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Faculty of Management
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Improving industrial project management in Jeddah city using total quality management principles

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Graduation Project – 1

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1. Chapter 1: Introduction

1.1. Research Background

Industrial projects in Jeddah City face significant management challenges, manifested in cost overruns, delayed delivery schedules, and low-quality final outputs. These problems stem from poor planning, inefficient resource allocation, and weak coordination between different departments. These challenges undermine the competitiveness of the industrial sector in Jeddah, necessitating a search for systematic and radical solutions to improve the efficiency and effectiveness of managing these projects.

Several previous studies have indicated the effectiveness of Total Management principles in improving project performance. For example, a study (Al-Omari, 2020) confirmed that applying the Total Management methodology contributed to a 15% reduction in costs in construction projects. Meanwhile, a study (Al-Salmi, 2021) indicated a noticeable improvement in product quality and customer satisfaction after integrating Total Quality Management principles. However, most of these studies focused on the service sector or general construction, with a clear scarcity of application to the specific industrial environment of Jeddah City.

The main gap lies in the scarcity of research that integrates Total Management principles with the industrial projects sector in Jeddah City specifically. There is a lack of sufficient studies that provide a clear applied model for local managers to rely on, considering the unique characteristics, competitive environment, and

regulatory context of the city. This creates an urgent need for research to fill this gap.

This research primarily targets managers of industrial projects, development planners in Jeddah Municipality and the Royal Commission for Jeddah City, and academic researchers in the field of industrial management. This problem is critically important because the success of industrial projects is the cornerstone of the city's economic vision. Improving their management means enhancing efficiency, attracting investments, and directly contributing to achieving the goals of "Saudi Vision 2030" related to the development of the industrial sector.

This research aims to propose a model for improving the management of industrial projects in Jeddah City through the application of Total Management principles. The model will seek to address current deficiencies in planning, implementation, and monitoring, with the goal of maximizing the use of available resources and ensuring project completion within specified budgets, timelines, and required quality standards.

1.2. Research Problem

While Total Management principles are widely recognized for enhancing organizational performance, their specific application and effectiveness in addressing the unique challenges of industrial project management in Jeddah remain unclear and underexplored. The existing literature often discusses these principles in isolation or within different industrial contexts, failing to provide a comprehensive framework tailored to the specific socio-economic, regulatory, and operational landscape of Jeddah's industrial sector. This section outlines the specific theoretical and practical gaps that this research seeks to address.

1.2.1. Theoretical Gaps

The primary theoretical gap lies in the lack of an integrated conceptual framework that adapts Total Management principles to the context of industrial project management in a major Saudi urban center like Jeddah. Existing models are often generalized and do not account for the unique interplay of local supply chain dynamics, regulatory environments, and cultural factors that influence project execution in this specific region. Furthermore, there is a scarcity of empirical studies that test the applicability and relative importance of various Total Management components such as total quality, total cost management, and human resource integration within the Jeddah industrial project ecosystem.

1.2.2. Practical Gaps

On a practical level, a significant gap exists between the recognized potential of Total Management and its on-the-ground implementation in Jeddah's industrial firms. Many organizations face substantial barriers, including a lack of standardized procedural guides, resistance to cultural and organizational change, and insufficient technical skills among project teams to effectively deploy these principles. This implementation deficit often leads to persistent issues such as cost overruns, scheduling delays, and quality shortfalls, highlighting a critical need for a practical, actionable model that local managers can adopt.

Therefore, the research question is How can Total Management principles be effectively applied to improve the performance of industrial project management in Jeddah City?

1.3. Research Significance

This study is significant for its potential to contribute new knowledge both theoretically, by advancing academic discourse, and practically, by providing actionable insights for industry practitioners.

1.3.1. At the theoretical level

This research will contribute to the body of knowledge by developing and proposing a contextualized theoretical model for applying Total Management in industrial project settings. It addresses a clear gap in the literature by focusing specifically on the unique variables present in the Jeddah context, thereby enriching the academic fields of project management and industrial engineering. The findings can serve as a foundational reference for future research on modern management practices in similar urban industrial environments in the Gulf region.

1.3.2. At the practical level

The practical significance of this study lies in its direct value to stakeholders in Jeddah's industrial sector. It will provide project managers and company executives with a clear, structured framework for implementing Total Management principles to achieve tangible improvements in cost control, timely delivery, and quality standards. Furthermore, the findings can inform policymakers and development agencies, such as the Jeddah Chamber of Commerce and Industry, in designing targeted training programs and

supportive policies that foster excellence and competitiveness in the local industrial landscape.

1.4. Research Questions

- How are TQM principles currently applied in industrial project management in Jeddah City?
- What challenges do industrial organizations in Jeddah face in implementing TQM?
- How do TQM practices influence cost, time, and quality performance in industrial projects?
- What contextual factors affect the successful adoption of TQM in Jeddah's industrial sector?
- What model can be proposed to guide the effective integration of TQM into industrial project management?

1.5. Research Objectives

- To examine the current application of TQM principles in industrial projects in Jeddah.

- To identify the key challenges that hinder TQM implementation.
- To analyze the impact of TQM on cost, time, and quality performance.
- To assess organizational and environmental factors influencing TQM adoption.
- To propose a practical model for integrating TQM into industrial project management in Jeddah City.

1.6. Research Hypotheses

- Industrial organizations in Jeddah face significant challenges in implementing TQM due to organizational and technical barriers.
- Applying TQM principles has a positive effect on cost performance in industrial projects.
- TQM practices improve schedule adherence and reduce delays.
- TQM enhances the quality of project outcomes in Jeddah's industrial sector.
- Organizational culture and leadership commitment significantly influence the success of TQM implementation.

1.7. Research Model

Independent Variable:

- Total Quality Management (TQM)
 - Leadership
 - Continuous improvement
 - Employee involvement
 - Customer focus
 - Process management
 - Supplier quality management

Dependent Variable:

- Industrial Project Performance
 - Cost performance
 - Time performance
 - Quality performance

Moderating Variables:

- Organizational culture
- Regulatory environment
- Technological readiness

1.8. Research Methodology

This study will adopt a qualitative research approach using secondary data from official reports, academic studies, and industrial publications related to project management in Jeddah. A descriptive research design will be used to analyze how TQM principles are applied and how they influence project performance.

Data will be collected from sources such as government reports, industrial case studies, and academic literature. A thematic analysis will be conducted to identify patterns related to TQM implementation, challenges, and performance outcomes.

Ethical considerations will be maintained by using publicly available data and ensuring proper citation of all sources.

1.9. Scope of The Study

The study focuses on industrial projects in Jeddah City, including manufacturing facilities, industrial infrastructure, and related sectors. It examines TQM practices

applied within the last 5 to 7 years, aligning with recent developments in Saudi Arabia's industrial sector.

The scope includes:

- TQM practices in planning, execution, and monitoring
- Challenges in implementing TQM
- Impact of TQM on cost, time, and quality

Contextual factors affecting TQM adoption

1.10. The Suggested Project Structure

1. Introduction
2. Literature Review
3. Research Methodology
4. Analysis and Results
5. Discussion
6. Conclusion and Recommendations
7. References
8. Appendices

2. Chapter 2: Literature Review

2.1. Introduction

Total Quality Management has become a key approach for improving organizational performance across various industries. This chapter reviews existing literature on TQM, industrial project performance, and the relationship between the two. It highlights the importance of TQM in enhancing cost efficiency, schedule performance, and quality outcomes, particularly in industrial environments like Jeddah City.

2.2. The independent variable

The independent variable in this study is **Total Quality Management (TQM)**. TQM involves a set of management practices aimed at continuous improvement,

customer satisfaction, and organizational excellence. According to Deming (1986), TQM emphasizes leadership commitment, employee involvement, and process optimization.

Dale and McQuater (2018) highlight that TQM tools such as process mapping, root-cause analysis, and quality audits help organizations reduce waste and improve efficiency. In industrial environments, TQM ensures that processes are standardized, resources are optimized, and quality is maintained throughout the project lifecycle.

However, successful TQM implementation depends on factors such as organizational culture, training, and management support. In regions like Jeddah, where industrial development is rapidly expanding, these factors play a critical role in determining the effectiveness of TQM.

2.3. The dependent variable

The dependent variable is **industrial project performance**, which is typically measured through:

- **Cost performance:** ability to stay within budget
- **Time performance:** adherence to schedules
- **Quality performance:** meeting required standards and specifications

Kerzner (2022) emphasizes that project performance is influenced by planning quality, communication, resource allocation, and risk management. In Jeddah, industrial projects often face challenges such as supply chain disruptions, regulatory delays, and workforce limitations, which impact performance outcomes.

2.4. The relationship between the independent and the dependent variables

Research shows a strong relationship between TQM and project performance. Al-Ghamdi (2019) found that TQM significantly improves manufacturing performance in Saudi Arabia. Al-Sehli (2021) demonstrated that TQM reduces rework and enhances quality in construction projects.

TQM practices such as continuous improvement and process management help reduce cost overruns and delays. Leadership commitment and employee involvement contribute to better communication and coordination, which are essential for project success.

Despite these findings, limited research explores this relationship within Jeddah's industrial sector, where unique environmental and regulatory factors may influence TQM effectiveness.

2.5. Conclusion

The literature indicates that TQM is a powerful approach for improving project performance. However, its application in Jeddah's industrial sector remains insufficiently studied. This gap highlights the need for a contextualized model that integrates TQM principles into industrial project management practices in Jeddah City.

References

1. Kaplan, R. S., & Norton, D. P. (1996). The balanced scorecard: Translating strategy into action. Harvard Business Review Press.
2. Deming, W. E. (2018). Out of the crisis. MIT Press. (Original work published 1986)

3. Dale, B. G., & McQuater, R. (2018). Managing business improvement and quality: Implementing key tools and techniques. Wiley-Blackwell.
4. Al-Aama, A. Y. (2019). The role of project management in achieving Saudi Vision 2030: A review. *International Journal of Project Management*, 37(5), 664-677.
<https://doi.org/10.1016/j.ijproman.2019.03.004>
5. Al-Ghamdi, S. M. (2019). Challenges of implementing total quality management in Saudi Arabian manufacturing organizations. *Journal of Manufacturing Technology Management*, 30(5), 840-856.
<https://doi.org/10.1108/JMTM-08-2018-0234>
6. EFQM (2019). The EFQM model: A practical guide for organizations. European Foundation for Quality Management.
7. Al-Sehli, M. A. (2021). The impact of total quality management on the performance of construction projects in Saudi Arabia. *International Journal of Construction Management*, 21(8), 789-801.
<https://doi.org/10.1080/15623599.2019.1595352>
8. Jeddah Chamber of Commerce and Industry. (2022). Jeddah economic review.
9. Kerzner, H. (2022). Project management: A systems approach to planning, scheduling, and controlling (13th ed.). John Wiley & Sons.
<https://www.wiley.com/en-us/9781119568547>
10. Liu, Y., & Zhang, H. (2023). Digital transformation in industrial project management. *International Journal of Project Management*, 41(2), 102-115.
<https://doi.org/10.1016/j.ijproman.2022.12.003>

11. Chiwisa, C. C. (2024). The Role of Leadership in Crisis Management: A Literature Review. *Journal of Human Resource and Leadership*, 8(1), 45-60.

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