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Basic guidelines for bid/No bid decision making in the EPC projects

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Abstract: *Construction companies must have the ability to deal with various bidding situations successfully in today's highly competitive construction market, but focusing all energy & effort on bids which are unlikely to win is nothing but a waste of resources. It is observed that companies that have a more ad-hoc approach to tendering are often bent on to pursue every bid that comes through the door. However, high-low price bid can have a negative impact of organization in this competitive environment. So it is necessary that construction organizations should be more selective when choosing projects that they bidding. The underlying fact is that contractors need to choose a potentially profitable project to bid for. It is observed that the most crucial decisions that are regularly exercised by construction contractors are to decide whether to bid or not to bid on a certain project, as the contractor's decision is affected by various factors. In this paper the factors that are influencing the bid no bid decisions are identified and three stages bid/no bid decision process framework is explained to give the more systematic approach to the contractor to choose most beneficial projects from the numbers of available options.*

Keywords: *Bidding, contractors, decision-making, influencing factors,*

I. Introduction

Construction contractors now a day bidding for a number of circumstantial projects considering the openness of EPC projects. As a result of this construction organization are required to be more selective when choosing the project that they should tender for (Smith 1995 and Wanous at el 2003). It is necessary that EPC contractors need to choose a potentially profitable project to bid for. According to Egemen & Mohamed (2007), the only possible way for a contractor firm to survive and meet their objectives, aims by winning tenders which makes a profit. On the other hand, Johnston & Mansfield (2001) suggest that contractors need to decide if the project that they are hoping to bid for is the kind of work that they have been successful in completing in the past. This is in addition to whether the contractors can make a reasonable profit.

Accordingly, the decision is not only focusing on winning chance of the tender but also considering if they can finish the job as planned with the expected profit margin (Egemen & Mohamed 2007). All the ideas mentioned above suggest that one of the critical decisions for a construction contractor to make is whether to bid or not to bid for a project when an invitation is received.

The bid/no bid decision is very crucial for any EPC contractors. It is important to understand that not bidding for a project for which we are capable could result in losing an opportunity to make a profit and bidding for undesirable projects could result in a significant loss or consume resources that could be invested in some better project work. This research paper is focusing on the systematic ways and framework for bid/no bid decision by considering the factor influencing the decision, studding number of research papers and response received from employees of EPC Company.

II. Literature Review

2.1 Previous Studies in Bid/no bid Decision

Various researchers have endeavored to establish a systematic bid/no bid decision process based on the factors that influence construction bid/no bid decisions. The table 1. shows a list of research studies on critical bid/no bid decision criteria. These research studies were undertaken in different cultural and geographical regions of the world. But many of the factors identified by the researchers are more or less same. Egemen & Mohamed 2007 tried to divide a criterion into some sub-criteria and that is why they discovered a large number of influencing criteria. Moreover, Ahmad & Minkarah (1988) discovered 17 new bid/no bid decision criteria as a result of their research participants' feedback to the survey.

Researchers	Year	Number of identified criteria
Shash	1993	55
Dozzi & AbouRizk	1996	21
Egemen & Mohamed	2007	83
Chua & Li	2000	51

Table 1. list of research studies on critical bid/no bid decision criteria

2.2 The importance of the bid/no-bid decision making process

Deciding whether to bid or not to bid in EPC tender has extreme importance, since they affect not only the working capability, but also the long-term results of the firm (Ahmad, I., 1990). Some factor directly affects bidding decision and should be considered in the decision process. While considering an opportunity for the company, the bidding team usually focuses on the following features: alignment of the opportunity to the organization's objectives and policies, contractor's core business strategy, current work pressure, availability of research, competition, Current market conditions, capability to perform the contract, financial conditions of firm, type and size of the project, project location etc. (Ahmad, I. 1990; Lowe and Parvar 2004).

According to respondents' feedback there are 20% to 100% of the works are obtained through a bidding procedure. There are 97.5 % respondents use intuitions as their primary tool to make the bid/ no bid decision. (Egemen and Mohamed 2007, p.1379). Shash (1993) mentions similar data that 34 out of 85 responding contractors obtain 50-100% of their jobs through competitive bidding. Lowe and Parvar (2004) identify that 1% of the contract sum was used in the decision to bid making process.

2.3 The benefits of Lessons Learned for Organizations

Von Zedtwitz (2003) define that the Post-project review is one of the most important project reviews in which lessons that may be learned and used to benefit future projects. According to APM (2006), there are five types of project reviews, namely "Evaluation Review", "Gate Review", "Audit", "Post-project review" and "Benefits realization review". Oakes (2008, p. 34) adds that a post-project review can be done once a project completed and the review assesses the overall project success and identifies the pros and cons of projects. Basically, a post-project evaluation is primarily used for the assessment of the success and efficacy of a completed project and Von Zedtwitz (2003) states that post-project reviews should capture learning from failed projects as well as from successful projects.

III. Research Methodology

The research methodology is explained in this chapter. Sampling is done based on the response getting from construction companies executive followed by the data collection methods.

3.1 Sampling

This study is done to examine the factors influencing the bid/no bid decision and to find out the systematic bid/no bid decision procedure. To answer the research questions this study follows two different approaches. First, this study examined the factors that influence the bid/no bid decision making in Construction Company by asking these questions to estimation, Project execution, planning, contracts team. Second, identify the critical factors through literature research. To answer the research question, altogether 25 employees of a construction company from different departments such as contract, marketing, Planning and Estimation were contacted and list down the factors. Also, a team of 11 employees from Construction Company estimation department brainstormed on the best way to design bid/no bid decision framework. These employees had been identified according to their position, experience and responsibilities in the company to be involved in the tendering processes and therefore have the required information to complete the questionnaire.

3.2 Data collection

This research examines the previous project bid/no bid decision and the impact of that decision on the organization. Completed projects of the company are studied thoroughly and find out the mistakes and devotion that is listed down during the bid/no bid decision. Data collected from the questionnaire asked the employees, previous bid assessment, and Risk analysis data, etc. The brainstormed report was also created and listed down the best procedure for bid/no bid decision.

3.3 Data Analysis

After the data collection a basic analysis of the gathered data was conducted. The first data set was checked for possible errors, missing values. Second, the response rates were calculated and the characteristics of the respondents were analyzed. Third, this data was compared with the research materials and the best of all is to be considered for deciding factors influencing bid/no bid decision and developing bid/no bid decision framework.

IV. Bid/no bid decision guidelines

Bid/no-bid decisions in any construction firm are considered to be very difficult, but it may not be correct every time. Construction firm need to understand the best way to make bid/ No bid decision. To be specific it is claimed by Han and Diekmann 2001a; b that many construction firms still using methods that are incomplete, fragmented, and elementary based on "personal instinct".

In this paper, a creative and systematic procedure is mentioned for Bid/No bid decision involving factor influencing bid/no bid decision, Lesson learned from past projects, SWOT analysis, bid assessment etc. The results of this may be used for future bidding decisions so that firm may be more competitive. The table 2. Shows integrated bid/No bid decision processes

Stage I	Inform the concern team and list down the factors that affect the bid/no-bid decision
Stage II	Lessons learned from past projects
Stage III	SWOT Analysis for every Bid
Stage III	Bid assessment

Table 2. Integrated bid/No bid decision processes

When notification of a tender is received, the very first step of the core bid team is to download all documentation and assessing whether a tender is right for your core business or not. But it is not always possible to take decision from the short tender notification description, so it is advisable to read those documents thoroughly and follow the stages mention here.

Stage I: Factors influencing bid/no bid decision

There are many surveys have been conducted across the world to identify factors that affect the bid/no-bid decision. Ahmad and Minkarah (1988) conducted a survey questionnaire to determine bidding factors in the US construction industry. The study identified 31 factors that were thought to influence the bidding decision. Shash (1993) utilized a modified version of Ahmad and Minkarah's (1988) survey and identified 55 bidding factors in the UK construction industry.

Identification of the factor that affects the bidding decision is very important. In order to start the process, it is recommended that a number of generic bid/no bid decision criteria be collected.

The following table 3. Shows some important factors that affect the bid/no-bid decision.

1.Specified time frame for submitting tenders (bidding period)	7. Percentage of retention money
2. Contract type (EPC, Price bid etc.)	8. The contract includes an advance payment
3.Quality of bidding documents	9. The contract includes a bonus for early completion
4.Milestone of payment	10. The contract includes an "Adjustment for Changes in Cost" sub-clause
5. Liquidity damage (LD)	11. Warranty requirements
6. The contract requires appointing a Dispute Adjudication Board (DAB) for the project	12. Security requirements (i.e., bid security, performance guarantee)

Table 3. List of factors that affect the bid/no-bid decision.

Stage II: Lessons learned from past projects

The second step of the process is to study the results of previous similar projects against the bid/no bid criteria decision. These projects can be checked against criteria such as the project client, location, risk assessment, success/failure factor, etc. If the list of bad experiences in the similar project is more than profit earn, try to avoid bid. This evaluation can be undertaken against the criteria either in a descriptive format (words) or a numerical (rating). The deliverable of stage II is the structured feedback from previous similar projects.

Stage III: SWOT analysis

This stage includes the actual process of the bid/no bid decision. When you have a big business decision to make, one of the smartest things you can do is conduct a SWOT analysis. SWOT, which stands for strengths, weaknesses, opportunities and threats, is an analytical framework that can help companies to make the most appropriate decision and face greatest challenges in this more competitive market.

In a bidding process, the SWOT analysis enables to identify both internal and external influences to the project. This matrix to be developed from of the results obtained by the study of factor influencing the bid/no bid decision, lesson learned from past projects and study of opportunities. SWOT's primary objective is to help organizations to develop a full aware of all the factors involved in a decision.

Whenever a project comes into the door, the construction companies have to identify the strengths, weaknesses of their business firm against the particular project. Also management has to identify the opportunities and threats that come in the path during execution.
Following is the example of the SWOT matrix developed by considering some of the basic factors:

INTERNAL FACTOR	STRENGTHS • Availability of Professional engineers • Customer loyalty/ Relationship • Experience in EPC Projects • Excellent track record • Strong Brand Name	WEAKNESSES • Shortage of man power • No focus on private sectors • No experience of similar geographic location • competitive vulnerability • Less Financial resources
EXTERNAL FACTOR	OPPORTUNITIES • Technological advantage • Diversify the business • Serve additional customer group • Secure qualification criteria for more future bids	THREATS • Has to compete with other companies to be that tender for contracts at lower price • Global competitor enter into the business • Economic slowdown may stop the work

Table 4. SWOT matrix

Based on the above matrix, the construction bidder can decide whether to bid or not to bid, by considering the importance of every factor.

Stage VI: Bid assessment

EPC companies are increasingly participating in competitive bid processes to gain work from clients, or to continue relationships with established clients. But there must be some parameters that define the right path of it. This bid assessment will helps to evaluate your next bid opportunity against the likelihood of success.

These points will help you assess your strategic position, and the strengths and weaknesses of what you can offer. In this assessment (Table 5), bidder has to score himself on the basis of his understanding from 0-5, 0 is for serious competitive disadvantage and 5 is for Strong benefit towards project. The total is to be calculated from all this criteria. If the total score exceed your pre define score then go for bid. Otherwise need to think more.

Scoring Scale 5- Strong benefit 0-Serious competitive disadvantage	*Notes*	*Scoring (0-5)*
Do we meet the tender requirement:		
Requirement 1,2		
Do we have relevant experience?		
Is the proposal and delivery time frame realistic?		
Is the work a core competence of our business?		
Is liquidity damage affordable to us?		
Can we realistically manage the risks, if we win?		
Can we afford the investment needed to pursue this opportunity?		
Is a competitor favoured by prospect decision makers or influencers?		
Will winning enhance our reputation in the market?		
Total Score		

Table 5. Bid assessment

V. Conclusion

The bid/no bid decision is very challenging for EPC contractor to choose most beneficial projects from a bundle of options available. Past research on bid/no bid decision provided the frequent frameworks. The purpose of this Paper is to provide the basic guidelines with best practice and tools which helps the EPC contractor to take decision on bid/no bid in this highly competitive environment. Based on an extensive literature review, a number of research studies on bid/no bid decisions found out and discussed with the employees of EPC Company and to develop four stage integrated framework in which contractor need to identify factors that influencing the bid/no bid decision, while they are assisted by the lessons they have learned from their Past projects. The SWOT analysis is also recommended to take the bid/no bid decision which helps contractors to identify their strength, weaknesses, opportunity and threats against particular projects. Finally bid assessment will helps the contractor to take bid/no bid decision more correctly.

This research work has contributed to the existing body of knowledge in that it would help to encourage the contractors to make the bid/no bid decision by using right tools at right time.As a result, the contractors can select more feasible projects with a higher likelihood of success by integrating SWOT analysis, Bid assessment and lessons learned into their bid/no bid decision process.

VI. Recommendation and future scope

There are some points that may require further study in order to develop some other models for taking bid/no bid decision:

1. EPC contractors should formalize their bid/no bid decision by conducting a risk assessment towards prospective bidding projects.
2. The more focus should be on lessons learned from previous projects. This can help contractors to be alert during bidding.
3. It is also recommended that there should some weight age system for every factor, so that the bid/no bid decision will be more precious.

References

[1]. Ahmad,I. & Minkarah, I. 1988, "Questionnaire Survey on Bidding in Construction", Journal of Management in Engineering, 4, No. 3, pp. 229- 243.
[2]. Egemen M.and Mohamed, A. (2007)."A framework for contractors to reach strategically corrects bid/no bid and mark-up size decisions". Building and Environment, 42, 1373-1385.
[3]. Wanous,M.,Boussabaine, A. and Lewis, J. (2000). "To bid or not to bid: a parametric solution". Construction management and Economics, 18, 457-466.
[4]. Shash, A. (1993). "Factors considered in tendering decisions by top UK contractors". Construction Management and Economics"11 (2), 111-118.
[5]. Johnston,H. & Mansfield, G. L. 2001, Bidding and estimating procedures for construction, Prentice-Hall, USA.
[6]. Mohammad S. El-Mashaleh,Ashraf Al-Jundi (2004), "Understanding Key Bidding Factors Considered by Top Jordanian Contractors", Jordan Journal of Civil Engineering, Volume 8, No. 4
[7]. Dozzi, S. P. & AbouRizk, S. M. 1996, "Quality Theory Model for Bid Markup Decision", Journal of Construction Engineering and Management, June, pp. 119-124
[8]. Han, S.H. and Diekmann, J.E., 2001a, 'Approaches for making risk-based go/no-go decision for international projects', Journal of Construction Engineering and Management, vol. 127, no. 4, pp.300-308.
[9]. Chen, M.T., 2005, 'Innovative Pre-Planning for International Projects', AACE International Transactions, INT.01.
[10]. Siegel, S., and Castellan, N. (1988). "Nonparametric statistics for behavioral sciences". New York, McGraw-Hill
[11]. Dean, J. W., & Sharfman, M. P. (1993). Procedural Rationality in the Strategic Decision-Making Process. Journal of Management Studies, 30(4), 587-610. doi: DOI 10.1111/j.1467- 6486.1993.tb00317.x
[12]. Toor, S. and Ogunlana, S.O.,2008, 'Critical COMs of success in large-scale construction projects: Evidence from Thailand construction industry', International Journal of Project Management, vol. 26, no. 4, pp.420-430.
[13]. Lowe, D. and Parvar, J., 2004, 'A logistic regression approach to modeling the contractor's decision to bid', Construction Management and Economics, vol. 22, no. 6, pp.643-653
[14]. King, A. A., & Tucci, C. L. (2002). Incumbent Entry into New Market Niches: The Role of Experience and Managerial Choice in the Creation of Dynamic Capabilities. Management Science, 48(2), 171-186.