

A methodology of critical evaluation of the contract selection process used in the construction industry of Kuwait

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Abstract. This paper investigates and critically evaluate the contract selection process employed in the construction industry of Kuwait. It will fully take into account the insights and opinions of engineers working on major construction projects in Kuwait. The different methods used to select the contract form in the Kuwaiti construction industry will be identified. Questionnaires, surveys and interviews will be used as a means of acquiring relevant information with regard to the country's major construction industries, This information will be analysed in order to discover the best means to improve the existing system used in Kuwaiti construction contracts for the selection of contract forms and terms of payment which could be benefit by including steps to ensure that types of project delivery system and term of payment in the future construction projects in Kuwait.

1 Introduction

A construction contract is a legal agreement that binds the owner and the builder of a given project. The contract normally states clearly how recompense for the completed task will be distributed and the specific amount that will be released [1]. A contract provides an arrangement between two or more parties that creates a responsibility to do or not to do a certain thing and establishes a legal framework [2]. A legal framework is comprised of the rights and guarantees that constitute an arrangement between the parties, in which each grants the other a legal obligation and the right to seek redress for the violation of those obligations [3]. Selection of the right kind of contract is a crucial step within the contracting process for both the contractor and the client. All parties need to select the contract based on the short and long-term interests of projects [4]. Within the construction industry specifically, priority is mostly given to the construction method; design by the contractors and sub-contractors; the design and phasing of construction; the clients' equipment installations and other factors determined by the degree of complexity of the project [5]. The types of contract most commonly encountered are lump-sum contracts, cost-plus-fee

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contracts, and unit rate contracts [6]. Regardless of the type of contract being utilised, nearly all are modified as well as customised to fulfil a project's particular requirements [7]. Construction contracts are based on multiple elements, including conditions and cause, obligation and agreement as to the legitimacy of the contract. According to Abdulla and Alhubil [8], this means that the construction contract needs to meet three conditions. These are: the contract element's validity; considerations and the availability of the qualified parties. In the construction industry especially, it is believed that the project's success is directly proportionate to success in choosing the most suitable contractor from among the applicants [9].

Previous research has revealed that the most popular type of construction contract in Kuwait is the Standard Domestic Contract, which has a fixed price as the method of payment [10]. There is no sophisticated analysis of the construction project within the contract selection process and consequently there is a risk of the contract being allocated inappropriately as well as disproportionately. The simplicity of the clauses within the SDC result in difficulties when large-scale and technically complex construction projects are involved. The current system within Kuwait awards contracts with the lowest tender through the Chamber of Central Tendering. The general contract document titled "legal general contracts" was launched in 1971 and has always been one of the contract documents used in private as well as governmental projects within the Kuwaiti construction sector [11]. While there have been various modifications within this document, its basic clauses have not undergone many changes [12]. In the present study, the focus of the author will be on providing different criteria that allow improvements to be made within the existing system of contract selection. In doing so, the author will focus mainly on the multiple selections between payment terms within the project delivery system.

Previously, explanations have been provided on how the system currently utilised for the selection of a type of contract has impacted the interfaces of parties involved in multiple construction projects. Within the contextual setting, it has been noted that construction contracts within Kuwait are afflicted by cost overruns as well as delays due to the poor selection of contracts [13]. Therefore, there is a need for a new study, based on new research, focusing on the connection between the contract selection process and contractual problems. The author will be examining ways that would allow these issues to be identified as well as resolved within the context of Kuwait. Currently, evidence is lacking within published literature of research regarding the critical analysis of the contract selection systems employed in Kuwait. The goal of this research will be to address that gap by providing a set of recommendations based on evidence, so that weaknesses can be mitigated and strengths built upon.

2 The contract selection process used in the construction industry of Kuwait

The standard domestic form is the form most commonly selected for use in Kuwaiti construction projects. 'Fixed price' was found to be the mode of payment most often chosen. The general condition is fixed for the domestic standard while the specific condition determines the description of the project on the contract form. Although there are a large number of projects in Kuwait, a limited number of payment methods are used, these being normally Fixed Price, Remeasure, and Cost Plus [10]. These types are the most common means of payment and are used all over the world. [14]. According to Almutairi, construction projects pass through different phases that vary from project to project. During the lifespan of the project there are six main phases: a concept and feasibility study; the planning and preparation of a consultant agreement; preparation of a contract document; the

construction project and follow-up; the completion of work and approval; and operation and maintenance. These phases are known as the 'life cycles of the project'.

The forms of contract in Kuwait are based on three main documents: tender documents; those dealing with contract conditions; and those providing technical specifications. There is also the contract deed [15]. The tender document includes Instructions for Tenderers, the Bid Tender, the Initial Warranty form, the Final Warranty form, the Bid Documents, and declarations [16]. The "general conditions" include the definition and interpretation of important words, such as 'contract', 'employer', 'contractor' and 'engineer' Also included are clauses defining the duties and powers of the client's "engineer" as well as the limits to how much work the "main contractor" can sub-contract. There are also "general obligations," specifying the form of agreement, performance bonds, on-site inspections and the "sufficiency of the tenders", which is the part of the contract that gives the contractor's minimum acceptable performance requirements and is set by the client. The responsibilities, rights, and relationships of the involved parties are included in the performance contract [17]. The specific conditions are not part of the general conditions, although they provide details of some articles within the general conditions. In addition, the specific conditions may include terms/ details/items/conditions not included in the general conditions.

During the tender phase, there may be difficulties associated with the bidding. This can be due to an occurrence of some error or failure to comply with the required instructions due to the nature of the bidding process. The problems may be the result of late bids, incomplete bids, conflicting bids, alternative bids, and similar bids. [18] These problems and difficulties tend to affect the contracting parties in construction projects in Kuwait. They include variation orders, conflicts in contract documents, termination of projects, delays in work, and dispute resolution. There are two main causes for delay in construction projects: external causes and internal causes. [19]. With regard to the resolution of disputes, methods may include negotiation, mediation, arbitration, and litigation [20]. Litigation and arbitration have proven to be the most popular methods of conflict resolution and are very well established throughout the construction industry.[21]

While the potential of the construction industry is endless, it is a highly complex industry and there are several factors that can have an immense impact on the outcome of any project. There are various challenges in terms of the management of construction projects. To ensure the success of such projects, one of the factors most necessary for the success of the project is contract management. This consists of the process of allowing parties to enter a contract that provides some obligations that they must deliver to one another [22]. Various contractual problems may occur within the construction industry, such as financial problems; issues relating to the tender documents, such as contracts and drawings; issues relating to material adaptation and specification that impact the quality of the work; political issues: administrative issues; the nature of the parties who have entered the contract; the overall environment of the sector, dispute resolution and arbitration, use of technology, and career ethics [23]. In the case of the construction contracts in Kuwait specifically, contractual issues commonly encountered include tender rules, contractual joint ventures, dispute resolution and liability. In terms of tendering, the Central Tender Committee is responsible for the evaluation as well as the award of tenders on behalf of the government [24]. However, it has been discovered that the government has been lax in terms of observing the tender rules. This issue becomes even more pronounced for contracts that are negotiated by the Kuwaiti government. Another critical issue is the resolution of disputes between parties. The primary issues are bureaucratic red tape and corrupt practices within the government, which hinder the peaceful resolution of disputes. In such cases, Kuwaiti law clearly states that contractual parties may assent to foreign arbitration.[25]

Construction contracts are necessary to reduce the conflict which may arise during the process of construction. By creating specific terms and conditions for all parties in contracts, these parties become legally bound to fulfil their responsibilities and duties [26]. However, it often happens that contract disputes occur due to disagreements between the involved parties. This can have a major impact on the construction projects, since the legal proceedings and other factors involved may complicate the situation even further, resulting in more difficulties within the overall project management [27]. Various provisions within contracts are intended to protect the parties, but the parties entering into the contract must be aware of the conditions involved to ensure that their interests would be protected in case any conflict arises. When there is conflict and the interests of various stakeholders or investors are not aligned, the profits of the construction project will also be negatively impacted. However, it is impossible for stakeholders to avoid conflicts, since there is a major disparity in their interests. According to Markus's [28], the construction industry is one where conflict is inherently present, which makes cooperation between parties very difficult. Furthermore, the uniqueness of each project makes it impossible for there to be a standard definition of success and thus each party evaluates success differently. While contracts are supposed to protect each party, there are often areas in which they can be lacking, particularly when one of the parties is unaware of the appropriateness of the terms and conditions mentioned [29]. This results in various issues within contracts, which will be comprehensively explored. These include construction delays, termination of projects, variation orders, and dispute resolution .

3 Strategies required for the enhancement of the system of contract selection in Kuwait's construction sector.

The present research suggests various strategies for improving the form of contract selection. An important lesson learned in relation to the selection of the procurement method is that it needs to be tailored to fit the specific requirements and constraints of the project. These include the funding, timing, complexities, and policy makers of the project. Approaches to the various international forms of contract in the selection of contract forms were reviewed. The FIDIC, the AIA and the JCT have different ways of creating a form through multiple types of project delivery systems and terms of payment. It was seen that, in the case of the JCT, the nature of the project, the scope of the work, client control measure, accountability, contractor appointment, final cost certainty, limitations, and construction changes are all factors to be taken into consideration when choosing an appropriate contract. Because of its comprehensive nature, the JTC approach can be regarded as more appropriate than that of the AIA and the FIDIC.

Previous studies have suggested that an independent and distinct approach to the two stages would yield better results, especially, in the long term. It is thus important, when choosing an approach to a project, to understand that different stakeholders will have different opinions and suggestions regarding the course of action. The type of client one deals with will also differ from one project to another. Additionally, the market conditions during the procurement phase (such as quality assurance, risk, complexity, accountability, costs, and time) might also differ, making it more likely for conflicts related to the budget of the project to arise [30]. The analysis of [31] established the importance of the procurement method taking into account the nature and the constraints of a given project. Devising an appropriate procurement method will be beneficial in terms of avoiding risks and resolving disputes related to the project. It will take into consideration characteristics that are bound to influence the choice of the procurement method, such as funding, timing, policy makers, the complexities of agency recruitment, the brief, the type of work, the site and the value of the project at each phase of the construction, [32] and will establish the

factors that need to be considered when deciding on the appropriate procurement method, namely Project Size, Cost, Time, Accountability, Quality Assurance, Organization, Complexity, Risk, Market, Finance, and Design. Furthermore, these criteria for the selection of an appropriate method call for a consideration of the criteria for the selection of the appropriate type of contract

The available literature available for this topic has made it evident that no single type of contract can be perfect. Each party involved in the contract will have different requirements, which means that each contract type will be unique. Considering that the success of any construction project is dependent primarily on factors like management skills, detailed work plans, experience, deliverables that are time-sensitive, and many others, it is crucial to define how responsibility is to be divided in a project. This indicates the importance of selecting the right type of contract in order to determine the nature of the relationship between the contracting parties. Moreover, the contract selection needs to be particularly clear about how the needs of the owner as well as the contractor can be fulfilled. Many contractors have a point of view that differs from that of the owners, since the former believe that profits should be maximized, which can result in cutting corners with materials or other work. The owners, on the other hand, will endeavour to keep the costs low an original schedule is followed as agreed upon initially, and that the result would be of high quality. The literature review has shed light on the various types of contracts along with the current system utilized within Kuwait for the selection of contracts. One of the most notable shortcomings in the available literature is a lack of understanding of contract selection and of various requirements that are specific to Kuwait. Moreover, the knowledge about contractual issues within the construction industry of Kuwait is somewhat limited, and large-scale construction has been largely ignored in the literature. This aspect in particular is crucial, since large-scale projects are often the most problematic ones. Contract selection for such projects can also be of great benefit to the construction industry of Kuwait, as each party would be able to understand the other's requirements while also trying to ensure that appropriate contracts are selected. Additionally, most research studies have focused on the lack of technology or appropriate management practices, whereas the human and social factors involved in the implementation of those technologies are often neglected. "Soft" management aspects, such as trust, are also a crucial part of contracts, and it would be beneficial for this perspective of project management to be subject to further investigation. Furthermore, many options in terms of the factors that are crucial when it comes to the selection of a contractor. However, most of this information is not localized to the context of Kuwait.

The literature review has identified several questions that need to be answered, *viz*:

1. How will the existing system deal with the time available to deliver the contract?
2. How effectively does the system address the needs of projects of different sizes?
3. Does the system allow for choices related to the different types of projects ?
4. Does the system include a stage whereby the funding mechanism is considered ?
5. How effectively does the system deal with the projects within different sectors of the industry?
6. Does the system adequately allow for different procurement pathways?
7. How does the system deal with different payment mechanisms?

In the next chapter, methodology for use in answering the above questions will be proposed.

4 Proposed methodology

This paper will propose a methodology for the establishment of a new system for the selection of contracts in the Kuwaiti construction industry. The research methodology and design chapter of this paper outline the approach adopted in the quest to successfully answer the research question and to satisfy all the stated objectives. This chapter contains documentation of all the possible options available for this study. It also contains a narrowing down of the available options to the choices that were considered the most viable for the research question and that promised to yield the most successful results. The research design and the various processes chosen during this research are also outlined.

In order to achieve the aim of project, there will be a critical analysis of the existing systems used for the selection of contract forms for construction projects within Kuwait. There will also be evidence-based proposals for building on the strengths of the current system and for mitigating its weaknesses.

Figure 1 below lists the research questions. It maps the research objectives and indicates five distinct phases in the form of an “onion” model. These phases will assist in clarifying the nature of the research model adopted for the research paper.

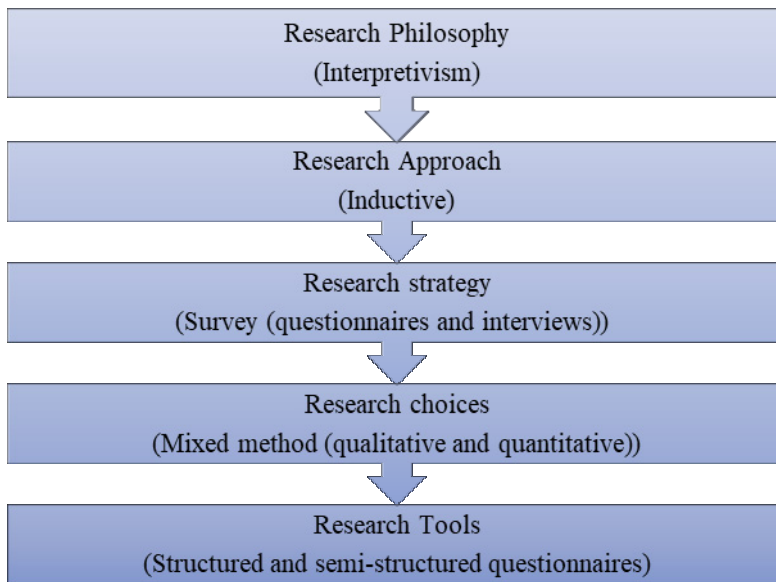


Fig. 1. “Onion” model of the (authors’/ author’s) research.

The text below outlines the specific data that will be sought from specific groups of participants.

Phase I: Review via desk research the existing families of international contract forms, project delivery systems and terms of payment.

Phase II: Review and identify the most frequently used contract forms, project delivery systems and terms of payment by investigating the current system used to select contract forms in the construction industry in Kuwait. This will be done through a questionnaire survey addressing major contractors, major design consultants, legal consultants, and project management service providers.

Phase III: Provide a strategy need to framework aiding selects the best chosen of contract form, project delivery system, and term of payment by multiples all of those types

depending on different criteria, such as time, size type, funding and sector. This will be done by means of a questionnaire survey addressing major contractors, major design consultants, legal consultants, and project management service providers. The author will provide a questionnaire survey as a means of reviewing the strategies that are needed to enhance the process of contract selection in the Kuwaiti construction industry. Figure 2 below will review the strategies necessary for the development of the current system by focusing on two main sections, i.e., the type of project and the nature of the project.

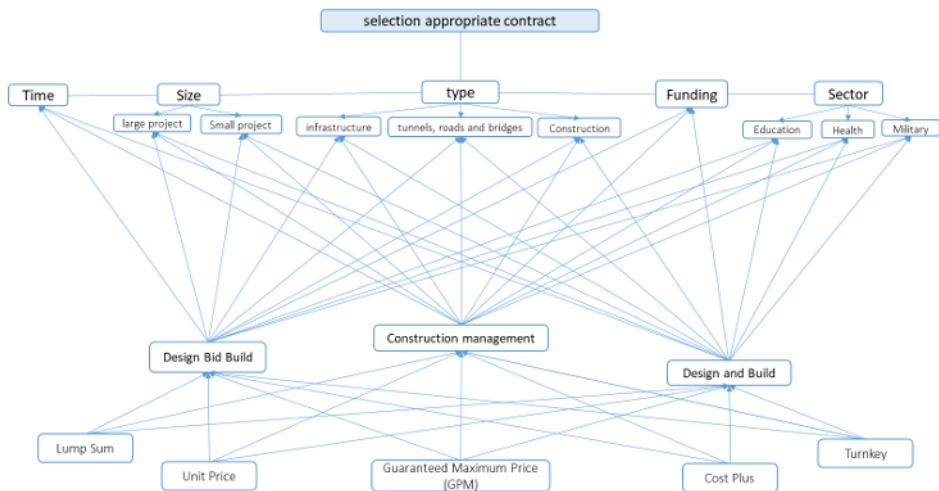


Fig. 2. Proposal by the authors for an appropriate selection contract form for use in Kuwaiti construction projects.

Phase IV will be the core phase in this study and will provide a new system for choosing the best contract form for both the public and the private sectors of the Kuwaiti construction industry. Questionnaire surveys and semi-structured interviews will be addressed to those who deal with contract forms in the industry, such as consultants, contractors, employers, arbitrators and other experts.

Before starting Phase III of the study, the current system for selecting the contract form will be investigated to review that the most families contract form, the project delivery system, and terms of payment in Kuwaiti construction projects in Kuwait, with a particular focus on the strengths and weaknesses of the current system and with the aim of providing a new system by multiple in between contract form, project delivery system and terms of payment to create a suitable contact form depending on the nature and type of project, as shown above.

Phase V: The secondary phase will be an enquiry regarding the extent to which modification of contract selection by multiple choice of a contract form, project delivery system and terms of payment depending on the project type or nature of the project will help to improve the performance of construction projects in Kuwait. This will reduce the number of variations of orders, delays, terminations and disputes, which cause an increase in the number of interrupted projects in the Kuwaiti construction industry. A questionnaire survey addressed to major contractors, major design consultants, employers, arbitrators/experts and project management service providers. The questionnaire will serve to develop the strategy outlined in the previous section for the improvement of the performance of the Kuwaiti construction industry. The table below will review the

evolution of the new system, which is proposed as a strategy for improving the performance of the nation's construction industry.

1. Current/Recent research data

- Academics – Data in relation to all questions about the Kuwaiti construction industry; the system currently in use for the selection of the contract form in industry; investigate the existing system by reviewing construction contract issues and the strategies needed for the selection of contract forms in the construction industry of Kuwait.

2. Main study data

- Arbitrators/experts (Local) – Target 50 – Survey with a follow-up interview.
- Clients (People who have managed construction projects of different sizes) – Target 50 – Survey with a follow-up interview.
- Consultants (companies of different sizes) – Target 100 – Survey with a follow-up interview.
- Contractors (companies of different sizes) – Target 100 – Survey with a follow-up interview.

3. Guide for Consultant and Contractor company size classification:

- Small (10 to 20 employees)
- Medium (20 to 40 employees)
- Large (more than 50 employees)

Surveying includes different forms and structures of interviews and questionnaires. This is a mixed-method research study that aims to obtain qualitative data. Therefore, both questionnaires and interviews are used to gather the required information in this paper and the mixed approach is adopted. The research contains questions and tools tailored to capture both qualitative and quantitative data throughout the study.

5 Conclusion

It has been ascertained that the most popular type of Kuwaiti construction contract is the Standard Domestic Contract. The latter has a fixed price as the method of payment. There is no sophisticated analysis of the construction project within the contract selection process and consequently there is a risk of the contract being allocated inappropriately as well as disproportionately. This paper has proposed a methodology for the instigation of a new system for selecting contracts in the Kuwaiti construction industry by focusing on providing different criteria, thereby improving the existing system of contract selection by multiplying selection between payment terms within the project delivery system.

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