



Midocean University

Faculty of Management

Department/Specialization. Master in Project Management

Research Title

"Impact of Project Initiation Practices and Scope Definition on Time and Cost Overruns: A Field Study in the Construction Sector in Saudi Arabia."

Student Preparation/

Sajid Ullah Noor Hussain

Supervision/

Dr. Al-Faisal Abdul Hamid

Dr. Fayez Jarad

:Academic Year

2026

Introduction:

In the Saudi construction sector, several studies have identified delays and cost overruns as critical challenges. For example, Assaf and Al-Hejji (2006) found that poor planning, unclear scope, and weak project management practices are among the leading causes of delays in large construction projects in Saudi Arabia. Similarly, Elawi et al. (2016) highlighted that inadequate early-stage project definition and decision-making significantly contribute to project performance issues. These findings emphasize the importance of strengthening project initiation practices, particularly project charter development and scope definition.

Previous research has emphasized that **inadequate project initiation practices** are among the primary causes of project failure. For instance, studies by Bent Flyvbjerg highlight that poor front-end planning and optimism bias often result in underestimated costs and schedules. Similarly, research conducted by KPMG and other industry reports shows that unclear project scope and weak governance structures contribute significantly to project overruns.

Within the project initiation phase, two key documents play a fundamental role: the **Project Charter** and the **Project Scope Definition**. According to the PMBOK Guide, the project charter formally authorizes the project and establishes high-level objectives, stakeholder identification, and the authority of the project manager. In parallel, scope definition provides a detailed description of project deliverables, boundaries, and work requirements, forming the basis for planning and execution.

Several studies have demonstrated that **poorly defined scope and inadequate project authorization mechanisms** lead to issues such as scope creep, misalignment among stakeholders, and ineffective change control (e.g., Harold Kerzner). These issues, in turn, are strongly associated with schedule delays and cost escalation, particularly in complex construction environments.

Although prior literature has examined factors influencing project performance, there remains a **research gap in systematically linking project initiation practices specifically project charter development and scope definition to the reduction of time and cost overruns**, especially within the context of the Saudi Arabian construction sector. Most existing studies either focus broadly on project success factors or are conducted in different geographical and industrial contexts.

Therefore, this study aims to analyze the relationship between **project initiation practices and project performance outcomes**, with a specific focus on how effective project charter preparation and scope definition contribute to minimizing time delays and cost overruns. The research adopts a theoretical and analytical approach, drawing on established frameworks such as the PMBOK Guide and relevant academic literature to develop a structured understanding of this relationship.

Study Problem:

Despite advancements in project management methodologies, a significant number of projects continue to experience **time delays and cost overruns**, particularly in the construction sector. Previous studies have consistently identified inadequate planning and poor early-stage project definition as major contributors to these challenges. For example, Sami A. Assaf and Sadi A. Al-Hejji (2006) found that unclear project scope and weak planning practices are among the leading causes of delays in large construction projects in Saudi Arabia. Similarly, Bent Flyvbjerg (2014) emphasized that insufficient front-end planning and optimism bias often result in underestimated costs and schedules, leading to overruns.

In addition, research by John I. Alzahrani and Margaret W. Emsley (2013) highlights that project success is strongly influenced by the clarity of project definition and alignment among stakeholders. However, many projects still suffer from **unclear project authorization and poorly defined scope**, resulting in issues such as scope creep, frequent changes, miscommunication, and inefficient resource utilization.

While existing literature has extensively examined the general causes of project delays and cost overruns, there is a **limited number of studies that specifically investigate the role of project initiation practices particularly the preparation of the project charter and detailed scope definition in mitigating these issues**, especially within the context of the Saudi Arabian construction sector. Most prior studies focus broadly on project performance factors without isolating and analyzing the direct impact of these key initiation documents.

Therefore, this study aims to address this gap by systematically analyzing how **effective project charter development and scope definition contribute to reducing time delays and cost overruns**. The study will add to the scientific knowledge by providing a **focused analytical framework that links project initiation practices with project performance outcomes**, offering both theoretical insight and practical implications for improving project success in the construction industry.

Importance of the study:

1. Scientific (Theoretical) Importance

- This study contributes to the existing body of knowledge in **project management** by providing a focused analysis of the relationship between **project initiation practices specifically project charter development and scope definition and project performance outcomes**.
- It addresses a **research gap** by examining these variables in an integrated manner, whereas most previous studies have analyzed project delays and cost overruns from a general perspective without isolating the impact of initiation-phase documentation.
- The study develops a **conceptual framework** linking project initiation processes with time and cost performance, which can support future academic research in the field.

2. Practical (Applied) Importance

- The study provides **practical insights for project managers and stakeholders** in the construction sector on how to improve project outcomes through effective preparation of project charters and clear scope definition.
- It helps organizations reduce **time delays, cost overruns, and scope-related issues** by highlighting best practices in the early stages of project development.
- The findings can support decision-makers in enhancing **project governance, planning efficiency, and resource utilization**, particularly within the context of construction projects in Saudi Arabia.

Objectives of the study:

Main Objective

To analyze the impact of **project initiation practices**, specifically the development of the project charter and scope definition, on **reducing time delays and cost overruns** in construction projects.

Sub-Objectives

- To examine the role of the **project charter** in establishing project governance, stakeholder alignment, and managerial authority.
- To analyze the importance of **clear scope definition** in project planning and scope management.
- To investigate the relationship between **poor scope definition and project time and cost overruns**.
- To evaluate how effective **project initiation documentation** contributes to reducing project risks and improving overall project performance.
- To develop a **theoretical analytical framework or case-based analysis** demonstrating the impact of project charter and scope definition on project outcomes.

Study Questions

Main Research Question

How do **project initiation practices**, specifically the preparation of the project charter and scope definition, influence **time and cost overruns** in construction projects?

Sub-Questions

- What is the role of the **project charter** in project initiation, authorization, and stakeholder alignment?
- How does **scope definition** influence project planning and execution processes?
- What are the impacts of **poorly defined project scope** on project time, cost, and overall performance?
- How can an effectively prepared **project charter** contribute to controlling project schedule and budget?
- To what extent does **proper scope management** reduce the risk of project delays and cost overruns?

Literature Review:

Numerous studies have investigated the causes of **time delays and cost overruns** in construction projects, with a strong emphasis on planning deficiencies and project definition.

A study by Sami A. Assaf and Sadi A. Al-Hejji (2006) aimed to identify the primary causes of delays in large construction projects in Saudi Arabia. The researchers adopted a **quantitative survey methodology**, collecting data from contractors, consultants, and project owners. The results indicated that **poor planning, unclear scope definition, and ineffective project management practices** were among the most critical factors contributing to project delays.

Similarly, Bent Flyvbjerg (2014) examined the causes of cost overruns in megaprojects through a **comparative analytical approach** based on international case studies. The study found that **inadequate front-end planning and weak initial project estimation** significantly contribute to both time and cost overruns, often driven by optimism bias and strategic misrepresentation.

In another study, John I. Alzahrani and Margaret W. Emsley (2013) investigated the impact of contractor-related factors on project success using a **post-construction evaluation methodology**. Their findings highlighted that **clear project definition, effective communication, and proper coordination among stakeholders** are key determinants of project performance.

Furthermore, Ghaleb Elawi et al. (2016) focused specifically on infrastructure projects in Saudi Arabia, using a **case study approach**. The study concluded that **poor decision-making during early project stages and lack of detailed project definition** significantly affect project schedules and costs.

From a broader project management perspective, Harold Kerzner (2022) emphasized that **project initiation documents**, including the project charter and scope statement, are critical for defining authority, responsibilities, and deliverables. The absence of these elements often leads to **scope creep, misalignment, and uncontrolled changes**, which negatively impact project outcomes.

Comparison and Critical Analysis

A comparison of the above studies reveals a strong consensus that **early-stage project planning and definition are critical determinants of project success**. Most studies (Assaf & Al-Hejji, 2006; Elawi et al., 2016) focus on identifying **causes of delays and overruns**, particularly within the Saudi construction sector. Others (Flyvbjerg, 2014) provide a **global perspective**, emphasizing systemic issues such as poor estimation and planning bias.

However, while these studies highlight the importance of planning and scope clarity, they generally address these factors in a **broad and fragmented manner**, without specifically

examining the structured role of **project initiation documents** such as the project charter and formal scope definition.

Research Gap

Based on the reviewed literature, it is evident that although significant research has been conducted on **project delays and cost overruns**, there is a **lack of focused studies that explicitly analyze the impact of project initiation practices particularly project charter development and detailed scope definition on project performance outcomes**.

Moreover, within the **Saudi construction sector**, most studies concentrate on identifying delay factors rather than providing a **systematic analytical linkage between initiation-phase practices and measurable project success indicators** such as time and cost control.

Contribution of the Study

This study seeks to fill this gap by developing a **focused analytical framework** that examines how **effective project charter preparation and scope definition** can contribute to reducing **time delays and cost overruns**. It provides both **theoretical insight and practical implications**, particularly relevant to improving project performance in the Saudi construction industry.

Theoretical premises of the study:

Independent Variables (IVs)

These are the *causal factors*:

1. Project Initiation Practices (PIP)

Includes:

- Project Charter quality
- Stakeholder identification effectiveness
- Initial feasibility clarity
- Governance clarity

2. Scope Definition Quality (SDQ)

Includes:

- Clarity of project scope
- Completeness of requirements
- Scope baseline stability
- Work Breakdown Structure (WBS) accuracy

Dependent Variables (DVs)

These are the *project outcomes*:

1. Time Overrun (TO)

- Delay beyond planned schedule
- Schedule deviation %

2. Cost Overrun (CO)

- Budget exceedance
- Cost variance %

Project Control Effectiveness (PCE)

- Change control efficiency
- Monitoring & reporting quality
- Baseline control discipline

Research Methodology:

1. Research Approach and Design

This study adopts a **quantitative research approach** supported by **secondary data analysis**. The purpose is to empirically examine the impact of project initiation practices and scope definition on time and cost overruns in construction projects in Saudi Arabia.

A **cross-sectional survey design** will be used to collect primary data from construction professionals, enabling statistical testing of the hypothesized relationships.

2. Data Collection Methods

Primary Data

Primary data will be collected using a **structured questionnaire** distributed to professionals in the Saudi construction sector, including:

- Project managers
- Site engineers
- Planning engineers
- Consultants and contractors

The questionnaire will be based on a **5-point Likert scale** to measure perceptions of:

- Project initiation practices
- Scope definition quality
- Project control effectiveness
- Time and cost overruns

Secondary Data

Secondary data will be used to support and validate the study through:

- Previous empirical studies on project overruns
- Industry reports in Saudi Arabia construction sector
- Standards and frameworks such as the A Guide to the Project Management Body of Knowledge

3. Study Variables and Measurement

Independent Variables (IVs)

- **Project Initiation Practices (PIP)**
- **Scope Definition Quality (SDQ)**

Dependent Variables (DVs)

- **Time Overrun (TO)**
- **Cost Overrun (CO)**

4. Hypothesis Structure

Main Hypothesis

H0: There is **no statistically significant relationship** between project initiation practices and scope definition and project performance (time and cost overruns) in construction projects in Saudi Arabia.

H1: There is a **statistically significant relationship** between project initiation practices and scope definition and project performance.

Sub-Hypotheses

Initiation → Performance

- **H01:** Project initiation practices have no statistically significant effect on time overruns.
- **H11:** Project initiation practices significantly affect time overruns.
- **H02:** Project initiation practices have no statistically significant effect on cost overruns.
- **H12:** Project initiation practices significantly affect cost overruns.

Scope → Performance

- **H03:** Scope definition has no statistically significant effect on time overruns.
- **H13:** Scope definition significantly affects time overruns.
- **H04:** Scope definition has no statistically significant effect on cost overruns.
- **H14:** Scope definition significantly affects cost overruns.

Study Tools:

This study will employ the following **analytical research tools**:

1. **Content Analysis**
Systematic analysis of literature from academic journals, project management textbooks, and the A Guide to the Project Management Body of Knowledge to identify key themes related to project charter development, scope definition, and their impact on project outcomes.
2. **Comparative Analysis**
Comparative evaluation of different project scenarios (well-defined scope vs. poorly defined scope) to examine variations in project performance, delays, and risks.
3. **Conceptual Analysis**
Interpretation of theoretical concepts and frameworks in project management to establish logical relationships between project initiation processes and project success factors.
4. **Theoretical Case Analysis**
Development and analysis of a conceptual case scenario to illustrate the practical implications of inadequate scope definition on project execution.

Field of Study:

Study Population

The population of this study consists of **project management knowledge areas and practices**, with a specific focus on:

- Project initiation and planning processes
- Project charter development
- Scope definition and scope management practices

The study covers concepts and frameworks derived from established project management standards, particularly the A Guide to the Project Management Body of Knowledge, as well as relevant academic literature across various industries.

Study Sample

Since this research adopts a **qualitative theoretical approach**, the sample is **non-statistical and purposively selected**, consisting of:

- A selection of **peer-reviewed academic journal articles** related to project failure and scope management
- Key **project management textbooks and references**
- Selected frameworks and guidelines issued by the Project Management Institute
- A **conceptual case scenario** developed to represent real-world project conditions

The sample is chosen based on its relevance to the research objectives and its ability to provide meaningful insights into the impact of scope definition on project success.

Sampling Technique

A **purposive (judgmental) sampling technique** is used, where sources are selected intentionally based on:

- Relevance to project charter and scope definition
- Academic credibility and reliability
- Contribution to identifying relationships between planning processes and project outcomes

References:

- Assaf, S. A., & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International Journal of Project Management*, 24(4), 349–357. <https://doi.org/10.1016/j.ijproman.2005.11.010>
- Assaf, S. A., Al-Khalil, M., & Al-Hazmi, M. (1995). Causes of delay in large building construction projects. *Journal of Management in Engineering*, 11(2), 45–50. [https://doi.org/10.1061/\(ASCE\)0742-597X\(1995\)11:2\(45\)](https://doi.org/10.1061/(ASCE)0742-597X(1995)11:2(45))
- Aljohani, A., Ahiaga-Dagbui, D., & Moore, D. (2017). Construction projects cost overrun: What does the literature tell us? *International Journal of Innovation, Management and Technology*, 8(2), 137–143. <https://doi.org/10.18178/ijimt.2017.8.2.717>
- Alzahrani, J. I., & Emsley, M. W. (2013). The impact of contractors' attributes on construction project success: A post construction evaluation. *International Journal of Project Management*, 31(2), 313–322. <https://doi.org/10.1016/j.ijproman.2012.06.006>
- Doloi, H., Sawhney, A., Iyer, K. C., & Rentala, S. (2012). Analysing factors affecting delays in Indian construction projects. *International Journal of Project Management*, 30(4), 479–489. <https://doi.org/10.1016/j.ijproman.2011.10.004>
- Elawi, G. S. A., Algahtany, M., & Kashiwagi, D. (2016). Owners' perspective of factors contributing to project delay: Case studies of road and bridge projects in Saudi Arabia. *Procedia Engineering*, 145, 1402–1409. <https://doi.org/10.1016/j.proeng.2016.04.176>
- Enshassi, A., Al-Najjar, J., & Kumaraswamy, M. (2009). Delays and cost overruns in the construction projects in the Gaza Strip. *Journal of Financial Management of Property and Construction*, 14(2), 126–151. <https://doi.org/10.1108/13664380910977592>
- Fallahnejad, M. H. (2013). Delay causes in Iran gas pipeline projects. *International Journal of Project Management*, 31(1), 136–146. <https://doi.org/10.1016/j.ijproman.2012.06.003>
- Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6–19. <https://doi.org/10.1002/pmj.21409>
- Flyvbjerg, B., Holm, M. S., & Buhl, S. (2002). Underestimating costs in public works projects: Error or lie? *Journal of the American Planning Association*, 68(3), 279–295.
- Kerzner, H. (2022). *Project management: A systems approach to planning, scheduling, and controlling* (13th ed.). Wiley.
- Mahamid, I. (2011). Risk matrix for factors affecting time delay in road construction projects: Owners' perspective. *Engineering, Construction and Architectural Management*, 18(6), 609–617.
- Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK® guide)* (7th ed.). Project Management Institute.