

A Study on The Qualification Criteria for Selection of Contractor in Nepal

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Abstract

During the bidding process in the construction works, there is need of selection of proper contractor who can perform the works as per contract agreement. There are the selection criteria for selection for contractors in Nepal. Due to the various reasons most of the construction works in Nepal are not performed on time and as per requirements. In the selection of contractor, there may be some missing factors due to which we are not able to select the proper contractor.

The study was focused on finding the factors that influence the qualification criteria for selection of contractor. The participants were questioned about the qualification criteria which are necessary for selection of contractor. The participants were from government officials, contractor and consultants. They were also asked if there were some factors missing in the questionnaire.

After the study it is found that in case of Nepal there are mainly three factors missing in existing Standard Bidding Document (SBD) which plays an important role in selection of contractor. The factors i.e., Quality management, failure to complete a project and health and safety management which are crucial in the selection criteria of contractor but they are not in prevailing selection criteria. These factors should be also considered which will probably help in the proper selection of contractor that can solve the problems existing in the construction industry due to improper contractor selection procedure.

Keywords

SBD, Qualification criteria's, Quality management, failure to complete a project, health and safety management

1. Introduction

For public procurement, all countries have implemented different acts and rules in their country. In 2063 B.S., Nepal also developed public procurement act for public procurement by referring different practices in developed countries and international organizations (WORLD Bank, ADB). For doing any public procurement, public entity should prepare bidding document. (PPA 2063, article 9). In Nepal, all the public entity should follow public procurement act and rules. No any public procurement can take place without following PPA/PPR. According to PPA 2063 article 10 and PPR 2064 rule 26, for construction works above two crore rupees public entity should determine the qualification criteria for the contractor. There should be necessity of determining eligibility and other five factors of Pending Litigation, Financial Situation, Experience, Equipment and Personnel. [1]

A clause in Nepal's new public procurement law allowed for the establishment of the Public Procurement Monitoring Office (PPMO). On 2063/09/30 (B.S.) and 2064/5/03 (B.S.), respectively, the Public Procurement Act, 2063 (B.S.), and Public Procurement Regulation, 2064 (B.S.), went into effect. On 2064/5/3 (B.S.), the PPMO was founded as the government organization, reporting directly to the prime minister. PPMO has developed and Issued the Standard Bidding Documents for Civil Works, Goods and Consultancy. [2]

First of all, the bidders which are qualified or responsive bidders on the basis of technical proposal are only called for financial opening. In the technical evaluation of bids, there are following factors for the qualification criteria that are in the Standard Bidding Document (SBD) for works above two crores. And they are

1. Eligibility

2. Pending Litigation
3. Financial Situation
 - (a) Historical Financial Performance
 - (b) Average Annual Construction Turnover
 - (c) Required Bid Capacity
4. Experience
 - (a) General Construction Experience
 - (b) Specific Construction Experience
 - i. Contracts of Similar Size and Nature
 - ii. Construction Experience in Key Activities
 - (c) Personnel
 - (d) Equipment
 - (e) Subcontractors

For the proper control mechanism for the timely completion of the project, the government has gone through various amendment in the PPR rules. The PPR rules has been amendment twelve times since now. The government of Nepal has mainly focused on the Rule 120 of extension of time. In the sixth amendment, the extension of time was limited and maximum limit was threshold to 50% of initial completion time by the secretary of the ministry. But due to COVID 19, the cabinet decision of 2078/05/03 B.S. increased the deadline of completion of time up to 2078/12/30 B.S. Again, the time extension got increased up to 2080/3/31 B.S. by the 12th amendment.

In our country, the amendment in the PPR rules 2063(amendment 11), explained that any contractor can do only five contracts at a time. They have to finish firstly all the past contracts and then only they can further participate in the bidding process. This provision provides an end to a bad habit of taking too much contract at low rates and not doing the works properly. This controls such things of taking contracts only and not doing works in time.

But not all contractors can perform all works of various simple to complex contracts. So, there is need of qualification criteria which filters the contractors and only lets the capable contractor to enter into the contract. For both owners and project managers, choosing the best contractor for a construction project is a key choice

1.1 Problem Statement

There are different types of construction works running in our country. Many different types of contractors are involved in the working in the construction works. In our country most of the contract works are not completed on time. The contractors take the work and don't do the work on time. They only want to take the work by bidding process and don't do the work timely. They only want to have the contracts at low rates and do not complete the work on time. Although there are many factors due to which they do not do the work timely. They don't have enough equipment, resources due to which they are not completing the work properly. By having the review on the problems in the construction industry, we can think that we are lacking somewhere. During the contractor selection, we are not focusing on some factors related to the timely and safely completion of the work.

1.1.1 Research Objectives

The specific objectives of this research are

- To assess the factors required for the qualification criteria for the selection of contractor
- To determine the rankings of the all factors according to the relative importance
- To compare the results with the existing qualification criteria for selection of contractor of Nepal
- To compare the results with other countries

2. Literature Review

Hatash and Skitmore (1997) analyzed the United Kingdom's bid evaluation standards. Before being chosen for the project, contractors' abilities must be defended and confirmed to see if they can do the work. The three fundamental phases of the British bidding process are general information, qualifying, and bid evaluation. General information includes administrative details about a contractor's business, the range of work it offers, technical resources and references, current insurance, tax information, financial data, subcontracting, racial relations, plants and equipment, and health and safety. The UK agencies check technical resources and references,

financial requirements, health and safety procedures, current insurance, taxes, subcontracting, and racial relations throughout the bid qualification stage.[3]

According to Russell and Skinnies (1988), the customer frames and executes the bid-qualification process based on the project requirements. When selecting the most competent contractor and preventing construction failure, he or she takes into account a number of aspects, including management, safety, location, performance, resources, finances, experience, failed performance, bonding, and the capacity for adopting a new project.[4]

Lam et al. (2005) reported 17 elements that need to be taken into account while evaluating bids: 1)Quality standard 2)Time, 3)Construction Plan, 4)Quality Guarantee System 5) security, Plans for the workforce,6) the quantity of primary tools and supplies, 7)the construction timeline and its assurance measure, and 8) Level of qualification, 9) Reputation, 10) Project Manager Level of Qualifications, 11) Experience with Related Projects, 12) the proportion of projects that were qualified and excellent in the previous two years, 13) the proportion of on-time completions, 14) bid prices, 15) the quantity of materials, 16) the cost-cutting strategy, and 17) the points for a thorough review and evaluation. They claimed that the non-linear, unreliable, and subjective nature of the bid-evaluation process employing these 17 elements complicated the issues. They consequently suggested a principal component analysis approach. This approach allowed for the reduction of a sizable number of co-linear and dimensionally huge dependent variables.[5]

Lam et al. (2009) noted that, especially with complicated and large projects, adopting a qualifying process for both contractors and owners is essential. The qualification procedure acts as a proactive safety net for both parties. A Support Vector Machine (SVM) method for best-value procurement was presented by Lam et al. taking into account the complexity of projects and the qualification process. The decision input variables' characteristics discovered through extensive knowledge mining in support vector machining included financial strength and resource, past performance, past experience, human resources, equipment resources, safety and health considerations, environmental factors, quality management, current workload, management capacity, and claim history.[6]

Padhi and Mohapatra (2010) evaluated the Indian government's bidding procedure which is a three-step procedure before award a project. First, the bidders' general data and claim histories are assessed. Second, agencies evaluate and rank the bidders in accordance with standards relating to prior work performance, resource accessibility, and financial standing. The second process involves choosing the top three bidders, who then submit bids with the lowest bidder receiving the winning offer. [7]

3. Methodology

In order to improve the performance of both contractors and owners, the research's goal was to identify and examine the variables that influence the contractor qualifying process in Nepal. The research was conducted using a variety of techniques, including a review of the literature on contractors' bid qualification, a questionnaire survey to gather data, data collection and analysis, a thorough statistical analysis, a determination of the relative importance index and rank, a comparison of Nepal's results with results from other nations, and a discussion of the findings, conclusions, and recommendations for Nepal's government. There were nine primary phases to the research. Figure 1 lists the stages of the research:

3.1 Research Population, Location, and Sample Size

Project managers, engineers, and consultants from various organizations (public, semi-public, commercial, and others) with experience in contractor selection projects in Nepal made up the research's targeted audience. Both individuals and establishments of Nepal received the questionnaire. 70 people made up the target sample. The participants received an invitation to a randomly chosen survey. The participants were divided into the following categories based on their specialties:

- Client
- Contractor
- Consultant

3.2 Sample Characteristics

The Clients were those individuals who were working on government projects in Nepal. Some of the

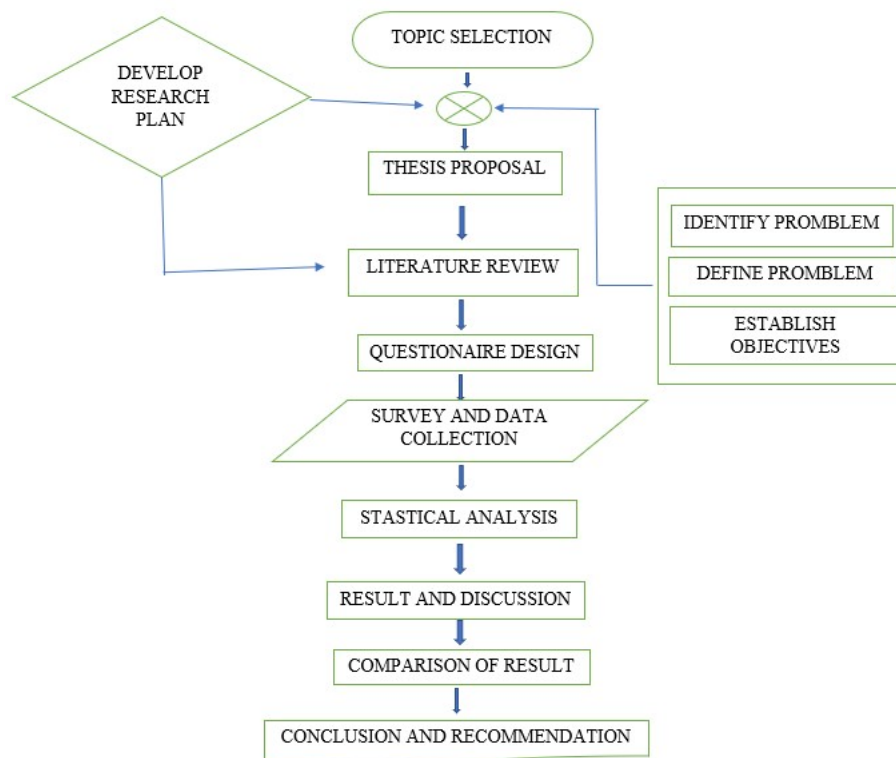


Figure 1: Research Methodology Flow Chart

agencies were as follows: Department of Roads (DOR), Department of Urban Development and Building Construction (DUDBC), Department of Water Supply and Sanitation (DWSS), Different Municipalities. Contractor taken for the survey were from mainly CLASS A, CLASS B contractors. The consultant taken for the study were of doing works in all sectors in our country.

3.3 Data Collection

Because a questionnaire is a widely used tool, it was selected as the data collection strategy Abdal-Hadi (2010) quoted, “Questionnaires have been widely used for descriptive and analytical surveys in order to find out the facts, opinions and views. It enhances confidentiality, supports internal and external validity, facilitates analysis, and saves resources”. [8]

KoBo Toolbox was used to collect the data in a standardized format for the population samples. Using the standardized form, the researcher was able to draw statistical conclusions regarding the data.

4. Results and Analysis

All the factors influencing the qualification criteria for selection of contractor in Nepal were found from the different literatures. They were classified into 22 major divisions:

- Expertise in similar projects
- Past and current performance
- Current workload
- Quality management, control and assurance system
- Turnover History
- Contractor failure to complete a project
- Health and Safety performance and plan
- History of claims of contractor
- Financial stability and soundness
- Length of time in business
- Equipment resources and availability

- Experience in geographic location of project
- Key managerial, supervisory and operational personnel experience and availability
- Area of specialization
- Workforce resources and availability
- Credit rating and history
- Schedule of project
- Management and technical skills and capabilities
- Contractor organization and plan
- Environmental sustainability
- References
- Profitability

4.1 Comparison Of The Qualification Criteria With The Present Qualification Criteria Of Nepal

As per the qualification criteria of Nepal, there are the following factors during the qualification of bids

1. Eligibility
2. Pending Litigation
3. Financial Situation
 - (a) Historical Financial Performance
 - (b) Average Annual Construction Turnover
 - (c) Required Bid Capacity
4. Experience
 - (a) General Construction Experience
 - (b) Specific Construction Experience
 - i. Contracts of Similar Size and Nature
 - ii. Construction Experience in Key Activities
5. Personnel
6. Equipment
7. Subcontractors

But as per study we surveyed on 22 factors but only first 14 factors play vital role during the qualification of bids as there is a huge difference in relative importance factor after the first 14 factors. So, as per comparison there are certain factors which play an important role in the qualification criteria according to our survey but they are not in qualification criteria and they are

- Quality management, control and assurance system,
- Contractor failure to complete a project
- Health and Safety performance and plan

4.2 Comparison Of The Factor With The View Point Of Client, Contractor and Consultant

We can find that the client mainly focuses on Expertise in similar projects Equipment resources and availability, Quality management, control and assurance system, Contractor failure to complete a project, Past and current performance, Health and Safety performance and plan and Current workload. The table 1 below shows the ranking of factors with prospective of owners, contractor and consultants according to the RII.

4.3 Comparison of the Results among Nepal and other countries

For the comparison of result obtained from our study and the existing qualification criteria of Nepal, those are compared with other countries. In India during the prequalification process, the following factors are checked.

- Annual Financial Turnover
- Value of Similar work
- Credit facility
- Profitability of the Bidder
- Bid Capacity
- Additional Requirement

Even though the bidders meet the above qualifying criteria, they are liable to be disqualified if they have

- Records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

Table 1: Comparison of the Factor with the view point of client, contractor and consultant

| FACTORS | OVERALL RANK | CLIENT ONLY RANK | CONTRACTOR ONLY RANK | CONSULTANT ONLY RANK |
|---|---------------------|-------------------------|-----------------------------|-----------------------------|
| Expertise in similar projects | 1 | 1 | 8 | 2 |
| Past and current performance | 2 | 5 | 3 | 8 |
| Current workload | 3 | 7 | 4 | 6 |
| Quality management, control and assurance system | 4 | 6 | 10 | 2 |
| Turnover History | 5 | 9 | 5 | 6 |
| Contractor failure to complete a project | 6 | 4 | 11 | 4 |
| Health and Safety performance and plan | 7 | 6 | 7 | 9 |
| History of claims of contractor | 8 | 15 | 2 | 1 |
| Financial stability and soundness | 9 | 13 | 9 | 4 |
| Length of time in business | 10 | 14 | 6 | 13 |
| Equipment resources and availability | 11 | 2 | 15 | 14 |
| Experience in geographic location of project | 12 | 8 | 14 | 11 |
| Key managerial, supervisory and operational personnel experience and availability | 13 | 17 | 1 | 10 |
| Area of specialization | 14 | 10 | 13 | 11 |
| Workforce resources and availability | 15 | 11 | 12 | 18 |
| Credit rating and history | 16 | 12 | 18 | 17 |
| Schedule of project | 17 | 16 | 16 | 19 |
| Management and technical skills and capabilities | 18 | 18 | 17 | 15 |
| Contractor organization and plan | 19 | 19 | 20 | 15 |
| Environmental sustainability | 20 | 21 | 21 | 20 |
| References | 21 | 20 | 22 | 21 |
| Profitability | 22 | 22 | 19 | 21 |

If we compare these factors with Nepal then it is found that some aspects are missing such as profitability and disqualifying context. Although as per our study profitability did not have much impact but the disqualifying factors were a concern and matching and not in our prevailing SBD of Nepal. Before being chosen for a project, contractors in the UK must demonstrate their qualifications and demonstrate their ability to finish the task. There are three fundamental phases to the bidding process in the United Kingdom: (1) General data; (2) Qualification; and (3) Evaluation of Bids General information includes administrative details about a contractor's

business, the range of work it offers, technical resources and references, current insurance, tax information, financial data, subcontracting, racial relations, plants and equipment, and health and safety. The UK agencies check technical resources and references, financial requirements, health and safety procedures, current insurance, taxes, subcontracting, and racial relations throughout the bid qualification stage. In context of Nepal, there are several factors missing in the SBD such as health and safety policies and references. As per our study too, it showed that these factors are lacking in our existing qualification criteria.

5. Discussions

In our country there are different types of problem being faced during the construction of any infrastructures. The contractors are mainly not focusing on the completing the works on time and the quality. During the selection process, we are lacking some factors which should be considered during the bidding process. All the factors that we are considering nowadays during the selection process are right but there are certain factors which are missing. We should focus on the past failure of contractor too. We should see whether they have completed the past works on time or not. If this factor starts testing only the contractor who completes the work the work on time gets selected in the future tenders. This factor controls the contractor to do work on time.

Other factor missing during the selection is Quality management, control and assurance system which could lead to an infrastructure to be constructed be of good quality and shall be monitored nicely.

The last factor that could be added in the selection criteria is Health and Safety performance and plan. There are different types of accidents occurring on the site in Nepal. And it is found that the contractor is not focusing on the safety of the labor and site. This problem leads to bad practice of construction and insecure site conditions. This factor may also see the past record of labor getting compensation after any accident on site and cost spent on maintaining safety on site.

6. Conclusions

The goals of this research are to identify the contractors' bid qualification factors, or criteria, which could form the basis of the current qualification practices, its relative importance and ranking, to identify the contractors' bid qualification criteria with respect to Nepal and to compare results obtained in Nepal with other countries

It is found that there are 22 factors mainly for selection of contractor which is gleaned from analyzing the literature about the qualification of

contractors.

The relative importance index as well as the ranking of the all the factors is shown. There is a significant difference in the responses between the owners, contractor and consultants.

There are mainly three factors which is not in prevailing qualification criteria in Nepal and they are Quality management, control and assurance system, Contractor failure to complete a project and Health and Safety performance and plan.

The results obtained by our study in Nepal are compared with qualification criteria of other countries. As there are certain factors which are missing in the prevailing qualification criteria of Nepal when compared to other countries that is also shown by our research.

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