Research Article

Contract Management System among Selected Construction Companies in Qatar

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ABSTRACT

The State of Qatar’s construction industry proliferates, attracting international investors and contractors to large-scale projects. This growth, however, is accompanied by an inevitable increase in claims and disputes, causing significant delays and additional costs to the project. The study’s focus is to understand better the practical problems affecting the contract management system's efficiencies in selected construction companies in Qatar. A descriptive correlational research design method was carried out using a survey questionnaire to determine the degree of importance and awareness of the contract management system in terms of risk, change, and claim management. Also, the results revealed that employees perceived risk, change, and claim management as integral parts of the contract management system. A Pearson correlation coefficient was used to test the correlation between the variables covered in the study, and the statistical evidence concluded that there is a significant strong linear relationship between the degree of importance and awareness in the contract management system. Therefore, based on the literature presented in this study and the data gathered from fifty-two respondents who voluntarily participated in the survey, the authors recommended that the organizations must embrace these contract management methods to cut costs, shorten lead times, and boost profitability: clear dispute resolution procedures, precise change control procedures, proper record keeping, effective risk mitigation plan, competent team members, and the organization’s capability and readiness to resort to arbitration when other dispute resolution procedures are exhausted.

Keywords: Change management, Claim management, Contract management, Construction industry, Dispute, delays, Qatar, Risk management

Introduction

Qatar’s construction industry is experiencing significant growth due to the Qatar National Vision 2030 and the FIFA World Cup Qatar 2022. In preparation for the world’s largest sporting event, Qatar embarked on a construction boom to build the required infrastructure. The construction industry became one of the...
most critical sectors in Qatar as it faced mounting pressure. According to Mordor Intelligence Industry, the Qatar Construction Market will be worth USD 57.68 billion in 2023 and USD 89.27 billion in 2028, with a compound yearly growth rate of 9.13% from 2023 to 2028. Qatar is committed to hosting the 2022 FIFA World Cup, achieving its National Vision 2030, and hosting the Asian Games in 2030, resulting in various industrial and infrastructure projects. Qatar’s 2050 Transport Plan includes 22 projects worth USD 2.7 billion, to be awarded in 2023. The World Bank predicts the country’s economy will grow by 4.5% in 2023 and 4.4% in 2024. Despite foreign investments, the construction industry faces challenges with banking policies, non-compliance, delayed payments, and personnel shortages.

The focal objectives of contract management are to ensure that the contract is delivered on time, at the proper place, in the right amount, completed to the required specifications, standards, and quality, and completed within the agreed price, as per World Bank (2018). As a result, a project is considered successful (Chan & Kumaraswamy, 1996). They are adopting and implementing specific project management techniques to handle projects and meet customer needs and expectations successfully (Unegbu et al., 2021). Throughout history, the global construction industry has struggled to deliver projects within agreed timelines and budgets (Chukwu et al., 2023). In fact, 98% of the mega projects incur cost overruns with an average cost increase of 80% of the original value, and 77% incur delays with an average slippage of 20 months behind the original schedule. One of the reasons for this poor record is the need for more productivity resulting from poor organization, contractual misunderstandings, inadequate communication, insufficient risk management, and limited talent management (Gali et al., 2015). Payment delays and disputes between parties are also identified as the two primary issues the construction company encounters (Carmichael et al., 2012, as cited by Ahmadisheykhsarmast et al., 2018).

As stated in the 2018 Global Construction Disputes Report by Arcadis, improper contract administration continued to be the main reason for construction disputes, especially in North America, the United Kingdom, Continental Europe, and the Middle East. Globally, disputes had an average cost of US$43.4 million and lasted 14.8 months. The average cost of disputes in the Middle East increased to US$91 million in 2017 from US$56 million in 2016, primarily because of failure to provide interim awards on time extensions and compensation, improper contract administration, and owner-directed changes. This proves that the need for better contract management and administration is one of the most common causes of regional disputes (Leith, n.d.).

Contract management is a critical part of the construction business. It is mainly concerned with written contracts representing an obligation to perform a service in exchange for money. Negotiating contract terms and conditions, ensuring compliance, and managing potential deviations during the project execution process are all part of it. Contract management ensures that all parties to the contract adhere to all its terms and conditions and document and approve any necessary changes to its implementation (Namusonge, 2016, as cited by Njoki et al., 2021).

Most of the time, it takes a conflict for both parties to realize the need for effective contract management. Despite the crucial role that good contract administration plays in ensuring the success of a project, flawed contract management procedures are blamed for numerous disputes, delays, and cost overruns on construction projects. A project’s ability to succeed depends on effective contract administration, and if the project is managed correctly, its value for money will continue, and its goals may be protected. An effective contract management system ensures that the contractor works per the contract’s provisions, which covers the procurement’s success (Muhammad et al., 2019; as cited by Briggs, 2022). Suppose the company needs to achieve the required criteria. In that case, its reputation might suffer, there might be fines and penalties, and the company might have to spend more time resolving difficulties or dealing with legal concerns (Zaremba, 2022). Contract compliance implies following
the laws, regulations, and instructions that control the purchase process. It was also contended that accountability, openness, justice, and equity must be the cornerstones of contract compliance and the rule of law (Babirye et al., 2023).

While a lack of risk management awareness can result in significant time, cost, and quality losses (Sharma & Gupta, 2019), the primary causes of inefficiencies in contract management practice are the contract management team's lack of training, expertise, and knowledge; stakeholders' inability to cooperate and communicate effectively; and a lack of timely monitoring and evaluation during the project implementation phase (Sah & Bhat-tarai, 2021). Moreover, construction claims management procedures are positively influenced by planning, control, procurement, environmental considerations, quality and schedule, contractor motivation, stakeholders' management abilities, and time and cost (Festus, 2021). Contract non-compliance, on the other hand, carries a substantial cost and may result in missed deadlines, delays in contract execution, litigation, or even contract cancellation. This might lead to poor performance, inefficiency, inefficient resource use, and a lack of transparency and accountability (Babirye et al., 2023).

In this study, the authors will provide valuable insights and recommendations for improving the quality of the companies’ current contract management system. By identifying the best practices and innovative approaches to contract management, this study can substantially contribute to the body of knowledge and the advancement of the contract management system, particularly in the State of Qatar. The study may have shared some similarities with the existing studies; however, its context, population characteristics, sample size, environment, and the author’s writing style make it unique.

The Objectives of the Study

The study’s focus is to understand better the practical problems affecting the contract management system’s efficiencies in selected construction companies in Qatar. To achieve this goal, the study aimed firstly to investigate the degree of importance and awareness of the contract management system as perceived by the employees in terms of risk, change, and claim management. Also, the study intends to determine if the degree of importance and awareness have a significant relationship. Lastly, at the end of the study, the authors will develop recommendations based on the study’s results and endorse them to the companies for system improvement.

Methods

Research Design

The study employed a descriptive-correlational design using a survey questionnaire, which is appropriate for this study since it seeks to systematically gather data to characterize a phenomenon, circumstance, or population that will help answer the research problem.

Research Environment

The study was conducted in the State of Qatar, which is in Western Asia and the Middle East and lies in the Persian Gulf in eastern Arabia, north of Saudi Arabia, and the United Arab Emirates. The construction sector in Qatar is playing a significant role in powering the country’s economy and has emerged as the most significant job creator in the region. The aim is to turn Qatar into a self-sustaining, diverse economy that is no longer heavily reliant on oil. This involves several infrastructure projects that will help enhance its residents’ living standards. This growth, however, is accompanied by an inevitable increase in claims and disputes, causing significant delays and additional costs to the project. The primary author chose this environment for the research to understand better the contract management system in selected regional construction companies.
Respondents
The respondents were the employees from selected companies who are involved in the processing and implementation of contracts in the project, which included: the managing director, operations director, commercial director, project manager, contract manager, contract administrator, quantity surveyor, construction manager, procurement engineer, and accountant. Moreover, using the convenience sampling technique, the researchers drew fifty-two (52) respondents who voluntarily participated.

Instrumentation
The researchers employed survey questionnaires, a frequently used research technique, because they provide a quick, cost-effective, and simple way of acquiring basic information from respondents. These instruments are beneficial for measuring subject behavior, preferences, intentions, attitudes, and views. The survey questions were taken entirely from the contract management process assessment model developed by the Joint Inspection Unit of the United Nations System (2015), which was used to assess the contract management processes during post-award. The questionnaire comprises twenty-eight closed-ended statements organized into three categories: risk management, change management, and claim management. In addition, the tool was reviewed and approved by the research advisor and a contract management expert who serves as a manager.

Data Collection and Treatment
The data was collected through a survey questionnaire with closed-ended statements with predetermined answers for respondents. The questionnaires were distributed to sixty-five respondents via email, Facebook Messenger, and WhatsApp, but only fifty-two participated in the survey. After collecting the data, the data was evaluated and analyzed using mean scores calculated for each statement in the Likert scale. Each response is assigned a number or a score from 1 to 4. Using the rating scale in Tables 1 and 2, the results were used to assess the degree of importance of the contract management system and the degree of employees’ awareness of the current practices. Aside from that, the study employed the Pearson correlation coefficient to determine the relationship between the variables covered in the study. Hence, based on the study’s findings, the authors will provide a recommendation to help the company enhance its system.
Table 1. The Scale of the Level of Agreement on the Importance of Contract Management System

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Scale Range</th>
<th>Response Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3.26 - 4.00</td>
<td>Extremely Important</td>
</tr>
<tr>
<td>3</td>
<td>2.51 - 3.25</td>
<td>Somewhat Important</td>
</tr>
<tr>
<td>2</td>
<td>1.76 - 2.50</td>
<td>Slightly Important</td>
</tr>
<tr>
<td>1</td>
<td>1.00 - 1.75</td>
<td>Not Important at All</td>
</tr>
</tbody>
</table>

Table 2. The Scale of the Level of Employee Awareness about the Company’s current system

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Scale Range</th>
<th>Response Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3.26 - 4.00</td>
<td>Very Aware</td>
</tr>
<tr>
<td>3</td>
<td>2.51 - 3.25</td>
<td>Somewhat Aware</td>
</tr>
<tr>
<td>2</td>
<td>1.76 - 2.50</td>
<td>Slightly Aware</td>
</tr>
<tr>
<td>1</td>
<td>1.00 - 1.75</td>
<td>Not Aware at All</td>
</tr>
</tbody>
</table>

Ethical Consideration

Throughout this study, the researchers placed the highest priority on ethics, mainly when collecting data. They upheld the principles of social responsibility, transparency, and data privacy. To ensure fairness and objectivity in the survey, the researchers remained vigilant against undue influence from personal interests, emotions, or affiliations. By clearly outlining the key elements and benefits of the study, they aimed to impact the contract management systems among participating companies positively.

Everyone was made aware of the identities of the researchers, the significance of the study, and the justification for it after gaining all required consent. The researchers thoroughly explained the significance of the employee’s role and all the expected advantages of the study.

Results and Discussion

The first research objective is to determine the degree of importance and awareness of the contract management system regarding risk, change, and claim. The fifty-two respondents from three different companies included directors (10%), senior managers (21%), and middle-level managers and supervisors (69%), which suggests suitability to provide reliable data on the objectives of the study.

Table 3 shows that employees perceived risk, change, and claim management as the fundamental elements of the contract management system. The employees rated change management as the highest among the three, with an average weighted mean score of 3.51, followed by risk management (3.39) and claim management (3.28).

Table 3. Summary of the Degree of Importance of each Variable with their Average Weighted Mean and Descriptive Equivalent

<table>
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<tr>
<th>Variables</th>
<th>Average Weighted Mean</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management</td>
<td>3.51</td>
<td>Change management is extremely important in the contract management system.</td>
</tr>
<tr>
<td>Risk Management</td>
<td>3.39</td>
<td>Risk management is extremely important in the contract management system.</td>
</tr>
<tr>
<td>Claim Management</td>
<td>3.28</td>
<td>Claim management is extremely important in the contract management system.</td>
</tr>
</tbody>
</table>

The results in Table 4, on the other hand, indicate that the employees must be made aware of the said procedures. Change management ranks first, with a weighted mean score of 3.05. Risk management came in second with a score of 2.83. Finally, claim management received a score of 2.78.
Table 4. Summary of the Degree of Awareness of each Variable with their Average Weighted Mean and Descriptive Equivalent

<table>
<thead>
<tr>
<th>Variables</th>
<th>Average Weighted Mean</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management</td>
<td>3.05</td>
<td>The employees are somewhat aware of the company's change management procedures.</td>
</tr>
<tr>
<td>Risk Management</td>
<td>2.83</td>
<td>The employees are somewhat aware of the company's risk management procedures.</td>
</tr>
<tr>
<td>Claim Management</td>
<td>2.78</td>
<td>The employees are somewhat aware of the company's claim management procedures.</td>
</tr>
</tbody>
</table>

In this study, Figure 2 illustrates the correlation between two variables. The calculated Pearson correlation coefficient (r) is 0.8985, indicating a robust linear relationship between the degree of importance and awareness. In other words, when employees perceive something as more important, their level of awareness also tends to increase.

Figure 2: Strong Linear Correlation
where: X stands for “importance,” and Y stands for “awareness.”

Discussions
Contract management is critical to project success (Sah & Bhattarai, 2021). It increases an organization’s operational performance as measured by various metrics, including quality, flexibility, speed, efficiency, and supplier relationships (Mwendwa, 2019).

According to the Asian Development Bank (2021), contract management aims to guarantee that all parties fulfill their contractual duties under each awarded contract, whether wholly or partially funded. The benefits of good contract management include supplier meeting requirements, environmental and social benefits, reputation, health and safety, legislative compliance, lower risks, probity, and value for money.

In a study conducted in South Africa, poor contract management results in the loss of income generated from a successful contract. While contract management was acknowledged as a significant facilitator to the performance of the state companies, it turned out that it needed to be consistently sustained in the organization (Njoki et al., 2021). Kibo & Mwangangi (2017) added that when payments are not made on time and the conditions of the agreement are not correctly followed, it...
adversely affects the relationship between the supplier and the company.

The most critical contract management activities include contractor monitoring and acceptance management; managing contract relationships; contract administration; dispute resolution; and contract closure (Eriksson & Westerberg, 2017).

**Risk Management.** Risk in construction is inevitable because of the complex dynamic environment in which construction work must be performed (Sharma et al., 2019). The complexity of building projects creates several risks that need to be managed to prevent common project issues (Sabil, 2020). A significant barrier to the implementation and execution of formal risk management procedures in the construction industry was a need for more training in the subject; however, when a project team effectively executes a risk management procedure, the project's likelihood to succeed is increased. (Albogamy et al., 2015; Aras et al., 2016, as cited by Sabiel, 2020).

**Change Management.** Change orders are identified as the most common cause of construction delays for construction companies (Ogunlana et al., 1996, as cited by Oluwajana et al., 2022), and owner-initiated changes and errors and omissions by designers are among the leading causes of change orders (Issac et al., 2008; Lu and Issa, 2005, as cited by Hao et al., 2008). Project changes have excellent and negative implications on project budgets (Saeed, 2018). A substantial change may lead to frequent delays in the project’s schedule, a revision of the work description, and a rise in the demand for resources, including materials, labor, equipment, and overtime. If changes are not handled properly, they could lead to contract conflicts that could lead to the project’s failure (Hao et al., 2008). On the other hand, positive changes may result in increased revenue.

**Claim Management.** A dispute is a situation of human interaction in which there is disagreement (Mwendwa, 2019), so having an effective claim management system is crucial (Chovichien & Tochaiwat, 2006). The primary goal of the claim management process is to settle specific issues effectively and efficiently. Without a procedure to settle disputes, a minor disagreement could escalate into a major one that would affect other areas of other projects (Mohamed et al., 2014). A critical practice that a successful contractor must remember is to avoid litigation and arbitration in claim settlement. (Pogorilich, 1992, as cited by Bakhary et al., 2015). Festus (2021) proposed using multiagent negotiations to resolve construction claims.

**Conclusion**

Contract management is a prevalent practice in which a contract is in place to maintain a strong relationship between the parties throughout a project. It facilitates the communication of negotiated agreements among project stakeholders and guarantees that each receives the desired output. Risk management, change management, and claim management are all integral parts of contract management systems that influence an organization’s effectiveness. Thus, organizations must embrace these contract management methods to cut costs, shorten lead times, and increase profitability.

The study employed a Pearson correlation coefficient, and the statistical evidence revealed a significant linear solid relationship between the degree of importance and awareness in the contract management system.

Moreover, based on the literature presented in the study and the data collected from the fifty-two respondents who voluntarily participated in the survey, it was identified that the most crucial contract management practices that an organization should employ to guarantee the system's effectiveness are: clear dispute resolution procedures, precise change control procedures, proper record keeping, effective risk mitigation plan, competent team members, and the organization's capability and readiness to resort to arbitration when other dispute resolution procedures are exhausted.

However, other organizations might have viewpoints or procedures distinct from the information gathered utilizing the convenience technique from 52 respondents. It is recommended that a future study includes a broader range of respondents, such as 200 employees from five companies, to gain a deeper understanding of the contract management system in
the region. It is also worthwhile to conduct further research on other regional business sectors, such as oil and gas, manufacturing, real estate, and hospitality. Nevertheless, the authors of this study developed recommendations that will help companies improve their systems and complete projects successfully.

**Recommendations**

The authors developed the following recommendations that can be endorsed to the companies to help improve their contract management system.

- Ensure that a structured process is in place and record the risk assessment to make it easy to identify and acknowledge risk priority. It is also essential to observe the performance of risk response actions to notify the management about the need for proactive risk management intervention.

- The failure to understand the contract compliance process can jeopardize the project’s success; therefore, managers must be actively involved in the contract compliance process; devoting significant time and resources to a deeper understanding of the relevant laws, policies, and regulations; appointing competent, dedicated, and knowledgeable contract managers; monitoring deliveries; and making timely payments to providers.

- The most common cause of claims is a change requested by the owner, particularly in the design aspect, which leads to changes in the overall project costs and leads to claims; thus, project staff must have more knowledge and skills in handling claims, good communication between stakeholders in project implementation, and most importantly, document completion and record keeping providing evidence when submitting the claim.

- The risk of inefficient contract management procedures can be avoided by analyzing the competency and qualifications of the contractor’s team before signing the contract.

- The clients and their consultants must also exercise extreme caution when issuing contracts to ensure they are awarded to competent contractors who can successfully handle and complete the project.

- The organization must have a qualified management team, which can be accomplished by hiring skilled experts or providing professional development programs to all its employees to improve their abilities and talents. Establishing study groups and encouraging employees to pursue additional job-related information courses will not only demonstrate that the employee is valued but will also ensure that the employee understands the processes and current techniques of the company. This, in turn, benefits both the employee and the employer.

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Dela Cruz, G. S. & Polinar, 2023 / Contract Management System among Selected Construction Companies in Qatar


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