

## Factors Affecting Selection of an Eligible Contractor

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### ABSTRACT

The construction branch is one of the important branches for achieving the economy of the country. So, it is obligatory to find out a competent contractor among all, for the successful completion of the work. Construction bidding is the process of offering a proposal to undertake a construction project. And it is one of the methods for the selection of a contractor. Bidding strategies vary from contractor to contractor and each contractor has a different view of the factors affecting their bid decisions. This study aims to find an effective strategy for the selection of competent contractors and bid evaluation. There are many factors that influence the bidding strategy. These factors influence depend on the situation when the research is done.

**Keywords--** Bidding strategy, Clients, Competent contractors, Construction bidding, Competent contractors

### Competitive Bidding

The construction bidding process is an essential aspect of the construction industry. In simple sense construction bidding can be defined as the process of offering the proposal or tender to undertake a construction project. Especially construction bidding includes the process in which the tender is submitted by the contractor to the client as an offer to manage and carry out the construction project. The primary objective of the construction bidding is to hire the eligible contractor from the client and related firms. The contractors in most cases get the job of construction undertaking by the process of bidding on the construction projects. The bid or the tender refers to the proposal that is offered to complete and undertake construction tenders are generally made based on the bill of quantities and the specification of the contracts. The client didn't select the most suitable bidder for awarding the contract among all the eligible bidders.

### INTRODUCTION

Due to advancements in the construction industry, it attracts the entire business world. It is the dream of any new contracting organization to enter the world of construction.

However, success and survival in the construction industry for a long time are difficult. Contractors from every part of the world compete for getting the work. The main aim of a contract is to get a job at the cheapest rate, best quality and least time. But today what happens is contractors go for the least cost for getting the work it may disturb the quality of the work. Hence, there is a need to have a perfect balance between the probability of getting the work and the probability of getting a profit. To balance all these conditions competent contractor is a need in today's life [1].

### Need For Selection of Competent Contractor

Competent contractor means an experienced contractor having the highest skills and knowledge with particular experience in the respective field. The selection of the right contractor for a particular project is an important factor to minimize the risks to the health. Ideally, selection should be made from a list of approved contractors who have indicated that they can satisfy the client's requirements. In the selection process of a contractor, many factors are taken into account. Luckily, a contractor who works well and satisfies the client's requirements regarding the quality and punctuality of the work is also likely to have a better than average health and safety performance. Cost, of course, will have to be part of the judgment but may not provide any indication of which contractor is

likely to give the best performance in health and safety terms.

### **Factors Affecting on the Selection of a Competent Contractor**

There are many factors that affect the bidding strategy. These depend on the situation at that time. Every Contractor has different views and mindsets toward the project. Various factors are classified into three categories such as internal, external, and environmental. Internal factors consist of the experience, knowledge, skills, and potential of the contractors. External factors consist of no. of competitors in the market, type of project, risk, etc. environmental factors consist of availability of machines, equipment, qualified staff, and skilled labor [2].

#### **Internal**

- Project finance
- Company characteristics
- Experience
- Benefit of business
- Knowledge

#### **Skills External**

- Client characteristics
- Project characteristics
- No. of competitors
- Type of project
- Risk

#### **Relationship with Owner Environmental**

- Bidding situation
- Economic condition
- Availability of machinery
- Competition in the market
- Availability of qualified staff and skilled labor

### **OBJECTIVE OF PAPER**

- To determine the common criteria or factors that affects the selection of a competent contractor.
- To find out a competent contractor.

### **LITERATURE**

A. Jarkers et al, he studied the past literature and research paper related to bidding strategies. And recognize the different parameters such as the size of the project, type of project, the financial condition of the organization, and quality of tenders are considered before taking the bid decision [3].

F. Deng et al, He studied the past literature and research paper related to bidding strategies. Different types of 34 factors considered for the formation of the questionnaire this questionnaire is distributed among respondents in different regions and responses are analyzed with the help of SPSS software these factors are ranked according to the ranking method from the analysis of qualification, skill, and work pattern were ranked in the top [4].

W. lu et al, He analyzed the past literature and past research papers related to bidding strategy and conducted a study on the Chinese construction industry he considered 48 different factors from the literature to know the importance of these factors. Questioners are prepared based on these factors. And the questionnaire is distributed among respondents' survey results from the respondent analyzed by using SPSS software and the factors were ranked based on the mean and standard deviation method the factors with a mean value more than or equal to 4 consider a critical factor that influences the competitiveness of bidders. Analysis of factors is carried out and grouped into 8 clusters such as project management technology bidding relationship strategy resources organization structure the result shows that the factors like bidding strategy, competitiveness firm size were the least important factor for finding the competitiveness of contractor [5].

A bagies and c fortune, He made the decision modeling for achieving the objective of to bid or not to bid decision. Not bidding for a project can result in losing an opportunity of getting the work, making a profit, improving relationship with clients, etc. this problem tells the importance of the bid or no-bid decision. he considers 94 factors from different sources and divided them into 10 groups such as competition, economic condition, bidding situation, past experience, business benefit, client characteristics, project finance, etc. [6].

## METHODOLOGY

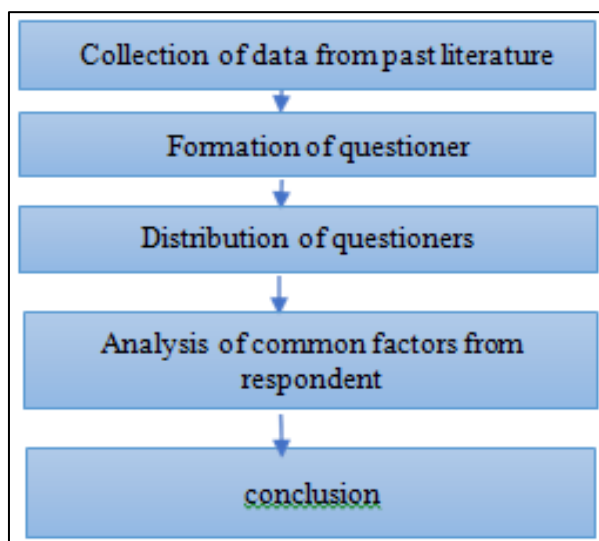


Figure 1: Methodology for selection of a contractor.

### Formation of Questionnaires'

The questionnaire is a list of questions used to collect data from respondents about their views or opinions and it is a good tool for collecting the data. In this research, the questionnaires are prepared by considering the various criteria such as behavior, reputation, qualification, experience, etc.

### Distribution of Questionnaires and Collection of Data

The questionnaire is distributed among 55 clients in various construction organizations in the region of Karad, Kolhapur Pune, and all the

questions mentioned in the questionnaires are explained to the respondent so that they can easily put their views and then data or views collected from the respondent.

### Analyze the Factors for the Selection of Competent Contractor

Analysis of data is done with the help of SPSS software using the ranking method in Table 1. 44 factors were identified for the selection of a competent contractor. These are given to the 55 respondents and they have to classify the responses into 5 categories such as poor, very poor, average, good, and very good as shown in Fig 1.

Table 1: factors for selection of a competent contractor.

1	<b>Cost</b>	55					
	Economic situation		1	5	9	36	4
	Taxes and financial requirements		0	10	31	2	12
	Payment policy		5	5	14	16	15
	Funding source		0	0	19	31	5
	Financial reference		0	7	15	25	8
	Past project cost		5	1	22	23	4
	Monthly payment difficulties		0	5	22	23	5
			<b>1.57</b>	<b>4.71</b>	<b>18.86</b>	<b>22.29</b>	<b>7.57</b>
2	<b>Quality</b>	55					
	Work		3	3	11	18	20
	Material		2	0	4	36	13
	Machine and equipment		1	9	9	29	7

			<b>2</b>	<b>4</b>	<b>8</b>	<b>27.67</b>	<b>13.33</b>
<b>3</b>	<b>Availability of resources</b>	<b>55</b>					
	Materials		2	5	11	28	9
	Labor		4	4	6	13	28
	Machines		2	7	7	25	14
	Physical resources		2	3	4	34	12
			<b>2.5</b>	<b>4.75</b>	<b>7</b>	<b>25</b>	<b>15</b>
<b>4</b>	<b>Tender</b>	<b>55</b>					
	Tender quality		5	4	6	31	9
			<b>5</b>	<b>4</b>	<b>6</b>	<b>31</b>	<b>9</b>
<b>5</b>	<b>Experience</b>	<b>55</b>					
	Past Experience		1	4	7	31	12
	Past project performance		0	3	7	30	15
	No. of completed projects		6	11	14	11	13
	Relationship with past suppliers		0	5	10	30	10
	Executive records		2	3	18	17	15
	Planning process		1	7	3	31	13
	Knowledge of regulations		1	6	7	29	12
	<b>1.57</b>	<b>5.57</b>	<b>9.43</b>	<b>25.57</b>	<b>12.86</b>		
<b>6</b>	<b>Time management</b>	<b>55</b>					
	Completion of project within predetermined time		1	5	9	33	7
	Delay		4	18	18	14	1
	Flexibility in time		0	7	23	8	7
	Length of time		0	4	10	32	9
			<b>1.25</b>	<b>8.5</b>	<b>15</b>	<b>24.25</b>	<b>6</b>
<b>7</b>	<b>Dispute and risk</b>	<b>55</b>					
	Incompetency with supply		3	2	27	15	8
	Dispute and arbitration		0	3	21	27	4
	Lack of availability of utilities		0	2	14	34	5
	Failure to comply with specifications		0	3	36	8	8
	<b>0.75</b>	<b>2.5</b>	<b>24.5</b>	<b>21</b>	<b>6.25</b>		
<b>8</b>	<b>Safety</b>	<b>55</b>					
	Provision of protective equipment's		2	5	25	17	6
	Training and safety program		0	15	13	19	8
	Proper handling of heavy machinery		0	4	26	17	8
	Disposal of waste		2	8	16	19	10
	<b>1</b>	<b>8</b>	<b>20</b>	<b>18</b>	<b>8</b>		
<b>9</b>	<b>Behavioral approach</b>	<b>55</b>					
	Relationship with client during project		2	4	25	10	14
	Relationship with client after project		3	5	13	30	4
	Ongoing work commitments		3	5	6	28	13
	Creativity		0	11	4	27	13
	Innovation		2	1	5	21	26
	Co-ordination with sub-contractors		2	5	8	29	11
Frequent progress	3	6	21	15	10		

			2.14	5.29	11.71	22.86	13
10	Other	55					
	Site proximity		0	1	6	30	18
	Ongoing work commitments		0	4	13	31	7
	Approach towards work		1	2	17	27	8
			0.33	2.33	12	29.33	11

By analyzing these factors using the SPSS software graph is prepared as below in Fig. 2.

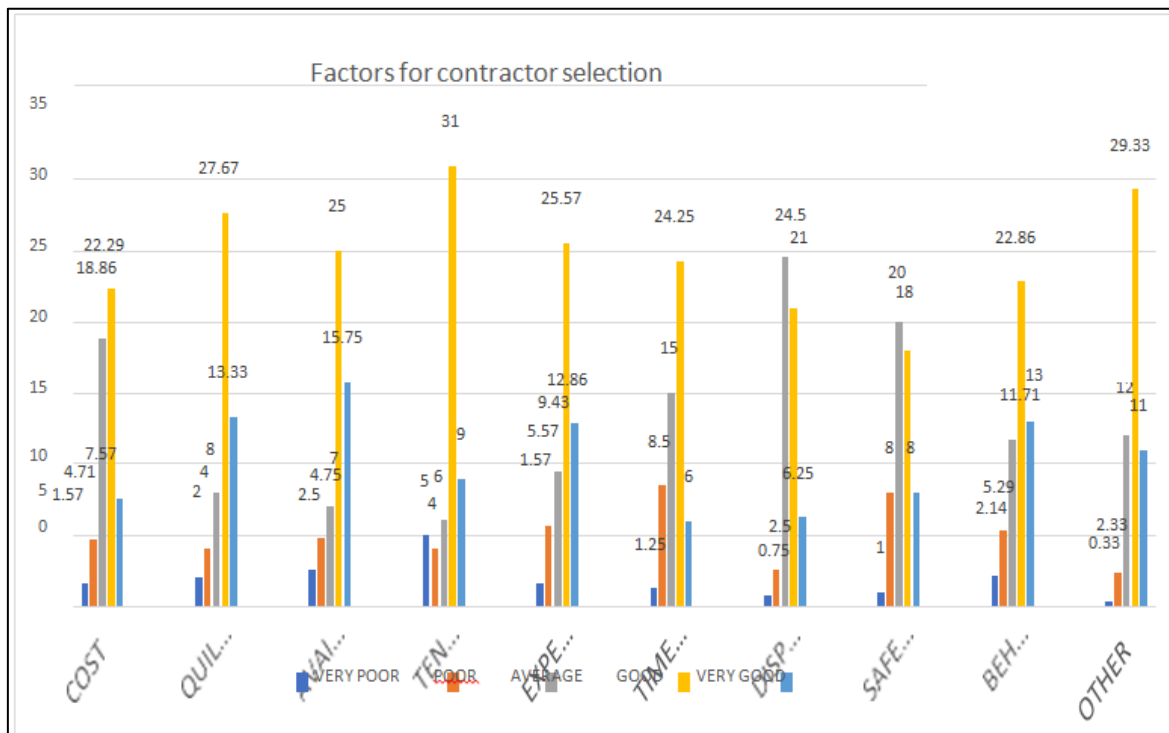


Figure 2: Graph based on analysis.

### CONCLUSION

Hence, table could be interpreted that, a value of 4 or above considered as a high important factor. Minimum mean value for any factor was 2.81.hence, concluded that none of the factor in the above list is considered as a very poor factor, so, these are the important factors considered for the selection of competent contractors

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