AMERICAN UNIVERSITY OF BEIRUT

A PROPOSED FRAMEWORK FOR CONTRACTUAL RISK ASSESSMENT BY CONTRACTORS DURING THE BIDDING PHASE

by
HIBA MAHMOUD TURMAN

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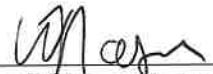
HIBA MAHMOUD TURMAN

Approved by:

Dr. M. Asem Abdul-Malak, Professor — Advisor
Department of Civil and Environmental Engineering

Dr. Hiam Khoury, Associate Professor — Member of Committee
Department of Civil and Environmental Engineering



Dr. Walid Nasr, Associate Professor — Member of Committee
Suliman S. Olayan School of Business - Dean's Office

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AN ABSTRACT OF THE THESIS OF

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Construction contract administrators play a key role in advising owners on the choice and drafting of contract conditions. On the one end, industry practices may simply involve adopting standard forms of such conditions, as these are published and periodically updated by numerous professional organizations. On the other end, practices such as drafting a fully customized set of conditions are known to be not uncommon. Contractors who perceive risks or ambiguities in owners' prepared conditions have limited leverage in negotiating them, and qualifying their bids may pose the risk of such bids being held unresponsive by owners. The objective of this research work is to offer a structured approach for scrutinizing during the bidding phase the terms of the contract already decided upon by projects' owners and incorporated as part of the bidding documents. The adopted methodology involved reviewing the relevant literature, scrutinizing the stages involved in the bidding phase, conceptualizing a framework embedding the various courses of action to be possibly adopted by participating bidders and comparing such actions against one another, validating the use of the proposed framework through examining several contract clauses that were identified as either ambiguous or unfair, or both, and underlying a recently arbitrated construction dispute. The research outcome is meant to provide contractors with a structured process for allowing them to undertake the proper due diligence in reviewing and identifying the risks inherent in the conditions of construction contracts. The proposed courses of action are expected to minimize the likelihood of eventually getting into disputes that could otherwise arise in connection with those contract conditions characterized with clarity and/or fairness issues.

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CHAPTER I

INTRODUCTION

A. Background

The construction industry is one of the most significant contributors to the economy in terms of gross product and employment (Ye et al. 2009). Construction projects, however, have become more complicated, requiring more sophisticated contracts to be devised, with the contracting parties' requirements getting more demanding. To this end, these contracts are considered to be the primary tool for defining the scope of work, assigning the contracting parties' respective rights and obligations, and allocating risks between them. Any such contract is constituted of several documents, including, for example: the agreement, letter of acceptance, letter of tender, general and particular conditions, specifications, drawings, and schedules (FIDIC 1999). Of significance to the administration of these contracts are the conditions, both the general and particular ones, which need to be assessed for their clarity (Claassen 2008), fairness, and operability (Groton 1986). In that respect, attention has for long been drawn towards the standard forms of contract that have been developed for the construction industry by a number of independent professional organizations (Ibbs and Ashley 1987). It is argued that such standard forms of contract (a) guarantee a balanced representation, allocation, and mitigation of project risks (Perry 1995) and (b) represent a desired degree of fairness, as their conditions have been "drafted by experts beforehand and away from the heat of the particular project" (Kwakye, 1997). Additionally, they are considered to likely "reduce the inefficiencies associated with the repeated drafting and reviewing of contracts while facilitating a

greater sense of partnership between contractors and employers" (Jergeas and Hartman 1994). Last but not least, standard forms have become "understood over the years, and a considerable body of case law has been built around them" (Claassen 2008).

Drafting a construction contract is no easy task. Construction disputes often arise over unanticipated happenings making them inevitable no matter how carefully the contract terms were crafted. Regardless of whether standard or in-house general contract conditions are adopted, owners tend to prepare the documents for a new construction contract simply by amending previously written ones, through adding new clauses and/or deleting or modifying existing ones. Wilson (1982) argues that "while this cut-and-paste process may save time in preparing the construction contract, it often leads to problems, in that the documents are not read and prepared as a whole for the specific contract." It may also result in the contract terms being tailored to better serve the interests of the drafting party (i.e., the owner). Such manipulations are said to affect the clarity, fairness, efficiency, and consistency of the contract provisions (Sertyesilisik, 2010).

As construction projects are characterized by a high degree of uncertainty and complexity, it has been reported that conflicts and their associated time and money can be avoided by conducting a thorough and careful review of the contract terms before signing the contract (Vlatas D. A. 1986). Unfortunately, contractors may be trapped by entering unfairly drafted contracts; that is, given the economic power of project owners who are solely responsible for drafting them, contractors may be left with the option of either taking or leaving them (Deutch 1977). It can be argued that contractors' agreement to engage in such unfair contracts may sometimes be in fear of their

reputation being tarnished, thereby affecting other companies' willingness to work with them.

Some courts tend to avoid enforcing unfair contract provisions which are usually offered in either you take it or leave it basis. Courts sought that unfair and/or ambiguous terms are to be construed against the drafting party even if the direct responsibility and liability, according to the signed contract provisions, are ostensibly on the contractor (Hanna et al. 2013). This is usually done using innovative interpretations of contracts, governing law, and the intent of the parties. In this respect, judges relied primarily on the doctrine of unconscionability which was introduced into the law in an attempt to remove uncertainties and explicitly deny enforcement of a contract provision that is unfair rather than distorting existing legal doctrines in order to decide that the contract provision is inapplicable (Vlatas D. A. 1986). Still, as thinly financed contractors may not be able to endure the lengthy and costly process of litigation or arbitration, it appears more plausible for them to instead avoid entering contracts under such conditions.

B. Problem Statement

Contractors may sign construction contracts without undertaking the proper due diligence in reviewing and identifying the risks inherent in the conditions of the contract. As contractors embark on bidding for different construction projects, it is not unlikely that they will end up facing the kind of conditions that lend themselves to being problematic; that is, conditions that are viewed as being biased towards serving the owner's interests. Such conditions require special attention from participating bidders, either by way of accepting the associated risks or addressing them through a number of

means. The question-and-answer period and bid negotiation, among the other stages involved in the bidding and contract formation phase, offer a chance for bringing up questions and opening discussions that could help address the reasonableness, fairness, and clarity of these conditions.

C. Research Objectives

The aim of this thesis is to identify ways that allow the contractor to properly resolve the risks associated with biased contract conditions. The intended intervention is limited to the various steps and stages that are involved in the bidding and contract formation period leading to contract signing. The ultimate goal is to find the means that enable contractors to decide on the possible courses of action and analyze the pros and cons of opting to choose one action over potential others.

D. Research Methodology

The methodology to be followed in this research is expected to involve:

1. Reviewing the relevant literature;
2. Scrutinizing the stages involved in the bidding and contract formation period;
3. Conceptualizing a framework embedding the various courses of action to be possibly adopted by participating bidders, and comparing such actions against one another;
4. Validating the conceived framework through a close analysis of the record of a completed construction contract whose conditions have already been deemed to lend themselves to give the contract in question the biased characteristic.

5. Devising a set of recommendations for the consideration by contractors in undertaking the due diligence reasonably warranted on future contracts.
6. Offering a summary of the undertaken research and a set of conclusions.

E. Significance of the Work

The work is meant to firstly provide advice to contractors, as to the need to pay critical attention to those clauses deemed problematic as scrutinized during the bidding phase, thereby minimizing the risks that could prevail from engaging in such contracts. Secondly, the proposed course of actions is expected to minimize the likelihood of eventually getting into disputes in connection with such unfair, vague or missing clauses. Ultimately, the outcome of embracing the work's recommendations shall help the parties to a construction contract to maintain a long-term, healthy relationship.

CHAPTER II

LITERATURE REVIEW

A. Construction Industry in a Nutshell

Construction industry occupies a very significant place in the world economy. In a construction project, different stakeholders come together to achieve objectives that are varied and, at times, inconsistent to the point of being contradictory. In the past few decades, construction industry has developed a uniquely aggressive nature. This in turn makes it incumbent on the parties to the contract to be ready at all times to seize opportunities as they present themselves or to avoid damage to their interest for the duration of the contract. This aggressive nature of the industry is a consequence of multiple characteristics that evolved over time. Some of the more important characteristics are a. the ever-changing nature (Kelly, 2014) and fast-paced development, b. the high failure rate; since construction companies have the second-highest rate of failure in the market c. the fierce competition, as the number of the competing contracting companies compared to the opportunities available in the market is extremely disproportionate. This large number of contracting companies might be attributed to the open nature of construction industry market where the legal and financial requirements are relatively easy to attain (Russell, 1990) e. the high uncertainty and the complex relationship between owner and contractor. Due to this complexity of the industry, all stakeholders involved contracting parties, commentators, and consulting companies, are continuously negotiating the key factors to a successful completion of the project.

Construction Project Success Factors

As a matter of fact, no general agreement can be made on the set of key factors, and their relative importance in the success of construction projects. This is due to the fact that each project is a unique one in terms of the risks, opportunities, requirements and the environment associated with that particular project in a specific time frame. Nevertheless, a considerable body of research was conducted to determine the factors that largely and directly affect the rate of success of construction projects. These factors according to the research may be subsumed under five main categories: project related factors, human related factors, project procedures, project management actions, and external environment (Chan, et al., 2004). The project related factors are the scope, type, nature, and size of project. The human related factors are the stakeholders of the project; the individuals' managerial, technical, and interpersonal skills, experience, attitudes and goals. The project procedures are concerned with procurement method and tendering method. The project management actions are: communication system adopted, control mechanism, the implementation of effective safety and quality assurance programs, and the development of an appropriate organizational structure. Finally, the external environment includes the economic, social, political, physical environments, the industrial relations environment, and technology advancement. While every single one of the above factors essential for the success of project success, having them all is no guarantee of success.

However, among all the above, perhaps it is the human factor, i.e., contracting parties' relationship, that is the most crucial factor in making or braking the deal. An integral part of the human factor is assumptions relating to: open and receptive mindset, teamwork, collaboration, mutual respect, and trust that in reality cannot normally obtain

in a contractual relationship. As with any human interaction where two parties or more are involved, the contracting process is fraught with controversy and conflict (Bu-Bshait & Manzanera, 1990). Things usually do not function in a straightforward fashion even if they appear to be perfect on paper, the contracting parties might fail to translate this seemingly perfect relationship into operational reality. The success of the contractual relationship entails a lot of give and take and compromises, devising means of addressing the problems of the adversarial relationships, mistrust, and inefficient communication and fostering principles like teamwork, collaboration, mutual respect, and trust between the contracting parties involved in the construction project.

B. Construction Contracts

A contract in its most basic definition is an agreement between two parties where one party accepts to take the responsibility of delivering a good or a service under specific terms and conditions. This agreement, the offer and acceptance, might be simple and directly conducted between the two contracting entities. It also could get more sophisticated/ complicated and involve more than two parties. Likewise, a construction contract is an agreement between the owner and the contractor that stipulates rights and obligation that are enforceable or recognizable by the law (Garner, 2004). This set of legal documents is the primary tool for allocating risks between the owner and the contractor.

In time, construction projects have gotten more demanding, larger in scale, involving more than two entities without being direct parties to the agreement, but do affect the agreement, and operated in a multinational context. Hence, contracting parties are urged to educate themselves and get to know more about drafting, administrating,

and managing contracts. And perhaps more importantly, contracting parties need new approaches and styles of contract drafting and managing. It is universally known that the form of the contract determines the contractual relationship between the parties involved in the project provided that this contract "agreement" may be standard or bespoke (Meng, 2014). As an owner might have his in-house team that is responsible for drafting the company's own, contract or might resort to a consulting company to do so on his behalf.

1. Standard Forms of Contracts

Studies showed that most of the traditionally delivered construction projects were associated with adversarial relationships, low rates of productivity, inefficient means, and methods that lead to rework and low quality, high rate of disputes and lack of innovation. This led to cost increases, time increases, and low quality work (Lichtig, 2006). Driven by the desire to overcome these hurdles and avoid these undesirable results, contracting parties started looking for new approaches of managing contracts, work, and relationships to replace the traditional way. In this respect, some internationally recognized consulting companies have stepped in and offered, to a relatively fair extent, a reliable and more efficient Standard Forms of Contracts to replace the old ones. These readymade contracts are meant to facilitate the work of all parties by clearly stipulating the rights and responsibilities of each party, limiting the unethical and illegal behavior of both parties, and fostering trust and fair risk sharing policies.

Over the years, some Standard Form Contracts have gained a good and a widespread reputation (Ibbs & Ashley, 1987). Some of the better known Standard Form

Contracts are: FIDIC, AIA, JCT to mention a few. Many researchers have revealed a considerable number of advantages of using the Standard form Contracts. A variety of Standard Form Contracts are designed to serve different construction and procurement methods; hence, there is a high probability of one of these being suitable. These forms of contracts are continuously subjected to meticulous testing and revising processes. Thus, they are of a high degree of precision since they are constantly being updated and validated by law to cope with the ever-changing construction industry. Moreover, these Contracts have become "understood over the years, that contracting parties are generally familiar with their standardized and a considerable body of case law has been built around them" (Claassen, 2008). They also suggest a balanced representation, allocation, and mitigation of project risks and represent a desired degree of fairness (Groton, 1986), as their conditions have been "drafted by experts beforehand and away from the heat of the particular project" (Kwakye, 1997). Another key perceived advantages of standard forms that they are considered to likely "reduce the inefficiencies associated with the repeated drafting and reviewing of contracts while facilitating a greater sense of partnership between contractors and employers" (Jergeas & Hartman, 1994). Additionally, Standard Form Contracts can be valuable as they reduce the time and cost at the negotiation stage and provide a sound framework for project success.

On the other hand, Standard Form of Contracts might be used as a starting point in drafting bespoke contracts (Stebbings, 2006). From the contract management perspective, conducting fine-tuning and adjustment to Standard forms Contract to suit the nature of the project and/or the owner's requirements can be very useful and handy. Prudent use of Standard Form of Contracts in drafting is likely to result in efficient

transactions, and save time, money, and effort. Although modifications of standard contracts may be required to realign them with the special requirements of the project, sometimes, they result in contradicting clauses encountered in contracts and omission of some clauses. Developing a robust, relatively fair, and flawless modified or bespoke contract in practice, it is not easily attained. The owner might opt to devise a new bespoke contract as he has the liberty to include and/or exclude clauses he deems appropriate and works to his advantage.

2. Drafting Contracts: Modification or Manipulation

In some jurisdictions, it may be required by law to use a specific standard form of contract for public works. Whereas some other companies, especially in the private sector, opt to design "tailor" their contracts, which is called bespoke contracts. Chow defined a bespoke contract as a contract designed with customized terms and conditions to meet specific requirements of a particular project (Chow, 2006). Scholars argued differently in favor of and against these customized construction contracts. Bespoke contracts are usually drafted for large projects by solicitors who are well versed in construction law and project management (Loots & Charrett, 2009). On the other hand, bespoke contracts may not be as comprehensive as standard forms, as argued by (Taylor, 2000).

In preparing construction contract documents, it is not uncommon for an Architect/Engineer to use a set of standard or previous contract documents instead of developing a completely new document (Wilson, 1982). This is usually done through deleting irrelevant or unwanted clauses or words, amending and/or adding further customized clauses. These modifications may vary from fine-tuning to radical and

extensive changes. The results of the drafting/amending process depend primarily on; first and foremost, the intention of the drafter, his mentality, dexterity, experience, and knowledge of construction law in addition to the governing laws.

3. Pitfalls in Drafting and Resulted Imbalanced Contracts

Even when the contract documents appear to be perfect, mistakes and ambiguities are bound to happen. In most cases, drafting party performs changes unilaterally without considering the ramification of alterations. As a result, some clauses may lose their preciseness due to these alterations, which will eventually create contradicting, ambiguous, and/or irrelevant clauses and specifications (Jergeas & Hartman, 1994). This is attributed to the fact that the documents are not read and prepared as a whole for the specific contract. This situation can also cause confusion and ambiguity especially with interlinked clauses affecting the enforceability of those clauses and creating legal uncertainties. The resulted contract might look like the original Standard Form Contract from the outside but it is very likely that the resulted rigged contract will suffer from major problems, no matter how hard they try to avoid pitfalls unless the drafting entity is very well versed in construction industry and the governing law. Some of these problems are fuzziness, ambiguity, incompleteness and erroneous which affect the clarity, readability, fairness, efficiency and internal consistency of contract provisions (Sertyesilisik, 2010).

Selective and deliberate cut and paste process might appear to be beneficial to the drafting party as it helps in reducing the time and effort and relieves the owner from bearing risks and responsibilities but in reality, it may foster the opportunistic behavior, claim consciousness, and adversarial relationship (Cox & Thompson, 1997). In most

cases irresponsible manipulation and alteration in contracts conditions backlash and result in long standing and deep seated claims and disputes depending on the severity of the manipulation. Since these alterations mainly affect the fairness and jeopardize the balance in risk distribution among contracting parties against the contractor. It is not difficult for a contractor to detect the bias nature of contract conditions, yet in most cases contractor would take the job.

Multiple answers were reported to the question why contractors accept to tolerate such unfair contract conditions in the times when logic says they should turn the bid invitation down or refrain from bidding, or substantially increase their margins to hedge for the risks and/or unfair terms included in the agreement. Usually contractors are trapped into such agreements mainly because owners have the economic power to compel the contractor to agree to their terms. Owners exert pressure on contractors by stating implicitly or explicitly that any future partnership or sequential project is conditioned by obeying the owner's instructions and not holding the owner up for a lot of money, in a way that abuses the contractor's need to stay in business. Contracting companies are generally thinly capitalized and asset-light. This explains the ease in which contractors can enter and leave the market, where the barriers to entry into the market are minor, and few in numbers. Statistics reveals that many of the construction companies end up insolvent or merging with more financially stable companies. Moreover, the contractor may be concerned about his reputation and other companies' willingness to work with him (Vlatas, 1986).

In general, courts look upon imbalanced contract clauses as being inherently unfair as they work in favor of the owner, who wrote it, and such unfair conditions of contract are thus deemed not enforceable by the law (Hill & Solt, 2010). A big debate is

still going on whether the entire agreement is to be considered void or it's limited to the unfair clauses stipulated in the contract and what are the best ways in dealing with such cases. In the case of ambiguous clause or term, they are usually construed against the drafting party, even if the direct responsibility and liability are ostensibly on the contractor (Hanna, et al., 2013). This was done using innovative interpretations of contracts, contracting law and the intent of the parties. Judges sought to use the doctrine of unconscionability to explicitly deny enforcement of a contract provision that is unfair rather than having them distort existing legal doctrines to find that the contract provision was inapplicable. Even if the entitlement issue is resolved, the decisive factor and main impediment remains whether the contractor will be able to endure the prolonged expensive periods of disputing. As it becomes a matter of survival to the contractor. This explains why contractors lean towards resolving the pending disputes amicably even if they believe that they are fully entitled.

Thus, the drafter of a modified standard contract or a bespoke contract is strongly advised to approach this process with extreme caution since the conditions being offered can make or break the contractual relationship between the contracting parties. As these new or amended clauses need to be carefully made in order not to disrupt the balanced risk allocation which is best represented in the Standard Form Contract.

Starting right is very crucial to insure a fruitful and successful project completion. By saying starting right, it is meant that parties need to read signs carefully while they start paving the road for a long-term relationship. It is very important to read between the lines and analyze the other party's behaviors, actions, and reactions. These commentaries also advocate the use of clear contractual language to start with, while

proposing amendments to problematic clauses that might ignite contention between contracting parties. In order to keep a balanced and a robust contract, commentators and lawmakers recommended that drafting parties be aware of the followings: the interaction between clauses as many clauses are cross-referenced with others, clauses interaction with the governing law. It is well known that the governing law takes precedent over the terms and conditions of the signed contract. Thus, the effect of the governing law of the contract should not be underestimated, even in the FIDIC or any other standardized contractual context. Another consideration is the implied terms by law or by fact or by statute.

C. Bidding Phase

1. Bidding in General

The tendering phase, also known as bidding, comes first in the sequence of the project timeline but it is perhaps also first in terms of significance vis-à-vis the other phases of any construction project. Tendering may be defined as the course followed or the means employed by many construction clients to obtain the schedule and price for a construction project (Brook, 2004). From the owner's perspective, it typically consists of three parts: deciding on the type of contract and the terms and conditions therein, that would form the basis of the contractual relationship and under which the work will be done, selecting the most suitable contractor given the budget and time available, and establishing the contract price. In the bidding process, the owner aims at getting the best value for the offered price. However, this is not the only decisive factor in pricing since other factors such as the state of the market and competitors bids offer also play an important role. From the contractor's perspective, Brook suggests that bidding often

involves two processes. First, estimating is the stage in which the actual project costs are calculated using project's drawings, specifications, and bill of quantities. This process primarily depends on the contractor's level of expertise in estimating and pricing. Second, adjudication is the stage in which a commercial view of the estimated cost is done in the context of the contracting company's particular circumstances, market conditions, contingencies, and risk allocation (Brook, 2004).

2. The Importance of the Bidding Phase in Shaping the Relationship

The Decision to bid is one of the most important and recurrent decisions that faces contractors. It involves multiple objectives as well as many internal and external factors. Contractors usually bid in order to make profit, improve their position in market, promote their reputation, Increase their chance of entering new markets, and strengthen their relationships with other stakeholders, client and/ or consultant (Aznar, et al., 2017) and at worst to stay in business and pay their bills. Moreover, the decision to bid is a costly and risky step especially since what is at stake is not only financial gain or loss but the company's reputation as well. Loosing bids continuously is not only damaging to a company's reputation but it also entails financial loss and waste of resources (Lin & Chen, 2004).

One method (or technique) recommended in making the decision to bid is for the contractor to express prospective benefits in terms of expected values. A bidder's anticipated benefits depend jointly on the probability of winning the bid, and the markup, which is the difference between the bid and the actual cost of realizing the project. These two parameters, the probability of winning and the markup, are central to

the process, and inversely interdependent: The higher the markup, the lower the probability of winning (Neufville & King, 1991).

In the public sector, contract awards are typically made using two main contract awarding methods, namely: a price-only (lowest responsible bidder which is the Contractor with the lowest bid who provides the bond required by contract) criterion and weighted multiple criteria (economically most advantageous tender, or best value explain (Russell, 1990). Generally, the lowest price is recommended when the focus of the project, technical specifications, and bill of quantities are well defined (Ballesteros-Pérez, et al., 2014) and/ or when the risk of corruption is high (Shan, et al., 2015). In both procurement methods, all factors need to be represented in figures in their perceived values. This makes it safe to say that price matters the most at the end. A consideration that puts contractors under pressure to keep their bids to the lowest possible price while maintaining their competitive edge.

Selection criteria should be designed to insure selecting a competent contractor with a competent price. Lowest price ought not to be the only decisive and conclusive in the selection criteria. Low bid price is tempting and as such is dangerously misleading; it could also be an indication of something wrong, unethical and/ or irregular behavior involved. Excessively low bid price is usually associated with one or more of the following considerations: it might be due to the contractor's failure to understand the scope of the work, misunderstanding the technical requirements, committing mistakes while compiling the bid, and/or having a claim-conscious mindset. This situation gets even worse in public sector bids, where cost and time pressure lead to inadequate and incomplete design. Furthermore, fear of accusations of corruption, favoritism or any illegal behavior, particularly in the public sector, leads to greater pressure to go with the

lowest price at the expense of other important factors. The Owner's strive to save money should not drive him to select the lowest price blindly. Owners should bear in mind that choosing the wrong partner can be very expensive for one simple reason, the contractor would not submit to his loss easily. In other words, a greater attention should be paid to aspects other than the price alone like technical aspects and risk sharing plans. As for the private sector, although clients are not obliged by the law to go for lowest price, it is still the most preferred strategy amongst the majority of these companies. This is done with the aim to maximize the competition to attain the best value for the money. The pressure to meet owners' expectation to achieve project's targets the contractor had to take upon himself in addition to the dire need to get a job may foment illegal, unethical, or the least abhorrent behaviors in the sort of collusive bidding, unbalanced bidding, bid rigging, bid shopping, bid chiseling, and claim-conscious and opportunistic behavior (Bowen, et al., 2007). It is not our intention to defend or promote one party on the expense of the other party. However, there are certain behaviors associated with the owner, and the way he constructs the contract, that nurture some unethical and/or illegal behaviors by contractors.

3. Seeding Claims during Bidding Phase

Contractors' success in managing and steering bidding and contract formation phases plays a crucial role in starting on the right foot and minimizing the risk of claims and disputes. During the bidding and contract closure phase, most contracting parties try their best to present themselves under the most favorable light: as pleasant, reasonable, and cooperative people. However, the honeymoon is over soon as controversies and conflicts come to the surface during project's execution, because even under normal

circumstances, claims and counter claims are bound to occur. The contractor's failure to identify and attend to or address biased, ambiguous, and/or unfair clauses and behaviors by the owner in order to avoid controversy and seal the deal will increase the likelihoods of having serious claims and disputes during project's execution.

Such a course of events is so common that the knowledge and skills needed to prevent, manage and solve claims in a timely fashion, to avoid the ensuing acrimonious feelings and deterioration in relations, has acquired extreme importance. In the construction industry, delivering a project on time and within budget with minimal changes in scope and without unexpected incidences under ideal construction contract conditions is the ambition of all contracting parties. Maintaining a smooth flow of the work and in accordance with the schedule makes such an objective more attainable. As a matter of fact, the probability of a claim arising at some point in time can never be eliminated or ignored in most construction projects (Jergeas & Hartman, 1994). In recent years, contracting parties and contractors in particular have become increasingly preoccupied with filing claims or wary of the associated cost and potentially poor recovery of expense associated with the settlements of claims. Studies have shown that there is a direct relationship between claims/disputes and certain characteristics and behaviors during the tendering phase (Jergeas & Hartman, 1994); (Rooke, et al., 2004); (Bramble & Callahan, 1992); (Laryea & Hughes, 2011). Thus, the probability of a claim arising at any point during a project's execution depends on two main categories: owner related factors and contractors related factors.

Owner related factors are:

a) Incomplete and /or conflicting bid information;

b) Quality of tendering documents: Inferior quality of drawings and specification, giving rise to ambiguity in contract requirements, software difficulties, errors and mistakes, discrepancy between information in drawings, specifications and bill of quantities, outdated information, and poor organization or structure of documents. It is argued that the clarity of documentation results in better bids from contractors and lesser risk of disputes. Research showed that reduction of total costs is possible with a set of appropriate tender documents. However, tender documents are usually not complete and clear, leading to several problems, including disputes. The lack of information and inconsistencies in documents are problems that complicate a contractor's tendering process and increase the risk of claims;

c) Lack of design coordination and inadequate design review manifested in errors or omissions;

d) Schedule conflicts: Failure of the Architects and Engineers (A/E) to perform in a timely manner including improperly reviewing shop drawings, changing order approval, clarification of drawings and specifications, and correction of design errors are few examples of what could go wrong in this area;

e) Insufficient time for bid preparation: The extensive amount of information that needs to be processed in a very limited duration imposes further challenges and risks on the contractors. The situation is even rendered more complex when the information provided lacks clarity and accuracy. There are often missing items, incomplete pages, and contradictory information in tender documents;

f) Harsh contract conditions, excessively competitive procurement method, and unrealistic expectations: selecting the procurement method and drafting the

contract conditions are usually done by the owner who, in most cases leaves the bidder/contractor with very little or nothing to say. In some cases, the owner might abuse the bargaining power enjoyed by virtue of being the owner of the project. Bidders respond to lowest price procurement method adopted by the owner by, virtually, reducing their prices to the extent that will render negative profit if the price were to remain the same as submitted. Nevertheless, the bidder manages to transform this loss into profit by using proactive claim management techniques. It should not come as a surprise for the owner that the contractor will resort to claims as a relief from the loss he is going to suffer. It seems that too competitive pressure makes it more difficult for contractors to make a reasonable profit thereby adversely affecting the health of the industry in the long run. Thus, some contractors resort to claims to recover as much as possible of the money they had to give away, willingly or unwillingly, in order to win the bid and secure a job for the next one or two years. This behavior can also be attributed to human nature, as in most cases people's preference is to maximize profit or, at least, minimize their losses. Contractors might take the risk of bidding with very low price, even with negative markup sometimes, having their minds pre-set to recover the loss through claims (Rooke, et al., 2004). This mindset or behavior can be mainly attributed to the tendering strategy adopted by the owner, and

g) In addition to the factors mentioned above, failure to communicate effectively and negotiate the terms and conditions of the contract will immensely harm the contractual relationship.

The drive of the above-mentioned factor is not merely self-interest and lack of sympathy. Owner or owner's representative might also fall under pressure, especially when the number of the shareholders is beyond control. For example, in the public sector, owner might fall under many types of pressures; budget Pressure to go with the lowest price, time pressure in which an unreasonably short time is given to finish the design, submit and review the submitted bids, and the possibility of having public oppositions.

Contractor related factors that have been highlighted as reasons for the claims include:

a. Claim consciousness: Some contractors start to plan for claims early. By "early", we mean during the preparation of the tender documents. With the objective of increasing their chances of winning the bid, contractors tend to reduce unrealistically their bid price. The situation is further complicated by the tendering strategy adopted by owners. It involves submitting tenders at prices that reflect the expectation that the ultimate price of the job will be inflated by claims. In this approach, contractors are looking for loopholes in the contracts with the intention of using them against the owner. Contractor thinks of these loopholes as the cash cow that will turn his loss into profit once the job has been secured. Contractors often bear the financial burden of a project's problems while intending to seek relief through claims. Generally, a low-priced bid leads to a claim mentality when the contractor attempts to mitigate loss of the anticipated costs. Yet, this option is not at every contractor's disposal. It takes a well-versed contractor to strategically plan for claims. Planning for claims is a laborious and protracted task that requires a very high level of training and expertise (Rooke, et al., 2004). To this effect, some contractors use this strategy

as a main consideration in selecting the project to bid for; contractors may deliberately select complex projects that would most likely yield claims; referred to in the literature as claim strategy;

b. Inadequate investigation before bidding, bad planning, and failure to read and scrutinize contract terms and conditions;
c. Unbalanced bidding and quantities' underestimation; Contractors might make mistakes and omissions that lead to construction claims. These acts of omission could occur at different stages in the preparation of the project estimates and bids evaluation of the project costs and design reviews, or in the management of the construction process;
d. Lack of experience in the nature of the project, poor quality construction including labor issues and problems, equipment problems, and financial problems, and
e. Finally, the Ineffective communication from the contractor's side. Failure to effectively communicate and negotiate the terms and conditions of the contract will immensely harm the contractual relationship.

Considerable space as well as emphasis in the literature has been devoted to the need in the construction industry for changing the common practices among owners in the areas of: quality of tender documents (Laryea, 2011), the time allocated for planning and putting the bid price together and drafting of contract document is considerable (Hughes & Laryea, 2011). Yet the change in owners' behavior is still very limited and insignificant. At any rate, a contractor cannot afford and will not sit idle until these prevailing conditions and attitudes in the industry change. Different contractors have developed different ways to adapt to the currently prevailing conditions. As mentioned

earlier, some contractors sought to hedge for these uncertainties and risks imposed by the poor quality of documents or unfair contract conditions by placing a high markup or proactively planning for claims. Both ways are inefficient as they hinder the contractor's chance to win the bid without opening up about the real problems and addressing them.

4. Bid Decision

Deciding whether to bid on a particular project or not is regarded as one of the major challenges faced by construction contractors frequently. A bunch of contradicting factors affects this decision. Therefore, in order to improve the bidding decision and increase the chances of winning more lucrative contracts, it is necessary to understand how these factors interact and thus affect the success of the bid. Table 1 summarizes the different categories of most important factors mentioned in the literature:

Table 1 Bidding Decision Factors

Employer/ Consultant Characteristics
• Identity of the client (type): Public/private client Perceived risks that may arise as a result of dealing with a particular client • Influence of the client in making recommendations in the construction market • Identity of the consultant: Perceived risks that may arise as a result of dealing with a particular Architect or consultant • Financial capability of the employer: Concerns around the financial viability of the client • Employer's reputation to honor payment on time / his commitment for making timely payments • Unreasonable expectations of the client
Contractor Related Issues
• Need for work/current work load • Need for public exposure, marketing, or establishing long term relationship with employer • Need for continuity in employment of workforce and key personnel • Company's strength in the industry • Past relationship with employer • Relationship with subcontractors and suppliers

• Experience of the firm with similar projects; Past loss/profit in similar projects • Confidence in company work force; Having enough number of qualified technical personnel • Reliability and cost certainty in cost estimate • Workload in bid preparation • Current financial standing of the firm, and availability of required cash and office overhead
Bidding & Contract Related Issues
• Selective/open tendering, number of competitors**,** Competitiveness of competitors • Excessive prequalification requirements • Tendering duration; specified time frame for submitting tenders • Project start time, duration, type, location, site accessibility, Buildability issues such as complex site details or new methods that are unfamiliar; Degree of difficulty of work Risk/safety hazard • Completeness and quality of design (bidding) documents, (i.e., drawings, specifications) • Contractor's involvement in the design stage • Contract type/ Procurement Method • Contract conditions and specifications: Reasonable/onerous; Very onerous special conditions of contract, e.g. contractors bond, unrealistic LD's • Insurance policies; need to procure surety bond, Security requirements (i.e., bid security, performance security); Warranty requirements • Proportion of work that will be subcontracted and nominated subcontractors • Required methods of construction for the project • Float ownership. • Terms of payment (i.e., minimum amount of interim payments, specified time periods for applying and issuing interim payment certificates); Percentage of retention money
Environmental, Social and Market (Economic) Situation
• Availability of other projects in the market and overall economy • Availability of labor, materials, equipment, subcontractor required for the project • Possibility of facing safety hazards during project execution • Possibility of facing environmental issues during project execution • Possibility to have public objections • Risk involved in employer's property investment

Recalling the definition of bidding phase from the contractor's perspective, it involves two folds; one is the estimation of the quantities of the works and the actual cost of executing them, which are calculated using project's drawings, specifications, and bill of quantities. The second is evaluating the risks and uncertainties associated with this particular job. The first part of the process primarily depends on the contractor's level of

expertise in estimating and pricing. Thus, risks and uncertainties imbedded herein can roughly said is to be limited and under the control of the contractor. As for the second part, it is regarded as a complex one because it involves simultaneous consideration of many factors that are related, but not limited to project, client, consultant, competitors, conditions of the contract, and market. Those factors are far from being under the control of the contractor. In the other words, when the contractor is in the process of making the decision to bid, he is basically making the decision whether he is able to take the risks inherent in the process or not. It is widely accepted that the factors identified in the above table are the factors that contractors consider in the tendering stage, it is anticipated that these factors are generally decisive in pricing for risks. This guides us to the conclusion that risk is an inseparable component of pricing in particular and the decision to bid in general.

In the research conducted to study dealing with risk during tender stage, three main approaches/tendencies were noticed among scholars. The first part of studies aimed to identify risk factors while others have studied the way contractors behave towards different types of risks during tender stage in particular and throughout the construction process in general. The third group of scholars took some steps further and offered recommendations in the forms of measures and models to deal with particular risks.

5. Identification of Risk Sources

Risk is a main consideration in every aspect in project life cycle, from the first inception of the tendering phase until the completion and handing over of the facility. However, the scope of this research is limited to the phases prior to execution. Risks

involved in this period are mostly related to site, weather, finance, owner, and contract wording and provisions.

Contract related issues: Problematic clauses and Areas of contentions

Potential risks can be predictable as they are generally the same in most of construction projects, even though each project is unique. Significant numbers of risk factors that are either not stipulated in the contract documents at all, or stipulated in the contract without being allocated to any contracting party. Other risks are imposed by amendment or inclusion of problematic clauses in particular. As the conventional wisdom holds, prevention is better that cure contractors need to highlight and address these issues before signing the contract. (Ibbs & Ashley, 1987), (Hanna, et al., 2013), (William & Issaka, 1998) and many other scholars have identified contract clauses that influence project performance in the areas of cost, schedule, quality, and safety. In addition to Laryea (2013) in his study, Nature of Tender Review Meetings, who tried to highlight some problematic clauses and suggested a comprehensive framework to review contract conditions. Another study was done by (Walsh, 2017) which aims at training a reviewer to identify problematic language and bring it to the attention of the decision makers at the company. In addition to, developing a list of red flag and must-have clauses which must be avoided, or included, in every contract, and identifying lessons learned.

A list of problematic clauses and legal terms was compiled from the reviewed literature to include the most frequently misinterpreted and misrepresented clauses.

- Unilateral Change Orders changes
- Notice Requirements (notice provisions)
- Claimed Breaches, and Termination Actions

- Inclusion of Dispute Adjudication Board (DAB) and arbitration clauses
- Contradiction with Statutory regulations and requirements on the type of works concerned
- Differing Site Conditions
- No Damage for Delay Indemnity, and Consequential damages
- Hold Harmless Clauses
- Scheduling and Coordination of Subcontractors By the General Contractor
- Ambiguous acceptance criteria
- Snag List Processing
- "Or-Equal" Limitations
- Calculation and Documentation of Time Extensions
- Weather Delays and Weather Days
- Authority Definitions, and any other fuzzy clauses

6. Contractors' Reactions towards Assessed Risks vs. Recommended Methods

In general, contractors make bidding and mark-up size decisions based on their experience, intuition, personal bias, emotional responses, and their subjective assessment of the conditions surrounding the bid situation. (Edwin & Maria, 2009). A large number of researchers have tackled the issue of risk. Yet, the ways parties perceive the different types of risk and deal with them are still an area of continuous study and investigation. The literature is rich in different methods, systematic and intuitive, that suggest different ways to identify and treat different types of risks. For example, Laryea and Hughes, (2011) in their study, Risk and Price in the Bidding

Process of Contractors, have identified more than sixty systematic and rational models on pricing risks in tender bids. However, in most of the studies reviewed, no reference was made to any comprehensive empirical work that explains how contractors actually price their bids i.e. how contractors in reality move from their understanding of risk factors to then setting a price (Laryea and Hughes, 2011).

Contractors usually do not talk openly about the way they deal with risks for many reasons. Perhaps the main reason is that pricing is a very sensitive task that involves "commercially sensitive" information in the sense that disclosing such information would make the contractor exposed to other competitors in the market which in turn affect their chance to win the bid. Another reason might be the absence of a real systematic framework in dealing, pricing, with risks (Laryea & Hughes, 2008). The majority of contractors deal with risks in intuitive and spontaneous manner based on their experience, either for the lack of understanding and familiarity of the existing models or the lack of faith in the practicality of risk analysis and management techniques. Thus, it is difficult for contractors to see the benefits especially with the relatively sophisticated techniques involved in these models. As the information needed to use them is difficult, if not impossible, to obtain, this in turn makes them unrealistic and unworkable. In addition to that, contractors have doubts whether these techniques are applicable to the construction industry since the vast majority of risks are contractual or construction related and are mainly subjective, hence they are better dealt with based on experience from previous contracts undertaken by the firm.

In practice, contractors clearly account for risks when calculating their bids for construction work. Contractors usually react to the identified risks by one or more of the following spotted measures. The first measure used by bidders is the lump sum

adjustments to the margin to cover identified risks. Contractors add a formidable contingency to cover an imponderable cost for accepting risks. It was found that this technique is the most widely used one (Towner and Baccarini), 2008. On the other hand, contractors resort to use subcontracting to transfer some critical risks to subcontractors and suppliers or buy insurance to protect against undesirable risk consequences. Transferring risks onto other parties in weaker positions or with less bargaining power is a quite common practice in the construction industry. (Hanna,et al., 2013). In that, owner will try to contractually shift risk to the contractor, who will in turn shift it to subcontractors and suppliers in a way that echoes the logic of the food chain. Another technique is to put tags and conditions to risky items or aspects of the tender bids (Laryea and Hughes, 2011). The bright side of this technique is that it helps in keeping low bid price and leaves a room for further negotiations.

Regarding the recommendations made by researchers, two main observations were noted. First, it was found that the most prominent risk mitigation strategy recommended is the addition of contingency margin. Most risk pricing models operate on the basis of applying a straight contingency margin once the level of risk has been identified. This will often not work, as contractors need to price their bids below this level to ensure they remain competitive. The models for pricing risks generally do not take into account the realities of the market and specific needs of the contractor such as the desire to win the job or outbid competitors, or the expectation of more profitable future contracts following successful completion of the job at hand (Mbachu, 2011).

The second limitation is that studies have focused on how to effectively allocate risk in narrow areas. These areas are mainly indemnification, consequential damages, differing conditions, and delay. Studies pointed out the dire need for transparency in

risk allocation procedures and the contingencies associated with acceptance of risk Ashley et al. (1988). However, recommendations are made for a limited number of contract clauses, and though a list of recommendations provides a great reminder of contracting principles to be applied, it does not give instructions or strategies for systematically optimizing risk allocation.

To sum up, Despite all the preaching about the importance of the bidding phase with it's all components; time, quality of tender documents and interaction and the tons of suggested tools and techniques to improve contract's drafting and risk sharing, contractors might still have to face this difficult situation and deal with poor tender documents and unfair contract conditions.

Researchers have done an impressive job in pinpointing the sources of claim and problematic legal terms and clauses through offering frameworks to review contract conditions. Yet, the literature still lacks real practical measures that go beyond the mere listing of frameworks that treat some of the contract provisions. Usual suggestions of careful proofreading and proper punctuation and listing the advantages of increasing clarity of contract clauses and finally suggest ways in the loading of contingency margin to cover the risks. Recommendations needed are of the nature of actions to be taken and when then further analysis of what if these actions were taken away from the financial implication of the traditional prescribed techniques. Established formal theoretical models to identify and assess certain types of risk and recommendations to deal with them at the tender stage.

D. Conclusion

Drafting construction contract is a complicated and delict task as the balance of power in contractual relation can be easily disturbed. Construction disputes often arise over unanticipated happenings making them inevitable no matter how carefully the contract terms were constructed (El-Adaway et al. 2007). Resorting to court to solve disputes, even with cases of lucidly biased contracts, is not an appealing idea. Both parties will suffer immensely from the time consuming and costly process. It is true that the main blame goes to the owner who pursues such conditions, either knowingly and willingly or out of ignorance, but the contractors cannot be absolved of blame, either. Contractors usually fail to protect their contractual position. Administering unbalanced contract requires more attention from the contractor's side. Although it is not entirely fair for the contractor since he does not have a say in drafting the terms. However, it is both parties duty to administer risk management techniques.

Most of the reviewed literature addresses the drafting party and offers advice, and tips on the best way to draft a fair contract. In the contrary, very little was said on how would the contractor, who is usually the receptor or passive in the process, detect, mitigate, and adapt to such unfair contracts prior to and during project delivery. This is not meant to undermine or belittle the value of these tips. In fact, if these were to be followed, it will be to the benefit of all contracting parties, as they will significantly reduce the chances of claims and disputes. Until this happens, if it ever happens, contractors need to develop a road map before stepping in such minefield.

Although the contractor might not have a direct influence on the nature of the 'initially drafted contract' or the terms that the client is offering, he/she still can manage the relationship with the owner and learn about the client and the project without

actually initiating the deal. In other words, contractor needs to devise ways, other than monetary ones, to convince and sometimes force the owner to change his contractual language vis-à-vis risk appropriation among many other ways to deal with risk. A lack of training and understanding of risk mitigation and elimination methods encourages contracting parties to continue with their risk-averse attitudes, which is best noticed in the owners' primitive attitude towards risk and problem solving. Moreover, herein lays the importance of good management of the pre-bidding and bidding periods. A contractor needs to exploit every possible opportunity to get the best bargain and win the bid while reserving for himself the right to walk away "cordially" without ruining the relationship with the client. These withdrawal techniques may vary from a direct no to a nominal bidding for face saving purposes.

CHAPTER III

PRE-CONSTRUCTION CONTRACTOR'S ENGAGEMENT CAPACITIES: PRE-BIDDING, BIDDING, AND NEGOTIATIONS AND CONTRACT FORMATION

A. Introduction

Typically, a construction project starts with an idea conceived by a business developer or owner. Subsequently, the owner consults or presents the idea to a designer who develops it into a conceptual design that satisfies the needs and meets the requirements of the owner. Afterwards this initial design will be further elaborated into multiple design deliverables. These deliverables should be studied and reviewed thoroughly by the Engineer or the owner's in-house team to ensure that the elaborated design properly reflects the client's requirements. A further review of the design might be carried out by an external reviewer through a process called design review or design audit. This review is done with the aim of checking if these deliverables comply with the requirements of the contract and communicating deficiencies and errors that need to be addressed in order to launch the bidding process. Once the design review is completed and changes, corrections, have been incorporated, the owner would advertise the project through the issuance of invitation for pre-qualification or request for proposals. The pre-qualification process typically includes the submission and evaluation of pre-qualification documents, and the identification of a short List of pre-qualified bidders to be invited to tender. After that, invitations to tender and the design documents will be distributed to the qualified/interested contractors. Contractors start

tender preparation (pricing and adjudication), tender documents will be carefully studied, analyzed, and threshed and then priced to be submitted to the owner. As part of validation of the construction documents and clarification of any perceived design ambiguity, prospective bidders might consider visiting the construction site and meeting with the owner and/ or owner representative along with other clarification methods such as requests for clarifications (RFC). In light of the analysis of tender documents and available information, contractors make the decision to either drop out of the bid process or submit bid proposals. Submitted bids, i.e. offers, will be analyzed based on selection criteria. This will usually be followed by Interviews and negotiations with the preferred bidder(s) to discuss their bids. Further negotiation rounds for contract conditions are usually held before officially awarding the contract to start the execution of the project. Figure 1 provides a graphical representation of the sequence and windows of interaction between owner and contractor during the pre-tendering and tendering phases.

In order to comprehend the dynamics of the bidding and negotiation processes, it is necessary to investigate and analyze the steps that precede and are involved therein and how they influence the contractor's understanding and assessment of the owner and project. This chapter shows the different stages that a construction project goes through prior to the phase of actual execution. A detailed description is provided of the tender process for a typical construction contract and the development of the contract documents in addition to the relationship that develops between the contractor and the owner and his team. Based on the analysis provided, this chapter highlights the windows of opportunities available to the contractor in every encounter to gather

information and learn about the project and the client and the expected knowledge to be gained in order to pave the road for more fruitful results.

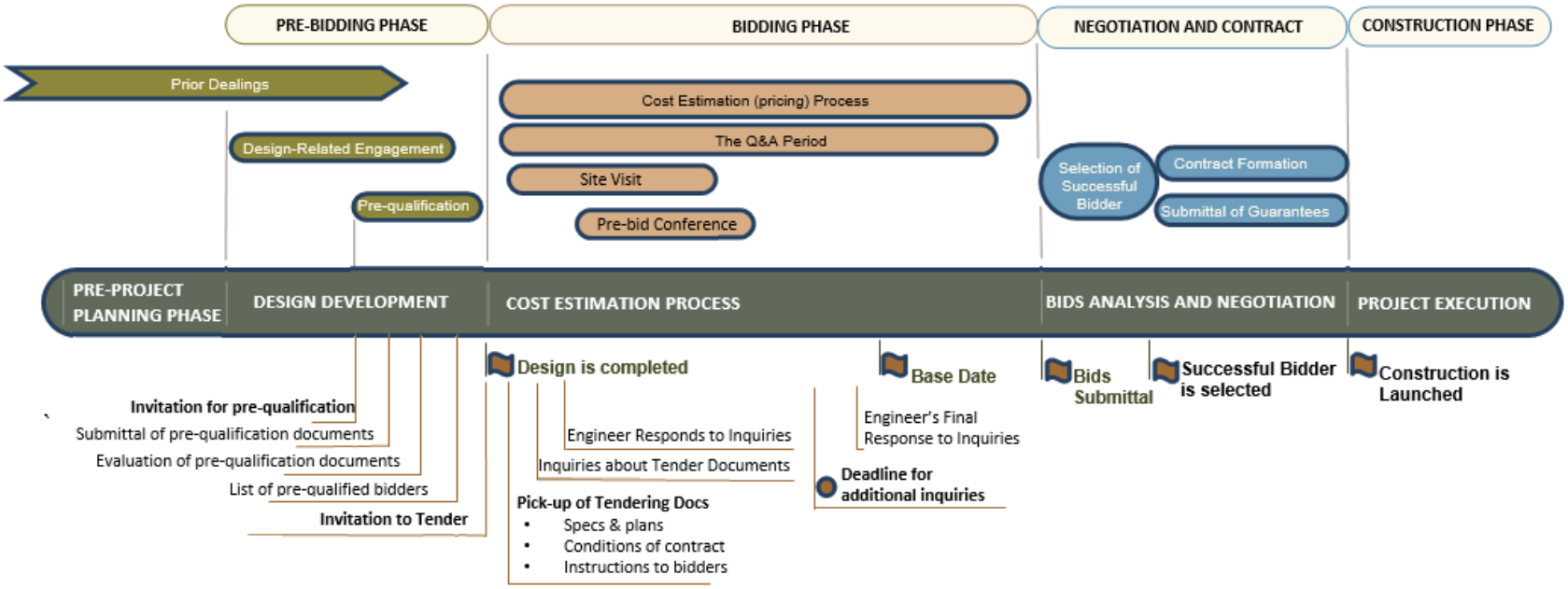

Figure 1 The sequence of pre-tendering and tendering processes

B. Scrutinizing the Owner

Construction projects are usually characterized by reactive rather than proactive management. Although this puts the contractor in the recipient's place, it does not mean the contractor has a passive role or has no chance to plan for or steer the process. First and foremost, from a business development perspective, the contractor has the discretion to decide whether to establish a business relationship with some owner or not. Such decision would normally come in response to either a formal request or an advert by the owner to participate in a preconstruction service or prequalification process, or a request for proposal.

In an ideal situation, the contractor would perform an investigative process, known as due diligence. Normally, the parties in charge of a due diligence investigation will need to inspect aspects related to the company's reputation, financial standing and legal status. The general purpose of a due diligence is to ensure that the company under scrutiny is financially sound and free of legal troubles or other impediments that may hinder the attainment of a project's goals or impose a threat to the party dealing with it. The due diligence process is an obligation that all parties in construction industry should take seriously before each and every step. It is pretty common among the owners to vet their prospective bidders using different techniques, which is discussed in details in the coming section. Equally important, the contractors inevitably need to know what they are embarking on before making a decision to take part in it. This necessarily entails investigating the client's and the team hired by the client general reputation and position in the market through networking and public relations with business development people and other contractors.

1. Owner's History and Reputation

Whether dealing with a previous client or starting business with a totally new one it's imperative that the contractor should inquire into the prospective contracting party's history and reputation. Sources of information in this regard are mainly hearsay and word of mouth, and the contractor's history as it appears in prior firsthand dealings with the owner. Another equally important element is the reputation of the owner's team. Thus the reputation of the Engineer or /and Project manager, if any, is not only about their persons or qualifications, but goes beyond this and could be an added value or a damaging factor to the project since the Engineer and the Project manager have a direct influence on the contractual relationship without being part of the contract.

As for the examination of the financial and legal matters during the due diligence process, contractors often assume that this merely targets the pending arbitration, litigation, or other claims and law suits or governmental proceedings. Many potential financial hurdles that may not be apparent at the time of the due diligence investigation, may arise at a later time as a consequence of legal disputes. Hence, newly emerging claims and law cases, unaccounted for, might be looming in the horizon.

2. Owner's Terms and Conditions

If the owner shares a history with the contractor through any kind of prior dealings, then the contractor is most likely aware of the form of contact and terms and conditions the owner uses. Contractors can glean this information, to some degree, from owner's contracts. These contracts include contracts between the owner under scrutiny and the contractor in some previous project or service, other contractors in the market, or consultant. It really does not matter with whom the company has contracted or what

the contract covers. Rather, it is the merit of the contract that makes it unfair and serving the owner's interest at the expense of the other contracting party. The mere existence of unfair conditions is enough for some contractors to recuse themselves and abstain from getting engaged in anything related to this particular owner, whereas some other contractors might want to try their luck even against high odds.

It is very likely that the contractor will make his decision based on the results of the previous encounter, the extent to which the contractor is satisfied with his previous experience with the owner/his representatives, along with other contractor related decision factors mentioned before. Contractor may revert to his records and check the lessons learned and the reasons for the failure if such obtained. The reasons for the unsatisfactory experience might be related to the owner's financial standing, the owner's personnel, the owner's form of contract, the consultant, or subcontractors nominated by the owner. The way the owner treated contractors in the previous contract indicates how the relationship between the owner and contractor is likely to proceed and how the owner, is likely to behave vis-à-vis the contractor during the project execution phase. Nevertheless, it is incumbent on the contractor to check if any of these reasons or unfavorable conditions has changed.

Once the contractor's initial investigations give the green light to proceed with a project, the contractor shall use every possible encounter as an opportunity to make a positive impression and gather information to make an informed decision while keeping a safe passage for possible retreat, if necessary.

C. Pre-Construction Services

Preconstruction services, as the name suggests, are services provided before the inception of the construction works. In most cases, these services are related to improving the buildability and cost-certainty of the design. The scope of these design related services usually include: engineering assessment, sequencing and construction risk, work packaging, development of cost plan and construction program, identifying deliverable responsibility by all parties. Additionally, before the project moves to construction and design review which considers design quality, value management and value engineering, design risk management, design coordination. In addition to procurement method, compliance with the project brief, the procedures laid out in project execution plan, the relevant legislation, codes and regulations, the need for specialist designers or specialist contractors, the need for mock-ups, samples, tests and inspections sustainability, and site selection.

During Design phase, the contractor might be asked to participate in a constructability workshop organized by the owner to review the design before the start of the bidding process. Information describing services required in sufficient detail are provided in the preconstruction service's agreement. This is usually done through an agreement to review the design for a premium or a flat rate. The signed agreement for such services is of a consultancy nature and thus, it differs from the actual construction contract. It ends by the time the service is completed and its scope is limited to the service in question. In other words, this agreement does not carry any obligation to hire this particular contractor to execute the project, yet the contractor might be selected as prequalified bidder. It is a separate consultancy agreement other than the actual

construction contract, which allows a client to gather information before committing to any construction.

During this phase, contractors' involvement/level of intervention is limited to design issues, even if the contractor was prequalified for that job and involved in reviewing the design during the constructability review. This phase deals with pure technical issues and does not touch on construction contract conditions. Yet, although the scope of the preconstruction service contract/agreement in this phase is limited, the degree of clarity, completeness, and fairness of the agreement gives an indication of the owner's style of managing contracts.

For the contractor, this might be the first interaction with the owner. Having engaged in reviewing the design, the contractor will have an advantage over other bidders: in that, he had the chance to learn about the project and the owner and examine the design more thoroughly without being rushed or stressed out during the hectic, and generally short, period of bidding. This interaction might reveal much about the kind of client the contractor might be dealing with, assuming that he win the bid. Among other things, he will acquire firsthand knowledge of his (owner's) attitude, level of responsiveness, openness to innovative techniques and cooperation, and willingness to respond promptly to inquiries. This stage involves give and take and gives a clear indication as to the owner's readiness to go by the terms of the contract. The Contractor should be able to develop a sense of the shape of the potential relationship with the owner. The above observations give an indication as to the type of relationship they are likely to develop. Thus, it is strongly recommended that the contractor takes full advantage of this opportunity and exploits it wisely.

D. Pre-Qualification

Once the conceptual design is done and the owner is satisfied of its adequacy, the said owner commences the process of identifying qualified candidates to execute the job. This process can take many forms during different phases. Contractors might be asked to undergo either a prequalification process, where the contractor needs to qualify in order to be eligible to submit a bid. This is done with the aim of ensuring the attainment of a short list of qualified contractors that which fully responds to the requirements of the project to which each one on the short list would be invited to submit a tender for the contract. Alternatively, it could be done as a post-qualification; in this case, only the lowest responsive bidder is required to present qualification documentation. In certain cases, it is regarded as sufficient qualification for some owners if the contractor were able to secure a performance bond.

1. Invitation to Prequalify

Once the prequalification document is finalized, the owner invites contractors to submit a prequalification form expressing their intent to participate in bidding for the project advertised. In this phase, prequalification is done in a number of ways. One way is to have it open for the public and where whichever contractor deems himself/ herself qualified to execute the job participates. Another way is to permit only a certain class of licensed contractors to participate to ensure that only qualified contractors can bid based on licensing requirements. A third method is to prepare a list of contractors with specifications and capabilities that match the requirements of the project as per the recommendations of consultants to whom the owner extends invitations to take part in the prequalification phase. Certain class of contractors might not need to submit

prequalification files because of their classification. In such cases minimum due diligence is required.

Extending invitations to prequalification is done with the aim of securing a pool of indisputably appropriate and qualified contractors based on their track record. This will eventually reduce the number of bids and offer a competition among nearly equal candidates.

2. Preparation and Submission of Prequalification Documents

In principle, pre-qualification form should be focused and simple to compile and reflects the specific needs of the project. A pre-qualification form asks a number of questions from potential bidders to solicit information from them on different areas of concern such as their level of expertise, capacity, legal status, and financial standing. Some of the common aspects to be evaluated in prequalification may include: the quality of the relevant previously performed projects, contractor failure records, specialized technical capabilities, key personnel, and management staff availability. In addition to financial standing and stability of the contractor (such as recent accounts interim statements, schedule of completed and uncompleted contracts, company owners' personal financial statements), banking information (loans: secured/unsecured), description of internal accounting system, bid versus final contract amount, and bid versus final project profit. As well as project management capabilities, a detailed description of ongoing project litigation, claims history, quality assurance plans and policy, safety plans, environmental plans, and details of insurance cover.

After receiving a letter of invitation or an advert requesting expressions of interest, the contractor needs to make sure that it clearly describes:

- The contracting body and scope of the project including scale and budget to which the prequalification process is to apply;
- The procurement method;
- Submission address, deadline and the entity that will use the resulting short list;
- The information and details required in the expression of interest which generally include: Contact details, description of company, financial information, relevant experience and technical capacity, staff experience and availability and references;
- The qualifications required and the manner in which the qualifications must be demonstrated;
- The evaluation criteria and the relative weightings by which the prequalification evaluation and selection will be undertaken. (Minimum qualifications that must be met);
- The expected schedule for evaluation, notification, and debriefing;
- The contact person for the document and terms and conditions related to communication regarding the process.

3. Prequalification Report and Notification of Applicants

After receiving the contractors' prequalification forms, the owner/owner representative would normally evaluate them according to the evaluation criteria set in the invitation letter. The results of the reviewed pre-qualifications will be communicated in a report that has the list of the names of prequalified contractors who are eligible for submitting a bid. Owner or owner representative should officially notify all the applicants of the decision. Some owners might indicate in the notification that prequalification will be followed by verification at the time of bidding.

Preparation for prequalification may add to the contractors' burden by requiring further work from them, by asking them to re-format their documentation to suit it. However, it could as well relieve the contractor of the burden of reviewing and pricing the tender documents as if he concludes that this project is not suitable for him in view of the information gathered in the prequalification process. Besides that, it is useful for a contractor to go through such process every now and then to check his position in the market and identify his points of strength and weakness.

Contractors should expect to divulge quite a bit of sensitive information throughout the process. A pre-qualification request should only require responding parties to submit information that is specifically relevant to the project, yet if the qualification requirements are deemed to be excessive in an unjustifiable way, a contractor might consider dropping out completely.

E. Invitation to Tender for Construction Contracts

Contractors considering bidding for a job shall submit an expression of interest or request to participate, if required, in response to an advert placed online or in the print press, or at the owner's prompting. Formal invitations normally include:

- Letter of invitation to tender;
- Form of tender;
- Preliminaries (pre-construction information);
- Form of contract, contract conditions and amendments;
- Design drawings;
- Instructions to tenderers explaining the tender process;

- The schedule for the tender process (the address, time and date for the return of tenders);
- Instructions on how to seek clarifications and make inquiries;
- The submission required in response to the invitation to tender;
- The evaluation process "award criteria" and;
- Policy for providing feedback to unsuccessful tenderers.

F. Responding to an Invitation to Tender

In response to an invitation to tender or invitation for expression of interest (sometimes referred to as request to participate), the contractor would normally need to make a decision to bid or not to bid. If the initial sign and conditions are favorable and no impediments that could preclude the establishment of the relationship exist, the contractor may want to respond to the letter of invitation. Interested invited tenderers will submit their tenders, which typically include their price along with their proposals. In some cases, the contractor might decide to proceed in bidding process and submit a fat bid with a high mark up. This is usually done with the intention to hedge for the high risk involved, face saving and maintain a cordial relationship with the owner.

1. Obtaining, Reviewing, Documenting and Pricing Tender Documents

Interested bidders who decided to proceed with bidding for the project will need to acquire the tender documents by way of picking them up or downloading them from the designated portal or website for a fee. Then, documents will then be reviewed, analyzed and priced. At this stage, prospective bidders are expected to review the technical requirements and highlight the errors, ambiguities and omissions in the design.

They are also expected to check the contractual requirements which entail reviewing the contract documents and highlighting the red flags, unfair and must have clauses in addition to any ambiguity resulting from the language of the contract. Contractors shall price their bids according to the base price needed to have the work done plus the contingency budgeting needed to hedge for the risk related to the contractual and technical requirements of the project. A suggested framework for reviewing tender documents, especially contract conditions, is discussed in details in the following chapter.

Tenders documents may include:

- Procurement Requirements:
    - Solicitation
    - Instructions for Procurement
    - Available Information
    - Procurement Forms and Supplements
- Contracting Requirements
    - Contracting Forms:
        - Agreement
    - Project Forms:
        - Performance Bond
        - Payment Bond
        - Certificates
    - Conditions of the Contract
        - General Conditions
        - Supplementary Conditions

        - Revisions, Clarifications and Modifications
    - Specifications
    - Contract Drawings
    - Pre-Contract Revisions: Addenda

As part of clarification and information validation, contractors are normally entitled to conduct site visits and meetings with the owner or owner representative.

2. Clarification Tools and Venues

Questions & Answers

The contractor has the right to issue a written query about issues related to errors, discrepancies, omissions, unfairness and ambiguities he encounters in the contract documents during the pre-bid conference.

Site Visits

During pricing process, prospective bidders may want to investigate the site; in some cases, this might prove to be obligatory. On such visits, they may have questions to ask to dispel any doubts they may have or verify information provided in the solicitation documents. A site visit is considered as an invaluable opportunity to plan effectively for risks and gather information about the project. Prospective bidders are encouraged to ask all the questions that may arise and seek clarification wherever needed and voice out any doubts or concerns during such a site visit which may be construed both ways, formal and informal. The site visit is informal in as far as it affords them the chance to establish direct contact with the owner's team through a casual chat. Alternatively, they could contact the owner's team by communicating through official emails. In all cases, answers to the questions raised either way will be

formally communicated to all prospective bidders that expressed interest in the requirement by way of minutes of the site visit and responses to request for clarifications.

Instructions to arrange for site visits re time and venue are indicated in the tender documents. Perhaps the best timing for a site visit to take place is after receiving the tender document and before the pre-bid conference (meeting). This would give the prospective bidder the chance to validate the information included in the tender documents, gather more information and get a formal answer for any additional questions (RFI or RFC) and concerns that may arise after the site visit.

Pre-bid Conference:

Prospective bidders are permitted to request clarifications on the invitation for bids or request for proposals by a stipulated date, and the pre-bid meeting is held within that period. These meetings, also known as conferences, are formal and the results shall be reported to all prospective bidders that expressed interest in bidding for the job whether through requesting, buying or downloading the tender documents from an official website. Pre-bid meetings are usually held during the bid-pricing period. They are best held after the prospective bidder have read, reviewed and analyzed the tender documents and prior to engineer's formal response to the requests for clarifications sent by the different prospective bidders. Details related to the time, venue and other arrangements for these meeting should typically be mentioned in the tender documents.

In some cases, a large number of major amendments, by way of Addendum to the tender documents, are issued which might require an extension in the bid submission date so that the bidders can adjust their bids accordingly. Excessive amendments might indicate that the client's ignorance of what he is embarking upon.

Site visits and pre-bid conferences can result in substantial amendments and corrections that require adjustments in tender documents by way of addendum that might in turn lead to extension of the submission date.

After the engineer responds to the last allowed inquiry, the contractor needs to ask himself and answer the following questions: to what extent was the owner/ engineer responsive and willing to give and take? What is the quality of the design? Did the owner/engineer consider confidentiality issues related to tenderer's commercially sensitive information such as proposed methodology, commercial proposals or programming advantages, which may have been divulged in meeting or request for clarification? Are the time, information and instructions given to bidders sufficient to help them submit a bid or proposal that lives up to the project's needs and requirements? To what extent did the engineer apply the instructions stipulated? Further discussion of such issues is offered in the next chapter.

3. Submission and Receipt of Tenders

After finalizing the tender documents preparation, tenderers will submit their offers before the deadline stipulated, along with other instructions, in the tender documents. This offer includes their price for executing the project along with proposals for how the project's objectives will be accomplished. This submission means that the contractor accepts to do the job for the price he offered if the owner is to accept the offer. This price will serve as the basis of the upcoming negotiation process. It also means that the contractor understands and accepts the "initial" contract conditions offered by the owner. Thus, this offer is legally binding.

The contractor takes the responsibility of incorporating any changes and modification done to tender documents ensuring the completeness and correctness of his tender document which shall include:

- A tender return slip, with details of the contract, return address, tender checklist;
- A completed tender pricing document;
- An initial construction phase plan;
- The requested design proposals, method statements and program;
- Procedures to be adopted such as procurement procedures, cost management procedures, etc.;
- Key project personnel;
- Requested qualification, bid bond and references.

G. Tender Evaluation: Analysis and Clarification

Once the tenders have been received, the owner shall open the tenders submitted in the due time on the specified date, then follows a careful process of assessment that will be undertaken to identify the responsive bidders. A responsive bid is one that materially complies with the requirements of the bidding documents. Another screening process to select the preferred bidder will then follow this. Each project has its own requirements and specifications, thus, the evaluation criteria shall be designed, usually by the consultant, accordingly to account for these differences. These evaluation criteria are usually referred to ‘award criteria’. This mainly include: the financial and technical aspects of the bid. In addition to these, the impressions the owner has already formed about each bidder will be the base for the selection of the preferred tenderers as a prelude to start the negotiation process. The evaluation process shall be conducted in

accordance with the award criteria stipulated in the bid solicitation which is expected to be fair, accurate and transparent. The Owner is expected to treat the information incorporated in the bids in a secure and confidential manner.

H. Pre-Contract Meeting

After analyzing the submitted bids, the client will make a shortlist of the preferred tenderers. Those contractors will be notified to start multiple interviews for negotiating the tenders and settling the contract. These negotiations are an opportunity to agree or clarify any matters regarding the pricing and quality of the proposed works, discuss alternative offers to the design or specification, and agree on the conditions of contract and program. Further adjustment of the tender documents is expected to take place at this stage; hence, the contractor might need to submit a revised tender. Contract negotiation will usually involve some degree of compromise on both sides to achieve a final contract that is acceptable to all parties.

If the award of contract fails, or is stopped for any reason, the second bidder on the list, reserve tenderer, can be brought in to start a new round of negotiations. The minutes of the meeting and the record of the agreements reached need to be carefully drafted and signed off by both parties as it will be part of the contract documents. The contract negation meeting is an opportunity to:

- Clarify roles, responsibilities and lines of communication;
- Hand over outstanding documents and information (such as insurance certificates and bonds);
- Discuss the contractor's program, including incorporation of works outside of the main contract, inspections, commissioning and testing;

- Agree procedures for monitoring, issuing, receiving and reviewing information;
- Agree site access procedures;
- Agree procedures for dealing with queries and issuing instructions;
- Hand over contractor's procurement schedule and mobilization schedule.

I. Contract Award

After finalizing the negotiations with the preferred bidders, a formal contract award notice shall be issued by the owner once the successful bidder has been selected. Contract award is the process of formally notifying the successful tenderer(s) that they have been selected as the contractor for a particular contract.

After that, two copies of the last version agreed upon of the amended contract documents will be printed and signed by both parties. The successful contractor shall submit the needed performance bond, warranties, evidence of insurance cover and any other outstanding documents. The contractor is said to be officially appointed if and only if he fulfils the requirements within the stipulated timeframe. In some cases, the engineer shall issue a letter of acceptance, signed by the owner to the successful bidder. This formal letter includes any annexed memoranda comprising agreements signed by both Parties. The contractor shall accept the letter of acceptance within the specified period. Then both parties will agree on the date of signing the contract agreement.

All tenderers should be informed of the decision to award the contract to a particular tenderer. A tender report may be prepared that provides an analysis of each tender submission, any subsequent negotiations and reasons for disqualification.

J. Contract Execution

Contractor might start work immediately after receiving the award notification before signing the contract. This work is usually in the form of preparing the site and mobilizing the needed equipment. Yet, the official date to be used in calculating the key dates of the project is the date in which the agreement was signed.

K. Conclusion

Despite the conflicting interests of the contracting parties, they all seek to draw each other's attention and establish a cordial working relationship prior to and during the bidding phase. Each party in the construction process approaches the prospective relationship with a number of objectives and concerns in mind. Starting with the Client, whose main objectives and concerns are to solicit the best possible pool of potential contractors, establish communication between consultant and potential contractors, and get the best bargain for the job in question. Client might also want to verify the clarity of the design documents through checking the number, types, distribution by bidders, frequency of questions, etc., fix all deficient documents. In addition to get a sense of the seriousness of bidders: quality of the questions and their timing of questions, and assess the likelihood of claim-consciousness bidders.

On the other hand, a contractor's objectives and concerns are to reinforce the intent or decision to go for involvement or withdrawal from the project: quality of design (standards, etc.), estimate the extent of design development and documentation inferred from the design documents, pinpoint, and account for areas and conditions that are open to conflicting interpretations. Moreover, most importantly ensure a reasonable chance for achieving a minimum level of profitability if and when the contract is won.

Therefore, this process ought to be conceived as a two-way highway with the two parties trying their best to scrutinize each other.

From the contractor's perspective, early inspection mechanisms may provide the best and earliest warning signal to act in a timely manner. It is absolutely essential to replay the actions and recall all possible clues in the period prior to and during the bidding phase: actions and clues that may go unnoticed in the managing the pre-construction process and that may prove to be influential. Contractors are therefore, strongly advised to carefully scrutinize the tender documents, contract conditions in particular, and to react accordingly, in such a way that could help them protect their interest and thwart all unreasonable risks.

Figure 2 below shows the different stages a construction project goes through prior to the actual execution. Each pivotal phase ends with a decision station that represents a junction where the contractor needs to make a decision as to the feasibility of participating in bidding. This decision is mainly based on the analysis of the information gathered through investigation or provided by the owner which is referred to in this study as the knowledge base.

During the pre-bidding phase, if applicable, the contractor at station 1 needs to make the decision to proceed or end dealing with that particular owner based on the feedback from previous encounters/ dealing with the owner. If the contractor decides to proceed and accepts to execute design related work, he will then have to make the same kind of decision at station 2; and again if the choice is to submit pre-qualification documents, the same decision has to be made at station 3.

The next phase would normally be the bidding phase which is divided into three main stages; first is the initial stage where the contractor reviews the Procurement

Documents. The decision made by the contractor after this stage, Decision Station 4, would also be one out of two; proceed or quit. After that, comes the middle stage where the actual pricing process starts. The third one is the final stage which is the short period between the date of the engineer's last response to queries and the due date. Different action/reaction can be taken based on the results of the tender documents' review, the site investigations, the clarifications provided by the owner's representative, and the owner's reaction to different queries raised by the contractor and other participants. Understanding the effect of these matters that are considered in these stages is decisive in making the decision that is most appropriate among the different options available. The output of the bidding phase would form the basis of the negotiation phase once the contractor has been selected as the preferred bidder or one among the preferred ones to start negotiations.

As time goes by, the original conception (image) the contractor has formed concerning the owner's, and the owner's team, reputation becomes clearer and more accurate. This factor, reputation, feeds directly into the decision to be made by the contractor in each decision station.

The following chapter discusses further options at the contractor's disposal to help the contractor investigate, analyze, deal with different issues and mitigate possible risks that may be encountered during bidding and bid negotiation and contract formation periods. Framework and tactics suggested in this research are held under the assumption that the bidding process is a competitive non-collusive bidding process without resorting to any illegal or unethical behavior on the contractors' part.

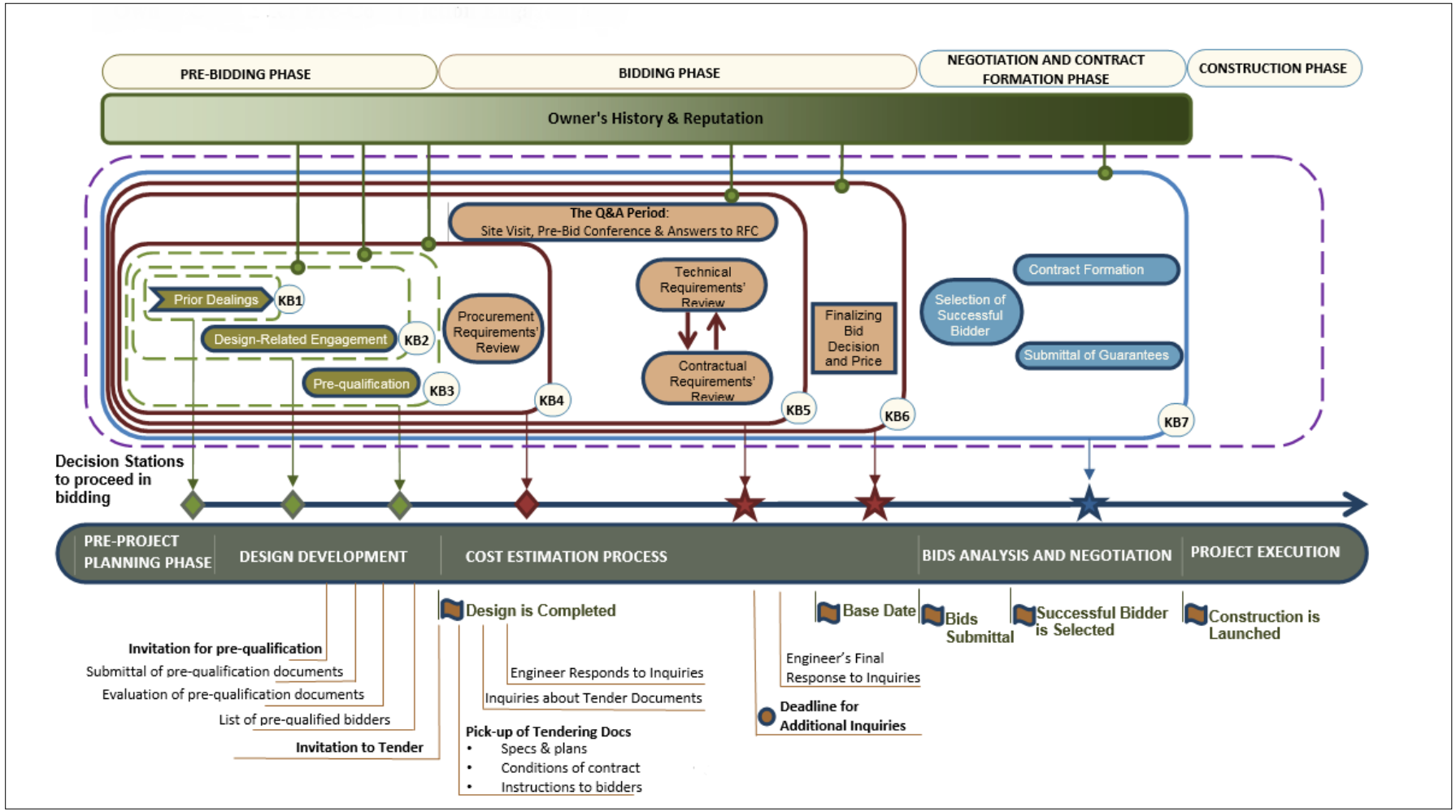

Figure 2 Owner-Contractor's pre-construction engagements

CHAPTER IV

BIDDING AND NEGOTIATIONS TACTICS

In reference to the flow chart, Owner-contractor's Pre-construction Engagements, in the previous chapter and the point where the discussion of it has reached, an intricate period begins for the contractor as he receives the bid package. The present chapter zooms in on the interaction that takes place during the bidding process, provide remedial measures, and suggest tactics to overcome the problems.

One feature of construction contracts is that price formation and contract formation take place through the same tendering process (Murdoch and Hughes 2008). That means the contractor needs to decide on the price for the work to be executed under the given contract conditions. Tender documents may take different forms and arrangements however; the core of resultant documents is the same. A massive amount of information needs to be processed into a price and program in a short time. The situation becomes further daunting if the information provided is not clear, incorrect or inaccurate. Problems frequently encountered with tender documents are missing information, incomplete drawings, conflicting information, inadequate specifications, errors and mistakes, and stringent and unfair terms and conditions. All of the preceding issues may result in significant changes that overcomplicate the pricing process within the short time allocated.

The suggested framework for construction contracts management is mainly two folds: the review of the entire bid package (tender documents) followed by a rational decision-making depending on the results of the reviewed risk and the analysis of the options at the disposal of the contractor.

A. Initial Stage of the Bidding Process: Review of Procurement Requirements

Procurement documents are known to be the general rules that govern the tendering process given in the form of instructions to tenderers. In principle, these are the first set of documents the contractor needs to review. Reviewing those documents at the beginning of the Tender Stage is very important in making the decision to participate in bidding or to quit. This is especially the case when the acquisition of the tender document was not preceded by a pre-qualification or a particular invitation to tendering. The Contractor decides to proceed and participate in bidding or to quit before incurring further loss in cost and time in case he finds that the requirements of the work at hand do not conform to his scope of work, policies and/ or current position in the market. This review needs to be conducted, followed by a swift decision which should be made and communicated to the concerned party in the hierarchy in the most expeditious manner, as the time allocated for the entire process from the beginning to the final submission of the tender is very limited.

B. Middle Stage of the Bidding Process

In this stage, the contractor has to review the Technical and Contractual Requirements and assess the different types of risks inherent in those requirements. The activities encompassed in this phase render it the longest among all the other stages. In theory, it involves meticulous reviewing, investigating, inquiring, observing, assessing, acting and reacting before reaching the final decision.

In practice, attention is mainly drawn to the review of the design and specs, as they are the main elements in pricing the work. Contractors in general fail to read the terms and conditions of contract during the bidding phase. This can be attributed to

many reasons; perhaps the most important one is the contractor's eagerness to win the project. Hence, he mainly focuses on what, from his perspective, is going to make the deal happens and pays little or no attention to other "minor details", contract conditions included, thinking that these could be settled at a later stage. The situation becomes further complicated when the contract conditions are unilateral and unfair. The conditions of contract are more about risk, liabilities, obligations and payment terms. The conditions of contract may or may not affect the rates and price offered but it tends to have an impact on the final tender submission in terms of the risk approach taken.

1. Review of Technical Requirements

It is imperative that the contractor review all plans, Specifications, Drawings, Bill of Quantities, Soils Reports and Addenda since he is contractually liable for all requirements included in the complete document. However, many contractors resort to reading the parts of the specifications that directly affect their price. This might result in major defects and risks, being overlooked and/or underestimated which affect the final bid decision.

It is common for owners to require the contractor to declare that he has reviewed and become thoroughly familiar with the contract documents as well as the project site. Doing so is often necessary in order for the contractor to submit a bid based upon realistic assumptions. The contractor owes the owner the duty of reporting whatever design defects or contradictions with applicable law he comes across, while reviewing the design for the purpose of pricing the work. This is usually done by way of issuing a request for clarification during the Question and Answer period.

It is the contractor's duty to notify the owner whenever he comes across or discovers any defects, i.e., discrepancies, inconsistencies, ambiguities, omissions, errors, departures, and diversions in the design during the course of the contractor's review before submitting the offer. If the quality of the design proved to be very poor, the contractor may decide to withdraw from the bidding process all together. Especially that the contractor takes responsibility and shall not be compensated for the patent ambiguities that he was aware of or should have been aware of, but failed not to question them prior to the award. These same patent ambiguities will not be construed against the drafter, owner. Contractor should be aware that his failure to build the project in accordance with applicable building codes, even at the behest of the owner, could still result in liability for the contractor thus, speculating on such issues and ambiguities should not be among the strategies the contractor may adopt as it is prohibited by law.

However, one needs to keep in mind here a major consideration: the contractors' review of the tender documents is definitely not carried out with the intention of identifying defects in the design, conflicts between the contract documents and applicable building codes and laws unless explicitly stated otherwise.

This step becomes even more essential in case the contract has included a Design Liability clause. In this clause, the owner inserts a provision pursuant to which the contractor warrants that "all design documents comply with applicable building codes" and he, the contractor, takes liability for the defects of the design. Such clauses effectively shift liability for improper design from the owner to the contractor.

Importance of Reporting Defects and Conformity Issues:

A Contractor should address all identified ambiguities in a prospective contract to avoid being legally liable as well to show goodwill and expertise. Moreover, in reporting defects, the contractor will gain the owner's trust. The contractor appears to be knowledgeable and actively engaged in the bidding process in a way that shows interest and competence.

In dealing with the quality of the technical issues, the contractor should always try to be as proactive as possible in flagging the issues provided the inquiry raised will not divulge sensitive information in relation to the contractor's strategy to execute the work.

2. Review of Contractual Requirements

It is universally agreed that construction projects are inherently risky undertakings. However, they are rendered more risky when contract conditions are manipulated by the owner for his advantage. Hence, the contractor needs to operate with the highest standard of contract administration. This includes both review of contract conditions as well the action plan.

However, before discussing the contractual part of the framework, it is important to point out the following: The starting point in dealing with the contract agreement is to realize that the conditions of this agreement are binding and determine the basis on which the relationship is to be regulated. Even if the enforceability of some clause or clauses is questioned, contractors should keep in mind that in principle the agreement is binding and parties should, on the whole, bear the consequences of the agreement they entered into. Because once an agreement is finalized it becomes subject to the principle

of *"Pacta Sunt Servanda"* Latin for "agreements must be kept". Thus, the contractor should primarily consider pointing out and resolving all sources of contention regardless of the court's decision on such issues. As in medicine, prevention is the first and safest remedy to adopt.

A Critical Trio; the Policy Maker, the Reviewer, and the Decision Maker

Three main roles are the essential components in this process. Depending on the company's size and resources, the contractor needs to have a reviewing team/personnel whose responsibility is to review the contract conditions for potential problems. The reviewing team reports its findings to the second team which is the decision making body. The decision making body is responsible for deciding on the optimum way to deal with the identified problems. The over-all process of reviewing the contract and making decisions is governed by sets of rules and guidelines that are drawn by the third team: i.e. the policy maker.

The decision-making policy is a standard, company-wide set of rules that are synchronized with the company's strategic business plan and reflect the contractor's level of risk tolerance. Every contractor has his own way of perceiving, analyzing, and reacting to risks that primarily reflects the level of risk aversion of that contractor. Setting out the company's policy is a laborious and delicate process that necessarily requires the active involvement of a construction counselor. However, the input of the experienced key personnel in both the construction site and the head office, in addition to the legal counselor, has an added value as each one of them can see the project from a different angle. It is strongly recommended that the development of the guidelines

governing the decision-making process (Action plan) takes into account both experiential and research based learning.

Experiential learning is based upon the lessons learned through the previous dealings of the company. To this end, the contractor needs to establish a systematic approach for collecting data related to the encountered risks, both anticipated and unanticipated ones, the way there were detected, assessed and resolved; also the efficiency of the tools used, as well as unanticipated risk and their effect on the company. Finally, the contractor needs to store the data collected into an easily accessible archives which can be used to feed into the making, or updating, of future decision policies. In addition to funneling the lessons learned, the contractor should keep an updated analysis of the behavior of the market, developers, and his own company over the past years during different economic cycles.

Research based learning, on the other hand, involves extrapolating. It is a proactive approach in anticipating the potential traps and/or shortcomings. This can be done by the development of different scenarios on where things could go wrong and what actions need to be taken and the likely consequences of each if and when taken in response to unfavorable contract conditions. A culture of research and development of knowledge should be nurtured. Availing one's self of recent research findings and commentators' reflection on construction related events helps in the making of an up to date and ever evolving policy that keeps up with changes in market practice and legislation of the locality in which the project is to be constructed.

In designing the design review process, a set of clear guidelines are prepared to help understand and translate the different contractual language, terminology and identify the problems therein. The ability to identify problematic contract language is a

skill that takes training and practice in understanding legal terms and concepts and their interaction with other tender documents and their different possible interpretations. The reviewer is mainly a trained-personnel from the construction industry with a reasonable background of both legal and technical knowledge. Whereas the decision maker needs to have a wider perspective to understand the likely qualitative and quantitative effects of different contractual risks and be able to react to them. Contrary to the common mistaken belief, neither the reviewer nor the decision maker needs to be a lawyer. Nevertheless, the input of a well-versed legal counselor is always welcomed.

It is the reviewer's responsibility to report all anomalies and departures from best practices, and suspicious aspects he encounters in the contract regardless of the decision-making policy adopted for the project. Optimizing the review process is something that totally the responsibility of the company. This is contingent upon types and opportunities of training, legal research, and other tools the company is willing and able to provide to enhance the process. The review is to be followed up by a rational decision-making depending on the results of the review as to risk as well as an analysis of the options available to the contractor.

But even where there is no written policy, it still does exist regardless of the contractor's style of management. Because there is always a decision that has to be made and someone has to make it. A decision maker needs to generally know the construction industry but more importantly, know the company's position in the market.

It is true that contracts differ depending on the nature of the job, yet, recurrent themes can be found in construction contracts reviewing processes. In reviewing the contract, it is the end result that matters regardless of the tools employed. The contractor might consider using one or more of the risk allocation tools which can be systematic or

ad hoc. Some of these tools include flowcharts, checklists, risk matrices, contract language tables, and stoplight chart.

In the following suggested framework, the review process can be broken down into three main tiers. First, identifying the type of the contract, then filtering out the problematic clauses, and finally specifying the type(s) of problem(s) as shown in figure 3.

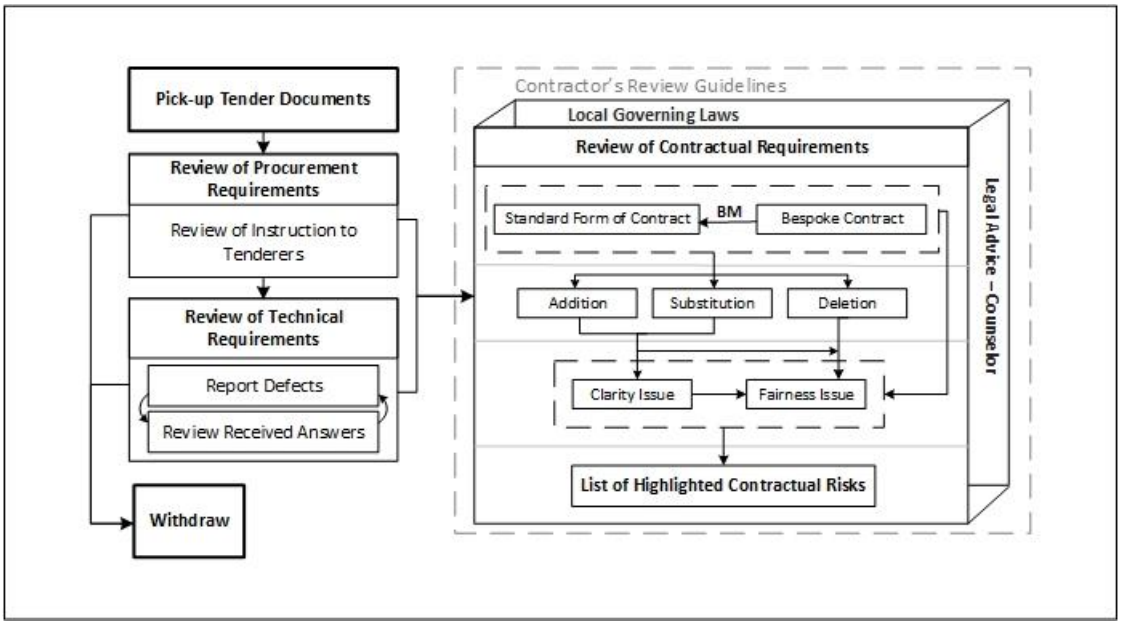

Figure 3 Different levels of tender documents review

First Tier of Review: Identifying the Type of the Contract:

Unless the law dictates the use of a particular form of contract to set out the details of the intended project, the owner, at his own discretion, may use a Standard Form of Contract, a Modified Standard Form of Contract or a Bespoke Contract. Therefore, the terms used in the agreement and subsequently the risk allocation are the choice of the drafting party.

Modified Standard Form of Contract:

In the cases where the owner decides to use a certain Standard Form of construction contract, the owner, in his tender document, clearly refers to the Standard Form to be used along with the number of the edition, the year of publication, and the respective name of the publishing entity. Regardless of the ongoing battle about the appropriateness of amending the Standard Form Contracts or not, it is a common practice within the construction industry to use amended forms of a standard contract where the General Conditions of contract are amended by the Particular Conditions of contract. In such a case, the Particular Conditions shall modify the General Conditions, delete or add to them.

Bespoke Construction Contract: "Owner's Own Devised Contract"

In this case, the owner presents the contractor with a completely new set of condition which has no reference to any familiar standard condition. The review of the General Conditions of a bespoke contract is a rather intricate and demanding process. This is primarily due to the novelty of constituent elements or structure. Bespoke contracts need to be checked for clarity, fairness, reasonableness, completeness, and readability of the contract conditions. Thus, and in order to facilitate the task, the reviewer is strongly advised to consider the use of a Standard Form Contract as a benchmark. In selecting the type of standard form contract, the contractor should consider the form which suits the particular type of project under consideration. The second aspect to consider is the familiarity and application, especially in dispute resolution, of that standard form contract in the locale in which the project is to be executed. In general, the standard form contracts are regarded as the best practices in the construction industry, and are particularly important in the absence or limitation (lack of case laws) of local laws in the locality of the project.

In addition to what has already been stated earlier, it is important to keep in mind that, at the level of General Conditions, problems can be attributed to two main areas/risks:

1. The appropriateness or suitability of the contract to the type of project and procurement method where the language, clauses and structure used in the selected contract clearly and adequately address the needs of the project.
2. The interaction with the governing local law and practices;

As ignorance of applicable laws is no excuse for not observing them (Ignorantia juris non excusa) it is the contractor's responsibility to familiarize himself with the laws and policies, promulgated by the government, that have a bearing on the industry. This is particularly important when venturing into a new market. The contractor needs to check the conformity of the contract's General Conditions with the applicable laws. This applies for both Standard and Bespoke contracts. Standard form contracts are developed to be used in an international context thus it is impossible that it can take into consideration the different legal systems/ legislation, customs or conventions of the different countries in the world. However, the level of knowledge required here is not more than being "reasonably informed" of the pertinent governing laws that are relevant, in one way or another, to the construction process. The contractor, as in all professions, is expected to provide services at the "standard of care" expected of an ordinarily competent member of the profession.

Second Tier of Review: Filter Out Problematic Clauses

It is the convention that any amendment, deletion or addition to the General Conditions of the contract has to be implemented through the introduction of Particular

Conditions. Ideally, in creating a contract amendment, the best practice is to be as specific and concise as possible. However, deviations and mistakes are bound to happen. Modifications may be required to realign the General Condition with the constantly changing industry and address project-specific requirements. However, it is not uncommon for owners to amend the standard form construction contracts with the intention of obtaining more stringent conditions and shifting the risk allocation in a contract by inserting additional obligations and/or removing rights. A suggested list of common problematic clauses is provided earlier in the literature review.

Generally, amendments come in one of three forms, which are discussed below where each form is accompanied with a corresponding sample language. The numbers (arrangement) mentioned in the Particular Conditions refer to the same clause numbers as in the General Conditions (in the same sequence):

1. The deletion of a General Condition:

"This clause is deleted in its entirety". This particular amendment method exposes the contract to the risk of interrupting the flow of the cross-referenced clauses in addition to the risk of incompleteness, especially if the deleted clauses are directly related to responsibility assignment. Omission (Deletion) of clauses might be done for the purpose of removing entitlement and waiving rights.

2. The replacement of a General Condition:

"This clause is deleted in its entirety, and replaced with the following". In this method, when amending a contract the owner states that a whole clause has been replaced, and provides the new clause. The substitution of certain clauses might be done for the purpose of shifting responsibility and/or altering limitations of liabilities.

3. The insertion of new additional clause:

"Add the following". Terms and clauses that are unique to the project have to be analyzed for the exposure to risk they may involve. Introducing new clauses in the Particular Conditions might entail the introduction of additional obligations and assumption of more risks through disclaimers and exculpatory clauses.

In general, Particular Conditions take precedence over General Conditions. This can be further emphasized by the inclusion of a note similar to following wording: "where any clause, paragraph, or sub-paragraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such clause, paragraph, or sub-paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto. Where any clause, paragraph, or sub-paragraph in the General Conditions is amended, deleted or superseded by any of the following paragraphs, the provisions of such clause, paragraph, or sub-paragraph, not so amended, deleted or superseded shall remain in effect."

In this step, the contractor is actually appraising the interaction between the general and Particular Conditions. The contractor needs primarily to review the Particular Conditions and flag the problematic clauses. Problematic clauses are usually the ones that depart from the best practices in a way that leads, whether intentionally or not, to imbalanced (unfair) risk allocation or ambiguity in the respective clause which takes us to the third tier of the review, which aims primarily at diagnosing the type of the problems created by the modification.

An important point where the review of the General Conditions of the Bespoke Contract is concerned is that the contractor will need to update the list of the flagged General Conditions as the Particular Conditions supersede the General ones resulting in the total elimination or neutralization of the risks in some of the flagged General

Conditions. Thus, the review of both General and Particular Conditions should be conducted simultaneously.

Third Tier of Review: Specifying the Type of Problem:

Different types of departure from the best practices will likely result in different shortcomings and problems. However, the root of these problem can be mainly attributed to clarity related issues, fairness related issues or a combination of both.

1. Fairness Related Issues:

Including unrealistic conditions that create a substantial imbalance between the parties' rights and obligations and cause a substantial financial detriment to the contractor. Terms that lock the contractor into cost overruns without his ability to seek compensation and/or prevent the contractor from the rights he is entitled to by law.

2. Clarity Related Issues

This category includes unclear terms that can be interpreted in many ways, in addition to "catch all statements". These blanket statements make it impossible to know or expect every aspect included or excluded from the statement.

3. Tangled Issues:

The contractor might seek legal advice regarding issues related to the clarity of the requirements or the wording of the clause(s) in question. If the clause proves to be open to different interpretations where the most reasonable of them, from a legal perspective, deprives the contractor from his right(s) or places responsibility on the contractor where it should not, such a messy case where "ambiguity" leads to fairness issues acquires urgency at two levels: the clarity and fairness.

3. Risk Management Plan for Construction Project

A major part and parcel of the pricing process during bidding is to conduct a risk management plan for different types of risks inherent in the upcoming construction project. These preemptive remedial actions are designed to contain the risk, by either making them less likely to materialize or by reducing the effects of their likely consequences if and when they materialized.

The Contractor would usually start doing his homework of dealing with the different highlighted risks of the project using the standard risk control measures. This can be done by: first, avoiding the risk altogether. Avoidance of risk can be obtained by introducing changes to the actual projection in order to eliminate the risk entirely or to safeguard the project's targets from its impact. This can be achieved by relaxing the time, cost, scope, or quality constraints. If avoiding risk were not possible, then the contractor would normally start to explore the possibility of assuming the risk without or with an acceptable increase in the price. If this is not possible then the contractor might consider using another risk measure, which can be transferring risk. This can be done by shifting the risk to another party. However, shirking responsibility by passing the risk to another party who is ill prepared to deal with it might entail ethical and/or legal consequences. Another method of transferring risk is through insurance. This remedy does not obtain free of charge and hence it is bound to add to the contractor's budget and increase his bidding price.

These remedial measures are decided upon in light of the prevailing market condition, the owner's history and reputation especially regarding his performance during economic crisis or market fall downs. In addition to the contractor's policies towards risks for both the project and the company, the contractor's mindset and

cultural background, and the contractor's need for work, while bearing in mind that these considerations are never constant but change with time.

Results of Risk Management

As a matter of fact, the contractor can neither expect to be able to highlight all the risks in the project nor be able to treat the highlighted ones proficiently. Part of the contractual risk might be resolved using the conventional risk control measures as part of the project's risk management plan. But it is very likely that the contractor will not be able to treat the major part of it due to the peculiar nature of the contractual risks. The root of these "residual risks" can be attributed to clarity or fairness related issues. The logic says if the contractor is in doubt as to what is meant by a certain item; he cannot be in a position to respond to it. Thus, contractors first need to understand the risk in order to have a realistic assessment of the consequences. Another issue with the contractual risk is that most of it cannot be easily quantified and hence priced. The contractor needs to make the risk and/ the consequences of the risk explicit which require that he understands the real risk and hence make decisions on how to deal with it in the best way depending on the level of urgency of that risk.

The remaining residual risks are those which do not fall within the contractor's purview. Should these risks materialize, they will have a significant impact on the project. Those perceived to have high risk value will need action plans that respond with utmost urgency while those with a low risk can simply be monitored without having a detailed action plan identified. As a matter of fact, each contractor has his own definition of threat thus, has his own classification that reflects the urgency and his level of risk aversion at the time the contract is being considered as shown in figure 4. As it shows the sequence of the process where the tender documents review process is

followed by the construction risk management process and the classification process of the residual contractual risks.

Classification of Residual Contractual Risks:

I. Cannot wait: “Deal Breakers”

The existence and/or the absence of these clauses are presumably at the heart of any contract the contractor enters into. Such clauses should take top priority and issues related to them need to be resolved and cleared before the submission of the bid because they obstruct the contractor’s ability to bid or they could entail a massive monetary damage if left unresolved.

This is mainly due to 1. The inclusion of a clause that is imbalanced at core, such clauses are referred to here as “Killer Clauses”. 2. The deletion clauses that constitute an indispensable part of the contract without which the contract is rendered incomplete; these are referred to here as “Must-have Clauses”. Both of those practices are unacceptable by the contractor’s policy and would make it impossible for the contractor to risk the financial well-being of his company unless these issues are addressed properly.

Clauses included in this category of deal breakers include, by way of example: any contract clauses that have oppressive terms such as unrealistic conditions that create a substantial imbalance between the parties’ rights and obligations and cause a substantial financial detriment to the contractor, if the agreement were signed without addressing them. In addition to terms that shift the responsibility for mistakes of others onto the contractor. As well, terms that place responsibility beyond the contractor’s control onto him. A case in point here are terms that lock the contractor into cost

overruns without his ability to seek compensation, prevent the contractor from getting paid on time, and place conditions on getting paid that are beyond the contractor's control.

There is a slight chance that such risks can be insured, eliminated or included in the contingency as doing so might entail a big increase in the budget. On the other hand, living with such conditions is also impossible as it puts the company's future at stake. Failure to address/resolve these issues during bidding period will most likely result in the contractor declining the entire project.

II. Can wait:

Clauses/Issues deferred within Questions and answers period or even to Negotiation phase. Dealing with these clauses can be deferred within the Question and Answer period without posing a threat if left unresolved to the negotiation phase. The contractor might be waiting for someone else to raise the question in order to avoid being perceived as bully/ aggressive; or else the risk can be absorbed if things go wrong as the contingency margin can cover the risk if left unresolved. Examples of clauses in this category are unfair mechanism, stringent requirements, and unfair clause with less detriment affect.

III. Better wait:

Under these clauses, there is still a chance for the contractor to bargain based on these terms Negotiation phase. They may be less urgent or the contractor may have a reason for remaining silent. It is better to discuss these issues during negotiations in order to restore some balance; or they may have been deferred because the contractor does not want these issues to become known to the other contractors or draw their attention to them. Some of these clauses can include Killer clauses given that they are

not enforceable in the locality of the project. For example ambiguous mechanism, float ownership, and stringent requirements.

An important note to point out, labeling problematic clauses using this classification does not necessarily mean that that output of the action plan will follow the set arrangement. It is no surprise that the contractor does not enjoy control over the process nor over its output. Since the dynamics of the process involves an owner who sets the rules and who has to deal with multiple players with the latter having different trajectories in their individual quests for and incompatible objectives with each of them trying to achieve his goals.

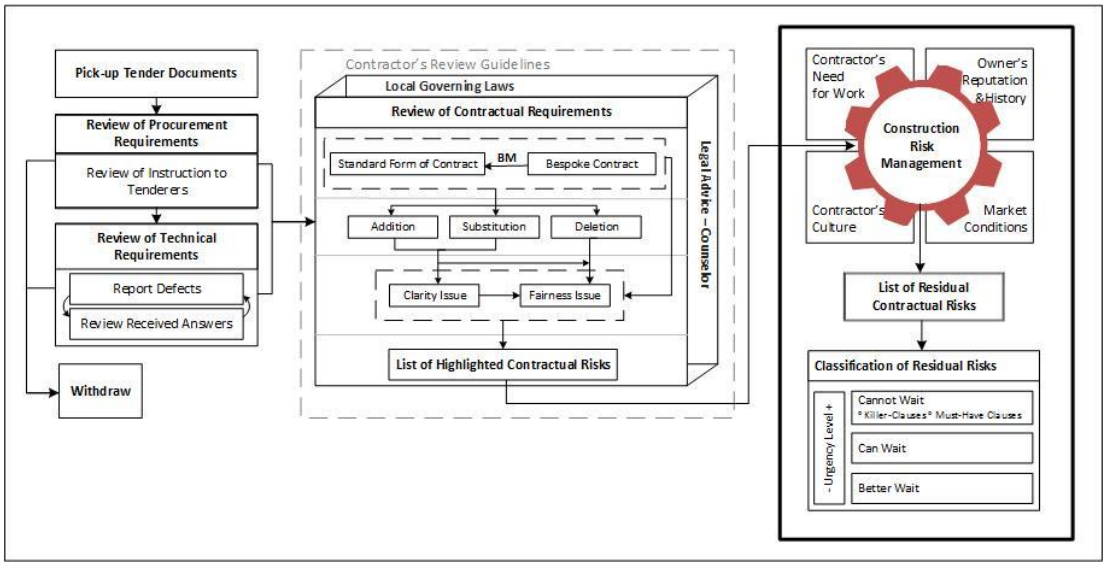

Figure 4 Construction Risk Management Process and the Classification of Residual Contractual Risk

4. Practical Tactics to Manage Problematic Clauses: Piece-meal Action plan

Once the proposed contract has been reviewed and the identified contractual risks have been prioritized, there are several ways a contractor can minimize its exposure to inequitable allocations of risk. An important facet of choosing the action requires a realistic assessment of various what if scenarios for each risk individually. These actions are primarily taken to regularly and consistently remove or neutralize the risk posed by the problematic clauses highlighted in contract before closing the deal.

Reacting to contractual risks and uncertainties associated with a particular job can be tricky and complicated. There is hardly, if ever, a one-size-fits-all action plan to early construction contract management because every company and every project is different. Contractor should set out the level/type of risk management required for the project which will affect when that action should be included within the project plan, its predicted effectiveness in containing the risk, and its associated consequences to ensure that the counter-measure does not have any unforeseen consequences.

Thus, contractors need to tailor their action plan in the best way that serves their goals. When developing risk resolution framework strategies, especially for the most critical risks, it is important to avoid reliance on a single control measure. As each step in the framework depends primarily on the output of the step that preceded it. In addition to the warnings and signs gathered that might instigate the contractor to rearrange his priorities and ultimately his actions. Failure to resolve one issue might not be enough to generate the required momentum to make the contractor leave the deal. It is the tendency and accumulation of unresolved issue. Considering the urgency of clauses will depend on each individual company, including its particular area of expertise; the experiences of the company.

For those risks which are neither eliminable nor transferable; the contractor might consider one of the following tactics. The contractor can respond to clarity and/or fairness related issues of contract documents and minimize the exposure to inequitable allocations of risk in several ways. These include seeking clarification by Issuing written queries and/or by raising questions during pre-bid conference, deferring discussion to the negotiation phase, pricing contingency according to the assumed risk,

form a reservation, do nothing and proceed with low price, and pulling out of the tender process as shown in figure 5.

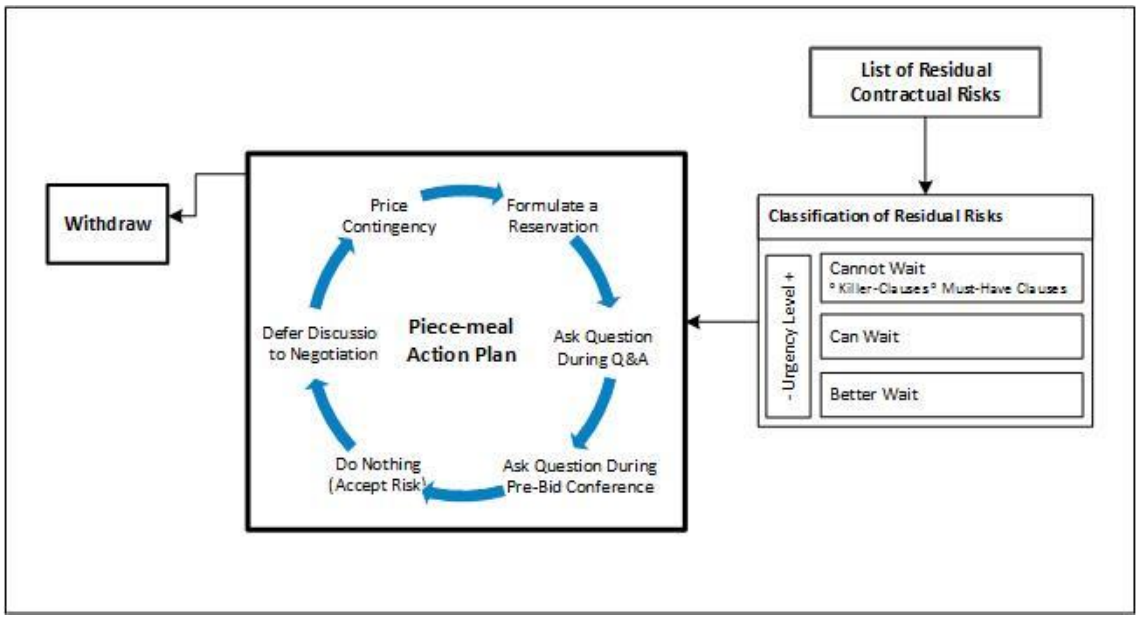

Figure 5 Piece-meal Action Plan for Residual Contractual Risks

Analysis of Action Plan

1. Seeking clarification by Issuing written queries:

Whenever the tenderer is in doubt as to the meaning of any part of the request for tender or has any questions relating to the request for tender, the tenderer should seek clarification from the owner in writing at any time up to the date of final questions and clarifications as set out in the request for tender.

Perhaps it is safe to make this general statement: a contractor is always urged to strategically raise the concerns and request clarification whenever he notices something inconsistent or incompatible with the actual site condition, missing, ambiguous, and/or unfair in the conditions being offered prior to the date assigned for such last things. Making enquiries in the early stages of engagement and prior to the awarding of contracts is particularly important in the case of killer clauses that have the highest rank

of urgency. In such case, the contractor is better off running toward a problem than running away from it, since such clauses might have detrimental effects on the financial welfare of the contractor.

2. Seeking clarification by raising questions during pre-bid conference:

Contractors often use meetings along with queries to resolve the problems so that a compliant bid can be offered. A Pre-bid conference is an open venue and very powerful tool where the contractors can, and should, lay bare their concerns. The owner might reserve to himself the right to ignore responding to a question or at his sole discretion. This is usually done by including clauses in the instruction to tenderers as follows: "The owner may provide a clarification to any of the issues identified before the due date through an addendum or reject and not respond to any request for clarification". The contractor may resort to discussing a certain issue openly during the bid conference in case he comes across one of the following scenarios: receiving an unsatisfactory answer or none at all.

In the latter case of failure of the owner to answer the queries, by an act of omission or deliberately, then a Pre-bid conference can be used as a venue to prompt or initiate a discussion; provided that the clause in question is such that it might hinder the contractor's ability to submit a bid, as it affects the price and the contractor is in no position or is unable to eliminate it or reduce the risk associated with it. The contractor might want to escalate against the owner and bring this issue to the attention of the other contractors. In this way, the contractors can corner the owner and nail him down to delete, change or add the clause in question since he, the owner, is under collective pressure to justify himself or introduce the required amendment.

If the contractor finds the answer received inadequate, he will have the opportunity to flag the issue in question and thus instigate a discussion about it during the pre-bid conference and in the presence of all other competitors. The contractor might start with "gently" expressing dissatisfaction with the response.

In certain other cases, the contractor might decide to raise a particular issue even if he has already made up his mind to include it in his contingency. In doing so, the contractor draws the attention of other "reasonable" competitors to this issue in order to adjust their contingencies to hedge for the risk. This way it would be a leveler for everyone.

Questioning is perhaps the most important and influential tool although it remains largely underestimated and misused among bidders. The owner is under pressure from contractors, insurance companies, banks and financing entities to change his unilateral, biased and unfair clauses, especially if the issue has gone public. In such cases, the owner owes it to the bidders to justify his stances. The owner's failure to adequately address enquiries from tenderers, especially the ones related to unfair and biased clauses, is likely to result in claims of unfair practices, qualified bids, or even withdrawal of offers. Unacceptable terms and conditions are likely to result in loading of costs in offers (imbalanced bids), disruption, and insufficient responses, or possibly no response at all, from known quality contractors. Such a situation will be financially harmful, and will entail great damage to the owner's reputation and will significantly reduce contractors' willingness to establish business with him in the near or far future.

As already stated earlier, the owner, in self-interest, needs to obtain the best offer, quality included. Hence, the owner actually is responsible towards the tenderers, the prospective contractors, to provide them with the right information in a timely

fashion, listen to their "legitimate" concerns and request for clarification and provide them with such clarification, where applicable. It is for the owner's own sake to engender a culture of openness and reciprocity to ensure that all involved are open and honest about identifying problems and resolving them.

The Art of Asking Questions

As with any human skill, some contractors are naturally better at asking and negotiating; nevertheless training and learning to actively practicing the art of asking questions can make the clarification process a more efficient process and help in enhancing the contractor's performance. Strategically asking is worth the effort given that the contractor has done his homework of reviewing the tender document and other due diligence. By strategically, I mean the ability to prioritize those concerns and present the most pressing and genuine ones rather than bombarding the owner with other less urgent issues. There should always be a balancing act in generating queries.

Asking the right question at the right time is at the heart of effective communication, information exchange, and building and managing stronger relationship with the owner. Given the limited duration allocated for pricing the work with its uncertainties, and the enormous amount of information, there is always a rush to answer which creates a sense of urgency. On the other hand, some contractors are rather hesitant to ask questions for fear that this may be construed as their lack of ability to really grasp the work at hand and that this will adversely affect their perceived competency. In addition to not speaking up enough/ and or early enough, many contractors fail to ask the questions properly or in time.

Different types of questions can lead to different outcomes. This primarily means that the contractor needs to be creative in his approach and strategically design

the wording, style, time and venue of the question depending on the nature of the enquiry in order to steer the communication process in a direction conducive to achieve his goals as shown in the steps below. Contractor should always be looking at what the advantage will be.

1. Identify the basis/nature of the query

Only genuine and necessary questions should be issued. The contractor is better off treating questions with the underlying assumption that the contractor has a limited quota of questions. Thus, he needs to think carefully about which question to put first. Contractors are entitled to issuing queries for more information and clarification in case of error, contradiction, ambiguity, incompleteness, omission, inequitable risk allocation and/or prejudice. The focus of the question should be clear, well defined, and perhaps, more importantly, does not divulge any commercially sensitive information that may give advantage to the other competitors.

2. Identify the right type of question based on the nature of the inquiry:

In order to avoid misunderstandings and or jumping to conclusions, the contractor should deliver the query/concern in the proper way. In some cases, contractors take the blame of failure to frame the question properly. It goes without saying that the contractor should, besides being polite, friendly, sound and convincing, avoid coming off as accusatory even when the intention of the question is to corner the owner. The following types of questions can serve in different situations. Each technique aims at achieving a different goal and should be used where applicable.

- Funneling Questions

This technique involves starting with general questions, and then narrowing down or zooming in to a more specific point in each. Usually, this will involve asking

for more and more details at each level. Funnel questions are useful for finding out more details about a specific point particularly in case of omissions and/ or incomplete information.

- Probing Questions

Asking probing questions is another strategy for finding out more detail by way of investigation and seeking clarification. It can be in the form of asking the owner for help in understanding a statement, requirement or a clause that he has made. Asking the owner for his personal opinion and interpretation eliminates the risk of ambiguity, misunderstanding, and jumping to wrong conclusions particularly when the consequences are significant. This approach can be helpful with both unintentional and intentional ambiguities as in cases where the owner might be trying to avoid stating something clearly in writing. The contractor may want to challenge some basic assumptions or affirm his understanding in order to feel more confident in his conclusions.

- Leading Questions:

Leading questions are used when the contractor is trying to lead the owner to see his way of thinking and persuading the owner to resolving the issue by adopting the contractor's proposal. This can be used to resolve unfair aspects in several ways: with an assumption or a subtle hint to the solution, phrasing the question so that the likely response would be to agree, or giving a choice between two options. In the last technique and although the owner is the one to give the final binding resolution for the issue, the owner might find himself leaning towards one of the proposed solutions especially if the contractor successfully helps the owner to embrace the reasoning

behind his argument. Using this technique, the contractor helps the owner to develop the intended image for different scenarios and gradually focus in on the useful details.

3. Identify the right Time and Venue

Besides being mindful of the wording of the information, the contractor needs to determine after due consideration the right time and venue to use for asking his questions. It is incumbent on the contractor when raising the question to take into account and think carefully of the advantages and disadvantages of raising the question on that particular time/venue. This would allow him time to plan for the next move in view of the owner's reaction/ lack of reaction. Three time/venue techniques can be used to serve different purposes:

-Acting promptly: there is no doubt that early resolution of problems is ultimately the most cost-effective approach to contractual risk management. In the bidding period, unlike in the negotiation phase where the need is to furnish for a long-term relationship, first things come first. That means contract needs to clarify/neutralize the most urgent issues in an expedited manner without any delay. For example, in the case of killer clauses, the contractor can attempt to negotiate these clauses out of the contract, thus he needs to act promptly.

-Deferring to the Pre-Bid Conference: the main element here is that the discussion of the issue is held publicly which puts the owner under direct pressure.

-Deferring to right before the final date for questions: It is not always advisable to be proactive; sometimes it is better to wait, observe and then react accordingly.

Observing the actions and questions being raised by competitors, during the question and answer period and Pre-Bid Conference, is most valuable. The contractor should treat others' questions with the utmost care, as they can be as important as his

own queries and concerns, if not more. Another important issue is to observe the owner's answers to these queries and owner's attitude towards the comments related to the contract conditions. These questions and answers might result in the contractor flagging the clause/ issue in question to be discussed later in the negotiation phase even if the other contractor, who originally raised the query, is satisfied with the answer or has adjusted the price. The owner may, at his sole discretion and at any stage of the tender process, amend, modify or issue a change for any reason, whether at his own initiative or in response to a clarification requested by a prospective tenderer. He, as well, may modify the tender documents by issuing an addendum.

The Importance of Asking Questions

- Helps in effectively planning for the next move depending on the owner's response/ lack of response; if the contractor does not ask for clarifications, the issue might never be resolved which might in turn force the contractor to take more strict actions during pricing or later during the execution. It is worth keeping in mind that things rarely fall into one's lap and it is unlikely that the owner will voluntarily change his mind vis-à-vis a language or terms that he himself has intentionally and advertently drafted. The worst thing that can happen with a well-framed question is usually a simple no. Nevertheless, this "no" is vital in planning for the next step.
- Asking can save money and time; a planned or randomly asked question might open doors and provide information that otherwise would not have obtained. It helps the contractor to make informed decision, especially when considering quitting the tendering process instead of wasting the company's resources on a deadlock or investing in a project that is taking the contractor to a definite loss.

- Contractors who are more engaged in analyzing and resolving problems encountered in the tender stage through asking questions have a distinct advantage over those who do not ask. Serious and competent bidders usually ask about and show interest in what is being offered. Part of winning the job depends on how the contractor engages the owner and cooperates with him in the tender process. The queries and pre-bid conferences are good venues for the contractor to show the owner his expertise in managing the contract in addition to the technical aspects. This should be accomplished with the greatest tact to avoid appearing arrogant or aggressive.
- It paves the way for more comfortable negotiating: question and answer period and pre-bid conference are the natural entry to the negotiations. It helps, to a certain extent, in understanding the owner's mentality and managerial style. Getting comfortable with asking during routine situations will make the contractor a more effective negotiator during closing the deal.

3. Deferring discussion to the negotiation phase

The third action can be adopted by the contractor is to postpone the discussion of a certain issue to the negotiation phase. The contractor should avoid directing too many of his concerns simultaneously lest he appears overly aggressive. On the contrary, the contractor should strive to give the opposite impression so that the owner will have no reason to have any fears or assume an adversarial attitude vis-à-vis the contractor. Thus, the contractor could decide initially to remain silent and postpone discussion of some less urgent issues or clauses that call for discussion to the negotiation phase. There may be other issues where they failed to clear up could be added to the negotiations cart as long as they do not annul the consideration of bidding all together. The dynamics of

the negotiation phases is primarily based on the give and take with the objective of finding common ground. The contractor is mindful of the possibility of having to lower his price but in prudence and self- interest, he does this in return for a concession from the owner. The owner, as well, has to make a compromise. Thus adjusting the price or offering additional services to the owner can be considered as an equitable adjustment to the contract clauses.

However, the dynamics of the negotiations are not the same for the different types of owners and projects. Bargaining rights in in public works contracts are usually limited, if not totally unavailable, to the contractor. This also usually applies in the case of large scale, lump sum private projects where contract negotiation is not an option. In this case, the contractor agrees to the contract as it stands. Thus, a contractor should carefully consider if and what issues are open for negotiations.

Resort to this option is fraught with risks and when adopted, this should be done with the utmost caution. Because unless the contractor is fully confident of his bargaining power and skill, as well as the ability to come up with credible solutions, he will end up being forced to live up to harsh and unfavorable contract conditions.

4. Pricing contingency according to the assumed risk

The fourth technique is to assume the risk and adjust the price. Bidding process is mainly about making assumptions and pricing the work accordingly. Real successful contractors are typically not gamblers. They should bid a price that covers the amount required to execute with work with the assumed risk calculated into it without endangering their chances of winning bid. The sums allowed for the risk adjustment by the tenderers can be different, mainly due to their different risk attitudes and the

different situational variables influencing the tenderers' pricing at the time of submitting tenders.

This technique is also used when the contractor is considering bidding for a certain project as a face-saving device and in order to maintain the relationship with the owner. In such a case, even if the contractor ends up winning the project he can, certainly, recover the cost of the executed work with the adequate risk contingency he added to his price. He thus can live with both scenarios.

5. Formulating a reservation:

When the contractor is faced with clauses with high level of urgency and could not be resolved or priced, the contractor might decide on withdrawing from the process. However, the contractor might decide to give it another thought thus he marks a reservation on that particular term or clause. Such tactic is important in investigating the ramification of the manipulating of a key clause. In that we mean, some clauses are cross-referenced or interrelated as one normally triggers the other. This tactic ties directly with the aggregate decision making when the contractor needs to give a final holistic assessment of the contract condition.

6. Do nothing and proceed with low price:

In order to keep a "reasonably" low price, the contractor might consider doing nothing and accept the risk, inherent in one aspect of the contract or might accept the overall contract, even when this goes against his policy. This stoical approach might be predicated on the assumption that, from the contractor's perspective, there is considerable advantage to be gained for the company possibly in the form of high profits or acquiring a highly desirable business partner thus improving the contractor's company visibility. The contractor here is a gamble on the future of the contractor's

company, even if it enjoys a sound financial basis, and hence he needs to manage the contract with caution in the course of its execution.

Although the contractor decided to proceed with bidding without doing anything for these issues that does not mean that these clauses do not pose threat. The contractor needs to highlight these issues and keep monitoring them in order to be able to deal with them have they materialize while executing the project.

7. Pulling out of the tender process:

The Contractor may consider not bidding at all if: The quality of the tender documents is very poor and is likely to lead to pricing and contractual difficulties. Or, No agreement whatsoever was reached regarding the highlighted deal breaker Clauses (Killer and must-have ones) with no sign, from the owner's part, of willingness to change or compromise. If the risk is too great to be tolerated, it might be a good idea to walk away from the work and look for more favorable projects. If it does appear lopsided and compromise is not possible, it may not be a relationship worth continuing.

The action plan can be operated in a "joint and separate" fashion for each one of the highlighted risks. In other words, contractor might opt to choose one action over the other or combine two or more. Different risks need different degrees of attention and call for different actions. However, one risk might go through a cycle of different actions until it is cleared or neutralized. The most preferable and prudent scenario is to first seek clarification as a start point and keep track of the changes of the clauses in question.

The contractor, as suggested by conventional wisdom, should use all tricks up his sleeve before quitting unless he finds that the surrounding atmosphere is not in his

favor. In such circumstances, it would be more prudent to save himself the trouble of losing money, time and resources in a futile quest.

Flagged - Newly emerged issues: will go back to the process

The contractor needs to carefully observe the actions as they are being taken by competitors and be fully aware of the issues brought up by other contractors. As well, he needs to be adequately informed of the engineer's answers to the clarification questions and the owner's attitude towards the comments and reviews of the contract's conditions. It is essential that all actions and reaction by the owner's representative should be tracked to be reported to the decision makers. The contractor needs to have in place a mechanism that makes it possible for him to monitor and report feedback on progress and change of the status of different clauses aptly. Additionally, there may be other issues that will make their appearance in the course of the bidding process. Those newly emerging risks need to inter the process in order to be assessed in the same manner. This way the contractor can see the inherent risks in an isolated and integrated fashion.

Report progress

The precise method and frequency of reporting depends on the action taken to deal with the risk in question. If and when risks are incorrectly assessed and therefore incorrectly prioritized, in the sense that they were underestimated, overestimated and/or missed they can divert attention from other important issue or issues that would coalesce and form a formidable threat that could not be alleviated easily or may never be alleviated at all. It is imperative that the flow of information in the contractor's company should be ensured and hence the quality of decision-making would be

improved. While it is actually impossible to foresee all potential issues, it is nevertheless of critical importance to effectively plan and manage identified risk in order to alleviate them. Part of the risks will be resolved along the way using the basic mitigation tactics: while the rest, which the contractor is aware of, needs to be handled

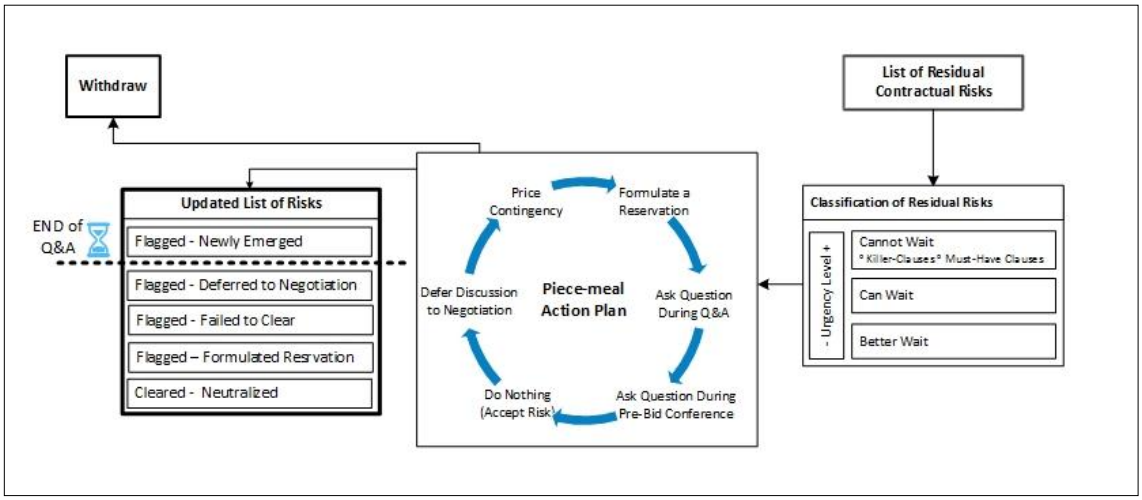

Figure 6 Resultant updated list of risks

tactfully and prudently. Figure 6 shows the resultant updated list of risks.

C. Final Stage of the Bidding Process

This stage follows once the engineer has made his final response to queries which usually comes within the fortnight prior to the deadline for submission of bids. Following the review, the site visit, the pre-bid conference and all other possible means of communication, decision makers still bear the ultimate responsibility to update the prices from quotations and check all addenda.

The checklist of what he has to go through includes among other items: review of amendments and Engineer's final response, changes introduced by the owner to the original scope of work, issues brought up by other contractors' results of site visit, pre-bid conference and Q&A. It is not only the question of the requisite nature of these last

two, namely: Site visit and pre-bid conference in some cases that require paying attention to them but more so the fact that could reveal important issues that might make the contractor reconsider bidding for such project. As a result, substantial changes might take place before reaching the final agreement.

1. Aggregate Action plan

At this stage, the contractor is presented with four categories of risks. The ones that are to be discussed during negotiation (deferred), the ones in which the contractor was able to act on them and put them under his control, thus considered as (neutralized or cleared) since they do not pose a threat in their current state. In addition to these two categories, are the ones' in which the contractor noted his reservation on keeping the contract, however, the final decision is to be made in conjunction with other risks especially the failed to clear ones. This takes us to the final category, the failed to clear. In case the owner did not ultimately agree to the revisions or deletions suggested by the contractor, then the issue should be analyzed and the accumulative impact of these issues ought to be discussed anew and brought emphatically to the attention of the decision makers. Usually at this point in tendering phase, the available options are limited to pricing the risk, deferring the discussion of the risk to the negotiation phase, doing nothing and accepting the risk, and finally qualifying the bid. The contractor then needs to make a decision after determining whether the risk posed by this language and/or clause is acceptable given the financial status (standing) of the contractor, his need for work and his company's objectives and strategies in the market.

Qualifying the Bid

In the case where lowest bid wins, it follows that it is not an option to increase the price. However, accepting to take the risk means an inevitable increase in the bidding price. In such cases, contractors have to find other ways to manage the situation. Conditional bid means introducing unique terms and conditions where the owner accepts departures and contractors express his reservations on certain contractual requirements and the work to be executed for the submitted price. The contractor here is risking the bid being regarded nonresponsive.

Submitting an Alternative Proposal

Submittal of an alternative proposal, if applicable: In the alternative proposal, the contractor presents to the owner with all the elements of cost that the bidding company uses in its pricing formula. In private business, even if the owner includes in the instructions that deviations and departures are not permitted, he will undoubtedly consider looking at the alternative proposal especially when it involves an irresistible offer in terms of saving money and/ or time. In other words, the contractor needs to have a significant added value "deal-sweetener" to make his offer attractive. If this offer is accepted, this will render some of the problematic clauses null and void or the least in need of some tweaking. Thus, the owner and contractor, during negotiations, might need to agree on amended or new terms.

The preceding two options have one element in common: the contractor in both takes the risk of his bid being classified by the owner as nonresponsive and hence being disregarded.

In the course of the process, the status of the risks in which the contractor failed to resolve or act on them separately has to be change. Hence, while it is incumbent on

the contractor to highlight problematic clauses and choose the right action to address them, it is equally mandatory that he keeps monitoring risks and making the connection between the different clauses that pertain to them. In this connection, the contractor must update the status of the different risks and ensure that all the received information, action and lack of thereof are properly recorded and included in the action plan. As the issues rose by the contractor(s) might be addressed successfully, addressed unsatisfactory and/or left unaddressed. In short, Contractors need to have, at their disposal, reliable and flexible methods to monitor, update any change of status of any risk and connect the dots to see the link between those risks at any time in the course of the process.

In conclusion, recording all the information and updates received on risks properly and having them in the action plan is indispensable to the contractor. Nevertheless, it is just as critical that he takes a holistic view of them to be able to formulate the appropriate final response, as shown in figure 7.

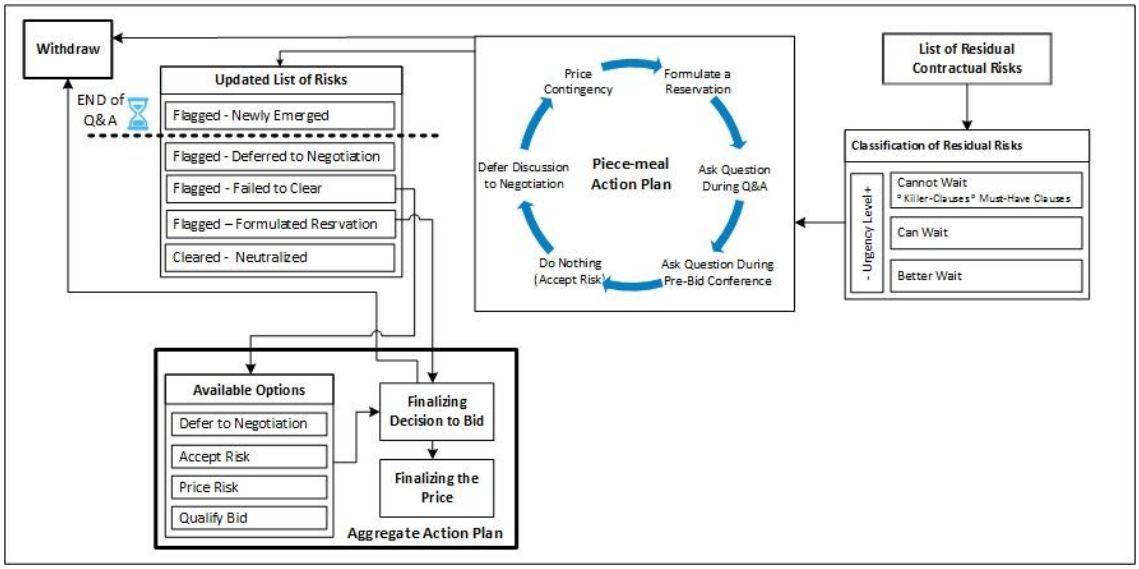

Figure 7 Aggregate Action Plan

2. Finalizing Decision to Bid

In view of the results and answers received and the holistic analysis of the highlighted risks, the contractor is going to decide to submit a bid or not. If yes, then he needs to update this price. Deciding whether to agree to the contract as revised based upon calculations of risk and reward made; the contractor will then submit his offer (including qualification, clarifications, and tender assumptions). Despite the effort in reviewing and planning to contain or resolve problems, the contractor will never be able to resolve all the problems known to him. Let alone those that he missed or did not assess properly. The contractor will still have a second chance (if selected as a preferred tenderer). But a thorough review of a construction contract is not something that can be taken lightly; it actually can be quite intimidating especially in the case of a company with little or no legal resources.

As long as the contractor is aware of the different problematic clauses contained in the proposed contract and the way they interact, he can make an informed business decision to: execute the contract and accept these risks, walk away, or execute the contract with a properly designed price and effectively manage the assumed risks during the execution of the work.

3. Finalizing Price of Bid

While maintaining a law price is always the prime concern of both parties, as an essential element to win construction projects, the following issues need to be kept in mind as winning the bid should not come before the company's. Deviating from the contractor's policies and nature in search for any chance for work might backfire. If the contractor is operating in a danger zone, especially when the risk is contractual, without

being equipped with the right tactics and a reasonable price, then it is most likely he is gambling on the future of his company.

D. Negotiations

For the contractor to make it to the negotiation phase, he needs to be either the preferred bidder or one of the preferred bidders. Even when the contractor is selected as a preferred bidder, the contractor is still under the pressure of competition. Negotiating is a key part of the construction process. The negotiations involve a lot of push and pull in an attempt to find balance and stable ground. The contractor shall enter this phase with a basket of different clauses with different statuses in which each category of these need special treatment.

In case of multiple preferred bidders, contractor needs to assess the competition and competitor(s). Some owners choose multiple contractors as preferred bidders to improve their position in the negotiation phase. In this case, the contractor must attempt to obtain as much information as possible about the competing companies. This will allow the contractor to better position himself during the negotiation phase and evaluate his chance of winning the tender.

The contractor should keep monitoring the owner's financial and legal status; if the owner went bankrupt before or during the negotiation (the tender is binding), the contractor would save himself a guaranteed anticipated loss, depending on the type of the owner, as the financial wellbeing of the company is on the stake.

The main substance forming the basis of the negotiation phase is basically the product of the bidding phase, which means the submitted offer and the amended contract documents. Both the owner and the contractor have formulated questions,

reservations, comments and suggestions to discuss before sealing the deal. Figure 8 shows the comprehensive contractual risk management used in identifying, assessing, classifying and mitigating these risks.

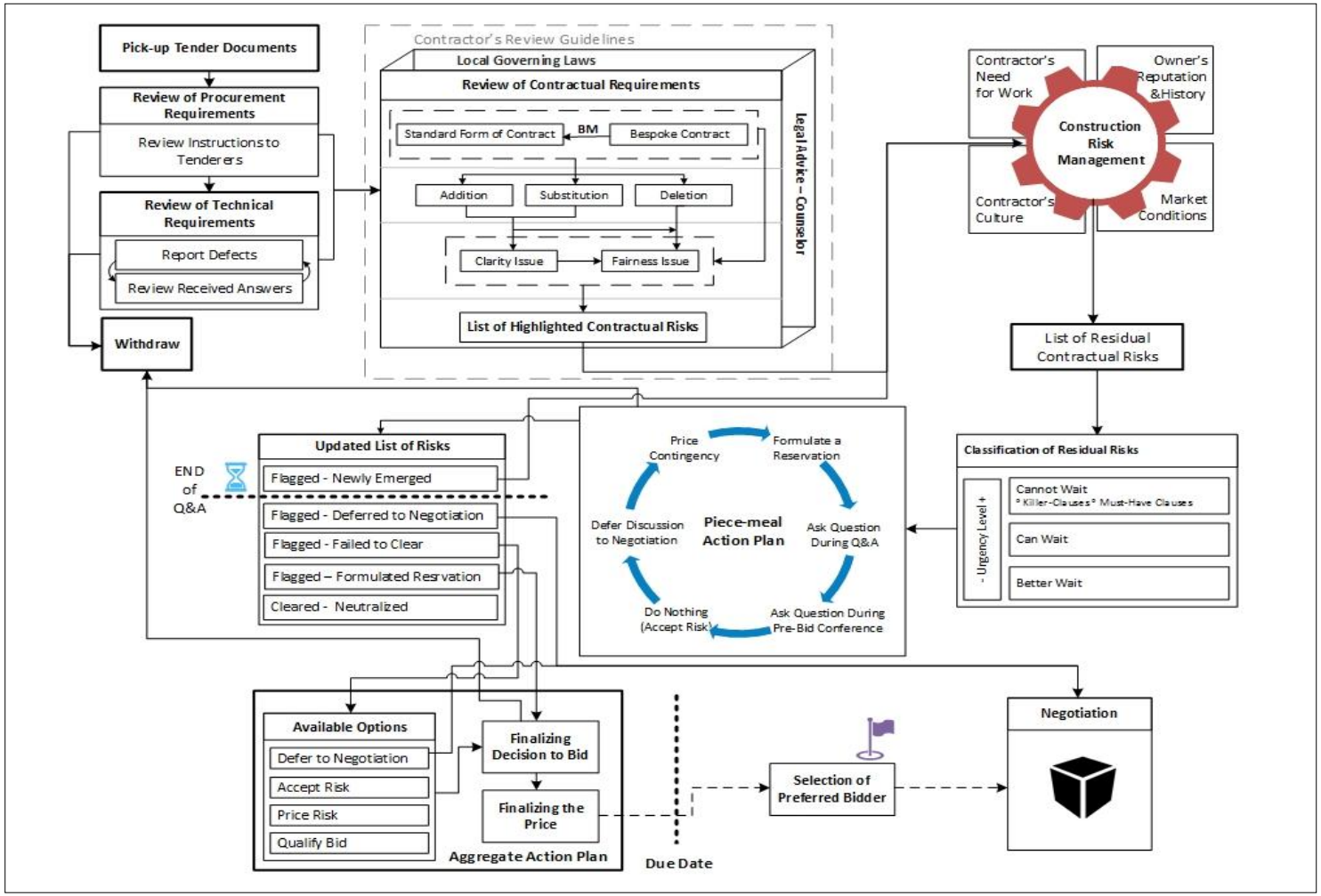

Figure 8 Conceptual Framework for Contractual Risk Management

Negotiation is a Dynamic Process

The aim of the contractor as a preferred bidder should be to sign a balanced contract. At this stage, it would be useful to execute a final review of all technical matters, especially in case the owner has objected to any technical conditions included in the final bid of the contractor. All the killer and must-have clauses identified during the bidding phase should be reevaluated as well.

The commercial negotiation in case of private tenders varies according to the owner. Some owners are quite transparent and propose their suggested terms for the final pricing of the contract. In other cases, the owner may give high priority to the completion time of the project. Some owners insist on exorbitant penalty clauses. The contractor should understand the position of the owner before entering the final negotiation.

While proposing an alternative solution to the owner, the contractor might need to show the owner all the cost elements used in his calculations and how these would be to the owner's benefit. Somewhere between the balancing of all of these factors there is almost always common ground where both parties feel adequately protected and therefore are comfortable to enter into a contract. During the commercial negotiation, the contractor may offer special pricing for additional works which would be beneficial for the project. The contractor who appropriately supports his position with facts and figures will instill confidence in the owner and thus might ask for contractual adjustment in return.

In case a tentative agreement on the main technical and commercial issues are reached (albeit on a verbal level), the contractor must discuss all deferred issues and any other residual matters to reach a fair solution on these as well.

The last phase of negotiation should be on the contract itself. This is possibly the most difficult phase of the negotiation. On the one hand, both parties feel they are close to reach a final agreement. On the other hand, the contractor`s bid bond remains with the owner and can be forfeited. The contractor needs to negotiate all the critical clauses to sign a balanced contract. Both parties should accept that it would not be possible to fully accommodate either side; however, it should be possible to reach a fair solution. The contractor must be careful not to be aggressive, while maintaining a steady position on the risky clauses in the hope that the signature of the balanced contract will conclude this last phase of the negotiation.

CHAPTER V

CASE BASED VALIDATION

This chapter aims at testing and validating the review process and action plan described in the suggested framework. To do this, a real dispute case is taken as a case in point which has the contract conditions that are at the core of the aforementioned dispute.

The validation of the framework involves: first, reviewing and examining the contract conditions, which are custom tailored (Bespoke) by the owner. This examination is done, as suggested by the framework, by checking the clauses in question with the parallel clauses(s), if any, in the selected benchmark and highlighting any departures and anomalies noticed. These departures and anomalies will then be assessed for their clarity and/or fairness in order to pinpoint the prospective risk and problems they might cause.

In principle, the comparison should be conducted for the entire contract conditions. However, for the case at hand, the review was conducted for the sets of conditions which are directly related to the case in which basically comprise such as: the treatment of payment delays and administration of claims and disputes in addition to any other clauses that may be triggered by these two main issues. The benchmark used for assessing the terms of the contract under which the examined dispute has arisen is standard conditions as prescribed by International Federation of Consulting Engineers, better known as the FIDIC (FIDIC 1999), as they are widely used and accepted in the MENA region.

The second step in the framework is to check the available actions to mitigate the smoking risks resulting from the highlighted deviations on both the individual and cumulative levels.

Before starting the analysis, a brief description of the case is provided below:

A. Claim Case Setting

1. Project Background Information

The contract at hand was tailored for a large-scale project consisting of multiple towers with about 300 high-end residential units and their related common space and amenities. The project was recently developed in one of the construction-vibrant countries of the Middle East and North Africa (MENA) region. The project owner is a prominent real-estate firm, recognized as being a regional leader in the development of mega-sized projects. The architecture and engineering (A/E) design consultant and the general contractor on the project were reputable local firms, with considerable experience in the locality of the project. The A/E participant was also appointed to act as the engineer for the administration of the construction contract. In addition, the owner retained an American-based project management firm, which was later replaced by another regionally-based one, and a British-based quantity surveying firm.

2. Claim Description

In principle, the core matter in dispute in the examined case relates to delays to the construction contract's set completion date caused by successive payment-delay defaults by the owner for five due payments. A summary of the sequence of the events that took place is as follows: The employer "owner" was found to have been in default in relation to each of the five consecutive payment cycles. The contract conditions

specified termination as a recourse that could be exercised at the discretion of the contractor in case the owner is held in a payment-related default. Based on this condition, the contractor's "eligibility for exercising contract termination" did prevail; however, the contractor exhausted all windows of patience without ultimately opting to terminate the contract. Instead, the contractor continued to work while repeatedly writing the employer about the expected extra time and cost repercussions likely to emanate from the actions taken on site to reduce work progress in response to the lack of payment. The contractor opted to submit a revised construction schedule showing a new expected completion date that was presented as being conditional on the remedying by the employer of the payment defaults and the provision of payment facilities in connection with the contractor then-halted materials procurement plans. The contractor had indeed exercised such a suspension action, albeit not pursuant to the contract terms in place. Soon after the expiry of the set completion date, the contractor had considered time to have "become at large". However, the employer unilaterally awarded an EOT several weeks after the expiry of the said completion date. The contractor, despite disagreeing with the employer's awarded extension and maintaining his time-at-large stance, submitted to the engineer an additional-payment claim in respect of the employer's awarded extension. In response to that, the engineer eventually ended up, after several months, denying the claim on the basis of the notice(s) and detailed particulars requirements not having been met in due time by the contractor. The resulting situation caused distraction and dismay on the part of the participants' project teams and placed the contract and, subsequently, the contractor's organization under a strain and unprecedented financial condition.

B. Validation of Framework

The validation process is conducted for the clauses that caused the dispute to arise of the case under consideration. The conditions which are directly related to the case are those comprising: management of or dealing with payment delays and administration of claims and disputes in addition to any other clauses that may be triggered by these two main issues. The subject of the five main clauses are: Termination under Payment Default, Extension of Time, Additional Payment, Amicable Settlement, and Arbitration. These clauses will be listed then compared to the ones in FIDIC. This comparison is meant to assess the compatibility or otherwise, i.e. the conformity of owner's drafted clauses to or departure from the best practices, and in case of departure to determine its fairness and consequently ascertain the new requirements and responsibility assignments as they follow from these particular contract conditions. Then a proposed Action plan is provided under the worst-case scenario when no modifications are introduced to the conditions in question.

1. Termination, Default of the Employer

Original Clause as Stipulated in the Owner's Bespoke Contract

"If the Employer Has failed to pay to the Contractor the net amount or final net amount shown by any interim certificate or final certificate within fourteen (14) days after expiry of the period of fourteen (14) days under sub-clause of the time of payment and such failure is not due to the making by the Employer of any deduction or recovery from the Contractor which the Employer may be entitled to make under the contract or otherwise Then, subject (in any case where the event concerned is remediable) to the contractor giving fourteen (14) days prior written notice to the Employer with a copy to the Engineer and the event concerned not having been remedied before expiry of that notice, the Contractor may within (14) days after such expiry give a further notice to the Employer which shall be effective to terminate the contract immediately."

Summary of Benchmarking Results

*The provided summaries of the benchmarking process are based on the work of Hanano, 2015

Table 2 FIDIC vs Case Contract - Payment Default Related Clauses, (Hanano 2015)

1999 FIDIC's Standard Conditions	**Case's Contract Conditions**
• Entitle Contractor to: o Request evidence of Employer's financial arrangements; o Reduce rate of work; o Suspend work; and o Terminate contract. • Establish eligibility for the Contractor to request a time extension and/or an additional compensation in case work rate reduction or suspension is exercised.	• Entitle Contractor to: o Terminate contract, while setting a 14-day time bar for contractor's right to exercise termination, following a 14-day immediate prior notice. • Give no reference to eligibility of contractor to request a time extension and/or an additional compensation.

Clauses Triggered by Termination under Payment Default:

- Payment

"Within fourteen (14) days after the date of issue by the Engineer of an interim certificate in accordance with the sub-clause of the issue of interim certificates The Employer shall pay to the Contractor or the Contractor shall pay to the Employer (as the circumstances may require) the net amount or the final net amount(s) shown by the relevant interim certificate or final certificate."

Nothing abnormal can be noted in the payment mechanism.

- Suspension of work, Extension of Time & Additional payment

A detailed analysis of these clauses is to follow, as they are main pillars of the claim case.

Analysis of Risks and Discussion of Plausible Mitigation Actions

Under payment default, the Contractor is entitled to issue an immediate contract termination notice setting a 14-day time bar for his, the contractor's, right to exercise termination, following the lapse of the 14-day immediate prior notice. Such a default condition is satisfied if the owner is more than 30 days late in settling any sums certified by the engineer, past the contract's stipulated payment period of 14 days.

The main issue that comes into play here is the mechanism which functions as the "only" proposed remedy; the said mechanism involves dual cycles of a 14-days' notice with the termination being immediately effective at any point in time the contractor decides to exercise his right during the second 14-day period. In the case of payment default, the contract prescribes no other punitive remedial measures other than the termination of the contract following a dual notice of 14-day immediate prior notice. In such stipulation, the contractor is denied the right to reduce the rate of progress and/or to suspend the works in the case of payments being delayed, as guaranteed by FIDIC. This can be construed as limiting the chances of the contractor of effectively terminating the contract.

Such wording, for both the measures and mechanism, is meant to limit the contractor's options in facing payment delays and subsequently defaults. Evacuating the construction site in such an abrupt and hectic way and leaving behind a pile of due payments to suppliers and sub-contractors in addition to the contractor's own human and non-human machinery is something excessive. And this is where the importance of the punitive remedial measures proves effective in giving the owner the time and opportunity to alleviate the damage. Thus, the risk posed by such clauses will most

likely be classified as fairness related risks as it deprives the contractor from exercising his rights which assumes top priority, Cannot Wait risk, in dealing with risk.

Such risks need to be cleared and clarified the soonest possible. Thus, the contractor needs to raise these is issues during Q&A and/or in the Pre-Bid Conference. In case the contractor does not receive a satisfactory answer, he is urged to formulate a reservation for further assessment in the later stages when the different risks are assessed in an aggregate manner. Figure 9 represents the different stages in dealing with this particular type of risk.

Another clarity issue that can be raised in connection with the dual notice termination mechanism is what happens if the contractor fails to submit a notice for termination within the statutory 14 days because he opts not or failed to exercise termination. In this case, would the contractor still have at his disposal any other contractual remedy, including the one which would have entitled him to request a time extension and a corresponding additional compensation?

If the contractor decides to seek legal advice, it is most likely this clarity issue will be translated into a fairness related issue and develop into a state called here "tangled issue" which obtains when the original problem gives rise to different risk. Such case is to be treated in the utmost urgency like the previous one as shown in Figure 9. The summery of the proposed analysis and action plan for the termination under payment default would be:

Cannot wait ➔ Seek clarification during Q&A (&) Pre-Bid Conf. ➔ Formulate a reservation ➔ May result in Qualifying Bid

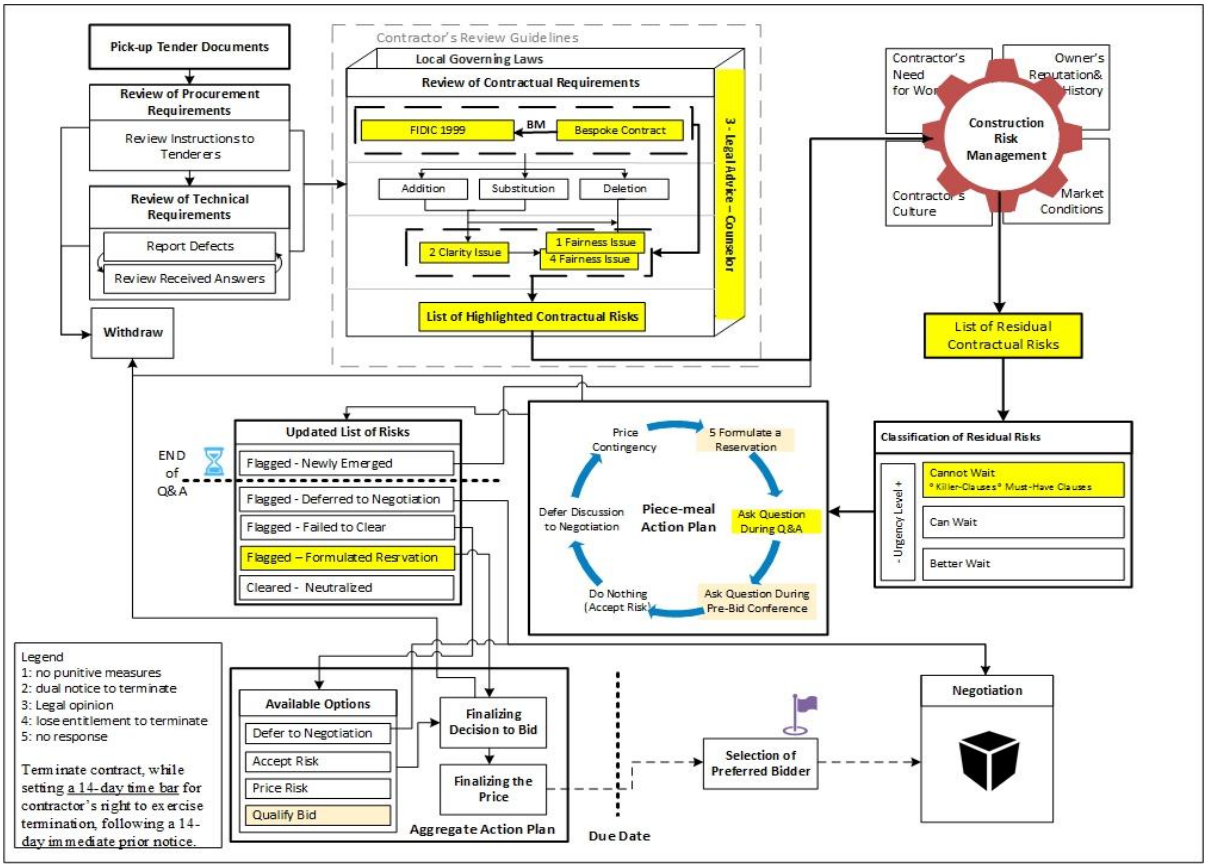

Figure 9 Proposed Action Plan for Termination under Payment Default

2. Extension of Time

Original Clause as Stipulated in the Owner's Bespoke Contract

"After due consultation with the Engineer and the Contractor, the Employer shall grant and notify to the Contractor and the Engineer such extension, if any, of the Time of Completion of the whole of the Works as may in his opinion be reasonable in respect of such part of any delay in completing the whole of the Works is caused solely by the following events:

- any variation of the Works made pursuant to a Variation Order as defined under the Variation Order clause,
- any Suspension Order as defined under Suspension Order clause,
- any of the expected risks as defined under the Risk and Care clause."

Summary of Benchmarking Results

Table 3 FIDIC vs Case Contract - Time Extension Related Clauses, (Hanano 2015)

Clause Subject	**1999 FIDIC's Standard Conditions**	**Case's Contract Conditions**
Time Extension Claims	• List causes of delay to be: o a variation or substantial change in a work item's quantity; o a cause of delay giving entitlement under any sub-clause (including suspension by Contractor); o exceptionally adverse climatic conditions; o unforeseeable shortage in materials and personnel; and o Any impediment or prevention attributable to Employer or his personnel. • Call for Contractor to notify within 28 days from date of event. • Call for Contractor to submit particulars within 42 days from date of event. • Call for Engineer to respond within a subsequent 42-day period, at least on the principles of the claim.	• List causes of delay to be: o a variation; o Suspension by Engineer, only, and not by contractor; o Defined expected risks; o Any other event or circumstance (not otherwise provided for in the contract) attributable to Employer or his personnel. • Call for Contractor to together notify and submit particulars to Engineer within 28 days. • Assign authority for issuing a time extension to Employer, with no pre-set time bar.

Clauses Triggered by Extension of Time clause:

- Suspension Order:

"The Contractor shall, under a written order of the Engineer specifying the date of the suspension and the reason bearing the written consent of the Employer, suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer may consider necessary and shall during the suspension properly protect, store and secure the works or such part thereof against any deterioration, loss or damage to the satisfaction of the Engineer. The extra cost incurred by the Contractor in giving effect to the Engineer's instructions under this clause shall be borne and paid by the Employer unless such suspension is; a) Otherwise provided for in the contract, or b) Necessary by reason of some default of or breach of contract

by the Contractor, or c) Necessary by reason of an occurrence of the forces of nature which an experienced contractor should have foreseen and provided for insured against d) Necessary for the proper carrying out of the works or for the safety of the works or any part thereof insofar as such necessity does not arise from any act or default by the Engineer or the Employer or from any of the excepted risks (as defined in the Risk and care clause). Provided that the Contractor shall not be entitled to claim recovery of any such extra cost unless, within twenty eight (28) days after receipt of the suspension order, it gives to the Engineer written notice of its intention to make such claim. If such notice is duly given extra cost recoverable by the Contractor shall be determined by the Engineer and paid to the Contractor in accordance with the clause related to the interim and final certificates."

Analysis of Risk and Discussion of Plausible Mitigation Actions

It can be noticed that the Extension of time is an option that the employer has an exclusive monopoly to grant it, after due consultation with the Engineer and the Contractor in case the delay is caused by a Variation Order, a Suspension Order, and if the Employer and/or any of his representatives are the reason behind the delays. This is predicated on the presumption of the Contractor's responsibility to send a written notice to the Engineer within 28 days after any event, with a copy to the Employer, including the full detailed particulars. It is also up to the Contractor to keep track of any or all-concurrent events. Although that might sound stringent and domineering on the owner's part, the full scale of the trap is yet to come. The owner when having a blanket type statement included in the contract, such as: "not otherwise provided for in the contract", he, the owner, creates substantial ambiguity that serves his purposes and leaves the term(s) open to interpretations that serve him best. Using such ambiguous "catch all" phrases and/or statements to remove the contractor's rights turns ambiguity into fairness

related issues. However, the statement in its current shape would be classified as an ambiguity issue that needs to be highlighted and tracked carefully. Figure 10 shows a proposed approach in dealing with such problem.

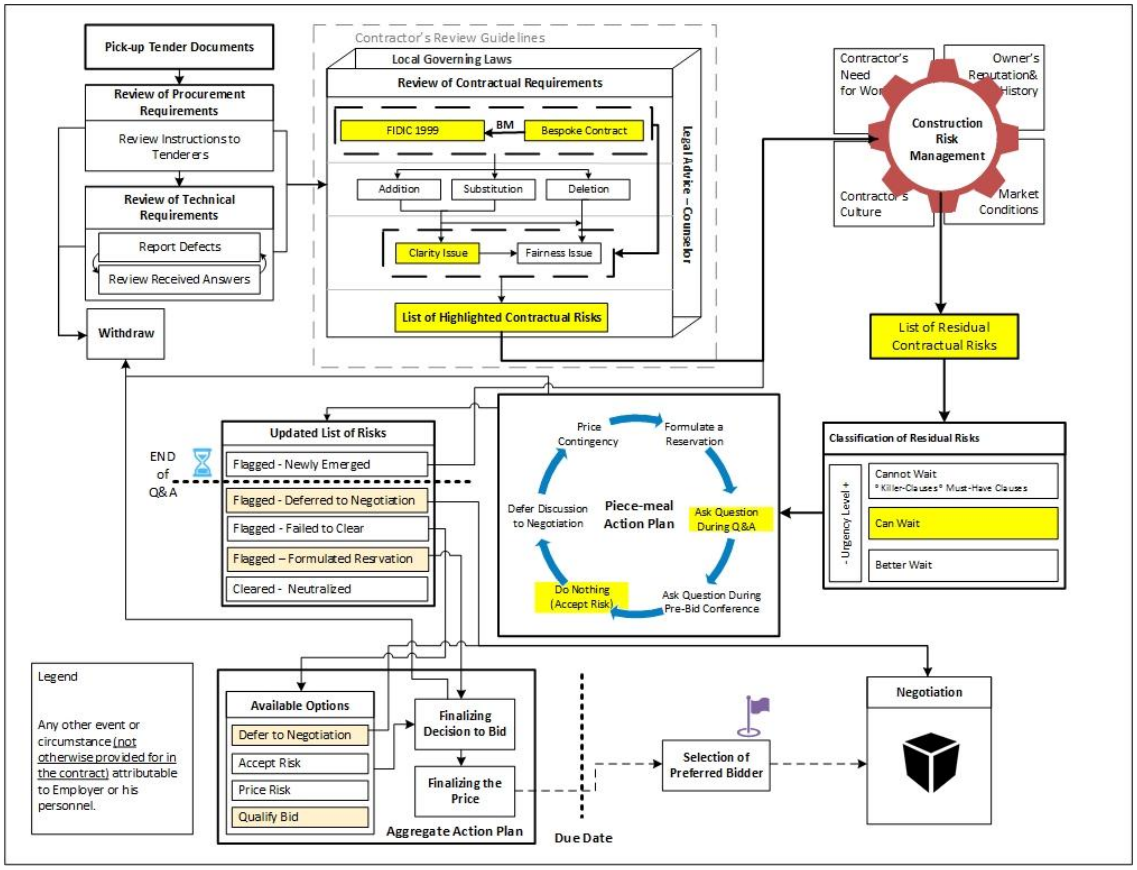

Figure 10 Proposed Action Plan for "catch all" Terms in EOT Claim Clause

Another tangled issue appears in the clause: The Employer reserves to himself the authority for issuing a time extension. Here while the owner is being authoritarian in assigning to himself the authority vested in the engineer because such action is normally within the engineer jurisdiction, the owner adds insult to injury when the clause continues with the following "with no pre-set time bar". While the contractor is directed to submit both EOT and, later, additional-payment claims to the engineer pursuant to a time-bar requirement, there is also no stipulation as to the timeframe within which the engineer shall respond to the contractor's additional-compensation claim. The

engineer's determination (while being not time-regulated) is to be subsequent to another submission by the contractor of a comprehensive account of the claim to be made within 28 days from the date of the first (notice and particulars) submission. There is No stipulation of time limit within which the contractor expects to receive a response on his submitted EOT and/or additional-compensation claim under the dispute case's contract terms.

Such clauses as the above open up the possibility for different scenarios that the contractor should have thought of in advance:

1- What if the contractor's alleged right of Extension of Time is rejected altogether, there is no clear next step which allows the Contractor to claim his right.
2- What is limit of the timeframe for the owner to respond, regardless of the merit of the response?
3- What if the owner fails to respond to the contractor's claim? How long is the contractor expected to wait for a response?
4- What are the remedies he is entitled to exercise in response to the owner's lack of response?

This case of tangled clarity-fairness related risks is best dealt with the utmost care as one of the cannot wait risks as suggested below:

Cannot wait ➔ Seek clarification during Q&A (&) Pre-Bid Conf. ➔ Formulate a reservation ➔ May result in Qualifying Bid

Failure to notice such a clear-compounded case of ambiguity will have undoubtedly disastrous consequences on the contractor during the execution of the work.

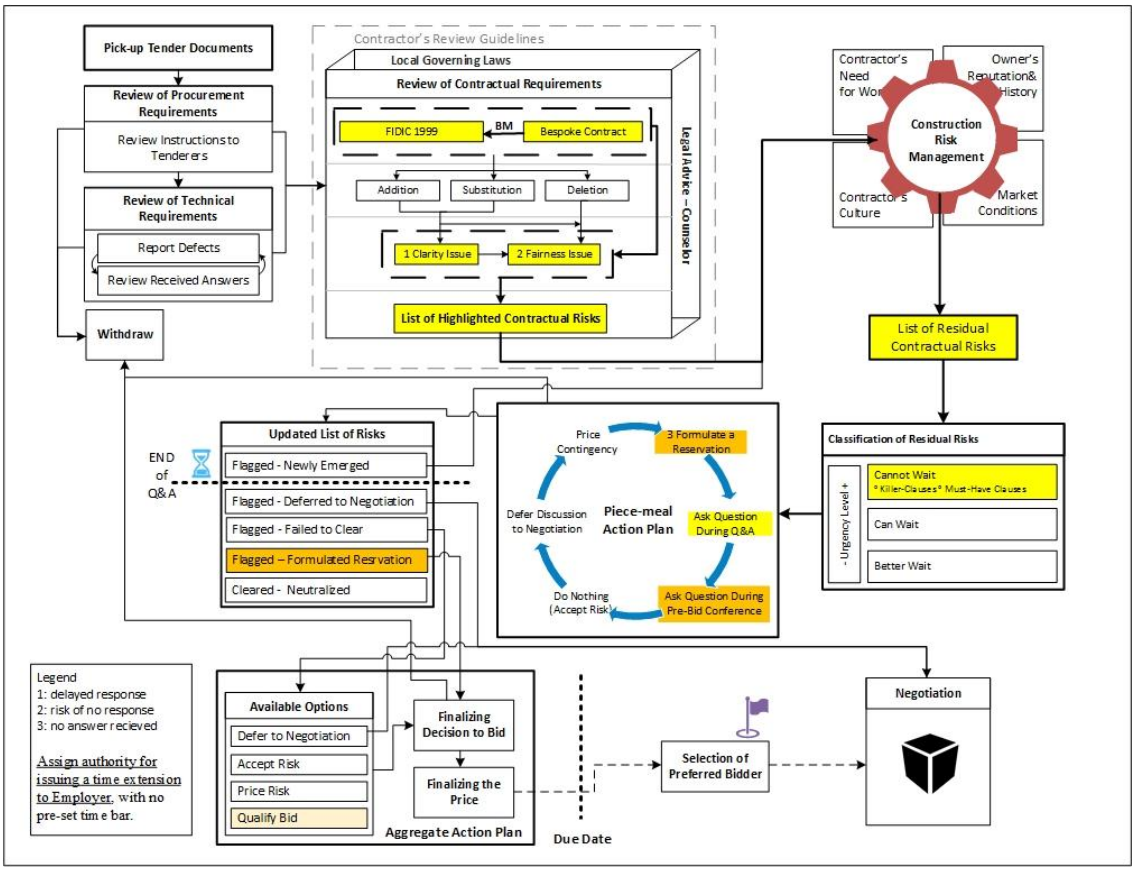

Figure 11Proposed Action Plan for the Lack of a "Pre-Set Time Bar" in EOT Claim Clause

3. Additional Payment Claims, Notice of Claims

Original Clause as Stipulated in the Owner's Bespoke Contract

"if the Contractor intends to make a claim against the Employer for any additional payment in connection with or arising out of the contract or the works other than a claim for a payment of or on account of any variation order issued pursuant to the Variation Order clause, the Contractor shall give notice in writing thereof to the Engineer, with a copy to the Employer, as soon as possible and in any event within twenty eight (28) days after the event or circumstances giving rise to the claim has first occurred. Such notice shall contain full and detailed particulars of and information concerning such claim insofar as those particulars are or that information is then known to it or reasonably available to it. Such particulars and information shall without limitation include the grounds upon which such claim is based, the Contractor's then estimate as to the amount of the aforesaid claim and details of the build-up of such estimate. The claims to

which this clause applies shall without limitation include any claims for extra cost under the Suspension Order clause and in those cases the notice given under the claim clause shall provide it is given within the period of twenty eight (28) days referred to in the Suspension Order clause fulfill the requirements of that clause concerning notice of intention to claim"

Summary of Benchmarking Results:

Table 4 FIDIC vs Case Contract - Additional Payment Related Clauses, (Hanano 2015)

1999 FIDIC's Standard Conditions	**Case's Contract Conditions**
• Call for Contractor to notify within 28 days from date of event. • Call for Contractor to submit particulars within 42 days from date of event. • Call for Engineer to respond within a subsequent 42-day period, at least on the principles of the claim.	• Call for Contractor to together notify and submit particulars to Engineer within 28 days. • Call for Contractor to submit a comprehensive account of the claim to Engineer within 28 days. • Assign authority for issuing a determination to Engineer, with no pre-set time bar.

Analysis of Risks and Discussion of Plausible Remedial Actions

- Call for Contractor to collectively notify and submit particulars to Engineer within 28 days.
- Call for the Contractor to submit a comprehensive account of the claim to Engineer within 28 days.

Submitting the particulars in 28 days is a rather stringent requirement; however, such limited time bar is suggested in many standard forms such as AIA. Thus, it does not pose a serious risk in as much as being expected; nevertheless, such stringent requirements should be highlighted for monitoring purposes. The contractor needs to take the necessary measures like keeping up to date records in order to ensure that he meets the deadlines. This is especially important if the contractor is used to dealing with other forms of contracts that allow for more relaxed time bars and in cases where failure in meeting the time bars results in losing the entitlement to the right in question.

- Assign authority for issuing a determination to the Employer, with no pre-set time bar.

The way the owner has assigned responsibilities is rather arbitrary and confusing. First, the contractor is required to submit the claim to the Engineer within a rather tight, yet acceptable, schedule. Second, the one is in charge of issuing a response (determination) is the owner, not the Engineer. Such issues need no more than extra attention in constructing the responsibility matrix. However, the real problem is in fact created by the lack of any reference to any pre-set time bar for the response. Repercussions of such cases have been discussed in the previous clause: Time Extension claims.

4. Dispute Resolution Amicable settlement

Original Clause as Stipulated in the Owner's Bespoke Contract

"if a dispute arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the carrying out of the Works, whether during the carrying out of the Works or after their completion and whether before or after any termination of the Contract, including any dispute as to any decision, opinion, instruction, order, certificate, determination or valuation of the Engineer or of the Employer it shall first be referred to a director of each party and those directors shall endeavor to settle the Dispute amicably. If the Dispute cannot be settled within twelve (12) weeks of the Dispute being referred to the respective directors then either the Employer or the Contractor may give notice to the other party of his intention to commence arbitration in respect thereof may be commenced unless such notice is given."

Summary of Benchmarking Results:

Table 5 FIDIC vs Case Contract - Amicable Settlement Related Clauses, (Hanano 2015)

1999 FIDIC's Standard Conditions	**Case's Contract Conditions**
• State dispute to be "of any kind whatsoever" in relation to all actions made by Engineer.	• State dispute to be in relation to actions by Engineer or Employer, but excluding those by Project Manager.

• Call for an Engineer's or a DAB's Decision to be given within 84 days. • Trigger a 56-day period for attempting amicable settlement upon issuing (within 28 days) a notice of dissatisfaction in respect of an Engineer's or a DAB's Decision.	• Do not stipulate an Engineer's or a DAB's Decision. • Trigger an 84-day period for attempting amicable settlement upon the referral of a dispute by Contractor to the upper management of Employer.

Analysis of Risk and Discussion of Plausible mitigation actions

Raising any matter in dispute for amicable settlement is contingent on the contractor having been in disagreement with the opinion of either the engineer or the employer over the matter in question. For a contractor to agree or disagree with a certain determination (response), he needs first to receive this response. What is meant here is that even if the contractor, while reviewing the EOT and/or Additional payment claims provisions, has failed to notice the fact that the owner did not stipulate a time frame to respond to the contractors claim for either Extension of Time or Additional payment, the contractor should definitely notice the missing yet pivotal element. Following the sequence of the clauses and making the connection between related clauses is very crucial in in enabling the contractor to be aware the whole picture and thus minimizing the risk of overlooking tiny, but killer, details.

5. Arbitration

Original Clause as Stipulated in the Owner's Bespoke Contract

"any Dispute in respect of which an amicable settlement has not been reached in accordance with the Amicable Settlement Clause shall be finally settled by arbitration. Unless otherwise agreed by the Employer and the Contractor.

- The Dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce;

- The Dispute shall be settled by one or more arbitrators appointed in accordance with the said Rules of Arbitration;
- The place of arbitration shall be in the existence country of the project; and
- The arbitration shall be conducted in the English language.

The said arbitrator(s) shall have full power to open up, review and revise any decision, opinion, instruction, order, certificate, determination or valuation of the Engineer or of the Employer relevant to the Dispute. Nothing shall disqualify the Engineer from being called as a witness and giving evidence before the said arbitrator(s) on any matter whatsoever relevant to the Dispute. The award rendered by all or a majority of the said arbitrator(s) shall be final and judgment may be entered upon it in any court having jurisdiction. In no event shall this Clause be construed as conferring upon any court authority or jurisdiction to enquire into or review such award on its merit.

Arbitration shall not be commenced prior to the date of issue of the Taking-Over Certificate to be issued under the Taking-Over Certificate Clause, the date of any termination of the Contract or the date of any expulsion of the Contractor from the Site and the Works under the Definition of Default Clause."

Summary of Benchmarking Results:

Table 6 FIDIC vs Case Contract - Arbitration Related Clauses, (Hanano 2015)

1999 FIDIC's Standard Conditions	**Case's Contract Conditions**
• Allow commencement of arbitration prior to or after the completion of the works.	• Allow commencement of arbitration only upon the issuance of The Taking-Over Certificate in respect of the works.

Clauses and terms Triggered by Arbitration Clause:

- Continuation of Obligations

"Neither the existence of any Dispute as mentioned in the Dispute Clause nor the commencement of any arbitration shall relieve either party to the Dispute from its obligation to continue to observe and perform each and every term, condition and provision of the Contract on its part to be so observed or performed, including without limitation in the case of the Contractor its obligation to proceed with the carrying out and completion of the Works and the remedying of defects therein and to do so in accordance with the decision, instructions and orders of the Engineer and of the Employer even if the Dispute concerns any of such decisions, instructions or orders".

Analysis of Risk and Discussion of Plausible Mitigation Actions

- "Arbitration shall not be commenced prior to the date of issue of the Taking-Over Certificate":

The prior issuance of the taking-over certificate (TOC) by the engineer is a condition precedent to the initiation of arbitration, thereby preventing the contractor from the chance of recovering losses under the prevailing laws for such payment defaults until after the completion of the works. Another issue, though tangential to this case and the scope of this work, that is missing in the contract is the issue of Substantial Completion. The contract goes directly to the taking over certificate when all of the works are completed which makes the life of the contractor more difficult. These conditions, basically, prevent the contractor from claiming his rights without causing himself further damage. Dragging the issue to the final completion phase, not even substantial, is unfair and an unenforceable clause as it goes against the governing law of the locality. On the individual level of the decision making process, the mere existence of such a killer clause threatens to break the deal. Figure 10 shows the proposed set of actions in dealing with the Arbitration clause.

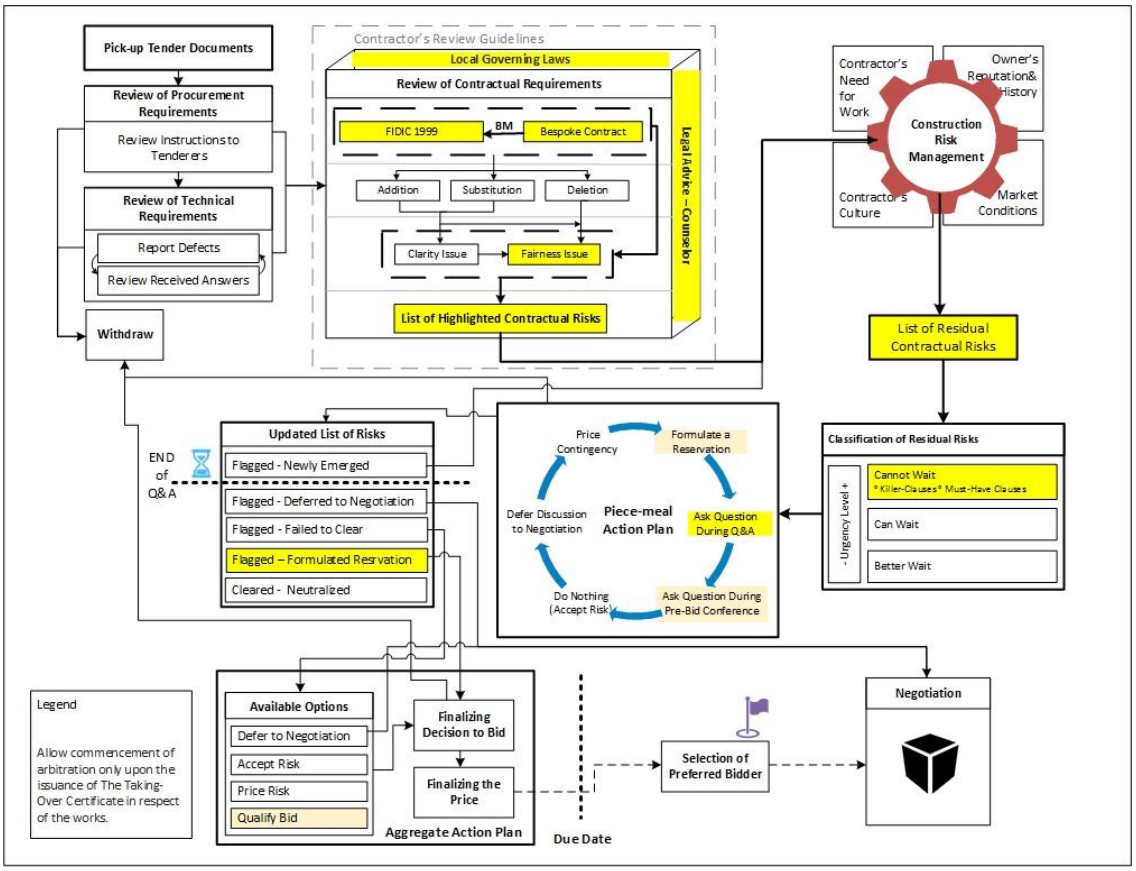

Figure 12 Proposed Action Plan for Arbitration Clause Related Risks

C. Connecting the Dots

In this section, a cumulative analysis of the problematic clauses encountered and their ramifications is provided. It is a matter of great significance to construct a grand picture from the parcels generated from the process of the piece-meal management on the individual level of each of the clauses. Seeing the risks from a holistic perspective is very useful in uncovering risks that could have been overlooked or underestimated. To this end a list of encountered risk, regardless of their urgency, should be prepared and checked for the overlap and connections between those problematic clauses.

- As per the contract conditions, contract termination is the only prescribed remedy to the owner payment default.

- The extension of time (EOT) clause did not make any specific reference to payment delays as a cause for establishing eligibility to request a time extension.
- The wording of a "catch-all" statement under the EOT clause incorporated a qualifier, which the contractor interpreted to have had the effect of precluding owner's payment defaults from being a relevant event or circumstance that could trigger the EOT clause.
- The owner assigned for himself the right of granting extensions of time. The award of any such time extension is stated to follow due consultation with the engineer and contractor.
- While the contractor is directed to submit both EOT and additional-payment claims to the engineer pursuant to a time-bar requirement, there is also no stipulation as to the timeframe within which the engineer shall respond to the contractor's additional-compensation claim. The engineer's determination (while being not time-regulated) is to be subsequent to another submission by the contractor of a comprehensive account of the claim to be made within 28 days from the date of the first (notice and particulars) submission.
- No stipulation of time within which the contractor shall expect to receive a response on his submitted EOT and/or additional-compensation claim under the dispute case's contract terms. This is also coupled with having to be in disagreement with such an opinion (response), issued – if ever – by either the owner or engineer, before any matter in question can be referred to the amicable settlement phase.

- The final, and yet most stringent requirement, is the one pertaining to the issuance of the taking-over certificate by the engineer being a condition precedent to the initiation of arbitration.

In order to summarize the situation resulting from the contract conditions, the contractor is entitled to seek arbitration in one of the following two scenarios: first, the failure to settle amicably. However, the contractor is not really free to exercise such an option since resorting to amicable settlement is pre-conditioned by the contractor's disagreement to the owner's opinion. By checking the mechanism of the claim notice, we find that the owner is not bound by any pre-set time bar to respond to the contractor's notice of claim. In addition to that, the contract is silent on what happens if the owner fails to respond. This leaves the contractor unable to resolve any claim regardless of the head of the claim. Such impasse leaves the contractor with the second scenario, which is proceeding with works and seeking arbitration after the issuance of the taking Over-Certificate. This means that the contractor has to complete the works as a condition to seeking arbitration. In this case, where the claim arose essentially due to the owner's default which resulted in the contractor assuming the financing of almost the entire project as a result of his (the contractor's) failure to exercise his right to terminate the contract under payment default. However, claims are bound to happen over different, unlimited, and unexpected occurrences other than the payment default. Figure 13 shows the finely tailored impasse created by the contract conditions.

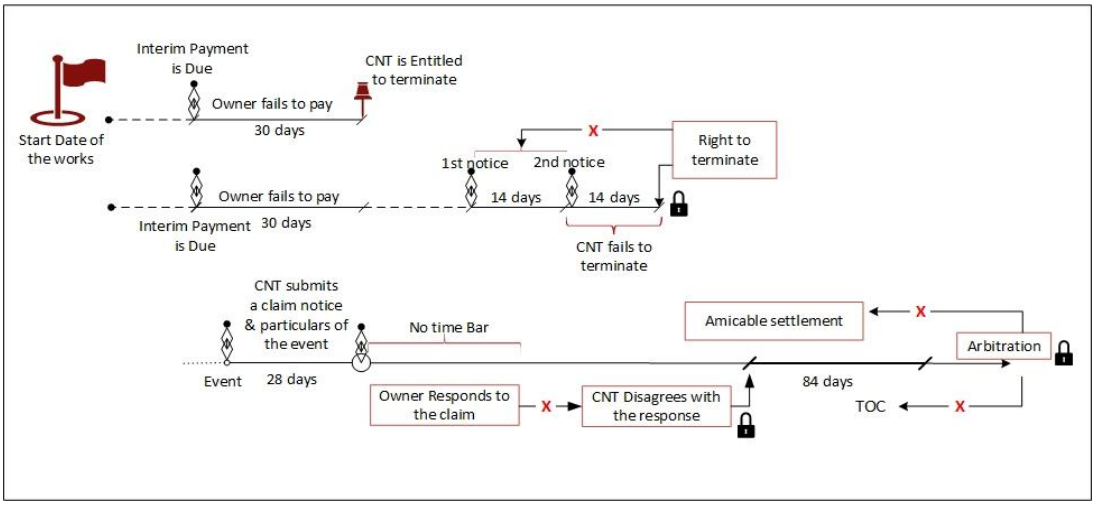

Figure 13 Impasse created by the unfair and/or ambiguous clauses' requirements

In making up the final decision whether to bid or not, and subsequently the price of the bid, the contractor needs to make the judgment based on the impact of those problematic clauses individually and accumulatively.

D. Conclusion

This case study offers an analysis of proposed preventive strategies and windows of opportunities available to contractors for questioning and negotiating detrimental conditions that may be written into contracts by owners. In the administration of these contracts, conditions, both general and particular ones, are of the utmost significance and ought to be assessed for their clarity and fairness. Here the indispensability of seeking legal advice cannot be exaggerated.

It demonstrated that it is important to assess the clauses one by one and not to underestimate or belittle any risk because this may play a part in shaping the final view of the risk which will affect the final decision/price. It also demonstrated that it is equally important that the contractor be able to make a realistic assessment of the options available to him to alleviate risks.

It was also found out that had the contractor examined the conditions of the contract and performed a close analysis of them, keys facts would have been revealed and deductions made which would have alerted the contractor to the need to raise a number of legal and administrative questions.

Finally, this study highlighted the importance of identifying the cross-referenced clauses/sub-clauses and assessing the interaction among them to see their accumulative impact. The findings clearly reveal that the contractor should be aware of and able to deploy systematic contract administration actions which could be used for dealing with the mandated unbalanced conditions and manage the risks they pose. The presented findings serve to raise awareness on the part of contractors as to the critical need for conducting thorough and systematic reviews of the owner's drafted contract conditions during the tendering stage. As such, the early detection of possible ambiguities, imbalanced or unfair conditions stipulated to be performed by the contractor and other participants employed by the owner can present an opportunity to have them clarified and possibly negotiated or revisited prior to entering into contract.

CHAPTER VI

SUMMARY, CONCLUSION AND RECOMMENDATIONS

A. Summary

Drafting construction contracts is a complicated and delicate task as the balance of power in contractual relation can be easily disturbed. Construction disputes often arise over unanticipated events making them inevitable no matter how carefully the contract terms were constructed. Resorting to courts to solve disputes, even in cases of clearly biased contracts, is not the best course of action. Both parties will suffer immensely from the time consuming and costly process. It is true that the main blame goes to the owner who pursues such conditions, either knowingly and willingly or out of ignorance, but the contractors cannot be absolved of blame, either. Contractors usually fail to protect their contractual position. Administering unbalanced contract requires more attention from the contractor's side. Although it is not entirely fair for the contractor since he does not have a say in drafting the terms. However, it is both parties' duty to administer risk management techniques.

The success of the contractual relationship entails a lot of give and take and compromises, devising means of addressing the problems of the adversarial relationships, mistrust, and inefficient communication and fostering principles like teamwork, collaboration, mutual respect, and trust between the contracting parties involved in the construction project

Starting right is very crucial to insure a fruitful and successful project completion. By saying starting right, it is meant that contractors need to conduct the necessary due diligence and read signs carefully while they start paving the road for a long-term relationship. It is very important to read between the lines and analyze the

other party's behaviors, actions, and reactions during the different phases and encounters prior to bidding and while preparing the bid.

One feature of construction contracts is that price formation and contract formation take place through the same tendering process. That means the contractor needs to decide on the price for the work to be executed under the given contract conditions.

B. Conclusion

It is of great importance to identify the cross-referenced clauses/sub-clauses and assess the interaction among them to see their accumulative impact. The findings clearly reveal that the contractor should be aware of and able to deploy systematic contract administration actions which could be used for dealing with the mandated unbalanced conditions and manage the risks they pose. The presented findings serve to raise awareness on the part of contractors as to the critical need for conducting thorough and systematic reviews of the owner's drafted contract conditions during the tendering stage. As such, the early detection of possible ambiguities, imbalanced or unfair conditions stipulated to be performed by the Engineer and other participants employed by the owner can present an opportunity to have them clarified and possibly negotiated or revisited prior to entering into contract.

From the contractor's perspective, early inspection mechanisms may provide the best and earliest warning signal to act in a timely manner. It is absolutely essential to replay the actions and recall all possible clues in the period prior to and during the bidding phase: actions and clues that may go unnoticed in the managing the pre-construction process and that may prove to be influential. Contractors are therefore,

strongly advised to carefully scrutinize the tender documents, contract conditions in particular, and to react accordingly, in such a way that could help them protect their interest and thwart all unreasonable risks.

This work is meant to firstly provide advice to contractors, as to the need to use a systematic review of the different tender documents and pay close attention to those clauses deemed problematic as scrutinized during the bidding phase, thereby minimizing the risks that could emanate from engaging in such contracts. Secondly, the proposed course of actions is expected to minimize the likelihood of eventually getting into disputes in connection with such unfair, vague or missing clauses.

The suggested framework for construction contracts management is mainly twofold: the review of the entire bid package (tender documents) followed by a rational decision-making depending on the results of the reviewed risk and the analysis of the options at the disposal of the contractor.

In reviewing the tender documents, it is recommended that the contractor starts with assessing the Procurement requirements then the Technical requirements as he is required by law to report any defects he encounters. Finally, the contractor needs to carefully read and review the contract conditions and their interaction with each other and with the technical requirements, and highlight the problematic clauses in order to make an informed decision based on a comprehensive and thorough review.

As long as the contractor is aware of the different problematic clauses contained in the proposed contract and the way they interact, he can make an informed business decision as to execute the contract and accept these risks, execute the contract with a properly designed price, and effectively manage the assumed risks during the execution of the work, or simply walk away and find a better work.

C. Recommendations

Being actively engaged in the phases that precede the final submission of the bid offer is highly recommended. Doing so helps the contractor in making an informed decision.

It is the contractor's duty to communicate any design defects he encounters while reviewing the design documents.

Contractors must read the contract conditions. As reading the contract conditions is not a fun activity that contractors do at their leisure time.

The contractor has the right to communicate his concerns and inquire about the ambiguities he encounters while reviewing the contract before signing the agreement.

In making up the final decision whether to bid or not, and subsequently the price of the bid, the contractor needs to judge based on the impact of those problematic clauses individually and accumulatively. A Comprehensive review and decision-making process should be considered to pinpoint those problems and try to deal with risks and eliminate them or the least recognize and keep monitoring them. If and when risks are incorrectly assessed and therefore incorrectly prioritized, in the sense that they were underestimated, overestimated and/or missed they can divert attention from other important issue or issues that would coalesce and form a formidable threat that could not be alleviated easily or may never be alleviated at all.

D. Further Work

Further work can be done to raise the awareness among contractors to the importance of reading and carefully reviewing the contract conditions. Another equally important aspect is the power of the group. As the contractors can actually exert

pressure on the owner to adjust his language to reflect a balanced rights and fair share of responsibility. A culture of openness and transparency should be nurtured in the industry. Contractors need to be aware of their rights and the means used to exercise those rights. This can be done through workshops, questionnaires and meetings with both owners and contractors. Further validation of the framework using different cases is very likely to result in new outcomes and fruitful revealing that can be used in developing the framework to be more accurate in targeting specific issues. In addition to that, using different cases would result in widening the scope framework to cover more area.

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