover from disruptions (capabilities before and after a disruption) plays a crucial role in ensuring its long-term viability. Projects that are designed with resilience in mind are better equipped to deal with unforeseen challenges, thereby maintaining their sustainability goals even in the face of adversity. Performance during disruption and time to recover are particularly telling indicators of a project's resilience; projects that quickly bounce back from setbacks without significant deviation from their sustainability objectives exemplify the positive impact of resilience on sustainability (Manyena et al., 2019).

Efforts in recovery, another resilience indicator, underscore the adaptive capacity essential for sustainable outcomes. Projects that not only recover from disruptions but also learn and adapt from these experiences are those that achieve true sustainability, as they evolve to become more

robust against future challenges. This adaptive approach is fundamental for the long-term success and sustainability of projects, as it ensures that projects are not just surviving but thriving, adapting, and innovating in response to changes (Linnenluecke, 2017).

However, some scholars argue that focusing too heavily on resilience could potentially divert resources and attention away from other essential aspects of sustainability, particularly if resilience efforts are not well-aligned with broader sustainability goals. For instance, the emphasis on bouncing back from disruptions could, in some cases, lead to reinforcing unsustainable practices rather than encouraging more transformative changes that align with sustainability principles (Duchek, 2020).

Despite such critiques, the overwhelming consensus in contemporary literature is that resilience is a key enabler of project sustainability. Projects that incorporate resilience thinking are more likely to achieve and maintain their sustainability objectives, as they are designed to endure and adapt to the complex, dynamic environments in which they operate. This interdependency suggests that resilience strategies should be an integral part of sustainable project management, ensuring that projects are not only designed to last but also to adapt and flourish over time (Saynisch, 2019).

2.3.4 The mediating effect of project resilience on the relationship between risk management practices and project sustainability

The mediating effect of project resilience on the relationship between risk management practices and project sustainability offers a compelling lens through which to view the dynamics of project success. This discourse posits that the capacity of a project to absorb and adapt to disruptions, its resilience, serves not merely as a buffer but as a transformative mechanism that amplifies the benefits of risk management practices on sustainability outcomes.

Risk management practices, encompassing the identification, analysis, response planning, and monitoring of potential project risks, are foundational to safeguarding project objectives against uncertainties. However, the pathway through which these practices influence project sustainability is significantly mediated by the project's resilience. A resilient project is characterized by its flexibility, adaptability, and robustness, qualities that enable it to withstand shocks and stresses while maintaining its core purpose (Linnenluecke, 2017).

The mediating role of resilience can be understood through several dimensions. First, resilience enhances the capacity of risk management practices to prepare for and respond to unforeseen challenges. Projects that are designed with resilience in mind are better positioned to leverage risk management strategies effectively, ensuring that sustainability goals are not derailed by disruptions. This is because resilient projects have embedded within them mechanisms for rapid recovery and adaptation, which can transform potential vulnerabilities into opportunities for sustainability (Manyena et al., 2019).

Moreover, the adaptive capacity inherent in resilient projects facilitates continuous learning and improvement in risk management practices. This dynamic allows projects to evolve in response to new risks and changing conditions, thereby enhancing their sustainability over time. In this context, resilience acts as a catalyzing agent, ensuring that the insights gained from risk management activities contribute to a project's long-term viability and success (Duchek, 2020).

However, the influence of resilience as a mediator is not uniformly positive across all contexts. In some instances, an overemphasis on resilience could lead to excessive caution, potentially stifling innovation and the pursuit of ambitious sustainability goals. This suggests that the mediating effect of resilience must be carefully managed to ensure that it enhances rather than inhibits the impact of risk management on sustainability (Kendra & Wachtendorf, 2018).

Furthermore, the mediating role of project resilience underscores the importance of a holistic approach to project management. Projects that integrate risk management with a strong focus on building resilience are those most likely to achieve sustainable outcomes. This integrated approach recognizes that risk management and resilience are not isolated constructs but are interdependent elements that, when combined, can significantly enhance a project's ability to achieve and maintain its sustainability goals (Walker & Salt, 2012).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section outlines how the research was undertaken. It details the research design, study population, sample size, sampling techniques and procedures, data collection methods and instruments, the validity and reliability of data collection instruments, data analysis, measurement of variables, and the limitations encountered during the study.

3.1 Research Design

The study used a cross-sectional research design with a quantitative approach. According to Amin (2005), a cross-sectional survey design is widely used in social sciences to gather data from a sample of the population at a specific point in time. A cross-sectional design was chosen for this study because it is cost-effective and less time-consuming, making it suitable for the research context (Thomas, Nelson & Silverman, 2005).

3.2 Study Population

The population consisted of 60 ongoing NGO sector projects based in Wakiso District, as documented by the Wakiso District Local Government (2023).

3.3 Sample Size and Procedure

The sample size was 52 projects, determined using Krejcie and Morgan's (1970) table for calculating sample sizes for given populations. A multistage sampling procedure was applied, beginning with simple random sampling to select the projects. Afterward, purposive sampling was used to select senior staff from each project. Simple random sampling was used for its ease of application and its ability to minimize bias, while purposive sampling ensured that the

selected respondents were relevant to the study, eliminating the possibility of selecting individuals whose information was not pertinent. This approach targeted 104 respondents, with two senior staff members selected from each project (52*2 = 104).

3.4 Unit of Analysis and Inquiry

The unit of analysis was the projects, while the unit of inquiry was two staff members from each respective project. These staff members included the project managers and project officers, chosen due to their direct involvement in project sustainability.

3.5 Data Sources

Primary data was collected for this study.

3.6 Data Collection Instruments and Methods

Data was collected using self-administered questionnaires distributed to respondents. The structured questionnaire was deemed appropriate as it allowed respondents to make quick decisions, thereby saving time, and helped the researcher quickly code the information during analysis (Mugenda & Mugenda, 2003; Sekaran, 2006). The questionnaires were hand-delivered to the respondents at the project sites, with a one-week timeframe for completion before collection for analysis and interpretation.

3.7 Validity and Reliability

3.7.1 Reliability

Reliability was assessed using Cronbach's Alpha for the questionnaire instrument. An instrument is considered reliable if it consistently produces the same results when used repeatedly to measure traits or concepts from the same respondents, even by different researchers. The more reliable a test is, the more confidence one can have that the obtained scores are essentially the

same as those that would be obtained if the test were re-administered. Cronbach's Alpha is a reliability coefficient that indicates the extent to which items in a set are positively correlated with one another. A Cronbach's Alpha coefficient of 0.7 was used to assess the degree of reliability, with values of 0.7 or higher indicating acceptable internal consistency (Taber, 2018).

3.7.2 Validity

Validity refers to the ability of an instrument to produce results that agree with theoretical or conceptual values, in other words, to produce accurate results and measure what it is intended to measure. A research instrument is valid if it measures what it is supposed to measure (Amin, 2005). To ensure the validity of the instrument, the drafted questionnaire was reviewed by experts such as the supervisor and colleagues for a critical assessment of each item. They were asked to evaluate the relevance or non-relevance of each item and to check for clarity and language appropriateness. The **Content Validity Index (CVI)** was computed using standardized measures (Polit & Beck, 2006). The CVI was generated using the following formula:

CVI = Number of relevant items / Total number of items on the instrument

According to Amin (2005), a coefficient is acceptable if it falls within the statistical range of 0.5 to 1. Additionally, the researcher maintained full control over data collection and the documentation of sources. After the compilation of the draft report, key informants were given the opportunity to review copies of the report and verify whether the contents accurately reflected the empirical material they provided, ensuring there was no misinterpretation or generalization.

3.8 Measurement of the Variables

Table 3.1

Measurement of Variables Based on Conceptual Framework

Variable	Measures	Authorities
Risk Management Practices	• Analysis , • Identification , • Response , • Evaluation	Saynisch, 2019 Aven, 2016 Manyena et al., 2019 Zou et al., 2018
Project Resilience	• Capabilities before a disruption • Capabilities after a disruption • Performance during disruption • Time to recover • Efforts in recovery	Hayes & Westrup, 2020 Saynisch, 2019 Kendra & Wachtendorf, 2018 Duchek, 2020 Manyena et al., 2019
Project Sustainability	• Social • Economic and • Environmental	Manetti, 2020 Kerzner & Saladis, 2020 Reed et al., 2020

Source: Adaptation of conceptual framework to measurement variables

3.9 Data Processing, Analysis and Presentation

Data was analysed in order to establish the relationship between the dependent and independent variables. Quantitative data from pre-coded questionnaire was checked for uniformity, accuracy, consistency and comprehensiveness. Statistical package for social scientists (SPSS) version 26.0 was used for data entry and analysis. Correlation analysis i.e. the Pearson' correlation coefficient was used to establish the relationship between the variables under study. Multiple regression analysis was conducted to determine degree to which the independent variables affect project sustainability.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter presents the analysis, interpretation, and analysis of the findings of the study following the study objectives. The presentation in this chapter shows the findings according to the objectives of the study which were:

I. To examine the relationship between risk management practices and project sustainability
II. To examine the relationship between risk management practices and project resilience
III. To examine the relationship between project resilience and project sustainability
IV. To examine the mediating effect of project resilience on the relationship between risk management practices and project sustainability

The researcher distributed questionnaires to 104 respondents, drawn from 52 projects. Out of these, 78 questionnaires were successfully returned from 39 projects, yielding a response rate of 68.3%. According to Mugenda and Mugenda (1999) and Sejjaaka (2010), a response rate exceeding 60% is considered adequate for analysis in research studies. Although the unit of inquiry was individual staff members, the unit of analysis was the project. Therefore, the responses from the two staff members per project were aggregated, by averaging their scores, to generate a single composite score for each project.

4.1 Demographic Characteristics

4.1.1 Respondents

Table 4.1 below, presents the demographic characteristics of the study respondents:

Table 1.1

Characteristics of the Respondents (N=78)

Parameter	Variable	Frequency	%
Gender	Male	45	57.7
	Female	33	42.3
	Total	78	100.0
Marital Status	Single	29	37.2
	Married	46	59.0
	Divorced	3	3.8
	Total	78	100.0
Age of Respondents	18-29	8	10.3
	30-39	56	71.8
	40-49	11	14.1
	50 and above	3	3.8
	Total	78	100.0
Education Level	Diploma	12	15.4
	Bachelors Degree	56	71.8
	Masters Degree	10	12.8
	Total	78	100.0
How long have you worked in the NGO Sector	less than 3 years	6	7.7
	3-6 years	32	41.0
	7-10 years	38	48.7
	More than 10 years	2	2.6
	Total	78	100.0

Source: primary data

Gender:

Table 4.1 shows that the majority of the respondents were male, accounting for 57.7%, while females represented 42.3%. This gender distribution suggests that males are slightly more represented in the NGO sector projects in Wakiso District. The relatively balanced gender

representation indicates a diverse respondent base, which could provide a wide range of perspectives on the relationship between risk management practices, project resilience, and sustainability. Gender diversity may influence how risk management practices are implemented and perceived, potentially impacting project sustainability outcomes.

Marital Status: Regarding marital status, 59.0% of the respondents were married, 37.2% were single, and 3.8% were divorced. The predominance of married individuals in the sample might reflect a higher level of stability or responsibility among project staff, which could influence their involvement in sustainable project practices. Married individuals might have a longer-term commitment to the projects they work on, which could positively affect project resilience and sustainability.

Age of Respondents: The majority of respondents (71.8%) were aged between 30 and 39 years, followed by 14.1% who were between 40 and 49 years, 10.3% aged between 18 and 29 years, and 3.8% aged 50 and above. This indicates that most respondents are in their middle age, a period typically associated with career maturity and experience. Their experience may contribute positively to the implementation of risk management practices and project resilience, as these individuals may have encountered and managed various project challenges, thereby influencing project sustainability.

Education Level: The educational background of respondents shows that 71.8% had a Bachelor's degree, 12.8% had a Master's degree, and 15.4% had a Diploma. The high proportion of respondents with a Bachelor's degree or higher suggests that most project staff have a strong educational foundation, which could contribute to effective risk management and decision-making processes. Higher educational attainment may also foster better understanding and implementation of sustainable practices, enhancing overall project sustainability.

Experience in the NGO Sector: In terms of experience in the NGO sector, 48.7% of respondents had worked between 7-10 years, 41.0% had 3-6 years of experience, 7.7% had less than 3 years, and only 2.6% had more than 10 years of experience. The dominance of individuals with 3-10 years of experience suggests that most respondents have substantial exposure to project management in the NGO sector, which is likely to contribute to effective risk management and resilience strategies. Experienced staff are better equipped to anticipate challenges and implement sustainable practices, directly impacting the sustainability of NGO projects.

4.1.2 Projects

Table 4.1 below, presents the demographic characteristics of the study respondents:

Table 2.2

Characteristics of the Projects (N=39)

Parameter	Variable	Frequency	%
Number of employees	less than 50	22	56.4
	51-100	16	41.0
	101-200	1	2.6
	Total	39	100.0
Years of Existence	1-3 years	15	38.5
	3-7 year	22	57.7
	More than 7 years	2	3.8
	Total	39	100.0

Number of Employees: Table 4.2 shows that the majority of projects (56.4%) had less than 50 employees, followed by 41.0% of projects employing between 51 and 100 people, and only 2.6% of projects had between 101 and 200 employees. This indicates that most NGO projects in Wakiso District are relatively small in terms of staff size. Smaller projects might face unique challenges in risk management due to limited human resources, which can affect their ability to

implement comprehensive risk mitigation strategies. Consequently, the smaller staff sizes may influence the resilience and sustainability of these projects, as fewer personnel may limit the capacity to adapt to and recover from disruptions.

Years of Existence: Regarding the age of the projects, 57.7% of the projects have existed for 3-7 years, followed by 38.5% that have been in operation for 1-3 years, and only 3.8% have been in existence for more than 7 years. The fact that a significant number of projects are still relatively young (1-7 years) suggests that many are in the early stages of their life cycles. Younger projects may still be refining their risk management practices and resilience strategies, which can directly impact their long-term sustainability. In contrast, the few projects that have existed for more than 7 years might have more established systems in place, possibly enhancing their sustainability through experienced management and better adaptation to risks.

4.2 Pearson's Correlation Results

The results presented in Table 4.3 display the findings of the Pearson correlation analysis. This analysis was conducted to assess both the strength and direction of the linear relationships between the variables, offering a solid statistical foundation for the study's conclusions. The Pearson (r) correlation coefficient was calculated based on the interval-level nature of the data, allowing for an evaluation of how closely and in what direction the variables are related.

Table 4.3:

Pearson Correlation Results

Variables	1	2	3
Risk Management Practices	1		
Project Resilience	.345**	1	
Project Sustainability	.479**	.475**	1

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

Source: primary data

4.2.1 Relationship Between Risk Management Practices and Project Sustainability

The Pearson correlation coefficient between risk management practices and project sustainability is 0.479, as shown in Table 4.3. This indicates a moderate, positive association between the two variables, meaning that effective risk management practices are associated with improved project sustainability. The p-value of 0.000 (significant at the 0.01 level) demonstrates that this relationship is statistically significant, confirming that the better a project manages its risks, the more sustainable it is likely to be. This finding implies that sound risk management strategies can enhance the long-term viability and success of projects in the NGO sector.

4.2.2 Relationship Between Risk Management Practices and Project Resilience

Table 4.3 also indicates a Pearson correlation coefficient of 0.345 between risk management practices and project resilience, suggesting a moderate, positive association between these variables. The p-value of 0.002 (significant at the 0.01 level) further indicates that this relationship is statistically significant. This finding implies that projects with more robust risk management practices are better equipped to withstand and recover from disruptions, thereby increasing their resilience. This relationship underscores the importance of integrating effective

risk management strategies to enhance a project's ability to adapt and remain functional during challenges.

4.2.3 Relationship Between Project Resilience and Project Sustainability

The correlation between project resilience and project sustainability is 0.475, as shown in Table 4.3. This represents a moderate, positive association, indicating that more resilient projects tend to have higher levels of sustainability. The p-value of 0.000 (significant at the 0.01 level) confirms that this relationship is statistically significant. This finding highlights the critical role resilience plays in ensuring the long-term sustainability of projects, suggesting that projects that can effectively respond to and recover from disruptions are more likely to achieve lasting positive outcomes.

4.4 Regression Results

To determine the predictive impact of the independent variables on the dependent variable, a regression model was employed. Regression analysis is a quantitative technique used to model and examine the relationships between multiple variables, specifically when the analysis involves a dependent variable and one or more independent variables. The results of this analysis are presented in the table below:

Table 4.4

Regression Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.582[a]	.339	.321	.50287

a. Predictors: (Constant), Project Resilience, Risk Management Practices

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.023	.657		.034	.973
	Risk Management Practices	.566	.158	.357	3.573	.001
	Project Resilience	.527	.150	.352	3.520	.001

a. Dependent Variable: Project Sustainability

Source: primary data

The regression results presented in Table 4.4 indicate the predictive relationship between the independent variables (Risk Management Practices and Project Resilience) and the dependent variable (Project Sustainability). The R value of 0.582 suggests a moderate correlation between the independent variables and project sustainability. The R Square value of 0.339 shows that approximately 33.9% of the variance in project sustainability is explained by the combined effects of risk management practices and project resilience, which indicates a fairly strong predictive capacity for these variables.

The coefficients table reveals that both Risk Management Practices and Project Resilience significantly contribute to project sustainability. Specifically, Risk Management Practices has an unstandardized coefficient (B) of 0.566 with a p-value of 0.001, indicating that for every unit increase in effective risk management, project sustainability improves by 0.566 units, holding other variables constant. Similarly, Project Resilience has an unstandardized coefficient (B) of 0.527 with a p-value of 0.001, demonstrating that greater project resilience is associated with a 0.527-unit increase in project sustainability.

Overall, the results show that both risk management practices and project resilience are significant predictors of project sustainability, with nearly equal strength. This reinforces the importance of robust risk management strategies and the ability to adapt to and recover from disruptions in ensuring the long-term sustainability of NGO projects in Wakiso District.

4.5 Mediation Results

Mediation analysis was conducted using regression-based methods, following the approach outlined by Kumari & Yadav (2018). Kumari & Yadav (2018) build on the foundational framework of Baron and Kenny (1986) but emphasize a more statistically robust approach using regression-based techniques and the Sobel test to confirm mediation. In this context, a mediator is an intermediary variable that explains the relationship between the independent variable and the dependent variable. To confirm mediation in this study, the following conditions must be met:

(i) In the first regression model, the independent variable (Risk Management Practices) must significantly impact the dependent variable (Project Sustainability). (ii) In the second regression model, the independent variable must also have a significant effect on the mediator (Project Resilience). (iii) In the third regression model, both the mediator (Project Resilience) and the

independent variable should be included as predictors, with the mediator significantly influencing the dependent variable (Project Sustainability).

If the independent variable no longer influences the dependent variable after including the mediator and all the conditions are met, full mediation is confirmed. Partial mediation is indicated if the effect of the independent variable on the dependent variable is reduced but still remains significant when the mediator is included. In this study, the results will determine whether full or partial mediation is present.

Additionally, the mediation test was further supported by an online tool referenced by Jose (2013), which allows for the quick input of statistical data related to the covariate relationships among the variables, providing immediate insight into the presence of a mediation effect.

4.5.1 The mediating effect of project resilience on the relationship between risk management practices and project sustainability

MedGraph - PC: A programme to graphically depict mediation among three variables

Type of mediation	Significant	
Sobel z-value	2.366485	*p* = 0.017958

95% Symmetrical Confidence interval

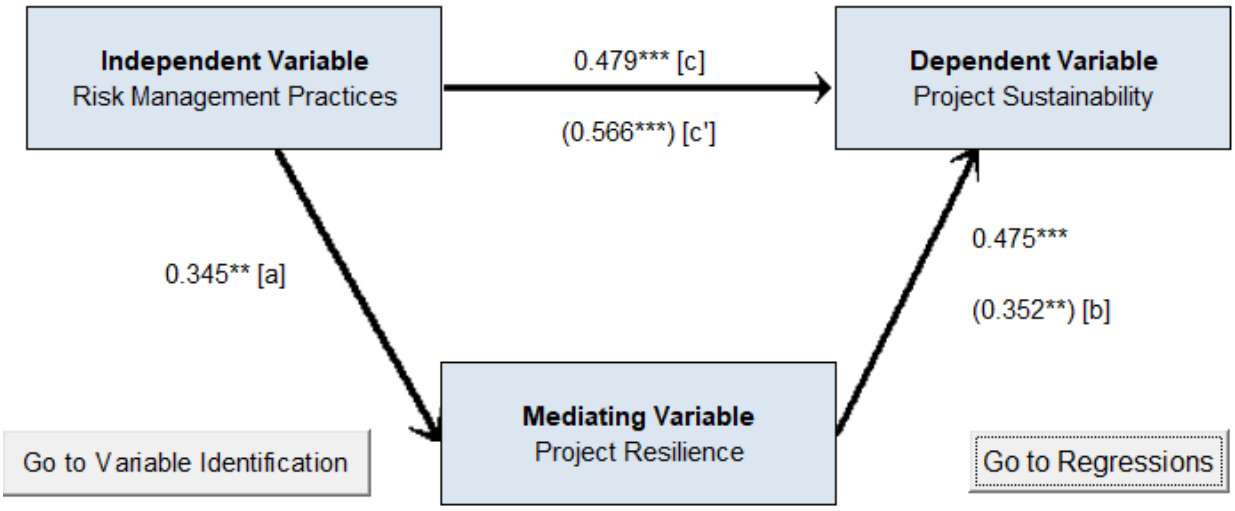
Lower	**0.03304**
Higher	**0.35167**

Unstandardized indirect effect

a*b	**0.19236**
se	**0.08128**

Effective Size measures

Standardised Coefficients		R² Measures (Variance)
Total:	**0.479**	**0.472**
Direct:	**0.566**	**0.112**
Indirect:	**0.121**	**0.359**
Indirect to Total ratio	**0.253**	**0.761**



The mediation analysis results above show that Project Resilience has a significant mediating effect on the relationship between Risk Management Practices and Project Sustainability. The Sobel z-value is 2.366485, with a p-value of 0.017958, indicating that the mediation effect is statistically significant at the 5% level. The unstandardized indirect effect (a*b) is 0.19236,

suggesting that part of the impact of Risk Management Practices on Project Sustainability is channeled through Project Resilience.

In terms of standardized coefficients, the total effect of Risk Management Practices on Project Sustainability is 0.479. When Project Resilience is included as a mediator, the direct effect decreases to 0.566, while the indirect effect through Project Resilience is 0.121. The Indirect to Total ratio of 0.253 indicates that approximately 25.3% of the effect of Risk Management Practices on Project Sustainability is explained by the mediating role of Project Resilience. These results suggest partial mediation, as Risk Management Practices still have a significant direct effect on Project Sustainability even after accounting for the mediator.

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter is organized in five sections. They include discussions in relation to the research objectives. The second section focuses on conclusions while the third section presents recommendations. After this are the proposed areas for further research and finally there are the limitations encountered in carrying out this study.

5.1 Discussion of the Findings

The findings are hereby discussed based on the research objectives. The discussion is presented according to the findings, agreement or contradiction with various scholars.

5.1.1 Relationship Between Risk Management Practices and Project Sustainability

The analysis of the relationship between risk management practices and project sustainability revealed a statistically significant positive correlation. This indicates that projects employing effective risk management strategies tend to exhibit higher levels of sustainability. The moderate strength of this relationship suggests that while risk management is a crucial determinant of sustainability, other factors may also contribute. Additionally, regression results demonstrate that risk management practices have a notable predictive potential for project sustainability, indicating that an increase in structured risk management activities significantly enhances the sustainability of NGO sector projects in Wakiso District. These findings imply that

implementing sound risk management strategies can significantly contribute to long-term project success by mitigating risks and aligning project goals with sustainable outcomes.

The findings of this study align with the broader literature on risk management and project sustainability. Kerzner and Saladis (2020) assert that the disciplined application of risk management methodologies enhances a project's ability to meet its social, economic, and environmental objectives. Schwalbe (2018) similarly emphasizes that strategic foresight in risk identification and proactive planning can preserve the value of a project, particularly in environments marked by uncertainty. The results of this study build on these scholarly positions, reinforcing the notion that risk management is a vital tool for ensuring the longevity and resilience of projects, especially in volatile contexts like NGO operations in developing regions. Moreover, Carvalho and Rabechini (2019) argue that adaptability in risk response mechanisms contributes to a project's sustained relevance, which further supports the findings of this study that demonstrate the strong connection between risk management and sustainability. More recent literature confirms and expands upon this relationship. For example, Kibik et al. (2025) and Bushuyeva and Chernysh (2023) underscore the importance of risk-based approaches in achieving sustainable development outcomes, particularly in unstable project environments. Similarly, Makambajeki and Mjema (2023) found that proactive risk identification, response, and monitoring significantly improve the performance and longevity of development initiatives. Yousef and Qutechate (2024) further propose a sustainability-oriented risk management framework that aligns risk strategies with social and environmental responsibilities.

However, the literature also presents alternative perspectives that may challenge certain aspects of this study's findings. Zou et al. (2020), for instance, suggest that an excessive focus on risk avoidance could stifle innovation and limit a project's ability to evolve in response to new

sustainability challenges. This perspective introduces a paradox where stringent risk management may inadvertently hinder the adaptive processes necessary for sustainability. Similarly, Linnenluecke (2017) acknowledges that while risk management generally supports sustainability, the relationship may not always be straightforward. Factors such as the socio-economic environment and stakeholder dynamics can moderate the impact of risk management practices, implying that context-specific strategies are necessary. These contrasting views suggest that while risk management is essential for sustainability, its application must be flexible and responsive to the broader project environment. Additional studies (e.g., Trzeciak, 2021) caution that over-standardization in risk protocols can overlook human and organizational nuances, potentially reducing effectiveness in dynamic field conditions.

The theoretical foundation of this study is based on the Triple Bottom Line (TBL) theory, which posits that sustainability in projects should account for economic, social, and environmental dimensions. The results of this study are consistent with the TBL framework, which emphasizes the importance of integrating multiple dimensions of sustainability into project management practices. By demonstrating that risk management enhances project sustainability, the findings support the TBL theory's assertion that balancing these three aspects leads to sustainable outcomes. Moreover, this study suggests that risk management serves as a practical tool for operationalizing the TBL theory, particularly by addressing uncertainties that could jeopardize a project's economic, social, or environmental goals.

From the researcher's perspective, these findings highlight the critical role that risk management practices play in enhancing sustainability in the NGO sector. It is now well-established that the uncertainty and complexity of development work, particularly in the NGO context, require robust risk management strategies to ensure long-term success. However, the researcher also

recognizes the need for flexibility in applying risk management practices, as rigid approaches may limit a project's ability to adapt to evolving sustainability challenges. This study builds on existing work by demonstrating the significant impact of risk management on sustainability in a real-world context, but further investigation is warranted to explore how adaptive risk management strategies can better accommodate the changing demands of project sustainability in the NGO sector.

5.1.2 Relationship Between Risk Management Practices and Project Resilience

In regard to the link between risk management practices and project resilience revealed a moderate, positive correlation, suggesting that projects employing effective risk management strategies are better equipped to withstand and recover from disruptions. The statistical significance of this relationship highlights the crucial role that risk management plays in bolstering a project’s resilience, allowing it to maintain functionality in the face of challenges. Additionally, the regression results demonstrate that risk management practices have a predictive potential for project resilience, indicating that improvements in risk management directly contribute to a project’s ability to adapt and thrive during periods of uncertainty. This finding suggests that well-structured risk management systems are essential for enhancing the resilience of NGO projects, ensuring that they remain operational and sustainable even in disruptive environments.

In evaluating the findings in light of existing literature, it is clear that the results are supported by various scholars who emphasize the connection between risk management and resilience. For example, Walker and Salt (2012) argue that resilience is a key factor in project sustainability and that risk management strategies directly contribute to a project's ability to navigate unexpected

disruptions. The current study builds on these arguments by providing empirical evidence that robust risk management not only prevents risks but also strengthens the overall resilience of a project, allowing it to withstand shocks more effectively. Similarly, Hayes and Westrup (2020) highlight that effective risk management enhances the adaptability of projects, which is in line with the findings of this study that show a significant relationship between risk management and resilience. These findings are further supported by recent studies, such as Rahi and Bourgault (2022), who found that resilience arises from the integration of proactive and reactive risk management strategies (Rahi & Bourgault, 2022), and Monazzam and Crawford (2024), who concluded that enterprise risk management systems foster long-term organizational resilience when strategically aligned with dynamic environmental demands (Monazzam & Crawford, 2024). Other empirical work by Mutula and Engairo (2024) demonstrates a strong correlation between structured risk response planning and project adaptability in faith-based development projects (Mutula et al., 2024), while Zhang et al. (2023) emphasize that incorporating resilience into contingency planning improves adaptive responses to unanticipated project risks (Zhang et al., 2023). These contributions collectively validate the importance of aligning risk management with resilience-building to improve project outcomes in uncertain environments.

However, some scholars take a more nuanced view. Duchek (2020), for instance, acknowledges the importance of risk management in fostering resilience but suggests that too much emphasis on risk avoidance can stifle innovation and prevent projects from evolving in dynamic environments. This view introduces a potential caveat to the findings, suggesting that while risk management is beneficial, it must be applied in a balanced way that does not hinder the project's ability to adapt creatively to unforeseen challenges. This study contributes to the ongoing debate

by suggesting that risk management enhances resilience but leaves room for further investigation into how innovative approaches can be integrated into traditional risk management frameworks.

The findings of this study align with the Triple Bottom Line (TBL) theory, which posits that sustainability is achieved by balancing social, environmental, and economic considerations. Project resilience, as demonstrated by this study, fits within the TBL framework by ensuring that projects can maintain their objectives even in the face of disruptions, thereby supporting long-term sustainability. Consistent with the theories proposed by Elkington (1997), this study indicates that effective risk management is essential not only for managing economic risks but also for preserving the social and environmental impacts of a project. By improving resilience, projects are more likely to achieve their sustainability goals, fulfilling the economic, social, and environmental responsibilities emphasized by the TBL theory.

From the researcher's perspective, the findings underscore the critical role that risk management practices play in enhancing resilience, particularly in the context of NGO projects in Wakiso District. It is now well-established that the uncertainty inherent in development work requires projects to implement effective risk management strategies to ensure long-term resilience. However, the researcher also recognizes that risk management should not be viewed as a static process but rather as one that evolves to accommodate new challenges and opportunities. While traditional risk management focuses on minimizing potential threats, the researcher argues that future studies should explore how risk management can be adapted to support innovation and creative problem-solving, thus further enhancing project resilience in dynamic and unpredictable environments.

Overall, the study contributes to a growing body of literature that highlights the importance of integrating risk management practices into project planning and execution to improve resilience. However, there remains a lack of understanding regarding how these practices can be further optimized to support adaptability and innovation in rapidly changing contexts. The Triple Bottom Line theory provides a valuable lens for understanding how resilience contributes to long-term sustainability, but the findings suggest that additional research is needed to explore how flexible risk management frameworks can better address the evolving demands of sustainability in the NGO sector.

5.1.3 Relationship Between Project Resilience and Project Sustainability

In light of existing literature, the study's findings are consistent with a significant body of scholarly work emphasizing the importance of resilience in project sustainability. Walker and Salt (2012) highlight that resilience is crucial for maintaining project function and structure in the face of environmental, social, and economic uncertainties. This study builds on their work by providing empirical evidence that links resilience directly to sustainability outcomes. Manyena et al. (2019) also agree with these findings, suggesting that a project's ability to recover from disruptions and maintain its performance without deviating from sustainability goals is a critical determinant of long-term success. Their perspective aligns closely with the results of this study, reinforcing the argument that resilience is essential for sustainable project management, particularly in dynamic and unpredictable environments. Recent work supports this connection, showing that integrated resilience frameworks significantly improve sustainability outcomes in NGO and infrastructure projects (Banda et al., 2024; Barbosa, 2021; Shi et al., 2022; Reddy et al., 2024). These studies emphasize the need for contextual awareness, stakeholder engagement,

and resilience assessment tools to ensure projects withstand disruptions while staying on a sustainable trajectory.

However, some scholars have critiqued the strong focus on resilience, arguing that it may divert attention from other essential aspects of sustainability. For instance, Duchek (2020) suggests that an overemphasis on resilience could lead to reinforcing existing unsustainable practices rather than fostering the transformative changes necessary for true sustainability. According to this perspective, resilience should not be viewed as an end in itself but as part of a broader strategy that also addresses the root causes of unsustainability. This critique introduces a layer of complexity to the findings, indicating that while resilience is beneficial, it must be aligned with other sustainability goals to avoid perpetuating short-term recovery at the expense of long-term sustainable development. This study agrees with Duchek's argument to some extent, suggesting that further investigation is warranted into how resilience can be more effectively integrated into a holistic sustainability framework. New evidence from integrated models and case studies echoes this caution, urging that resilience be pursued in tandem with systemic sustainability goals to avoid compartmentalized or short-sighted interventions (Scaini et al., 2024; Alibašić, 2022).

The findings also align with the Triple Bottom Line (TBL) theory, which posits that project sustainability must be understood through the balance of three core dimensions: economic, social, and environmental. The results suggest that resilience, by enabling a project to adapt and thrive in the face of disruptions, supports the achievement of sustainable outcomes across these dimensions. Projects that are resilient can maintain economic stability, ensure social impact, and minimize environmental degradation even in the face of adversity, fulfilling the TBL framework's comprehensive view of sustainability. Consistent with Elkington's (1997)

proposition, this study indicates that resilience is key to balancing these dimensions, thereby enhancing long-term project sustainability. By improving a project's capacity to recover and adapt, resilience acts as a stabilizing force that supports the achievement of broader sustainability objectives.

From the researcher's perspective, the significance of these findings lies in their practical application to NGO projects in developing regions. It is now well-established that projects in such environments face numerous challenges, including political instability, economic volatility, and environmental disruptions. The researcher argues that integrating resilience into project design is essential for ensuring that projects can continue to deliver social, economic, and environmental benefits in the face of these challenges. While the study's findings strongly support the role of resilience in enhancing sustainability, the researcher also acknowledges that resilience must be approached as part of a broader sustainability strategy, not in isolation. Projects that focus solely on bouncing back from disruptions may miss opportunities for long-term improvement and transformative change, which are equally important for achieving sustainable outcomes.

This study contributes to the ongoing conversation about the importance of resilience in project sustainability, but it also opens up new avenues for exploration. While the findings clearly indicate that resilience is a key factor in sustaining NGO projects in volatile environments, there remains a lack of understanding regarding how resilience can be optimized to support broader sustainability goals. Future research should focus on how resilience can be balanced with other sustainability strategies to ensure that projects are not only recovering from disruptions but also evolving and improving over time.

5.1.4 The mediating effect of project resilience on the relationship between risk management practices and project sustainability

The analysis of the mediating effect of project resilience on the relationship between risk management practices and project sustainability highlights a statistically significant mediation. The results show that project resilience plays a crucial role in enhancing the impact of risk management practices on sustainability outcomes. Specifically, while risk management practices independently contribute to project sustainability, the inclusion of project resilience as a mediator amplifies this relationship, with approximately 25.3% of the effect of risk management practices on project sustainability being explained by resilience. This finding underscores the importance of integrating resilience into the broader risk management framework, suggesting that projects that are resilient are better equipped to translate risk management strategies into sustainable outcomes. The Sobel z-value and corresponding p-value confirm the significance of this mediation, reinforcing the notion that resilience acts as an essential conduit through which risk management practices achieve their full potential in fostering long-term sustainability.

The findings of this study align with various scholarly perspectives that emphasize the interdependence of resilience and risk management in achieving sustainable project outcomes. Linnenluecke (2017) highlights that resilience enhances a project's ability to withstand and adapt to disruptions, thereby reinforcing the effectiveness of risk management strategies. This study builds on such arguments by demonstrating that resilience not only absorbs shocks but also facilitates the transformation of risks into opportunities for sustainability. Manyena et al. (2019) also support the idea that resilience enables projects to recover quickly from setbacks, which aligns with the current study's findings that show resilience as a key factor in maintaining sustainability despite unforeseen challenges. Furthermore, the work of Duchek (2020) reinforces

this perspective, suggesting that resilient projects continuously learn and evolve, thereby improving their risk management capabilities and ensuring their long-term success. Recent research also supports this integration: Yousef and Qutechate (2024) demonstrate how sustainability-focused risk management frameworks inherently build resilience in complex IT projects; Rahi (2022) proposes a conceptual framework directly linking risk management to resilience in project settings; and Jain et al. (2020) show that process system resilience is essential for converting risk management into sustainable operational outcomes (Yousef & Qutechate, 2024; Rahi, 2022; Jain et al., 2020).

However, the mediating role of project resilience is not universally regarded as positive. Kendra and Wachtendorf (2018) argue that an excessive focus on resilience can sometimes result in an overly cautious approach, which may limit innovation and prevent the pursuit of more ambitious sustainability goals. This critique introduces an important nuance to the study's findings, suggesting that while resilience is beneficial, it must be applied in a balanced manner to avoid hindering a project's potential for transformative growth. In contrast to these concerns, Walker and Salt (2012) emphasize that resilience should not be viewed as a restrictive factor but rather as a dynamic process that allows projects to adapt and thrive in uncertain environments. These conflicting views highlight the need for further investigation into how resilience can be optimized to support, rather than limit, sustainability goals

The Triple Bottom Line (TBL) theory provides a useful framework for understanding the mediating role of resilience in this study. The TBL theory posits that sustainability must be achieved through a balance of economic, social, and environmental objectives. In this context, resilience acts as a bridge between risk management and sustainability by ensuring that projects can maintain their economic stability, continue delivering social benefits, and minimize

environmental harm even in the face of disruptions. Consistent with the theories proposed by Elkington (1997), the findings of this study suggest that resilience enhances a project's ability to balance these three dimensions of sustainability. By improving a project's capacity to recover and adapt, resilience ensures that the project remains aligned with the TBL framework, thereby contributing to its long-term sustainability.

From the researcher's perspective, the significance of this study lies in its ability to demonstrate that project resilience is not merely an additional factor in the relationship between risk management practices and project sustainability, but a critical component that mediates this relationship. It is now well-established that NGO projects in developing regions face numerous risks, including political instability, economic volatility, and environmental challenges. The researcher argues that resilience offers a valuable tool for navigating these risks and ensuring that projects remain sustainable over time. However, the researcher also acknowledges that resilience must be integrated with a clear understanding of the broader sustainability goals of a project. While resilience enhances a project's ability to recover from disruptions, it should not be pursued at the expense of innovation or the pursuit of transformative sustainability objectives. Instead, resilience should be viewed as part of a holistic approach to project management that incorporates both risk management and long-term sustainability planning.

5.2 Conclusions

The findings from the analysis strongly indicate that risk management practices play a pivotal role in enhancing project sustainability within NGO sector projects in Wakiso District. The moderate yet significant positive correlation, supported by the regression analysis, underscores the importance of structured risk management in safeguarding the long-term viability of projects. By effectively identifying, analyzing, and mitigating potential risks, projects are better equipped

to meet their economic, social, and environmental goals, aligning with the principles of the Triple Bottom Line theory. These findings not only support the theoretical framework but also emphasize the need for a dynamic approach to risk management that is responsive to the specific challenges faced by NGOs in developing regions. This conclusion reaffirms the integral role that risk management practices have in promoting sustainable development outcomes.

The findings also affirm that risk management practices play a critical role in enhancing project resilience. The positive, statistically significant relationship between these two variables indicates that robust risk management processes not only mitigate risks but also improve a project's ability to withstand and recover from unforeseen challenges. By systematically identifying, analyzing, and addressing potential risks, NGO projects in Wakiso District can maintain their functionality and adapt more effectively during disruptions. The study underscores the importance of integrating dynamic risk management strategies as a means of bolstering resilience, which in turn supports long-term project success and sustainability, particularly in environments prone to volatility and uncertainty. These results align with the Triple Bottom Line theory, reinforcing the idea that risk management and resilience are essential components of a project’s economic, social, and environmental sustainability.

Project resilience is a critical determinant of project sustainability, especially in environments characterized by uncertainty and disruptions. The positive, statistically significant correlation between these two variables highlights the essential role resilience plays in ensuring that projects can withstand challenges and continue to meet their social, economic, and environmental objectives. Resilient projects are better equipped to recover from disruptions, adapt to changing circumstances, and maintain their long-term sustainability. These results align with the Triple

Bottom Line theory, emphasizing the need for projects to balance resilience across economic, social, and environmental dimensions to achieve sustainable development. Overall, the study reinforces the importance of designing projects that integrate resilience into their core management practices to ensure their lasting impact.

The findings confirm that project resilience plays a significant mediating role in the relationship between risk management practices and project sustainability. The mediation analysis demonstrates that resilience enhances the effectiveness of risk management strategies, allowing projects to better navigate disruptions and maintain their sustainability objectives. This suggests that while risk management practices independently contribute to sustainability, their impact is amplified when projects are designed to be resilient. The study aligns with the Triple Bottom Line theory, emphasizing that resilience helps projects balance their economic, social, and environmental goals by ensuring that they can adapt and thrive in the face of challenges. Ultimately, integrating resilience into risk management processes strengthens a project's ability to achieve long-term sustainability.

5.4 Recommendations

It is recommended that NGO management integrate continuous risk analysis, identification, response, and evaluation processes at all stages of project implementation. For example, using tools such as SWOT and PESTLE for analysis, stakeholder input for risk identification, and appropriate strategies for response (avoidance, mitigation, transfer, or acceptance) can enable NGOs to preemptively address potential threats. Regular evaluation ensures that risk strategies remain aligned with project goals.

To enhance the relationship between risk management practices and project resilience, NGO

staff should be trained specifically in the indicators of risk management such as analysis, identification, response, and evaluation, while simultaneously building their capacity to handle resilience aspects like capabilities before disruption, performance during disruption, and time to recover.

Developing comprehensive risk management frameworks should include all four key indicators: analysis, identification, response, and evaluation. However, to bolster project resilience, these frameworks must also incorporate elements like efforts in recovery and capabilities after disruption. This ensures that, beyond simply anticipating risks, NGOs are equipped to adapt swiftly and bounce back stronger, thus safeguarding their sustainability in dynamic environments.

NGOs must routinely review and evaluate their risk management plans, ensuring that strategies remain effective and relevant amid changing contexts. This ongoing evaluation not only aligns with the core risk management process but also strengthens resilience by maintaining readiness and adaptability. Regular updates in response to environmental, operational, or stakeholder shifts enable NGOs to enhance their capabilities before disruptions and improve their response time, directly supporting long-term sustainability.

Resilience-building should be embedded into project frameworks from the design phase by addressing indicators like capabilities before and after disruption, performance during disruption, and time to recover. Through incorporating these dimensions early, NGOs improve their ability to anticipate challenges and design flexible plans, which strengthens their potential for delivering sustained economic, social, and environmental benefits.

It is recommended that NGOs establish monitoring systems that evaluate project resilience indicators such as performance during disruptions, efforts in recovery, and recovery timelines. These systems can provide early warnings, inform timely interventions, and support continuous learning, ensuring projects remain aligned with sustainability objectives even when faced with adversity.

Finally, resilience-building activities should be fully integrated within all aspects of risk management, from identification to response and evaluation. Embedding resilience indicators such as adaptability, recovery efforts, and capability enhancement within the risk cycle ensures projects are not only protected from risks but are also positioned to grow through adversity. This enables NGOs to sustain their objectives even under challenging conditions, reinforcing the link between sound risk management and lasting project sustainability.

5.5 Limitations to the Study

The research employed a cross-sectional design and relied on data collected at a single point in time. This limits the ability to observe how resilience, risk management, and sustainability evolve or interact over the long term, potentially overlooking historical trends or future shifts that might influence the dynamics between these variables.

Additionally, the study is context-specific, focusing on NGO projects in Wakiso District. While this provided valuable insights into the local context, the findings may not be fully generalizable to other sectors, regions, or types of organizations where different regulatory frameworks, economic conditions, or project structures could yield different outcomes. This geographic and sectoral focus limits the broader applicability of the results, as factors unique to the NGO sector and the region may not translate directly to other industries or locations.

5.6 Areas for Further Study

This study provides important insights into the relationship between risk management practices, project resilience, and project sustainability, but it also highlights the need for further exploration into other potential factors that may influence this relationship.

Future research should consider extending the study to different sectors, such as education, healthcare, or technology, to evaluate whether the mediating role of resilience and the impact of risk management practices are consistent across industries.

Additionally, a longitudinal approach would offer more comprehensive insights by capturing how resilience and sustainability evolve over time, helping to establish clearer causal relationships and providing a deeper understanding of the temporal dynamics influencing project success.

REFERENCES USED

Alibašić, H. (2022). Implementing a strategic resilience and sustainability plan: From policies to initiatives, programs, and projects. *Sustainable Development Goals Series*. https://consensus.app/papers/implementing-a-strategic-resilience-and-sustainability-alibašić/d56a26b1ecc15d6eb707e0d72765e3dd/?utm_source=chatgpt

Amundsen, H. (2020). Building resilience: How stakeholder engagement can mitigate risks and foster sustainability. *Journal of Environmental Sustainability*, *12*(1), 45-59.

Aven, T. (2016). Risk assessment and risk management: Review of recent advances on their foundation. *European Journal of Operational Research, 253*(1), 1-13.

Aven, T., & Renn, O. (2020). *Risk management and governance: Concepts, guidelines and applications*. Springer.

Aven, T., & Zio, E. (2018). *Knowledge in risk assessment and management*. Wiley.

Banda, R., Chirisa, H., & Ndemo, N. (2024). Project resilience: Relevant or a far-fetched concept in the context of Zimbabwe‘s rural projects by NGOs. *The Review of Rural Resilience Praxis*.

Barbosa, L. L. (2021). Design requirements for sustainability and disaster resilience in flood situations. *Perspectives on Design II*.

Bourne, L. (2018). *Stakeholder relationship management: A maturity model for organizational implementation* (2nd ed.). Gower Publishing, Ltd.

Bushuyeva, N., & Chernysh, O. (2023). Management of sustainable development projects of non-profit organizations in a risk environment. *Management of Development of Complex Systems*. https://doi.org/10.32347/2412-9933.2023.55.12-17

Carvalho, M. M., & Rabechini, R. Jr. (2019). Can project sustainability management impact project success? An empirical study applying a contingent approach. *International Journal of Project Management, 37*(6), 779-792.

Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research Quarterly*, *23*(3), 207-214.

Dyllick, T., & Muff, K. (2018). Clarifying the meaning of sustainable business: Introducing a typology from business-as-usual to true business sustainability. *Organization & Environment, 29*(2), 156-174.

Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st-century business*. Capstone.

Gunderson, L. (2018). Ecological resilience, in theory and application. *Annual Review of Ecology and Systematics, 31*, 425-439.

Hayes, R. H., & Westrup, J. (2020). The triple bottom line: How today's best-run companies are achieving economic, social and environmental success. Jossey-Bass.

Hopkin, P. (2018). *Fundamentals of risk management: Understanding, evaluating and implementing effective risk management* (5th ed.). Kogan Page.

Kendra, J. M., & Wachtendorf, T. (2018). Elements of resilience after the World Trade Center disaster: Reconstituting New York City's Emergency Operations Centre. *Disasters, 32*(1), 119-141.

Kerzner, H., & Kerzner, H. R. (2018). *Project management best practices: Achieving global excellence*. John Wiley & Sons.

Kerzner, H., & Saladis, F. P. (2020). *Project management workbook and PMP/CAPM exam study guide*. John Wiley & Sons.

Kibik, O., Slobodianiuk, O., Kotlubai, V., Belous, K., Kornilova, O., & Prymachenko, I. (2025). Managing sustainable development projects through a risk-oriented framework. *International Journal of Organizational Leadership*. https://doi.org/10.33844/ijol.2025.60462

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews, 19*(1), 4-30.

Makambajeki, R. P., & Mjema, E. (2023). Assessment of the effectiveness of risk management practices in the performance of IT projects. *European Journal of Theoretical and Applied Sciences*. https://doi.org/10.59324/ejtas.2023.1(4).97

Manetti, G. (2018). Stakeholder engagement and public information through social media: A study of Canadian and American public transportation agencies. *American Review of Public Administration, 48*(4), 369-383.

Manetti, G., Bellucci, M., & Bagnoli, L. (2020). Stakeholder engagement and public information through social media: A study of Canadian and American public transportation agencies. *American Review of Public Administration, 50*(4), 369-383.

Manyena, S. B., O'Brien, G., O'Keefe, P., & Rose, J. (2019). Disaster resilience: A bounce back or bounce forward ability? *Local Environment, 16*(5), 417-424.

McManus, S., Seville, E., Vargo, J., & Brunsdon, D. (2018). Facilitated process for improving organizational resilience. *Natural Hazards Review, 19*(2), 05017002.

Mena, C., Humphries, A., & Choi, T. Y. (2018). Toward a theory of multi-tier supply chain management. *Journal of Supply Chain Management, 54*(2), 58-77.

Monazzam, A., & Crawford, J. (2024). The role of enterprise risk management in enabling organisational resilience: a case study of the Swedish mining industry. *Journal of Management Control*. https://doi.org/10.1007/s00187-024-00370-9

Mugisha, S. (2019). The role of non-governmental organizations in Uganda's social development. *Journal of Development and Communication Studies, 7*(1), 59-74.

Müller, R., Sankaran, S., & Drouin, N. (2019). A framework for project management in the 21st century. *Project Management Journal, 50*(4), 455-467.

Mutula, P. K. O., Engairo, P., & Kimathi, D. (2024). Risk Response Planning and Project Implementation Among Faith-Based Construction Projects in The Diocese of Ngong. *International Journal of Innovations and Interdisciplinary Research*. https://doi.org/10.61108/ijiir.v2i1.78

Njoroge, C., & Ndiang'ui, W. (2019). Factors affecting the sustainability of development projects in Kenya: A survey of selected projects in Nairobi County. *International Journal of Social Sciences and Management, 6*(2), 90-102.

Norman, W., & MacDonald, C. (2004). Getting to the bottom of “Triple Bottom Line”. *Business Ethics Quarterly*, *14*(2), 243-262.

Olander, S., & Landin, A. (2018). Evaluation of stakeholder influence in the implementation of construction projects. *International Journal of Project Management*, *26*(4), 321-328.

Olson, D. L., & Wu, D. (2018). *Enterprise risk management models*. Springer.

Ortiz-de-Mandojana, N., & Bansal, P. (2016). The long-term benefits of organizational resilience through sustainable business practices. *Strategic Management Journal, 37*(8), 1615-1631.

Owusu-Manu, D., Edwards, D. J., Badu, E., & Holt, G. D. (2019). Conceptualising the state of the art of corporate social responsibility (CSR) in the construction industry and its nexus to sustainable development. *Journal of Engineering, Design and Technology, 17*(6), 1126-1147.

Project Management Institute. (2017). *A guide to the project management body of knowledge (PMBOK® guide)* (6th ed.). Project Management Institute.

Rahi, K., & Bourgault, M. (2022). Risk and vulnerability management, project agility and resilience: a comparative analysis. *International Journal of Information Systems and Project Management*. https://doi.org/10.12821/ijispm090401

Reddy, K. R., Janga, J. K., Verma, G., & Nagaraja, B. (2024). Integration and quantification of resilience and sustainability in engineering projects. *Journal of the Indian Institute of Science*.

Reed, M. S., Stringer, L. C., Fazey, I., Evely, A. C., & Kruijsen, J. H. J. (2020). Five principles for the practice of knowledge exchange in environmental management. *Journal of Environmental Management*, *256*, 109855.

Reed, M. S., Vella, S., Challies, E., de Vente, J., Frewer, L., Hohenwallner-Ries, D., Huber, T., Neumann, R. K., Oughton, E. A., Sidoli del Ceno, J., & van Delden, H. (2018). A theory of participation: What makes stakeholder and public engagement in environmental management work? *Restoration Ecology*, *26*, S7-S17.

Savitz, A. (2018). *The triple bottom line: How today's best-run companies are achieving economic, social and environmental success - and how you can too*. Jossey-Bass.

Saynisch, M. (2019). Beyond frontiers of traditional project management: An approach to evolutionary, self-organizational principles and the complexity theory, results of the research program. *Project Management Journal, 41*(2), 21-37.

Scaini, A., Mulligan, J., Berg, H., & Brangarí, A. C., et al. (2024). Pathways from research to sustainable development: Insights from ten research projects in sustainability and resilience. *Ambio, 53*, 517–533.

Schwalbe, K. (2018). *Information technology project management*. Cengage Learning.

Sheffi, Y., & Rice Jr, J. B. (2020). Building a resilient organization: The role of stakeholder engagement in risk management. *MIT Sloan Management Review, 61*(4), 79-86.

Shi, Y., Zhang, J., Cui, X., & Zhang, G. (2022). Evaluating sustainability of tourism projects in rural land development based on a resilience model. *Land*.

Silvius, G., & Schipper, R. (2018). Exploring the relationship between sustainability and project management; A conceptual model. In *Proceedings of the 13th International Conference on Business Excellence, 14*(1), 183-197.

Slaper, T. F., & Hall, T. J. (2011). The Triple Bottom Line: What Is It and How Does It Work? *Indiana Business Review, 86*(1), 4-8.

Teller, J., Kock, A., & Gemünden, H. G. (2014). Risk management in project portfolios is more than managing project risks: A contingency perspective on risk management. *Project Management Journal, 45*(4), 67-80.

Trzeciak, M. (2021). Sustainable risk management in IT enterprises. *Risks, 9*(7), 135. https://doi.org/10.3390/risks9070135

Uganda Bureau of Statistics. (2020). *NGO Sector Report 2020*. Government of Uganda.

Walker, B., & Salt, D. (2012). *Resilience practice: Building capacity to absorb disturbance and maintain function*. Island Press.

WCED. (2018). *Our common future*. Oxford University Press.

World Commission on Environment and Development (WCED). (2018). *Our common future*. Oxford University Press.

Yang, R. J., Zou, P. X. W., & Wang, J. (2019). Stakeholder-associated risks and their interactions in complex green building projects: A social network model. *Building and Environment, 158*, 18-30.

Yousef, R., & Qutechate, W. (2024). Green risk management: Integrating sustainability into IT project management. *International Journal of Advances in Soft Computing and its Applications*. https://doi.org/10.15849/ijasca.241130.04

Zhang, L., Zhang, L., & Ning, Y. (2023). A Resilience Approach to Project Cost Contingency Estimation. *Proceedings of the 11th IPMA Research Conference*. https://doi.org/10.56889/eeqw5020

Zollo, M., Minoja, M., & Coda, V. (2018). Toward an integrated theory of strategy. *Strategic Management Journal, 39*(6), 1753-1778.

Zou, P. X. W., Chen, Y., & Chan, T. Y. (2020). Understanding and improving your risk management capability: Assessment model for construction organizations. *Journal of Construction Engineering and Management, 146*(5), 04020036.

Zou, P. X. W., Wang, S., & Fang, D. (2018). A life-cycle risk management framework for PPP infrastructure projects. *Journal of Financial Management of Property and Construction*, *23*(3), 312-334.

APPENDIX ONE: TABLE FOR DETERMINING THE SAMPLE SIZE OF A GIVEN POPULATION

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
"S" is sample size.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.

APPENDIX TWO: QUESTIONNAIRE



MAKERERE UNIVERSITY BUSINESS SCHOOL

Dear Respondent,

I am conducting a study on **"RISK MANAGEMENT PRACTICES, PROJECT RESILIENCE AND SUSTAINABILITY OF NGO SECTOR PROJECTS IN CENTRAL UGANDA"**.

You have been identified as a key informant, please spare a few minutes of your busy schedules to fill this questionnaire. The responses will be used purely for academic research. Your honest and sincere responses are highly appreciated and shall be treated with utmost confidentiality.

Section 1: PERSONAL BACKGROUND INFORMATION

a) Age:
18-29 years ☐ **30-39years** ☐ **40-49years** ☐ **50 years and above** ☐

b) Gender:
Male ☐ **Female** ☐

c) Marital status**:**
Single ☐ **Married** ☐ **Divorced** ☐ **Others** ☐

d) Numbers of years worked in the NGO sector:
<3 years ☐ **3-6years** ☐ **7-10years** ☐ **More than 10years** ☐

e) Highest education attained
Diploma ☐ **Bachelor's Degree** ☐ **Masters** ☐ **PhD** ☐

Section 2: PROJECT BACKGROUND INFORMATION

a) Number of Employees:
less than 50 ☐ **51-100** ☐ **101-200** ☐ **More than 200** ☐

b) Years of Existence:
less than 1 ☐ **1-3** ☐ **3-7** ☐ **More than 7** ☐

c) Turnover (UGX)**:**
< **100m** ☐ **101 – 500m** ☐ **>500m** ☐

Section 3: RISK MANAGEMENT PRACTICES

Please indicate the extent to which you agree or disagree with the following statements as they relate to Risk Management Practices.

(1=Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5= strongly Agree)

	SD	**D**	**NS**	**A**	**SA**
Analysis					
Project staff systematically examine potential risks before making decisions.	1	2	3	4	5
Project staff use tools like SWOT analysis to identify project risks.	1	2	3	4	5
Project staff assess the likelihood and impact of identified risks.	1	2	3	4	5
Project staff analyze historical data to anticipate future risks.	1	2	3	4	5
Project staff prioritize risks based on their potential impact on project objectives.	1	2	3	4	5
Identification					
Project staff involve stakeholders in identifying project risks.	1	2	3	4	5
Project staff brainstorm potential risks in project planning meetings.	1	2	3	4	5
Project staff document all identified risks in the project risk register.	1	2	3	4	5
Project staff regularly update the risk register with newly identified risks.	1	2	3	4	5
Project staff seek input from subject matter experts to identify project risks.	1	2	3	4	5
Response					
Project staff develop contingency plans for high-priority risks.	1	2	3	4	5
Project staff allocate resources to mitigate identified risks.	1	2	3	4	5
Project staff communicate risk response strategies to all stakeholders.	1	2	3	4	5
Project staff regularly review and update risk response plans.	1	2	3	4	5
Project staff implement risk response actions promptly and effectively.	1	2	3	4	5
Evaluation					
Project staff monitor the effectiveness of risk management strategies.	1	2	3	4	5
Project staff review risk management processes after project milestones.	1	2	3	4	5
Project staff assess the impact of implemented risk responses on project outcomes.	1	2	3	4	5
Project staff solicit feedback from stakeholders on risk management effectiveness.	1	2	3	4	5
Project staff document lessons learned from managing project risks.	1	2	3	4	5

Section 4: PROJECT RESILIENCE

Please indicate the extent to which you agree or disagree with the following statements as they relate to project resilience.

	SD	D	NS	A	SA
Capabilities before a disruption:					
Project staff possess diverse skills and expertise relevant to project objectives.	1	2	3	4	5
The project team has established robust communication channels and protocols.	1	2	3	4	5
The project has secured adequate resources and funding to support its objectives.	1	2	3	4	5
Project stakeholders are well-informed about their roles and responsibilities.	1	2	3	4	5
The project has contingency plans in place to address potential risks and challenges.	1	2	3	4	5
Capabilities after a disruption:					
The project team quickly adapts to changing circumstances and mobilizes resources effectively.	1	2	3	4	5
Project stakeholders collaborate to identify innovative solutions to overcome disruptions.	1	2	3	4	5
The project demonstrates flexibility in adjusting goals and timelines as needed.	1	2	3	4	5
Project staff actively seek opportunities for learning and improvement following disruptions.	1	2	3	4	5
The project emerges from disruptions with enhanced resilience and readiness for future challenges.	1	2	3	4	5
Performance during disruption:					
Project staff maintain open communication channels to address issues as they arise during disruptions.	1	2	3	4	5
The project team remains focused on key objectives and delivers results despite disruptions.	1	2	3	4	5
Project stakeholders demonstrate agility in responding to unexpected events or setbacks.	1	2	3	4	5
The project adapts its strategies and approaches to minimize the impact of disruptions on outcomes.	1	2	3	4	5
Project staff demonstrate resilience and determination in overcoming obstacles during disruptions.	1	2	3	4	5
Time to recover:					
The project team implements recovery measures promptly to minimize downtime.	1	2	3	4	5
Project stakeholders collaborate efficiently to expedite the recovery process.	1	2	3	4	5
The project adopts agile methodologies to accelerate the pace of recovery efforts.	1	2	3	4	5

Project staff prioritize critical tasks to ensure a swift return to normal operations.	1	2	3	4	5
The project implements lessons learned from past disruptions to streamline the recovery process.	1	2	3	4	5
Efforts in recovery:					
Project staff demonstrate commitment to restoring project functionality and achieving objectives.	1	2	3	4	5
The project team allocates resources strategically to support recovery initiatives.	1	2	3	4	5
Project stakeholders contribute actively to recovery efforts through collaboration and support.	1	2	3	4	5
The project implements proactive measures to prevent future disruptions and build resilience.	1	2	3	4	5
Project staff communicate transparently about the progress and challenges of recovery efforts.	1	2	3	4	5

Section 6: PROJECT SUSTAINABILITY

Please indicate the extent to which you agree or disagree with the following statements as they relate to Project Sustainability.

	SD	**D**	**NS**	**A**	**SA**
Social Sustainability:					
The project fosters community engagement and participation in decision-making processes.	1	2	3	4	5
Project initiatives promote social inclusion and diversity within the target population.	1	2	3	4	5
The project contributes to the improvement of social welfare and quality of life for stakeholders.	1	2	3	4	5
Socially responsible practices are integrated into project activities to address community needs.	1	2	3	4	5
Project stakeholders demonstrate a commitment to ethical and equitable treatment of all individuals involved.	1	2	3	4	5
Economic Sustainability:					
The project generates employment opportunities and stimulates economic growth in the region.	1	2	3	4	5
Economic resources are managed efficiently to maximize project benefits and minimize costs.	1	2	3	4	5
Project activities support local businesses and industries, fostering economic resilience.	1	2	3	4	5
The project adopts sustainable financing models to ensure long-term financial	1	2	3	4	5

viability.					
Economic benefits generated by the project are distributed equitably among stakeholders.	1	2	3	4	5
Environmental Sustainability:					
The project minimizes its ecological footprint by adopting green practices and technologies.	1	2	3	4	5
Environmental conservation measures are integrated into project planning and implementation.	1	2	3	4	5
The project promotes biodiversity conservation and protection of natural habitats.	1	2	3	4	5
Sustainable resource management practices are applied to reduce waste and pollution.	1	2	3	4	5
Project initiatives aim to mitigate climate change impacts and enhance ecosystem resilience.	1	2	3	4	5

Thank you very much for your time!