

Role of Project Management via Project Quality in Achieving Project Success:
“A Study of Sub-Contractors Group of Companies in Jeddah, KSA”

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Final Project – 2
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2nd Semester- 2024

Acknowledgement

This research work has been a great journey for me and has helped me to understand an area of work that is vast and wonderful.

It has been completed with months of hard work and dedication and would not have been possible if not for the blessing and guidance I have received from God.

I am particularly indebted to my supervisor “Dr. Mona Moustafa Elashry” for her advice, encouragement, and support. Her expertise and insights were instrumental in shaping the direction of this research.

I would like to thank my university which has provided information and access to knowledge bases that have helped me greatly.

I also greatly appreciate the contributions of my student colleagues who have facilitated the necessary resources.

And most importantly; I would like to thank my family for their support and understanding given to me during this period.

Dedication

I dedicate this to my family, who were always there for me, even on the tough days.

Especially, goes to you, Mom “Allah, forgive her and have **mercy** on her.”

To my fiancée, who has been my most profound inspiration.

To my best friends who became my family.

To the teachers who educate with passion and patience.

To my colleagues who believed in me

For all the yesterdays that led me to today.

For every moment that brought me to this point.

To the challenges that made me stronger.

Abstract

Purpose:

Methodology:

Findings:

Originality & Implication:

Keywords:

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1 Chapter One: Introduction

1.1 Research Background:

Project management has gained significant popularity as an administrative term and concept, not only in achieving business goals and purposes but also in contributing to the economic development of less developed countries (**Silva & Magano, 2023, p 67-91**). Many applications and programs in these countries, such as product development, real estate development, and infrastructure development, use project management to plan, coordinate, collaborate, train, and manage resources to achieve specific project objectives (**Lock, 2020**).

In recent times, there has been a noticeable and acceptable increase in the adoption of project management (PM) and associated methodologies. This increase is evident in the recognized benefits and features of implementing project management methodologies. One key aspect is that effective project management enhances and increases the success rates of projects, subsequently fostering organizational performance (**Dai, 2002**). Attention has been directed towards using the Project Management (PM) as a tool to improve and enhance this effectiveness, particularly by enabling the effective transfer of knowledge from successful projects/factors through providing a series of support services and features for various project management levels and stages (**Taboada & de Vass, 2023**).

However, literature on this important topic is largely anecdotal. **Kukah et al. (2023)** contributed to the experimental study of Critical Success Factors (CSFs) as decisive factors and probabilities of project success. He addressed around ten critical factors, including project mission, top management support, project schedule/plan, client involvement, technical tasks, communication, error identification, and resolution strategies. In addition to Bento's study, there are many other CSF lists mentioned in the literature, such as the **Kerzner Project Management Excellence Report (1987)**. Most of these lists focus on factors related to the project manager and the organization to which the project belongs. None of them directly include the issue of the effectiveness and Role of Project Management functions on project success.

Quality is considered a fundamental factor in assessing the success and sustainability of projects and project management practices. It plays a crucial and vital role in the project, as project specifications and performance metrics are largely based on time, cost, and quality, often referred to as the "iron triangle." (Patmawati & Asbari, 2023, p 21-26). Quality possesses diverse characteristics, both subjective and objective, with some aspects challenging or impossible to quantify.

The comprehensive approach to evaluating project quality and efficiency includes a set of metrics contributing to the success of traditional projects, such as cost, schedule, and safety. Additionally, it incorporates measures like customer satisfaction, leadership, employee engagement, teamwork, training, and responsiveness (Cobb, 2023). The dual system for measuring and defining project quality utilizes assessments known as "Traditional Project Quality" and "Contemporary Project Quality." While "Traditional Project Quality" deals with meeting and fulfilling client needs in terms of budget, schedule, metrics, and technical specifications, "Contemporary Project Quality" is more personal, relying on qualitative evaluations from clients and team members. It focuses on how the project meets their expectations in terms of goal delivery, values, peer reviews, customer expectations, collaboration, and high-quality outcomes.

In engineering or construction projects, similar procedures evaluate "Quality Assurance" as a means to manage construction quality during the project's design and construction phases.

Determining the project's success poses another challenge in understanding project management and, consequently, evaluating project performance (Aarseth & Andersen, 2013, p 103-132). Generally accepted is the notion that the success or failure of the project is determined by the convergence of the project's ability to achieve technical objectives within three constraints: scope, time, and cost; the project's perceived benefits to beneficiaries, sponsors, and the project team; and project execution.

According to this definition, the effective measurement of project success or failure can only occur upon its completion.

1.2 Research problem

Through reviewing the literature studies, it is concluded that there is a gap in the existing literature, particularly the lack of focus on the effectiveness role of Project Management via Quality functions on project success. While critical success factors (CSFs) have been identified in previous studies, there is a notable absence of direct inclusion of PM-related factors.

This research seeks to explore how the presence and functionality of PM contribute to the success rates of projects, considering factors such as project mission, top management support, project schedule/plan, client involvement, technical tasks, communication, error identification, resolution strategies, and the unique role of Project Management.

1.2.1 Theoretical Gaps

While prior studies have identified critical success factors (CSFs), there is a noticeable omission of direct consideration of PM-related factors. The study aims to delve into defining project quality, encompassing both traditional and contemporary perspectives.

It seeks to understand how quality, as a fundamental factor, influences project success.

Additionally, this research will consider the challenges in determining project success and the accepted notion that it hinges on the convergence of technical objectives, stakeholder perceived benefits.

1.2.2 Practical Gaps

Lack of Research on Project Management and Success: While project Quality are inherent, there is a need for further Practical research.

This research will explore the metrics used for traditional project quality, including cost, schedule, safety, and client satisfaction, as well as the qualitative assessments involved in contemporary project quality, which rely on subjective evaluations from clients and design team members.

The effective measurement of project success or failure is recognized as a post-completion activity.

Overall, the research problem centers around bridging the gap in literature regarding the role of project management functions, the influence of quality on project success, and the challenges associated with determining project success in the realm of project management.

Main Research Question

Therefore, the above research problem can be formulated in the main question:

What is the Role of Project Management via Quality Functions on Project Success?

1.3 Research Significant

Theoretical and Practical Significance of this research lies in its potential to bridge existing gaps and contribute to define and explore the role of project management functions, the influence of quality on project success, by studying the following:

1.3.1 At The Theoretical Level

There is a theoretical gap that resides in the need for a dual system that comprehensively measures and defines project quality, encompassing both traditional and contemporary perspectives.

This research aims to address this gap by exploring the impact of a Project Management Via Quality on project success, taking into account various factors such as project mission, top management support, project schedule/plan, client involvement, communication, error identification, resolution strategies, and the unique role of PM services.

The findings will contribute to the following:

1. **Enhancement of Theoretical Framework:** Familiarizing oneself with the roles and tasks of project management in achieving project success contributes to the development and enhancement of the theoretical framework in project management studies. It provides a broader understanding of the key principles, plans, and methodologies contributing to the success of projects.
2. **Academic Progress:** The study adds value to the academic domain by exploring and analyzing theoretical foundations for the success and sustainability of project management. It allows scholars and researchers to explore, enhance, and develop theories associated with the effectiveness and impact of project management.
3. **Conceptual Clarity:** By delving into theoretical aspects, the study may contribute to achieving conceptual clarity regarding the dynamic factors and processes that play a vital role in determining project success. This conceptual clarity is crucial for building a strong theoretical foundation for project management practices.

1.3.2 At The Practical Level:

There is a Practical gap in the existing literature stems from the insufficient attention given to the specific examination of Project Management (PM) functions in relation to project success. While prior studies have identified critical success factors (CSFs), there is a noticeable omission of direct consideration of PM-related factors.

This research seeks to understand how quality, as a pivotal factor, influences project success. It will investigate the metrics used for traditional project quality, including cost, schedule, safety, and client satisfaction, as well as the qualitative assessments involved in contemporary project quality, which rely on subjective evaluations from clients and team members.

The findings will contribute to the following:

1. **Project Management Improvement:** Understanding and acknowledging the role of project management in project success contribute to helping practitioners improve and develop project management processes. It assists in identifying and addressing optimal practices, overcoming weaknesses, ultimately leading to the development and enhancement of a comprehensive project management approach.
2. **Risk Mitigation:** The study aids project managers and teams in identifying and predicting expected damages, risks, and difficulties that may hinder project success. This proactive approach helps in identifying, mitigating, and reducing the severity of damages and risks, ensuring timely project completion within budgetary constraints and achieving desired outcomes.
3. **Efficient Resource Allocation:** Scientific insights gained from the study can lead to more efficient allocation of resources. Project managers can make informed decisions related to resource allocation, ensuring appropriate allocation for the right tasks, thereby increasing efficiency and minimizing resource wastage.

4. Stakeholder Satisfaction: Full awareness and understanding of the tasks and role of project management in success help in managing stakeholders' expectations and ensuring their satisfaction. Effective project management practices contribute to presenting and delivering projects that meet stakeholders' needs, fostering positive relationships.
5. Continuous Improvement: The practical impacts of this research support a culture of continuous improvement and development within organizations. By applying lessons learned from successful project management, organizations can adapt and evolve their project management practices remaining competitive and achieve sustainable success.

1.4 Research Questions

The current study aims to answer the Main Research Question:

What is the Role of Project Management via Quality Functions on Project Success?

And to answer the main question we must answer the following Research Sub-Questions:

1. What are the factors related to Project Management in Achieving Project Success?
2. What are the traditional metrics used to measure project quality?
3. How does project management contribute to achieving higher customer satisfaction?
4. How does project management methodologies (e.g., Agile) integrate with quality management practices to ensure project deliverables meet specifications?
5. How does effective quality management practices help to optimize project costs?
6. How does managing project quality contribute to staying on schedule and avoiding delays?
7. How does achieving high-quality project deliverables increased stakeholder satisfaction?
8. What role does project managers play in delivering projects on time and within budget?
9. How can the benefits of a strong project management and quality management synergy be measured within a project environment?
10. How does continuous improvement strategies be applied to refine project management and quality management for better project success?

Applying on random sample of Managers, Administrators, and Supervisors of group of companies in Jeddah, KSA according to (Age - Years of Experience - Position).

1.5 Research Objectives:

1. To identify the factors related to Project Management in Achieving Project Success.
2. To analyze the traditional metrics used to measure project quality.
3. To evaluate how project management contribute to achieving higher customer satisfaction.
4. To investigate how project management methodologies (e.g., Agile) integrate with quality management practices to ensure project deliverables meet specifications.
5. To Examine How can effective quality management practices help to optimize project costs.
6. To determine How project quality contributes to staying on schedule and avoiding delays.
7. To evaluate How does achieving high project quality increased stakeholder satisfaction.
8. To explore the role of project managers in delivering projects on time and within budget.
9. To prove the benefits of a strong project management and quality management synergy within a project environment.
10. To examine how continuous improvement strategies be applied for better project success.

1.6 Research Hypotheses

1. The main hypothesis of this study predicts a statistically significant positive relationship between effective project management and project quality towards project success.
2. There is a statistical significance positive relationship between project quality and project success that enhances effective project management.
3. There is a statistical significance positive relationship between Agility and project success that enhances effective project management.
4. There is a statistical significance positive relationship between Managing the Human Resource and project success that enhances effective project management.
5. There is a statistical significance positive relationship between “Planning Activities, Tasks, Schedules and Budgets” and project success that enhances effective project management.

1.7 Research Model

The figure below shows the relationships between all variables in this study.

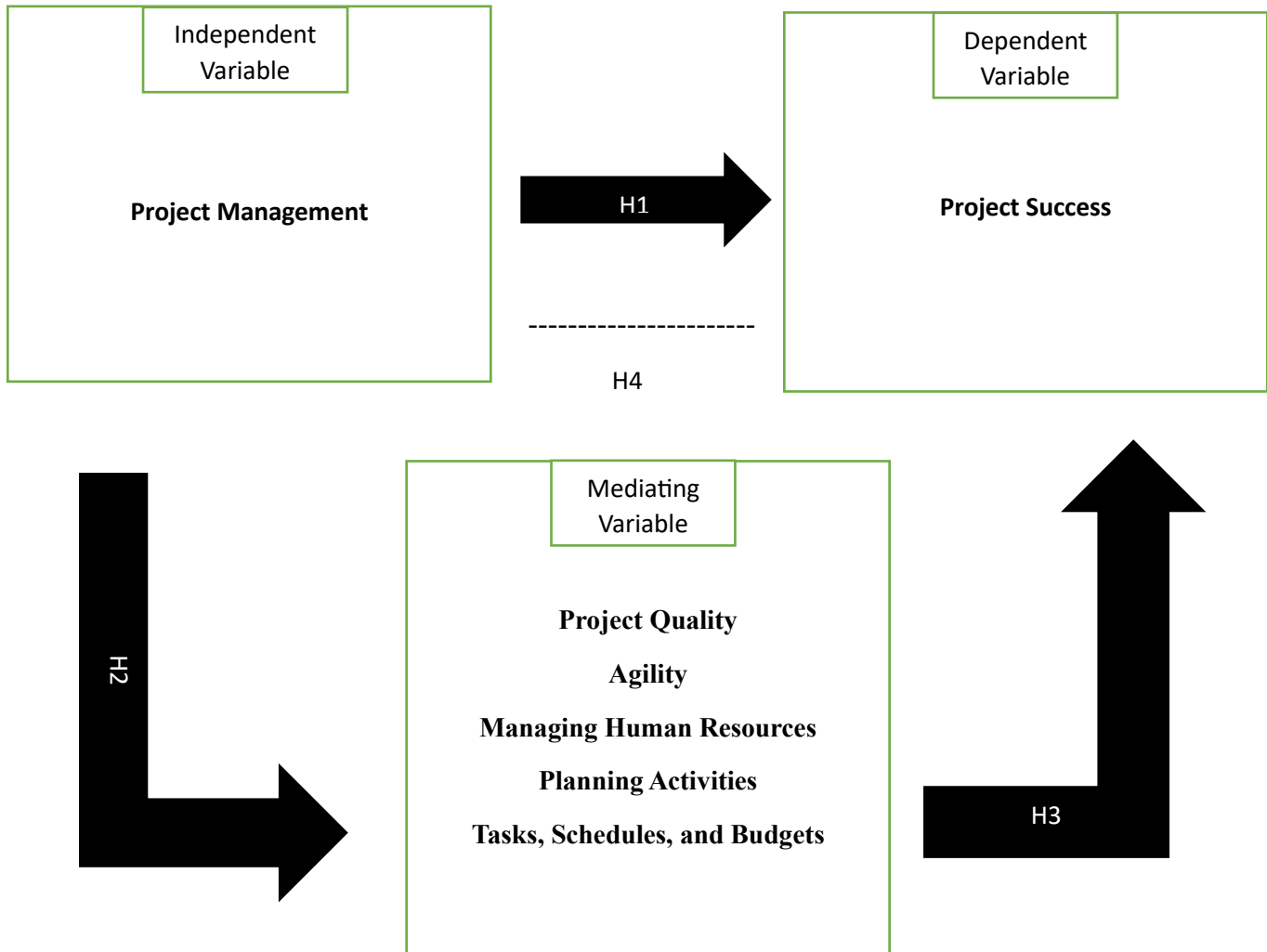


Figure 1: Designed by Researcher

1.8 Scope of the study

The population of this study will be focus on Group of subcontractors' companies in Jeddah, KSA. Subcontractor companies play a crucial role in project success by contributing to various aspects of the execution process. Here's a breakdown of their significance:

- **Specialized Expertise:** Subcontractors often bring specialized skills, knowledge, and experience in specific trades or tasks. This allows project managers to leverage expertise that might not be readily available within their core team. For instance, an electrical contractor on a construction project can handle complex wiring tasks efficiently.
- **Efficiency and Resource Management:** By delegating specific tasks or project phases to subcontractors, project managers can improve overall efficiency. This frees up their in-house team to focus on core competencies and project coordination. Additionally, subcontractors often have their own equipment and resources, reducing the need for the main contractor to invest in everything themselves.
- **Cost-Effectiveness:** Hiring subcontractors can be cost-effective, especially for specialized tasks. Subcontractors may already have the necessary equipment and trained personnel, leading to potentially lower costs compared to the main contractor building that capacity themselves.
- **Schedule Management:** By working with multiple subcontractors, projects can potentially progress on different fronts simultaneously. This can expedite the overall project timeline, especially for large or complex projects with various tasks running in parallel.
- **Risk Mitigation:** Qualified subcontractors with a proven track record can help mitigate risks associated with specific tasks. Their expertise allows them to identify and address potential issues within their area of responsibility, reducing the overall project risk for the main contractor.
- **Innovation and Problem-Solving:** Subcontractors can bring fresh perspectives and innovative approaches to project challenges. Their specialized knowledge can contribute to creative solutions and improved project outcomes.

Overall, subcontractor companies are valuable partners in achieving project success. By leveraging their expertise, managing them effectively, and fostering collaboration. Project managers can significantly increase their chances of delivering projects on time, within budget, and to high quality standards.

Here are the selected companies:

First Company: Modern Building Leaders - MBL

MBL was established in 2011 and, from the beginning, has been able to offer a full spectrum of integrated and turnkey engineering, procurement and construction services.

They have successfully delivered increasingly large and more complex projects for many public sector, private and public-private partnership clients in Saudi Arabia.

The group includes specialists in each major trade, including earthwork, concrete, steel, finishing, fitting-out, marine works, electro-mechanics and low current systems.

Second Company: First Fix

First Fix is a local market dealer delivering world class projects via end to end solutions that provide integrated design, engineering and construction disciplines of mechanical, electrical & plumbing (MEP) through people, innovation and passion.

Company size:

5,001-10,000 employees

Specialties:

Low Voltage Solutions, MEP engineering, Civil Infrastructure, Mechanical, Electrical, and Plumbing

Third Company: Power Center

Power Center Factory is a reputed “Medium/Low Voltage Switchgear, manufacture in the kingdom of Saudi Arabia, made in accordance with latest IEC standards & established in 1990 to meet current digital technologies using IOT platform to deliver enhanced efficiency, reliability and safety, of growing contraction industries demand of electrical distribution systems in production & control filed.

Power Center is partner and authorize to manufacture, assembly, test and supply of Medium & Low Voltage equipment and systems governed by Certification and validation policy of Schneider and Legrand as per of IEC standards.

1.9 The Project Structure

The following figure indicates the suggested structure for the final graduation project 1.

- Chapter 1: Introduction
- Chapter 2: Literature Review
- Chapter 3: Research Methodology
- Chapter 4: Statistical Analysis
- Chapter 5: Findings` Discussion and Conclusion



Figure 3: Designed by Researcher

2 Chapter Two: Literature Review

2.1 Overview:

This chapter serves as a theoretical framework and literature review, where a summary of previous studies will be presented. Additionally, it will delve into all the concepts, theories, definitions, and factors related to the role of project management in achieving project success.

Overall, this chapter serves as a foundational framework for subsequent discussions, offering a thorough examination of the theoretical underpinnings and Practical evidence surrounding the relationship between project management practices and project success. Through a comprehensive review of the literature, we aim to provide valuable insights and implications for practitioners, researchers, and stakeholders involved in project management endeavors.

2.2 Literature Review

2.2.1 The Independent Variable: Project Management

Project Management and its relation significance

Definition of Projects

Projects vary in complexity, size, value, length and type; Consequently, there is a difference of opinion on what constitutes project success and the criteria by which a project is judged (**Leshner and Staub, 2019**). There is no single approved concept for measuring project success, and therefore, different models and frameworks have been developed (**Mir and Pinnington, 2014**). Criteria for measuring project success have evolved from simple, quantifiable time, scope and cost, which are primarily related to project efficiency (**Carvalho et al., 2015**), to a multidimensional construct that, besides the short term, has a long-term perspective directly related to effectiveness and impact. regulatory (**Pacagnella et al., 2019**). The focus is on achieving the organization's goals, project purpose, and customer satisfaction with the product (**Albert et al., 2017**). In fact, the triple constraints of a short-term view are essential, but often less important than customer satisfaction in the long-term stakeholder perspective (**Shenhar and Dvir, 2007**). **Müller and Jugdev (2012)** describe project success as “mostly in the eye of the beholder,” meaning that one stakeholder may consider a project a success, while another stakeholder may consider it a failure.

Most of us understand and realize that project success is nothing but a difficult term that should be considered in a multidimensional manner, in a dynamic and relative manner, and this may make it complex and difficult to compare in a reasonable and appropriate manner, and this must also be taken into account (inspired by **Svejvig and Andersen, 2015**) Despite this, there is not yet a universal recipe available that contributes to achieving the desired success of the project. It is unlikely that global approaches to project management will be developed and developed that may guarantee the success of the project. For example, for this reason, it is neither realistic nor desirable in this environment. The current changing time, as the great industrial competition and constantly changing customer needs have led sectors and institutions to deviate from the traditional approach to project management (**Young et al., 2012**), as there has been increasing evidence that it can lead to major illnesses in the final stages, and this may include rework. Too many and too many, lack of flexibility, customer anger, and the ability and possibility of developing the entire project (**Serrador and Pinto, 2015**). Recently, Agile technology has revolutionized the world of project management, especially in the field of software development (**Sweetman and Conboy, 2018**).

Project Management significance

Study of (**Ciric Lalic, 2022**) investigated whether various project management methodologies (traditional, agile, or hybrid) have different effects on project success, considering project success as a multidimensional concept. Additionally, the authors aimed to explore if specific project characteristics moderate these effects. The research was conducted on a sample of 227 project professionals from around the world. Exploratory factor analysis (EFA) was utilized to validate the factors contributing to project success, while the K-means cluster method was employed to categorize respondents' profiles into agile, hybrid, and traditional project management approaches. The significance among these groups was tested using ANOVA tests. The findings indicate that the agile approach has a more positive impact on two out of five dimensions of project success analyzed in the study (impact on the team and preparation for the future) compared to the traditional approach. Practically, this research provides valuable insights for project management practitioners to tailor their approaches towards achieving project success. It also contributes to academic knowledge by further developing project management contingency theory.

Study of (**Ramesh, 2018**) stressed to examine how project management influences the successful completion of projects. It outlines three specific aims: to assess the impact of feasibility studies on project success, to investigate how managerial activities affect project success, and to understand the role of project managers in achieving project success. The study also aims to explore the relationship between human resource management (HRM) practices and project success. Convenient sampling was employed to gather data, with 100 questionnaires distributed among respondents from the Warangal region. These respondents were asked to evaluate various constructs, including feasibility studies, managerial activities (such as planning, staffing, coordination, and controlling), HRM practices, and project success. Through the use of regression analysis and correlation, the study concludes that all dimensions of the independent factors (feasibility studies, managerial activities, and HRM practices) exhibit a positive relationship with the dependent factor, which is project success. In essence, the research findings suggest that conducting feasibility studies, engaging in effective managerial activities, implementing sound HRM practices, and having capable project managers all contribute positively to the successful completion of projects in the Warangal region.

2.2.2 The Dependent Variable: Project Success

Study of (**Dahie, 2017**) delves into the significance of project management in attaining success within local NGOs based in Mogadishu, Somalia. It outlines three main objectives: to explore how feasibility studies contribute to project success, to assess the impact of planning activities on project success, and to understand the effect of human resource management (HRM) on project success within these NGOs. The researcher opted for convenient sampling and gathered responses from 100 questionnaires distributed among staff members of local NGOs in Mogadishu. These questionnaires focused on key constructs such as feasibility studies, planning activities, HRM, and project success. Through correlation and regression analyses, the study reveals that all aspects of the independent variables (feasibility study, planning activities, and HRM) exhibit a positive relationship with the dependent variable, which is project success. In other words, the research findings suggest that factors such as conducting feasibility studies, engaging in effective planning activities, and implementing robust human resource management practices contribute significantly to the success of projects undertaken by local NGOs in Mogadishu.

Study of **Zakaria (2015)** stated that a construction project is a collaborative effort involving various individuals and organizations with the aim of achieving specific objectives within a defined timeframe. Therefore, effective leadership is crucial for construction managers in overseeing these projects. Leadership abilities play a significant role in enhancing productivity in construction, leading to better outcomes such as efficiency, satisfaction, and increased effort. The primary goal of this study is to examine how the leadership skills of project managers influence the success of construction projects. The success of a company heavily relies on the strong leadership skills of its project managers, as they can navigate projects with minimal issues. Additionally, interpersonal skills are essential for project managers to effectively engage with the workers involved in a project. The study concludes that the leadership characteristics of project managers have a positive impact on project success, and these skills can be honed through continuous training and learning. There are seven key leadership skills identified in the study that contribute to effective project management: communication, problem-solving, team building, conflict resolution, planning and goal setting, sense of responsibility, and time management. Among these skills, the ability to plan and set targets for construction projects is highlighted as the most crucial skill to possess.

2.2.3 The Relationship between The Independent and Dependent Variable

Project Management and its role in project team success

Study of (**Osman, 2015**) purposed to allocate the importance of the role played by the project manager and project team members in the successful implementation of environmental management strategy in the Malaysian construction industry. Using a survey format, questionnaires were sent to stakeholders in the Malaysian construction field, including contractors, clients and consultants, and one hundred and twenty-two questionnaires were interpreted. This study concluded that most of the women's stakeholders agreed that the commitment and commitment of the project team, the leadership expertise of the project manager, and the extent of the influence of the communications system are very necessary in order to ensure the success of the environmental management plan. These results also show that three individual variables - the quality and efficiency of the project manager and project team members, project management sectors, and factors related to procurement have important links and relationships with the success of the environmental management strategy.

Research of (**Machado, 2015**) referred to measuring the contemporary scenario in the field of project management success as a tool for optimal knowledge and understanding of that field of research. A bibliometric study was supported by a series of sixty-four research articles on “Project Management Success” collected in the Web of Science (ISI) database, covering the progress of that topic over the previous five years (2000 to 2014). Articles were interpreted by journal, most cited keywords, citations, journal power and influence scores, and abstract interpretation. The notes cited numerous authors and journals, as well as an extensive series of papers authored by Aaron Shenhar, as sources of data and information relevant to the field of project management success. This data and information may be consumed by other authors to support other studies and research towards the topic of project management success, which is not covered by this research.

Paper of **Mirza (2013)** aimed to shed light and focus on the central factor of the framework that has an impact on the goals and objectives of project and may therefore affect the necessary and critical success factors for the project. Documentation and formal approval of the scope is also considered vital to keep the project on track. The aim of the research was to identify existing suggestions that indicate that recognizing the framework in the success of projects. In this direction, previous research with a close relationship in general has been reviewed, which included project success and its framework in particular, as the research indicates the existing relationship between the success of the project and the product. It has been concluded that an optimal appreciation of the distinction between the project framework and the product can lead to an increase in the possibility of the project’s success.

Paper of (**Fageha, 2013**) aimed to clarify and describe the terminological scope of sustained doctoral research, which strives to develop and develop a procedure that can help the project management team support and integrate the views of stakeholders in the process of setting the project framework in the pre-project planning phase and thus facilitate better project outcomes. Completing and conducting research in a mixed manner (quantitative and qualitative). It was conducted in three main stages. The first stage studied the relationships and interactions between the elements of the project definition. The analysis was performed using two quantitative techniques: interpretive structural modeling (ISM) and the analytic network process.

Project Management and leadership success

Paper of (Ahmed, 2013) focused and shed light on the necessity and importance of leadership experiences, which are vital for project managers while managing projects with impact, quality, and efficiency. A note of interest and attention has been drawn from the literature in the field of project management, which is that studies and research on the management of project managers are still limited despite the call for many studies and research for more than a decade. Studies and research show that project managers must acquire the main characteristics and experiences of management, as well as managerial expertise, in order to implement effective achievement of project and business results. The project manager must achieve the right expertise at the right time and embrace the right knowledge, culture and appropriate professions. Sufficient study and research must be done in order to advance and develop a single project manager management model that is compatible with all projects in all countries of the world and also in all industries. The effectiveness of project management qualifications on project success and job outcomes should also be improved in future studies.

Previous studies have presented and presented some valuable knowledge regarding the basis and impact of the effective approach in managing software development projects, for example (Butler et al., 2020; Gemino et al., 2020). Despite this, little research has been completed on whether the effective agile approach has led to many successful projects comparing the software and non-software domains, although in recent years in many studies the interest in moving Agile outside of software development has become clear (Lappe et al., 2018; Niederman et al., 2018).

Until now, most research investigating the influence of the agile approach on project success has been limited in scope. Particularly outside of the software field, where traditional methods prevailed, the existing studies have been primarily anecdotal, conducted with small sample sizes, or constrained by specific industries or geographic regions (Demir and Theis, 2016).

Many authors have proposed conducting and completing experimental studies that differentiate between traditional and agile project management methods (**Lappi et al., 2018; Niederman et al., 2018**). Some recent research has also expanded on this topic and contributed significantly to realizing and understanding the impact that agile methods can have, compared to typical and traditional methods, on project success, as **Serrador and Pinto (2015)** discovered. They analyzed the impact of the agile approach through an integrated and large-scale experimental analysis of the projects that are being developed. Developed at different stages and levels of the agile approach and its potential for success over time. They have presented and presented existing research findings that motivate the agile project management approach.

The most recent study by **Jimeno et al. (2020)** goes one step further. It takes into account the relative impact of three project management styles - traditional, agile and hybrid on project success. They also emphasized the importance of flexibility in achieving stakeholder satisfaction. Specifically, agile and hybrid methods outperformed traditional methods with respect to this dimension of project success. On the other hand, the three approaches showed similar performance levels with respect to budget and time success and the scope and quality success dimension.

They also noted that the level of Agile that is used in projects has an impact and statistical significance on the success of the project, but it is small and limited in some way because it is sufficient only for the following two dimensions of success, in addition to that they are judged by efficiency and the satisfaction of stakeholders, and two elements are taken into account as they are a measure of success: Project agility. The traditional approach to project management involves highly disciplined and deliberate planning and control methods, based on logical sequencing activities, emphasizing the importance of planning (**Serrador and Pinto, 2015**) but is limited by the fact that projects rarely follow a sequential flow.

Currently, there may be many diverse and, in most cases, overlapping methods for managing the difficulties of any specific project, which makes it difficult to choose the best one. The study (Sheffield and Lem etayer, 2013) indicated that achieving the success of the project is somewhat difficult. Things may become more difficult because clarifying and defining the success of the project is still among the things that are difficult to achieve (Mohanarajah, 2015). This project may be discussed in a controversial manner in the literature, and many may consider it a one-dimensional construct that should be understood and understood by the direction of budget, time, quality, and And meet technical needs (Carvalho et al., 2015). Others see it as a difficult, complex and multidimensional term with many attributes (Judgev et al, 2014).

Project management practitioners realize that different projects need different project management approaches (Ciric et al., 2016). As a result, new project management approaches have emerged under different names, with an emphasis on differentiation from the traditional approach, even in its own name. The word chosen to distinguish these new methods from existing methods was agility (Spondak, 2014).

2.2.4 The Mediating Variable: Project Quality

About The Role of Quality as Mediate Variable in achieving Project Success:

The role of quality as a mediating factor in achieving project success is paramount in project management literature. Quality management practices are integral to ensuring that project objectives are met effectively and efficiently. Here's an overview of the importance of quality as a mediating factor in project success, supported by references:

1. **Enhanced Stakeholder Satisfaction:** High-quality project deliverables lead to increased stakeholder satisfaction. When project outcomes meet or exceed stakeholder expectations regarding functionality, reliability, and performance, stakeholders perceive the project as successful (Baccarini, 1999; Pinto & Slevin, 1987).
2. **Reduced Rework and Rework Costs:** Quality management processes, such as robust quality planning and control, help identify and address defects early in the project lifecycle. By reducing errors and rework, projects can maintain schedule adherence and avoid cost overruns (Project Management Institute, 2017).
3. **Improved Performance and Reliability:** Quality-focused project management practices contribute to the development of reliable and high-performing deliverables. This reliability enhances the project's overall success by ensuring that the final product meets the specified requirements and functions as intended (Gido & Clements, 2014).
4. **Mitigated Risks and Uncertainties:** Quality management involves proactive risk identification and mitigation strategies. By addressing potential quality issues early on, project teams can reduce the likelihood of project delays, failures, and associated risks, thereby increasing the probability of project success (Kerzner, 2017).
5. **Positive Organizational Reputation:** Projects that consistently deliver high-quality outcomes contribute to the organization's reputation for excellence. A positive reputation enhances the organization's competitive advantage and fosters trust among stakeholders, which can lead to increased opportunities for future projects (Cleland & Ireland, 2006).
6. **Continuous Improvement:** Quality management fosters a culture of continuous improvement within project teams and organizations. By collecting and analyzing quality-related data, teams can identify areas for enhancement and implement corrective actions to optimize project performance over time (Cooke-Davies, 2002).

2.3 Conclusion

Overall, the research centers around bridging the gap in literature regarding the role of project management functions, the influence of quality on project success, and the challenges associated with determining project success in the realm of project management.

There is a theoretical gap that resides in the need for a dual system that comprehensively measures and defines project quality, encompassing both traditional and contemporary perspectives.

Familiarizing with the roles and tasks of project management in achieving project success contributes to the development and enhancement of the theoretical framework in project management studies. It provides a broader understanding of the key principles, plans, and methodologies contributing to the success of projects.

In conclusion, quality serves as a critical mediating factor in achieving project success by influencing stakeholder satisfaction, reducing rework costs, improving performance and reliability, mitigating risks, enhancing organizational reputation, and facilitating continuous improvement. Integrating robust quality management practices into project management processes is essential for maximizing project outcomes and delivering value to stakeholders.

The research seeks to understand how quality, as a fundamental factor, influences project success.

3 Chapter3: Research Methodology

3.1 Introduction

This chapter relies on highlighting and clarifying the research methodology that will be used during this study and identifies the role of project management in achieving the purposeful success of the project.

The methodology includes the preparation and design of the research, the population, sampling methods, data collection techniques, types of data, and statistical analysis procedures used.

This comprehensive approach deals with completing and conducting an integrated examination of the research variables and achieving reliable and valid findings and results.

In this study, the researcher will rely on the descriptive analytical research methodology.

The design will be quantitative. Each variable in the study will also have its own section in an electronic questionnaire distributed to the research sample, the figure below shows more details.

3.2 Operational definitions for research variables

To allow clarity and accuracy, the following operational definitions of key variables have been provided throughout this study, which are supported by relevant references:

The Independent Variable: Project Management

Project management may be defined and explained as the application of knowledge, skills, mechanisms, and techniques to project tasks and activities to meet project needs and requirements. Affiliated with the Project Management Institute (PMI), project management deals with initiating, preparing, implementing, monitoring, and closing projects in order to achieve certain goals and meet certain success criteria in a given time. PMI's "Project Management Guide (PMBOK Guide)" provides a comprehensive framework that includes these elements and emphasizes the importance of balancing competing project constraints, which include scope, time, cost, quality, resources, and risk.

→ Operational definition: Implementing knowledge, skills, tools, mechanisms and techniques on project tasks and activities with the aim of filling and meeting the project needs.

The Dependent Variable: Project Success

Project success is defined and explained as the extent of the project's success in achieving and reaching its goals, including time, budget, quality, and stakeholder satisfaction. According to **De White (1988)**, project success can be viewed in two different ways: project management success, which focuses on performance and delivery within specified constraints (time, budget, quality, and quality) and product success, which focuses on the impact of the end product or the service. Recent studies have expanded this definition to include and address stakeholder satisfaction as a critical factor, recognizing that project success is determined not only by following the traditional triangle of project constraints but also by how well expectations are met and fulfilled by people partners (**Baccarini, 1999**).

➔ Operational definition: The extent to which the project has been achieved and reached its goals, including time, budget, efficiency and satisfaction, not stakeholders.

The Mediating Variable: Project Quality

The quality and efficiency of the project aims at the layer that fulfills and satisfies the needs, requirements and expectations identified through the project, which may result in achieving achievements and results that are fit for purpose. It deals with the preparation and design of quality, ensuring it and following it up during the life of the project according to (Goran 1988) during which quality is achieved in project management through commitment.

➔ Operational definition: A set of principles, standards and processes that ensure that project outcomes and stakeholder expectations are met or exceeded.

3.3 Research Design

1. Research Philosophy: Positivist
2. Research Approach: Deductive
3. Research Strategy: Survey
4. Research Choice: Quantitative
5. Time Horizon: Cross-sectional
6. Data Collection and Analysis Techniques: Statistical analysis of survey results

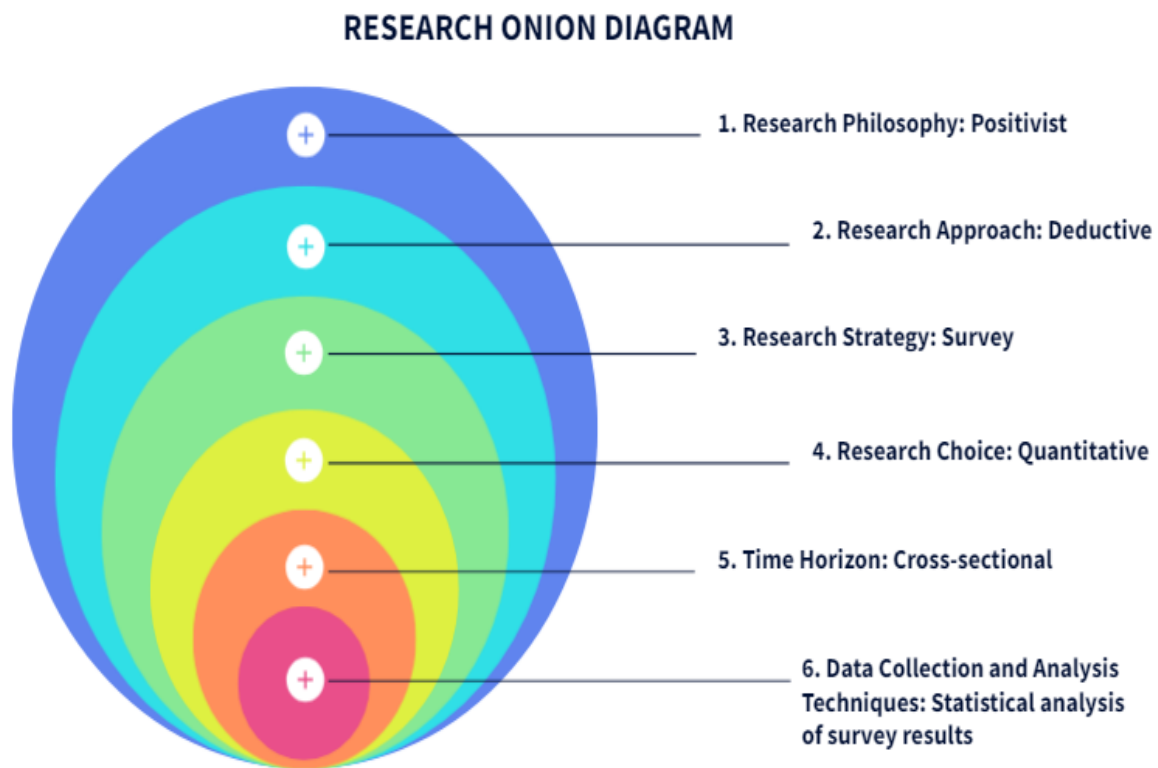


Figure 3: Designed by Researcher

3.4 Research population & Sampling methods and technique

The research sample consists of project managers and team members with experience in project management and implementation from various construction sectors. This population variation ensures that the results are generalizable. A stratified random sampling method is used to confirm and ensure representation from various construction industry sectors.

The sampling method is a Probability, and Sampling techniques cover the following steps:

(1) Stratification:

Classification of the population and dividing them into classes based on industry sectors.

(2) Random sampling:

Respondents from each category may be randomly selected to contribute to the study.

This approach enhances the reliability and validity of the results by ensuring that different perspectives are included.

3.5 Data collection method

This section describes the research instruments that were used to collect the required data in order to answer the research questions and test the research hypotheses. Accordingly, the researcher relied on survey method in collecting the quantitative data via questionnaires. The following sections present the instruments that were used to measure the research variables.

The researcher is relied on the questionnaire below, to measure independent, dependent, and mediating variables (with overall 25 items for the whole variable).

The Instrument type is 5 points Likert scale. Hence 1= Strongly Disagree and 5 = Strongly Agree.

Table of Research Instruments:

S. No.	Variable	Number of Statements
1	Project Management	8
2	Project Success	8
3	Project Quality	8

Table 1: Designed by Researcher

3.6 Types of data

The electronic questionnaire is divided into sections corresponding to each variable in the study:

1. Section 1: Demographic information (such as age, gender, industry, role).
2. Section 2: Project management practices (such as planning, implementation, and monitoring).
3. Section 3: Project success metrics (e.g. time, budget, quality, stakeholder satisfaction).
4. Section 4: Open-ended questions to gain qualitative insights.

The study collects primary and secondary data:

- Primary data:
Primary data is collected directly from the research contributors using an electronic questionnaire.
- Secondary data:
Secondary data is represented in the literature and its primary source is existing reports and databases related to project management and success.

3.7 Statistical analysis procedures

Quantitative data analysis

All data were analyzed using statistical software (Excel version 2019) to perform and complete the following analyses:

- (1) Descriptive statistics: Summary of data using means, modes, medians, and standard deviations.
- (2) Statistical analysis: Testing hypotheses using techniques such as t-tests, analysis of variance (sd, Mean, f), and regression analysis.

Qualitative data analysis

Qualitative data is analyzed using content analysis, which includes:

- (1) Coding: Identify and identify major themes, methods, and patterns.
- (2) Objective analysis: Analyzing and studying data with the aim of revealing ideas that are related to project management practices and project success.

Data Triangulation

To develop the credibility and validity of the results, data triangulation is used by monitoring and combining quantitative and qualitative data. This approach provides a more comprehensive understanding of the research problem.

3.8 Conclusion

This section presents the research methodology used in this study by detailing the research design, population, sampling method, data collection method, data type, and statistical analysis method. Using mixed methods and powerful analytical techniques, this study aims to provide critical insights into the role of project management in achieving success.

4 Chapter 4: Statistical Analysis & Findings discussion

4.1 Introduction

4.2 Sample profile (descriptive statistics for research sample)

4.3 Validity & reliability tests for the questionnaires

4.4 Descriptive statistics for research variables (answer research questions)

4.5 Testing Hypotheses & Findings Discussion

4.6 Conclusion

5 Chapter five: Research limitations, Recommendations & Conclusion

5.1 Research Limitations & Future Research

5.2 Research Recommendations

5.3 Conclusion

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Link of Survey: <https://forms.gle/mKJhCoPN6vorkZTZ6>

Here are the Practical Study Places :

Modern Building Leaders – MBL Company

<https://www.mbl.com.sa/>

First Fix Company

<https://www.firstfix-ksa.com/>

Power Center Factory

<https://powercenter.com.sa/>

7 Appendix

Hi Everyone,

As Engineers and Leaders, we're constantly innovating and problem-solving to achieve the best possible outcomes. To help us stay ahead of the curve and continue delivering exceptional work, we're reaching out to all of you for your valuable insights.

We've created a brief survey (it should only take about 10 minutes to complete) to gather your feedback on [**The Role of Project Management in Achieving Project Success**].

Your honest feedback will be instrumental in Identify:

- ✓ The most critical factors contributing to successful project completion.
- ✓ The effectiveness of current project management methodologies.
- ✓ Emerging trends and challenges in project management.
- ✓ Best practices and areas for improvement in project management approach.
- ✓ Strategies to optimize project outcomes and enhance team effectiveness.
- ✓ Shape the future of project management within construction companies.

The survey is completely anonymous, and your individual responses will be kept confidential.

Click on the following link to access the survey:

<https://forms.gle/HNEydiANWAJdp3jn9>

We appreciate your time and participation.

Best Regards,

Survey Questions:

The Independent Variable: Project Management

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
1. With good project planning, scope creep will not occur.					
2. Using current project management tools are effective in facilitating project execution					
3. Production cost helps identify needed resources and maintain budget control.					
4. Cost analysis exposes potential risks to be encountered in a project.					
5. Costs of labor are properly packaged to motivate our workers.					
6. Communicate project updates are often reported to stakeholders					
7. The delivery time is prompt and better than as agreed.					
8. The responses to client complaints are prompt and adequate.					
9. Prices quoted for project are competitive.					
10. The high level of competition has not prevented the organization from making enough profit to guarantee organizational survival.					

Table 2: Designed by Researcher

The Dependent Variable: Project Success

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
11. Customers have ensured our success through their continuous patronage and loyalty.					
12. The price of our product has given us a competitive edge against our competitors.					
13. Our total revenue (sales) growth rate enhances a better market share.					
14. Our client is satisfied with the prompt delivery of our project compared to other competitors.					
15. Our brand name and product range have been a major source of competition in the market.					
16. Our styles and designs are some of the most sought after throughout the industry.					
17. Our designs incorporate past and present culture.					
18. Our brand gives a unique product differentiation.					
19. sharing lessons learned is crucial to avoid failure.					
20. Measure project success one of the key factors that contribute to project success					

Table 3: Designed by Researcher

The Mediating Variable: Project Quality

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree
21. Our projects are properly scrutinized before delivery.					
22. There is a form of design/product planning before quality production.					
23. After production, there is verification of compliance of the product before final handling over of the project.					
24. Control measures are put in place against quality defects.					
25. Innovation has an effect on the continuous improvement of quality service delivery.					
26. Products are primarily designed to conform with the specifications of our client.					
27. There is a social relationship between clients and the management especially with change requests.					
28. For all of our projects, we often comply with quality standards.					
29. Monitoring project progress is one of the key factors that contribute to project quality.					
30. Quality Control and Quality Assurance (QA/QC) processes are typically implemented in our projects.					

Table 4: Designed by Researcher