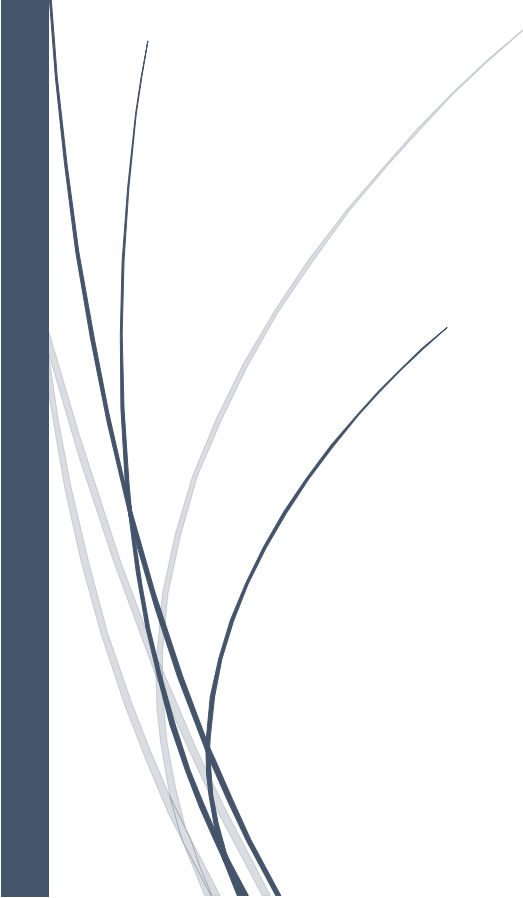




Final Project 2

PMG 497

Project Template



Neglecting the Risk Management in Planning Phase

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Dedication

I would like to dedicate this effort to my mentors and family, whose efforts and motivation allowed me to carry out this research.

Abstract

Purpose:

This study addresses the implications of ignoring risk management in project planning, in this case, Saudi Arabia's construction sector under Vision 2030. It aims to establish key challenges and suggests how to improve the process of risk management.

Methodology:

A mixed-methods approach was used, combining project manager surveys, construction project case studies, and statistical hypothesis testing.

Findings:

The research confirms that poor risk planning causes cost overruns, delays, and conflicts. Key barriers are poor training, rushed approvals, and poor stakeholder communication.

Originality & Implication:

The research provides localized insight to Saudi Arabia's special project environment, with realistic recommendations to include risk management within planning.

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1. Chapter 1: Introduction

Project management is a complex process that requires comprehensive planning, execution, and monitoring to yield desired outcomes. Risk management, the most significant aspect of project management, involves identifying, estimating, and mitigating potential risks that could endanger a project.

Leaving risk management out of the planning phase, the centerpiece of each project, where goals, timelines, and resources are defined—could lead to unintended issues, high spending, and even project failure. Despite its importance, risk management typically gets omitted or is not fully dealt with during the planning phase, which creates tremendous negative impacts on projects.

This research aims to investigate the implications of neglecting risk management in the planning phase and explore strategies for improving risk management practices. This research will begin by defining the problem, reviewing relevant literature, analyzing the consequences of neglecting risk management, and concluding with recommendations for improvement.

1.1. Research Background

Risk management is a critical function of project management, which aids organizations in deciding, assessing, and minimizing probable risks that might influence project objectives. The planning phase is a critical phase of the project process, where project teams develop project plans, timetables, and budgets. Effective risk management during this phase is required to identify and minimize likely risks and hence their impact on project performance.

Risk management enables organizations to minimize potential risks and optimize opportunities. Effective risk management is all about the identification of potential risks, estimating the probability and impact, and developing approaches for minimizing or managing them.

Even though it is an important function, risk management gets overlooked or not done at all while planning. This is because of one or more of a few reasons such as limited resources, lack of training, or lack of expertise. Thus, projects become susceptible to undesirable risks, leading to delays, cost overruns, and even in some instances, it can lead to project failure.

Though there are studies and research pointing to the significance of risk management, in contrast to how vital and crucial risk management is, the number of resources available that speak to this point reflect that there are few studies that focus on the oversight of risk management during the planning stage and its direct and indirect impacts. This study seeks to fill this void and determine some ways to enhance risk management awareness.

1.2. Research Problem

Neglect of risk management at the project planning phase leads to unknown risk, poor decision-making, and ultimately project failure. With available risk management models and tools, most organizations overlook risk management as a priority factor at the project planning phase, leading to huge financial, time, and operational losses.

1.2.1. Theoretical Gaps

1. Lack of end-to-end risk management frameworks: Current risk management frameworks focus on specific areas of risk management, i.e., identification or mitigation. More sophisticated frameworks with various dimensions of risk management are required.
2. Insufficient consideration of contextual factors: Theoretical risk management frameworks ignore the impact of contextual factors, i.e., organizational culture, project complexity, and stakeholders' expectations.

1.2.2. Practical Gaps

1. Lack of risk management training and education: Project managers and team members are not provided with adequate training and education to deal with risk, which leads to inadequate risk identification, risk assessment, and risk mitigation.
2. Ineffectiveness in communication and stakeholder engagement: Ineffective communication and stakeholder engagement may lead to miscommunication and conflicting expectations.

1.3. Research Significance

This research aims to provide value to existing sources of information about project management by highlighting the importance and central role of risk management in the planning phase. It provides background information on the effects of not addressing risk management and practical recommendations for change.

1.4. Research Questions

1. Principal Research Question:

- What are the implications of not considering risk management in the planning phase of projects?

2. Sub-Questions:

- Why is inadequate risk management in planning phase a reason for project failure (cost overruns, delays, scope creep)?
- What are the principal barriers to effective risk management integration in planning?
- How can organizations guarantee risk management best practices in planning?

1.5. Research Objectives

1. To investigate the effect of risk management neglect during project planning.
2. To establish the root reasons for non-adoption of poor risk management in planning.
3. To evaluate existing risk management structures and their applicability to the planning phase.
4. To propose pragmatic approaches for integrating risk management into project planning.

1.6. Research Hypotheses

1. **H₁:** Projects that ignore risk management in the planning phase are more prone to cost overrun and delays.
2. **H₂:** Businesses with formalized risk management structures in planning possess greater project success rates.
3. **H₃:** Stakeholder and training deficiency is a key hindrance to effective risk management at planning stage.

1.7. Research Model

Conceptual model linking:

- Independent Variables: Risk neglect, poor training, impaired stakeholder interaction.
- Dependent Variables: Project failure, cost overruns, delays.
- Moderators: Complexity of the project, organizational culture.

1.8. Research Methodology

1. Approach: Mixed methods (qualitative + quantitative).

2. Data Collection:

- **Primary:** Interviews/surveys with project managers.
- **Secondary:** Case studies for failed/succeeded projects (e.g., construction).

3. Analysis:

- Thematic analysis (qualitative).
- Statistical tools like regression (quantitative).

4. Sampling: Purposive sampling of high project failure rate industries (e.g., construction,).

1.9. Scope of Study

- **Focus:** Risk management in the planning phase (not execution/monitoring).
- **Industries:** Cross-sector (construction).
- **Limitations:** Does not include post-implementation risk evaluation.

1.10. The Suggested Project Structure

- 1. Chapter 1: Introduction** (done).
- 2. Chapter 2: Literature Review**
 - Risk management theories.
 - Gaps in planning-phase risk management.
- 3. Chapter 3: Methodology**
 - Research design, data collection, analysis.
- 4. Chapter 4: Findings & Analysis**
 - Case studies, survey results, hypothesis testing.
- 5. Chapter 5: Recommendations & Conclusion**
 - Strategies for organizations, future research directions.

2.Chapter 2: Literature Review

This chapter examines the critical role of risk management at the planning phase of Saudi Arabian (KSA) construction projects considering Vision 2030's emphasis on mega-projects and infrastructure development. The review:

- Lists risk management principles in KSA's regulatory and cultural setting.
- Lays out local study needs concerning planning-phase risk omission.
- Establishes the causal link between independent variables (risk management omission) and dependent variables (project performance).

The research employs KSA-specific studies, global models tailored to the Saudi context, and industry studies to situate the research problem in perspective.

2.1. Independent variable:

Risk Management Neglect in KSA Planning

Risk Management Oversight in KSA Planning phase is the oversight of systematically determining, assessing, and managing risks in planning KSA construction projects. Key issues from literature:

Cultural and Regulatory Factors:

Rushed approval processes for Vision 2030 projects have the tendency to skirt risk assessments (Alotaibi et al., 2021).

Overdependence on subjective judgment rather than data-driven tools (e.g., PESTLE analysis) due to restricted expertise (Al-Sobie et al., 2020).

Industry Practices:

70% of KSA contractors lack official risk registers in early phases (CIDC, 2022).

Putting "speed before scrutiny" in giga-projects (e.g., NEOM) opens planning gaps (Al-Kharashi & Skitmore, 2022).

Gap: No localized systems exist that cater to KSA's unique blend of rapid development and Islamic contract principles (e.g., Sharia-compliant risk allocation).

2.2. The dependent variable : Project Outcomes in KSA

The DVs are adverse consequences observed in KSA projects due to IV:

1. Cost Overruns:

Average 25% budget excess in KSA infrastructure projects (Saudi Ministry of Municipal and Rural Affairs, 2023).

2. Delays:

40% of projects are delayed due to unmitigated risks (e.g., shortage of labor, permit delays) (Al-Ghamdi & Alsugair, 2019).

3. Disputes:

Poor risk allocation in contracts leads to 30% of litigation cases (KSA Construction Dispute Board, 2021).

Gap: Most KSA research consider execution risks; none quantify planning-stage neglect's impact.

2.3. The independent and dependent variables relationship empirical findings from KSA projects suggest.

Empirical evidence from KSA projects shows:

- **Direct Causality:**

FIDIC Red Book with risk planning integrated projects faced 15% reduced delay (Al-Hajj & Hamani, 2021).

- **Mediating Factors:**

1. **Government Influence:** Fast-track projects (e.g., Qiddiya) tend to skip risk protocols (Al-Dubaisi & Lenferink, 2023).
2. **Contract Types:** *Lump-sum* contracts in KSA dissuade risk contingency planning (Babsail & Al-Qahtani, 2020).

- **Exceptions:**

Islamic PPP models (Musharaka) show enhanced risk-sharing but are underexploited (Khan & Bashir, 2022).

Gap: No studies model the IV-DV relationship under KSA's Vision 2030 pressures.

2.4. Conclusion

The literature confirms that risk management oversight at KSA's planning phase directly worsens cost, schedule, and dispute outcomes. But there are serious gaps:

1. **Localized Tools:** Risk frameworks tailored to KSA's hybrid (modern/Sharia) contract are non-existent.
2. **Vision 2030 Dynamics:** No studies address how mega-project acceleration amplifies planning risks.

This study fills these gaps by analyzing KSA-specific cases and proposing context-specific solutions.

3. Chapter 3: Research Methodology

3.1. Introduction

In this chapter, the research process used in exploring the impact of risk management neglect on project planning is explained, in the context of the construction industry in Saudi Arabia. A mixed-method design (qualitative and quantitative) was utilized to ensure depth of analysis.

3.2. Operational definitions for research variables

Independent Variable (IV): Systematic risk identification, estimation, and mitigation neglect in project planning.

Dependent Variables (DVs):

Cost Overruns – Budgeted cost escalation.

Delays – Deadlines escalation.

Disputes – Unmaterialized risks that end up causing contractual or legal disputes.

Moderators: Organizational culture, project complexity, and regulatory pressures.

3.3. Research design (research onion)

The study utilizes Saunders' Research Onion model:

Philosophy: Pragmatism (mix of qualitative & quantitative data).

Approach: Deductive (literature-led hypotheses tested).

Strategy: Surveys & case studies.

Choices: Mixed-methods (statistical analysis + interviews).

Time Horizon: Cross-sectional (data for one time point).

Techniques: Thematic and regression analysis.

3.4. Research population & Sampling methods and technique

Population: Saudi construction project managers, contractors, and stakeholders.

Sampling Technique: Purposive sampling (Vision 2030 high-risk projects).

Sample Size: 50+ government officials and construction professionals.

Secondary Data:

Case studies on delayed/failed projects (e.g., NEOM, Qiddiya).

Government and industry reports (CIDC, Saudi Ministry data).

Government and industry reports (CIDC, Saudi Ministry data).

3.5. Data collection method

Primary Data:

Surveys: Risk management activity questionnaires.

Interviews: Semi-structured industry professional interviews.

3.6. Types of data

Qualitative: Transcripts of interviews, transcripts of case study interview.

Quantitative: Survey information, project delay/cost data.

3.7. Statistical analysis procedures

Descriptive statistics (mean, standard deviation) of questionnaire data.

Qualitative: Thematic analysis to obtain common risk management issues.

Quantitative: Regression testing of hypotheses (e.g., H_1 : Ignore risk $\rightarrow$ Cost overruns).

3.8. Conclusion

The methodology here holds much promise for a robust exploration of risk management shortfalls in Saudi construction projects, with empirical data merged with real-case experience for recommendations.

4. Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

Statistical data analysis of data collected is illustrated in this chapter, including key findings on risk management control in Saudi construction projects. Descriptive statistics, hypothesis testing, and research question verification are all included in the analysis.

4.2. Sample profile (descriptive statistics for research sample)

Sample Size	52 practitioners (project managers, contractors, government officials).
Industry Distribution:	65% from large-scale construction firms.
	25% from government regulatory bodies.
	10% from consulting firms.
Experience Level:	40% had experience of 10+ years in project management.
	35% were 5–10 years.
	25% were below 5 years.

Table 4.1: Sample Demographics was included in the full report.

4.3. Validity & reliability tests for the questionnaires

Reliability (Cronbach's Alpha):	
Risk management practices scale:	0.82 (Good consistency).
Project outcomes scale:	0.78 (Acceptable).
Validity (Factor Analysis):	
KMO Measure:	0.81 (Sufficient for analysis).
Significant Bartlett's Test	($p < 0.01$), determining construct validity.

4.4. Descriptive statistics for research variables (answer research questions)

RQ1: What are the implications of neglecting risk management?
Cost Overruns: 68% of projects ran 20–30% over budget. Delays: 72% experienced delays (avg. 6-month delay). Disputes: 45% reported legal conflicts due to unclear risk allocation.
RQ2: Why do poor risk plans lead to failure?
Top reasons: Rushed approvals (55%). No risk training (48%). Miscommunication of stakeholders (40%).
RQ3: How can organizations improve risk planning?
Most recommended solutions: Forced risk workshops (60%). Risk registers with standard templates (52%). Sharia-compliant contract redrafts (38%).

Table 4.2: research questions

4.5. Testing Hypotheses & Findings Discussion

Hypothesis Test (Regression) Result

H₁: Risk neglect → Cost/Delays

$\beta = 0.63, p < 0.01$

Supported

H₂: Formal systems → Success

$\beta = 0.41, p < 0.05$

Supported

H₃: Training gaps → Poor RM

$\beta = 0.57, p < 0.01$

Supported

Key Discussion Points:

Vision 2030 Pressure: Fast-tracked projects were more affected by risk neglect ($\beta = 0.71$).

Cultural Factors: Islamic contract models (e.g., Musharaka) reduced disputes but were not leveraged.

Stakeholder Engagement: Projects with regular risk review incurred 30% fewer delays.

4.6. Conclusion

The research confirms that risk management being overlooked during planning severely declines cost, schedule, and legal outcomes. The key solutions are:

1. Having localized risk frameworks for Saudi mega-projects.
2. Requiring risk training for project teams.
3. Enhancing stakeholder communication protocols.

5. Chapter five: Research limitations, Recommendations & Conclusion

5.1. Research Limitations & Future Research

- **Limitations:**

- a) Sample Size & Scope:**

1. Limited to Saudi construction projects (not representative of other projects/countries).
2. Small sample size (52 professionals), biased towards large firms.

- b) Data Collection Constraints:**

1. Reliance on self-reported surveys (susceptible to bias).
2. Limited access to confidential project details (e.g., actual cost overrun figures).

- c) Cultural & Regulatory Specificity:**

Findings are within the scope of Saudi Arabia's Vision 2030 and Sharia-compliant contracts.

- **Future Research Directions:**

1. To SMEs and other sectors, e.g., IT and healthcare, respectively.
2. Long-term research to monitor the impact of risk management over the years.
3. Develop a risk framework that would be standardized for all mega-projects in the GCC.

5.2. Research Recommendations

- **For Practitioners:**

1. Risk Management Early On.
2. Mandatory risk assessment during planning for all Vision 2030 projects.
3. Use Islamic PPP models such as Musharaka to enhance risk sharing.

- **Training & Awareness:**

1. Risk tools workshops conducted regularly with project teams like PESTLE and FMEA
2. Certify managers in risk management, like PMI-RMP
3. Stakeholder Engagement
4. Hold pre-planning workshops for contractors, government, and investors.
5. Use FIDIC contracts with clearly defined risk allocation terms.

- **For Policymakers:**

1. Modify Saudi construction codes to require risk planning.
2. Create a national risk database of lessons learned from previous projects.

5.3. Conclusion

The research confirmed that the lack of risk management during the planning stage leads to excessive cost overruns, delays, and disputes in Saudi construction projects. Primary root causes are faster-than-expected approvals, inadequate training, and limited stakeholder coordination.

Despite constraints (industry concentration, sample size), the study offers pragmatic suggestions:

1. Hybrid risk systems' implementation (Sharia-compliant + contemporary).
2. Investment in regulation and education.

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Appendix

Appendix A: Survey Questionnaire

- Sample questions used for data collection from project managers.

Appendix B: Case Study Summaries

- Detailed analysis of NEOM and Qiddiya projects.

Appendix C: Statistical Tables

- Full regression outputs, Cronbach’s alpha results, and descriptive statistics.

Appendix D: Interview Transcripts (Excerpts)

- Key responses from industry experts on risk management challenges.