

General Overview on Tendering Process in Construction Industry

RUSHIKESH S GAIKWAD¹, ASHWINI SALUNKHE²

¹ Dept. Of Civil Engineering, Dr. D. Y. Patil Institute of Technology, Pune, MH, India

² Asst. Professor, Dept. Of Civil Engineering, Dr. D. Y. Patil Institute of Technology, Pune, MH, India

Abstract— *The aims of this research are to identify and analyze problems in every stage of public tendering process, then offer potential solutions to resolve or curb these problems. The study shows that there are many problems that occur during tendering process. The most common problem is the bidding system's inability to provide a complete database of contractors with their personal, past works and experiences, and performance evaluation. The limited human resources in both number and competency is another important issue to consider. Proposed solution to solve these issues are based on four pillars of reformation concept done by public procurement agency.*

Indexed Terms-- *Contracting, purchasing, Construction Project; Quality Management; Quality Improvement.*

I. INTRODUCTION

Construction Industry is a developing industry. The selection and evaluation of contractor play important role and needs great attention, especially for public construction projects that are conducted by the government. Contractor evaluation and selection are important and significant for government organization responsible for the success of construction process.

Choosing capable contractor is important to deliver construction project success. With tight regulations and procurement ethics, tendering process should run smoothly based on expected principles and objectives.

II. RESEARCH OBJECTIVE

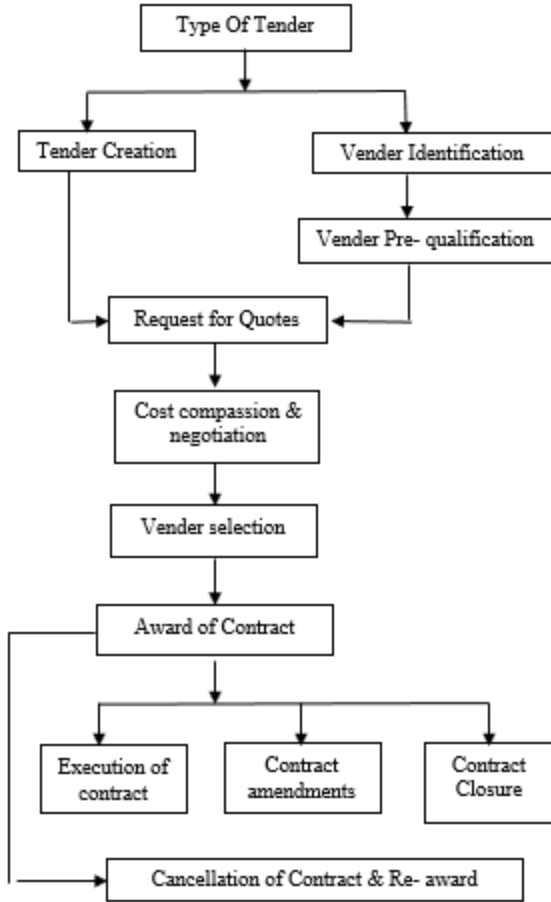
Based on the above findings, this study was conducted to identify problems that occur specifically in each phase and stages of the procurement process in construction projects tender.

This research was conducted specifically on each tendering stage and phase of construction project so that identification of problem and analysis to find alternative mitigation is easy to do since each stage shows clearly, the time stamps, procedure and party involved.

III. TENDERING PROCESS FOR CONSTRUCTION PROJECT

In Indian civil industry there are typical process for tendering for various activities like Excavation, RCC core and shell, water proofing, tiling, painting etc.

There are many types of tendering like lock and key, item rate tenders with or without materials. Below chart shows the tender process for all types.



IV. VENDOR IDENTIFICATION FOR TYPICAL TENDER

India, the world's outsourcing hub, provides a wide range of services. However, selecting the proper vendor in India for your organization might be difficult. Vendor selection team will be able to quickly discover a suitable vendor in India that can supply the service/product that you wish to outsource if you have clearly defined business and vendor requirements. Request that your team prepare a list of potential Indian merchants, but keep in mind that not all vendors will satisfy your needs. You'll need to choose a few vendors from whom you'd like more information after conducting interviews and examining their backgrounds. After that, your vendor selection team can draught a Request for Information (RFI) and send it to the vendors who have been chosen. The next stage would be to assess the vendors' responses and compile a short list of Indian suppliers.

Table no. 1 format for details required from vender.

Sr.no	Vendor	Single Largest Project	Turn Overs in Year (Amount In Cr.)	Ongoing Projects & Client	Completed Projects & Client
1	Vendor 1	All Required Details	21-22 20-21 19-20		
2	Vendor 2	All Required Details	21-22 20-21 19-20		

V. FORMAT FOR SURMISED COST COMPARISON

To begin, go over all of your vendors' proposals with a fine-tooth comb. The next stage is to list your company's requirements as well as the vendors' requirements. Discuss each demand with your management team and assign a priority value to it. Then, for each need, assign a performance value. All that remains is to generate a total performance score and select the winning Vendor.

The final step in the Indian vendor selection process is to develop a contract negotiating strategy. Make a list of your top priorities and alternatives. Clearly set time limitations and benchmarks. Assess your potential risks and liabilities. Include the level of confidentiality that is required. Changes in the requirements should be mentioned. Understanding the difference between what you desire and what you require from an outsourcing contract will assist you in developing a more effective strategy.

Table no.2 Cost comparison.

Sr.no	Vendor	Amount				
		Budget	Q1	Q2	Q3	% Deviation
1	Vendor 1	10,00,000	12,20,000	11,05,000	9,00,000	-11.1%
2	Vendor 2		13,50,000	12,90,000	12,00,000	16.7%
3	Vendor 3		12,75,000	11,50,000	11,00,000	9.1%
4	Vendor 4		11,20,000	10,75,000	10,00,000	0%

VI. GENERAL TERMS AND CONDITIONS

The document controlling the contractual relationship between a service provider and its user is known as the "Terms and Conditions." Below is table mentioning some of the Terms that may remain same for various activity for a project.

Table no. 3 general terms.

Sr.no	Title for Conditions
1	Authorized Representative
2	Notices
3	Order Of Precedence
4	Scope Of Work / Completion
5	Time Schedule & Progress
6	Standards & Codes
7	Laws & Regulations
8	Permits
9	Prices / Taxes / Levies
10	Labour, Personnel & Work Rules
11	Safety & Health
12	Site Conditions & Natural Resources
13	Contractor's Work Area
14	Responsibility For Work, Security And Property
15	Contractor's Plant, Equipment & Facilities
16	Use Of Completed Portions Of Work
17	First Aid Facilities
18	Inspection, Quality Surveillance, Rejection And Workmanship
19	Testing
20	Force Majeure
21	Disputes
22	Arbitration
23	Law Governing The Contract
24	Records And Audit
25	Warranty
26	Backcharges
27	Indemnity
28	Insurance / Workmen Compensation Act
29	Amendments
30	Suspension
31	Termination For Default
32	Voidability Of The Contract
33	Final Inspection & Acceptance

VII. SELECTIVE TENDER

The only alternative created to overcome the constraints of the open tendering procedure is the selective tendering process in construction. A shortlist of contractors is compiled in this approach, and they are requested to submit tenders.

Due to the urgency of the job, the goal of the selective tendering procedure in construction is to improve the quality of the bids received by allowing only contractors with the appropriate experience and competence to submit offers. To make the construction tendering process more manageable and less burdensome for all parties involved.

The advantages and disadvantages of the selective tendering process in construction are stated below:

Advantages –

1. Tendering costs were lowered, and resources were used more efficiently.
2. Reduce tender documentation.
3. Shorter tender periods.
4. Better management of the tender process.

5. Only qualified contractors were requested to tender, and the lowest bidder was chosen.

Disadvantages-

1. Reduces the amount of work available to other contractors, particularly new ones.
2. Tender prices are almost always higher than they would be in an open tendering situation.
3. Favoritisms may occur in the shortlisting.

VIII. NEGOTIATION TENDER

The negotiation tendering process in construction is most commonly employed in the engineering and construction business, starting with tendering and ending with dispute settlement, i.e. pre-contract and post-contract negotiations. It's usually just one contractor, but it could be up to three. The following are the steps in the negotiation process:

The employer must find a suitable contractor with whom to bargain.

The contractor might be chosen from the employer's list of preferences or based on the professional team's recommendations.

The scope of work is communicated to the contractor. The following contract types can be subjected to negotiations.

The contractor and the employer have a long-term commercial relationship in this form of construction tendering process.

When there is a pressing need to begin work on the site as soon as possible and complete the task as quickly as possible.

The advantages and disadvantages of the selective tendering process in construction are stated below:

Advantages –

1. In the construction industry, this form of tendering process decreases the chance of failure.
2. Special circumstances, like as emergencies or security concerns, are the best alternatives for the employer to consider.
3. On-site work must begin as soon as possible. It

reduces the time it takes to select a contractor for any tendering project.

4. During the design phase, the contractor might share his knowledge.

Disadvantages-

1. The cost of work is likely higher than competitive tender.
2. Reduces the availability of work for other contractors.
3. On-site work must begin as soon as possible. It reduces the time it takes to select a contractor for any tendering project.
4. During the design phase, the contractor might share his knowledge.
5. Disadvantages-
6. The cost of work is likely higher than competitive tender.
7. Reduces the availability of work for other contractors.

CONCLUSION

Clients' tender evaluation is one of the most important actions and decisions they make. The client must analyze the tender in order to verify that the project can be executed effectively. We presented a framework for a decision support system in order to improve the tender evaluation process and to determine the relative relevance ranking of basic criteria for the best tender, which will assist the decision maker in evaluating the best offer more precisely. When reviewing bids against a pre-determined set of criteria, a decision-maker may be willing or able to supply only incomplete, imprecise, and unclear information due to time constraints, a lack of data, or a lack of knowledge.

The most prevalent issue is that the bidding system is unable to give a complete database of contractors, including their staff, completed projects, previous experience, and performance review.

LITERATURE REVIEW

An efficient and accurate estimation of e-procurement system is highly recommended by researchers and practitioners.

It Increased average bidder participation - Lower

Tender Cost - Shorter Tender Evaluation Cycle Time
- Real-time access to tender status.

Due to its rapid economic growth and favorable business environment, Multinational Corporations (MNCs) prefer to launch and expand their enterprises in India.

In such a situation, western corporations are focusing their attention on Indian manufacturing companies who have implemented or are in the process of implementing E-Procurement methods.

REFERENCES

- [1] M. Sohail, and S.Cavill. J.of Const. Eng. and Manag, Vol. 134, No. 9, pp. 729-738. (2008)
- [2] W.H. Chang and J.S. Chang, Elec. Commerce Research and Applications, Vol. 11, pp. 346-360.(2012)
- [3] Peraturan Presiden Nomor 54. tentang Pengadaan Barang/Jasa Pemerintah. (2010)
- [4] A. Sutedi. Aspek Hukum dalam Pengadaan Barang & Jasa and Berbagai Permasalahannya, Edisi kedua, (2012)
- [5] Prakashkumar Hasmukhbhai Patel Enrollment No. 119997392022, A Study of E-Procurement Practices in Selected Organizations in Gujarat
- [6] Surabhi Saxena Ph.D. Research Scholar, Department of Computer Application, Babu Banarasi Das University Lucknow (U.P.)India. A Critical Literature Survey on Factors that Effecting E-Procurement Software.
- [7] Ramanathan Somasundaram, India Case study on e-Government Procurement Development (Financed by R-CDTA 7437: Asia Pacific Procurement Partnership Initiative)
- [8] K Bikshapathi, P Raghuvver, Implementation of e-procurement in the Government of Andhra Pradesh: A Case Study.
- [9] Dr. Stephen Kajewaski - Electronic Tendering An Industry Perspective Report 2001-008-c-07
- [10] D.R Cooper, and P.S. Schindler. Business Research Methods, 9th edition. (2006).
- [11] R.Kountur. Metode Penelitian untuk Penulisan Skripsi and Tesis, Cetakan kedua. (2004)

- [12] A.G. Yong, and S. Pearce, S. A beginner's guide to factor analysis: focusing on exploratory factor analysis. 9(2):79-94. (2013)
- [13] S.S. Purwanto. J. Tek. Sipil, Vol. 9, No. 1, pp. 43-56.(2008),
- [14] Guidelines on tender Evaluation using weighted criteria for Building Works and Services, Tasmania, Department Of Treasury And Finance, version 2.0, pp.1-12, 2006.
- [15] Standard Tender Documents, Procurement of Works User Guide, European Bank for Reconstruction and development, pp. 1-122, August 2010.
- [16] L.E.Clarker "Factors in the Selection of Contractors for," University of Southern Queensland, Faculty of Engineering and Surveying ,pp.1-172, November,2007.
- [17] E-purchase to check rigged bids" (2009b). Daily Star. [Online]. Available at <http://www.thedailystar.net/story.php?nid=77043>
- [18] "Public procurement and corruption." (2010). Daily Star. [Online]. Available at www.thedailystar.net/law/2010/04/04/watch.htm. (Accessed on April 25, 2010).
- [19] J. B. Yang and D. L. Xu, "Nonlinear Information Aggregation via Evidential Reasoning in Multiattribute Decision Analysis Under Uncertainty," IEEE Trans. Syst., Man, Cybern. A, vol. 32, no. 4, pp. 376-393, May 2002.
- [20] Study Of Influencing Factors Of Tender Evaluation: An Evidential Reasoning Approach.