ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE

Assessment of Risk Management Practice on Project Success: A Case of Ethiopian Heritage Authority Built Heritage Conservation Projects

BY

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Approval by Board of Examiners

Members of the Board of Examiners approve that this research project entitled "**Assessment of Risk Management Practice on Project Success: A Case of Ethiopian Heritage Authority Built Heritage Conservation Projects**" undertaken by Eskinder Tilahun Gebeyehu fulfills the requirements for the Degree of Master of Arts in Project Management and is acceptable with regards to the standards and regulations of the University.

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STATEMENT OF DECLARATION

I, hereby, declare that this study entitled "**Assessment of Risk Management Practice on Project Success: A Case of Ethiopian Heritage Authority Built Heritage Conservation Projects**" is submitted in partial fulfillment of the requirement for Degree of Master's in project management with the guidance and support of the thesis advisor. This study is my original work and it has not been presented for any degree or diploma program in this or any other university/institution, and that all source of materials used have been dully acknowledged.

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LETTER OF CERTIFICATE

This is to certify that this research project, undertaken by Eskinder Tilahun Gebeyehu "**Assessment of Risk Management Practice on Project Success: A Case of Ethiopian Heritage Authority Built Heritage Conservation Projects**" is his own original work and it has not been submitted to any institution.

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ABSTRACT

Effective risk management is essential for the success of built heritage conservation projects. This study aims to assess the role of project risk management in the success of these projects, with a specific focus on the Ethiopian Heritage Authority (EHA). Key processes in project risk management are examined, including risk planning, risk identification, risk assessment, risk response, and risk monitoring and control. The target population comprised 50 experts directly involved in EHA's built heritage conservation projects, with responses collected from 44 participants. The research methodology employed case studies and a census approach within a cross-sectional study framework. Data were analyzed quantitatively using descriptive statistics and SPSS software version 29. The findings reveal a positive correlation between project success and all aspects of project risk management. The results indicate that comprehensive risk management practices are vital to the success of heritage conservation projects. It is recommended that substantial attention be given to risk management, as it is a key determinant of project success.

Chapter One

1. Introduction

1.1 Background

Ethiopia has a rich cultural and historical heritage that goes back thousands of years, with lots of historical sites, monuments, and cultural landscapes to show for it. The country's cultural sites, like the ancient rock-hewn churches in Lalibela and the stelae fields in Aksum, are not only sources of national pride but also evidence of how complex and varied Ethiopia's past has been.

The Ethiopian Heritage Authority, a government agency responsible for looking after and promoting Ethiopia's cultural heritage, is in charge of making sure these important places are well-protected and preserved. Ethiopia's unique cultural identity and historical value come from both tangible heritages like monuments and artifacts, and intangible heritages like traditional knowledge and customs.

According to the Research and Conservation of Cultural Heritage Proclamation No. 209/2000, the authority's main objectives are to: scientifically register and keep an eye on cultural heritage so that it can be passed down from one generation to the next; protect cultural heritage from both natural and human-made disasters; Help the country's economic and social development by making use of its cultural heritage. Discover and study cultural heritage.

The Ethiopian Heritage Authority works hard to protect these cultural treasures so that they can be enjoyed by future generations. They do this through a range of activities like research, documentation, conservation, restoration, and interpretation of heritage sites.

One of the biggest challenges the Ethiopian Heritage Authority faces in its conservation efforts is managing risks that could threaten their projects' long-term sustainability and success. These risks can come in all sorts of forms, like lack of budget, lack of conservation expertise, lack of conservation materials, lack of competent conservation consulting and construction firms, lack of enough trained workers to deal with, and also different manmade and natural hazards.

To deal with these risks, the Ethiopian Heritage Authority needs to have good risk management in place. This means finding and assessing potential risks, coming up with ways to deal with

them, and putting plans in place to make sure that heritage sites stay safe and can be enjoyed for years to come.

Despite the importance of risk management, not much research has been done on how well risk management techniques work in practice when it comes to Ethiopian Heritage Authority conservation projects. While there's been lots of research done on risk management in heritage conservation all over the world, there's still a lot to learn about how well these techniques work in Ethiopia's unique cultural, social, and environmental context.

In order to fill this gap in our understanding, this study looks at the risk management strategies being used in Ethiopian Heritage Authority conservation projects and measures how well they're working. By identifying any problems or areas where improvement is needed, this study aims to help create better risk management plans for protecting Ethiopia's cultural heritage.

1.2 Statement of the Problem

Effective risk management plays a crucial role in determining the success of a project. By identifying, analyzing, and responding to potential risks, project managers can mitigate or avoid obstacles that may negatively impact project outcomes such as time, cost, and quality (PMI, 2000). A proactive approach to risk management enables the anticipation of challenges, ensuring that contingency plans are in place to address unforeseen events. This not only minimizes disruptions but also improves decision-making and resource allocation, ultimately leading to higher project success rates.

The conservation and restoration of built heritage in Ethiopia face a myriad of risks that can threaten the success of these projects. Common risks include schedule delays due to the unavailability of conservation materials, environmental factors, conflicts with stakeholders and other factors. Budget constraints further exacerbate these challenges, as heritage conservation projects often require significant financial investment that is difficult to secure and maintain. Quality risks are also prevalent, stemming from the lack of trained professionals across the various fields needed for successful heritage conservation, such as architecture, art conservation, engineering, botany, history, geology, etc. These risks highlight the critical need for effective risk management practices within the EHA's projects.

Despite the significance of these risks, there is a concerning lack of project success within the Ethiopian Heritage Authority, particularly in terms of time, cost, and quality outcomes. Many projects suffer from delays, budget overruns, and compromised quality.

It is yet unknown how precisely risk management techniques affect the effectiveness of conservation projects run by the Ethiopian Heritage Authority. Although some studies have emphasized the significance of risk management in the preservation of cultural heritage, more empirical study is required to comprehend the use of risk management techniques and their effects on project outcomes in the Ethiopian setting.

Thus, the purpose of this study is to investigate the following research question: How do risk management practices affect the Ethiopian Heritage Authority's conservation projects' success? This research intends to provide insights into the efficacy of risk management strategies in historic conservation projects and make recommendations for improvement by looking at the present risk management practices and identifying important difficulties.

1.3 Research Question

1.3.1 General Research Question

How does risk management practice influence the success of conservation projects in the Ethiopian Heritage Authority?

1.3.2 Specific Research Questions

- What are the current risk management practices employed by the Ethiopian Heritage Authority in conservation projects?
- What is the impact of risk management practices on the success of conservation projects in Ethiopian Heritage Authority?
- What strategies can be recommended to improve the effectiveness of risk management practices in conservation projects?

1.4 Research Objectives

1.4.1 General Research Objectives

The general research objective of "Assessment of Risk Management Practice on project success: the case of Ethiopian Heritage Conservation Projects" is to investigate the relationship between project risk management and the success of built heritage conservation projects in the Ethiopian Heritage Authority (EHA).

1.4.2 Specific Research Objectives

- To identify the current risk management practices employed by the Ethiopian Heritage Authority in conservation projects.
- To analyze the impact of risk management on key success criteria of conservation projects, such as project completion time, budget adherence, and quality.
- To identify the current state of risk management in EHA conservation projects (what risk management tools and techniques are used in EHA conservation projects).
- To determine how risk management be improved in EHA to improve the success of built heritage conservation projects.
- To make suggestions for better risk project management in built heritage conservation projects.

1.5 Significance of the Study

This study is significant because it has the potential to advance the field of heritage conservation by offering insightful information about how risk management techniques affect conservation project performance, especially when applied to the Ethiopian Heritage Authority. This study is to expand our knowledge of the efficacy of risk management techniques in heritage conservation and offer useful suggestions for enhancement by analyzing the current risk management procedures, identifying important obstacles, and evaluating stakeholder perspectives.

Contribution to Knowledge:

By providing an in-depth examination of the specific impact that risk management methods have on the performance of conservation projects within the Ethiopian Heritage Authority, this study will add to the body of knowledge already available on risk management in heritage conservation.

This research will provide important insights into the distinct socio-cultural, economic, and environmental factors that influence risk management in Ethiopian heritage conservation by identifying the main challenges the Ethiopian Heritage Authority faces in putting effective risk management practices into practice.

By revealing the attitudes and perspectives of government officials, heritage specialists, local communities, and project contractors toward risk management procedures, the study will help advance our understanding of stakeholder perceptions of risk management in historic conservation.

Practical Implications:

The Ethiopian Heritage Authority and other organizations dedicated to heritage conservation will benefit greatly from the study's practical implications, which offer significant insights into how risk management techniques can be enhanced to increase the effectiveness of conservation programs.

The Ethiopian cultural Authority will be able to create more effective risk management plans for cultural conservation projects by identifying the main obstacles to improvement and areas for practice improvement. This would ultimately improve project outcomes.

Additionally, the study will offer feasible recommendations for raising stakeholder participation in risk management procedures, which will encourage increased cooperation and coordination amongst all parties involved in heritage conservation projects.

Policy Implications:

The results of this research could have an impact on how policies related to heritage conservation are developed, especially in Ethiopia. The study could potentially contribute to the creation of

guidelines and policies that aim to improve risk management in heritage conservation projects by emphasizing the significance of good risk management techniques.

The results and recommendations of the study may lead policymakers to prioritize investments in risk management measures, hence influencing the allocation of resources and funding for heritage conservation projects.

Cultural and Socio-Economic Impact:

The conservation of cultural heritage is essential to maintaining cultural identity and promoting socioeconomic growth. This study has the potential to support sustainable development in the area and aid in the preservation of Ethiopia's rich cultural heritage by enhancing risk management procedures in heritage conservation projects.

Effective conservation project implementation can benefit nearby communities by giving them access to jobs, educational opportunities, and cultural enrichment.

Academic and Research Impact:

When conservation projects are implemented well, they can help the surrounding community by providing employment, educational opportunities, and cultural enrichment.

The study can potentially spark additional investigation and discussion on the function of risk management in the preservation of cultural heritage, producing fresh ideas and viewpoints on this crucial subject.

In summary, by improving our knowledge of the role risk management techniques play in guaranteeing the success of conservation projects, this research has the potential to significantly advance the field of heritage conservation. This study is to assist the Ethiopian Heritage Authority and other heritage conservation groups in their mission to preserve and maintain our cultural legacy for future generations by offering insightful analysis, useful suggestions, and policy consequences.

1.6 Scope of the Study

The conceptual scope of the study, " Assessment of Risk Management Practice on Project Success: The Case of Ethiopian Heritage Conservation Projects," focuses solely on risk management practice and its impact in project success. It will also assess elements that contribute to the success of a built heritage conservation project, such as reaching project goals and objectives on time.

The empirical scope will concentrate on built heritage conservation projects involving the preservation, restoration, conservation, and protection of historically significant structures, as well as risk management techniques that are critical for the success of built heritage conservation projects in the Ethiopian Heritage Authority (EHA). Geographically, it is restricted to the EHA headquarters in Addis Ababa, and it is also limited to EHA managers and experts who work as conservation project leaders.

The researcher used a descriptive research design to conduct the investigation. The primary instrument used by the researcher to collect data was a questionnaire because it is a quick, efficient, and reasonably priced method of doing so. It will center on conservation projects implemented in different parts of Ethiopia by the Ethiopian Heritage Authority. The study's conclusions offered insightful information about the function of risk management in heritage conservation and aid in the creation of successful risk management plans for Ethiopian heritage conservation projects.

1.7 Limitations of Study

There hasn't been enough research done on the impact of project risk management on project success in general or on Ethiopian-built historic conservation projects specifically. As a result, it could be challenging to locate enough directly relevant materials for a conceptual and empirical assessment. The study may not have taken into consideration outside variables that could affect the project's success, such as social, political, economic, and technological aspects.

1.8 Definition of key terms

Project Risk Management: is the systematic process of identifying, analyzing, and responding to project risk (PMI, 2000).

Project success: organizational success, stakeholder satisfaction, and the effective and timely completion of projects (Irfan et al., 2021).

Heritage: The tangible or intangible legacy left by previous generations for us to enjoy, preserve, and pass on to future generations (UNESCO, 2023).

Built heritage: Built heritage is tangible heritage which may consist of a single or group of buildings, monuments, structures or archeological sites with a significant historic or architectural value (Chapter_16__-Built_Heritage.Pdf, n.d.)

Built heritage conservation projects: Projects aimed at preserving, conserving, or restoring a portion or the entire built heritage (HPR, 2000).

Chapter Two

2. Literature Review

2.1 Introduction

The first step in using any risk management technique is to understand what a risk is. PMI (2000), defines a risk as any unpredictable event or circumstance that, should it come to pass, may have a favorable or unfavorable effect on the project's objective. As a result, anything that has already happened to a project is not seen as a risk. That is conceivable to happen. Second, there is a chance that a risk will have a positive or negative outcome. Many people have a tendency to focus only on risks that could be harmful. A cunning program manager considers both the positive and negative aspects.

Project success can be threatened, and risk management plays a critical role in identifying, evaluating, and mitigating these threats. Since conservation projects are frequently complicated and need meticulous planning and execution, effective risk management techniques are crucial to their successful implementation. With an emphasis on the Ethiopian Heritage Authority, this study of the literature attempts to assess the present level of knowledge on the impact of risk management techniques on the accomplishment of heritage conservation Projects. In the context of heritage conservation, the review will offer a thorough examination of the fundamental ideas, theoretical frameworks, variables affecting risk management, and the effects of risk management techniques on project success.

2.2 Theoretical Review

2.2.1 Heritage conservation

Theoretical Frameworks in Built Heritage Conservation

Building cultural heritage conservation is a multidisciplinary field that encompasses the preservation, restoration, and adaptive reuse of historic structures to maintain their cultural, historical, and architectural significance.

Different theoretical frameworks provide guidance for building cultural heritage conservation, influencing its goals, methods, and guiding principles. Intangible and tangible manifestations of human creativity, such as monuments, sites, customs, and practices, are all included in the definition of cultural heritage, according to UNESCO (1972). These expressions are thought to be crucial for comprehending and appreciating the diversity of human cultures and civilizations. This holistic viewpoint highlights the importance of cultural legacy as a source of identity, memory, and inspiration by underlining its interconnection with social, economic, and environmental issues.

ICOMOS (2008) further elaborates on the concept of cultural significance, emphasizing the cultural, historical, aesthetic, scientific, and social values associated with heritage buildings. Cultural significance provides a basis for evaluating the significance of heritage assets and determining appropriate conservation strategies to safeguard their authenticity and integrity. The Burra Charter ICOMOS (2013) outlines principles and guidelines for the conservation and management of cultural heritage, emphasizing the importance of minimal intervention, reversibility, and community engagement in heritage conservation practice.

Methodological Approaches in Built Heritage Conservation:

Building cultural heritage conservation employs a range of methodological approaches to assess, document, interpret, and manage historic structures. Heritage recording and documentation involve the systematic documentation of heritage buildings using various techniques, including photography, mapping, surveying, and archival research Mason (2006). These records serve as valuable sources of information for understanding the significance, condition, and evolution of heritage buildings over time.

Building assessment and evaluation involve the identification, assessment, and evaluation of building heritage significance based on criteria such as historical significance, architectural merit, and community value Riganti and Nijkamp (2004). Heritage impact assessment (HIA) evaluates the potential impacts of development projects on heritage buildings, helping to identify, assess, and mitigate adverse effects while maximizing benefits Fanit and Chabi (2023) these assessments inform decision-making processes and ensure the sustainable management of building heritage resources.

Challenges in Built Heritage Conservation:

Despite the importance of building cultural heritage conservation, several challenges persist in the field. One of the primary challenges is the threat of physical deterioration and decay due to age, neglect, weathering, and inadequate maintenance Feilden (2007). Heritage buildings are often subjected to structural instability, moisture ingress, biological growth, and environmental pollutants, which can compromise their integrity and authenticity over time.

Another significant challenge is the pressure of urban development and rapid urbanization, which threatens the integrity and authenticity of historic urban areas and cultural landscapes Meskell (2012). The expansion of cities, infrastructure projects, and commercial developments often encroach upon heritage buildings, leading to demolition, displacement, and loss of cultural significance. Balancing the competing demands of development and conservation requires careful planning, stakeholder engagement, and policy intervention to ensure the sustainable management of building heritage resources.

Rapid urbanization, climate change, armed conflict, and socio-economic disparities pose significant threats to cultural heritage sites worldwide Egoreychenko (2020) However, these challenges also present opportunities for innovation, collaboration, and advocacy. By integrating traditional knowledge with modern technologies, engaging youth in heritage stewardship, and promoting intercultural dialogue, stakeholders can address emerging conservation issues and promote the sustainable development of cultural heritage.

Best Practices in Built Heritage Conservation:

Despite the challenges, numerous best practices and strategies have been developed to promote effective building cultural heritage conservation. Adaptive reuse involves repurposing heritage buildings for contemporary uses while retaining their architectural and cultural value Feilden (2007). Adaptive reuse projects transform disused or underutilized heritage buildings into vibrant community spaces, cultural institutions, commercial establishments, or residential dwellings, thereby revitalizing urban neighborhoods, stimulating economic activity, and promoting social inclusion.

Community engagement is another critical best practice in building cultural heritage conservation, emphasizing the involvement of local communities, indigenous groups, and other stakeholders in decision-making processes Mason and Avrami (2002). Community-based approaches prioritize inclusivity, equity, and social cohesion, fostering a sense of ownership and stewardship over heritage buildings. By integrating traditional knowledge, cultural practices, and indigenous wisdom into conservation efforts, stakeholders can ensure the relevance and sustainability of building heritage projects.

Risks in Built Heritage Conservation Projects

A number of barriers still exist in historical conservation projects, despite efforts to control risks and accomplish project success. According to Pereira Roders and Van Oers (2013) these difficulties include a lack of experience and technical skills, a lack of financing and resources, and competing stakeholder interests. A comprehensive strategy that takes into account the particular cultural, social, and environmental settings of heritage conservation projects is needed to address these issues. According to Mason and Avarmi (2002), addressing these challenges requires a holistic approach that integrates technical expertise with community engagement and sustainable development principles. By involving local communities, empowering stakeholders, and promoting cultural sensitivity, heritage conservation projects can overcome barriers and achieve meaningful outcomes.

Built cultural heritage conservation is a dynamic and evolving field that requires interdisciplinary collaboration, innovative approaches, and inclusive practices to address the complex challenges facing our architectural, historical, and cultural heritage. By embracing key principles such as cultural significance, authenticity, and sustainability, practitioners can navigate the complexities of building heritage conservation and ensure the continued stewardship of our shared heritage for future generations. Through the adoption of holistic strategies, community engagement, and adaptive management, building cultural heritage conservation offers pathways for preserving our architectural identity, enhancing social cohesion, and promoting sustainable development in an ever-changing world.

2.2.2 Project Success

Project success is frequently described as the accomplishment of project goals within the limitations of time, cost, and quality, according to Shenhar et al. (2001). The significance of achieving project objectives while staying within the project's budget and timeline is emphasized in this definition. But according to Turner and Cochrane (1993), factors that affect a project's success in the long run include stakeholder satisfaction and the project's impact. Project success is not just about meeting predefined criteria; it also involves satisfying the needs and expectations of stakeholders, whose involvement and satisfaction play a vital role in determining the project's ultimate success. Furthermore, the long-term impact of the project on various stakeholders and its ability to bring about positive change in the intended areas are critical factors in assessing project success. Thus, while meeting time, budget, and quality goals are important, they are not the sole determinants of project success; rather, a holistic approach that considers stakeholder satisfaction and long-term impact is essential.

According to Jenkins (2006) relationship between three primary forces in a project, Time is the available time to deliver the project, cost represents the amount of money or resources available and quality represents the fit-to-purpose that the project must achieve to be a success.

Figure 2.1: Project Management Scope Triangle

Source: Jenkins (2006), Project management primer.

The elements that lead to project success have been the subject of several studies. Four essential components of project success were highlighted by Shenhar et al. (2001) as being influence on the client, business success, project efficiency, and future planning. In a similar vein, project managers can define and accomplish project success with the aid of the goals-and-methods matrix put forward by Turner and Cochrane (1993). These components provide a comprehensive framework for evaluating project success beyond just meeting technical requirements. Influence on the client reflects the project's ability to meet or exceed client expectations and build strong relationships. Business success considers the project's contribution to organizational objectives and its alignment with strategic goals. Project efficiency focuses on the effective utilization of resources and adherence to schedules and budgets. Future planning involves anticipating and addressing potential challenges and opportunities that may arise during or after project completion. By considering these components, project managers can ensure a more holistic and nuanced understanding of project success, leading to better decision-making and overall project outcomes.

Belassi and Tukel (1996) discovered that variables including project size, complexity, and organizational culture can affect project duration in terms of time performance. Stakeholder participation, project scope, and project management techniques were also noted by Fashina et al. (2021) as important variables influencing project time performance. These findings highlight the multifaceted nature of project time performance and the various factors that can impact it. Project size and complexity, for example, can introduce additional challenges and uncertainties that may extend project duration. Similarly, organizational culture can influence communication, decision-making, and resource allocation, all of which can affect project timelines. Stakeholder participation plays a crucial role in ensuring alignment of expectations and timely decision-making, while project scope defines the boundaries and objectives of the project. Effective project management techniques, including planning, scheduling, and risk management, are essential for maintaining project timelines and minimizing delays. By considering these variables, project managers can better anticipate and mitigate potential delays, thereby improving overall project time performance.

In terms of cost performance, Chan and Kumaraswamy (1997) emphasized how crucial efficient cost monitoring and control are to the accomplishment of project objectives. According to Chan

and Kumaraswamy (2002), project cost performance can be impacted by variables such as project complexity, technology, and project management techniques. Cost performance is not just about staying within budget constraints; it also involves optimizing resource allocation and maximizing value for money. Efficient cost monitoring and control mechanisms enable project managers to track expenses, identify variances, and take corrective actions as needed to ensure project objectives are met within budgetary constraints.

Additionally, project complexity, technological requirements, and project management techniques can all influence cost performance. Complex projects may require additional resources and expertise, leading to higher costs, while advancements in technology can either increase or decrease project costs depending on their adoption and implementation. Effective project management techniques, including cost estimation, budgeting, and resource allocation, are critical for managing costs throughout the project lifecycle. By considering these variables and implementing appropriate cost control measures, project managers can enhance project cost performance and achieve better overall project outcomes.

2.2.2.1 Project Success in Built Heritage Conservation Project

Cultural heritage conservation projects serve as guardians of our collective history and identity, preserving tangible and intangible expressions of human creativity for future generations. The success of such endeavors transcends mere project management metrics, encompassing broader objectives related to cultural significance, community engagement, and long-term sustainability.

Successful projects and effective risk management are essential components of heritage conservation efforts. Conservation practitioners can increase the likelihood of attaining successful project results in heritage conservation work by proactively identifying and managing risks and putting good project management methods into place. But in order to overcome obstacles like scarce resources and stakeholder disputes, creative thinking and teamwork are needed.

Project success in cultural heritage conservation is intricately linked to the preservation of cultural identity, historical significance, and architectural integrity. Adherence to preservation ethics and international standards, such as those outlined by organizations like UNESCO and ICOMOS, is essential for ensuring the integrity and authenticity of conservation efforts Jokilehto

(2006). These principles emphasize the importance of minimum intervention, reversibility, and authenticity in guiding conservation decisions and practices.

Community engagement emerges as a cornerstone of project success in cultural heritage conservation, emphasizing the involvement of local communities, indigenous groups, and other stakeholders in decision-making processes Chauhan (2022). Community-based approaches prioritize inclusivity, equity, and social cohesion, fostering a sense of ownership and stewardship over cultural heritage assets. By integrating traditional knowledge, cultural practices, and indigenous wisdom into conservation efforts, stakeholders can ensure the relevance and sustainability of heritage projects.

Numerous factors contribute to the success of heritage conservation projects. Jones and Leech (2015) emphasize the importance of training and capacity building in enhancing the effectiveness of conservation projects. They argue that investing in training programs for project personnel and stakeholders can significantly improve project outcomes by equipping individuals with the necessary skills and knowledge to address complex conservation challenges.

Furthermore, Ripp and Rodwell (2016) highlight the influence of various external variables on the success of heritage conservation projects. Factors such as public support, regulatory compliance, and the availability of funds are identified as crucial determinants of project success. Public support fosters community engagement and facilitates resource mobilization, while adherence to regulatory standards ensures project alignment with legal requirements and reduces risks. Additionally, adequate funding is essential for implementing conservation measures, conducting research, and sustaining long-term preservation efforts. Recognizing the significance of these factors is essential for ensuring the success of heritage conservation projects, as it necessitates a comprehensive approach that addresses both internal capacity-building needs and external contextual factors.

Technical expertise and capacity building are fundamental for executing cultural heritage conservation projects with precision and integrity. Investing in the skills and expertise of conservation professionals, heritage practitioners, and local artisans strengthens the technical capacity and institutional resilience of heritage organizations Ulusan (2023). Training programs, workshops, and knowledge-sharing projects facilitate the transfer of best practices, innovative

techniques, and indigenous wisdom, empowering communities to safeguard their cultural heritage for future generations.

Sustainable funding mechanisms are essential for ensuring the long-term viability and effectiveness of cultural heritage conservation projects. Diversifying funding sources, leveraging public-private partnerships, and mobilizing philanthropic support are strategies for overcoming financial constraints and funding gaps in heritage conservation Bandarin and Van (2012). Sustainable financing models prioritize investments in heritage infrastructure, tourism development, and community-based enterprises, generating economic benefits and fostering social cohesion.

Project success in cultural heritage conservation work requires a comprehensive and inclusive approach that integrates technical expertise with community engagement, preservation ethics, capacity building, and sustainable financing. By embracing cultural diversity, respecting indigenous rights, and empowering local communities, heritage conservation projects can achieve meaningful and enduring outcomes that contribute to the collective well-being of humanity. As the custodians of our shared cultural heritage, it is incumbent upon us to uphold the values of stewardship, inclusivity, and sustainability in our efforts to safeguard cultural treasures for future generations.

2.2.3 Risk Management

Research by Zwikael and Ahn (2011) explains that project management is one field where risk management is crucial since it encompasses a wide range of organizational functions and associated risks. Furthermore, projects typically have a significant degree of uncertainty due to their tight timelines, hazy or insufficient finances, designs that are close to the practical limit of their potential performance, and regularly shifting needs. For instance, market payoff, project budget, product performance, market needs, and project timeline are the five categories of uncertainty in projects. Project risk management is therefore regarded as a core topic in the literature, and as a result, numerous new techniques have been developed to effectively handle uncertainty in the real world.

A number of stages and procedures are involved in project risk management with the goal of identifying, assessing, and addressing risks that could have an influence on the project's

successful completion. A thorough framework for project risk management is provided by Chapman and Ward (2003), who stress the significance of methodically addressing uncertainties at every stage of the project lifecycle. They offer insightful information on risk management procedures, such as risk identification, risk assessment, risk response planning, and risk monitoring and control, in their book Project Risk Management Processes, Techniques, and Insights. Project managers can proactively mitigate possible hazards and seize opportunities to improve project results by adhering to a disciplined approach to risk management.

Risk management, as defined by A Guide to the Project Management Body of Knowledge (PMBOK) PMI (2000), is the methodical process of recognizing, evaluating, and controlling project risk. It involves limiting the likelihood and effects of unfavorable events on project objectives and increasing the likelihood and effects of favorable events.

Cooper et al. (2005), in their book, Project Risk Management Guidelines, add to the conversation around project risk management. Their work offers project teams a set of guidelines and best practices to follow as they navigate the difficulties of risk management in projects. Important facets of project risk management are covered in the book, such as risk planning, monitoring, identification, analysis, and response. Project managers can enhance project performance and successfully manage project risks by following these suggestions. The findings of Cooper et al. emphasize how crucial it is to incorporate risk management into project management procedures in order to guarantee project success and reduce the impact of uncertainty.

The International Council on Monuments and Sites (ICOMOS) developed the ICOMOS Risk Management Model, which consists of four stages: risk identification, risk assessment, risk response, and risk monitoring ICOMOS (2014). This model provides a systematic framework for identifying, assessing, and mitigating risks throughout the project lifecycle.

The risk management process comprises the following, according to A Guide to the PMI (2000) Edition: risk Management planning, risk identification, risk analysis (qualitative and quantitative), risk response planning, risk monitoring and control.

Figure 2.2: Project risk management process

Source – Shrivastava (2012), Project risk management

Risk management is necessary for the preservation of architectural heritage. Through a methodical approach to risk identification, assessment, reaction, monitoring, and control, conservation practitioners can effectively reduce risks and guarantee the enduring viability of cultural buildings for preservation. But in order to effectively solve issues like scarce resources, regulatory compliance, and climate change, parties must work together and adopt creative solutions.

2.2.3.1 Risk Management Planning

Risk planning is a critical phase in project risk management, involving the development of strategies to identify, assess, and mitigate potential risks. Datta and Mukherjee (2001) emphasize the importance of developing a risk management matrix for effective project planning, highlighting the need for a systematic approach to identify and prioritize risks. Similarly, Ward and Chapman (2003) advocate for transforming project risk management into project uncertainty management, recognizing the inherent uncertainties in cultural heritage conservation projects. By integrating risk planning into project planning processes, organizations can proactively address potential risks and enhance project resilience.

Risk planning is a multifaceted phase in project risk management, aiming to develop comprehensive strategies to effectively manage and mitigate potential risks throughout the project lifecycle. The Project Management Institute PMI (2000) defines risk planning as the process of establishing a risk management plan that delineates the approach, roles,

responsibilities, and processes for identifying, analyzing, and responding to risks. This entails defining risk management objectives, criteria, and thresholds to guide risk management activities. Moreover, risk planning must be integrated into overall project planning processes to ensure alignment with project objectives and constraints Chapman and Ward (2003). By embedding risk planning within project planning, organizations can proactively address uncertainties and enhance project resilience.

Various tools and techniques are employed in risk planning to systematically identify, assess, and prioritize risks based on their potential impact and likelihood of occurrence. PMI (2000) recommends the use of risk management plans, risk registers, probability and impact matrices, and risk categorization methods to facilitate risk identification and assessment. Additionally, Chapman and Ward (2003) advocate for the utilization of risk breakdown structures and risk management frameworks to facilitate the systematic analysis and categorization of project risks. Furthermore, risk planning often involves conducting risk workshops, stakeholder interviews, and expert judgment sessions to gather insights from project stakeholders and subject matter experts Cooper et al. (2005). By leveraging these tools and techniques, project teams can develop robust risk management plans that enhance project resilience and minimize the impact of uncertainties.

In addition to identifying and assessing risks, risk planning also involves developing risk response strategies to effectively manage and mitigate potential threats. PMI (2000) emphasizes the importance of developing risk response strategies, which may include avoiding, transferring, mitigating, or accepting risks, depending on their potential impact and likelihood of occurrence. Moreover, Chapman and Ward (2003) stress the significance of developing contingency plans and alternative courses of action to address unforeseen risks that may arise during the project lifecycle. By aligning risk response strategies with project objectives and constraints, organizations can effectively manage project risks and improve project performance Cooper et al. (2005). Through proactive risk planning, organizations can anticipate and mitigate potential threats, enhancing project success and ensuring the achievement of project objectives.

2.2.3.2 Risk Identification

Effective risk identification is essential for anticipating and addressing potential threats to project success in cultural heritage conservation projects. Zwikael and Sadeh (2007) highlight the importance of planning effort as an effective risk management tool, emphasizing the need for a multidisciplinary approach to identify risks. Additionally, Zwikael and Ahn (2011) analyze project risk planning across industries and countries, identifying common challenges and best practices. By leveraging insights from empirical studies, organizations can improve their risk identification processes and develop a comprehensive understanding of project risks.

Risk identification is a fundamental phase in project risk management, focusing on systematically identifying and documenting potential risks that may affect project objectives. PMI (2000) defines risk identification as the process of identifying individual risks, sources of risk, and events that may impact project outcomes. This involves considering both internal and external factors that may pose risks to project success, including technical, environmental, organizational, and external risks Cooper et al. (2005). Moreover, Chapman and Ward (2003) emphasize the importance of adopting a multidisciplinary approach to risk identification, involving stakeholders, subject matter experts, and project team members in the process. By leveraging diverse perspectives, organizations can uncover a comprehensive set of risks that may impact project success.

Various tools and techniques are employed in risk identification to systematically uncover potential risks. PMI (2000) recommends using brainstorming sessions, checklists, risk registers, and historical data analysis to identify risks. Additionally, Chapman and Ward (2003) advocate for the use of risk breakdown structures and scenario analysis to explore potential risk scenarios and their potential impact on project objectives. Moreover, Cooper et al. (2005) suggest conducting risk workshops, interviews, and surveys to gather input from project stakeholders and subject matter experts. By leveraging these tools and techniques, project teams can identify and document a comprehensive set of risks, enabling them to proactively manage and mitigate potential threats to project success.

Risk identification is not a one-time activity but an ongoing process that evolves throughout the project lifecycle. PMI (2000) emphasizes the importance of regularly updating the risk register

and conducting periodic risk reviews to identify emerging risks and reassess existing risks. Additionally, Chapman and Ward (2003) advocate for the use of risk databases and lessons learned repositories to capture and disseminate knowledge about project risks. By continuously monitoring and updating the risk register, organizations can ensure that project risks are effectively managed and mitigated throughout the project lifecycle Cooper et al. (2005). Through proactive risk identification, organizations can anticipate and address potential threats, enhancing project success and ensuring the achievement of project objectives.

2.2.3.3 Risk Assessment

Risk assessment involves analyzing identified risks to determine their likelihood and potential impact on project objectives. Ben-David and Raz (2001) propose an integrated approach for risk response development in project planning, emphasizing the importance of assessing the severity of consequences associated with each identified risk. Moreover, Zwikael and Ahn (2011) examine the effectiveness of risk management practices across industries, providing valuable insights for enhancing risk analysis processes. By adopting robust risk assessment methodologies, organizations can prioritize risks and develop targeted risk response strategies to mitigate potential threats.

According to PMI (2000), risk assessment includes evaluating the probability of occurrence and the severity of consequences associated with each identified risk. This entails prioritizing risks based on their potential impact and likelihood of occurrence Cooper et al. (2005). Moreover, Chapman and Ward (2003) stress the importance of using quantitative and qualitative risk assessment techniques to gain a comprehensive understanding of project risks. By leveraging both quantitative and qualitative approaches, organizations can develop a nuanced understanding of project risks and their potential impact on project success.

Various tools and techniques are employed in risk assessment to systematically analyze identified risks. PMI (2000) recommends using quantitative techniques such as Monte Carlo simulation and sensitivity analysis to assign numerical values to risks and estimate their impact on project objectives. Additionally, Chapman and Ward (2003) advocate for the use of risk matrices, decision trees, and scenario analysis to assess the likelihood and consequences of identified risks. Moreover, Cooper et al. (2005) suggest conducting risk probability and impact

assessment to prioritize risks based on their potential impact on project objectives. By leveraging these tools and techniques, project teams can gain valuable insights into project risks, enabling them to make informed decisions and develop effective risk response strategies.

Risk assessment is not a one-time activity but an iterative process that evolves throughout the project lifecycle. PMI (2000) emphasizes the importance of regularly updating risk assessments to reflect changes in project scope, schedule, and budget. Additionally, Chapman and Ward (2003) stress the significance of conducting sensitivity analysis and scenario planning to assess the sensitivity of project outcomes to changes in key risk factors. By continuously monitoring and updating risk assessments, organizations can ensure that project risks are effectively managed and mitigated throughout the project lifecycle Cooper et al. (2005). Through proactive risk assessment, organizations can anticipate and address potential threats, enhancing project success and ensuring the achievement of project objectives.

2.2.3.4 Risk Response

Risk response involves developing strategies to address and mitigate identified risks, thereby minimizing their impact on project objectives. Ben-David and Raz (2001) emphasize the importance of integrating risk response development into project planning processes, highlighting the need for proactive risk management. Additionally, Ward and Chapman (2003) advocate for transforming project risk management into project uncertainty management, recognizing the dynamic nature of risks in cultural heritage conservation projects. By developing agile risk response strategies, organizations can adapt to changing circumstances and enhance project resilience.

According to PMI (2000), risk response strategies may include avoiding, transferring, mitigating, or accepting risks, depending on their potential impact and likelihood of occurrence. This entails developing contingency plans and alternative courses of action to address unforeseen risks that may arise during the project lifecycle Chapman and Ward (2003). Moreover, Cooper et al. (2005) stress the importance of aligning risk response strategies with project objectives and constraints to ensure project success.

Various tools and techniques are employed in risk response to develop effective risk mitigation strategies. PMI (2000) recommends using risk mitigation plans, risk avoidance strategies, risk

transfer agreements, and risk acceptance criteria to address identified risks. Additionally, Chapman and Ward (2003) advocate for the use of risk response workshops, expert judgment sessions, and stakeholder consultations to develop consensus on risk response strategies. Moreover, Cooper et al. (2005) suggest conducting cost-benefit analysis and risk impact assessments to evaluate the effectiveness of risk response strategies. By leveraging these tools and techniques, project teams can effectively manage project risks and improve project performance.

Risk response is not a one-time activity but an ongoing process that evolves throughout the project lifecycle. PMI (2000) emphasizes the importance of regularly updating risk response plans to reflect changes in project scope, schedule, and budget. Additionally, Chapman and Ward (2003) stress the significance of conducting risk response audits and lessons learned sessions to evaluate the effectiveness of risk response strategies. By continuously monitoring and updating risk responses, organizations can ensure that project risks are effectively managed and mitigated throughout the project lifecycle (Cooper et al., 2005). Through proactive risk response, organizations can anticipate and address potential threats, enhancing project success and ensuring the achievement of project objectives.

2.2.3.5 Risk Monitoring and control

Risk monitoring and control involve tracking the effectiveness of risk management measures and implementing corrective actions as needed. Datta and Mukherjee (2001) stress the importance of developing a risk management matrix for effective project planning, highlighting the need for regular monitoring and updates. Moreover, Zwikael and Sadeh (2007) emphasize the importance of ongoing risk monitoring to detect emerging risks and assess their potential impact. By leveraging insights from empirical studies, organizations can establish robust risk monitoring and control mechanisms to ensure project success in cultural heritage conservation projects.

According to PMI (2000), risk monitoring involves regularly assessing and updating the status of identified risks to ensure that risk management measures remain effective. This entails establishing monitoring criteria and thresholds to trigger corrective actions when risks exceed acceptable levels (Chapman & Ward, 2003). Moreover, Cooper et al. (2005) stress the

importance of proactive risk management to anticipate and address potential risks before they escalate into issues.

A variety of tools and techniques are employed in risk monitoring and control to systematically track and evaluate project risks. PMI (2000) recommends using risk tracking and reporting systems, risk dashboards, key performance indicators (KPIs), and risk response audits to monitor the effectiveness of risk management measures. Additionally, Chapman and Ward (2003) advocate for regular risk reviews, updates to risk registers, and communication of changes in risk status to project stakeholders. Moreover, Cooper et al. (2005) suggest conducting risk trend analysis and root cause analysis to identify emerging risks and underlying issues. By leveraging these tools and techniques, project teams can effectively monitor and control project risks, ensuring project success and minimizing the impact of uncertainties.

Risk monitoring and control is not a one-time activity but an iterative process that evolves throughout the project lifecycle. PMI (2000) emphasizes the importance of regularly updating risk registers and conducting periodic risk reviews to identify emerging risks and reassess existing risks. Additionally, Chapman and Ward (2003) stress the significance of establishing risk thresholds and triggers to prompt corrective actions when risks exceed acceptable levels. By continuously monitoring and updating risk management measures, organizations can ensure that project risks are effectively managed and mitigated throughout the project lifecycle Cooper et al. (2005). Through proactive risk monitoring and control, organizations can anticipate and address potential threats, enhancing project success and ensuring the achievement of project objectives.

2.3 Empirical Review

Much study has been done to assess the primary risk categories that construction projects typically encounter. Project risk management, however one of the most crucial prerequisites of developing cultural conservation programs, is not well understood because not much research has been done in this field in Ethiopia or around the world.

Based on the study "Collaborative projects in cultural heritage conservation–management challenges and risks" Hirsenberger et al. (2019), some of the most common risks identified in heritage conservation projects include:

Budget Constraints: Limited financial resources can pose a significant risk to heritage conservation projects, potentially leading to delays or compromises in project scope and quality.

Stakeholder Conflicts: Divergent interests among stakeholders, such as government agencies, conservation organizations, local communities, and private investors, can create conflicts and challenges in decision-making and project management.

Regulatory Compliance: Adherence to regulatory requirements and compliance with heritage conservation laws and regulations may present challenges, particularly when dealing with complex legal frameworks and bureaucratic processes.

Technical Challenges: Preservation and restoration efforts often involve intricate technical processes, such as structural stabilization, material conservation, and historical research, which require specialized expertise and resources.

Environmental Factors: Environmental risks, including natural disasters, climate change, and environmental degradation, can threaten the integrity and stability of cultural heritage sites, necessitating proactive measures for risk mitigation and adaptation.

Cultural Sensitivity: Cultural heritage conservation projects must navigate sensitive cultural and social contexts, respecting the traditions, values, and beliefs of local communities and indigenous peoples.

Technological Obsolescence: Rapid advancements in technology may render existing conservation techniques and methodologies obsolete, requiring continuous innovation and adaptation to emerging technologies.

Public Awareness and Engagement: Engaging and mobilizing public support for heritage conservation projects is crucial for project success, but lack of awareness or opposition from local communities can pose significant challenges.

By recognizing and addressing these common risks, heritage conservation stakeholders can develop robust risk management strategies to mitigate potential threats and enhance the success and sustainability of their projects.

In their article "Risks in conservation projects," Zolkafli et al. (2012) examine the risks associated with conservation projects. The authors delve into the complexities of conservation endeavors, highlighting the various risks that can impact project outcomes. Through a thorough analysis, they identify key risk factors such as budget constraints, technical challenges, stakeholder conflicts, and regulatory compliance issues. The article emphasizes the importance of recognizing and addressing these risks to ensure the successful implementation of conservation projects. Drawing on empirical research and case studies, Zolkafli et al. (2012) offer insights into effective risk management strategies and highlight the need for proactive planning and mitigation efforts to mitigate potential threats to project success.

The study by Getachew Tekalegn (2023) AAU that studied causes of heritage building conservation project delay at Ethiopian Heritage Authority (EHA) assessed the causes of delay in implementing heritage building conservation projects. Data were collected through questionnaires from a sample of forty-six participants. The collected data underwent descriptive statistical analysis, focusing on importance indexes and factor ranking. The analysis results revealed that bureaucratic procedures and complex decision-making processes within client organizations, conflicts between contractors and sub-contractors, poor planning and scheduling by the contractor, price escalation, lack of contractor's experience, inadequate qualification of the contractor's technical staff, late approval of changes, and poor contract management by the consultant were identified as the most significant risks contributing to project delays.

2.4 Conceptual Framework

The idea that project risk management procedures affect a project's likelihood of success will serve as the foundation for the investigation. Performing thorough risk planning, identification, analysis, response, and risk monitoring and control are some of these procedures and effectively applying them on conservation projects will positively affect project success.

Conceptual framework

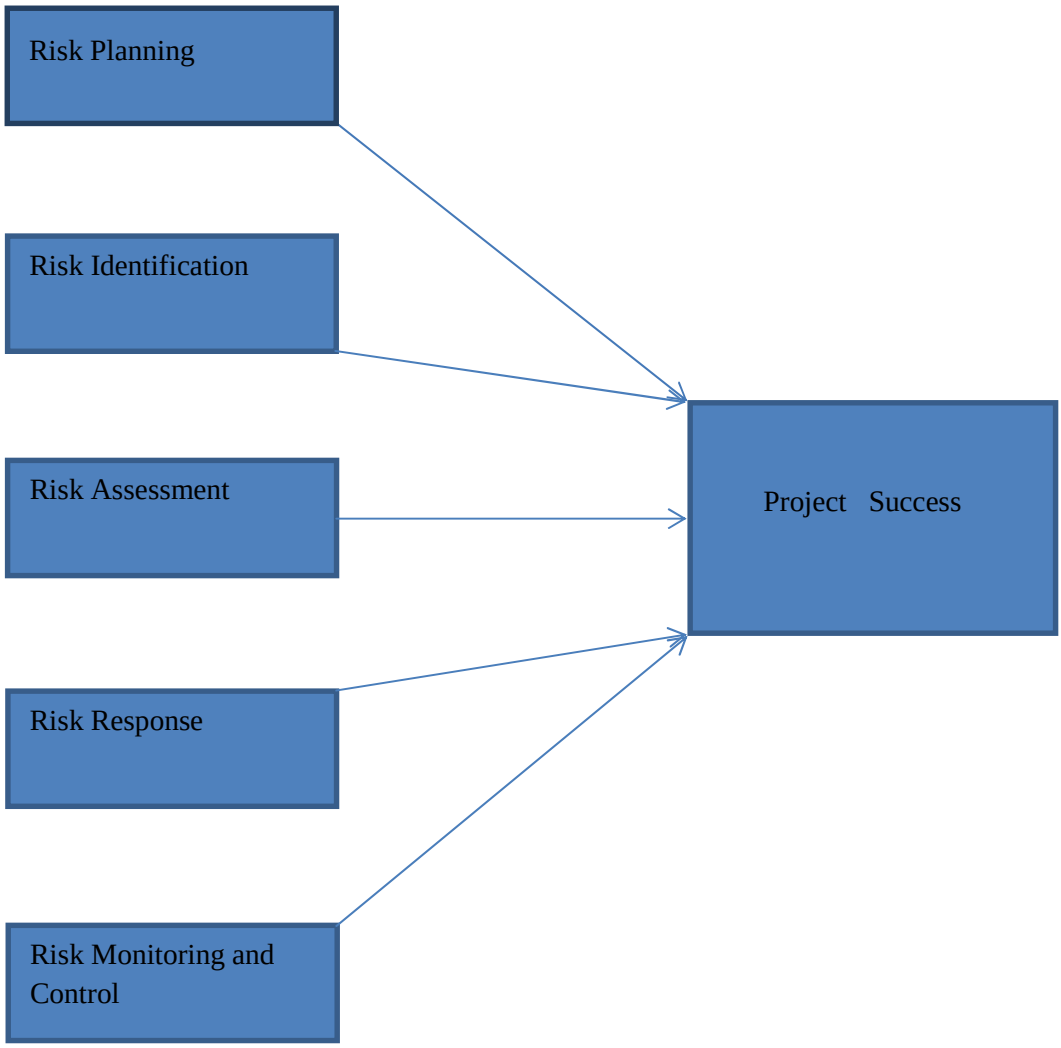

Figure 2.3: Conceptual framework

Source: PMI (2000)

Chapter Three

3. Research Design and Methodology

3.1 Research Design

The researcher utilized a descriptive research design to conduct the investigation. The researcher adopted a descriptive design in order to assess project risk management practices on project success. Descriptive research is used to provide an accurate and systematic description of characteristics, practices, or behaviors, rather than evaluating cause-and-effect relationships.

Purposive sampling techniques were selected for their ability to gather quantitative data, which were statistically analyzed to reveal patterns and correlations. This approach was complemented by qualitative methods to provide a deeper understanding of the respondents' perspectives. The combination of these methods was intended to yield a comprehensive overview of the risk management practices employed and their effectiveness in achieving project success.

In addition, data were gathered through questionnaires and interviews. The questionnaire had two parts: the first part asked respondents to rank the presence of planning practices in the Ethiopian Heritage Authority (EHA) and their impact on project success using a Likert scale; the second part consisted of open-ended questions.

To ensure the purposive sampling's effectiveness, it was carefully designed to include a variety of question types, including Likert scale and open-ended questions. This mix of question types enabled the collection of both quantitative and qualitative data.

The study was cross-sectional since the researcher collected data from the population at a particular point in time.

3.2 Research Approach

The study employed a mixed-methods approach, integrating both qualitative and quantitative research methods. This approach was selected to leverage the strengths of both methodologies and to provide a holistic understanding of the impact of risk management practices on heritage conservation projects.

The qualitative approach involved in-depth interviews with a subset of the sample. This method allowed for the exploration of complex issues in greater detail than was possible with quantitative methods alone. The interviews were semi-structured, providing a framework to ensure that key topics were covered while allowing flexibility for respondents to discuss issues in their own words. The qualitative data provided insights into the experiences, perceptions, and attitudes of the respondents regarding risk management practices.

The quantitative approach involved the administration of a purposive sampling questionnaire to the entire sample. The sampling gathered data on the prevalence and effectiveness of various risk management practices. Quantitative data were analyzed using statistical methods to identify patterns and relationships among variables. This approach provided a broad overview of the current state of risk management practices within the Ethiopian Heritage Authority.

By combining qualitative and quantitative methods, the study aimed to achieve a more comprehensive understanding of the research problem. The qualitative data provided context and depth to the quantitative findings, while the quantitative data offered a broader perspective on the prevalence and effectiveness of risk management practices.

3.3 Sampling

A purposive sampling technique was used to select 50 experts and officials from the Ethiopian Heritage Authority who had direct involvement or expertise in heritage conservation projects and risk management practices. This non-probability sampling method was chosen to ensure that the sample included individuals who were most knowledgeable about the research topic.

The sample included individuals from various departments within the Authority, including conservation, project management, and administration. This diversity was intended to capture a range of perspectives and experiences related to risk management in heritage conservation projects.

The selection criteria for participants included their role within the organization, their experience in heritage conservation projects, and their involvement in risk management activities. By targeting individuals with relevant expertise, the study aimed to gather detailed and accurate information about the current practices and challenges in risk management.

3.4 Data Source

The data for this study were sourced from both primary and secondary sources. Primary data were collected directly from the participants through purposive sampling techniques and interviews. This first-hand information was critical for understanding the specific practices and challenges related to risk management within the Ethiopian Heritage Authority.

Secondary data were gathered from existing literature, reports, and documents related to heritage conservation and risk management. This data provided a contextual background and helped to frame the primary data within the broader field of study. By combining primary and secondary data, the study aimed to provide a comprehensive analysis of the research topic.

3.5 Data Type

The primary data collected for this study consisted of both qualitative and quantitative data. Qualitative data were obtained through in-depth interviews with selected participants. These interviews provided detailed insights into the respondents' experiences and perspectives on risk management practices.

Quantitative data were collected through the purposive sampling questionnaire administered to the full sample of 50 experts and officials. The sampling included closed-ended questions with Likert scale responses to measure the level of agreement or effectiveness of different risk management practices. This data provided a quantitative measure of the prevalence and effectiveness of these practices.

3.6 Data Collection Method

The data collection methods for this study included both questionnaires and interviews. The questionnaire was designed to gather quantitative data from the entire sample. It included a mix of question types to capture a range of information about risk management practices and their perceived effectiveness.

Interviews were conducted with a subset of the sample to gather qualitative data. These interviews provided an opportunity for participants to share their experiences and insights in a more interactive and dynamic setting. The interviews were semi-structured, allowing for both guided and open-ended exploration of key topics.

3.7 Data Analysis

The data analysis process used both qualitative and quantitative methods. Qualitative data from the interviews were analyzed using thematic analysis. This method involved identifying, analyzing, and reporting patterns or themes within the data. Thematic analysis was particularly useful for exploring complex issues and understanding the underlying meanings and perspectives of the respondents.

Quantitative data from the purposive sampling were analyzed using descriptive and inferential statistics. Descriptive statistics, such as frequencies and percentages, were used to summarize the data. Inferential statistics, such as correlation analysis, were used to explore relationships between variables. The quantitative analysis provided a broad overview of the prevalence and effectiveness of risk management practices within the Authority.

The data from the questionnaires were quantitatively evaluated using descriptive statistics with the statistical tool SPSS version 29. The association between project management planning and project success was investigated using correlation. The correlation method assessed the strength of the association between the two variables presented.

Depending on the sort of questions given, numerous descriptive statistics analysis approaches, such as frequencies, means, percentages, and standard deviations, were used. In addition, the qualitative aspect was evaluated and analyzed using transcription as well as logical and deductive explanations. Furthermore, the data were shown in tables, graphs, and charts to make it easier to understand the data being studied.

3.8 Ethical Considerations

Ethical considerations were adhered to throughout the research process. Informed consent was obtained from all participants, ensuring that they were fully aware of the purpose of the study and their role in it. Participants were assured of the confidentiality of their data and their right to withdraw from the study at any time without penalty.

Confidentiality was maintained by anonymizing the data and ensuring that individual responses could not be traced back to specific participants.

Chapter Four

4. Data Analysis, Presentation and Discussion

4.1 Introduction

This chapter presents the data analysis and discussion of the research findings on how risk management practices affect project success in built heritage conservation projects under the Ethiopian Heritage Authority. This is done by presenting the results of a questionnaire, an interview, and secondary materials. To test all the hypotheses, the data were analyzed using SPSS version 29. This chapter is divided into four major parts. The first section starts by describing demographic details of the respondents; the second section contains descriptive statistics. The correlation and regression analyses are shown in the third and fourth sections, respectively. Cronbach's alpha is used to test the goodness and internal consistency of the measure.

Fifty questionnaires were distributed to Ethiopian Heritage Authority professionals who have an active involvement in heritage conservation projects, including architects, engineers, conservators, art conservators, heritage development experts, and managers. From the total distributed 50 questionnaires 44 or 88% were returned. The response rate was statistically sufficient for further analysis.

A reliability test is primarily concerned with measuring a collection of variables consistently. The Cronbach Alpha coefficient is an indication of the scale's internal consistency. When the Cronbach's alpha coefficient is high, it indicates that the scale's components are related to one

another and measure the same underlying concept. Scale reliability can be reasonably tested using a Cronbach Alpha value greater than 0.70.

Reliability Statistics

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Risk Planning	.947	.952	4
Risk Identification	.873	.876	4
Risk Assessment	.899	.921	4
Risk Response	.942	.945	4
Risk Monitoring and Control	.762	.758	4
Project Success	.905	.912	3

Table 1: Cronbach alpha value

Source: Sample Data

4.2 Demographic Information of the respondents

The first part of the survey offered broad inquiries on the respondents' gender, educational background, overall job experience, role in the EHA, and degree of project management education.

4.2.1. Distribution of Respondents by Gender

The findings revealed that 28 respondents, which make 63.6% of total respondents, were men, 16 respondents, which make 36.4% of total respondents, were women.

Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	16	36.4	36.4	36.4
	Male	28	63.6	63.6	100.0
	Total	44	100.0	100.0	

Table 2: Distribution of respondents by gender

Source: Sample Data

4.2.2. Respondents Education Level

According to the survey, 11.4% of respondents held a PHD, while 38.6% held a master's degree. Degree holders made up 43.2% of respondents, and the remaining 6.8% of total respondents held a diploma.

Educational background of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PHD	5	11.4	11.4	11.4
	MA/MSc	17	38.6	38.6	50.0
	BA/BSc	19	43.2	43.2	93.2
	Diploma	3	6.8	6.8	100.0
	Total	44	100.0	100.0	

Table 3: Distribution of respondents by educational background

Source: Sample Data

4.2.3. Respondents Work Experience

This study revealed that 43.2% of respondents had 5 to 10 years of work experience, whereas 25% had 11 to 15 years of work experience. Although 11.4% of those polled have less than 5 years of professional experience, 20.5% have more than 15 years of experience.

Work experience of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<5	5	11.4	11.4	11.4
	5-10	19	43.2	43.2	54.5
	11-15	11	25.0	25.0	79.5
	>15	9	20.5	20.5	100.0
	Total	44	100.0	100.0	

Table 4: Distribution of respondents by work experience

Source: Sample Data

4.2.4. Respondents position in the Ethiopian Heritage Authority

According to the results shown in Table 4.4 below, of the total respondents, 34.1% are architect conservators, 22.7% are engineer conservators, 15.9% are heritage development experts, 13.6% are inventory experts, and 6.8% are managers in different directorates of the Ethiopian Heritage Authority.

Respondents position in EHA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Architect Conservator	15	34.1	34.1	34.1
	Engineer conservator	10	22.7	22.7	56.8
	Art Conservator	3	6.8	6.8	63.6
	Heritage development expert	7	15.9	15.9	79.5
	Inventory expert	6	13.6	13.6	93.2
	Manager	3	6.8	6.8	100.0
	Total	44	100.0	100.0	

Table 5: Distribution of respondents by position in EHA

Source: Sample Data

4.2.5. Respondents Level of Education in Project Management

The respondents' were also asked about their level of education in project management. In this survey, 61.4% of respondents acknowledged that they have no educational experience in project management; 31.8% had taken some project management courses in their BSc or MSc studies; and 6.8% had an MA degree in project management.

Respondents level of education in PM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MA	3	6.8	6.8	6.8
	Some Courses	14	31.8	31.8	38.6
	I don't have any	27	61.4	61.4	100.0
	Total	44	100.0	100.0	

Table 6: Distribution of respondents by level of education in PM

Source: Sample Data

4.3 Descriptive Statistics

4.3.1 Relative importance index result, rank and Percentage

The research findings include data on the relative relevance index (RII), as well as the rank of the presence in Ethiopian Heritage Authority's risk management practices on successful built heritage conservation project completion.

The RII technique, a weighted average, calculates the average rank for each question and then calculates the rank for each capability based on the average of the ranks of the questions grouped under the capability.

Table 4.1 provides detailed information on the RII and organized rankings for each risk management practice and project success question. On the other hand, Table 4.2 displays a percentage of the respondents on every scale for each question regarding risk management practice and project success.

No	Description	RII	Rank
1	**Project Success**		
	a. Conservation projects are completed within quality specifications	0.486363636	1
	b. Conservation projects are completed within budget	0.450000000	2
	c. Conservation projects are completed within quality specifications	0.450000000	2
2	**Risk Planning**		
	a. Risk planning activities at the beginning of each heritage conservation project.	0.372727272	3
	b. Regular update and review of risk management plans throughout the lifecycle of a project.	0.481818181	1
	c. Risk planning tools and techniques	0.372727272	3
	d. Effective integration of risk planning into the overall project planning process	0.445454545	2
3	**Risk Identification**		
	a. Risk identification process is carried out in order to identify both internal and external factors affecting the project.	0.640909090	2
	b. Effective use of tools and techniques	0.445454545	4
	c. Involvement of various stakeholders in the risk identification.	0.609090909	3
	d. Risk identification process is carried out at the inception of the project to identify both internal and external factors affecting the project.	0.645454545	1
4	**Risk Assessment**		
	a. Effective assessment of the likelihood and impact of identified risks	0.522727272	1
	b. Qualitative and quantitative methods to analyze risks.	0.445454545	3
	c. Risk analysis methods accurately predict project outcomes.	0.422727272	4
	d. Frequent risk assessments throughout the project lifecycle.	0.481818181	2
5	**Risk Response**		
	a. Effective response to identified risks in projects.	0.495454545	1
	b. Strategies used to address negative risks.	0.445454545	2
	c. Strategies used to address positive risks (opportunities).	0.445454545	2
	d. Risk response strategies have been effective in mitigating risks.	0.422727272	4
6	**Risk Monitoring and Control**		
	a. Regular risk monitoring during the execution of heritage conservation projects.	0.445454545	1
	b. Effective use of tools and techniques to monitor and control risks.	0.372727272	4
	c. There is regular update of risk register to reflect new and changing risks.	0.431818181	2
	d. Clear and well-communicated procedures for addressing critical risks.	0.422727272	3

Table 7: Relative importance index and rank of risk management practice in EHA

Source: Sample Data

No	Description	Strongly Disagree%	Disagree%	Neutral%	Agree %	Strongly Agree%
1	**Project Success**					
	a. Conservation projects are completed within quality.	0	56.8	43.2	0	0
	b. Conservation projects are completed within budget.	0	75	25	0	0
	c. Conservation projects are completed within schedule.	0	75	25	0	0
2	**Risk Planning**					
	a. Risk planning activities at the beginning of each heritage conservation project.	56.8	0	43.2	0	0
	b. Regular update and review of risk management plans throughout the lifecycle of a project.	38.6	0	43.2	18.2	0
	c. Risk planning tools and techniques	56.8	0	43.2	0	0
	d. Effective integration of risk planning into the overall project planning process	38.6	18.2	25	18.2	0
3	**Risk Identification**					
	a. Risk identification process is carried out in order to identify both internal and external factors affecting the project.	20.5	0	18.1	61.4	0
	b. Effective use of tools and techniques	38.6	18.2	25	18.2	0
	c. Involvement of various stakeholders in the risk identification.	0	38.6	18.2	43.2	0
	d. Risk identification process is carried out at the inception of the any project.	0	20.5	36.4	43.2	0
4	**Risk Assessment**					
	a. Effective assessment of the likelihood and impact of identified risks	0	56.8	25	18.2	0
	b. Qualitative and quantitative methods to analyze risks.	20.5	36.4	43.2	0	0
	c. Risk analysis methods accurately predict project outcomes.	38.6	36.4	25	0	0
	d. Frequent risk assessments throughout the project lifecycle.	20.5	36.4	25	18.2	0
5	**Risk Response**					
	a. Effective response to identified risks in projects.	38.6	0	36.4	25	0
	b. Strategies used to address negative risks.	38.6	18.2	25	18.2	0
	c. Strategies used to address positive risks (opportunities).	38.6	18.2	25	18.2	0
	d. Risk response strategies have been effective in mitigating risks.	38.6	36.4	0	25	0
6	**Risk Monitoring and Control**					
	a. Regular risk monitoring during the execution of heritage conservation projects.	20.5	36.4	43.2	0	0
	b. Effective use of tools and techniques to monitor and control risks.	38.6	36.4	25	0	0
	c. There is regular update of risk register to reflect new and changing risks.	18.2	47.7	34.1	0	0
	d. Clear and well-communicated procedures for addressing critical risks.	18.2	52.3	29.5	0	0

Table 8: Respondent' response presence of Risk Management Practice and project success in EHA

Source: Sample Data

Project Success

Several important factors are highlighted by the Ethiopian Heritage Authority's (EHA) review of project success. According to the Relative Importance Index (RII), finishing conservation projects within quality standards (RII = 0.486) is the most important criterion for project success, followed by finishing within budget (RII = 0.450) and on schedule (RII = 0.450). These results highlight the significance of meeting schedule, budget, and quality requirements in cultural heritage restoration projects. The survey results show that quite a few of participants argue that projects are completed on time and under budget, with 75% of respondents disagreeing on both points, referring to considerable difficulties with both financial and time management. Regarding the quality factor, only 56.8% of respondents agreed, with 43.2% staying neutral. This emphasizes the need for improved project management practices to enhance the success rates of heritage conservation projects.

Risk Planning

EHA's risk planning procedures identify opportunities for development. The best RII (0.482) is found in risk management strategies that are updated and reviewed on a regular basis, however only 18.2% of respondents agreed. With 56.8% disagreement, the first risk planning activities and instruments received a lower score (RII = 0.373). The reaction to integrating risk planning into overall project planning is mixed, as indicated by the RII of 0.445. These results imply that while frequent risk planning is important, it needs to be improved for more effective practical implementation and incorporation into project workflows.

Risk Identification

With the highest RII (0.645) for identifying internal and external factors affecting the project at the starting level, risk identification in EHA projects is deemed to be somewhat effective. Stakeholder participation (RII = 0.609) and efficient tool use (RII = 0.445) received lower scores nevertheless. Remarkably, 61.4% of respondents concurred that early risk identification is crucial. These findings show that early risk identification is very important, but they also show that more effective tools and procedures, as well as improved stakeholder engagement, are needed to further enhance this crucial process.

Risk Assessment

The efficacy of risk assessment procedures used by EHA varies. A RII of 0.523 was credited to effective risk assessment, while 56.8% of respondents disagreed with its use. With many respondents scoring neutrally, both qualitative and quantitative analytic approaches received a RII of 0.445. RII = 0.423, the lowest value for accuracy in risk prediction, suggests some skepticism; RII = 0.482, the intermediate level, was obtained for frequent risk assessments. These results imply that in order to increase the impact and reliability of risk assessment procedures, there is a need for improved implementation and trust in it.

Risk Response

The assessment of EHA's risk response methods identifies both its strengths and its potential for development. With a RII of 0.495, the most effective reaction to hazards was ranked best, indicating a reasonable level of confidence in the ability to address risks. There was disagreement in the comments, though, with only 25% agreeing and 38.6% disagreeing. Approaches to managing opportunities (RII = 0.445) and negative risks (RII = 0.445) exhibited comparable trends, with a sizable percentage of respondents disagreeing. With significant skepticism (38.6% disagreement), risk response techniques' efficacy in managing hazards received the lowest grade (RII = 0.423). These findings show that although risk response is recognized as important, there are significant obstacles to these techniques' perceived efficacy and consistency.

Risk Monitoring and control

The efficacy of the risk monitoring and control procedures used by EHA varies. Regular risk monitoring throughout project execution received a moderate RII of 0.445, with 43.2% of respondents remaining neutral and a sizable minority of respondents (36.4%) disagreeing. With a lower RII of 0.373 and substantial disagreement (38.6%), the efficient use of tools and strategies to monitor and control risks was found to be beneficial. Responses to the risk register being

updated on a regular basis to account for new and evolving threats were mixed, with a RII of 0.432. Procedures that are well-defined and conveyed for handling important risks received similar scores (RII = 0.423), with a sizable portion of respondents (52.3%) disagreeing. These results imply that although attempts are made to monitor and reduce risks, there are notable deficiencies in the crucial areas of tool use, frequent updates, and clear communication.

4.4 Correlation Analysis

The purpose of this study is to assess how strongly risk management practices and project success are related. This section aims to assess the degree of correlation between project risk management and overall project success. To this end, Pearson's correlation coefficient will be used to link individual variables (risk planning, risk identification, risk assessment, risk response, risk monitoring, and control) to project success. The findings of the correlation analysis are presented in the table below.

Correlations							
		Project Success	Risk Planning	Risk Identification	Risk Assessment	Risk Response	Risk Monitoring and Control
Project Success	Pearson Correlation	1					
	Sig. (2-tailed)						
Risk Planning	Pearson Correlation	.749**	1				
	Sig. (2-tailed)	<.001					
Risk Identification	Pearson Correlation	.586**	.580**	1			
	Sig. (2-tailed)	<.001	<.001				
Risk Analysis	Pearson Correlation	.599**	.429**	.957**	1		
	Sig. (2-tailed)	<.001	.004	<.001			
Risk Response	Pearson Correlation	.818**	.930**	.783**	.708**	1	
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		
Risk Monitoring and Control	Pearson Correlation	.376*	.412**	.921**	.826**	.558**	1
	Sig. (2-tailed)	.012	.005	<.001	<.001	<.001	
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Table 9: Person correlation results

Source: Sample Data

Summary of findings of correlation

Project Success and Risk Planning

Project success and risk planning have a 0.749 Pearson correlation value, which is significant at the 0.01 level ($p < 0.001$). The significant positive correlation suggests a strong relationship between successful risk management and heritage conservation project outcomes. The large coefficient indicates that project success tends to grow significantly as risk planning quality

increases. This emphasizes how crucial it is to do extensive risk planning at the outset of a project, as this lays the groundwork for dealing with possible problems before they arise.

Project Success and Risk Identification

Project success and risk identification have a 0.586 correlation, which is significant at the 0.01 level ($p < 0.001$). This moderate positive connection suggests that thorough and precise risk identification has a positive impact on project success. Project managers can increase the likelihood of project success by anticipating possible obstacles and creating ways to reduce them with the help of effective risk identification. Using the right tools and procedures together with the participation of multiple stakeholders are essential to this process.

Project Success and Risk Assessment

Project success and risk assessment have a 0.599 Pearson correlation coefficient, which is significant at the 0.01 level ($p < 0.001$). This moderate positive association emphasizes how crucial it is to evaluate the impact and possibility of risks that have been discovered. Resource allocation and risk prioritization are made possible for project managers by efficient qualitative and quantitative risk assessment techniques. Risk assessment assists in making well-informed decisions that lead to the successful completion of projects by precisely projecting possible outcomes.

Project Success and Risk Response

Of all the variables, there is the strongest link between project performance and risk response, with a coefficient of 0.818 that is significant at the 0.01 level ($p < 0.001$). This very significant positive association suggests that a project team's ability to address hazards effectively has a significant influence on the project's success. The implementation of risk response tactics that are

effective, such as mitigation, transfer, and acceptance, is crucial for risk management and project goal achievement. The close connection emphasizes how important it is to have effective risk response procedures in place.

Project Success and Risk Monitoring and Control:

Project success and risk monitoring and control have a 0.376 Pearson correlation value, which is significant at the 0.05 level ($p = 0.012$). Despite being the lowest correlation among the variables, this one nevertheless shows a positive association. Throughout the project lifecycle, regular risk monitoring and control are crucial for determining the efficacy of risk responses and making the required adjustments. Progress reports and risk registers are two examples of tools and methods used in monitoring and control that support oversight and continual risk management.

Overall Relationship between Risk Management Practice and Project Success:

A strong positive association has been found by analyzing the Pearson correlation data between several areas of risk management practice and project success in EHA's heritage conservation projects. All phases of the risk management process, from planning to monitoring and control, have a major impact on the project's ultimate success. Project teams that employ effective risk management techniques are better equipped to recognize, evaluate, address, and track risks in a methodical manner. This increases the probability that project goals will be met within the limits of quality, time, and cost. Effective risk management requires a comprehensive approach if cultural heritage is to be successfully preserved and conserved.

Summary of Findings from Open-ended Questions and Interviews

The Ethiopian Heritage Authority (EHA) frequently faces challenges in meeting performance indicators related to time, budget, quality, and customer satisfaction when implementing heritage protection projects. The results of the correlation analysis demonstrate how significantly these success criteria are impacted by efficient project risk management. The existing risk management procedures used by the EHA are insufficient, which results in substandard project

outcomes. Enhancements in this domain could considerably augment the triumph of the undertaking.

Among the most popular risk management tools and techniques in EHA conservation projects are risk registers, SWOT analysis, and expert opinion. Unfortunately, there is a lack of consistency and depth in the implementation of these technologies, which adds to the overall inefficiency in risk management. Using these methods more thoroughly and methodically may improve risk identification and mitigation.

Stakeholder conflicts, technical difficulties, budget limitations, and problems with regulatory compliance are common hazards in EHA heritage protection projects. These risks are frequently ignored, which results in delays, overspending, and poor quality. Improving the procedures for risk identification and evaluation could reduce these typical hazards and enhance project results.

Having a qualified personnel, sufficient finance, strong risk management procedures, and effective stakeholder participation are all important components of Ethiopia's built heritage conservation projects. Resolving the shortcomings in the current EHA procedures by implementing thorough planning, continual tracking, and frequent risk assessments will greatly increase the success rate of conservation projects.

Summary of Findings from EHA's Previous Conservation Efforts

The study tried to evaluate the success level of conservation projects carried out by the Ethiopian Heritage Authority over the past five years, from 2011 EC to 2015 EC. The findings of the assessment are shown in the table below.

year	No of projects planned for completion	No of projects completed within planned		
		Time	Cost	Quality
2011	10	0	2	4
2012	12	0	1	3
2013	14	0	3	5
2014	12	0	2	2
2015	21	0	2	4

Table 10: The state of EHA's projects throughout the previous five years

Source: Sample Data

Based on the data provided, the study aimed to evaluate the success level of conservation projects undertaken by the Ethiopian Heritage Authority (EHA) over the past five years, from 2011 EC to 2015 EC. The findings, as illustrated in Table 4.10, reveal a consistent lack of success across all assessed dimensions—time, cost, and quality. For each year within this period, no projects were completed on time, indicating a severe shortfall in meeting scheduled deadlines. Furthermore, the number of projects completed within the planned cost was similarly zero, underscoring a significant issue with budget management. Quality assessments also fell short, with only a minimal number of projects meeting quality standards. In summary, the data indicates that EHA faced considerable challenges in effectively managing and completing conservation projects during these five years, with no project meeting the criteria of timely completion, cost efficiency, or quality.

Chapter Five

5. Conclusion and Recommendation

5.1 Conclusion

The primary objective of this research was to evaluate how risk management practices affect the Ethiopian Cultural Authority's (EHA) ability to carry out successful cultural conservation projects. Planning, identification, assessment, response, and monitoring are the areas of risk management that were examined in order to gain a thorough understanding of how these practices affect project outcomes.

According to the results, risk planning and risk response have positive and significant effects on project success. Risk identification and risk assessment have a moderate positive impact on project success, and risk monitoring and control have a low positive impact on project success.

Effective risk planning significantly enhances the success of heritage conservation projects.

The significance of meticulous preliminary planning is shown by the significant positive correlation (0.749) found between risk management and project success. This entails determining possible hazards, formulating plans for risk reduction, and incorporating risk management into the project planning procedure as a whole. The necessity of ongoing planning attention throughout the project lifespan is further shown by the strong RII scores for frequent updates and reviews of risk strategies.

Risk identification involving various stakeholders is crucial. The correlation coefficient of 0.586 suggests a positive association between project success and risk identification. Including a variety of stakeholders guarantees an adequate understanding of risks, both internal and external. Stakeholder involvement's high RII score (0.6455) indicates how well it can identify a wide range of potential challenges, enabling more extensive and well-informed risk management solutions.

For a project to succeed, detailed and frequent risk assessments are required. Risk assessment procedures are demonstrated to have a beneficial influence on project outcomes, with a correlation of 0.599. A successful assessment uses both qualitative and quantitative techniques to analyze the impact and likelihood of risks that have been identified. Frequent assessments had

modest RII scores (0.4818), indicating that it is helpful to continuously evaluate in order to adjust to new risk and improve management strategies.

Effective risk response strategies have the highest impact on project success. The highly significant correlation (0.818) between project performance and risk response suggests that post-identification risk management is crucial. It is necessary to have well-developed and ongoing strategies to manage both positive and negative risks. The high RII ratings emphasize the necessity for proactive steps to reduce risks and take advantage of opportunities, underscoring the need of an effective response.

Risk monitoring and control play a vital role in ensuring project success. Despite being marginally lower than other factors, the correlation (0.376) between project success and other variables is still significant. Regular risk assessments, the updating of risk registers, and the implementation of precise procedures for handling risks are all necessary for effective monitoring. The RII ratings show that although certain monitoring procedures are in place, the tools and techniques employed may be improved. Achieving intended results and preserving project alignment can be facilitated by enhancing these elements.

5.2 Recommendation

Based on the findings of this study and a review of relevant literature, it is evident that robust risk management is critical for the success of heritage conservation projects at the Ethiopian Heritage Authority (EHA). Effective risk management, including risk planning, identification, assessment, and monitoring, is essential to mitigate uncertainties and improve project outcomes.

To strengthen risk management, EHA should integrate comprehensive risk planning from the project's inception; ensuring potential risks are not only identified but also matched with well-developed mitigation strategies. Regular updates to the risk management plan are vital throughout the project lifecycle to address emerging threats.

Engaging a broad range of stakeholders in the risk identification process will enrich the understanding of potential risks from multiple perspectives. Workshops and brainstorming

sessions should be used to facilitate this, while standardized tools and techniques for risk identification are crucial for consistency.

Detailed and recurring risk assessments, using both qualitative and quantitative methods, are necessary to track changes in risk profiles. EHA should prioritize proactive mitigation measures and develop clear, actionable risk response plans that are frequently revised based on the latest risk evaluations.

To ensure risks are effectively tracked, EHA should invest in advanced risk monitoring systems, such as automated tracking tools and risk dashboards. These tools will enhance decision-making by providing real-time updates. Furthermore, the organization must establish clear protocols for updating risk registers and implementing control measures.

A culture of open communication around risk management should be encouraged, with regular reports and meetings to keep stakeholders informed. Continuous training in risk management tools and techniques will be essential to maintain competency among project staff and foster a proactive approach to risk control.

By adopting these practices, EHA can improve its risk management capabilities and, consequently, enhance the overall success of its conservation projects.

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APPENDIX

Appendix-A

Questionnaire

Dear respondents,

I am undertaking a research survey on built heritage conservation projects. The purpose of this research is to explain "Assessment of Risk management practice on project success in the case of Ethiopian Heritage Authority conservation projects.

The research is an individual research project as part of my study for MA Degree in Project Management at Addis Ababa University. I invite you as key staff members to participate in this survey. The information you provide in response to the items in the questionnaire will be used as part of the data needed for the study. All the information you provide will be kept in strict confidentiality and it will be used only for academic research. Therefore, please answer each question carefully. There is no right or wrong answer. If you are unsure of an answer, please respond with your best estimate.

Your participation in this research is highly appreciated, and I thank you for your time, energy, and effort. If you have any further questions, feel free to contact me at the address below.

Thank you for your cooperation,

Eskinder Tilahun

Post graduate student, Project Management, Addis Ababa University

Email: leul.eskinder1@gmail.com

GENERAL INSTRUCTIONS

Part - 1

Background Information about the Respondents

Please use (x) mark in the relevant box for your response

1. Gender Female ☐ Male ☐

2. Educational back ground

PHD ☐ MA/MSC ☐

BA/BSC ☐ College Diploma ☐

3. General Work Experience

Less than 5 years ☐ 5-10 years ☐

10-15 years ☐ Above 15 years ☐

4. What is your position in the Ethiopian Heritage Authority?

Architect Conservator ☐ Engineer Conservator ☐

Art Conservator ☐ Heritage Development Expert ☐

Inventory Expert ☐ Manager ☐

5. What is your level of education in project management?

Certificate ☐ MA ☐

Took some courses ☐ I don't have any ☐

PART - 2

Questions Specific to the Project Risk Management Practice and Project Success of EHA

Direction: Please rate the degree of Presence of the statements in EHA by making an (X) mark where appropriate for the following identified factors that influence existing risk management practice and project success, based on your knowledge of practice.

Degree of Presence in EHA Scale

SD – Strongly disagree, D – Disagree, N – neutral, A – Agree, SA – Strongly agree

No	Description	Degree Of Presence in EHA				
		S D	D	N	A	S A
1	**Project Success**					
	a. Conservation projects are completed within quality specifications					
	b. Conservation projects are completed within budget					
	c. Conservation projects are completed within quality specifications					
2	**Risk Planning**					
	a. There is risk planning activities at the beginning of each heritage conservation project.					
	b. There is regular update and review of risk management plans throughout the lifecycle of a project.					
	c. There is use of various risk planning tools and techniques (e.g., risk management plans, risk breakdown structures, probability, and impact matrices) to effectively prepare for potential risks in our heritage conservation projects.					
	c. There is effective integration of risk planning into the overall project planning process to ensure all potential risks are addressed from the outset.					
3	**Risk Identification**					
	a. Risk identification process is carried out in order to identify both internal and external factors affecting the project.					
	b. There is effective use of tools and techniques (e.g., brainstorming, Delphi technique, SWOT analysis, checklists) to identify risks in our heritage conservation projects.					
	c. There is involvement of various stakeholders in the risk identification					

	process of heritage conservation projects.					
	d. Risk identification process is carried out at the inception of the project to identify both internal and external factors affecting the project.					
4	**Risk Assessment**					
	a. There is effective assessment of the likelihood and impact of identified risks in heritage conservation projects.					
	b. There is combination of qualitative and quantitative methods to analyze risks.					
	c. Risk analysis methods accurately predict project outcomes.					
	d. There are frequent risk assessments throughout the project lifecycle.					
5	**Risk Response**					
	a. There is an effective response to identified risks in heritage conservation projects.					
	b. There are a variety of strategies used (e.g., risk avoidance, transfer, mitigation, acceptance) to address negative risks.					
	c. There are various strategies used (e.g., exploiting, enhancing, sharing, accepting) to address positive risks (opportunities) in our heritage conservation projects.					
	d. Risk response strategies have been effective in mitigating risks in heritage conservation projects.					
6	**Risk Monitoring and Control**					
	a. There is regular risk monitoring during the execution of heritage conservation projects.					
	b. There is effective use of tools and techniques to monitor and control risks in our projects, e.g., risk audits.					

	c. There is regular update of risk register to reflect new and changing risks.					
	d. There are clear and well-communicated procedures for addressing critical risks.					

Part 3 Open-ended Questions

Open-ended Questions: Please give your answers at the back of the question sheet. If you are unsure of an answer in this section, you can skip the question.

1. Do you think heritage conservation projects by EHA are successful in terms of time, budget, quality, customer satisfaction, and other factors? If your answer is no, what is the level of impact of project risk management?
2. Which project risk management tools and techniques are used in EHA conservation projects?
3. What are the most common risks in heritage conservation projects implemented by EHA?
4. In your opinion, what are the significant factors that contribute to the success of built heritage conservation projects in Ethiopia?

Interview Questions

1. What is your position in the Ethiopian Heritage Authority?

2. In your opinion, what is the role of project risk management in the success of EHA built heritage conservation projects?

3. What are the primary challenges EHA faces that hinder the success of heritage conservation projects?