

A Survey on Subcontractor Prequalification

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Abstract

Construction work is often executed by many subcontractors specialized in various trades. It has been noted by many studies that the pre-qualification process of selecting subcontractors is an important step to ensure a successful execution of a construction project. The objective of this study is to understand if there is a consensus within the industry regarding the subcontractor pre-qualification process, as well as the information needed for pre-qualifying subs, and to understand what factors may contribute to different practices in the industry if the consensus cannot be reached. The authors first collected pre-qualification statements from various companies to design a questionnaire. The aim is to solicit opinions according to variables such as company type, annual volume and project type. Then, the authors solicited input from construction companies by requesting their participation in the survey. Finally, the authors performed a preliminary data analysis to obtain some initial results. Based on the preliminary analysis, it seems to suggest that construction companies have no or little difference to many of the factors related to subcontractor prequalification regardless their sizes and types of project they serve. However, further studies are required to make conclusions.

Keywords

Subcontractor, prequalification.

1. Introduction

The evolution of subcontracting has had a substantial impact on the construction process. Increasing portions of building construction projects are contracted to specialty, trade contractors. As a group, subcontractors contribute significantly to the capital risk, resources, managerial effort, and business expertise supporting the construction in the United States (Bubshalt, et al, 1996). Subcontracts usually covers a wide range of construction tasks, such as excavation, concrete forming and pouring, reinforcement-steel placing, masonry, and carpentry with his own forces.

Studies have confirmed that the subcontract system is efficient and economical in the use of available resources (Bubshalt, et al, 1996). By subcontracting, a general contractor can obtain men with the requisite skills when they are needed, without the necessity of maintaining an unwieldy and expensive full-time employment of trade workers, so that the general contractor can stay more focus with its limited resources on things such as managing clients and controlling project budget, schedule, quality and safety. On the other hand, a subcontractor is more capable of substantially maintaining and providing full-time employment for his workers, thereby affording an opportunity for the acquisition and retention of the most highly skilled and productive journeymen. Another common reason for subcontracting specialty jobs is that the project requires construction equipment that a general contractor does not have. In many cases, it is advisable for the general contractor to subcontract that part of the project rather than attempt to obtain the equipment and do the work itself. Subcontracting specialized works has even more benefits. For example, a general contractor can get the benefits of innovations and can take advantage of others' creativity and experience (Ng, et al, 1998).

The whole process of subcontracting involves a huge amount of networking where the general contractor collects bids from different sub-contractors and finally accepts the lowest bid without compromising on quality of work (at most times), which in turn makes the general contractor more competitive on the project. One of the most important considerations that the general contractor should have is the quality of the sub-contractor.

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Therefore, if subcontracting is managed successfully, it brings good qualities in the specialized work items to be contracted and with a competitive edge in the cost of a project. The success of subcontracting however starts with the selection of subcontractors.

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2. Pre-qualification

There are limited studies on sub-contractor qualification. Much work has been done with respect to contractor qualification from an owner's perspective (Palaneeswaran, et al, 2000). In general, there are two methods of qualifying bidders: pre-bid and post-bid qualification. Pre-bid qualification requires the interested contractor to submit information about the firm before the bid documents are released. This is usually done while contract documents are being finalized so that time is not spent during the bid period with pre-bid qualifications. However, it should be done close enough to the bid dates so that the information is applicable, especially information regarding current projects. Post-bid qualifications are submitted with the bid and reviewed by the owner during the bid opening and analysis. In either case, qualification is determined by evidence of capability from previous jobs, financial strength and stability, previous commitments, personnel availability, and safety record.

The advantage of pre-qualifying bidders is that, when bids are received, the lowest bidder can usually be selected. This saves time and potential disputes with bidder's disqualification after the bid on the basis of financial or technical ability. Even with the pre-qualification process, however, bidders can still be disqualified. Usually, the disqualification is based on perception that the bidder did not follow the terms of the contract documents. Sometimes a bidder will submit a bid with material or method, which substitutes as the basis for its price. The owner can also reject the bid. This sometimes can lead to a dispute and can slow the start of construction.

However, some studies noted there might exist different requirements in terms of what to be considered in the qualifying process due to reasons such as different types of contractors (small general contractors vs. large contractors), or different market (i.e., residential vs. civil). The objective of this study is to determine if there exist consensus in the industry in terms of subcontractor prequalification (i.e., what information is required by a general contractor for such a purpose) and factors that contribute to different prequalification practices, if any.

3. Methodology

This study consists of three phases. In phase I, the authors collected pre-qualification statements from various companies to design a questionnaire. The aim is to solicit opinions according to variables such as company type, annual volume, project type, etc. In phase II, the authors designed the questionnaire and sent it to a pool of construction companies that were different from those in phase I. In phase III, the authors conducted data analysis by using statistical techniques and derived conclusions based on the analysis.

3.1 Phase I: Collection of Pre-qualification Statements

Phase I includes studying pre-qualification statements of various companies and gathering information essential to develop a comprehensive questionnaire for the purpose of this project.

3.2 Phase II: Development of Survey Questionnaire

With the help of pre-qualification statements, a questionnaire was prepared which included all the vital information for a pre-qualification statement of subcontractors. The questionnaire was sent to over 300 construction companies in U.S., however, in total there are 23 responses received.

After the replies were received from these companies, the authors divided them into two categories: volume of construction and type of construction. Within these two categories, two subdivisions sorting the received data were further allocated. The first category, volume of construction, was divided according to volume of work: 50 million and below, or 50 million and above. The second one, type of construction, consisted of different types of construction: residential, commercial, industrial, and civil (heavy and highway).

The questionnaire is organized mainly according to four areas,

- 1) Organizational
- 2) Financial
- 3) Legal and licensing
- 4) Safety

3.3 Phase III: Preliminary Data Analysis

The initial data analysis reveals that

- 1) It appears that majority of the responders would like to know sub-contractor's organization in terms of requesting information about current officers, years under current name and year when the company is formed. Especially, all of the responders would request information about how long subs are in business (Figure 1 to 4).
- 2) Although bonding capacity is regarded as essential to know subcontractors' financial situation, the survey results show that 13% of the responders don't consider subs' bonding capacity as essential financial information that they should know (Figure 5). Such observation is further confirmed by the results shown in Figure 6, which demonstrate that 80% of the responders would like to know financial information other than bonding capacity. Only 12% of the responders would check subs' bonding capacity as the only source for financial information.
- 3) All responders are interested in knowing the technical experience of the subcontractor for a certain specialty, as well as its principals' relevant experience (Figure 7 to 9). Technical experience is obviously very significant.
- 4) All responders are interested in knowing the sub' insurance coverage and licensing information (Figure 10 and 12). It is interesting to notices that a small portion of responders feel that the

worker's compensation experience modification rate is not important to them (Figure 11). This observation is supported by the results that a small portion of responders doesn't require subs to have a safety program (Figure 13).

- 5) On the other hand, the majority of responders do request safety information from subs, (Figure 14).
- 6) It seems that all agrees that subcontractor prequalification can be standardized (Figure 15).



Figure 1

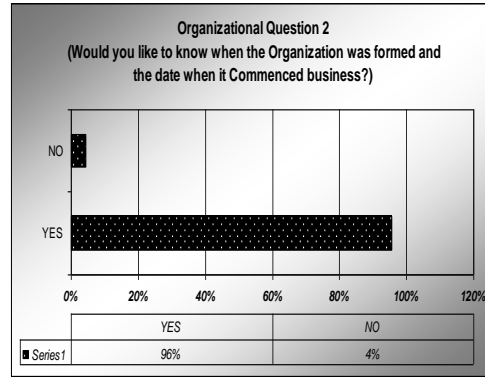


Figure 2

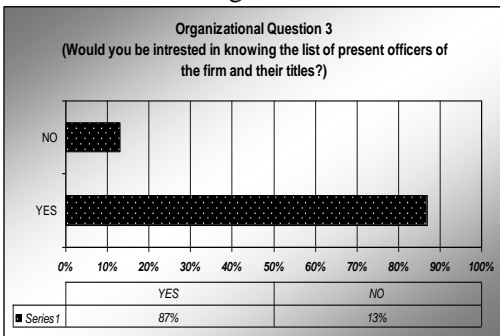


Figure 3

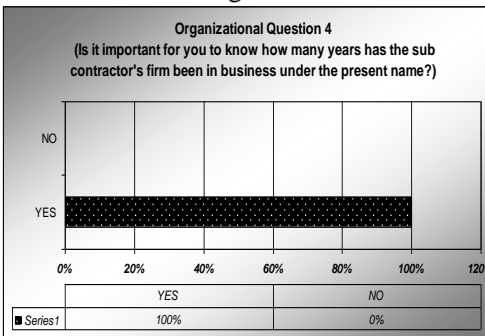


Figure 4

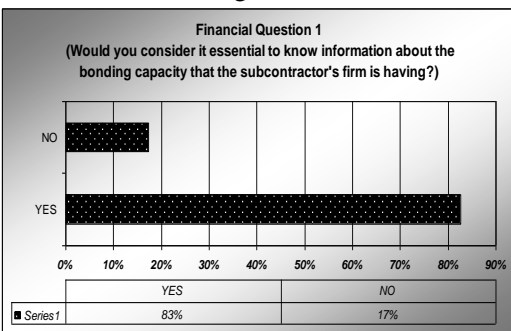


Figure 5

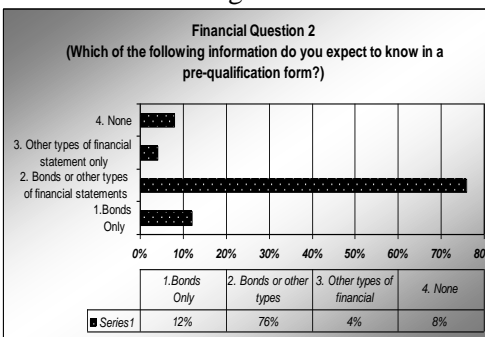


Figure 6

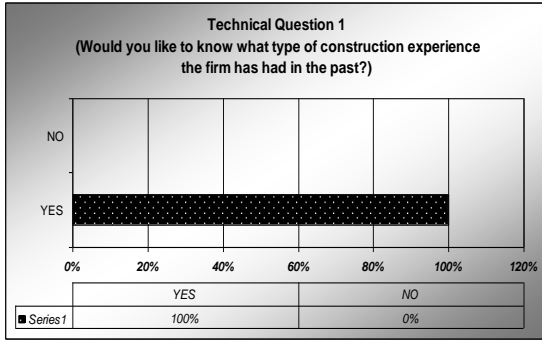


Figure 7

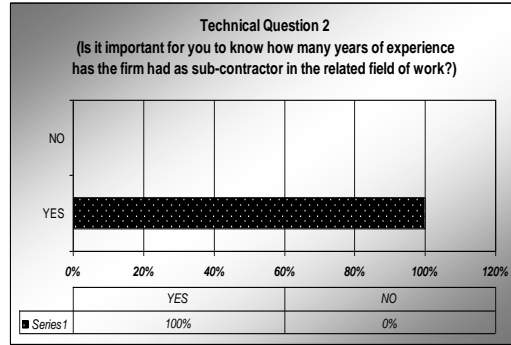


Figure 8

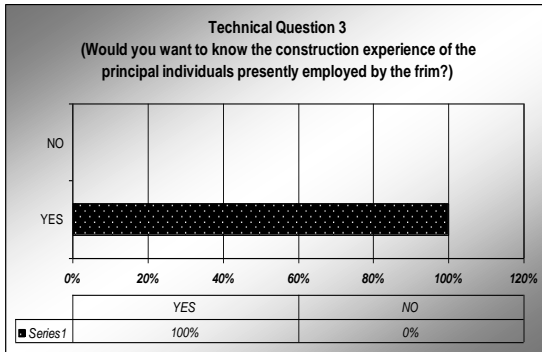


Figure 9

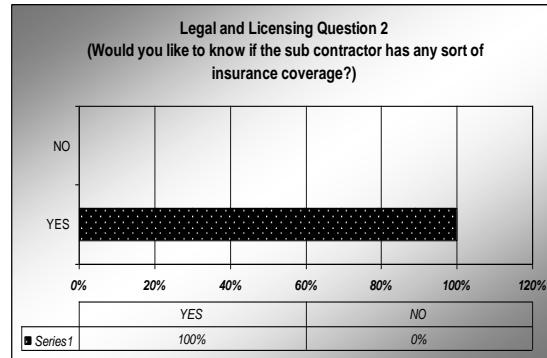


Figure 10

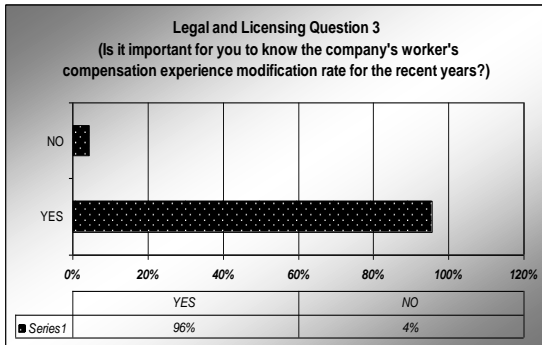


Figure 11

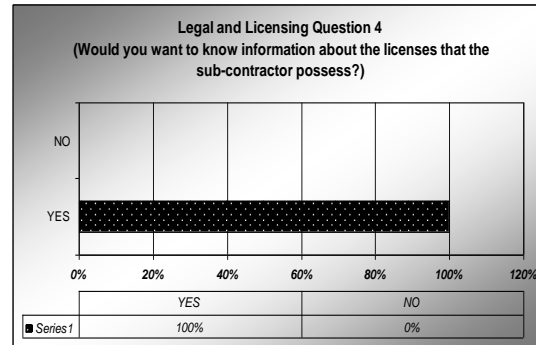


Figure 12

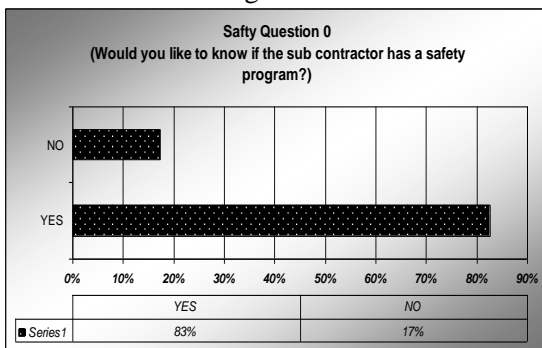


Figure 13

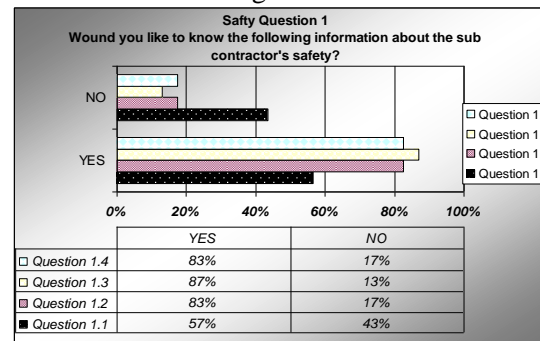


Figure 14

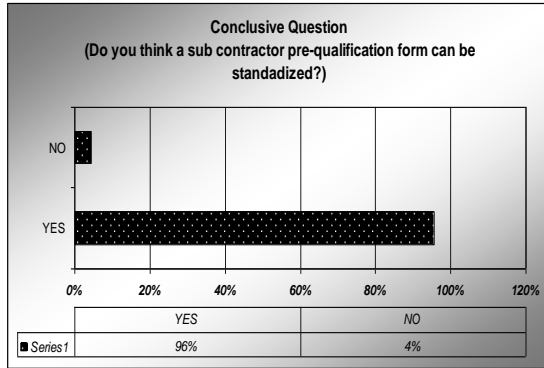


Figure 15

5. Conclusion

Sub-contractor prequalification is an important issue that deserves significant research attention as almost all construction projects involve some kind of subcontracting.

The preliminary analysis seems to suggest a favorable answer to the standardization of a subcontractor prequalification process; however detailed studies are required before any conclusions can be made.

6. References

3.

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