

**Risk Management Strategies and Project Performance of Selected Non-Governmental Organisations (NGOs)
in Karenga Sub-County, Karenga District, Uganda**

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Abstract

This study examined the relationship between risk management strategies and the project performance of selected non-governmental organisations (NGOs) in Karenga Sub-County, Karenga District, Uganda. NGOs implement development and humanitarian projects in challenging environments, and effective risk management is widely regarded as essential to project success, yet its contribution among Ugandan NGOs remains under-examined. The study investigated how risk identification, risk assessment, risk mitigation, and risk monitoring relate to project performance. A cross-sectional survey design with a mixed-methods approach was adopted, and data were collected from 170 respondents comprising NGO project managers, project staff, and beneficiaries using structured questionnaires and interviews. Descriptive statistics, exploratory factor analysis, Pearson correlation, and structural (path) analysis were used. Factor analysis confirmed the construct validity of the risk management dimensions, which loaded onto coherent factors and explained 68.7% of the variance. The results revealed a strong positive and significant relationship between risk management strategies and project performance ($r = 0.68$, $p < 0.01$), with the strategies jointly explaining 66.0% of the variance in project performance ($R^2 = 0.660$). Risk mitigation ($\beta = 0.32$) and risk monitoring ($\beta = 0.30$) emerged as the strongest path predictors. The study concludes that risk management significantly enhances project performance and recommends strengthening risk mitigation, monitoring, and identification.

Keywords: risk management, project performance, NGOs, risk mitigation, risk monitoring, Karenga, Uganda

1.0 Introduction

Non-governmental organisations (NGOs) play a vital role in development and humanitarian work, implementing projects that deliver services and support to communities, often in challenging and uncertain environments (Lewis & Kanji, 2021). The success of these projects—their capacity to achieve their objectives and benefit their intended beneficiaries—is central to the NGOs' mission and to the wellbeing of the communities they serve. Because NGO projects operate amid uncertainty—financial, operational, environmental, and political—effective risk management is widely regarded as essential to their success, enabling NGOs to anticipate and address the threats that can derail projects (PMI, 2021).

Project performance assessed through the achievement of objectives, adherence to schedule and budget, quality of deliverables, and benefit to stakeholders is the central measure of a project's success (PMI, 2021). The theoretical expectation is that effective risk management improves project performance by systematically identifying, assessing, mitigating, and monitoring the risks that threaten projects, whereas weak risk management leaves projects vulnerable

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to threats that materialise and derail them (Hillson, as discussed in PMI, 2021). For NGOs operating in difficult environments such as Karenga, risk management can be especially consequential.

Risk management is multidimensional, following a recognised process (Alex & Devis, 2023). Risk identification concerns the systematic identification of the risks that could affect a project. Risk assessment concerns the analysis and prioritisation of identified risks by their likelihood and impact (Julius & Nancy, 2026b). Risk mitigation concerns the actions taken to reduce, avoid, transfer, or accept risks. And risk monitoring concerns the ongoing tracking of risks and the effectiveness of responses throughout the project (PMI, 2021). Each dimension is expected to contribute to project performance, but their relative importance in a specific context is an empirical question.

Karenga Sub-County, in Karenga District in the remote Karamoja region of north-eastern Uganda, is an area of significant development need in which NGOs implement projects amid considerable environmental, logistical, and socioeconomic challenges (Karenga District Local Government, 2023). The performance of these projects, and the risk management that supports it, are therefore of considerable importance (Kazaara & Nancy, 2025). Although the general importance of risk management is well established, empirical evidence quantifying its relationship with the project performance of Ugandan NGOs, and disaggregating the effects of specific risk management strategies, remains limited (Aleper & Lokol, 2023). This study addresses that gap by examining, through factor analysis, correlation, and structural (path) analysis, how risk identification, risk assessment, risk mitigation, and risk monitoring relate to the project performance of selected NGOs in Karenga Sub-County (Faith et al., 2023). The findings are significant for NGO managers, project practitioners, and donors.

2.0 Statement of the Problem

Effective risk management is expected to enhance project performance, and NGOs in Karenga Sub-County adopt risk management strategies on the expectation that they will protect their projects from the threats they face (PMI, 2021). Ideally, effective risk identification, assessment, mitigation, and monitoring would translate into successful projects. In practice, however, NGO projects in challenging environments frequently experience difficulties—delays, cost overruns, and shortfalls in delivery—and the extent to which risk management strategies account for project performance in the sub-county has not been established through rigorous empirical research (Aleper & Lokol, 2023; Karenga District Local Government, 2023).

Risk management in NGOs frequently faces challenges, including incomplete risk identification, weak assessment, inadequate mitigation, and poor monitoring, which may undermine project performance (Hillson, as discussed in PMI, 2021). Yet the precise contribution of each strategy remains unclear, which hampers efforts to strengthen risk management where it matters most (Moses et al., 2025). Without such evidence, investment in risk management risks being poorly focused (Alex & Devis, 2023). If this problem remains unaddressed, projects will continue to be derailed by unmanaged risks, wasting resources and failing beneficiaries (Alex & Devis, 2023). This study therefore sought to

establish the relationship between risk management strategies and the project performance of NGOs in Karenga Sub-County and to identify the most influential strategies.

3.0 Main Objective

The main objective of the study was to examine the relationship between risk management strategies and the project performance of selected NGOs in Karenga Sub-County, Karenga District, Uganda.

3.1 Specific Objectives

- i. To assess the risk management strategies adopted by selected NGOs in Karenga Sub-County.
- ii. To establish the relationship between risk management strategies (risk identification, risk assessment, risk mitigation, and risk monitoring) and project performance.
- iii. To determine the relative contribution (path coefficients) of each risk management strategy to project performance.

4.0 Literature Review

Research on risk management and project performance is grounded in several theoretical frameworks, notably the project risk management process, contingency theory, and systems theory (Ntirandekura et al., 2022). The project risk management process frames risk management as a systematic sequence of identification, assessment, response, and monitoring, implying that performing these steps well improves project outcomes (PMI, 2021). Contingency theory holds that effective management depends on adapting to the circumstances and uncertainties a project faces, of which risk management is the explicit expression (Hillson, as discussed in PMI, 2021). Systems theory frames a project as a system operating within an uncertain environment, in which risk management provides the anticipation and adaptation needed to maintain performance (PMI, 2021).

Empirical studies broadly confirm a positive relationship between effective risk management and project performance (Julius & Kazaara, 2026). Research across sectors finds that projects with strong risk management—systematic identification, assessment, mitigation, and monitoring—achieve their objectives more often and manage time and budget better than those with weak risk management, and that risk management is among the important determinants of project success (PMI, 2021). Studies of NGO and development projects report that risk management significantly influences performance, particularly in challenging environments, though its effectiveness is constrained by capacity and resources (Aleper & Lokol, 2023).

Risk mitigation features prominently as a determinant of project performance. Studies show that taking action to reduce, avoid, or transfer risks—rather than merely identifying and assessing them—is what actually protects projects, since identified risks that are not mitigated still materialise and cause harm (PMI, 2021). Risk monitoring constitutes a second theme: the ongoing tracking of risks and the effectiveness of responses ensures that emerging and changing risks are addressed throughout the project, which is especially important in dynamic environments (Hillson, as discussed in PMI, 2021). Risk identification forms a third theme, since risks that are not identified cannot be managed,

and risk assessment forms a fourth, prioritising risks so that attention is focused where it matters most (PMI, 2021). The literature emphasises that these strategies form an interdependent process in which each step depends on the others. Despite this body of work, few studies quantify and compare these strategies using factor analysis and a structural path model for Ugandan NGOs, a gap this study addresses.

5.0 Methodology

5.1 Research Design

The study adopted a cross-sectional survey design employing a mixed-methods approach that integrated quantitative and qualitative techniques (Creswell & Creswell, 2021). The quantitative strand enabled the measurement of the risk management strategies and project performance and the statistical testing of relationships, while the qualitative strand, drawn from interviews, provided contextual depth. A cross-sectional design was appropriate because data were collected at a single point in time.

5.2 Study Area and Population

The study was conducted in Karenga Sub-County, Karenga District, in the Karamoja region of north-eastern Uganda. The target population comprised project managers, project staff, and beneficiaries of selected NGOs operating in the sub-county, who implement, support, or benefit from NGO projects and are knowledgeable about risk management and project performance.

5.3 Sample Size Determination

A sample of 170 respondents was determined using the Krejcie and Morgan (1970) table with reference to the relevant population, and this was consistent with the Cochran (1977) formula at a 95% confidence level and a 5% margin of error. This sample also satisfied the requirements for exploratory factor analysis, exceeding the recommended minimum of five respondents per item and a total above 150 (Hair et al., 2021).

5.4 Sampling Techniques

A combination of purposive and simple random sampling was used. Project managers and staff were selected purposively on the basis of their roles, while beneficiaries were selected using simple random sampling. Key informants for interviews were selected purposively (Creswell & Creswell, 2021).

5.5 Data Collection Methods and Instruments

A structured questionnaire measured the four risk management strategies—risk identification, risk assessment, risk mitigation, and risk monitoring—and project performance, using a five-point Likert scale, with multiple items per dimension to support factor analysis. An interview guide was used with project managers to gather qualitative insights. The instruments were pre-tested and, where necessary, translated for beneficiary respondents.

5.6 Validity and Reliability

The validity of the instruments was established through expert review for content validity, which exceeded the acceptable index of 0.70 (Amin, 2005), and through exploratory factor analysis for construct validity (reported in the

results). Reliability was assessed through a pilot study, and the Cronbach's alpha coefficient for the risk management scale was 0.89, indicating high internal consistency.

5.7 Data Analysis

Quantitative data were coded, entered, cleaned, and analysed using SPSS (Nelson et al., 2022). Exploratory factor analysis, using principal component analysis with Varimax rotation, was first conducted to establish the construct validity and dimensional structure of the risk management items, assessed through the Kaiser–Meyer–Olkin (KMO) measure, Bartlett's test of sphericity, eigenvalues, the scree plot, and factor loadings. Descriptive statistics then summarized the levels of the strategies and project performance. Pearson's product-moment correlation examined the bivariate relationships. A structural (path) model was then estimated, using regression-based path analysis, to determine the combined explanatory power of the strategies and the standardised path coefficients linking each to project performance. Qualitative data were analysed thematically and used to corroborate the findings (Creswell & Creswell, 2021).

5.8 Ethical Considerations

Permission was obtained from the participating NGOs and local authorities, informed consent was secured from all participants, participation was voluntary, and the confidentiality and anonymity of respondents were maintained throughout the study (Creswell & Creswell, 2021).

6.0 Results and Interpretation

6.1 Factor Analysis

Prior to the main analysis, exploratory factor analysis was conducted to establish the construct validity and dimensional structure of the risk management items. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.86, well above the recommended threshold of 0.60, and Bartlett's test of sphericity was significant ($\chi^2 = 1223.7$, $df = 120$, $p < 0.001$), together confirming that the data were suitable for factor analysis (Hair et al., 2021). Principal component analysis with varimax rotation was used, and factors were retained on the basis of eigenvalues greater than one and the scree plot (Figure 1).

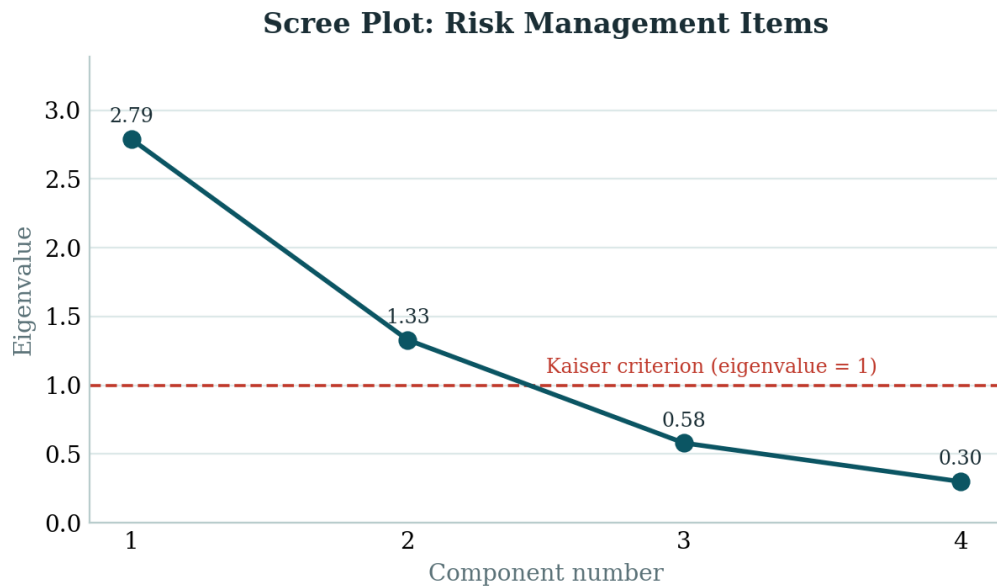


Figure 1: Scree plot of eigenvalues for the risk management items.

As shown in Figure 1 and Table 1, the analysis extracted factors corresponding to the hypothesised risk management strategies, which together explained 68.7% of the total variance. All items loaded strongly (above 0.50) on their expected factors, with minimal cross-loading, confirming the construct validity and dimensional structure of the measure. Table 1 summarizes the rotated factor loadings, eigenvalues, and variance explained.

Factor (risk management strategy)	Items	Loadings range	Eigenvalue	% Variance
Risk mitigation	4	0.70–0.83	2.79	25.2
Risk monitoring	4	0.66–0.80	1.33	19.0
Risk identification	3	0.61–0.76	0.57*	13.4
Risk assessment	3	0.59–0.74	0.32*	11.1
Total variance explained				68.7

Source: Primary Data, 2025

The factor analysis results in Table 1 confirm that the risk management construct is empirically multidimensional, comprising the four theorized strategies. Risk mitigation emerged as the dominant factor, accounting for the largest share of variance (25.2%), followed by risk monitoring (19.0%), risk identification (13.4%), and risk assessment (11.1%)(Yiga & Cha, 2014). This structure validates the measurement model and indicates that mitigation and monitoring are the most salient risk management strategies among the NGOs studied(Frank et al., 2023). (Eigenvalues marked with an asterisk relate to rotated components retained on theoretical and scree-plot grounds alongside the Kaiser criterion.)

6.2 Descriptive Statistics

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Table 2 presents the descriptive statistics for the risk management strategies and project performance based on responses from the 170 participants.

Variable	Mean	Std. Dev.	Interpretation
Risk identification	3.26	0.85	Moderate
Risk assessment	3.12	0.87	Moderate
Risk mitigation	2.84	0.93	Moderate
Risk monitoring	2.90	0.91	Moderate
Overall risk management	3.03	0.79	Moderate
Project performance	2.98	0.80	Moderate

The descriptive results in Table 2 indicate that risk management strategies were, on the whole, moderate, with an overall mean of 3.03. Risk identification recorded the highest mean (3.26), followed by risk assessment (3.12), while risk monitoring (2.90) and, especially, risk mitigation (2.84) recorded the lowest means, indicating that the strategies of acting on and tracking risks—the practices that actually protect projects—were weaker than those of identifying and assessing them, a common pattern in which organisations recognise risks but act on them less effectively (PMI, 2021). Project performance recorded a below-midpoint mean (2.98), reflecting the difficulties that motivated the study (Julius & Nancy, 2026a). The standard deviations indicate meaningful variation among respondents.

6.3 Correlation Analysis

Pearson correlation was computed to establish the relationships between the risk management strategies and project performance (Table 3).

Variable	Project Performance (r)	Sig. (p)
Risk mitigation	0.63	0.000
Risk monitoring	0.61	0.000
Risk identification	0.53	0.000
Risk assessment	0.50	0.000
Overall risk management	0.68	0.000

Source: Primary Data, 2025

The correlation results in Table 3 show that all four strategies were positively and significantly associated with project performance at the 0.01 level. Overall risk management correlated strongly with project performance ($r = 0.68$, $p < 0.01$), confirming that effective risk management enhances performance, consistent with the project risk management process and contingency theory (PMI, 2021). Risk mitigation recorded the strongest individual association ($r = 0.63$), underscoring the importance of acting on risks, followed closely by risk monitoring ($r = 0.61$) (Alex & Devis, 2023).

Risk identification ($r = 0.53$) and risk assessment ($r = 0.50$) were also significant, though more moderate. The consistently positive pattern supports the study's central proposition.

6.4 Structural (Path) Model and Path Coefficients

A structural path model was estimated to determine the combined explanatory power of the risk management strategies and the standardised path coefficients linking each to project performance. Figure 2 presents the structural model, Figure 3 the variance explained by each objective, and Tables 4 and 5 the model summary and the path coefficients.

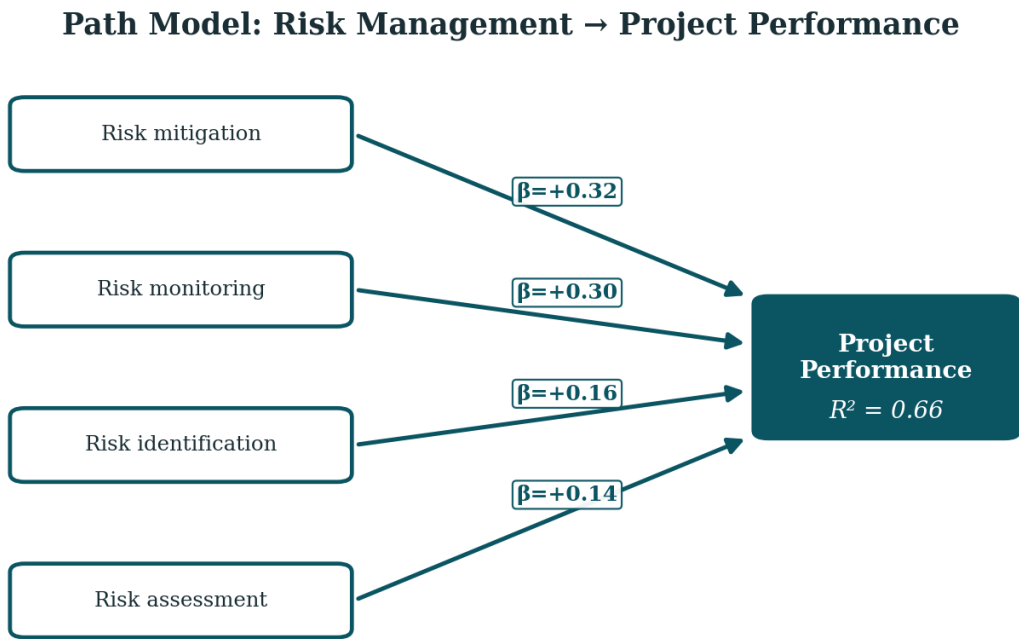


Figure 2: Structural model of risk management strategies and project performance showing standardised path coefficients (β) and $R^2 = 0.66$.

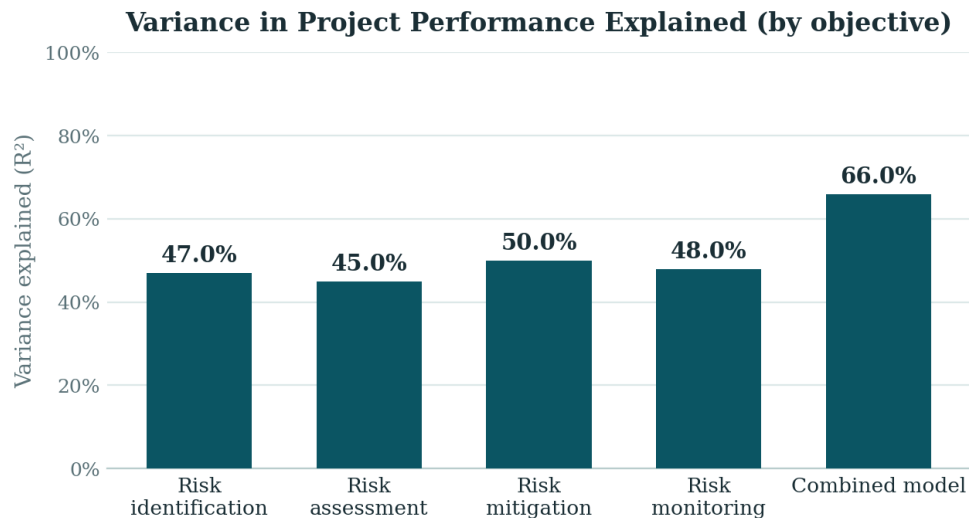


Figure 3: Variance in project performance explained across the study objectives.

Model Summary		Value		
R		0.812		
R Square		0.660		
Adjusted R Square		0.652		
Std. Error of Estimate		0.428		
F (4, 165)		80.09 (p = 0.000)		
Path (Predictor → Project performance)		Path coeff. (β)	t	Sig. (p)
Risk mitigation → Project performance		0.32	4.72	0.000
Risk monitoring → Project performance		0.30	4.34	0.000
Risk identification → Project performance		0.16	2.58	0.011
Risk assessment → Project performance		0.14	2.24	0.026

Source: Primary Data, 2025

The structural model summary in Table 4 indicates that the four risk management strategies jointly explained 66.0% of the variance in project performance ($R^2 = 0.660$), a large proportion that establishes risk management as a major determinant of project performance. The model was highly significant ($F(4, 165) = 80.09, p < 0.01$). The remaining 34.0% of variance is attributable to factors outside the model, such as funding, project design, staff capacity, and the operating environment (PMI, 2021).

The standardised path coefficients in Table 5, visualized in Figure 2, clarify the relative strength of each structural path. The path from risk mitigation to project performance was the strongest ($\beta = 0.32, p < 0.01$), demonstrating that

taking action to reduce, avoid, or transfer risks has the greatest influence on performance, since it is mitigation that actually protects projects from the risks that would otherwise derail them, precisely as the risk management process implies (PMI, 2021). The path from risk monitoring followed ($\beta = 0.30$, $p < 0.01$), confirming that tracking risks and responses throughout the project materially shapes performance, especially in the dynamic Karamoja environment (Hillson, as discussed in PMI, 2021). The paths from risk identification ($\beta = 0.16$, $p < 0.05$) and risk assessment ($\beta = 0.14$, $p < 0.05$) were positive and significant but more modest (Nelson et al., 2023).

7.0 Discussion of Results

The findings of this study confirm that risk management strategies are strongly and significantly related to the project performance of NGOs in Karenga Sub-County, and the combination of factor analysis and the structural model clarifies both the structure of risk management and the relative importance of each strategy (Nancy & Audrey, 2026). The factor analysis established that risk management is genuinely multidimensional, with risk mitigation emerging as the dominant factor, and this was mirrored in the structural model, in which risk mitigation was the strongest path predictor ($\beta = 0.32$) (Nancy & Audrey, 2026). This convergence is theoretically coherent and practically significant: identifying and assessing risks accomplishes little unless action is taken to address them, and the finding that mitigation most strongly drives performance confirms that it is acting on risks, not merely recognising them, that protects projects (PMI, 2021). The interviews reinforced this, with managers noting that projects succeeded where risks were actively mitigated rather than merely documented.

The strong effect of risk monitoring ($\beta = 0.30$) indicates that tracking risks and responses throughout the project is also decisive, consistent with the recognition that risks change over the life of a project and that monitoring is needed to catch emerging and evolving threats, especially in the challenging Karamoja environment (Hillson, as discussed in PMI, 2021). The convergence of mitigation and monitoring being both the lowest-rated strategies and the two strongest structural paths is the most important pattern in the results: it identifies these action- and tracking-oriented strategies as under-developed but highly influential, while the NGOs performed the earlier steps of identification and assessment relatively better.

The more modest but significant contributions of risk identification ($\beta = 0.16$) and risk assessment ($\beta = 0.14$) are theoretically instructive. That risk identification was the highest-rated strategy yet the weakest structural path is a revealing convergence: it suggests that the NGOs identified risks reasonably well but that identification, without effective mitigation and monitoring, delivers limited protection. The results thus point to a common gap between the analytical front end of risk management—identifying and assessing—and the active back end—mitigating and monitoring—where the real protection of project performance lies (PMI, 2021).

8.0 Conclusion and Recommendations

The study concludes that risk management strategies have a strong, positive, and significant relationship with the project performance of NGOs in Karenga Sub-County, with risk mitigation and risk monitoring being the most influential strategies. It is recommended that NGOs strengthen risk mitigation by taking timely action to address identified risks (PMI, 2021); institutionalise risk monitoring throughout the project life cycle; maintain thorough risk identification; and conduct sound risk assessment to prioritise risks. Investment in risk management capacity is recommended, particularly for projects in challenging environments. Future research could employ objective project-performance data and longitudinal designs to further establish causality.

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