

RISK IDENTIFICATION AND PROJECT PERFORMANCE IN REAL ESTATE FIRMS IN RIVERS STATE, NIGERIA

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ABSTRACT

The study examined the relationship between risk identification and project performance of real estate firms in Rivers State, Nigeria. The measures of project performance used are cost performance, quality performance and time performance. The study adopted a cross-sectional survey research design. The target population was the 23 real estate firms in Rivers State as obtained from the updated directory of finelib.com. However, the study elements were 69 which comprised managers from real estate firms. The study adopted a census sampling technique since the population of the study was relatively small. Data for the study was collected through a structured questionnaire, while the four-point Likert scale was used to measure the responses from the respondents. Data was analysed using mean and standard deviations with charts for the primary analysis of the study variables, while inferential statistics such as the Spearman's Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Sciences version 27. The results of the study showed that there is a significant positive relationship between risk identification and the measures of project performance. The study concludes that risk identification has a strong relationship with project performance of real estate firms in Rivers State, Nigeria. The study therefore recommends amongst others that Real estate firms should establish a structured risk identification framework at the project initiation phase to uncover potential financial risks such as cost escalation, currency fluctuations, and material price volatility.

Keywords: Cost performance, project performance, quality performance, risk identification, time performance

INTRODUCTION

Project performance remains a key focus in both academic and professional project management discourse, particularly within dynamic and resource-intensive industries such as real estate. Effective project performance is typically assessed using critical indicators such as cost performance, quality performance, and time performance (Atkinson, 1999; PMI, 2021). These indicators reflect a project's ability to deliver outputs within budget, meet predefined quality standards, and achieve completion within scheduled timelines. However, despite the strategic importance of these performance metrics, project underperformance continues to be a recurring issue, especially in developing countries where infrastructural and systemic challenges persist (Omoregie & Radford, 2006).

In Nigeria, real estate projects are frequently plagued by budget overruns, substandard quality, and delays, often attributed to the absence of robust project control systems and unpredictable environmental variables (Aibinu & Jagboro, 2002; Ogunsemi & Jagboro, 2006). These challenges highlight a pressing need for improved performance management strategies. Although several studies have been conducted on factors influencing project performance, many have focused on general construction or infrastructure sectors, with limited attention given to real estate-specific project environments in sub-national contexts like Rivers State.

A growing body of research has begun to emphasize the role of risk management in enhancing project performance (Hillson, 2003; Zwikael & Ahn, 2011). Within this domain, risk identification stands out as a foundational step in the risk management process. It involves the systematic recognition of potential project risks that could impact outcomes (PMI, 2017). Proper risk identification allows project teams to anticipate threats and opportunities, thereby enabling proactive planning and mitigation measures. Inadequate risk identification often leads to unforeseen complications that can escalate into full-scale project failures (Tah & Carr, 2001).

Despite the acknowledged importance of risk identification, there remains a knowledge gap regarding its specific impact on the individual dimensions of project performance — particularly within Nigeria's real estate sector. Most extant studies adopt broad approaches to risk management, rarely isolating risk identification as an independent variable. Additionally, empirical studies that link risk identification to project performance — especially across cost, quality, and time performance — are sparse and inconclusive in regional contexts like Rivers State. This underlines the need for a focused investigation into how effectively identifying project risks can influence key performance outcomes.

This study, therefore sought to fill this gap by empirically examining the relationship between risk identification and project performance in real estate firms in Rivers State, Nigeria.

The specific objectives of the study include.

- i. To examine the relationship between risk identification and cost performance in real estate firms in Rivers State, Nigeria.
- ii. To determine the relationship between risk identification and quality performance in real estate firms in Rivers State, Nigeria.
- iii. To ascertain the relationship between risk identification and timeperformance in real estate firms in Rivers State, Nigeria.

Conceptual Framework

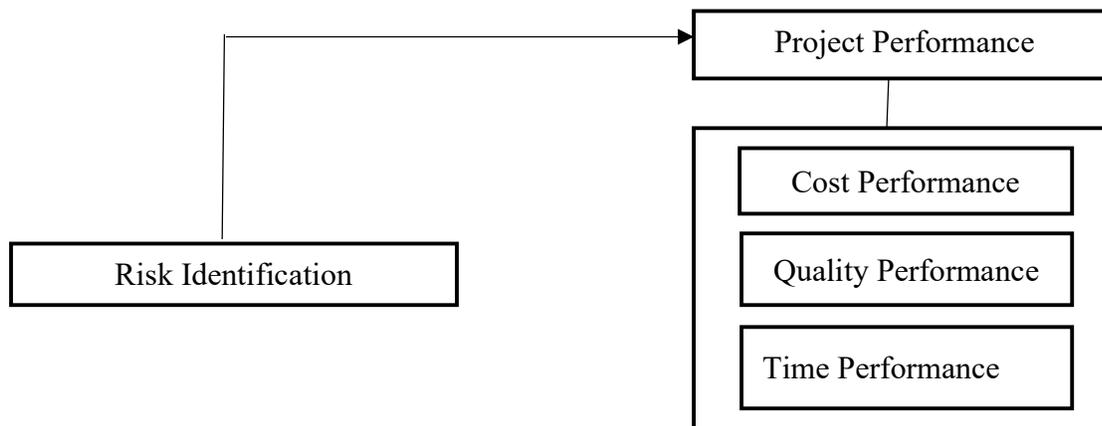


Figure 1.1: Conceptual Framework Indicating the Relationship Between Risk Identification and Project Performance.

Source: Desk Research (2025) with measures of project performance sourced from ((Ahmed (2023)).

Research Questions

The Research questions are as follows

- i. What is the relationship between risk identification and cost performance in real estate firms in Rivers State, Nigeria?
- ii. What is the relationship between risk identification and quality performance in real estate firms in Rivers State, Nigeria?
- iii. What is the relationship between risk identification and time performance in real estate firms in Rivers State, Nigeria?

Research Hypotheses

The research hypotheses are as follows

- i. There is no significant relationship between risk identification and cost performance in real estate firms in Rivers State, Nigeria.
- ii. There is no significant relationship between risk identification and quality performance in real estate firms in Rivers State, Nigeria.
- iii. There is no significant relationship between risk identification and time performance in real estate firms in Rivers State, Nigeria.

LITERATURE REVIEW

Theoretical Foundation

Stakeholder Theory

Stakeholder theory is a fundamental concept in management and governance that emphasizes the importance of considering the interests of all stakeholders in decision-making processes. First introduced by Freeman (1984), the theory challenges the traditional shareholder-centric approach by advocating for a broader view that incorporates the needs and expectations of various

stakeholders, including employees, customers, suppliers, and the community. Stakeholder theory posits that organizations do not operate in isolation but rather within a network of relationships with multiple stakeholders who can affect or be affected by their operations (Donaldson & Preston, 1995).

Types of Stakeholders: Primary Stakeholders – These include individuals and groups essential to an organization's survival, such as employees, customers, investors, and suppliers (Clarkson, 1995). Secondary Stakeholders – These are groups that influence or are influenced by the organization but are not directly involved in transactions, such as media, activist groups, and regulatory agencies (Mitchell, Agle & Wood, 1997). Internal and External Stakeholders – Internal stakeholders include employees and managers, while external stakeholders consist of entities outside the organization, such as suppliers, customers, and governments (Freeman, Harrison & Zyglidopoulos, 2010). Stakeholder theory serves as a guiding principle in corporate governance by advocating for ethical and responsible management practices. It suggests that organizations should balance the interests of all stakeholders rather than prioritizing shareholders alone (Jensen, 2001). The theory has been widely applied in various domains, including project governance, sustainability, and strategic management (Freeman et al, 2010).

Conceptual Review

Concept of Risk Identification

Risk identification is the process of pinpointing risks that could affect a project, including their sources, categories, and potential impacts (Chapman & Ward, 2003). It is the first step in the risk management process and is critical for proactive decision-making and the development of effective mitigation strategies (PMI, 2021). Failure to identify risks early can lead to project delays, cost overruns, and compromised quality (Hillson, 2002). Risk identification is a critical component of the risk management process, often considered the first step toward mitigating potential project risks (Hillson, 2009). It involves systematically identifying, understanding, and documenting risks that might affect a project's objectives. According to Ward and Chapman (2003), early and accurate identification of risks enables project managers to develop appropriate risk response strategies, which can significantly impact the performance of the project, particularly in terms of cost, time, and quality.

Concept of Project Performance

According to Ahmed (2023) project performance denotes the extent to which project outputs and outcomes satisfy budget goals, schedule goals, operational and technical specifications, and ultimately, the business needs of the client. The traditional approach associated with the performance of a project includes the evaluation of scope, quality, and cost. Indeed, the process of measuring the action leads to quantifying project performance which is considered as efficiency and effectiveness of action in the context of projects are required in projects which are different from each other. The performance measure is "a set of metrics that aids in assessing the efficiency and/or efficacy of an action. The performance measures allow project managers and other project stakeholders to assess project performance at the phase level, allowing proactive measures to be implemented based on current project reviews.

Measures of Project Performance

Cost Performance

Cost performance refers to the degree to which a project adheres to its budget throughout its lifecycle (Chau, 1995). It is a widely accepted measure of project success, particularly in

industries such as construction, IT, and manufacturing, where budget overruns are common challenges. Cost performance is often evaluated through metrics such as cost variance (CV) and cost performance index (CPI) (Kerzner, 2017). Inadequate project planning and budgeting are primary causes of poor cost performance. According to Dvir and Lechler (2004), projects with thorough planning and realistic budget forecasts tend to achieve better cost outcomes. Detailed cost estimation and contingency planning are critical to mitigating the risks of budget overruns (Munns & Bjeirmi, 1996). The complexity of a project significantly impacts cost performance. Flyvbjerg, Bruzelius, and Rothengatter (2003) argue that large-scale, complex projects often suffer from "optimism bias" and underestimated costs, leading to budget overruns. Moreover, ineffective cost control in complex projects can compound financial inefficiencies.

Quality Performance

Quality performance refers to the extent to which project outputs comply with agreed specifications, regulatory standards, and customer requirements (Kerzner, 2017). It is often assessed using quality metrics, such as defect rates, compliance to design, and stakeholder satisfaction (Atkinson, 1999). The ability to achieve high-quality outcomes is crucial for building stakeholder trust and ensuring long-term project success (PMI, 2021). Effective planning is critical to achieving quality performance. According to Dvir, Raz, and Shenhar (2003), poor definition of project requirements during the initiation phase often leads to deliverables that fail to meet quality expectations. Comprehensive requirements management, including stakeholder alignment and validation processes, ensures that quality objectives are clearly defined and achievable.

Time Performance

Time performance refers to the ability of a project to meet its scheduled deadlines for various phases and its overall completion (Atkinson, 1999). It is a key component of the "iron triangle," alongside cost and quality, and is widely used as an indicator of project success. Timely delivery is particularly crucial in industries such as construction, IT, and product development, where delays can lead to cost overruns, contractual penalties, and loss of competitive advantage (Kerzner, 2017). Effective planning and scheduling are critical to achieving time performance. Dvir, Raz, and Shenhar (2003) emphasize that inadequate planning is a primary cause of schedule delays. Techniques such as critical path method (CPM) and program evaluation and review technique (PERT) are widely recommended for creating realistic and achievable project schedules (PMI, 2021).

Empirical Review

Risk Management and Project Performance

Kerzner (2013) found that projects with a formal risk identification process experienced fewer cost overruns and delays, particularly in complex, large-scale projects. Kerzner emphasized the importance of continuous risk identification throughout the project lifecycle, not just during the initiation phase. Chakrabarti and Soni (2018) conducted a study on IT projects in India and found that risk identification significantly affected both cost and time performance. Projects with comprehensive risk identification processes were more likely to stay on budget and meet deadlines compared to those that lacked structured risk identification.

In a study on construction projects in Nigeria, Ogunlana et al. (2002) observed that early risk identification led to better project performance, particularly in terms of reducing unexpected costs and mitigating time delays. Their research revealed that projects in which risks were

proactively identified and addressed performed better in all performance measures, including quality. According to Fuzzy and Abolhasani (2012), brainstorming sessions and the Delphi method are popular qualitative approaches to risk identification. These methods help gather insights from project stakeholders and experts, improving the accuracy and thoroughness of the identified risks. Their effectiveness is linked to the project team's experience and the involvement of key stakeholders.

METHODOLOGY

The study adopted a cross-sectional research design. Therefore, the target population of this study was twenty-three (23) real estate firms as obtained from the updated directory of finelib.com. Participants of the study were selected in line with the unit of analysis which is the organization level study. By virtue of the aforesaid, three (3) representatives from each of the twenty-three (23) real estate firms were chosen to make up the study elements. This included managers from the firms. Census sampling method was adopted because the target population of the study was relatively small. The main data collection instrument for the study was structured questionnaire. A total of sixty-nine (69) copies of questionnaires were distributed, and (55) was eventually used for the study. Data was analysed using mean and standard deviations with charts to display the study variables, while inferential statistics such as the Spearman's Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Science version 29.0 for the purpose of examining the nature and proposed association.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Description on Range of correlation Pearson values and the corresponding level of association

Range of Pearson with positive and negative sign values	Strength of Association
± 0.80 – 0.99	Very Strong
± 0.60 – 0.79	Strong
± 0.40 – 0.59	Moderate
± 0.20 – 0.39	Weak
± 0.00 – 0.19	Very Weak

Source: Adopted from Ahaiauzu & Asawo, 2016, *Advance Social Research Methods*

The positive (+) sign in the values of (*B*) indicates a positive relationship, while the negative (-) sign in the value of (*B*) indicates an indirect/negative or inverse relationship. Thus, the sign of the *B* explains the direction of association between the two variables. The above table forms our yardstick for the determination of the level of relationship between the variables of the dimensions and those of the measures as understudied. These relationships range from very weak to very strong.

Relationship between Risk Identification and Project Performance

Table 2: Correlation between Risk Identification and Project Performance

		Correlations				
			Risk Identification	cost performance	quality performance	time performance
Spearman's rho	Risk Identification	Correlation Coefficient	1.000	.867**	.843**	.788**
		Sig. (2-tailed)	.	<.001	<.001	<.001
		N	55	55	55	55
	cost performance	Correlation Coefficient	.867**	1.000	.852**	.839**
		Sig. (2-tailed)	<.001	.	<.001	<.001
		N	55	55	55	55
	quality performance	Correlation Coefficient	.843**	.852**	1.000	.900**
		Sig. (2-tailed)	<.001	<.001	.	<.001
		N	55	55	55	55
	time performance	Correlation Coefficient	.788**	.839**	.900**	1.000
		Sig. (2-tailed)	<.001	<.001	<.001	.
		N	55	55	55	55

** . Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS Output, 2025

Table 2 presented the Spearman's rank order correlation matrix for the relationship between risk identification and the measures of project performance (cost performance, quality performance and time performance) in real estate firms in Rivers State, Nigeria. From the data given in the table 4.16, the correlation results for **Ho1**, **Ho2** and **Ho3** were given as:

Ho1: There is no significant relationship between risk identification and cost performance in real estate firms in energy firms Rivers State, Nigeria.

From the analysis, the result showed the correlation coefficient of $\rho = 0.867$ which shows the direction and strength of this relationship. The coefficient represents a strong positive correlation between risk identification and cost performance in real estate firms in Rivers State, Nigeria. The test of significance shows that this relationship is significant at $p = .001 < 0.05$ which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between risk identification and cost performance in real estate firms in Rivers State, Nigeria.

Ho2: There is no significant relationship between risk identification and quality performance in real estate firms in energy firms Rivers State, Nigeria.

From the analysis, the result showed the correlation coefficient of $\rho = 0.843$ which shows the direction and strength of this relationship. The coefficient represents a strong positive correlation between risk identification and quality performance in real estate firms in Rivers State, Nigeria. The test of significance shows that this relationship is significant at $p = .001 < 0.05$ which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between risk identification and quality performance in real estate firms in Rivers State, Nigeria.

Ho3: There is no significant relationship between risk identification and time performance in real estate firms in energy firms Rivers State, Nigeria.

From the analysis, the result showed the correlation coefficient of $\rho = 0.788$ which shows the direction and strength of this relationship. The coefficient represents a strong positive correlation between risk identification and time performance in real estate firms in Rivers State, Nigeria. The test of significance shows that this relationship is significant at $p = .001 < 0.05$ which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between risk identification and time performance in real estate firms in Rivers State, Nigeria.

Discussion of Findings

The first, second and third hypotheses sought to examine the relationship between risk identification and project performance. Hence it was hypothesized that there is no significant relationship between risk identification and project performance. These hypotheses (Ho1, Ho2 and Ho3) were tested using the Spearman rank order correlation technique. The study findings reveal that risk identification has a strong positive and significant relationship with cost performance, quality performance and time performance.

The finding agrees with previous study by Kerzner (2013) who found that projects with a formal risk identification process experienced fewer cost overruns and delays, particularly in complex, large-scale projects. Kerzner emphasized the importance of continuous risk identification throughout the project lifecycle, not just during the initiation phase. Chakrabarti and Soni (2018) conducted a study on IT projects in India and found that risk identification significantly affected both cost and time performance. Projects with comprehensive risk identification processes were more likely to stay on budget and meet deadlines compared to those that lacked structured risk identification.

In a study on construction projects in Nigeria, Ogunlana et al. (2002) observed that early risk identification led to better project performance, particularly in terms of reducing unexpected costs and mitigating time delays. Their research revealed that projects in which risks were proactively identified and addressed performed better in all performance measures, including quality. According to Fuzzy and Abolhasani (2012), brainstorming sessions and the Delphi method are popular qualitative approaches to risk identification. These methods help gather insights from project stakeholders and experts, improving the accuracy and thoroughness of the identified risks. Their effectiveness is linked to the project team's experience and the involvement of key stakeholders.

Pinto and Slevin (1987) suggested that using historical data and checklists can help project managers systematically identify risks based on previous project experiences. This method is especially effective in repetitive or similar types of projects, where past risks are likely to recur. A study by Alvarado et al. (2016) in the oil and gas sector highlighted the effectiveness of SWOT analysis in identifying potential risks by assessing the strengths, weaknesses, opportunities, and threats faced by a project. The study found that projects using SWOT analysis to identify risks performed better in managing both cost and time-related challenges.

CONCLUSIONS AND RECOMMENDATION

The basis of the findings of this study concludes that risk identification has a positive strong relationship with the cost performance of real estate firms in Rivers State, Nigeria. It is also affirmed that that risk identification has a positive strong relationship with the quality performance of real estate firms in Rivers State, Nigeria. Furthermore, it is affirmed that that risk identification has a positive strong relationship with the time performance of real estate firms in Rivers State, Nigeria. This means that as real estate firms in River State, Nigeria enhance their risk identification activities, there will be increase in cost performance, quality performance and time performance.

Based on the relationship from the findings, the following recommendations were proffered:

- i. Real estate firms should establish a structured risk identification framework at the project initiation phase to uncover potential financial risks such as cost escalation, currency fluctuations, and material price volatility.
- ii. Project teams should involve cross-functional stakeholders (e.g., architects, engineers, contractors) during risk identification sessions to uncover risks that could compromise building standards, regulatory compliance, and design specifications.
- iii. Project managers should employ tools such as risk checklists, historical project data, and expert judgment to identify schedule-related risks—like delays in approvals, labor shortages, or weather disruptions—and integrate them into project scheduling software for monitoring.

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