



Organizational Culture Factors Affecting the Project Effectiveness in the Construction Industry of the UAE

عوامل الثقافة المؤسسية التي تؤثر على كفاءة المشاريع في مجال الإنشاء والصناعة في دولة الامارات

by

MOHAMED AL ZAABI

**Dissertation submitted in partial fulfilment
of the requirements for the degree of
MSc ENGINEERING MANAGEMENT**

at

The British University in Dubai

December 2022

DECLARATION

I warrant that the content of this research is the direct result of my own work and that any use made in it of published or unpublished copyright material falls within the limits permitted by international copyright conventions.

I understand that a copy of my research will be deposited in the University Library for permanent retention.

I hereby agree that the material mentioned above for which I am author and copyright holder may be copied and distributed by The British University in Dubai for the purposes of research, private study or education and that The British University in Dubai may recover from purchasers the costs incurred in such copying and distribution, where appropriate.

I understand that The British University in Dubai may make a digital copy available in the institutional repository.

I understand that I may apply to the University to retain the right to withhold or to restrict access to my thesis for a period which shall not normally exceed four calendar years from the congregation at which the degree is conferred, the length of the period to be specified in the application, together with the precise reasons for making that application.



Signature of the student

COPYRIGHT AND INFORMATION TO USERS

The author whose copyright is declared on the title page of the work has granted to the British University in Dubai the right to lend his/her research work to users of its library and to make partial or single copies for educational and research use.

The author has also granted permission to the University to keep or make a digital copy for similar use and for the purpose of preservation of the work digitally.

Multiple copying of this work for scholarly purposes may be granted by either the author, the Registrar or the Dean of Education only.

Copying for financial gain shall only be allowed with the author's express permission.

Any use of this work in whole or in part shall respect the moral rights of the author to be acknowledged and to reflect in good faith and without detriment the meaning of the content, and the original authorship.

ABSTRACT

The present research examined organizational culture factors that are associated with project success in the construction business in the UAE. The study investigates the influence of project coordination, trust, communication, shared experience, and alternate forms of cooperation on construction project success. The research study assisted in enhancing the understanding of the UAE construction industry in terms of the project manager's perception of the core factors of project success. With the use of a quantitative research design, the researcher attempted to answer the research questions. A survey strategy was employed, with a questionnaire being the primary tool of data collection. The data was analyzed with the help of descriptive analysis and multiple regression analysis. The results of the study show that project managers perceive that project coordination, trust, and communication show a significant impact on construction project success. The findings of the study show that the perception of project managers about the role of shared experience and alternate forms of cooperation was favorable to project success. The findings of the research study have significant implications for project management in the construction industry. The researcher recommended future research studies based on the limitations of the present research.

خلاصة

لقد فحص البحث الحالي العوامل الخاصة بالثقافة التنظيمية المتعلقة بنجاح المشروع في صناعة أعمال البناء في دولة الإمارات العربية المتحدة. تقوم الدراسة بالبحث والتحقيق في تأثير تنسيق المشروع، والثقة، والتواصل، والخبرة المشتركة، والأشكال البديلة للتعاون على نجاح مشروع البناء. بادرت الدراسة البحثية في تقوية وتعزيز فهم مجال أعمال البناء في الإمارات العربية المتحدة من منظور مدير المشروع للعوامل الأساسية لنجاح المشروع. لقد حاول الباحث الإجابة على أسئلة البحث باستخدام تصميم البحث النوعي. تم استخدام استراتيجية الدراسة الاستكشافية، باستخدام طريقة الاستبيان كأداة أساسية لجمع البيانات اللازمة. تم تحليل البيانات بمساعدة كل من التحليل الوصفي وتحليل الانحدار المتعدد. تظهر نتائج الدراسة أن مديري المشاريع يدركون أن لدى الأشياء مثل تنسيق المشروع، والثقة، والتواصل، تأثيراً كبيراً على نجاح مشروع البناء. تظهر نتائج الدراسة أن منظور مديري المشاريع حول دور الخبرة المشتركة وأشكال التعاون البديلة كانت ملائمة لنجاح المشروع. نتائج الدراسة البحثية كان لها فوائد كبيرة على إدارة المشاريع في صناعة أعمال البناء. قام الباحث بالتوصية على إجراء دراسات بحثية مستقبلية مبنية على حدود البحث الحالي.

ACKNOWLEDGEMENTS

Firstly, I would like to thank my professor for helping and guiding me along the way and providing concise and stern feedback whenever I needed the same. Without his direction, I would not be able to complete the study and faltered at numerous points. I would also like to express my appreciation to the respondents who chose to participate and provided their perspectives without any qualms and inauthentic engagements. Lastly, I would like to thank my friends and family members who provided any assistance whenever I required the same, from opening new possibilities for connections with necessary respondents to providing me with moral support during difficult times. This has been a journey that I am incredibly grateful for, and I believe I have grown personally throughout the same, a predicament to those who helped me.

Table of Contents

LIST OF TABLES	iii
LIST OF FIGURES	iv
CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Background and Rationale for Research	3
1.3 Problem Statement.....	4
1.4 Research Objectives	5
1.5 Research Questions.....	5
1.6 Significance of the Research	5
1.7 Thesis structure.....	6
CHAPTER 2: LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Review of key concepts of project management	7
2.3 A Review of factors affecting project success.....	10
2.4 Organizational culture affecting project success	12
2.4.1 Project Culture.....	16
2.5 Overview of Construction Industry in UAE.....	18
2.5.1. PM Success Factors in UAE and Middle East	18
2.5.2 Core Cultural Factors at Play in UAE	21
2.6 A Review of Empirical Evidence from UAE	22
2.7 Research Gap	25
2.8 Conceptual Framework of the study.....	25
CHAPTER 3: RESEARCH METHODOLOGY	28
3.1 Introduction	28
3.2 Research Design	28
3.3 Data Collection Instrument.....	29
3.4 Population and sampling	31
3.5 Data Analysis.....	32

3.6 Reliability and Validity of the Instrument.....	33
3.7 Ethical considerations of the research	35
CHAPTER 3: DATA ANALYSIS & FINDINGS.....	36
4.1 Introduction	36
4.2 Sample profile.....	36
4.3 Descriptive Statistics	38
4.5 Hypotheses testing using Multiple Regression Analysis.....	39
CHAPTER 5: CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS.....	44
5.1 Conclusion and Discussion.....	44
5.2 Implications of the study	47
5.3 Limitations of the Study	49
5.4 Recommendations for Future Studies.....	49
REFERENCES	51
Appendix A Cover Letter and Questionnaire.....	57
Appendix B Google Forms Responses.....	61

LIST OF TABLES

<i>Table 1 Elements Comprising of Project Culture (Source: Du Plessis and Hoole, 2006)</i>	<i>17</i>
Table 2 Variables and items with coding	30
Table 3 Sample size (Sekaran,2003)	32
Table 4 Cronbach's Reliability Test.....	34
Table 5 Distribution by gender.....	36
Table 6 Distribution by gender.....	37
Table 7 Distribution by number of years experience in the present organization.....	37
Table 8 Descriptive analysis	38
Table 9 Pearson's Correlation analysis results.....	40
Table 10 Model Summary	41
Table 11 ANOVA output	41
Table 12 Coefficients	41
Table 13 Summary of hypotheses results.....	42

LIST OF FIGURES

Figure 1 Traditional view of factors of project success and failure (Bakkar, Boonstra & Wortmann, 2009) 2

Figure 2 Project culture as an interplay between organizational culture and professional culture (Ruuska, 1999) 16

Figure 3 : Graphical representation of elements of Project culture..... 26

CHAPTER 1: INTRODUCTION

1.1 Introduction

For an adequate functioning of an organization, project management has after potential to play an essential role in it (Al-Hajj & Zraunig, 2018). Project management is a field which has intensive development, despite the knowledge and tools at its disposal, the ratio of the failure of the projects is still very high (Vrchota, Rehor, Maríková, & Pech, 2021). Both, the project owners and project managers are confronted with a continuous growth of project success requirements. These requirements stem from the needs and expectations of internal and external stakeholders of the business (Davis, 2016). Hence, to meet the increasing expectations of the stakeholders and ensure project success, the project managers are constantly in search for solutions which will help them to reach their objectives (de Carvalho et al., 2015). Organizations' current Project Management strategies, on the other hand, do not always guarantee project progress.

The project's success is highly dependent on how a project was managed and executed (Vrchota, Rehor, Maríková, & Pech, 2021). Poor project planning, exceeding project cost, project completion delays and poor project quality, have always been the main issues with project management activities (Hornstein, 2015). During the preparation and implementation stages of project management activities, a significant number of decisions must be taken. The project will fail if the project managers are unaware of the main factors that could affect the goals set in the initiation process (Radujković & Sjekavica, 2017).

The traditional view to measure the success of a project is based on three criteria: time, budget and requirements (Bakkar, Boonstra & Wortmann, 2009). This structure is often criticized but it is still used to determine the project success. This is illustrated in the Figure 1 below. The project success factors may vary depending upon the size of the project, complexity, and uniqueness of the project (Radujković & Sjekavica, 2017).

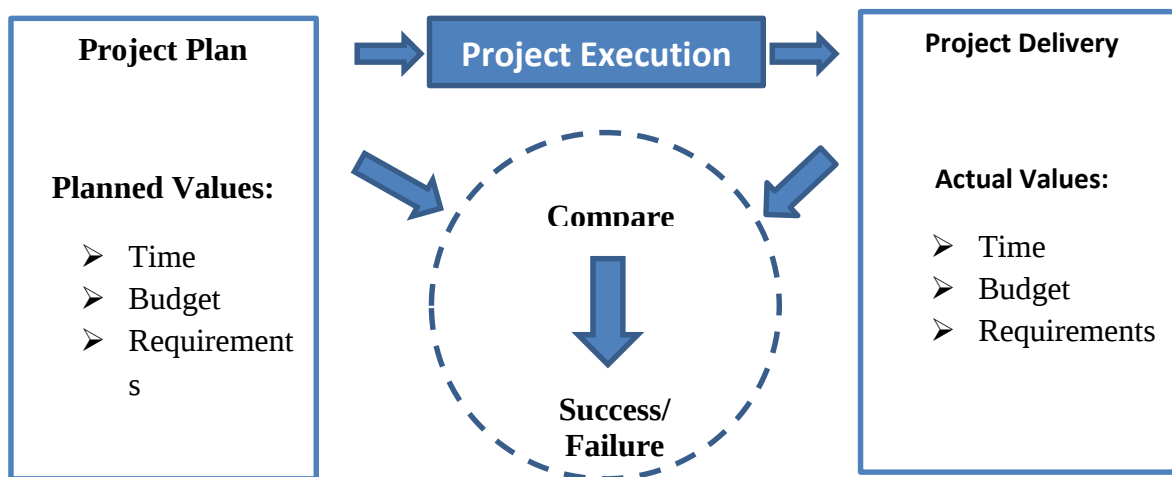


Figure 1 Traditional view of factors of project success and failure (Bakkar, Boonstra & Wortmann, 2009)

The traditional approach to determine project success or failure takes into consideration time, cost and other requirements. Nevertheless, researchers have identified many factors which affect project success. Chan, Scott, and Chan (2004) categorized the project success factors into five parts, “human factors, project factors, project work procedures, project implementation, and factors of the organization’s external environment”. Some other success factors identified based on past research studies are, procedures and tools (Radujković & Sjekavica, 2017) internal communication (de Carvalho et al., 2015), project manager’s competencies (Al-Hajj & Zraunig, 2018) etc.

One of the areas identified to be the main reason for the failure in projects is organizational culture (Piwowar-Sulej, 2021). Culture of an organization is a set of values, beliefs, and norms, which guide behavior of employees and decision-making of the management (Schein, 1990). As per Schein (1990), organizational culture, leads to an insightful shared assumption that culture lies at the heart of any organization and helps to solve problems and differentiate organizational culture from any other types of culture. Culture of an organization suggests how the people adapt to the change and innovation which is directly linked with the behavior of the project managers. As per Van den Berg and Wilderom (2004) culture is “*a shared perception of organizational work practices within organizational units that may differ from others*”. Past research studies in the field of project management identified that

communication, inter relationship, employee involvement, shared understanding and information exchange as important cultural factors (Nguyen & Watanabe , 2017). Muriithi & Crawford (2003) stated that there is relationship between the organizational culture dimensions and the success and failure of the projects. The authors, Wei and Miraglia (2017), in their study confirmed that there is an important relationship between organizational culture and specific cultural elements that influence the process of knowledge building and transfer. According to Suda (2007), an organization's actions, patterns, and individual behavior of its members are shaped by a strong culture. A strong culture can help provide stability but at the same time it can also be a hindrance in getting the desired results by remaining competitive. Culture is potent, it can either block an organization's strategy or catalyze it. Understanding the culture of the organization is very critical for successful projects as it influences the dynamics of the how the project members perform, perceive and relate with it as culture resides in every fold of the organization (Piwowar-Sulej, 2021).

1.2 Background and Rationale for Research

In project management, the project managers' lack of cultural understanding can affect his/her functioning and project success (Bredillet, Yatim, & Ruiz, 2010). They can have difficulty in adapting or understanding the different behaviors or norms across the organization. Whereas, in comparison the project managers with progressive mind set have strong connection to their culture. These project managers need to be more sensitive, adaptable and capable of interacting with other cultures (Vlahov, Misic, & Radujkovic, 2016). The majority of projects do not work in isolation; they must operate within a business context that should complement the project management criteria. Strategic planning and implementation, project management, and everything else are all influenced by culture (Nguyen & Watanabe , 2017).

As stated by Pinto (2016) organizational culture affects the manner in which departments coordinate, project teams performance, commitment of project members, and project planning. On the other hand, in a project success the role of culture is important as it affects the shared understanding, trust among project team members, sharing of experience and different ways of

cooperation among project team members (Kessel, Oerlemans, & van Stroe-Biezen, 2014). Similarly, Piwowar-Sulej (2021) have suggested that the effect of organizational culture on project success (effectiveness) should be studied in different industries and countries. The researcher found that limited research is conducted in the United Arab Emirates (UAE) on the this topic. Therefore, this research study aims to highlight the organizational culture factors that influence the effectiveness of construction projects in the UAE.

1.3 Problem Statement

UAE has seen an unprecedented construction boom since 1971 which has led to an extensive and rapid growth in the construction industry. About 80% of the construction workers in the UAE are from different parts of the world (Al Ariss & Guo, 2016) and completely new to the traditional Arabic culture and this to an extent threatens the rapid growth and sustainability from a cultural aspect. According to Al Hasani, Tularam and Regan (2017), UAE has unique economic and cultural characteristics as compared to any other countries in the Middle East; hence this diversity leads to the cultural risks which can hamper the growth and development of any project especially in the construction industry in the UAE.

Despite cost challenges, labor shortages, and trends toward fixed-bid contracts, the construction industry as a whole grew in 2019 (Deloitte, 2020). The UAE construction industry had increased activity in 2020, and a total of \$53.8 billion worth of projects were awarded in 2019 (Abbas, 2020). However, a significant proportion of projects in the UAE were postponed (Khan, Singh, Kaur, & Arumugam, 2021). Delays in construction projects can result in cost overruns and a decline in quality, both of which are common issues in building projects. Therefore, to reduce delays and their related cost overruns, it is necessary to examine the essential success determinants (Khan, Singh, Kaur, & Arumugam, 2021). Multiple studies have indicated that the predictors of the success of projects are inconsistent.

In the light of the above discussion, the study aims to examine the impact of organizational culture on the project effectiveness in the construction sector of UAE. The

organizational culture factors investigated in the present research are, Project Coordination, Communication, Trust, Alternate Forms of Cooperation, and Sharing of Experience.

1.4 Research Objectives

The research topic will help us to investigate the perceptions of project managers of the organizational culture factors role in the project effectiveness in the construction sector in the UAE.

- To examine the project managers' perception of the impact of Project Coordination, Communication, Trust, Alternate Forms of Cooperation, and Sharing of Experience in project success in the construction sector in the UAE.

1.5 Research Questions

The research will help us to focus on the following questions:

RQ1. What is the perceptions of project managers of the influence of organizational culture factors on the effectiveness of construction projects in the UAE?

RQ2. Which of the organizational culture factors: Project Coordination, Communication, Trust, Alternate Forms of Cooperation, and Sharing of Experience have significant impact on project success of construction projects in the UAE?

1.6 Significance of the Research

The topic chosen for the research struck as very appealing and interesting, there has been quite a few researches conducted on the topic but what renders this study different than those is that, this study aims to focus on the cultural factors influence the perceptions of project managers in the UAE especially in a construction industry. This study will help the construction companies to understand the perceptions of the project managers of the culture in the UAE. The

construction industry in the UAE is very important to its economic success hence it is important to understand what factors influence the perceptions and the effectiveness of the construction projects in the UAE. As the cultural factors that are produce significant impacts and affects the success of the projects.

1.7 Thesis structure

The following Chapter 2 will discuss various theories related to the organizational culture that will guide and detail the study's process. Through a review of the literature, the researcher can extend their understanding of the topic and identify potential gaps in the literature, to contribute to the body of knowledge. Chapter 3 will discuss the research methodology. The researcher will present the research approach and justify the selection of particular research methods to achieve the proposed objectives of the study. In Chapter 4 the researcher will cover the data analysis. The chapter includes details of the data analysis considered in the methodology. Chapter 5 will present the research findings based on the data analysis. The researcher has attempted to link and compare the findings to the relevant literature and other studies to highlight the level of significance compared to another research. Chapter 5 will also include the conclusion, recommendations, and limitations of the research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter, the literature review will compare the difference, the relevant literature and highlight studies that are most relevant to the subject area and the research objectives formulated for the paper. It would also take into consideration the relevant themes and subject areas to be analyzed and then highlight specific information that can be derived from the related journal articles. In the next section the researcher provides an overview of key project management concepts namely, project, project management, and project success (effectiveness).

2.2 Review of key concepts of project management

Before the researcher starts discussion on other concepts it is important to first understand what a 'project'. According to Rose (2013), a project refers to a temporary group activity that is developed to achieve a unique product, service or outcome. According to Rozenes, Vitner and Spraggett (2006), a project is a combination of human and non-human resources that are used to achieve a clearly-defined objective. However, the argument presented by Pace (2019) was that a project, as well as a single objective, should have a specified timeline for starting and ending, and the budget should be strictly assigned accordingly. This perspective was backed by Al-Hajj and Zraunig (2018), who described project as a means of managing the existing resources to attain a clear objective with different tasks that have definite results and deliverables. The perspective given above places a lot of stress on assigning resources to accomplish certain objectives in a specified deadline. In addition, the timeline approach to achieve a given objective after accomplishing various tasks has been supported in other studies (Bond-Barnard, Fletcher, & Steyn, 2018).

Project management was described by Project Management Institute (2013), in their annual report for 2013, as the use of knowledge and skills to achieve the specified short-term

objectives that have been developed for certain well-defined goals. The term was also applied by Chan, Scott, and Chan (2004) to the construction industry with a definition similar to this.

Different definitions of project management have also been presented by other authors. For example, Hornstein (2015) asserted that project management refers to organizing, planning, managing and directing the company resources effectively to accomplish the project in a timely manner. In the same way, it was asserted by Radujković and Sjekavica (2017) that a budget should be defined for a project.

PMI has asserted that project success is determined by the capability to carry out tasks in a sequential manner and within the stipulated time frame and budget. According to Bond-Barnard, Fletcher, and Steyn (2018), though these points are very important in the field of project management, project success and project management success are significant issues. It is difficult to define or explain and gauge success and failure because individuals have different perceptions about them (Al-Hajj & Zraunig, 2018). According to Rolstadas et al. (2014) project success can be measured by determining the degree to which the goals of the project and the expectations of all stakeholders are accomplished with respect to the conventional standards of time, quality and cost. Al-Hajj and Zraunig (2018) when talking about project success, stated that there are two points of view; that of the customer who looks for triple constraints (time, cost, and scope), and that of the project team, which looks for actions, plans, phases, tools, and techniques. Khan et al. (2021) also linked project success to the triple constraints, as he claimed that a successful project is one which is completed without violating the triple constraints and without disturbing the corporation's culture, values or proper documentation.

The empirical studies in the past have shown evidence on the key success factors of the project but very little research has been explored based on the success of the project based on the cultural aspects and how it impacts the success and final result of a project (de Carvalho et al., 2015). Many authors have outlined the various factors that lead to project success, it is essential to analyse and align the same with the underlying perceptual parameters that tend to define how project managers deal with these identified factors. There is a need to understand the various ways in which deep-rooted region-specific parameters impact the way in which

project managers in UAE perceive and approach project management practices, thereby determining whether a project succeeds or fails. In order to do so, it is imperative to look at some of the core trends pertaining to the construction industry in the UAE and the reasons behind the emergence and sustenance of the same.

According to Bredillet, Yatim, and Ruiz, (2010) although the project managers are aware of the fact that project management can prove to be beneficial for their business but despite the rapid development and advancement in the tools and techniques of the project management the failure rate of the projects is very high specially in the large scale projects. Hence it is very important that project managers recognize the factors that are contribute to the success or the failure of a project. The determinants for the success and failure of the project can be classified into two groups i.e. one related to project management processes and second related to internal and external stakeholders of the project and how both these groups influence the performance and result of the project.

Thi and Swierczek (2010) in their study compared various projects and their identifying factors which had critical influence on the result. According to the researchers the project success was influenced by the crucial factors such as communication, resource and time management, senior management support, client involvement and effective change. In addition to these factors there were second set of factors which included factors related to the political stability and environment.

In a research by Al Ameri (2016), the author analyzed the perspective of project managers. According to the author the project managers takes different perspectives while managing the projects the two main perspectives identified were task and organizational. The view point of the project managers is critical in finding the success factors based on the perspectives of the project managers in some projects. According to Piwowar-Sulej, (2021) some of the primary factors that affect the project performance are organizational culture, project manager as well as project management culture.

These elements, when combined, would be able to influence the project performance; however, it is essential also to consider the factors that impact the effectiveness of the three factors that have been mentioned. The study stresses that a conceptual framework including all these factors and parties is vital in order to ensure project success and effectiveness, regardless of the nature and type of project (Adzmi & Hassan, 2018).

The role of the stakeholder relationships have been emphasized by the authors Banihashemi, Hosseini, Golizadeh, and Sankaran (2017) in their studies. According to them the relationships between the internal and external stakeholders play an important mediating role for the success of the project. The authors postulate that the quality of relationships with internal and external stakeholders by the project managers has positive effect on the success of the projects. Authors Barbalho, De Toledo, and Silva (2019) agree with Banihashemi et. al (2017) with the important of the role of stakeholder in influencing the success of the project and that stakeholders impact the value that is created in the risk management processes. Chan, Scott, and Chan (2004) in their study also confirmed the significant role played by the stakeholders in the success of the project. Castro Silva et al. (2018) also emphasized that by engaging the stakeholders can lead to successful project results and any resistance from the stakeholders can lead to the critical organizational risk in the projects V (Bredillet, Yatim, & Ruiz, 2010). Davis (2016) in his landmark study highlighted the fact that different stakeholders have different perception of the project success in particular the pairs of project stakeholders who may or may not have common success factors. According to him lack of agreement between the project stakeholder groups, core team, and senior management may lead to difficulty in preparing a list of the key success factors for the project.

2.3 A Review of factors affecting project success

In the field of project management, project success and project management success are significant issues. It is difficult to define or explain and gauge success and failure because individuals have different perceptions about them (Al-Hajj & Zraunig, 2018). According to (Rolstadas et al., 2014) project success can be measured by determining the degree to which the goals of the project and the expectations of all stakeholders are accomplished with respect to the

conventional standards of time, quality and cost. To have a successful project there must be factors leading to that success, or, conditions without which the project will not succeed. The literature often mentions and lists many project successes factors. Researcher can list many categories; behavioral, social, political, environmental, technical, and, of course, financial. Kerzner (2013) defined six critical success factors for project management and stated that the most important is the corporate understanding of project management. Liphadzi, Aigbavboa and Thwala (2015) declared leadership to be a recognized project success factor. Other points of view about success factors such as team building (Albert et al., 2017) and proper communications (Bond-Barnard, Fletcher, & Steyn, 2018) make it very clear that using the proper planning, monitoring, and control, as well as following proper methodologies effectively and efficiently, can be considered success factors too. Wai et al. (2013) defined six dimensions for success factors; the pre-construction factor, the construction factor, post-construction factor, the organizational factor, the information management factor, and the change management factor.

Lindhard & Larsen (2016) conducted their research focused specifically on the construction projects taking place around the world and the specific factors that defined success for construction projects. The study pointed out that despite extensive research on the subject of construction projects and their management, construction managers often found it challenging to execute construction processes and projects efficiently. The findings of the study stated that knowledge sharing, as well as communication, are two of the most critical factors weighing in the success of any construction project. The challenges that were observed in such projects varied from gaps in coordination and interpretation of instructions to trust and sense of the shared objectives of the project established in the initial stages of the project.

Moreover, another study conducted in Malaysia by Kuen et al. (2009) on manufacturing companies and critical factors that impact and lead to project success. The study was conducted on manufacturing companies and explored the role played by project change controls in the success of manufacturing projects. The critical factors identified in the research study included were the support of top management, technical know-how, competencies of personnel, client acceptance, monitoring and controlling mechanisms as well as effective communication

measures. The findings of the study suggested that among these factors, project mission and top management support are the primary factors that drive project success and performance in case of micro projects as well as macro projects (Kuen, Zailani, & Fernando, 2009).

A research study conducted by Nekvapilova & Pitas (2016) highlights the factors and conditions that have an influence in defining project management success, especially in the public sector. From a study point of view that one of the most significant challenges faced by project managers who are managing middle level and significant level projects often highlights that project leadership is one of the leading factors that influence the performance of major projects. The study explores the fact that managers who do not follow the principles and techniques of project management established by the field experts. Indicating the findings of the study suggest that when it comes to public administration, the concepts associated with leadership are a lot different than how they work in the private sector.

To sum up, even though several studies have been carried out, there is a clear uncertainty with respect to project success. This may be because of the fact that project success depends on perspectives and opinions or the assessors' examining it (Al-Hajj & Zraunig, 2018).

2.4 Organizational culture affecting project success

Culture can be defined as a means of harmonizing work processes by ensuring that the entire workforce is on the same page regarding an understanding of the impending goals and ways to achieve them. It can be considered as a device for the integration of various scattered processes. As Weick (1987, p. 124) has defined it, "culture creates a homogeneous set of assumptions and decision premises which when implemented on a local and decentralized basis preserve coordination and centralization." For an organization and all the workers involved, they must share the same basic assumptions to stabilize the working processes that could otherwise continue to shift between different modes of operation (Schein, 1990). Establishing a shared norm such as communicating relevant concerns about the problems regarding the standard operating procedures can provide all the possible situations that can come up during the

operation and the ways to tackle these situations (Kessel, Oerlemans, & van Stroe-Biezen, 2014).

According to the authors Bredillet, Yatim, and Ruiz (2010) there have been limited researches on the cultural aspects of the success of projects and those authors who have conducted the research in the relevant area have confirmed that cultural aspects play an important role in influencing the final result of the project and the processes involved in the project management. de Carvalho et al. (2015) confirmed that in order for a project to be successful it needs to have a supportive culture which is determined by positive attitude, commitment of time, resources, respect and openness. In addition to this the author also proposes clear set responsibilities, support of the senior management and proactive management to be a part of it. Vrchota et al. (2021) stated that environmental pressures and organizational culture may affect the performance of the projects. The results of their study indicates important moderator between the performance of the project and the organizational culture is the environmental pressure. According to authors Kessel et al. (2014) organizational culture influences the performance of independent projects. The authors also state that effects of organizational culture on the final results of the projects have been confirmed in the construction projects and that there is a key relationship between the organizational culture and a large degree of delays. Chan et al. (2004) in their study formulated a research question related to the organizational culture as a base of affecting the way the projects are managed. The results from their study indicated that organizational culture indeed is an important factor and influences the success of the project.

The study by Yazici (2009) is worth citing here, wherein the author focused his research on the relationship between the performance of project management and the cultural patterns. The author confirmed through his research that organizational culture indeed is an important factor in dealing with the project's expectations, budget, and time. The author also stated that for an effective project management it is important organizational culture is more focused towards empowerment and collaboration.

Santos et al. (2019) pointed out that while several researchers have talked and discussed factors that would influence project success, it can vary based on the nature and situation surrounding specific projects. The study specifically looks into the organizational factors which impact project success, especially in automotive firms. The methods chosen to identify and analyze factors have been carried out in the form of confirmatory factor analysis on a sample of seventy two companies. The findings of the study suggest that organizational culture; top management support as well as change management mechanisms are some of the leading factors affecting project management and success when mediated by a culture that bolsters flexibility and innovation. The findings of the study also recommended that these critical success factors, when combined with a suitable organizational climate, can influence and promote positive project performance.

Another major factor to be considered while understanding project management effectiveness is the role that is played by the risks associated with the project. A study conducted by Hasani (2018), economic and cultural risks also is important factors defining the performance of UAE construction projects. From the research, it was identified that the primary factor influencing project success are communication factors. Furthermore, cultural differences and issues associated with the diverse cultures working within project teams were also identified as major challenges in most UAE construction projects. However, the research suggests that the challenges can be considerably reduced by implementing a better understanding of cultures among the managers and understanding the risks associated with multicultural teams. Furthermore, through efficient implementation of projects and diligent planning, economic risks can also be avoided in construction projects.

As a result, organizational culture in projects influences project efficiency. Organizational culture gaps exist between consultants and contractors, according to Rameezdeen and Gunarathna (2012). They discovered that consultants adhere to clan culture while contractors adhere to a market-oriented culture. Both Zou et al. (2012) and Coffey and Willar (2010) show good significant relationships between project performance and project organizational culture. Finally, Gajendran et al. (2012) built a theoretical framework for

researching project management organizations. The system contained three cultural positions: "integration-technical," "differentiation-practical," and "cultural diversity."

Several authors have tried to focus on cultural underpinnings when it comes to the management and working of project teams in the UAE. According to Ullah Khan & Sandhu (2016), a deep rooted analysis of project management teams in the UAE showed that the fundamental cultural dimensions on the national level proposed by the likes of Hofstede held true amongst labourers as well as senior project managers in the region. If we consider the dimensions that Hofstede has laid out for national cultural paradigms, it is evident that UAE is a high power distance, high uncertainty avoidance, average masculinity focus-oriented, and low individualism culture. As per the findings of Jaafar (2020), it was observed that the high power distance that is inherent in UAE culture is directly responsible for communication issues and challenges in construction projects. Moreover, the high power distance was also observed to be detrimental for control process deployment as well as risk monitoring, which are crucial for ensuring low wastage of resources and time.

According to authors like Akanni, Oke, & Akpomiemie (2015), the risk factors associated with cultural diversity influence a majority of the factors associated with project success in the construction industry. In a country with such rich and imbalanced cultural diversity like UAE, it becomes imperative that any research on project success considers perceptual changes that might occur due to cultural differences and deep-seated behaviours, motivations, preferences and collective mentality.

Hasani (2018) argued that there are numerous cultural aspects that influence the success of project success and further contribute to the shaping and moulding of project management procedures and processes. One of the core cultural aspects identified by the author in the case of construction projects in the UAE was the inherent aspect of trust between foreign project managers and local clients. According to the respondents, trust issues between local clients and project managers were a cause for a lot of issues in terms of project success and failures, thereby also influencing the way in which communication and overall interaction between the parties occurred (Hasni,2018). Moreover, a majority of the participants also mentioned that the vertical

hierarchy structures in construction projects within the UAE was also a major influencing factor with regards to project success and effectiveness in general. About 20% of the respondents in the study also believed that due to their higher position in the hierarchy within a project management structure, they deserved higher opportunities in terms of experience sharing as well as in terms of special attention, showcasing the manifestation of the high power distance in UAE society. Other than these core aspects, the respondents of the study also acknowledged that custom differences impacted decision-making procedures to a large extent, including in the case of resource management, time management and other aspects (Hasni,2018).

2.4.1 Project Culture

According to Marrewijk (2007), project culture, a part of organizational culture, plays a very crucial role in both the project and the organization as a whole. He sees project as being a culture rather than having a culture, an approach which reflects that organizational culture is seen as being a culture itself and the project culture may transform itself into various stages of the project's life cycle. Authors Dvir and Shenhar (2015), in their Environ Megaproject had identified two transformational episodes of project culture and their study has confirmed that revolutionary culture is the key to successful projects. Ruuska (1999), illustrates a better understanding of the project culture as Figure 2.

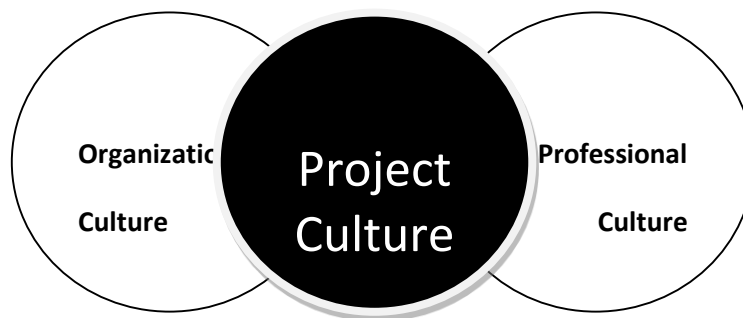


Figure 2 Project culture as an interplay between organizational culture and professional culture (Ruuska, 1999)

The success of the project is greatly influenced by the project culture and it is one of the most important components (Cleland, 1994). According to the study by the authors Du Plessis and Hoole (2006), project culture comprises of open communication, result oriented,

interdependence of discipline, stakeholder or management commitment, focus on open system, learning etc. These elements identified by the authors have been categorized into four groups as illustrated in table 1.

Table 1 Elements Comprising of Project Culture (Source: Du Plessis and Hoole, 2006)

Project Culture	
Area	Elements
People	• Interpersonal Relationships • Emphasis on Team
Processes	• Management/stakeholder commitment and support • Learning • Open communication • Project methodology and process
Relationships	• Interdependence • Control/discipline • Conflict tolerance
Orientation	• Results orientation • Risk orientation • Open system focus

The table 1 above shows that the project culture comprises of depth and wide range of influence it may have on the organization as a whole and on the project itself. The above studies have confirmed that project culture plays an important role and has a great impact on the different processes that take place in the project.

Ajman and Koskinen (2008), in their research have emphasized that it is important to align the project culture with the organizational culture. Ajman and Koskinen (2008) proposed a framework to identify the type and essence of the project culture that is found to be dominant in the organization. According to the framework, project culture dimensions are Openness, Involvement, Positive approach, Alignment, and Stability. The framework also takes into

consideration the project attributes. The project outcomes are linked to attributes directly and through the project culture. Project culture is founded on trust, respect, open communication, risk and conflict tolerance, a flexible, results-focused approach, faith in making the correct decisions, kindness, and professional ethics (Pinto and Slevin, 1987).

2.5 Overview of Construction Industry in UAE

According to Bodolica, Spraggon, & Zaidi (2015), the construction sector has been a major hotspot for multinational companies that have ventured into the industrial framework of the UAE due to the same. According to a report by Deloitte in 2015, UAE sees an annual investment of over \$5 billion in the construction industry, a number which is growing due to the increasing demand for commercial as well as residential buildings. Moreover, if construction is viewed from the various dimensions of infrastructure, such as transport, power, gas, communication, industrial and so on, the total investment on an annual basis within the UAE is observed to be over \$200 billion. Needless to say, the construction industry in the UAE can be defined as a prolific and highly active sector that is a hotspot for foreign investment.

2.5.1. PM Success Factors in UAE and Middle East

Some of the significant projects that are carried out in the UAE, and require extensive project management knowledge and skills, are the construction and infrastructure projects. Since project performance is one of the most critical issues within the construction industry, it is important that definitive variables and factors are set as determinants of success. A comprehensive study was conducted specifically on the construction projects being carried out in Kenya, which has several issues and problems that are complex in nature. The study was carried out through a survey questionnaire which highlighted several issues that still persist within projects that are carried out within Kenya. The findings of the study suggested that it is important for construction organizations to be able to implement a clear mission and vision, as well as clear metrics to measure the performance of projects. The main highlights of the study the need for better training programs as well as industry know-how is pertinent in the construction industry for the success of a project and their practical performance (Nyangwara & Datche, 2015).

According to a study by Saraf (2013), the success of a specific construction project relies heavily on its performance. The research suggests that the success and failure of construction projects depend on several factors, including planning and execution of the project. The study was conducted through a survey questionnaire distributed to three key stakeholder groups, including contractors, engineers, and owners. The findings of the study suggest that the key factors that influence the performance of construction projects include proper planning, detailed designing, decision-making process, site management well as personnel management and quality controls. Together these factors, when implemented appropriately, can prevent major issues that can take place in construction projects. The study's findings suggest that these factors that influence construction projects should be considered in designing a specific approach that will lead to project success and better performance (Saraf, 2013).

Another research conducted by Faried & Saad (2018) focuses specifically on the construction project performance in the United Arab Emirates. The study highlights the critical factors which can influence and enable innovation in the construction projects of the UAE. The study is conducted in the form of a qualitative approach, which includes an analysis of factors that play a substantial part in the performance of construction projects in the country and the literature related to these factors. The study's findings suggested that technical innovation and organizational innovation are essential in ensuring success and effectiveness within UAE construction projects. The study also highlights the various parties, factors and techniques involved in the successful management of projects in the country and the possible improvements that can take place in the subject include more focus on innovation (Faried & Saad, 2018).

Furthermore, along with the identification and analysis of critical success factors associated with construction projects, it is also essential to understand the factors that can cause challenges and issues in the projects. A study conducted by Faridi & El-Sayegh (2007), analyses the factors that lead to delays in construction projects in UAE. The study highlights that the construction industry is so crucial to the UAE economy that delays in projects within this industry can influence the performance of the country's economy as a whole. The study was conducted with the help of a survey questionnaire and based on the results, the top reasons causing delays in the projects have been identified. Some of the core reasons for the delay

include lags in core processes and improper planning. Furthermore, in the case of construction projects in the UAE, the specific top reasons for delays were identified as the time taken for the approval of drawings, lags in owners' decision-making processes, and inadequate early planning in the project process (Faridi & El-Sayegh, 2007).

Another interesting and recent study conducted by Nair et al. (2020), on the construction industry in UAE. The study suggests that there are several factors that influence the success of construction projects within the country. The study was carried out with a combination of quantitative and qualitative research methods. The findings from both research tools suggested that some of the most critical success factors are the allocation of quality resources and long-term vision. Furthermore, the findings also suggested that project management tools, as well as inter-departmental collaboration, have a major impact on project success. It was also observed from the facts of the study that the health and safety regulations, as well as employees from diverse backgrounds, are some of the major limitations that cause delays and cause hindrances in the project management process (Nair, Bahukhandi, & Tauseef, 2020).

Another major factor to be considered while understanding project management effectiveness is the role that is played by the risks associated with the project. A study conducted by Hasani (2018), economic and cultural risks also is important factors defining the performance of UAE construction projects. From the research, it was identified that the primary factor influencing project success are communication factors. Furthermore, cultural differences and issues associated with the diverse cultures working within project teams were also identified as major challenges in most UAE construction projects. However, the research suggests that the challenges can be considerably reduced by implementing a better understanding of cultures among the managers and understanding the risks associated with multicultural teams. Furthermore, through efficient implementation of projects and diligent planning, economic risks can also be avoided in construction projects (Hasani, 2018).

Another research study by Gunduz & Yahya (2018) also analyses the success factors which drive project success in construction projects. Some of the major issues associated with construction projects in the Middle East include struggling to meet deadlines and in managing budget limits. The study was conducted with the help of a survey questionnaire which was

analyzed using statistical tools such as importance index and T-test. The analysis in the paper was carried out with a combination of an interview group and a literature review. Based on the analysis, the findings suggest that the technical capacity of the company as well as setting the scope and definition of the project are some of the major factors influencing project success, specifically within the construction projects in the Middle East (Gunduz & Yahya, 2018).

2.5.2 Core Cultural Factors at Play in UAE

Several authors have tried to focus on cultural underpinnings when it comes to the management and working of project teams in the UAE. According to Ullah Khan & Sandhu (2016), a deep rooted analysis of project management teams in the UAE showed that the fundamental cultural dimensions on the national level proposed by the likes of Hofstede held true amongst labourers as well as senior project managers in the region. If we consider the dimensions that Hofstede has laid out for national cultural paradigms, it is evident that UAE is a high power distance, high uncertainty avoidance, average masculinity focus-oriented, and low individualism culture (Hofstede, 1991). As per the findings of Jaafar (2020), it was observed that the high power distance that is inherent in UAE culture is directly responsible for communication issues and challenges in construction projects. Moreover, the high power distance was also observed to be detrimental for control process deployment as well as risk monitoring, which are crucial for ensuring low wastage of resources and time.

According to authors like Akanni, Oke, & Akpomiemie (2015), the risk factors associated with cultural diversity influence a majority of the factors associated with project success in the construction industry. In a country with such rich and imbalanced cultural diversity like UAE, it becomes imperative that any research on project success considers perceptual changes that might occur due to cultural differences and deep-seated behaviours, motivations, preferences and collective mentality. According to the work of Hasani (2018), there are numerous cultural aspects that influence the success of project success and further contribute to the shaping and moulding of project management procedures and processes. One of the core cultural aspects identified by the author in the case of construction projects in the UAE was the inherent aspect of trust between foreign project managers and local clients. According to the respondents, trust

issues between local clients and project managers were a cause for a lot of issues in terms of project success and failures, thereby also influencing the way in which communication and overall interaction between the parties occurred. Moreover, a majority of the participants also mentioned that the vertical hierarchy structures in construction projects within the UAE was also a major influencing factor with regards to project success and effectiveness in general. About 20% of the respondents in the study also believed that due to their higher position in the hierarchy within a project management structure, they deserved higher opportunities in terms of experience sharing as well as in terms of special attention, showcasing the manifestation of the high power distance in UAE society. Other than these core aspects, the respondents of the study also acknowledged that custom differences impacted decision-making procedures to a large extent, including in the case of resource management, time management and other aspects.

2.6 A Review of Empirical Evidence from UAE

Some of the significant projects that are carried out in the UAE, and require extensive project management knowledge and skills, are the construction and infrastructure projects. Since project performance is one of the most critical issues within the construction industry, it is important that definitive variables and factors are set as determinants of success.

According to a study by Saraf (2013), the success of a specific construction project relies heavily on its performance. The research suggests that the success and failure of construction projects depend on several factors, including planning and execution of the project. The study was conducted through a survey questionnaire distributed to three key stakeholder groups, including contractors, engineers, and owners. The findings of the study suggest that the key factors that influence the performance of construction projects include proper planning, detailed designing, decision-making process, site management well as personnel management and quality controls. Together these factors, when implemented appropriately, can prevent major issues that can take place in construction projects. The study's findings suggest that these factors that influence construction projects should be considered in designing a specific approach that will lead to project success and better performance.

Faried & Saad (2018) in their research focused specifically on the construction project performance in the United Arab Emirates. The study highlights the critical factors which can influence and enable innovation in the construction projects of the UAE. The study is conducted in the form of a qualitative approach, which includes an analysis of factors that play a substantial part in the performance of construction projects in the country and the literature related to these factors. The study's findings suggested that technical innovation and organizational innovation are essential in ensuring success and effectiveness within UAE construction projects. The study also highlights the various parties, factors and techniques involved in the successful management of projects in the country and the possible improvements that can take place in the subject include more focus on innovation.

Furthermore, along with the identification and analysis of critical success factors associated with construction projects, it is also essential to understand the factors that can cause challenges and issues in the projects. A study conducted by Faridi & El-Sayegh (2007), analyses the factors that lead to delays in construction projects in UAE. The study highlights that the construction industry is so crucial to the UAE economy that delays in projects within this industry can influence the performance of the country's economy as a whole. The study was conducted with the help of a survey questionnaire and based on the results, the top reasons causing delays in the projects have been identified. Some of the core reasons for the delay include lags in core processes and improper planning. Furthermore, in the case of construction projects in the UAE, the specific top reasons for delays were identified as the time taken for the approval of drawings, lags in owners' decision-making processes, and inadequate early planning in the project process.

Nair et al. (2020) conducted research on the construction industry in UAE. The study suggests that there are several factors that influence the success of construction projects within the country. The study was carried out with a combination of quantitative and qualitative research methods. The findings from both research tools suggested that some of the most critical success factors are the allocation of quality resources and long-term vision. Furthermore, the findings also suggested that project management tools, as well as inter-departmental collaboration, have a major impact on project success. It was also observed from the facts of the

study that the health and safety regulations, as well as employees from diverse backgrounds, are some of the major limitations that cause delays and cause hindrances in the project management process (Nair, Bahukhandi, & Tauseef, 2020).

Gunduz & Yahya (2018) also analysed the success factors which drive project success in construction projects. Some of the major issues associated with construction projects in the Middle East include struggling to meet deadlines and in managing budget limits. The study was conducted with the help of a survey questionnaire which was analyzed using statistical tools such as importance index and T-test. The analysis in the paper was carried out with a combination of an interview group and a literature review. Based on the analysis, the findings suggest that the technical capacity of the company as well as setting the scope and definition of the project are some of the major factors influencing project success, specifically within the construction projects in the Middle East.

Khan et al. (2021) conducted research on the construction project success factors in Abu Dhabi. The findings of their research indicated that project quality, project cost, project scope, project communications and project planning significantly influence the construction project success. The researchers recommended that project managers must focus on multiple factors to ensure project success. Furthermore, Khan et al. (2021) recommended that future research studies should examine the perception of project managers of factors such as communication, knowledge exchange, scope, and quality management. They also argued that scope, time and cost should not be considered as the key project success factors.

The Project Management field has significantly progressed over the decades in UAE. The first step is to decide the nature of the project and the factors which influence the project management. Many studies have looked into the factors that affect success or failure, also known as vital success or failure factors. It is possible to ensure success in two ways: by preventing the factors that lead to failure and achieving the factors that lead to success. As a result, organizational culture in construction projects has an effect on project efficiency. Organizational culture gaps exist between consultants and contractors, according to Rameezdeen and

Gunarathna (2012). Hence, the culture around the perception of the project managers in construction projects will be a core area of focus for the study at hand.

2.7 Research Gap

The present research focuses on the factors of organizational culture which the project managers perceive as important for the project success. Such research has not been done in recent decades, especially in the UAE, where project management has not been fully adopted and improvisation affects work performance. There are various factors determining project success, but studies are still ongoing (Al-Hajj & Zraunig, 2018). When evaluating the characteristics of construction project organizational culture, one may claim that fundamental project delivery methods are a useful source of information (Khan, Singh, Kaur, & Arumugam, 2021). Research on culture and its implications for performance of construction projects has been disparate and inadequate. Project organizational culture and performance correlations are unclear. Insufficient research has identified project-level culture dimensions and empirical evidence for culture's influence. In the construction sector, questions about project organizational culture and the relationship between culture and project performance remain unresolved and warrant more study. The present research investigation aims to fill this gap.

2.8 Conceptual Framework of the study

Culture is basically examined as values and assumptions (Kessel, Oerlemans, & van Stroe-Biezen, 2014). Work habits reflect values. Culture should be viewed as embodied in structures, procedures, and behaviors. These considerations demonstrate that pervasive, persistent practices reflect corporate culture (Nguyen & Watanabe, 2017). Because organizational practices are more observable and quantitative, they may be compared across organizations and linked to individual and organizational performance. According to Castro Silva et al. (2018), the project manager's position in the company and the employee attitude toward the project best illustrate project organizational culture. The project manager's authority should depend on the project's level; a high-priority project manager should have managerial skills and be paid like a manager. The project manager's informal role may be more essential (Al Ameri, 2016).

According to Hoxha and McMahan (2019), there are the project manager should essentially comprehend, supervise and regulate people and technical factors when handling a project. It is the culture of the firm which will facilitate the project manager to work in collaboration with each other under a single organizational culture which would ensure that they are focused on the project objectives (Engelbrecht et al., 2017). The project managers need to have fundamental knowledge about project management to ensure that projects are successful.

Trust and sharing of experiences are linked to the culture of the organization (Nguyen & Watanabe , 2017). Project managers should shape the values which promote trust building and experience sharing within the project team members to enhance project success. Trust is also found to support collaboration (Bond-Barnard, Fletcher, & Steyn, 2018). Alternate forms of cooperation and communication were found to affect project success (Bredillet, Yatim, & Ruiz, 2010).

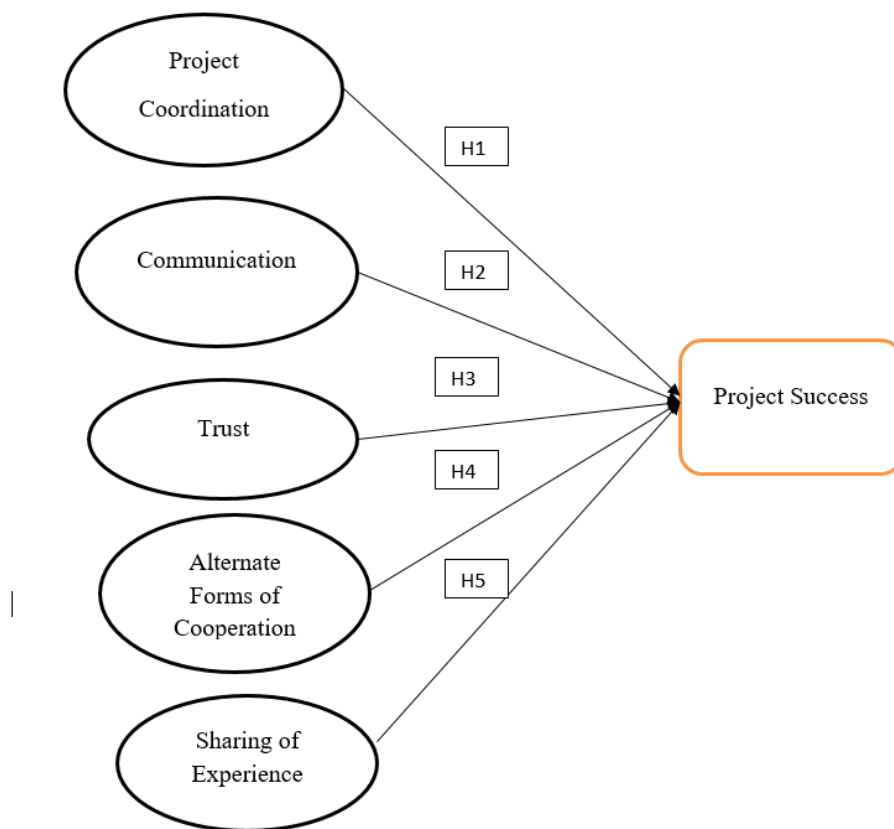


Figure 3 : Graphical representation of elements of Project culture

Based upon the above discussion the following research hypotheses are developed.

H1: There is a significant impact of project coordination on the project manager's perception of Project success in the construction sector in the UAE.

H2: There is a significant impact of communication on the project manager's perception of Project success in the construction sector in the UAE.

H3: There is a significant impact of trust on the project manager's perception of Project success in the construction sector in the UAE.

H4: There is a significant impact of alternate forms of cooperation on the project manager's perception of Project success in the construction sector in the UAE.

H5: There is a significant impact of sharing of experience on the project manager's perception of Project success in the construction sector in the UAE.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the research design and methodology used for this study and how it has guided data collection, analysis, and the development of theory. It includes details about the research tools used, in addition to the justification for using an online survey tool for data collection and analysis.

3.2 Research Design

Research design is the way a researcher will conduct their study to find evidence regarding the research hypotheses. It systematically defines the steps, going through data collection, analysis and interpretation of the research topic, aiming to have significant results. Based on the questions of this research, a quantitative design was chosen. This research used survey questionnaire as the main tool for collecting and analyzing the data. According to (Sekaran & Bougie, 2016) the aim of using a questionnaire survey is to gather information and explore underlying structures in a social context or in relation to individuals in that context. The research objective in this paper was to collect the data from individuals within the construction industry, with a focus on factors affecting the industry. The use of simple frequency distribution through mean estimation and p-value estimation through regression analysis was done in order to find associative patterns between different factor sets, specifically as per the hypotheses mentioned. The frequency distribution process was mainly focused on enabling the emergence of overarching patterns in terms of the perspectives of respondents towards specific variable groups.

The data was gathered through a survey using a cross-sectional design involved to get the required amount of data. This means that a survey is being conducted in a single point in time measuring the sample selected from the targeted population which involved project managers in the construction sector of UAE. This cross-sectional study involves the collection

of information from the targeted only once, while the longitudinal design, involves repeatedly measuring a fixed sample of population on the same or even on different variables (Saunders, Lewis, & Thornhill, 2019). The collection of data once in a single point is serving the needs of the research in the best way and hence, it was preferred over the other one.

3.3 Data Collection Instrument

A survey questionnaire survey is suitable for our analysis because the research objective is to collect data from individuals within the construction industry, with a focus on factors affecting the industry. A closed ended questionnaire was designed based on factors derived from the literature review about the primary positive and negative factors associated with managing projects. The first section of the questionnaire collected responses on general questions. The three questions included in first part were related to gender, age, and number of years in the present organization. The researcher collected responses on general questions using nominal scale. The second part of the survey comprised of 26 questions which referred to the problem which were divided into five topic-related variable groups in relation to the context of project management. These are project coordination (PC), communication (CO), trust (T), alternative modes of cooperation(AC), and experience sharing (SE). The items for measuring these variables were developed based on the scales used by Nguyen and Watanabe (2017) and Bond-Barnard, Fletcher, and Steyn (2018). The Project success items (5) were adopted from Nguyen and Watanabe (2017). A five-point Likert scale was used to assess the influence of the variables wherein, 1=Strongly disagree(SD), 2= Disagree(D), 3 neither agree nor disagree(N), 4=Agree (A), and 5= Strongly agree(SA). Furthermore, each question was subjected to a quality check to ensure succinct and clear wording and that questions were understandable. Google Forms was used to create the questionnaire, which was then emailed to the target audience. The same digital platform, Google Forms, also allowed for data collection and overall visual representation. Table 2 provides items measuring each of the variables and respective coding of items.

Table 2 Variables and items with coding

Statements	Variable
PC1 - The extent of management and coordination from the project management perspective is adequate	Project coordination (PC)
PC2 - Project changes are communicated quickly and effectively	
PC3 - Weekly meetings are enough to ensure project execution	
PC4 - Tender documents are formulated clearly	
PC5 - Do you experience waste between parties in the construction stage due to a lack of understanding and respect	
CO1 - The extent of communication between internal project parties is often optimal	Communication (CO)
CO2 - The extent of communication between external project parties is often optimal	
CO3 - Good communication is easy to practice	
CO4 - I rarely experience conflicts and disputes between project parties resulting from lack of communication	
CO5 - Communication inconsistencies and conflicts are rarely caused by errors or defects in the project documents	
TO1 - The general level of trust between construction project parties is high	Trust (T)
TO2 - I always know what the other parties' contributions are to the construction project	
TO3 - The other project parties understand my role in the construction project	
TO4 - The extent of legal agreements is sufficient	
TO5 - Contributes traditional selection criteria for obtaining confidence among the project parties	
AC1 - Alternative forms of cooperation are used to an inadequate extent	Alternative forms of cooperation (AC)
AC2 - I am positively inclined by participating in projects where alternative forms of cooperation are applied	
AC3 - Alternative forms of cooperation can create better conditions for addressing individual interests in the construction project	
AC4 - The probability of joint profit is increased by using alternative forms of cooperation	

AC5 - I always have the opportunity to contribute my knowledge in all phases of the project	
SE1 - There is always an internal accumulation of experience and sharing of knowledge in all phases of the project	Shared experience (SE)
SE2 - There is always an external accumulation of experience and sharing of knowledge in all phases of the project	
SE3 - Experience gathering takes place using a set procedure	
SE4 - Sharing of knowledge is used adequately	
SE5 - I only share my experience and knowledge if it is demanded	
PE1-The project quality will be satisfactory	Project success (PE)
PE2-The project will be completed on schedule.	
PE3-The project will be implemented within the budgeted cost.	
PE4-Safety and environmental conditions in the course of project will be maintained	
PE-5The project will be profitable for the client	

3.4 Population and sampling

The sample population chosen for the research were the project managers (consultants) in UAE. They were chosen based on three criteria: all participants had to be from the UAE, and all participants had to be active in publicly funded construction projects. Since these personnel have the most information on the management of the projects, they were the right population to provide insights about challenges associated with managing projects and the various factors and methodologies that are used in UAE. The factors leading to the success and failure of projects will also be determined through the survey questionnaire. The sample size of the study was calculated using the table 3 given below.

Table 3 Sample size (Sekaran,2003)

N	S	N	S	N	S
10	10	200	132	3000	341
15	14	300	169	4000	351
20	19	400	196	4500	354
25	24	500	217	5000	357
30	28	600	234	6000	361
35	32	700	248	7000	364
40	36	800	260	8000	367
45	40	900	269	9000	368
50	44	1000	285	10000	370
55	48	1500	306	15000	375
60	52	1600	310	20000	377
65	56	1700	313	30000	379
70	59	1800	317	40000	380
80	66	1900	320	50000	381
90	70	2000	322	75000	382
100	80	2600	355	100000	384

As the researcher was not able to define the population of the study on account of lack of data availability in public domain, the researcher followed the sample size recommended for the highest population as shown in table 3 above. Thus, the researcher considered 384 as the possible sample size. Accordingly, the researcher shared the survey links with 400 respondents. At the end of survey 168 completed responses were considered for analysis. Thus a response rate 42 %.

A convenience sampling technique was used to choose the specific respondents who would be receiving the survey questionnaire and thereby partaking in the study. The selected sampling technique was helpful in collecting data in limited time frame. The researcher distributed the questionnaires based on his own network associations.

3.5 Data Analysis

The analysis of data would be helpful in providing effective outcomes for the research questions that have been established at the start of the research. Because the nature of the scales used for

measuring variables are different, the sets of the collected responses for each variable will be treated in different ways. The first part of the questionnaire includes demographic data. The demographic questions collected responses on a categorical scale. The response for Q.1 asking the gender of the respondent was collected using a dichotomous scale. While the responses for Q 2 (age) and Q 3 (number of years' in current organization) were collected with the help of five categories each. Frequency analysis has always been considered an extremely vital tool as this analysis looks at each category alone and hence can determine the distribution of the variables accurately by conducting univariate categorical analysis among all the gathered data. Before the inferential statistics phase, a descriptive analysis is usually needed to summaries the data collected and provide a fully accurate description of the defined variables within the research. The descriptive analysis includes frequency analysis and distribution in addition to measures of central tendencies and dispersion. Those measures include minimum, maximum, mean, mode, median, range, variance, and standard deviation.

The responses on the statements measuring the main variables were collected with the help of a continuous scale (5-point-Likert scale). The researcher conducted Multiple Regression Analysis to determine the relationship between the dependent variable and several independent variables. In regression, the analysis shows the extent to which the independent variables explain the variation or change in the dependent variable. To apply regression, normality of variance assumption needs to be tested and then to be met. There are two ways to test it, a histogram of the residuals and a normal probability plot. If the result shows a bell-shaped or normal distribution, the assumption is considered met and then the regression can be applied. Furthermore, the researcher analyzed the correlation using Pearson's correlation analysis, before applying multiple regression analysis.

3.6 Reliability and Validity of the Instrument

The researcher tested the validity of the instrument with the help of concurrent validity. The convergent validity was tested with the help of Pearson's product moment correlation test in SPSS version 24. The researcher provides findings of the same in table 4 below along with the

reliability test results. According to rules of thumb, it has been suggested that item-to-total correlations exceed 0.50 and the inter-item correlations exceed 0.30 (Hair et al., 2015). They suggest the following: correlation (r) = 0.10 to 0.29 (small correlation: both active and negative correlation), correlation (r) = 0.30 to 0.49 (medium correlation), and correlation (r) = 0.50 to 1.00 (large correlation). Table 5 shows the consolidated results that consist of the construct, inter-item correlation, and item-to-total correlation. As the results of the inter-item correlation values of the indicators in each construct were at high levels, they indicated the convergent validity of the instrument.

The researcher examined the reliability of the scale with the help of Cronbach's alpha tool to assess the internal consistency of the scale. The alpha value range is 0 to 1. Any value which is closer to 1 is supposed to indicate good reliability. There is different evidence related to the acceptable values of alpha. The researcher followed the most acceptable range of alpha which states that the alpha value of 0.7 and above are acceptable (Taber, 2013). The findings of the test indicate that the scale has acceptable reliability as the alpha values for all the variables is above 0.7. Other than Cronbach's alpha, the measure to assess internal consistency is the item-to-total correlation (the correlation of the item to the summated scale and the inter-item correlation or the correlation among items; Hair et al., 2015). The same is given in the table 4 below.

Table 4 Cronbach's Reliability Test

Variable	Number of statements	Cronbach's Alpha (α)	Inter-Item Correlation	Item-to-Total Correlation
PC	5	0.789	.822–.962	.743–.926
CO	5	0.797	.751–.828	.701–.816
TO	5	0.708	.751–.834	.851–.864
AC	5	0.847	.820–.956	.909–.941
SE	5	0.771	.675–.828	.727–.852
PE	5	0.774	.759–.920	.843–.930

3.7 Ethical considerations of the research

The researcher ensured that ethical considerations were given during the research process. Each participant was informed about the research project and the purpose of the survey by an e-mailed letter of introduction. The individual names of the participants are not known and therefore cannot be revealed in any publication. This is assured through the online software Google Forms as well as the design of the questionnaire that does not reveal any personal information. Confidentiality of the respondent was protected by the. Data will only be published in total or summary, so no single participation is published alone or can be recognized. In this way, the anonymity of all participants is guaranteed. All data collected was stored in the file system with a password to assure data security and integrity.

CHAPTER 4: DATA ANALYSIS & FINDINGS

4.1 Introduction

Chapter four presents the findings and results of the conducted survey. It shows the detailed analysis of the collected data, starting with demographic factors analysis, followed by the hypotheses testing using descriptive analysis and multiple regression analysis.

4.2 Sample profile

The researcher provided the detail of the participants which are shown in table below. The table 5 below presents the frequency and percentage of each sample characteristic.

Table 5 Distribution by gender

		Frequency	Percent
Valid	Male	115	68
	Female	53	32
	Total	168	100

Table 5 provides the gender-wise distribution of the sample (N=168). Males constitute 68 percent of the total sample (n=1115), indicating that most respondents who were a part of this sample are men. Females constituted nearly 32 percent (n=53) of the sample. Hence, it can be stated that the sample has a larger contribution from males compared with females.

Table 6 given above indicates that 30 percent of the sample is in the 36–45-year age group (n=50). Respondents in the 46-55-year age group were 18 percent, and the 26–35-year age group was 32 percent. Only 4 percent of respondents reported their age above 56 years. This indicates that the sample is mostly comprised of young professionals. There was 17 percent of respondents in the 18-25-year age group.

Table 6 Distribution by gender

		Frequency	Percent
	18-25	28	17
Valid	26-35	54	32
	36-45	50	30
	46-55	30	18
	Above 56	6	4
	Total	168	100

Table 7 Distribution by number of years' experience in the present organization

		Frequency	Percent
Valid	Less than one year	23	14
	1-5 years	42	25
	6- 10 years	40	24
	11-15 years	22	13
	More than 15 years	41	24
	Total	168	100

Table 7 shows that 14 percent of the respondents (n= 23) reported were working in the present organization for 1-5 years. Secondly, 13 percent (n=22) of them have experience for 11-15 years. Nearly 24 percent of respondents (n=40) are employed in the said area and sector for 6-10 years. The percentage of respondents with more than 15 years is 24 (n=41). Hence, it can be concluded that the respondents for the present study have a considerable amount of experience of working in their present firm.

4.3 Descriptive Statistics

It is an important assumption to ensure the sample data distribution is normal. To test normality of the data descriptive analysis was conducted. Table 8 shows the mean, standard deviation, skewness, and kurtosis values. Table 8 provides descriptive statistics for the items of the main variables of this study. Skewness values indicate if the data is uniformly distributed around the mean value. The skewness values shown in table 8 are all within the acceptable limit ± 2 . Similarly, kurtosis values imply that if the data has any outliers, in other words it also helps in testing if the data is normally distributed. The standard acceptable value range is again ± 2 . All the kurtosis values are falling within the acceptable range; hence normality of the data is established.

As observed from the table the item with highest mean value ($M=3.95$, $S.D=.73$) is SE5. The statement respective is “I only share my experience and knowledge if it is demanded.” The mean value implies that participants of the study believe that communication is optimal between the project teams. Next to this is CO5 ($M=3.93$, $S.D=.71$) stating that most of the participating believe that “Communication inconsistencies and conflicts are rarely caused by errors or defects in the project documents”. Item T4 ($M=3.92$, $S.D=.67$) too has mostly agreement of the respondents that the extent of legal agreements is sufficient. T1 ($M=3.91$, $S.D=.72$) and T 3 ($M=3.91$, $S.D =.72$) have same mean values.

As far as the overall mean values for all these variables is concerned, the variable with highest mean value is of T ($M=3.88$, $S.D. =.77$). PE ($M=3.86$, $S.D. = .69$) has the second highest score as most of the respondents agree on these items. AC ($M=3.81$, $S.D. = .77$) and SE ($M=3.84$, $S.D. = .69$) have mean values which are very much similar. The least mean value is for PC ($M=3.71$, $S.D. = .71$).

Table 8 Descriptive analysis

	M	S.D	Skewness		Kurtosis	
				Std. Error		Std. Error
PC1	3.69	0.804	-1.075	0.188	1.915	0.374
PC2	3.65	0.791	-0.626	0.188	0.006	0.374

PC3	3.75	0.934	-0.746	0.188	0.321	0.374
PC4	3.75	0.902	-1.091	0.188	1.395	0.374
PC5	3.72	0.842	-1.264	0.188	2.089	0.374
PC	3.71	0.854	-0.960	0.188	1.145	0.374
CO1	3.77	0.768	-1.269	0.188	2.520	0.374
CO2	3.82	0.824	-0.571	0.188	0.344	0.374
CO3	3.76	0.845	-0.796	0.188	1.061	0.374
CO4	3.71	0.920	-1.024	0.188	1.222	0.374
CO5	3.93	0.713	-0.814	0.188	1.842	0.374
CO	3.80	0.814	-0.894	0.188	1.397	0.374
T1	3.91	0.727	-0.719	0.188	1.436	0.374
T2	3.75	0.992	-0.936	0.188	0.633	0.374
T3	3.91	0.727	-0.910	0.188	2.415	0.374
T4	3.92	0.671	-0.868	0.188	2.429	0.374
T5	3.89	0.748	-1.036	0.188	2.365	0.374
T	3.88	0.773	-0.893	0.188	1.855	0.374
AC1	3.76	0.823	-0.710	0.188	0.820	0.374
AC2	3.83	0.752	-0.561	0.188	0.349	0.374
AC3	3.85	0.717	-0.367	0.188	0.170	0.374
AC4	3.80	0.733	-0.406	0.188	0.160	0.374
AC5	3.82	0.732	0.067	0.197	-0.485	0.391
AC	3.81	0.769	-0.593	0.188	0.617	0.3744
SE1	3.78	0.721	-0.628	0.188	1.674	0.374
SE2	3.77	0.694	-0.856	0.188	2.299	0.374
SE3	3.85	0.673	-0.532	0.188	1.468	0.374
SE4	3.83	0.703	-0.693	0.188	1.470	0.374
SE5	3.95	0.735	-0.663	0.188	1.242	0.374
SE	3.84	0.705	-0.674	0.188	1.630	0.374
PS1	3.87	0.696	-0.260	0.188	0.040	0.374
PS2	3.86	0.676	-0.775	0.188	1.994	0.374
PS3	3.86	0.711	-0.814	0.188	1.720	0.374
PS4	3.90	0.682	-0.676	0.188	1.783	0.374
PS5	3.83	0.710	-0.771	0.188	1.565	0.375
PS	3.86	0.885	-0.815	0.198	0.659	0.391

4.5 Hypotheses testing using Multiple Regression Analysis

As per given hypotheses mentioned in chapter 2, the researcher examined the data using multiple regression analysis. The five hypotheses were developed to test the impact of five cultural

factors on PS. The researcher calculated mean value for the responses of each item for each of the variable. The mean values for each items measuring PC, CO, T, AC, SE and PS for individual respondents (n=168) were calculated. In order to conduct regression analysis, the first assumption of normality was tested. The normality of the data was established by the researcher in 4.3, hence the data was found suitable for regression analysis. Furthermore, the second assumption of correlation was tested. The results of Person's correlation analysis are given in table 9. Then the researcher conducted multiple regression analysis wherein PS is the dependent variable and RC,T,CO, and AC were the independent variables.

The coefficients of correlation analysis are measuring the level of and strength of the associations between the examined variables. Table 9 is representing the correlation analysis of all the variables. The results indicated that a positive and significant relationship exist between PC and CO ($r=.312$) and T and CO ($r=.204$). The association of CO with AC ($r=.194$) and CO with PS ($r=.241$) was found to be significant. PC has a positive and significant relationship with AC ($r=.22$), SE ($r=.165$), and with PS ($r=.157$). PC and T has a negative relationship which was not significant ($r=-.105$). AC and T are significantly related ($r=.301$). T has a significant and positive correlation with SE ($r=.211$) and with PS ($r=.216$). AC has a significant relationship with SE ($r=.129$) and negative and not a significant relationship with PS ($r=-.121$). The relationship between CO and SE is negative and not significant ($r=-.088$).

Table 9 Pearson's Correlation analysis results

	PC	CO	T	AC	SE	PS
PC	1	.312*	-.105	.220*	.165*	.157**
CO		1	.204*	.194*	-.088	.241*
T			1	.301*	.211*	.216*
AC				1	.129*	.092
SE					1	-.121
PS						1

*, Correlation is significant at $p < 0.05$ level. **, Correlation is significant at $p < 0.01$ level.

Table 10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.382 ^a	.146	.125	.60222
a. Predictors: (Constant), PC, CO, T, AC, SE				

Table 10 model summary shows that this model is a good predictor of academic performance as $R=0.38$ at $p < 0.05$. The relationship between PC, CO, T, AC, SE and PS is weak and significant. The directionality of this association is positive. R square indicates that the independent variables or predictors are able to explain 14.6 % of the variance leading to PS of construction sector in UAE.

Table 11 ANOVA output

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	68.912	5	6.099	96.113	.000 ^b
	Residual	22.950	163	.363		
	Total	91.862	167			
a. Dependent Variable: PS						
b. Predictors: (Constant), PC, CO, T, AC, SE						

Table 11 ANOVA output indicates that the regression model predicts PS significant ($F(5,162) = 96.113, p < 0.05$). Therefore, it is concluded that the regression model is significantly predicting the project success.

Table 12 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.571	.071		1.874	.130
	PC	.157	.101	.143	2.047	.000
	CO	.241	.116	.201	3.189	.050

	T	.216	.004	.131	3.061	.031
	AC	.092	.076	.087	.807	.231
	SE	-.121	.047	.102	.994	.087
a. Dependent Variable: PS						

Table 12 provides the Beta coefficients values and their level of significance. These values will help in understanding the PE in construction sector of UAE. Out of the total five cultural factors, PC, CO, and T are significantly predicting PS. PC is significantly influencing PS ($\beta=.157$) $p<0.5$. It is observed that CO has the most significant influence on PS when compared with the remaining factors. CO have a significant influence on PS ($\beta=.0.241$) $p<0.5$. SE does not have a significant influence on PS ($\beta=-.121$) $p>0.5$. PS has no significant influence of AC ($\beta =.092$) $p>0.05$. T has a positive and significant influence on PS ($\beta=.216$) $p<0.5$. Overall, when it comes to PS, CO becomes one of the most critical factors.

Based upon the regression analysis output, the hypotheses results are as mentioned below in table 13.

Table 13 Summary of hypotheses results

Hypotheses	Result
H1: There is a significant impact of project coordination on the project manager's perception of Project success in the construction sector in the UAE.	Accepted
H2: There is a significant impact of communication on the project manager's perception of Project success in the construction sector in the UAE.	Accepted
H3: There is a significant impact of trust on the project manager's perception of Project success in the construction sector in the UAE.	Accepted
H4: There is a significant impact of alternate forms of cooperation on the project manager's perception of Project success in the construction sector in the UAE.	Rejected

H5: There is a significant impact of sharing of experience on the project manager's perception of Project success in the construction sector in the UAE.	Rejected
--	----------

CHAPTER 5: CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS

5.1 Conclusion and Discussion

The present research was conducted with a purpose to examine the project managers' perception of the impact of Project Coordination, Communication, Trust, Alternate Forms of Cooperation, and Sharing of Experience in Project success in the construction sector in the UAE. The respective research question of the study was,

RQ1. What is the perceptions of project managers of the influence of organizational culture factors on the effectiveness of construction projects in the UAE?

The researcher collected data from 168 project managers to investigate the research problem. The main hypotheses of the study were tested with the help of multiple regression analysis. The results revealed that Project success is significantly influenced by the project coordination ($\beta=.157$, $p<0.5$), communication ($\beta=.0.241$, $p<0.5$), and trust ($\beta=.216$, $p<0.5$). Furthermore, the findings indicated that sharing of experience ($\beta=-.121$, $p>0.5$) and alternate forms of cooperation ($\beta=.092$, $p>0.05$) have no significant impact on Project success. Thus, the main three organizational culture factors which were found to be instrumental in Project success were trust, communication, and coordination of the project. Similar findings were reported by Haaskjold, Anderson, and Langlo (2020). They specified that successful collaboration is influenced by the culture of the organization which promotes teamwork. Furthermore, the collaboration is improved through communication and leads to building trust between the project team members (Bond-Barnard Fletcher, & Steyn, 2018). Urton and Murray (2021) concluded that collaboration has no significant impact on PS. Trust helps businesses to transform learning and knowledge activities into measurable performance metrics that are accepted by financial markets. The effectiveness of collaboration, including information sharing and knowledge sharing, both of which are heavily criticised, is significantly influenced by trust (Urton & Murray, 2021). The findings of present study find support in the conceptual model proposed by Alqahtani (2017), who examined relationship between values of Abu Dhabi Police and the competencies of their project managers. Alqahtani (2017) mentioned that organizational

values affect project managers' competencies' including leadership, communication, and coordination. The project managers believe that sharing of knowledge is being adequately used amongst construction projects in the UAE and the overall perception regarding the coordination among important team members to execute project effectively. The findings are supported by the research study of Bond-Barnard, Fletcher, and Steyn (2018). The study findings are supported by Resource based View, demonstrates that the competitive advantage results from the efficient and effective implementation of a collaborative team on project performance. The firm's resources are its strength, allowing the project to grow successfully and efficiently. The collaborative, trust-fostering team's RBV-based project performance will improve thanks to its human resource and capability pool (Zureehan & Lee, 2022).

Due to the multicultural work environment in the UAE the sharing of experience gets affected as employees from different culture might experience challenges in the exchange of knowledge and experiences Alqahtani (2107) and AlShehhi et al. (2021) found that UAE organizations culture find it difficult to accept criticism, which might affect their ability to share their experience. Therefore, project managers must encourage active listening and development of positive attitude towards team members with different personalities and cultures.

In the communication (CO) variable when the respondents were asked about the overall perception, they had about the ease of communication amongst the project managers in the UAE this is agreement with Al-Hajj and Zraunig's (2018) research where this tends to become an extrapolation or underestimation of sorts and there is gaps in communication infrastructure and processes in UAE construction projects that have resulted in massive delays across time periods. In the same variable the respondents were asked about their personal experiences in regards to conflicts arising from the communication gaps due to cultural differences or any barriers this is associated with the studies of Chan, Scott, and Chan, (2004) who suggest that conflicts are commonplace due to cultural barriers. The positive response to the above question can be designated to the practice of closed-door meetings to mitigate such conflicts in a silent and stealthy manner, as well as the lack of awareness of higher executives about these issues.

The research also pointed towards the fact that communication is the most important variable or factor towards attaining a successful project completion this is in line with the results of Rolstadas et al. (2014) wherein they also identified the factors that had critical influence on the result of the project. According to the researchers in their study the project success was influenced by many crucial factors and the most important was communication.

The results indicated that attributed to alternative forms of cooperation does impact Project success. However, owing to the cultural and social factors, along with industrial standards required to complete projects, traditional selection criteria and methods are still utilized in order to build trust amongst clients and stakeholders. The role of the stakeholder relationships have been emphasized by Nguyen and Watanabe (2017). According to them the relationships between the internal and external stakeholders play an important mediating role for the success of the project. The authors postulate that the quality of relationships with internal and external stakeholders by the project managers has positive effect on the success of the projects.

In results between the relationship between the communication and Project success opened up numerous possibilities regarding the underlying factors responsible for both Project success and the lack thereof in UAE construction projects. Firstly, the data trends and their association with each other reveal that the overarching perception shared amongst project managers with regards to the relative ease in practising good communication directly shapes their opinion on the frequency of meetings required to ensure proper Project success. Secondly, the correlation also reveals that the more the respondents believe that good communication is easy to practice, the more developed is their belief that tender documents are clearly formulated. Lastly, an overarching perception shared amongst the respondents pertaining to the ease and comfort associated with ensuring good communication is also responsible for increased frequency of wastage amongst parties involved in construction projects. In other words, lack of attention for the deep-rooted necessities and a lack of deliberation to invest the increased number of resources, efforts and time in terms of ensuring communication is associated to a large extent with decreased respect and understanding amongst stakeholders, leading to wastage at different stages of the project.

The finding of the research shows no impact of Alternative forms of Cooperation indicate that an increased degree of wastage due to lack of respect and understanding of individual roles during project phases is directly associated with and influences to a large degree the belief that alternative forms of cooperation can offer a better answer to dealing with individual concerns of stakeholders during the project (AlShehhi et al., 2021). This gives rise to the logical confirmation that the more wastage experienced during a project, the more open the individuals involved within the same will be towards alternative forms of cooperation. The findings by Bond-Barnard, Fletcher, and Steyn (2018) indicated that trust affects project success when the team members had previous successful interactions. If the team members have no previous experience of working with each other then trust is not developed and the sharing of knowledge is affected too.

Secondly, the Project success by using alternative forms of cooperation indicates that the lack of respect and understanding that leads to wastage in the first place tends to nurture the belief amongst stakeholders (Kessel, Oerlemans, & van Stroe-Biezen, 2014). Project managers perceive that innovation and embracing of alternative forms of cooperation can potentially improve the current situation and reinstate sustainability, mutual understanding and respectful dealings amongst those involved. Lastly, the research also shows that project managers are aware of the fact that an increased need for communication and sharing of experiences often stems from the acknowledgement of the high degree of wastage occurring in a project due to the lack of adequate respect amongst parties involved. At the same time, it shows that frequency of communication is not enough to warrant increased innovation and experimentation, which further requires a deliberate shunning of traditional means of working, which as previous results have shown, is not a fundamentally accepted practice within the UAE construction industry.

5.2 Implications of the study

The results of the study defined in the above chapter offer insights into not only the perception of project managers towards cultural factors of Project success but further enabled a deeper

understanding of how cultural factors affect construction project success in UAE. In this case, the findings indicated that cultural factor influence project manager perception are geared towards the implications that were identified. It was found that most of the project managers who participated as respondents in the study were optimistic about the degree of attention that was given to project coordination, communication, and trust, alternate modes of cooperation and sharing of experience. It was found that the perception developed due to the frequency of opportunities pertaining to sharing of experiences and adequate interactions with stakeholders had a direct and strong impact on Project success.

At the same time, the perception shaped around alternate modes of cooperation was not affecting Project success. In other words, increased wastage due to lack of respect and poor trust amongst stakeholders, which is observed to be associated with high power distance in the cultural framework of UAE, tends to affect project success. Lastly, even with the increased pressures for innovation applied onto project managers due to communication inconsistencies and perceptions pertaining to knowledge sharing capabilities, it was seen that experimentation with alternate modes of cooperation was restricted due to fear that clients will reject their proposals if traditional criteria and methods of working were ignored or neglected.

The implications of these findings show that it is not merely enough to consider the effectiveness of a construction project from the view of narrowing the parameters such as project manager skills and expertise. Moreover, even focusing upon communication and trust as overarching parameters of success is not enough if a holistic picture of the industry and the driving or restraining forces at work within them are to be extracted and studied. The fundamental truth of the industrial scenario of Project success and the factors that contribute to the same can only be obtained if the underlying cultural aspects. Even though the project managers in the study painted a wholly positive picture of Project success and success within the UAE, it was observed that their perception of effectiveness was deeply intertwined with the cultural factors of the construction sector in the UAE.

5.3 Limitations of the Study

The main limitations of this study are the limited sample size and sampling method. The researcher has already specified that the convenience sampling method is used. The sample size was 136 only. Convenience sampling method has certain limitations such as the generalizability of the findings and representativeness of the sample. Additionally, a lack of a more balanced sample based upon their demographic characteristics may be a possible limitation of this study.

A possible limitation is that this study includes only project managers from construction sector of UAE, hence, the findings might not be generalizable as the data has limited representation of the population characteristics. The proposed model in this research study also offers room for further modification and addition of more factors. The cross-sectional nature of the study poses limitations in exploring behavioral changes at different time intervals.

Limitations caused on account of the quantitative nature of the study cannot be ignored. As the study used a questionnaire as a tool of data collection, the researcher was not able to gain behavioral insights on account of the objective nature of the tool. Also, the researcher understands that there is possibility of response bias as the respondents might get influenced by herding behavior.

5.4 Recommendations for Future Studies

The researcher suggest that future studies should provide a consideration of project management practices based on regional and cultural differences in the location of concern needs to be undertaken. Whenever quantitative or qualitative studies involving project managers and other stakeholders are undertaken with regard to project management studies, the implications of the present study posit that statistical analysis, or another level of analytical reasoning should be applied in order to identify underlying mechanisms of perception at work. It is necessary to not consider the actual opinions and perspectives of project managers and stakeholders towards project management effectiveness in a stand-alone manner, but rather to test the same and align

them with overarching cultural dynamics that resulted in the development of the perceptions in the first place. At present, the data was collected using a self-reported survey. In the same manner, interviews and focus group discussions can help gain a different insight into the research problem. Also, using a teacher-reported survey can provide a different perspective altogether.

The potential research design limitations of the quantitative method cannot be ignored. The quantitative method does not help explore the hidden behavioural aspects of the topic. Hence, the researcher recommends that improvement in the research design can help improve the generality of the findings. A longitudinal design is strongly recommended to overcome the limitations of the cross-sectional study. Also, longitudinal research will help in detecting behavioural variations more effectively. The researcher would recommend that future studies be conducted where these factors are evaluated for a potential moderating effect. The researcher recommends the use of stratified or cluster sampling technique for future studies. Such an investigation would explore differences in opinion, which can enhance the generalizability of the findings. The researcher would also like to specify that perception of project team members, leaders and other key stakeholders can be examined in follow-up studies.

Moreover, the cultural dynamics of the study can be expanded by considering not only project managers as the core target audience but further including contractors, clients and other stakeholders involved in projects, thereby offering a multi-faceted view of the factors involved in the Project success paradigm. Lastly, future studies can also focus on project management in general rather than restricting the scope to a specific industry like construction only, which is the case with the current research. In fact, pan-industrial studies can unearth deeper levels of influence with regards to the regional and cultural intertwining of factors with overarching behavioural patterns, intentions, and motivations.

REFERENCES

- Adzmi, R. M., & Hassan, Z. (2018). A Theoretical Framework of Critical Success Factors on Information Technology Project Management During Project Planning. *International Journal of Engineering & Technology*, 7(4.35), 650. <https://doi.org/10.14419/ijet.v7i4.35.23078>
- Al Ameri, T. (2016). The Roles of the Project Management Office In The Execution of the Organizations Strategic Plan. *Dissertation*.
- Albert et al. (2017). Evaluation of project success: a structured. *International Journal of Managing Projects in Business*, 10(4), 796-821.
- Al-Hajj , A., & Zraunig, M. (2018). The Impact of Project Management Implementation on the Successful Completion of Projects in Construction. *International Journal of Innovation, Management and Technology*, 9(1), 21-27.
- Al-Malkawi, H., & Pillai, R. (2013). The impact of financial crisis on UAE real estate and construction sector: Analysis and implications. *Humanomics*, 29(2) , 115-135.
- AlShehhi, N., AlZaabi, F., Alnahhal, M., Sakhrieh, A.,& Tabash, M. (2021).The effect of organizational culture on the performance of UAE organizations, *Cogent Business & Management*, 8(1), 1-21, <https://doi.org/10.1080/23311975.2021.1980934>
- Alqahtani, F. (2017). The relationship between the values of Abu-Dhabi Police and the competencies of their project managers, Dissertation for the degree of Doctor of Philosophy, University of Wolverhampton, UK.
- Ajmal, M. M., Koskinen, K. U. (2008), Knowledge transfer in project-based organizations: An organizational culture perspective. *Project Management Journal*, (39)1, 7–15
- Akanni, P. O., Oke, A. E., & Akpomiemie, O. A. (2015). Impact of environmental factors on building project performance in Delta State, Nigeria. *HBRC Journal*, 11(1) , 91-97.
- Banihashemi, S., Hosseini, M. R., Golizadeh, H., & Sankaran, S. (2017). Critical success factors (CSFs) for integration of sustainability into construction project management practices in developing countries. *International Journal of Project Management*, 35(6), 1103–1119. <https://doi.org/10.1016/j.ijproman.2017.01.014>
- Barbalho, S. C. M., De Toledo, J. C., & Silva, I. A. D. (2019). The Effect of Stakeholders' Satisfaction and Project Management Performance on Transitions in a Project Management Office. *IEEE Access*, 7, 169385–169398. <https://doi.org/10.1109/access.2019.2955446>

- Bodolica, V., Spraggon, M., & Zaidi, S. (2015). Boundary management strategies for governing family firms: A UAE-based case study. *Journal of Business Research*, 68(3) , 684-693.
- Bond-Barnard, T. J., Fletcher, L., & Steyn, H. (2018). Linking trust and collaboration in project teams to project management success. *International Journal of Managing Projects in Business*, 11(2), 432-458.
- Bredillet, C., Yatim, F., & Ruiz, P. (2010). Project management deployment: the role of cultural. *International Journal of Project Management*, 28(2), 183-193.
doi:<https://doi.org/10.1016/j.ijproman.2009.10.007>
- Castro Silva, H. F., Velásquez Pérez, T., & Rojas Puentes, M. P. (2018). Adoption of project management methodologies in Colombia project manager's perspective. *Journal of Physics: Conference Series*, 1126, 012032. <https://doi.org/10.1088/1742-6596/1126/1/012032>
- Chan, A. P., Scott, D., & Chan, A. P. (2004). Factors Affecting the Success of a Construction Project. *Journal of Construction Engineering Management*, 130, 153-155.
- Cleland, D. (1994), Project management Strategic design and implementation. McGrawHill, New York
- Davis, K. (2016). A method to measure success dimensions relating to individual stakeholder groups. *International Journal of Project Management*, 34, 480-493.
- de Carvalho et al. (2015). Project management and its effects on project success: Cross-country and cross-industry comparisons. *International Journal of Project Management*, 1-14.
- Deloitte, (2020). 2020 engineering and construction industry outlook.
<https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us2020-engineering-construction-outlook.pdf>
- Du Plessis, Y., Hoole, C.(2006), An operational 'project management culture' framework-part 1, *SA Journal of Human Resource Management*, 4(1), , 36-43.
- Dvir, D., Shenhar, A. J. (2015), What great projects have in common. *IEEE Engineering Management Review*, 43, (3), 71–73
- Engelbrecht, J., Johnston, K. A., & Hooper, V. (2017). The influence of business managers' IT competence on IT project success. *International Journal of Project Management*, 35(6), 994–1005. <https://doi.org/10.1016/j.ijproman.2017.04.016>
- Faried, M., & Saad, M. (2018). Key Success Factors Impacting the Success of Innovation in UAE Construction Projects. *Proceedings of 3rd International Sustainable Buildings Symposium*, (pp. DOI: 10.1007/978-3-319-64349-6_39). Dubai.

- Faridi, A., & El-Sayegh, S. (2007). Significant factors causing delay in the UAE construction industry. *Construction Management and Economics*, 24 (11), 1167-1176.
- Gajendran, T., Brewer, G., Dainty, A., & Runeson, G. (2012). A conceptual approach to studying the organisational culture of construction projects. *Construction Economics And Building*, 12(2), 26. doi: 10.5130/ajceb.v12i2.2434
- Gunduz, M., & Yahya, M. (2018). Analysis of Project Success Factors in Construction Industry. *Technological and Economic Development of Economy*, 24 (1), 67-80.
- Haaskjold, H. ., & Andersen, B. . (2022). In search of Empirical Evidence for the Relationship Between Collaboration and Project Performance. *The Journal of Modern Project Management*, 7(4). Retrieved from <https://journalmodernpm.com/index.php/jmpm/article/view/JMPM02207>
- Hasani, M. (2018). Cultural and Economic Risks Factors in UAE Construction. *International Journal of Academic Research in Business and Social Sciences* , 449-471.
- Hofstede, G. (1991). *Cultures and organisations*. New York: McGraw-Hill.
- Hornstein, H. A. (2015). The integration of project management and organizational change management is now a necessity. *International Journal of Project Management*, 33(2), 291-298.
- Hoxha, L., & McMahan, C. (2019). The Influence of Project Manager's Age on Project Success. *Journal of Engineering, Project, and Production Management*, 9(1), 12–19. <https://doi.org/10.2478/jeppm-2019-0003>
- Jaafar, K. (2020). The Impact of Cultural Diversification on Project Processes: Evidence from Dubai - UAE. *The Journal of Modern Project Management*, 8(1). , 162-186.
- Kerzner, H.R. (2013). *Project Management: A Systems Approach to Planning, Scheduling, and Controlling*. Wiley.
- Kessel, F. G., Oerlemans, L. A., & van Stroe-Biezen, S. A. (2014). No creative person is an island: Organisational culture, academic project-based creativity, and the mediating role of intraorganisational social ties. *South African Journal of Economics and Management Science*, 17, 46-69.
- Khan, A. N., Singh, J., Kaur, D., & Arumugam, T. (2021). The Success of Construction Projects: Empirical Evidence from the United Arab Emirates. *Global Business and Management Research: An International Journal*, 12(3), 47-59.

- Kuen, C., Zailani, S., & Fernando, Y. (2009). Critical factors influencing the project success amongst manufacturing companies in Malaysia. *African Journal of Business Management* , 16-27.
- Larsen J.K., Shen G.Q.P., Lindhard S.M. and Brunoe T.D. (2015). Factors Affecting Schedule Delay, Cost Overrun, and Quality Level in Public Construction Projects. *Journal of Management in Engineering*, 32(1), 1-29
- Liphadzi, M., Aigbavboa, C., & Thwala, W. (2015). Relationship Between Leadership Styles and Project Success in the South Africa Construction Industry. *Procedia Engineering*, 123, 284–290. <https://doi.org/10.1016/j.proeng.2015.10.091>
- Lindhard, S., & Larsen, J. K. (2016). Identifying the key process factors affecting project performance. *Engineering, Construction and Architectural Management*, 23(5), 657–673. <https://doi.org/10.1108/ecam-08-2015-0123>
- Nair, P., Bahukhandi, D., & Tauseef, S. (2020). Non-Pecuniary Factors Affecting The Success Of Construction Projects In United Arab Emirates. *International Journal of Scientific and Technology Research* , 1074-1084.
- Nekvapilova, I., & Pitas, J. (2016). Factors Affecting Project Management in the Public Sector. *International Conference on Knowledge Based Organizations* (pp. 10.1515/kbo-2016-0037). Brno, Czech Republic: De Gruyter.
- Nguyen, L. H., & Watanabe , T. (2017). The Impact of Project Organizational Culture on the Performance of Construction Projects. *Sustainability*, 9(781). doi:doi:10.3390/su9050781
- Pace, M. (2019). A Correlational Study on Project Management Methodology and Project Success. *Journal of Engineering, Project, and Production Management*, 9(2), 56–65. <https://doi.org/10.2478/jepm-2019-0007>
- Project Management Institute (2013). A guide to the project management body of knowledge. PMI, Philadelphia, Penn.
- Pinto, J. K. (2016). *Project Management: Achieving Competitive Advantage* (4 ed.). Harlow,UK: Pearson Education.
- Piowar-Sulej, K. (2021). Organizational culture and project management methodology: research in the financial industry. *International Journal of Managing Projects in Business*, 14(6), 1270-1289. doi:DOI 10.1108/IJMPB-08-2020-0252
- Radujković, M., & Sjekavica, M. (2017). Project Management Success Factors. *Procedia Engineering*, 196, 607-615. doi:doi: 10.1016/j.proeng.2017.08.048

- Rameezdeen, R., & Gunarathna, N. (2012). Organisational Culture in Construction: An Employee Perspective. *Construction Economics And Building*, 3(1), 19-30. doi: 10.5130/ajceb.v3i1.2908
- Rolstadas et al. (2014). Understanding project success through analysis of project management approach. *International Journal of Managing Projects in Business*, 7(4).
- Ruuska, K. (1999), Projekti hallintaan. Suomen Atk- Kustannus Oy.
- Santos, I., Barriga, G., Jugend, D., & Cauchick-Miguel, P. (2019). Organizational factors influencing project success: an assessment in the automotive industry. *Production*, 29.
- Saraf, D. (2013). Study of Factors Affecting Performance of Construction Projects. *International Journal of Science and Research*, 4 (5), 1339-1341.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students* (8 ed.). Pearson.
- Schein, E. (1990). Organizational culture. *American Psychologist*, 45(2), 109-119. doi:<https://doi.org/10.1037/0003-066X.45.2.109>
- Sekaran, U., & Bougie, R. (2016). *Research Methods For Business: A Skill Building Approach* (6 ed.). WILEY & Sons.
- Thi, C. H., & Swierczek, F. W. (2010). Critical success factors in project management: implication from Vietnam. *Asia Pacific Business Review*, 16(4), 567–589. <https://doi.org/10.1080/13602380903322957>
- Ullah Khan, A., & Sandhu, M. (2016). Benchmarking national culture and decent work practice indicators in project- based industry - Lessons from United Arab Emirates. *Benchmarking: An International Journal*, Vol. 23 , 490–518.
- Van den Berg, P. T., & Wilderom, C. P. (2004). Defining, measuring, and comparing organisational cultures. *Applied Psychology*, 53, 570-582.
- Van Marrewijk, A., (2007) Managing project culture: The case of Environ Megaproject. *International Journal of Project Management*, 25(3), 90–299.
- Vlahov, R., Misic, S., & Radujkovic, M. (2016). The influence of cultural diversity on project management competence development – the Mediterranean experience. *Procedia – Social and Behavioral Sciences*, 226, 463-469. doi:<https://doi.org/10.1016/j.sbspro.2016.06.212>
- Vrchota, J., Rehoř, P., Mařáková, M., & Pech, M. (2021). Critical Success Factors of the Project Management in Relation to Industry 4.0 for Sustainability of Projects. *Sustainability*, 13(281), 1-19. doi.: <https://>

- Wai, S., Yusof, A. M., Ismail, S., & Ng, C. (2013). Exploring Success Factors of Social Infrastructure Projects in Malaysia. *International Journal of Engineering Business Management*, 5, 4. <https://doi.org/10.5772/55659>
- Weick, K.E. (1987) Organizational Culture as a Source of High Reliability. *California Management Review*, 29, 112-127. <https://doi.org/10.2307/41165243>
- Willar, D., & Coffey, V. (2010). Construction performance and organisational culture. *Engineering, Construction And Architectural Management*.
- Yazici, H. J., (2009) The role of project management maturity and organizational culture in perceived performance. *Project Management Journal*, 40(3), 14–33.
- Zou, J., Zillante, G., & Coffey, V. (2012). Project Culture in the Chinese Construction Industry: Perceptions of Contractors. *Construction Economics And Building*, 9(2), 17-28. doi: 10.5130/ajceb.v9i2.3018
- Zureehan ,M. & Lee, K. (2019). The Effect Of Top Management Support And Collaborative Team On Project Performance In Malaysian Construction Industry:Moderating Effect Of Trust, *International Journal Of Industrial Management* , 13 (1), 422 – 437

Appendix A Cover Letter and Questionnaire

Questions Responses 146 Settings

Section 1 of 2

ORGANIZATIONAL CULTURE FACTORS AFFECTING THE PROJECT EFFECTIVENESS IN THE CONSTRUCTION INDUSTRY OF UAE

This survey is specifically designed to focus on five core aspects of project performance, namely Project Coordination (PC), Communication (CO), Trust (T), Alternative Forms of Cooperation (AC) and Shared Experience (SE). There is no need to enter any personal information and email address (along with any other identity-based data) will be kept completely confidential - you are completely and irrefutably anonymous while answering these questions.

Please provide answers according to your experience and be as honest and authentic as possible. The aim of the survey is to develop a better means of integrating project management principles in construction projects in UAE. Your participation in this study is entirely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. It is essential for us to learn your opinions.

Your survey responses will be strictly confidential, and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential.

Questionnaire

Section 1-General Part

The objective of this section to collect general information about the survey respondent.

- 1) Your gender
 1. Male
 2. Female
- 2) Please choose your age category
 1. 18 to 25 years
 2. 26 to 35 years
 3. 36 to 45 years
 4. 46 to 55 years
 5. Above 56 years

3) How long have you been working in the present organization?

1. Less than one year
2. From 1 to 5 years
3. From 6 to 10 years
4. From 11 to 15 years
5. More than 15 years

Section-2

Kindly choose the answer that best describes your opinion of the statement.

- 1= Strongly disagree
2= Disagree
3= Neither agree nor disagree
4= Agree
5= Strongly agree

Statements	Response
PC1 - The extent of management and coordination from the project management perspective is adequate	
PC2 - Project changes are communicated quickly and effectively	
PC3 - Weekly meetings are enough to ensure project execution	
PC4 - Tender documents are formulated clearly	
PC5 - Do you experience waste between parties in the construction stage due to a lack of understanding and respect	
CO1 - The extent of communication between internal project parties is often optimal	
CO2 - The extent of communication between external project parties is often optimal	
CO3 - Good communication is easy to practice	
CO4 - I rarely experience conflicts and disputes between project parties resulting from lack of communication	
CO5 - Communication inconsistencies and conflicts are rarely caused by errors or defects in the project documents	

TO1 - The general level of trust between construction project parties is high	
TO2 - I always know what the other parties' contributions are to the construction project	
TO3 - The other project parties understand my role in the construction project	
TO4 - The extent of legal agreements is sufficient	
TO5 - Contributes traditional selection criteria for obtaining confidence among the project parties	
AC1 -Alternative forms of cooperation are used to an inadequate extent	
AC2 - I am positively inclined by participating in projects where alternative forms of cooperation are applied	
AC3 - Alternative forms of cooperation can create better conditions for addressing individual interests in the construction project	
AC4 - The probability of joint profit is increased by using alternative forms of cooperation	
AC5 - I always have the opportunity to contribute my knowledge in all phases of the project	
SE1 - There is always an internal accumulation of experience and sharing of knowledge in all phases of the project	
SE2 - There is always an external accumulation of experience and sharing of knowledge in all phases of the project	
SE3 - Experience gathering takes place using a set procedure	
SE4 - Sharing of knowledge is used adequately	
SE5 - I only share my experience and knowledge if it is demanded	
PS1-The project quality will be satisfactory	
PS2-The project will be completed on schedule.	
PS3-The project will be implemented within the budgeted cost.	
PS4-Safety and environmental conditions in the course of project will be maintained	
PS5-The project will be profitable for the client	

Appendix B Google Forms Responses

The screenshot shows the Google Forms interface for a survey titled "Key Factors for Effective Project Performance in the UAE". The "Responses" tab is selected, showing 146 responses. A red banner at the top of the response area indicates "Not accepting responses". Below this, a message for respondents states: "This form is no longer accepting responses". The interface includes tabs for "Summary", "Question", and "Individual" responses, with "Individual" currently selected. A pagination bar shows "1 of 146" responses. Below the response area, the survey title is repeated: "ORGANIZATIONAL CULTURE FACTORS AFFECTING THE PROJECT EFFECTIVENESS IN THE CONSTRUCTION INDUSTRY OF UAE". A note below the title states: "This survey is specifically designed to focus on five core aspects of project performance, namely Project Coordination (PC), Communication (CO), Trust (T), Alternative Forms of Cooperation (AC) and Shared Experience (SE). There is no need to enter any personal information and email address (along with any other identification".

Key Factors for Effective Project Performance in the UAE

Questions Responses 146 Settings

146 responses

Not accepting responses

Message for respondents

This form is no longer accepting responses

Summary Question Individual

< 1 of 146 >

Responses cannot be edited

ORGANIZATIONAL CULTURE FACTORS AFFECTING THE PROJECT EFFECTIVENESS IN THE CONSTRUCTION INDUSTRY OF UAE

This survey is specifically designed to focus on five core aspects of project performance, namely Project Coordination (PC), Communication (CO), Trust (T), Alternative Forms of Cooperation (AC) and Shared Experience (SE). There is no need to enter any personal information and email address (along with any other identification