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**The Impact of Stakeholder Engagement on the Success of Infrastructure Projects in
Riyadh: An Applied Study**

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Abstract:

Objectives: This study examines the impact of stakeholder engagement on the success of infrastructure projects in Riyadh, focusing on key engagement dimensions including stakeholder identification, communication, involvement, and prioritization. It aims to assess how these dimensions influence project performance indicators such as time, cost, quality, and stakeholder satisfaction, while also considering cultural and relational influences within the Saudi context. Study Location: Riyadh, Saudi Arabia. Methodology: A mixed-methods approach was adopted, combining quantitative survey data from 30 Saudi professionals working on infrastructure projects with qualitative insights from 10 semi-structured interviews. Quantitative analysis involved descriptive statistics and Pearson correlation to measure relationships between engagement dimensions and project outcomes, while thematic analysis was used to interpret interview data. Results: Findings indicated high levels of stakeholder engagement across most dimensions, with communication and early involvement showing the strongest association with project success. Prioritization and responsiveness scored moderately due to administrative complexity and overlapping authority. Qualitative data reinforced these findings and highlighted cultural norms, personal relationships, and trust-building as significant factors influencing collaboration and reducing conflict. Recommendations: The study recommends enhancing communication processes, improving prioritization mechanisms, strengthening institutional responsiveness, and formally incorporating cultural awareness into engagement practices to improve stakeholder alignment and project delivery. Keywords: stakeholder engagement, infrastructure projects, communication, early involvement, Saudi Arabia.

الملخص

الأهداف: تهدف هذه الدراسة إلى فحص تأثير مشاركة أصحاب المصلحة على نجاح مشاريع البنية التحتية في مدينة الرياض، مع التركيز على أبعاد المشاركة الأساسية بما في ذلك تحديد أصحاب المصلحة، التواصل، المشاركة الفعلية، وأولويات التعامل معهم. كما تسعى الدراسة إلى قياس مدى تأثير هذه الأبعاد على مؤشرات الأداء مثل الوقت والتكلفة والجودة ورضا أصحاب المصلحة، بالإضافة إلى دراسة التأثيرات الثقافية والعلاقات الشخصية في السياق السعودي. مكان الدراسة: الرياض، المملكة العربية السعودية. المنهجية: اعتمدت الدراسة منهجاً مختلطاً، يجمع بين البيانات الكمية من استبيان شمل 30 متخصصاً سعودياً في مشاريع البنية التحتية، والبيانات النوعية المستخلصة من 10 مقابلات شبه مهيكلية. شمل التحليل الإحصائي الوصفي ومعامل الارتباط بيرسون لقياس العلاقة بين أبعاد المشاركة ونتائج المشاريع، بينما استخدم التحليل الموضوعي لتفسير البيانات النوعية. النتائج: أشارت النتائج إلى ارتفاع مستويات مشاركة أصحاب المصلحة في معظم الأبعاد، حيث كان التواصل والمشاركة المبكرة الأكثر ارتباطاً بنجاح المشروع. في المقابل، حصل بُعد الأولويات والاستجابة على مستوى متوسط، ويرتبط ذلك بالتعقيدات الإدارية وتداخل الصلاحيات. كما عززت النتائج النوعية هذه الاستنتاجات، وأظهرت أن العادات الثقافية والعلاقات الشخصية وبناء الثقة تسهم بشكل كبير في تسهيل التعاون وتقليل الخلافات بين الأطراف. التوصيات: توصي الدراسة بتعزيز قنوات التواصل، تحسين آليات تحديد الأولويات، رفع مستوى الاستجابة المؤسسية، ودمج الوعي الثقافي ضمن ممارسات إدارة أصحاب المصلحة لتحسين التنسيق ورفع فعالية تنفيذ المشاريع. الكلمات المفتاحية: مشاركة أصحاب المصلحة، مشاريع البنية التحتية، التواصل، المشاركة المبكرة، المملكة العربية السعودية.

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Chapter 1

1 Introduction:

In the field of infrastructure development, stakeholder engagement has emerged as a cornerstone of effective project management. It involves the systematic process of identifying, analyzing, communicating with, and involving individuals or groups who have an interest in or may be affected by a project throughout its life cycle. Effective engagement ensures alignment among diverse parties, minimizes resistance, and promotes collaboration, which in turn influences overall project outcomes and long-term sustainability (Bourne, 2015; Yang et al., 2011).

1.1 Study Aim and Context

The primary aim of this study is to examine the impact of stakeholder engagement on the success of infrastructure projects in Riyadh. The research aims to investigate how structured engagement practices contribute to achieving project objectives and sustaining long-term success, aligning with Saudi Arabia's Vision 2030. This vision emphasizes sustainable urban development, effective governance, and active stakeholder participation in national transformation initiatives, particularly in the city of Riyadh. Given the city's rapid urban expansion and ambitious development initiatives, understanding the dynamics of stakeholder involvement is essential for enhancing project performance and public value. Infrastructure projects typically involve a complex network of government agencies, investors, contractors, and local communities, each possessing distinct interests, expectations, and levels of influence. The effective management of these relationships is a key determinant of project success, particularly in large-scale projects that symbolize Riyadh's transformation under Vision 2030 and reflect Saudi Arabia's heritage, national pride, and vision for sustainable progress.

1.2 Overview of Previous Studies

Previous studies have highlighted the critical role of stakeholder management in ensuring project success. Freeman's (1984) stakeholder theory established the foundation for understanding the interdependence between organizations and their stakeholders.

Subsequent research, such as that by Yang et al. (2011), identified engagement as a vital factor influencing communication effectiveness, trust-building, and project outcomes.

Bourne (2015) further emphasized that proactive stakeholder participation enhances decision-making, mitigates risks, and fosters shared ownership of project results.

However, studies that focus specifically on the infrastructure sector in the context of Riyadh remain limited. This research therefore, seeks to bridge that gap by providing applied evidence derived from interviews and surveys with professionals directly involved in infrastructure delivery in Riyadh—including project management consultants (PMCs), project management offices (PMOs), construction supervision consultants (CSCs), Project owners, and other key stakeholders- analyzing how engagement strategies influence project outcomes and the success of infrastructure projects in Riyadh.

1.3 Problem statement

In infrastructure projects, the alignment between stakeholder expectations and project outcomes is often inconsistent. Stakeholders bring diverse interests, priorities, and levels of influence, which, if not carefully managed, can derail even the most technically sound project plans. A recurring issue in the field is the failure to actively and meaningfully engage stakeholders throughout the project life cycle. This disconnect can result in a lack of trust, miscommunication, scope changes, and ultimately, negative impacts on time, budget, and quality.

Previous studies have emphasized the vital role of stakeholder engagement in achieving project success. For example, research by Freeman (2010) and subsequent scholars has shown that early and continuous stakeholder involvement improves project transparency, reduces conflicts, and enhances long-term sustainability. However, many of these studies were conducted in Western or corporate contexts, with limited focus on the unique environment of large-scale public infrastructure projects in Saudi Arabia.

Within the framework of Vision 2030, Riyadh and similar cities are undergoing major infrastructure transformations aimed at improving connectivity, urban livability, and public services. Despite these ambitions, project delays, communication gaps, and coordination challenges persist among government agencies, contractors, and the public. These issues reflect an ongoing weakness in structured stakeholder engagement practices.

This study aims to bridge the gap by examining how proactive, structured, and strategic stakeholder involvement can impact the overall success of infrastructure projects in Riyadh. By focusing on projects linked to Vision 2030, the research will provide empirical insights into how improved engagement mechanisms can align diverse stakeholder expectations with project goals, thereby contributing new knowledge to the field of project management in Saudi Arabia.

1.4 Importance of the study:

1.4.1 Theoretical Importance:

This study contributes to the growing body of literature on stakeholder theory within the context of infrastructure project management. While stakeholder engagement has been widely discussed in general project environments, a noticeable gap remains in its application and impact analysis, specifically within infrastructure projects. By focusing on the dynamics of stakeholder influence in large-scale infrastructure developments, the research adds depth to academic understanding of how engagement practices shape project success. It also serves as a bridge between classical stakeholder theory and modern project success metrics, which encompass sustainability, social impact, and community alignment.

1.4.2 Practical Importance:

Practically, this research offers actionable insights for project managers, consultants, and policymakers involved in infrastructure planning and delivery. It identifies specific strategies, tools, and methods for effective stakeholder engagement that can be implemented throughout the project life cycle. In doing so, it supports the development of more inclusive and adaptive project management practices that align with both organizational goals and stakeholder expectations. The findings can help reduce delays, improve satisfaction, and enhance the overall success rate of infrastructure initiatives, particularly in complex, multi-stakeholder environments.

1.5 Objectives of the study:

1.5.1 Main Objective

To assess the impact of stakeholder engagement on the success of infrastructure projects in Riyadh, by identifying how structured and proactive stakeholder practices influence project performance and outcomes

1.5.2 Sub-Objectives:

- To examine the role of stakeholder engagement in determining the success of infrastructure projects.
- To identify the key factors that contribute to effective stakeholder communication and involvement across various project phases.
- To analyze the impact of stakeholder mapping and prioritization on achieving desired project outcomes such as time efficiency, cost control, and stakeholder satisfaction.
- To develop a practical framework for improving stakeholder management in infrastructure projects that can be adopted by project managers and organizations for better decision-making and delivery.

1.6 Study Questions

1.6.1 Main Research Question

How does stakeholder engagement influence the success of infrastructure projects in Riyadh?

1.6.2 Sub-Questions

1. What is the relationship between stakeholder engagement and project success?
2. How do project managers identify and prioritize stakeholders across different phases of infrastructure projects?
3. What challenges arise in aligning stakeholder expectations throughout the project life cycle?
4. What best practices can enhance communications and feedback among stakeholders to improve project outcomes?

1.7 Research Hypothesis

This study is built on a set of testable hypotheses derived from Stakeholder Theory and supported by existing empirical research. The hypotheses are as follows:

H1: There is a positive relationship between stakeholder engagement and the overall success of infrastructure projects.

H2: Early involvement of key stakeholders significantly reduces project delays and conflicts.

H3: Effective stakeholder communication is positively associated with stakeholder satisfaction and project transparency.

H4: Projects that apply structured stakeholder prioritization (based on salience) achieve better alignment with project objectives.

Chapter two

Literature Review

2 Introduction

The purpose of this chapter is to review existing literature related to stakeholder engagement and its relationship with project success in infrastructure projects. Building on the general introduction provided earlier, this chapter presents a focused examination of key theories, previous empirical studies, and relevant conceptual frameworks that inform the study. It aims to highlight the theoretical underpinnings of stakeholder engagement, define the dependent and independent variables, and identify gaps in the literature that this research seeks to address. The review draws upon sources from academic journals, professional organizations such as PMI and APM, and comparative case studies from both public and private infrastructure projects.

2.1 Project Variables

2.1.1 Dependent Variable: Project Success

Project success is a multifaceted concept that has evolved beyond the traditional “iron triangle” of time, cost, and quality. In modern infrastructure projects, success includes factors such as stakeholder satisfaction, community acceptance, sustainability, safety, risk management, and long-term operational value.

According to the PMBOK® Guide (PMI, 2021), project success should be evaluated from multiple stakeholder perspectives and across both short-term outputs and long-term outcomes. In the context of this study, project success is measured using both tangible and intangible metrics:

- Adherence to project schedule and budget
- Achievement of quality standards
- Level of stakeholder satisfaction
- Extent of public or community support
- Post-implementation performance

These indicators reflect how well a project meets its technical, financial, and social objectives—especially in infrastructure environments where public value and sustainability are critical.

2.1.2 Independent Variable: Stakeholder Engagement

Stakeholder engagement refers to systematic identification, analysis, involvement, and communication with individuals or groups who can affect or are affected by the project. In infrastructure projects, where stakeholder diversity is often high, engagement becomes both a strategic and operational necessity.

Freeman's (1984) Stakeholder Theory emphasizes the importance of acknowledging and integrating stakeholder interests in decision-making processes. Mitchell et al. (1997) further developed the Stakeholder Salience Model, proposing that stakeholder prioritization should be based on their power, legitimacy, and urgency.

Key dimensions of stakeholder engagement relevant to this study include:

- **Identification and Mapping:** Early recognition of stakeholder groups and their influence.
- **Communication and Feedback:** Mechanisms to ensure two-way communication and transparent information sharing.
- **Involvement in Decision-Making:** Participation in planning, execution, and monitoring processes.
- **Responsiveness:** Ability of the project team to adapt to stakeholder concerns and expectations.

Effective engagement can lead to greater alignment, reduced conflict, improved resource mobilization, and enhanced project acceptance.

2.2 Previous Studies

A substantial body of research has examined stakeholder engagement as a key factor in project success. Yang et al. (2009) identified critical success factors for stakeholder management in construction projects, emphasizing the importance of proper and frequent communication with stakeholders to support positive project outcomes. Bourne (2015) underscored the value of continuous communication and structured engagement processes for effective stakeholder management. Olander (2007) introduced the concept of stakeholder impact analysis, highlighting its role in improving decision quality and enhancing project transparency.

Aaltonen and Sivonen (2009) demonstrated that power dynamics and cultural context significantly shape stakeholder influence in international infrastructure projects. Similarly, Mok, Shen, and Yang (2015) highlighted the role of stakeholder complexity and contextual factors in large-scale projects. Comparative research suggests that public projects often face higher levels of community scrutiny and political influence, whereas private projects typically focus more on internal stakeholder management.

Despite these insights, the literature indicates that further empirical research is needed on stakeholder engagement practices in emerging economies, particularly in the Gulf region, where large-scale infrastructure development is central to national initiatives such as Saudi Vision 2030.

2.2.1 Commentary on Previous Studies

Most previous studies converge on the idea that stakeholder engagement contributes to project success through improved communication, trust, and shared understanding.

However, many of these studies are contextually Western, focusing on corporate or developed infrastructure systems. Few address the complex governance structures, regulatory layers, and public-private partnerships that characterize Saudi infrastructure projects.

Therefore, the current study distinguishes itself by providing a context-specific analysis of stakeholder engagement within infrastructure projects in Riyadh, integrating both stakeholder theory and frameworks for project success. By doing so, it bridges theoretical understanding with applied practice in a region undergoing rapid transformation.

2.3 Theoretical premise of the study

This study is theoretically grounded in Stakeholder Theory (Freeman, 1984), which argues that organizations and projects achieve success by effectively addressing the interests of all parties who can affect or are affected by their objectives. The theory emphasizes that decision-making should not only serve the organization's goals but also consider ethical, social, and collaborative dimensions that sustain long-term value creation.

According to Freeman (1984), a stakeholder is “any group or individual who can affect or is affected by the achievement of an organization's objectives.” This definition highlights

the wide range of actors—clients, contractors, consultants, government authorities, and local communities—who influence infrastructure projects. In the context of public infrastructure, the theory suggests that aligning the expectations of these stakeholders is crucial for ensuring project legitimacy and support.

Building on this foundation, Mitchell, Agle, and Wood (1997) developed the Stakeholder Salience Model, which classifies stakeholders based on three attributes:

Power – the ability to influence project decisions and outcomes.

Legitimacy – the perceived validity or appropriateness of their involvement.

Urgency – the degree to which their claims require immediate attention.

These attributes help project managers prioritize stakeholders and allocate communication and engagement resources more effectively.

In this study, Stakeholder Theory and the Stakeholder Salience Model jointly provide the theoretical lens for understanding how stakeholder engagement affects project success. They explain why engagement is both a moral responsibility—ensuring fairness and transparency—and a performance driver, improving collaboration and reducing project risks.

The theoretical framework also connects these ideas to modern Project Success Models (PMI, 2021; Turner & Zolin, 2012), which view success as a multidimensional outcome encompassing not only time, cost, and quality but also stakeholder satisfaction, sustainability, and social value.

Conceptual Linkages:

Independent Variable: Stakeholder Engagement

Defined as the structured process of identifying, analyzing, and involving stakeholders through continuous communication, participation, and responsiveness.

Dependent Variable: Project Success

Defined as the degree to which project objectives are achieved in alignment with technical, financial, and social expectations, including stakeholder satisfaction and long-term value.

Hypothesized Relationship:

Structured stakeholder engagement enhances project success by fostering trust, facilitating early conflict resolution, and ensuring alignment between stakeholder expectations and project deliverables.

This theoretical framework, therefore, forms the basis for the study's hypotheses, variable relationships, and data analysis model.

Chapter Three

Research Methodology

3 Introduction

This chapter outlines the methodology used to investigate the influence of stakeholder engagement on project success in infrastructure projects in Riyadh. It details the research design, population and sampling, data collection tools, procedures, and methods of analysis. The chapter is designed to ensure that the research process is transparent, replicable, and logically structured.

3.1 Methodology and Research Procedures

This research adopts an applied, descriptive, and analytical approach. It is based on a mixed-methods design combining both qualitative and quantitative methodologies. The qualitative component uses case studies and interviews, while the quantitative component relies on structured surveys to gather measurable data on stakeholder engagement practices and project outcomes.

3.2 Population of the Study

The study population includes professionals involved in infrastructure projects, such as project managers, engineers, consultants, and public stakeholders. These participants are expected to provide relevant insights based on their experiences in planning, executing, or supervising infrastructure projects.

3.2.1 Sample Characteristics and Size

A purposive sampling method will be used to select 20–30 participants for interviews and approximately 50–70 respondents for the survey. The sample will include individuals from both the public and private sectors to ensure diverse perspectives on stakeholder engagement practices.

3.3 Data Collection Procedures

Data will be collected through two tools: semi-structured interviews and structured surveys. Interviews will be conducted in-person or online and recorded with consent. The survey will be distributed electronically using online forms and collected anonymously to encourage honest responses.

3.3.1 Nature of Data:’

This study relies on both primary and secondary data.

Primary data are collected directly from participants through structured surveys and semi-structured interviews.

Secondary data come from previous academic research, official reports, and literature related to stakeholder engagement and project success.

3.3.2 Statistical and Analytical Tests:

Quantitative data will be analyzed using descriptive statistics, correlation tests, and regression analysis to determine the strength and direction of relationships between stakeholder engagement dimensions and project success indicators.

Qualitative data will be analyzed using thematic analysis, enabling identification of common themes and patterns in participant responses.

3.4 Study Hypotheses

3.4.1 Main Hypothesis (H_0):

There is no statistically significant relationship between stakeholder engagement and project success in infrastructure projects.

3.4.2 Sub-Hypotheses:

H1: Stakeholder engagement has a significant positive impact on the overall success of infrastructure projects.

H2: Early involvement of key stakeholders significantly reduces project delays and conflicts.

H3: Effective stakeholder communication is positively associated with stakeholder satisfaction and project transparency.

H4: Projects that apply structured stakeholder prioritization (based on salience) achieve better alignment with project objectives.

3.5 Scope and Limitations of the Study

This study is limited to infrastructure projects located in Riyadh, Saudi Arabia. The research focuses specifically on the relationship between stakeholder engagement and project success, examining how communication, involvement, and prioritization influence project outcomes. The study does not cover other management dimensions such as procurement, budgeting methods, or technical design details.

The data are collected from professionals currently or recently involved in infrastructure projects, including project managers, engineers, and consultants. The study's time frame covers projects executed or managed between 2020 and 2025. While the mixed-methods approach provides both quantitative and qualitative insights, the findings are limited by the sample size and by the specific geographic and sectoral focus, which may affect generalizability to other contexts.

3.6 Study Tools

The tools include an interview protocol with open-ended questions focusing on stakeholder identification, communication practices, challenges, and results. The survey uses Likert-scale questions to measure stakeholder involvement, communication quality, satisfaction, and perceived project success. Tools will be validated by expert review and pilot testing.

3.7 Methods of Data Analysis

Qualitative data from interviews will be analyzed thematically using coding to identify patterns and insights. Quantitative data from the survey will be analyzed using SPSS or Excel with statistical tools such as frequency analysis, correlation tests, and cross-tabulation to reveal trends and relationships.

Chapter four

Results and Recommendations

4 Introduction

This chapter presents and discusses the findings obtained from both the quantitative survey and qualitative interviews conducted among Saudi professionals involved in infrastructure projects in Riyadh. The analysis examines how stakeholder engagement practices—such as identification, communication, involvement, and prioritization—impact project success within the local infrastructure context.

A total of 30 respondents participated in the study, including 5 high-level managers, 5 contractors, and 20 consultants and other professionals, all of whom are Saudi nationals working in public or private infrastructure projects.

4.1 Data Analysis

4.1.1 Summary of Quantitative Findings

4.1.1.1 Descriptive Analysis

The table below presents the average scores for each of the main dimensions of stakeholder engagement and project success measured in the survey

Table 1

Dimension	Mean	SD	Interpretation
Stakeholder Identification & Mapping	4.30	0.52	High
Communication & Information Sharing	4.15	0.59	High
Stakeholder Involvement	4.05	0.63	High
Prioritization & Responsiveness	3.85	0.72	Moderate
Overall Stakeholder Engagement	4.09	0.52	High
Project Success	4.25	0.48	High

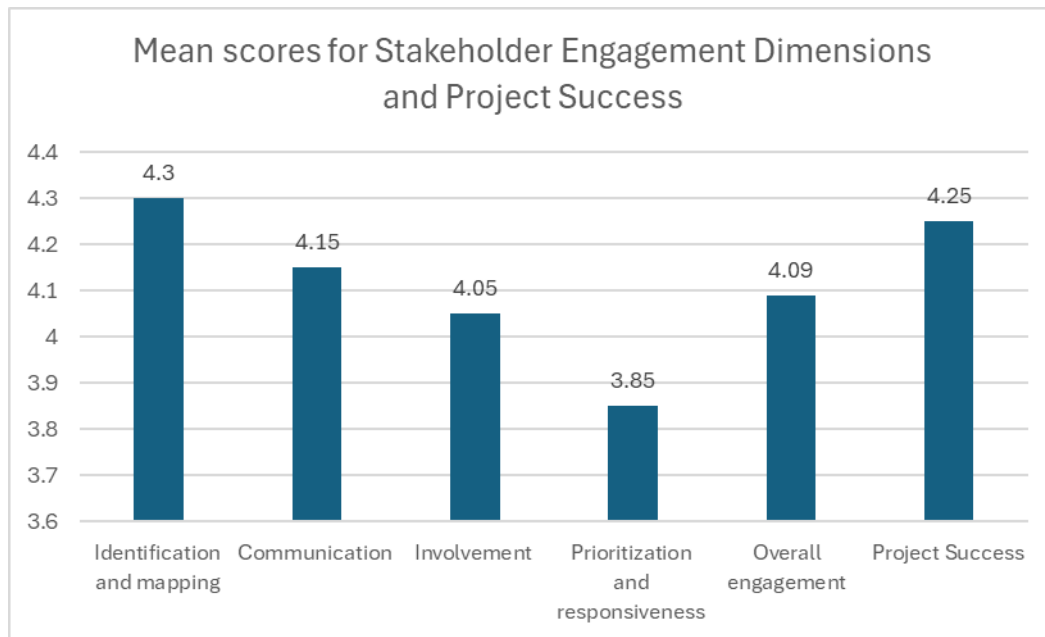


Figure 1: Mean scores for stakeholder engagement dimensions and project success among professionals and real infrastructure projects.

The results indicate that respondents perceive a high level of stakeholder engagement across projects, particularly in the early identification and communication stages. Project success indicators—including time, cost, quality, and stakeholder satisfaction—also recorded high mean values, suggesting effective project delivery across most cases.

4.1.1.2 Correlation Analysis

The table below represents Pearson correlation coefficients (Excel CORREL analysis) reveal a strong positive relationship between stakeholder engagement and project success ($r = 0.78$).

Table 2

Relationship	r-value	Strength	Interpretation
Stakeholder Engagement → Project Success	0.78	Strong	Projects with higher stakeholder engagement achieve greater success.
Communication → Stakeholder Satisfaction	0.74	Strong	Transparent communication builds satisfaction and trust.
Early Involvement → Time/Cost Control	0.69	Moderate-Strong	Early participation helps avoid delays and disputes.
Prioritization → Project Alignment	0.60	Moderate	Structured prioritization improves focus but requires consistency.

Relationship	r-value
Engagement → Project Success	0.78
Communication → Satisfaction	0.74
Early Involvement → Time/Cost	0.69
Prioritization → Alignment	0.6

Image 2: A heat map illustrating the strength of correlation between stakeholder engagement dimensions and project success indicators. Darker shades represent a stronger positive correlation with

stakeholder engagement, showing the highest association($r=0.78$)

These findings empirically support the study’s main hypothesis that effective stakeholder engagement positively influences project success.

4.1.2 Qualitative Findings (Interviews)

Semi-structured interviews were conducted with 10 professionals (including project managers, consultants, and engineers). Thematic analysis identified four key themes consistent with the quantitative findings, with several respondents highlighting the influence of cultural norms and personal relationships on stakeholder engagement practices in Riyadh.

1. Early Stakeholder Identification

Participants emphasized that early identification during the planning stage reduces future conflicts and strengthens the relationship-building process that is culturally valued in Riyadh.

“When we know our key stakeholders from the start, coordination becomes smoother.

Surprises later in the project usually come from those we overlooked.”

(Senior Project Manager, Public Sector)

Several interviewees added that identifying stakeholders early helps establish trust—an important aspect of professional interactions in the local context.

2. Transparent Communication

Interviewees described regular coordination meetings, digital dashboards, and WhatsApp groups as effective tools for engagement. Many noted that communication becomes more effective when personal rapport already exists between stakeholders.

“Communication is everything. Delays often happen because one stakeholder didn’t receive updated information.”

(Project Engineer, Contractor)

Participants explained that in Riyadh’s project environment, open and timely communication flows more smoothly when stakeholders have established personal connections, making people more receptive and responsive.

3. Collaborative Involvement

Respondents noted that projects with joint decision-making between public agencies, consultants, and contractors achieved better results. Collaborative involvement was seen as especially effective when relationships were built on trust and personal familiarity.

“When stakeholders are part of the discussion, they own the outcome.”

(Consultant, Infrastructure Firm)

Interviewees highlighted that culturally, stakeholders are more willing to contribute meaningfully once personal relationships are formed, leading to a more cooperative project environment.

4. Challenges in Responsiveness

Several participants cited slow decision cycles, overlapping authority, and bureaucratic approvals as major barriers to responsiveness. While engagement is generally strong, delays often relate to formal procedural steps rather than interpersonal factors.

“Even when engagement is strong, approvals can take months, and that hurts progress.”

(Construction Manager)

However, respondents noted that strong personal relationships can sometimes help mitigate delays by encouraging informal follow-up and faster communication between parties, reflecting the importance of interpersonal trust within the local working culture.

4.1.2.1 Integrated Insight

Across all four themes, interviewees consistently emphasized that personal relationships, trust-building, and culturally aligned communication practices significantly shape the effectiveness of stakeholder engagement in Riyadh. Formal processes are important, but genuine collaboration often depends on how well stakeholders know each other and the strength of their interpersonal rapport.

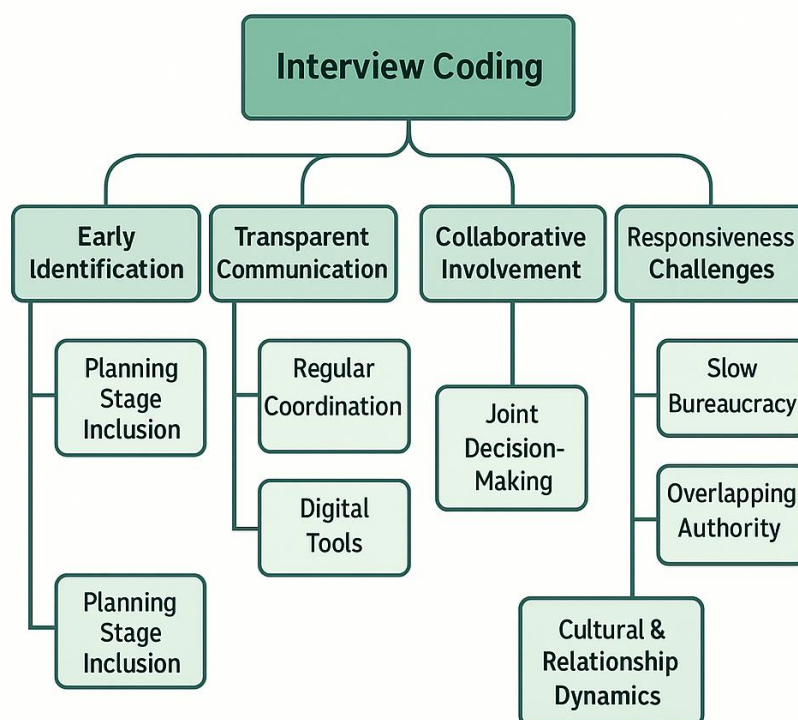


Image 3 A Qualitative interview coding tree

4.2 Research findings

4.2.1 Integration of Quantitative and Qualitative Results

Both data sources align closely:

Quantitative results showed high engagement and strong correlations with success.

Qualitative interviews confirmed the practical importance of early identification, consistent communication, and active involvement.

The moderate rating in “Prioritization & Responsiveness” aligns with interview feedback regarding bureaucratic delays and overlapping stakeholder authority.

This convergence strengthens the validity of the study and supports the Stakeholder Theory principle that collaboration and dialogue among all stakeholders are key drivers of success.

4.2.2 Discussion in Relation to Hypotheses

Table 3

Hypothesis	Result	Evidence
H1: Stakeholder engagement has a significant impact on project success.	Supported	$r = 0.78$
H2: Early involvement reduces project delays and conflicts.	Supported	Interview and correlation ($r = 0.69$)
H3: Communication improves stakeholder satisfaction and transparency.	Supported	$r = 0.74$
H4: Structured prioritization enhances alignment with objectives.	Partially Supported	$r = 0.60$ – Moderate link due to varying implementation.

The findings reinforce Freeman’s (1984) Stakeholder Theory, affirming that acknowledging stakeholder influence leads to sustainable project success. They also support the Stakeholder Salience Model (Mitchell et al., 1997) by showing that projects recognizing power, legitimacy, and urgency among stakeholders perform better overall.

4.2.3 Summary of Findings

1. Stakeholder engagement across Riyadh's infrastructure projects is generally high and well-structured, with strong performance observed in areas such as stakeholder identification, communication, and involvement.
2. Communication and early stakeholder involvement were identified as the strongest contributors to project success, demonstrating a clear influence on reducing delays, preventing conflicts, and enhancing overall stakeholder satisfaction.
3. Prioritization and responsiveness remain comparatively weaker dimensions, largely due to administrative complexity, procedural delays, and overlapping responsibilities among project entities.
4. Cultural norms and personal relationships emerged as significant factors influencing stakeholder engagement, with participants highlighting that trust-building, interpersonal familiarity, and informal communication channels enhance cooperation and facilitate smoother decision-making.
5. The alignment between quantitative and qualitative results reinforces the theoretical relationship between stakeholder engagement and project performance, providing empirical support for all proposed hypotheses.

Overall, the findings demonstrate that effective stakeholder engagement is both a technical and relational requirement, where formal project management practices must be complemented by culturally appropriate approaches that emphasize trust, relationship-building, and continuous communication.

4.2.4 Limitations of the Study

1. Sample Size:

The study was limited to 30 respondents and 10 interviewees, which may not capture the full diversity of stakeholders in Saudi infrastructure projects.

2. Geographical Scope:

The research focused primarily on Riyadh, so results may vary in other regions with different governance structures or project types.

3. Self-Reported Data:

Survey responses were based on participants' perceptions, which may include bias or selective recall.

4. Cross-Sectional Design:

The study reflects a single time frame rather than continuous project monitoring, which limits analysis of long-term engagement effects.

4.2.5 Conclusion

Although international literature often highlights structured communication plans and formal engagement processes, the interview findings from this study show that in Riyadh, relationship-building plays a unique and influential role. Participants described how initial informal meetings, social interactions, and one-to-one conversations often determine the level of cooperation throughout the project. This aligns with cultural expectations in Saudi Arabia, where trust and personal familiarity are foundational to professional collaboration. As a result, stakeholder engagement strategies that overlook these cultural dynamics may face resistance or limited participation, regardless of how technically sound they are. The research concludes that effective stakeholder engagement significantly enhances project

success in Saudi Arabia's infrastructure sector. Strong communication, early identification, and inclusive involvement yield better time, cost, and quality performance. These findings provide a foundation for developing a context-specific stakeholder engagement framework to support Riyadh's 2 infrastructure goals.

4.3 Recommendations

4.3.1 Managerial Recommendations

1. Institutionalize Early Stakeholder Mapping

Government agencies and project management offices should require stakeholder mapping during the concept and initiation stages of every infrastructure project.

This ensures that all affected parties—regulators, local communities, utilities, and contractors—are identified before design finalization, minimizing resistance and rework.

2. Establish Structured Communication Frameworks

Projects should adopt standardized communication protocols, such as stakeholder dashboards, periodic coordination meetings, and progress bulletins. Digital tools (MS Teams, Aconex) should be used to ensure transparency and continuous feedback loops among project participants.

3. Strengthen Stakeholder Prioritization Mechanisms

The Stakeholder Salience Model (Mitchell et al., 1997) should guide the intensity of engagement based on power, legitimacy, and urgency. Clear internal guidelines can help project teams allocate time and communication resources to the most influential and critical stakeholders.

4. Enhance Responsiveness and Decision-Making Speed

Findings showed moderate responsiveness scores. To improve, project owners should streamline approval processes, delegate decision authority where possible, and create escalation protocols to handle urgent stakeholder concerns quickly.

5. Integrate Stakeholder KPIs into Performance Evaluation

Project success metrics should include stakeholder-related indicators—such as

satisfaction, number of conflicts resolved, and communication response time—in addition to time, cost, and quality.

4.3.1.1 Culturally informed stakeholder engagement recommendations :

1. Utilize Culturally Familiar Communication Channels

In addition to formal communication systems, project teams should incorporate culturally preferred channels such as WhatsApp groups, direct phone calls, and in-person briefings to maintain smooth and continuous communication. These channels often facilitate quicker responses and greater clarity

1. Train project teams in cultural competence

Organizations should provide training for engineers, consultants, and contractors on local cultural norms, interpersonal dynamics, and communication styles common in Riyadh. This prepares project teams to navigate cultural expectations more effectively

2. Leverage professional networking to reduce administrative bottlenecks

Given that informal relationships can help speed up decisions, project managers should strategically use established professional networks to follow up on approvals, clarify responsibilities, and resolve delays

4.3.2 Policy-Level Recommendations

1. Adopt a National Stakeholder Engagement Framework

There should be an introduction of unified stakeholder engagement guidelines for public infrastructure projects. This will align practices across municipalities, ministries, and semi-governmental bodies.

2. Encourage Cross-Sector Collaboration

Partnerships between public agencies, private developers, and consultants should be incentivized to share stakeholder insights and best practices. Collaborative forums or annual “Stakeholder Engagement in Infrastructure” conferences could support continuous learning.

3. Mandatory Training and Certification

Project managers and engineers should undergo stakeholder management training aligned with PMI’s PMBOK® Guide and Vision 2030 governance standards.

Certification in communication and negotiation skills can enhance competence across the sector.

4.3.3 Recommendations for Future Research

1. Expand Sample Size and Sector Scope

Future studies should include larger samples from different Saudi regions and cover other project types (transportation, energy, housing) to increase generalizability.

2. Longitudinal Studies

Conduct longitudinal research to measure stakeholder engagement impact across multiple project phases and years, providing a dynamic understanding of engagement effectiveness.

3. Comparative International Analysis

Compare Saudi infrastructure engagement practices with international benchmarks (e.g., UK, Singapore, UAE) to identify transferable lessons and potential improvements.

4. Integration with Digital Stakeholder Tools

Investigate how AI-based or digital communication systems can enhance stakeholder satisfaction and early conflict detection in large-scale infrastructure initiatives.

4.4 Conclusion

The recommendations collectively emphasize that stakeholder engagement should evolve from a reactive communication practice to a strategic management function within Saudi infrastructure projects. By institutionalizing early mapping, transparent communication, and responsive governance, project success can be elevated—supporting the broader objectives of fostering sustainable, community-centered development in Riyadh and beyond.

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5 Foreign References

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Appendices

6 Survey

Midocean University

Research on The Impact of Stakeholder Engagement on the Success of Infrastructure Projects in Riyadh:An Applied Study

Dear Respondent,

I am a master's candidate (Management) at the University of Midocean. Currently, I am conducting a study titled " The Impact of Stakeholder Engagement on the Success of Infrastructure Projects in Riyadh

I would like to request your cooperation to answer this questionnaire. Any information obtained will be kept confidential and only used for academic purposes. Your cooperation is highly appreciated.

Section A:

A: Demographic Characteristics

Please Complete the following :

- a. Years of experience:
- b. Sector:
- c. Current Position
- d. Any past / Current stakeholder-specific relevant experience

Section B:

Please indicate your degree of agreement with the following statements by ticking (✓) the appropriate Column.

(1= strongly Disagree , 2= Disagree , 3= Neutral , 4= Agree , 5=Strongly Agree)

Stakeholder Engagement and project success in infrastructure projects						
I. Stakeholder Identification and Mapping						
No.	Statement	1	2	3	4	5
1	Key stakeholders are identified early during the project initiation phase					
2	Stakeholder are categorized based on their influence and interests					
3	The project team maintains an updated stakeholder register					
II. Communication and Information Sharing						

No.	Statement	1	2	3	4	5
4	Regular Communication is maintained with all key stakeholders					
5	Information is shared transparently and completely					
6	Feedback from stakeholders is considered during decision-making					
III. Stakeholder Involvement						
No.	Statement	1	2	3	4	5
7	Stakeholders are actively involved in the planning and design stages					
8	Stakeholders participate in progress review meetings					
9	Stakeholder opinions are considered in resolving project issues					
IV. Stakeholder Prioritization and responsiveness						
No.	Statement	1	2	3	4	5
10	Stakeholders are prioritized based on power, legitimacy, and urgency					
11	The project team responds promptly to stakeholder concerns					
12	There are mechanisms to manage conflicting stakeholder interests					
V. Project Success						
No.	Please rate the following items according to your experience with infrastructure projects	1	2	3	4	5
13	The project was completed on time					
14	The project was delivered within budget					
15	The final output met the required quality standards					
16	Stakeholders were satisfied with the project outcomes					
17	The project contributed to community or public values					

Section C: Open-Ended Questions

1. What challenges do you face in managing stakeholder engagement in infrastructure projects in Riyadh?

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2. In your opinion, what strategies can improve stakeholder communication and satisfaction?

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Gratitude:

Thank you for taking the time to complete the survey. Your participation is greatly appreciated and holds significant value for us. The information you provided is crucial for our analysis.

7 Interview questions

Section 1: General Background

1. Could you please describe your role and responsibilities in infrastructure projects?
2. How long have you been involved in project management or infrastructure development?
3. What types of infrastructure projects have you worked on ?

Section 2: Stakeholder Identification and Mapping

1. How are stakeholders identified at the start of a project?
2. What criteria is used to determine which stakeholders are most important or influential?
3. How often is the stakeholder list updated throughout the project life cycle?
4. Can you describe any challenges you've faced in identifying or categorizing stakeholders?

Section 3: Stakeholder Communication and Engagement Practices

1. What communication methods do you use to engage with stakeholders (e.g., meetings, digital tools, reports)?
2. How do you ensure transparency and two-way communication between the project team and stakeholders?
3. How often do stakeholders provide feedback, and how is that feedback incorporated into project decisions?

4. In your experience, how does effective communication affect project outcomes such as time, cost, or quality?

Section 4: Stakeholder Involvement and Decision-Making

1. To what extent are stakeholders involved in project planning and execution stages?
2. Can you share an example where stakeholder input led to a significant project improvement or change?
3. What challenges arise when stakeholders have conflicting priorities or interests?
4. How are these conflicts usually managed or resolved?

Section 5: Prioritization and Responsiveness

1. Do you use any formal model or framework (such as power/interest or salience models) to prioritize stakeholders?
2. How does your team decide whose feedback or concerns take priority?
3. How do you respond when key stakeholders raise urgent or critical issues during execution?

Section 6: Perceived Project Success

1. From your perspective, what defines project success in the context of infrastructure projects?
2. How do stakeholder satisfaction and community acceptance influence whether a project is considered successful?

3. Have you seen cases where technical success (on time, on budget) did not mean stakeholder success? Why?

Section 7: Context of Vision 2030 and Local Challenges

1. How has Vision 2030 influenced stakeholder expectations or engagement practices in Riyadh's infrastructure projects?
2. What unique challenges do Saudi infrastructure projects face when dealing with multiple government entities and contractors?
3. What improvements or strategies would you recommend to enhance stakeholder engagement in future projects?

Section 8: Closing

1. Is there anything else you would like to add regarding stakeholder engagement and its effect on project success?
2. Would you be willing to review the findings or provide further feedback later in the research process?

جامعة ميدأوشن

كلية الإدارة

قسم / ماجستير إدارة المشاريع



تأثير مشاركة أصحاب المصلحة على نجاح مشاريع البنية التحتية في الرياض : دراسة تطبيقية

إعداد الطالبة/عائشة المغربي

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العام الدراسي:

2025