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Research Article

Strategic Risk Identification Practices and Organisational Performance at Rural Electrification and Renewable Energy Corporation in South Nyanza Region, Kenya

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Abstract
Organisational performance was a key determinant of organizational performance, especially for utility firms like the Rural Electrification and Renewable Energy Corporation. Despite strategic initiatives aimed at enhancing service delivery and expanding electricity access, rural electrification and renewable energy corporation continued to face persistent operational inefficiencies. This study aimed to assess the effect of strategic risk identification on organisational performance at the rural electrification and renewable energy corporation in South Nyanza Region, Kenya. These insights were intended to inform national and local government energy policies by highlighting the role of strategic risk management in enhancing operational outcomes. The study was grounded in Enterprise Risk Management Theory. A survey research design was adopted, targeting rural electrification and renewable energy corporation's entire management cadre, middle-level managers, and employees, a total population of 704. Using the Yamane's (1967) formula, the sample size was determined to be 256 respondents. Data were collected through structured questionnaires. A pilot study involving 26 respondents was conducted in north rift region to validate the tools. Reliability was assessed using the Cronbach alpha coefficient, with a threshold of 0.71. Prior to data collection, approval was secured from the University and a research permit obtained from the National Commission for Science, Technology, and Innovation. Quantitative data were coded and analyzed using the Statistical Package for Social Sciences. Descriptive statistics, frequencies, percentages, means, and standard deviations, were used alongside regression analysis. The regression results revealed a strong positive relationship between risk identification and organisational performance. The study concluded that strategic risk management practices significantly influenced organisational performance at rural electrification and renewable energy corporation. Key recommendations included the establishment of standardized risk identification protocols, regular training, and real-time reporting systems.
Keywords: Strategic Risk Identification, Organisational Performance, Rural Electrification, Renewable Energy Corporation.

Introduction

Kanu (2020) opines that although the implementation of enterprise risk management on its own did not have a notable effect on firm performance, its alignment and integration with strategic planning contributed positively to financial results. This finding highlights the importance of embedding enterprise risk management within the broader strategic framework of an organization rather than treating it as a standalone function. By doing so, firms can better anticipate and manage risks in a way that supports their long-term goals, leading to improved financial performance. A study by Yoshikuni *et al.,* (2025) investigated the effects of enterprise risk management on strategic enterprise management (IS-SEM) and strategic momentum in BRICS economies, including India. The research revealed that enterprise risk management positively influences IS-SEM and strategic momentum, leading to increased strategic flexibility and improved firm performance, especially under environmental uncertainties.

Enzokuhle (2024) conducted a study examining the effectiveness of risk management strategies in mitigating supply chain disruptions in South Africa. The findings indicated that robust risk management

strategies, including risk assessment, supplier diversification, and the implementation of advanced technologies like predictive analytics and block-chain, are critical in maintaining operational stability and ensuring business continuity. Bamigboye *et al.,* (2024) conducted a study involving 50 financial firms and observed a notable enhancement in earnings quality following the implementation of enterprise risk management. Their findings revealed a 45.6% improvement in earnings quality during the post-enterprise risk management period (2019–2023), highlighting the positive impact of enterprise risk management compliance on financial performance. This suggests that integrating structured risk management practices can significantly strengthen the reliability and transparency of financial reporting in the financial sector.

Redemta *et al.,* (2022) investigated the influence of SRM on the performance of government-owned entities (GOEs) in Kenya. Their study found a significant positive relationship between SRM practices and organizational performance, emphasizing the need for integrating business continuity into strategic planning and investing in automated SRM tools to enhance risk analysis and profiling. Munyao *et al.,* (2025) conducted a study on strategic risk management and the performance of commercial state corporations in Kenya, revealing that governance risk plays a crucial role in enhancing corporate outcomes through effective oversight, transparency, and structured decision-making. The research highlighted reputational risk as a key factor influencing customer trust, investor confidence, and long-term sustainability. Furthermore, the study identified external environmental risks-such as political instability and economic fluctuations-as major obstacles for these corporations. It also emphasized that managing compliance risk through adherence to regulatory standards significantly boosts organizational efficiency and minimizes legal exposure.

Objective of the Study

To assess the effect of strategic risk identification practices on organisational performance at rural electrification and renewable energy corporation in South Nyanza Region.

Theoretical Framework

The study was grounded in enterprise risk management theory. The enterprise risk management framework did not originate from a single author but was widely disseminated by thought leaders and institutions, such as the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2004; updated in 2017), as well as scholars like Gordon, Loeb, and Tseng (2009), who conceptualized its theoretical implications for firm performance. Enterprise risk management theory asserted that the proactive identification of strategic risks enabled organizations to anticipate potential disruptions and allocate resources more effectively. This foresight reduced operational surprises and enhanced organizational resilience. Enterprise risk management theory posited that establishing robust risk response mechanisms (avoidance, reduction, sharing, or acceptance) enabled firms to mitigate the adverse impacts of risk events, thereby sustaining or improving operational performance. Implementing strategic risk response structures at the rural electrification and renewable energy corporation helped to ensure swift and structured actions when risks materialized-such as supply chain disruptions or political interference-leading to minimized downtime and improved service continuity. Enterprise risk management theory also emphasized the importance of continuous monitoring and iterative reviews of risk management processes. This adaptive approach allowed organizations to remain aligned with evolving risk landscapes and ensured that risk controls remained effective. In the context of the rural electrification and renewable energy corporation, an ongoing review process provided real-time insights into operational bottlenecks and emerging risks, facilitating timely adjustments that contributed to consistent and efficient operations.

Literature Review

Redemta *et al.,* (2022) examined the influence of strategic risk management on the performance of government-owned entities (GOEs) in Kenya, finding a significant positive relationship between strategic risk management practices and organizational performance. However, their study did not specifically address how these practices impact organisational performance in rural electrification and renewable energy sectors, particularly in regions like South Nyanza. This highlights a gap in understanding the sector-specific implications of strategic risk assessment on organisational performance in rural electrification and renewable energy contexts. Mutai (2024) investigated the impact of risk management strategies on the performance of oil companies in Kenya, identifying positive relationships between risk acceptance, transfer, avoidance, and reduction with organizational performance. However, this study focused solely on the oil sector and did not explore the specific context of rural electrification and renewable energy initiatives in regions like South Nyanza. Therefore, a gap exists in understanding how strategic risk assessment practices influence organisational performance within the context of rural electrification and renewable energy projects in South Nyanza.

The study by Wanjagi *et al.,* (2024) examined the impact of capital adequacy on the organisational performance of Kenyan commercial banks, revealing a 10.32% improvement in efficiency with increased capital adequacy. While this finding underscores the importance of capital adequacy, it overlooks the role of strategic risk assessment practices in enhancing organisational performance. Previous research has highlighted the significance of strategic risk management in improving bank performance. For instance, a study on large commercial banks in Kenya found that strategic risk assessment, evaluation, monitoring, control, and reporting are critical components of effective risk management practices. This gap presents an opportunity for further research to explore how strategic risk assessment practices can contribute to improving organisational performance in the banking sector. Odhiambo and Kibe's (2024) study on strategic risk agility at Pwani Oil Products Limited demonstrated that proactive risk management and adaptability enhanced financial performance in the edible oil sector. However, their focus was on a single company within a specific industry, limiting the generalizability of their findings. This gap presents an opportunity to investigate how strategic risk assessment practices influence organisational performance at REREC in South Nyanza, considering the distinct operational and regulatory environment of public institutions.

Research Methodology

Research design serves as a structured approach for investigating the particular issues of interest in a study (Bloomfield and Fisher, 2019). It integrates various components and methods related to data collection and analysis. For the proposed study, survey research design used. This design enabled the researcher to gather quantitative data through appropriate tools, adopting a survey correlational approach. Survey research design involved planning and executing a study to collect data from a sample of individuals or groups using survey instruments. The study population was 704 with Yamane formula for sample size determination was used to select 256 respondents. Data were collected through questionnaires, validated for reliability and analyzed using construct validity and Cronbach alpha coefficient of 0.71 and above considered reliable. Before data collection, researcher applied for a research permit from the National Commission for Science, Technology and Innovation to allow for data collection. Data was collected using a questionnaire. Quantitative data collected was coded, entered into the statistical package for social sciences (SPSS) then analysed both descriptively, through frequencies, percentages, means and standard deviations where applicable, and through regression analysis.

Findings

Table 1. Risk identification and adult learner participation.

Statements	N	Minimum	Maximum	Mean	Standard deviation
Our organization has a well-documented risk identification process.	231	1	5	3.19	1.255
Risk identification is conducted at all levels of the organization.	231	1	5	2.83	1.086
The risk identification process is regularly reviewed and updated.	231	1	5	2.94	1.073
Our organization continuously monitors the external environment for emerging risks.	231	1	5	2.83	1.146
Market trends and industry reports are analysed for potential threats.	231	1	5	2.94	1.366
Competitor activities are regularly reviewed as part of risk identification.	231	1	5	2.92	1.344
Top management actively participates in risk identification activities.	231	1	5	3.21	1.315
Senior executives promote a risk-aware culture throughout the organization.	231	1	5	3.24	1.068
Leadership encourages the reporting of risks without fear of punishment.	231	1	5	2.93	1.341

The researcher targeted 256 respondents by dispatching same number of questionnaires to the field. However, only 231 respondents successfully filled and returned the questionnaire accounting for a 90.2% response rate. The descriptive data presented provides insights into risk identification and organisational performance at rural electrification and renewable energy corporation based on a sample of 231 respondents. Each statement represents a different aspect of the risk identification that might influence

organisational performance at rural electrification and renewable energy corporation, with responses measured on a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Below is a detailed discussion of each statement (Table 1).

The data presented in Table 1 offers valuable insights into the state of risk identification practices within the rural electrification and renewable energy corporation and how these may impact organisational performance. Overall, the mean scores for each statement hover around the midpoint of the Likert scale, suggesting moderate agreement among respondents. The highest mean score (M = 3.24, SD = 1.068) pertains to the perception that senior executives promote a risk-aware culture, indicating a relatively strong leadership commitment to embedding risk consciousness across the organization. Similarly, the statement that top management actively participates in risk identification activities (M = 3.21, SD = 1.315) suggests some degree of engagement from leadership, although the high standard deviation implies varying perceptions among employees.

Conversely, areas such as organization-wide risk identification (M = 2.83, SD = 1.086), external environment monitoring (M = 2.83, SD = 1.146), and the use of market and industry analysis (M = 2.94, SD = 1.366) received lower mean scores, indicating weaknesses in these areas. These results suggest that while some internal mechanisms and leadership support are in place, rural electrification and renewable energy corporation may lack a fully integrated and proactive risk identification framework that spans all organizational levels and external influences. The relatively low mean for the statement on encouraging risk reporting without fear (M = 2.93, SD = 1.341) also points to potential cultural or structural barriers that might discourage open communication about risks. In summary, while there is some evidence of a structured approach to risk identification, particularly at the leadership level, the overall effectiveness is limited by inconsistent implementation, insufficient integration of external intelligence, and possibly a lack of psychological safety for reporting risks. These gaps could undermine organisational performance and limit the organization's agility in responding to emerging threats. Strengthening these areas could significantly enhance rural electrification and renewable energy corporation risk management capabilities and, by extension, its operational performance.

The study finding was in agreement with a study by Odhiambo and Kibe (2024) investigated strategic risk agility's impact on Pwani Oil Products Limited's performance. The study found that strategic risk identification practices influence organisational performance thin government-run organizations operating in the renewable energy sector. The study was also in agreement with findings by Redemta *et al.,* (2022) who examined the influence of strategic risk management on the performance of government-owned entities (GOEs) in Kenya, identifying a significant positive relationship and recommending the integration of business continuity into strategic plans and investment in automated risk management tools.

Further, the study was in agreement with findings by Ng'ang'a and Odari (2023) who investigated the impact of information risk on procurement performance in Kenyan public universities, revealing a significant negative relationship. Additionally, the study is also in agreement with as study by Kariuki and Suva (2023) examined the impact of risk identification on the performance of the Kenya Revenue Authority in national revenue collection, finding a positive relationship between effective risk identification practices and enhanced performance. Finally, the study was in agreement with findings by Musau (2021) conducted a case study on CPF Financial Services Limited to determine the effect of integrating enterprise risk management into strategic planning on organizational performance.

Regression Analysis

The study sought to evaluate the effect of risk identification practices on organisational performance at rural electrification and renewable energy corporation in South Nyanza Region. The regression analysis was conducted using linear regression as shown in Tables 2, 3 and 4.

Table 2. ANOVA for risk identification.

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	305.649	1	305.649	7353.228	.000[b]
	Residual	11.140	229	.042	-	-
	Total	316.788	230	-	-	-
a. Dependent variable: Organisational performance						
b. Predictors: (Constant), Risk identification						

The ANOVA results in Table 3 reveal a statistically significant relationship between risk identification and organisational performance. The regression model explains a substantial portion of the variance in organisational performance, as indicated by the high F-value of 7353.228 and a significance level (Sig.) of .000, which is well below the conventional alpha threshold of .05. This suggests that the predictor variable, risk identification, has a strong and significant impact on the dependent variable. Furthermore, the high regression sum of squares (305.649 out of a total of 316.788) and the low residual mean square (.042) support the model's robustness, implying that effective risk identification processes are strongly associated with improved organisational performance in the observed data.

Table 3. Model summary for risk identification.

Model	R	R-square	Adjusted R-square	Standard error of the estimate	Durbin-Watson
1	.982[a]	.965	.965	.20388	2.103
a. Predictors: (Constant), Risk identification					
b. Dependent variable: Organisational performance					

The data presented in Table 3 reveal the model summary for risk identification has a very strong linear relationship between risk identification and organisational performance, as evidenced by a high R value of 0.982 and an R square of 0.965. This means that 96.5% of the variance in organisational performance can be explained by the effectiveness of risk identification processes, suggesting a highly predictive model. The adjusted R-square, also at 0.965, confirms that this explanatory power is not due to model over-fitting.

The standard error of the estimate (0.20388) is relatively low, further indicating model precision. Additionally, the Durbin-Watson statistic of 2.103 falls within the acceptable range (approximately 1.5 to 2.5), suggesting no significant autocorrelation in the residuals. These results collectively imply that risk identification plays a critical role in enhancing organisational performance.

Table 4. Coefficients for risk identification.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Standard error	Beta		
1	(Constant)	.372	.034	-	10.972	.000
	Risk identification	.900	.011	.982	85.751	.000
a. Dependent variable: Organisational performance						

The regression results indicate a strong, statistically significant positive relationship between risk identification and organisational performance. The unstandardized coefficient for RI is 0.900, indicating that for every one-unit increase in risk identification; the organisational performances expected to increase by 0.900 units, holding other variables constant. The standardized coefficient (Beta) of 0.982 indicates a very strong positive relationship between risk identification and organisational performance, suggesting that RI is a significant predictor.

The t-value of 85.751 and the associated p-value of 0.000 (which is less than the typical alpha level of 0.05) confirm that this relationship is statistically significant. Furthermore, the constant term is 0.372, with a t-value of 10.972, also significant at $p < 0.05$, suggesting that even without any influence from the independent variable (RI), there is a baseline positive impact on organisational performance. In terms of hypothesis testing, the null hypothesis (that risk identification has no effect on organisational performance) is rejected, confirming that risk identification is a significant predictor of organisational performance in this model.

Conclusion

From the study summary, the study concludes risk identification is a significant positive predictor of organisational performance at rural electrification and renewable energy corporation in South Nyanza Region Kenya and it contribute positively to organisational performance, though their effects were somewhat weak.

Recommendations

- Leadership should establish clear, standardized risk identification protocols across all levels. This includes structured training programs, periodic risk assessment workshops, and real-time risk reporting mechanisms.

- ☞ Rural electrification and renewable energy corporation in South Nyanza Region Kenya should invest in advanced data analytics and external monitoring systems to assess emerging risks. Establishing a dedicated risk intelligence team can ensure proactive decision-making informed by market and environmental trends.
- ☞ Beyond leadership commitment, risk awareness must be institutionalized. This requires fostering an open communication environment where employees feel encouraged to report potential risks without fear of consequences.
- ☞ Continuous risk monitoring should be reinforced through automated tracking systems, regular audits, and feedback loops that allow for dynamic risk adjustments.

Declarations

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