

The Impact of Enterprise Risk Management on Project Success: STC in Riyadh, Saudi Arabia

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Chapter 1: Introduction

1.1 Research Background

In the contemporary global economy, the telecommunications sector serves as the fundamental backbone of digital transformation, socio-economic development, and national resilience. Within the Kingdom of Saudi Arabia, this sector has undergone unprecedented growth and transformation, driven primarily by the strategic directives of Saudi Vision 2030. As telecommunication firms transition from traditional telecom providers to comprehensive digital ecosystem enablers, the complexity and scale of their projects have grown exponentially. This rapid transformation is characterized by massive infrastructure rollouts, such as 5G network expansion, cloud computing integration, smart city initiatives, and the exploration of next-generation technologies like 6G and low-orbit satellite communication.

However, this dynamic environment introduces a vast and intricate array of risks that directly threaten project delivery, operational integrity, and strategic alignment. Telecom organizations must navigate complex technological uncertainties including escalating cybersecurity threats, advanced malware, and system integration vulnerabilities, volatile market dynamics, shifting consumer demands (such as the transition from voice services to exponential data consumption), and stringent national and transnational regulatory frameworks. In this high-stakes ecosystem, traditional reactive approaches to project anomalies are no longer viable. Project success is increasingly dependent on the implementation of a structured, comprehensive, and proactive Enterprise Risk Management (ERM) framework. Organizations that tightly integrate governance, risk management, and compliance (GRC) mechanisms demonstrate significantly higher levels of operational efficiency and a more robust corporate reputation when navigating these complex landscapes (Aloulou & Alshohail, 2026).

The Saudi Telecommunication Company (STC), headquartered in Riyadh, stands as a premier digital pioneer and the leading telecommunications provider in the region. As a crucial enabler of Saudi Arabia's digital backbone, STC manages a large portfolio of strategic corporate, operational, and technological projects. Given its central role, STC's project delivery standards are tightly coupled with national security, public infrastructure

stability, and economic diversification goals. To safeguard its investments and ensure the continuity of mission-critical operations, STC has established structured governance mechanisms, operating under international risk standards such as ISO 31000 and ISO 22301 (Saudi Telecom Company, 2024). Investigating how risk management principles are operationalized within STC in Riyadh provides a vital empirical baseline for understanding the direct correlation between rigorous risk frameworks and project success parameters, including scope adherence, budget containment, timeline fidelity, and stakeholder trust.

1.2 Research Problem

Despite the critical importance of the telecommunications sector to Saudi Arabia's national infrastructure, projects within this domain frequently encounter substantial vulnerabilities that threaten their successful execution. The core problem revolves around the unprecedented escalation of risk complexity within digital-driven mega-projects, juxtaposed against the challenges of dynamically embedding risk-aware cultures across various organizational layers. Telecom projects in Riyadh are uniquely exposed to rapid technological obsolescence, severe supply chain disruptions, fragmented data regulations, and continuous compliance pressure from local authorities.

1.2.1 Theoretical Gaps

From an academic and theoretical perspective, existing literature frequently examines the concept of Enterprise Risk Management (ERM) as an aggregated, macro-level corporate policy focused heavily on regulatory compliance and corporate governance. However, there is a distinct shortage of empirical research investigating how these high-level structures actively translate into value creation and micro-level project operations within technology-driven firms in developing economies, particularly in the Gulf Cooperation Council (GCC) region (Aloulou & Alshohail, 2026). Furthermore, traditional project models frequently fail to apply structured multi-dimensional simulations or network analyses to evaluate concurrent project threats dynamically (Alotaibi, 2026). Most traditional project management models evaluate risk through a restricted lifecycle perspective (such as cost, time, and quality), failing to integrate multi-dimensional indicators like reputational risk, compliance alignment, and corporate resilience. This leaves a significant theoretical gap regarding how comprehensive ERM frameworks systematically alter project success rates within rapidly transforming digital ecosystems.

1.2.2 Practical Gaps

Practically, the operational environment of STC in Riyadh reveals critical execution challenges. The transition from legacy telecommunication models to intensive data and cloud infrastructure has amplified exposure to highly advanced cybersecurity threats, such as distributed denial-of-service (DDoS) botnets and ransomware targeting upstream supply chains. Third-party vendor integration and continuous compliance mandates from the Communications, Space and Technology Commission (CST) exert immense delivery pressure on infrastructure projects. In addition, large-scale engineering and infrastructure endeavors across the Kingdom frequently face severe project risk variables and scheduling overruns due to complex geopolitical and contextual environmental factors (Alotaibi, 2026; Altuwaim & Saiba, 2026). When these technical, legal, and operational risks materialize without standard proactive mitigation, they lead to significant operational consequences: prolonged network downtime, substantial financial penalties, erosion of Average Revenue Per User (ARPU), and compromised strategic assets.

Consequently, this study explores a fundamental question:

Main Research Question: What is the impact of Enterprise Risk Management frameworks on achieving project success within the Saudi Telecommunication Company in Riyadh, Saudi Arabia?

1.3 Research Significance

1.3.1 At the Theoretical Level

This study contributes to the academic domain by offering an empirically validated model that connects corporate risk governance directly to operational project delivery metrics. By bridging the gap between generalized enterprise risk theories and specialized project execution parameters within the Middle Eastern telecom context, this research expands the understanding of modern risk-value paths. It establishes an empirical baseline for researchers studying organizational agility, critical digital infrastructure resilience, and governance maturity in emerging digital markets (Aloulou & Alshohail, 2026; Altuwaim & Saiba, 2026).

1.3.2 At the Practical Level

On a practical level, this research provides project managers, chief risk officers, and corporate executives at STC and across the broader telecom market with actionable, strategic insights. By identifying the explicit operational links between unified risk registers, automated transaction monitoring, continuous business impact analyses (BIA), and project containment rates, the study provides a practical framework to minimize cost overruns and delays. Furthermore, ensuring project success at STC directly reinforces national critical infrastructure protection (Saudi Telecom Company, 2024). Consequently, optimizing project execution standards within the telecom ecosystem directly supports the secure realization of Saudi Vision 2030 digital transformational goals.

1.4 Research Questions

Based on the research background, the identified research problem, and the theoretical and practical gaps, this study aims to examine the impact of Enterprise Risk Management (ERM) on project success at Saudi Telecom Company (STC) in Riyadh, Saudi Arabia. Enterprise Risk Management has become an essential management approach that enables organizations to identify, assess, respond to, and monitor risks systematically, thereby improving organizational performance and increasing the likelihood of project success. Previous studies have emphasized that effective Enterprise Risk Management contributes to better governance, informed decision-making, and successful project implementation (Alshurideh et al., 2022; Aldehayyat & Anchor, 2010).

Accordingly, this study seeks to answer the following research questions:

Main Research Question

RQ1: What is the impact of Enterprise Risk Management on project success at Saudi Telecom Company (STC) in Riyadh, Saudi Arabia?

Sub-Research Questions

RQ1.1: What is the impact of risk identification on project success at STC?

RQ1.2: What is the impact of risk assessment on project success at STC?

RQ1.3: What is the impact of risk response on project success at STC?

RQ1.4: What is the impact of risk monitoring on project success at STC?

1.5 Research Objectives

The primary objective of this study is to investigate the impact of Enterprise Risk Management (ERM) on project success at Saudi Telecom Company (STC) in Riyadh, Saudi Arabia. Effective Enterprise Risk Management enables organizations to anticipate uncertainties, improve resource allocation, support strategic decision-making, and enhance project performance. Previous studies have shown that integrating Enterprise Risk Management into organizational processes positively contributes to achieving project objectives and improving organizational performance (Alshurideh et al., 2022). To achieve the main objective of the study, the following objectives have been formulated:

Main Objective

RO1: To examine the impact of Enterprise Risk Management on project success at Saudi Telecom Company (STC).

Specific Objectives

RO1.1: To examine the impact of risk identification on project success at STC.

RO1.2: To assess the impact of risk assessment on project success at STC.

RO1.3: To evaluate the impact of risk response on project success at STC.

RO1.4: To examine the impact of risk monitoring on project success at STC.

1.6 Research Hypotheses

The hypotheses of this study are developed based on the research objectives and previous empirical studies that examined the relationship between Enterprise Risk Management and organizational performance. Existing literature indicates that organizations implementing effective Enterprise Risk Management practices are more likely to improve project outcomes by reducing uncertainty, strengthening governance, and enhancing decision-making processes (Alshurideh et al., 2022; Aldehayyat & Anchor, 2010).

Main Hypothesis

H1: Enterprise Risk Management has a statistically significant positive impact on project success at Saudi Telecom Company (STC).

Sub-Hypotheses

H1a: Risk identification has a statistically significant positive impact on project success at STC.

H1b: Risk assessment has a statistically significant positive impact on project success at STC.

H1c: Risk response has a statistically significant positive impact on project success at STC.

H1d: Risk monitoring has a statistically significant positive impact on project success at STC.

The proposed hypotheses assume that organizations adopting comprehensive Enterprise Risk Management practices are better equipped to identify and manage project risks, resulting in improved project performance, efficient resource utilization, and successful project delivery (Alshurideh et al., 2022).

1.7 Research Model

The conceptual framework of this study is developed based on the relationship between Enterprise Risk Management (ERM) and Project Success. Enterprise Risk Management represents the independent variable, while Project Success represents the dependent variable. Based on previous literature, Enterprise Risk Management consists of four key dimensions: Risk Identification, Risk Assessment, Risk Response, and Risk Monitoring. These dimensions are expected to contribute positively to project success by improving decision-making, reducing uncertainty, enhancing organizational resilience, and supporting the achievement of project objectives (Alshurideh et al., 2022).

The proposed research model assumes that the effective implementation of Enterprise Risk Management practices improves project performance through the systematic identification, assessment, response, and continuous monitoring of risks. Organizations that adopt comprehensive Enterprise Risk Management practices are expected to achieve higher levels of project success than those that rely on traditional risk management approaches (Alshurideh et al., 2022; Aldehayyat & Anchor, 2010).

The conceptual framework of the study is illustrated in Figure 1.1.

Independent Variable (IV)

Enterprise Risk Management (ERM)

- Risk Identification
- Risk Assessment
- Risk Response
- Risk Monitoring

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Dependent Variable (DV)

Project Success

Figure 1.1 Proposed Research Model

1.8 Overview of Saudi Telecom Company (STC)

Saudi Telecom Company (STC) is the leading telecommunications and digital solutions provider in the Kingdom of Saudi Arabia. The company offers a wide range of services, including mobile communications, fixed-line services, broadband internet, cloud computing, cybersecurity, digital infrastructure, and information technology solutions. Through continuous investment in innovation and digital transformation initiatives, STC plays a significant role in supporting Saudi Arabia's Vision 2030 and strengthening the country's digital economy. Operating in a highly competitive and technology-driven environment exposes STC to various strategic, operational, financial, technological, and cybersecurity risks. Consequently, implementing an effective Enterprise Risk Management framework has become essential to ensure business continuity, improve organizational resilience, support strategic decision-making, and enhance project performance. Previous studies have emphasized that organizations implementing structured Enterprise Risk Management practices are better able to reduce uncertainty and improve organizational performance (Alshurideh et al., 2022).

STC has been selected as the empirical setting for this study because it manages numerous strategic projects across different business sectors and continuously adopts governance and risk management practices to achieve its strategic objectives. The company's commitment to innovation, digital transformation, and effective project management makes it an appropriate organization for investigating the relationship between Enterprise Risk Management and project success (Aldehayyat & Anchor, 2010). The target respondents for this study will include employees working in project management, enterprise risk management, operations, and other related administrative departments at STC in Riyadh. These employees possess the practical knowledge and experience required to evaluate the implementation of Enterprise Risk Management practices and their contribution to successful project delivery. Therefore, STC provides an appropriate environment for conducting the empirical investigation proposed in this research.

1.9 Research Methodology

This section describes the research methodology adopted to achieve the objectives of the study. It explains the research design, research population, sampling technique, research instrument, data collection procedures, data analysis methods, and ethical considerations. The selected methodology is appropriate for examining the impact of Enterprise Risk Management (ERM) on project success at Saudi Telecom Company (STC) in Riyadh, Saudi Arabia.

1.9.1 Research Design

This study adopts a quantitative research approach using a descriptive research design to examine the relationship between Enterprise Risk Management (ERM) and project success. The quantitative approach enables the researcher to collect numerical data through a structured questionnaire and analyze the collected data statistically to test the proposed hypotheses. This approach is widely used in business and management research because it provides objective and reliable findings (Creswell & Creswell, 2023).

1.9.2 Research Population

The target population of this study consists of employees working at Saudi Telecom Company (STC) in Riyadh, Saudi Arabia. The study focuses on employees involved in project management, enterprise risk management, operations, and other related administrative departments. These employees are expected to possess sufficient knowledge and practical experience regarding Enterprise Risk Management practices and project implementation, enabling them to provide reliable information for achieving the objectives of this study.

1.9.3 Sampling Technique

This study employs a convenience sampling technique, which is one of the most commonly used non-probability sampling methods in organizational research.

Participants will be selected based on their accessibility and willingness to participate in the study. This sampling technique is considered appropriate because it facilitates access to employees who have practical experience in project management and Enterprise Risk Management within STC (Saunders et al., 2023).

1.9.4 Research Instrument

Primary data will be collected using a structured questionnaire. The questionnaire is divided into two sections. The first section collects respondents' demographic information, including gender, age, educational qualification, years of experience, and department. The second section measures the study variables using statements adopted and adapted from previous studies on Enterprise Risk Management and project success (Alshurideh et al., 2022).

1.9.5 Data Collection Procedures

The questionnaire will be distributed electronically to employees at Saudi Telecom Company (STC). Participation will be voluntary, and respondents will be informed about the purpose of the study before completing the questionnaire. Sufficient time will be provided for participants to complete the survey, and all collected responses will be used exclusively for academic research purposes (Saunders et al., 2023).

1.9.6 Data Analysis

The collected data will be analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies, percentages, means, and standard deviations, will be used to summarize respondents' demographic characteristics and responses. Inferential statistical analyses, including Pearson Correlation Analysis and Multiple Linear Regression Analysis, will be conducted to examine the relationship between Enterprise Risk Management and Project Success and to test the proposed hypotheses. A significance level of 0.05 will be used to determine the statistical significance of the proposed hypotheses (Creswell & Creswell, 2023; Saunders et al., 2023).

1.9.7 Ethical Considerations

Participation in this study will be entirely voluntary. Participants will be informed about the purpose of the study before completing the questionnaire and will have the right to withdraw at any time without any negative consequences. No personal identifying information will be collected, and all responses will remain anonymous and confidential. The collected data will be stored securely and used solely for academic purposes in accordance with accepted research ethics (Saunders et al., 2023).

1.10 Suggested Structure of the Study

The proposed study is organized into five chapters. Each chapter addresses a specific aspect of the research and contributes to achieving the research objectives.

Chapter One: Introduction

This chapter introduces the research background, research problem, theoretical and practical research gaps, research significance, research questions, research objectives, research hypotheses, research model, overview of the selected organization, research methodology, and the overall structure of the study.

Chapter Two: Literature Review

This chapter reviews the relevant literature related to Enterprise Risk Management (ERM) and Project Success. It discusses the theoretical foundations, previous empirical studies, conceptual framework, and research gap supporting the current study. The chapter also examines the relationships between the independent and dependent variables based on previous research findings.

Chapter Three: Research Methodology

This chapter explains the research philosophy, research approach, research design, target population, sampling technique, sample size, research instrument, validity and reliability procedures, data collection methods, ethical considerations, and data analysis techniques used to achieve the objectives of the study.

Chapter Four: Data Analysis and Results

This chapter presents the analysis of the collected data using the Statistical Package for the Social Sciences (SPSS). It includes respondents' demographic characteristics, descriptive statistics, reliability analysis, validity analysis, correlation analysis, regression analysis, hypothesis testing, and interpretation of the research findings.

Chapter Five: Conclusion and Recommendations

This chapter summarizes the major findings of the study, discusses the theoretical and practical implications of the results, presents the limitations of the study, and provides recommendations for practitioners and future researchers.

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