Journal of Management Info

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Research Article

Influence of the contractor's culture on the UAE construction project's performance

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ABSTRACT

Academics have recently paid a lot of attention to culture, as it has been shown to have an impact on organizational performance. There has been little research carried out on assessing the correlation between project organizational culture and performance in the industry of construction. This study aims to verify how the culture of the contractor affects the construction projects performance in the UAE according to work practices at the project level. Data from 124 recently completed construction projects in the UAE were examined using questionnaires to collect specific data for this purpose. This study found a significant relationship between the contractor's culture and the project's performance. The findings reveal that the contractor significantly affects the overall performance of the project. Client satisfaction with quality is more impacted by the contractor's culture, while contractor satisfaction with profitability is least impacted by the contractor's culture. The findings of this study will assist those who work in construction projects in identifying ways to enhance the culture of the contractor at the project level. This can help improve the performance and success of construction projects.

Keywords: *Contractor's Culture; Project's Performance; Construction Industry; Project Management*

Submitted: 29 July 2023 *Revised: 18 September 2023* *Accepted: 29 September 2023*

1. INTRODUCTION

In recent years, the construction industry of the United Arab Emirate (UAE) has represented an important sector of the country's economy. In leading Global Competitiveness Reports, the economy of the United Arab Emirates (UAE) has gotten high marks for several economic indicators (Algheth & Sayuti, 2019, 2020; Ministry of Economy, 2018). In this country, the construction sector is one of the sectors of the Middle East and Gulf region's construction industry that is expanding the fastest, and it has experienced a boom in recent years as a result of numerous megaprojects in a variety of fields, including infrastructure projects, residential and commercial buildings, hospitals, factories, and schools for both the public and private sectors. Between 2005 and 2016, the UAE government invested about 414 billion USD in the construction sector (Algheth & Sayuti, 2019, 2020). 8.7% of the total Gross Domestic Product was produced by the construction and building sector (GDP), or about USD 33.6 billion, in 2017, up from USD 33.36 billion at the end of 2016, according to the United Arab Emirates (UAE) government's 2018 Annual Economic Report (Ministry of Economy, 2018). The UAE economy will be affected if construction projects do not perform as expected, given the UAE government's massive investment in this industry.

https://doi.org/10.31580/jmi.v10i3.2848

The project organization is typically claimed to have unique features that distinguish it from conventional organizations. These characteristics include the fact that it only exists during the project's delivery, that its members are from a variety of sources, and that its products are typically unique. Despite its significance, it is challenging for participants in the project to understand the organization's culture. It is important to confirm that one of the significant variables affecting project performance is the organizational culture of the project(Cheung et al., 2012, 2015). Moreover, considering the exclusivity of the construction sector and the organization of the project, the project's environment may have a big impact on how participants act. Additionally, it is thought that cultural differences may lead to communication conflicts that make it harder for construction organizations to accomplish project goals. As a result, it is necessary to investigate project organizational culture as it relates to industry practices. But there haven't been many studies on project organizational culture, especially in the construction industry (Nguyen & Watanabe, 2017). The actions and performance of the contractor are crucial to the success and performance of projects in the construction sector (Algheth & Sayuti, 2019, 2020; Ren et al., 2008). Since it involves numerous national and international organizations and employees, the UAE's construction project is managed by several individuals from a variety of backgrounds. This causes different human behavior as well as different expectations for the project. This makes it challenging to evaluate how project organizational culture, particularly for contractors, affects the performance of construction projects from the perspective of work practices.

The following issues have reportedly been reported with construction project performance: time delay, budget overrun, poor quality, poor construction safety, client dissatisfaction, low labor productivity, and contactor dissatisfaction with profitability (Nguyen & Watanabe, 2017; Takim & Akintoye, 2002). To improve the construction project's performance, it is important to figure out the things that could affect its success or failure. There has been extensive research on the Critical Success Factors (CSFs) relevant to construction projects over the years (Alias et al., 2014; Chan et al., 2004; Chua et al., 1999; Fortune & White, 2006). Construction project management has five CSFs: project related factors, actions of project management, procurement procedures, the external environment, and project culture (Alias et al., 2014; Belout, 1998; Chan et al., 2004; Chua et al., 1999; Fortune & White, 2006; Warrick, 2017). In order to achieve organizational goals, management must pay close attention to CFS factors on a regular basis (Fortune & White, 2006; Nguyen & Watanabe, 2017). Recently, the culture area has received much attention from researchers since it has been observed that it influences the performance of an organization (Cheung et al., 2012, 2015; Zuo et al., 2008). Culture is seen as a major factor in how well an organization does in the business world (Stanford, 2010). Culture is essential for improving project performance (Cheung et al., 2012, 2015). Among the many CSFs that have been studied in the project management field are those related to Support from management, relationships, communication, participation, and decision making. All these things can be thought of as "cultural" elements because they have to do with how people act and think during the project delivery process (Belassi & Tukel, 1996; Chan et al., 2004; Chua et al., 1999; Nguyen & Watanabe, 2017).

2. LITERATURE REVIEW

2.1. PROJECT PERFORMANCE FACTORS

The following problems have reportedly been reported with construction project performance: time delay, budget overrun, poor quality, poor construction safety, client dissatisfaction, low labor productivity, and contactor dissatisfaction with profitability (Takim & Akintoye, 2002). Construction project critical success factors (CSFs) have been extensively researched in literature over the years (Alias et al., 2014; Chan et al., 2004; Chua et al., 1999; Fortune & White, 2006). Project-related factors, project management actions, procurement procedures of the project, the external environment, and project culture are the CSFs related to construction project management (Alias et al., 2014; Belout, 1998; Chan et al., 2004; Chua et al., 1999; Fortune & White, 2006; Nguyen & Watanabe, 2017; Warrick, 2017). For the organization to reach its objectives, management should monitor CFS factors closely and continuously (Fortune & White, 2006).Performance measurement methods in the construction industry have influenced a variety of government entities, clients, both public and private, construction companies, and other project participants. Performance measurement typically refers to the routine reporting and information gathering regarding the inputs, efficacy, and efficiency of construction projects (Nguyen & Watanabe, 2017). The two models created to measure the performance of construction projects are the Integrated Performance Index and Key Performance Indicators (Pillai et al., 2002; Takim & Akintoye, 2002). In order to evaluate the success of research and development (R&D) projects, Pillai et al. (Pillai et al., 2002) created the Integrated Performance Index. Key performance indicators (KPIs) were used in the construction sector in the UK to evaluate project success using a set of 10 criteria. 7 of these parameters related to project performance, while 3 related to company performance. The project performance indicators are the construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product, and client satisfaction with the service. The 3 key performance indicators for a company are productivity, profitability, and safety (Takim & Akintoye, 2002). Using these indicators to assess organizational performance It's very common (Cheung et al., 2012, 2015). Process performance is measured using industry specific KPI systems in many industries, which is essential to an organization's success. Even though KPIs are very popular, it seems like they are best used to measure performance at the project level (Kagioglou et al., 2001).

2.2. CULTURE, ORGANIZATION CULTURE AND PROJECT ORGANIZATIONAL CULTURE

Researchers have paid a lot of attention to the topic of culture in project management since it has been observed to affect an organization's performance (Cheung et al., 2012, 2015; Zuo et al., 2008). Any organization's business success depends greatly on its culture (Stanford, 2010). Studies have examined the impacts and influences of culture on various levels, including those of the nation, industry, organization, and profession (Nguyen & Watanabe, 2017). The way in which an organization's culture reflects assumptions about clients, employees' objectives, products, and activities, as well as assumptions that have historically worked well, is known as its organizational culture. These assumptions show up in behavior

norms and expectations about what is best and most appropriate to do (Laurent, 2003; Naoum et al., 2015). According to Stanford (2010), "organizational culture is an organizationally specific "experience" felt both subjectively and individually by insiders and outsiders.". Additionally, organizational culture is described as "the values and beliefs that govern behavior in an organization." (Choi et al., 2015). Organizational culture is described as "specific ways of conducting organizational functions that evolved over time... (these) practices reflect the organization's shared knowledge and competence" from the perspective of work practices (Kostova, 1999). A common understanding of organizational work practices within organizations that may vary from others is referred to as the organizational culture (van den Berg & Wilderom, 2004). The project-based construction industry needs to have a better understanding of cultural concerns at the project level and their impact and influence on the construction project's performance, as there are a few studies that have discussed this idea. The general attitude toward projects within the company is known as "project culture." (Zuo et al., 2008). The construction project organization is an organization that sets up a pattern of interrelationships, responsibilities, and authority among the key participants (the client, the consultant, and the contractor) so that the client's goals can be met (Walker, 2015). The construction industry is a labor-intensive industry for many different companies. In this industry, completing projects requires the right people in the right positions, as well as effective communication across several lines of accountability. However, when the fundamental presumptions are not properly communicated and their organizational cultures do not align, effective communication becomes a problem. Some studies claim that there are significant cultural differences between the construction industry and other industries. Due to its distinctive business environment, which includes fixed project durations, geographically dispersed construction, highly itinerant laborers, dynamic site management, and numerous companies and organizations that must collaborate on the project, as the construction industry has a unique culture. As a result, transferring management tools from one industrial sector to another requires a significant redesign. This fact highlights the essential of conducting research on the organizational culture of construction projects (Riley & Brown, 2001).

2.3. The Relationship Between Project Culture and Performance.

Zuo et al. (2008), conducted a study in China to ascertain the perceptions of the Chinese contractor relating to the effects of project culture issues at the project level on the performance of regional construction projects. The findings of this study demonstrated that specific project cultures had a significant impact on project outcomes. The research also showed that practitioners of the construction industry are very concerned with creating an appropriate project culture.

In Slovenia, Stare (2011) conducted research to determine the extent to which project organizational culture has an impact on the project's completion in Slovenian companies. This study found that project organizational culture had a significant impact on project performance. Additionally, it was noted that the project manager's increasing level of

authority has a favorable effect on many cultural dimensions and a direct relevance on the success of the project.

Authors Cheung et al. (2015), ascertain the connection between project organizational culture and procurement strategy in Vietnam. They accomplished this by examining cultural artifacts at the project level from a work-practice based point of view using project-specific data from 199 completed construction projects and a review of the literature. The factors of project's cultural have been divided into five groups: (1) goal alignment and trust represented by the following cultural artifacts: "objective understanding," "roles and duties of the constructor," and "roles and duties of the client," Mutual respect, information sharing, project managers' encouragement, sharing of mutual trust, the value of people's contributions, opportunities provided, commitment from supervision, and leadership. (2) Constructor commitment is exemplified by the cultural artifacts below: the constructor's commitment to quality, the constructor's commitment to schedule, and the constructor's commitment to budget. (3) Cooperative orientation, as shown by the following cultural artifacts: looking forward to the project's benefits, having a good working relationship, being open and respectful to each other, sharing ideas and support, assigning blame and taking responsibility, showing pride and celebrating, getting clients to agree to agreements, following leaders' instructions, and making decisions. (4) Leadership commitment, which is represented by the following cultural artifacts: leaders' guidance, decision-making support, and empowerment assignments. (5) Worker orientation, which is represented by the following cultural artifacts: respect for workers, training sessions, and concerns for workers. The research has revealed a strong link between project organizational culture and procurement characteristics. Additionally, the results might help to improve the project's culture, which is anticipated to enhance the project's performance.

Researchers Wei and Miraglia (2017), carried out an empirical investigation in a project-based organization in the Chinese construction industry to look at how shared beliefs, norms, and artifacts, the three main components of organizational culture, affect knowledge transfer between projects. The findings of this research demonstrated how cultural component at lower organizational levels interact with organizational culture at the corporate level to affect how individuals decide which kinds of knowledge are most important to share, when knowledge can be shared or kept to oneself, and how much either is okay.

In Vietnam, Nguyen and Watanabe (2017), studied the cultural artifacts at the project level from the perspective of work-practice for completed construction projects to ascertain the effect of project organizational culture on the performance of construction projects. The project's cultural factors have been divided into five groups: (1) Goal alignment and reliance, which are represented by the following cultural artifacts: Objective clarity, roles and responsibilities of the contractor and client, a shared understanding, information sharing, and support for the project manager Mutual reliance, the worth of each individual's contribution, the opportunities offered, the dedication of the supervisor, and the leadership of the leaders. (2) Contractor commitment, which is represented by the following cultural artifacts: contracting firm's dedication to quality, deadliness, and budget restrictions. (3) A

cooperative orientation, which is represented by the following cultural artifacts: commitment to the project's benefits, productive working interactions, openness, and respect for one another, support and sharing of ideas, responsibility and assigning blame, recognition of accomplishments, client's commitment to agreements, direction from leaders, and participation in decision-making. (4) Empowerment orientation, represented by the following cultural artifacts: empowering tasks, supporting decision-making, and leaders' guidance. (5) Worker orientation, which is represented by the following cultural artifacts: training sessions, consideration for employees, and respect for employees. In that research, the following performance indicators have been adopted: (1) participant satisfaction, which is extracted based on the five sub measures: satisfaction with quality by client, satisfaction with schedule by client, satisfaction with cost by client, participant satisfaction with safety, and satisfaction with profitability by contractor. (2) productivity of labor. (3) Lessons learned. (4) Overall performance. The results of this study showed that worker orientation, goal alignment and reliance, and contractor commitment to contract agreements are the cultural factors that have the greatest impact on project performance. Contractor commitment also improved overall performance and participant satisfaction. Goal alignment, trust, and contractor commitment ensure learning performance, while contractor commitment and cooperative orientation increase labor productivity.

Researchers Ren et al. (2008), conducted a study in Dubai, United Arab Emirates, in order to identify the key causes of construction project delays. The three main causes of project delays were discovered to be the client, the consultant, and the contractor. Unrealistic project duration, numerous provisional sums items and prime cost items, irregular payment to the main contractor by the client, subcontractors and suppliers nomination, and variations were the top five reasons for delay cited by the client. The consultant determined that incomplete drawings, slow document approval, lack of contract documents, many changes to the drawings and specifications, and the inspection process duration were the main causes. Preparation of the method statements by the contractor, a project with inadequate funding, poor organizational management, choppy external and internal communications, and construction errors were the main contributing factors. The findings of this study indicate that arbitrary project duration, assigned subcontractors, and cultural effects were the main causes of delays.

Almathami (2020), carried out a study in the Kingdom of Saudi Arabia (KSA) to investigate the current productivity levels, existing productivity improvement barriers, existing productivity improvement strategies, and the existing organizational culture (OC) profiles of businesses in the construction industry of KSA. The study also examines how OC affects productivity and the relationships between OC and productivity. According to the study's findings, "adaptability" is the most important cultural characteristic in the KSA construction sector, while "involvement" is the least important. The dynamic tensions show that OC is more rigid than flexible in the KSA's construction industry, that it frequently prioritizes external adaptation over internal integration, that it has a top-down management structure, and that it responds to the construction industry rather than creating new systems and procedures.

Cheung et al. (2012), conducted a study in Hong Kong to better comprehend how organizational culture (OC) and the effectiveness of construction organizations with regard to project-based organizational culture interact. A condensed list of artifacts that relate to OC identifiers and performance was found by the researcher during the literature review for this study. The eight OC are team orientation, employee engagement, goal clarity, coordination and integration, innovation orientation, performance emphasis, and incentive orientation. The four performance indicators are financial, internal business process, custom, innovation, and learning. The study's findings suggest that innovation is the OC that will have the biggest influence on the effectiveness of construction organizations. This outcome emphasizes the need for a culture that encourages innovation and supports creativity methods and materials.

3. MATERIALS AND METHODS

3.1. Research Design and Date Collection

In this study, the influence of the contractor's culture on the performance of the projects in the UAE construction industry is examined using a mixed-methods approach. The collection of data was based on a thorough analysis of the literature and the opinions of significant project participants who had worked on construction projects in the United Arab Emirates (clients, consultants , and contractors). At the first stage, 13 people were interviewed, mostly project managers or senior managers and engineers. A pilot study has been conducted using a tentative questionnaire model with those participants to ensure that the instructions were clear, and the questions had reasonable contents. Finally, the questions were divided into the following four parts: (1) general information about the respondents; (2) the description of cultural artifacts related to the contractor's culture; (3) project performance indicators; and (4) an invitation to respondent participation in an open discussion and to make comments. A random sample of project practitioners who worked on construction projects in the UAE and played the roles of Managing Director, Area Manager, Projects Manager, Project Director, Project Manager, Project Engineer and Resident Engineer for clients, contractors, and consultants were given a questionnaire to fill out. As a part of the information collection for the study, 200 sets of questionnaires were given out to project participants. These questionnaires were distributed via email, social media, and interviews. Follow-up phone calls and messages will also be supported tools to remind and urge the participants to respond to the questionnaires. Using a five-point Likert scale that went from one (strongly disagree/not at all satisfied) to five (strongly agree/extremely satisfied), the participants answered about their most recent completed project (Nguyen & Watanabe, 2017). A total of 137 replies were received, of which 124 could be considered valid enough to be analyzed with an effective rate of 62%. According to the valid questionnaires, 26.6% were from clients or clients' representatives, 40.3% were from consultants, and 33.1% were from contractors. Regarding the organization sector of participants, 16.1% were from the public sector and 83.9% were from the private sector. Furthermore, 67.7% were from national (local) organizations, and 32.3% were from international organizations. Regarding the type of project, 62.9% were building projects,

8.9% were villa projects, and 28.2% were infrastructure projects. Regarding participant position, 4.0% were the managing director, 8.9% were the area manager, 22.6% were the projects manager, 1.6% were the project director, 37.9% were the project manager, 19.4% were the project engineer, and 5.6% were the resident engineer. Furthermore, 36.3% of participants' years of experience were above 20 years, 31.5% were 16 to 20 years, 15.3% were 11 to 15 years, 14.5% were 5 to 10 years, and 2.4% were less than 5 years. Table 1 shows the culture of the contractor along with 15 cultural artifacts, and Table 2 shows 8 project performance indicators that come as a result of detailed analysis of literature and interviews.

Table 1. Contactor's Project Culture and Artifacts

Project Cultural Factor	No.	Cultural Artifacts (CA)
Contractor's Project Culture	1	Contractor commitment to contract agreement
	2	Roles and obligations of contractor
	3	Contractor submissions on time
	4	Contractor commitment to the schedule
	5	Contractor commitment to the budget
	6	Contractor commitment to quality
	7	Contractor qualified site staff
	8	Contractor proper site planning
	9	Contractor managing and controlling the site
	10	Contractor submits qualified subcontractors/suppliers
	11	Contractor controlling subcontractors/suppliers
	12	Submission of Quality materials by contractor
	13	Executing the approved variations orders by contractor
	14	Contractor takes all safety requirements and precautions at site
	15	Contractor releasing subcontractor's/supplier's payments on time

Table 2. Indicators for Project Performance

No.	Employed Performance Indicators
1	Client satisfaction with quality
2	Client satisfaction with schedule
3	Client satisfaction with cost
4	Participants satisfaction with safety
5	Contractor satisfaction with profitability
6	Labor productivity
7	Lesson learned
8	Overall performance

3.2. Analytical Methods

Version 26.0 of the Statistical Package for the Social Sciences (SPSS) software was used to analyze the data gathered from the questionnaire survey. By looking at the general information about the respondents, the standard deviation, and the mean score using descriptive statistics (frequency and destructive measures). The reliability of all the items in this study was ensured using the Cronbach's alpha coefficient threshold. Alpha values can range from 0 to 1. The groupings are more reliable the higher the alpha value. A Cronbach's alpha value greater than 0.7 is considered "good" or "acceptable" in reliability testing

(Cheung et al., 2012, 2015; Nguyen & Watanabe, 2017). By using Pearson's correlation coefficient, linear correlation was adopted to evaluate the correlation between the independent (Contractor's Culture) and dependent variables (Performance Indicators). A higher Pearson's correlation coefficient value indicates more correlation between the variables. The range of the Pearson's correlation coefficient is 0 to 1 (Cheung et al., 2012, 2015; Malik & Adeleke, 2018).

4. RESULTS AND DISCUSSION

4.1. CONTRACTOR'S CULTURE

The average mean scores of each related cultural artifact on a five-point scale were used to calculate the contractor's project culture scores. Results are shown in Table 3. These scores indicate that the factors are above-average identifiers of contractor culture in the UAE construction industry. The contractor's culture mean score was (3.4000). Table 4 shows the ranking of scores of cultural artifacts in the contractor's culture. Cronbach's alpha was found to be 0.977, which is regarded as a very acceptable level of internal consistency reliability for the extracted factors.

Table 3. Score of Contractor's Project Culture and related artifacts

Project Cultural Factor	No.	Cultural Artifacts (CA)	Mean of Score (Cultural Artifacts)	Mean of Score (Contractor's Culture)
Contractor's	1	Contractor commitment to contract agreement	3.5323	3.4000
Project	2	Roles and obligations of contractor	3.5968	
Culture	3	Contractor submissions on time	3.2903	
	4	Contractor commitment to schedule	3.2984	
	5	Contractor commitment to budget	3.3065	
	6	Contractor commitment to quality	3.3871	
	7	Contractor qualified site staff	3.3629	
	8	Contractor proper site planning	3.4597	
	9	Contractor managing and controlling the site	3.4516	
	10	Contractor submits qualified subcontractors/ suppliers	3.4194	
	11	Contractor controlling subcontractors/ suppliers	3.4274	
	12	Submission of Quality materials by contractor	3.5565	
	13	Executing the approved variations orders by contractor	3.3871	
	14	Contractor takes all safety requirements and precautions at site	3.5242	
	15	Contractor releasing subcontractor's/supplier's payments on time	3.0000	

Table 4. Ranking of Scores of Cultural Artifacts in the Contractor's Culture

Project Cultural Factor	Cultural Artifacts (CA)	Mean of Score (Cultural Artifacts)
	Roles and obligations of contractor	3.5968
	Submission of Quality materials by contractor	3.5565
Contractor's	Contractor commitment to contract agreement	3.5323
Project Culture	Contractor takes all safety requirements and precautions at site	3.5242
	Contractor proper site planning	3.4597
	Contractor managing and controlling the site	3.4516

Project Cultural Factor	Cultural Artifacts (CA)	Mean of Score (Cultural Artifacts)
	Contractor controlling subcontractors/suppliers	3.4274
	Contractor submits qualified subcontractors/suppliers	3.4194
	Contractor commitment to quality	3.3871
	Executing the approved variations orders by contractor	3.3871
	Contractor qualified site staff	3.3629
	Contractor commitment to budget	3.3065
	Contractor commitment to schedule	3.2984
	Contractor submissions on time	3.2903
	Contractor releasing subcontractor's/supplier's payments on time	3.0000

4.2. Compare the Means of Key Project Participants

Due to the diverse backgrounds and goals of the business of clients, consultants, and contractor organizations in the construction industry, the representativeness of the identified contractor's project culture may differ across participant organizations. A comparison of means was done to determine whether there was a significant difference in how important the identified contractor's project culture was perceived by the clients, consultants, and contractors. Table 5 provides a summary of the findings. The contractor's project culture has received significant scores that are more than 3.0 on a Likert scale with a limit of 5, proving that using a contractor's project culture to identify project culture in the construction industry is appropriate. The Compare Means results of this study show that despite the three types of participants' affiliation with various types of organizations, there is no evidence to suggest that they have different opinions regarding the contractor's project culture.

Table 5. Compare the Means of Project Contractor's Culture

Organization activity	Analysis Factor	Contractor's Culture
Client/Client representative	Mean	3.1556
	Std. Deviation	1.07013
	N	33
Consultant	Mean	3.4213
	Std. Deviation	0.63022
	N	50
Contractor	Mean	3.5707
	Std. Deviation	0.95138
	N	41
Total	Mean	3.4000
	Std. Deviation	0.88116
	N	124

4.3. Project Performance Indicators

To calculate the performance indicator scores, the average mean scores based on their scores on a scale of five were employed. Table 6 shows the results. These results show that the UAE's construction industry's performance indicators are above average. Participants' satisfaction with safety received the highest ranking (3.29), followed by lessons learned

(3.27), client satisfaction with quality (3.09), labor productivity (3.06), client satisfaction with cost (2.86), contractor satisfaction with profitability (2.81), and client satisfaction with schedule (2.56), which received the lowest ranking. The overall performance was (2.99).

Table 6. Score of Performance Indicators

No.	Performance Indicators Employed	Mean of Score
1	Client satisfaction with quality	3.09
2	Client satisfaction with schedule	2.56
3	Client satisfaction with cost	2.86
4	Participants satisfaction with safety	3.29
5	Contractor satisfaction with profitability	2.81
6	Labor productivity	3.06
7	Lessons learned	3.27
8	Overall performance	2.99

4.4. The Correlation Between the Contractor's Project Culture and Performance

In order to assess the relationship between the contractor's culture and project performance, a linear correlation was performed by using Pearson's correlation coefficient to analyze the relationship between the variables. According to Table 7, The contractor's culture and project performance are closely related (coefficient of Pearson's correlation is 0.819). The culture of the contractor has a greater impact on client satisfaction with quality (coefficient of Pearson's correlation is 0.760), followed by lessons learned (coefficient of Pearson's correlation is 0.719), client satisfaction with schedule (coefficient of Pearson's correlation is 0.710), participant satisfaction with safety (coefficient of Pearson's correlation is 0.700), labor productivity (coefficient of Pearson's correlation is 0.682), client satisfaction with cost (coefficient of Pearson's correlation is 0.670), and then contractor satisfaction with profitability (coefficient of Pearson's correlation is 0.492), which was ranked the lowest project performance indicator effected by the contractor's culture. Fig. 1 represents a scatter diagram of the correlation between the contractor's culture and project performance.

Table 7. Values of Correlation Coefficient Between Contractor's Culture and Project Performance.

Project Cultural Factor	Coefficient of Pearson's Correlation	Client satisfaction with quality	Client satisfaction with schedule	Client satisfaction with cost	Participants Satisfaction with safety	Contractor Satisfaction with profitability	Labour productivity	Lessons learned	Overall performance
Contractor's Culture	Coefficient of Pearson's Correlation	0.760**	0.710**	0.670**	0.700**	0.492**	0.682**	0.719**	0.819**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*** At the 0.01 level, correlation is significant (2-tailed)* *** At the 0.05 level, correlation is significant (2-tailed)*

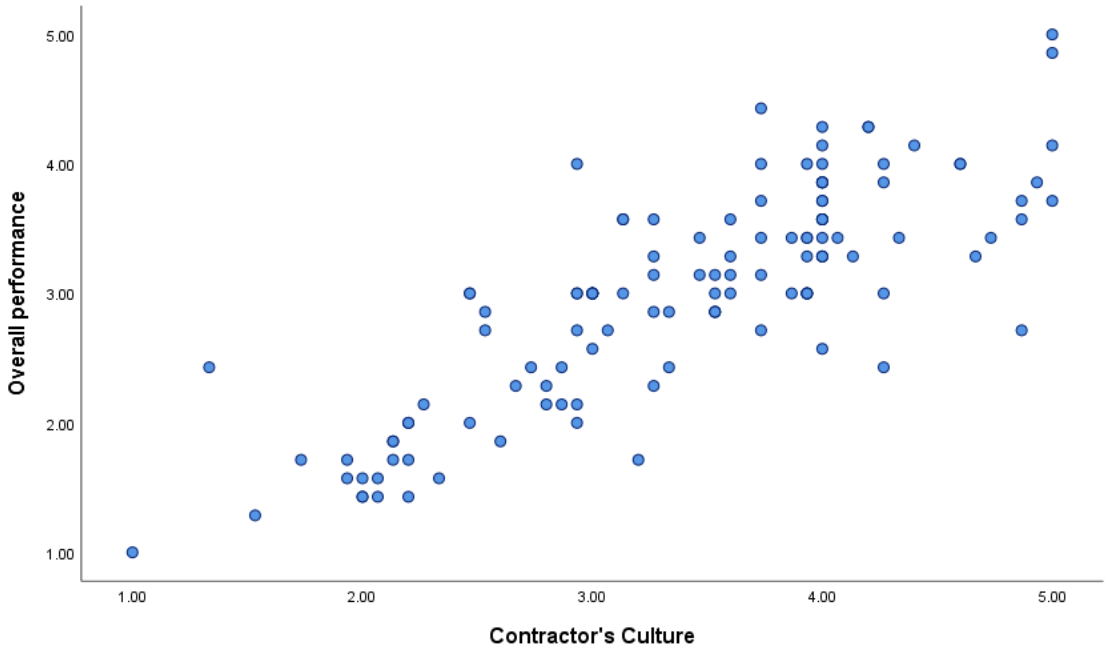

Fig. 1. The Correlation Diagram Between the Contractor's Culture and Project Performance

5. CONCLUSION

This study's aim was to empirically identify the culture of the contractor in the UAE construction industry based on a practice perspective. The correlation between the contractor's project culture and performance has been studied using statistical analysis. This study shows that despite the three types of participants' affiliation with various types of organizations, there is no evidence to suggest that they have divergent opinions on contractor's project cultures in the construction industry of UAE. The results of the study show a significant connection between the contractor's culture and project performance. The results of this study show that the project culture of the contractor has a big effect on the overall performance. The culture of the contractor has a greater impact on client satisfaction with quality, followed by lessons learned, client satisfaction with schedule, participant satisfaction with safety, labor productivity, client satisfaction with cost, and then contractor satisfaction with profitability, which was ranked the lowest project performance indicator effected by the contractor's culture. The results of this study assist people who work in the construction industry in implementing procedures that will improve the project-level contractor's culture and, eventually, improve project success and performance.

Author Contributions:

Adel Khalifa Mohammed Conceptualizing the research idea, designing the study, overseeing the data collection process, and being involved in the data collection and analysis. Md. Sayuti Bin Ishak contributed to the data analysis and interpretation of the results. Also, he contributed to revisiting the manuscript critically for important intellectual content.

Funding:

The author declares that no external funding has been received for this research study.

Institutional Review Board Statement:

Not applicable.

Informed Consent Statement:

Not applicable

Data Availability Statement:

Data will be available on request, according to the policy of the journal.

Acknowledgments:

Authors would like to thank everyone who took part in the field studies and everyone with experience who shared their knowledge to help with this research.

Conflicts of Interest:

None.

Reference:

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