

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

Almaha Torky Aloraier
Academic ID: 241002588

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Faculty of Management - Midocean University

Supervisor
Dr.
Abdulraheem Nader

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1. 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.

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