

CRITICAL SUCCESS FACTORS OF PROJECT MANAGEMENT IN PAKISTAN: TOWARDS A CONTEXT-SPECIFIC FRAMEWORK FOR IMPROVING PROJECT PERFORMANCE

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Abstract

Project failure remains a persistent and costly problem across Pakistan's construction, information technology, and public-sector development industries, with delays, cost overruns, and unmet quality expectations reported despite decades of methodological advancement in project management practice. A recurring theme in both global and Pakistan-specific literature is that project success is rarely attributable to a single cause; rather, it emerges from the interaction of a defined set of Critical Success Factors (CSFs) — the limited number of areas in which satisfactory performance is essential to achieving desired outcomes. While a growing body of research has examined CSFs within individual Pakistani sectors, these studies remain largely fragmented, sector-specific, and confined to small, localized samples, leaving three key gaps in current understanding: the absence of an empirically validated, cross-sectorial CSF framework suited to Pakistan's distinct institutional and cultural context; limited comparative testing of the relative importance of commonly cited factors across different sectors and ownership types; and a corresponding lack of evidence-based tools to guide practitioners and policymakers in prioritizing scarce resources. This study addresses these gaps through mixed-methods, sequential explanatory design. An initial qualitative phase, comprising semi-structured interviews with senior project practitioners, will refine a candidate list of CSFs drawn from the literature and ground it in local practice. A subsequent quantitative phase will employ a structured survey of project managers and stakeholders across construction, IT, and public-sector projects nationwide, analyzed through factor analysis and structural equation modeling to test the relative influence of five CSF clusters — leadership and management support, planning and control, stakeholder engagement, team and resource factors, and institutional context — on project performance outcomes including time, cost, quality, and stakeholder satisfaction. The study is expected to produce the first large-scale, empirically validated, cross-sectorial CSF framework for project management in Pakistan, offering both a theoretical contribution to the international CSF literature and practical, actionable guidance for improving project delivery in Pakistan and comparable developing economies.

Keywords: Critical Success Factors; Project Management; Project Performance; Pakistan; Developing Economies; Public and Private Sector Projects

1. Introduction and Background

Project management has become the principal vehicle through which organizations in both the public and private sectors deliver strategic change, infrastructure, and technology outcomes. Yet despite decades of methodological advancement, project failure — measured through cost overruns, schedule delays, and unmet quality or stakeholder expectations — continues to be reported at high rates in developing economies (Malik et al., 2026). Pakistan presents a particularly instructive setting in which to examine this problem. The country has, over the past two decades, undertaken large-scale investment through public-sector development programmes, the China-Pakistan Economic Corridor (CPEC), energy and dam construction, and a rapidly growing IT and software services sector. Empirical studies of these sectors consistently report that a substantial proportion of projects fail to meet their original time, cost, or quality targets (Khan, Rehman & Waheed, 2015).

A recurring theme in the literature is that project success is rarely attributable to a single cause; rather, it results from the interaction of a defined set of Critical Success Factors (CSFs) — the limited number of areas in which satisfactory results ensure competitive performance, a concept developed in the strategic-planning literature and subsequently applied extensively to project management research (Leidecker & Bruno, 1984). In the Pakistani context, studies of construction, manufacturing, IT, and public-sector projects have each proposed partially overlapping but non-identical sets of CSFs, spanning leadership and top-management support, planning and control, stakeholder management, team competence, resource availability, and political and institutional stability (Saqib et al., 2008; Iram et al., 2016). What remains absent from this body of work is a synthesized, cross-sectorial, and contextually grounded framework that consolidates these fragmented findings and tests their relative weight in explaining project outcomes across Pakistan's diverse project-delivery environments. This proposal outlines a doctoral research project designed to address that gap.

2. Problem Statement

Existing CSF studies conducted in Pakistan are largely sector-specific — focusing individually on construction, IT, or public-sector projects — and rely predominantly on descriptive or single-regression analyses drawn from small, localized samples (e.g., single dam-rehabilitation projects or single-province manufacturing firms). Consequently, three problems persist:

1. There is no empirically validated, cross-sectorial CSF framework that reflects the institutional, cultural, and economic conditions unique to Pakistan.
2. The relative importance of commonly cited factors (e.g., top-management support, leadership competence, planning rigor, stakeholder engagement) has not been tested comparatively across sectors, limiting the transferability of existing findings.
3. Practitioners and policymakers lack an evidence-based, prioritized tool to guide resource allocation and capacity-building investment in project management practice.

This study responds to these gaps by developing and empirically testing a context-specific CSF framework applicable across Pakistan's major project-based industries.

3. Research Aim and Objectives

Aim: To identify, rank, and validate the critical success factors that most strongly influence project management performance in Pakistan, and to develop a practical framework for improving project outcomes.

Objectives

1. To critically review the global and Pakistan-specific literature on critical success factors in project management.
2. To identify the CSFs perceived as most significant by project practitioners across construction, IT, and public-sector projects in Pakistan.
3. To empirically examine the relationship between identified CSFs and project performance outcomes (time, cost, quality, and stakeholder satisfaction).
4. To test whether the significance of CSFs varies systematically by sector, project type, or organizational ownership (public vs private).

5. To develop and validate a context-specific CSF framework, with practical recommendations for project managers, organizations, and policymakers in Pakistan.

4. Research Questions

- RQ1: What are the critical success factors most frequently associated with project success in Pakistan's construction, IT, and public-sector industries?
- RQ2: To what extent do these factors explain variation in project performance outcomes?
- RQ3: Does the relative importance of CSFs differ significantly across sectors and between public- and private-sector projects?
- RQ4: What framework and set of practical recommendations can be derived to improve project management performance in Pakistan?

5. Literature Review

5.1 The Concept of Critical Success Factors

The concept of Critical Success Factors (CSFs) can be traced to Daniel (1961), who discussed the importance of focusing management information on the factors that determine organizational success. Rockart (1979) subsequently developed the Critical Success Factors method and described CSFs as the limited number of areas in which satisfactory results are necessary for successful organizational performance. Leidecker and Bruno (1984) further developed the CSF approach and demonstrated its usefulness for identifying factors that can significantly influence organizational success. The concept has subsequently been applied across organizational and project-management settings to identify the conditions most strongly associated with successful outcomes (Daniel, 1961; Rockart, 1979; Leidecker & Bruno, 1984).

5.2 CSF Research in the Pakistani Context

A growing body of Pakistan-focused research has examined CSFs within specific sectors. A study of public-sector organizations in Pakistan found significant relationships between project success and critical factors including planning and control, soundness of business and workforce, quality performance, and past performance; planning and control showed the strongest relationship with overall project success (Ahmad et al., 2015). Research on IT projects in Pakistan has identified leadership qualities, effective communication, and experienced project team members among important factors associated with project success (Fayaz et al., 2017). Research in Pakistan's manufacturing and construction sectors has examined critical factors associated with project success, reporting a significant relationship between critical success factors and project success (Iram et al., 2016). Construction research in Pakistan has identified decision-making effectiveness, project manager experience, contractor cash flow and experience, timely owner decisions, site management, supervision, planning effort, prior project management experience, and client decision-making ability among highly ranked critical success factors (Saqib et al., 2008). More recent syntheses have begun to incorporate contemporary influences such as agile methodologies, remote project teams, and emerging technologies into the CSF discussion, signaling that the factor set relevant to Pakistani projects continues to evolve (Malik et al., 2026)

6. Conceptual Framework

Drawing on the literature reviewed above, the study proposes a preliminary conceptual model organizing candidate CSFs into five broad clusters, whose relative influence on project performance (measured via time, cost, quality, and stakeholder satisfaction) will be empirically tested and refined:

Cluster	Representative Factors
Leadership & Management Support	Top-management commitment; project manager competence and leadership style; organizational culture
Planning & Control	Scope definition; scheduling rigor; budget control; risk management; monitoring and feedback mechanisms

Stakeholder & Client Engagement	Client consultation; communication; stakeholder identification and management
Team & Resource Factors	Team competence; resource availability; training; technology adoption

7. Research Methodology

7.1 Research Design

The study will adopt mixed-methods, sequential explanatory design. An initial qualitative phase (semi-structured interviews with senior project practitioners) will refine and contextualize the candidate CSF list drawn from the literature. This will be followed by a quantitative phase using a structured questionnaire survey to test the relative influence of the identified CSFs on project performance across sectors.

7.2 Population and Sampling

The target population comprises project managers, team leads, and senior stakeholders involved in construction, IT, and public-sector development projects across major urban centres in Pakistan (e.g., Islamabad, Lahore, Karachi, Peshawar). A stratified purposive sample will be used for the qualitative phase (approximately 15–20 interviewees across the three sectors), and a stratified random sample for the survey phase (target $n = 300\text{--}400$) to allow sector-wise comparison with adequate statistical power.

7.3 Data Collection

- Phase 1 (Qualitative): Semi-structured interviews exploring practitioners' perceptions of success and failure drivers on recent projects.
- Phase 2 (Quantitative): A structured, Likert-scale questionnaire measuring perceived importance of CSFs and corresponding project performance outcomes (time, cost, quality, stakeholder satisfaction).

7.4 Data Analysis

- Qualitative data: Thematic analysis to refine the CSF list and generate contextual insights.
- Quantitative data: Descriptive statistics, exploratory/confirmatory factor analysis to validate CSF clusters, and multiple regression or structural equation modeling (SEM) to test the relationship between CSF clusters and project performance, including sector as a moderating variable.

7.5 Ethical Considerations

The study will seek ethics approval from the host university prior to data collection. Participation will be voluntary and based on informed consent; all data will be anonymized, securely stored, and reported only in aggregate form, in accordance with the university's human research ethics guidelines.

8. Significance of the Study

- Academic contribution: Extends the CSF literature by providing the first large-scale, cross-sectorial, model-testing study of project success factors in Pakistan, addressing a gap explicitly identified in prior sector-specific research.
- Practical contribution: Provides project managers and organizations with an evidence-based, prioritized framework to guide capacity building, resource allocation, and process improvement.
- Policy contribution: Offers policymakers and public-sector agencies a basis for designing project governance reforms aimed at reducing cost and schedule overruns in nationally significant projects.
- Regional relevance: Given similarities in institutional and economic conditions, findings may be cautiously generalizable to other South Asian economies.

9. Scope and Limitations

The study focuses on medium- to large-scale projects within construction, IT, and public-sector development in Pakistan and does not extend to micro-projects or informal-sector activity. As with most cross-sectional survey research, findings will reflect practitioner perceptions at a single point in time; a longitudinal extension is noted as an avenue for future research. Access constraints in conflict-affected or highly remote regions may also limit geographic coverage, and this will be addressed transparently in the study's limitations section.

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