

A Critical Review on Tendering Procedure for Infrastructure Projects

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Abstract: *In Construction Industry, competitive bidding has long been used as a method for contractor selection. Because the true cost of the project is not known until the completion of the project, adverse selection is a major concern. Since the tendering process is inherently price competitive, the application of the tendering contract concept is likely to severely inhibit the opportunity for alternative tenders. This paper aims at providing an overview about literature on tendering process for infrastructure projects. Three main interest areas can be found in the literature: **tendering procedures, types of tenders and criteria for bid evaluation.***

Keywords: *Tendering, Tendering Procedure, Bid Evaluation, Bid Evaluation Criteria*

I. INTRODUCTION

In the process of making a country from developing nation to developed nation it is essential to tap resources available in the country and develop an infrastructure using the potential of technical innovation. In last decades, due to restrictions for use of public budget in developing of infrastructure projects, Governments have chosen Public Private Partnerships (PPPs) as a way of satisfying the increasing demand for infrastructure. In particular, the adoption of this delivery solution has found wide application in developing countries, where there is both a strong demand and reduced capital availability. Many factors can determine the success of an infrastructure project. One of these is the decision making process before the start of the project. Many decisions are required to be undertaken by public contracting authority. While much attention has not been paid on the selection and awarding procedure of a private partner in the project. Generally, the private party of a PPP is awarded by means of a public tender, given the public interest of such a competition. The tendering processes are more complicated and more costly than those of conventional procurement. A well-structured tendering process is therefore the base for minimizing tendering costs and encouraging competition. In such situations, contracting authorities have to design the tendering process, in order to maximize their outcome.

An overview of the existing literature on the theme shows three relevant issues regarding tendering. The first one is about the procedure to follow in the tender. Second, Procedure for opening of Tenders. Third due to the complexities, it is important to provide a collection of the used evaluation criteria.

II. Tendering Procedure

Three different kinds of procedures can be used

- a) Open competitive tendering
- b) Invited tendering
- c) Negotiated tendering

a) Open Competitive Tendering

It is competitive public procurement method used for acquiring goods, services and infrastructure works. It is executed in accordance with established procedures set out in the procurement guidelines and detailed in the standard bidding documents. This consists of the following phases

- Request for prequalification
- Prequalification
- Invitation to tenders
- Tender evaluation and short listing
- Negotiation with shortlisted tenders
- Selection of best tender and award

b) Invited Tendering

In case of the Invited Tender, the architect after consultation with his client invites a limited number of contractors for filling up the tender of the project. It results in the competition on small scale. But it proves to be useful for the specialized and skilled works. It also results in early successful completion of projects. This procedure is usually adopted for the private jobs where the owner has the right to negotiate directly and enter into an agreement with whomsoever he chooses. This procedure is highly recommended for monumental structures, industrial construction, and other works that require specialized knowledge and equipment.

c) Negotiated Tendering

It is an advance form of selective tender and the contract is given by negotiation with one or at most two contractors. As such, there is no competition in this type of tender and hence it may prove to be costly. But when the work is to be completed in the target time without sacrificing for the quality, the negotiated tender may prove to be the only alternative.

III. Procedure For Opening of Tenders

The tender shall be submitted in envelopes marked as 1, 2, 3 and 4 and each envelope shall contain the following details :


- (i) **Envelope marked no. 1:** This envelope shall contain the earnest money deposit in the form indicated in the notice of invitation to tender.
- (ii) **Envelope marked no. 2 :** This envelope shall contain the following particulars :

- (a) Covering letter to tender.
 - (b) Any comments which the tenderer desires to make in the form of brief statement with reference to the items, clauses and pages of the tender documents to which the comments pertain.
 - (c) The solvency certificates from bank authorities.
 - (d) The latest income tax clearance certificate.
 - (e) A list of works of similar nature and magnitude carried out by the tenderer.
 - (f) Details of plant and machinery available which the tenderer proposes to use in this construction work.
 - (g) Details of the technical staff employed by the tenderer and details of technical staff that will be posted on this work, if the job is awarded to him.
 - (h) Complete details of the work in hand at the time of submission of the tender.
 - (i) Details of registration with government or semi-government authorities.
 - (j) Details about the firm such as constitution of firm, year of incorporation, registration date, names of partners etc.
- (iii) Envelope marked no. 3:** This envelope shall contain the priced tender form with the signature of tenderer.
- (iv) Envelope marked no. 4:** This shall be a large envelope of adequate size and it shall contain the above mentioned envelopes marked nos. 1,2 and 3. This envelope shall be properly sealed and shall be endorsed on the outside face "Tender for name of project". This envelope shall be deposited or mailed by registered A.D. so as to reach place on or before date and time.
- (v) Opening of Tenders:** The envelope shall be opened in the following sequence:
- (a) The outer envelope marked as no. 4 shall be opened in the office of name at date and time in presence of representatives of tenderers who choose to remain present.
 - (b) The envelope marked as no. 1 and containing the earnest money deposit shall then be opened and if the earnest money deposit is not found as prescribed the tender shall be returned unopened to representative of concerned tenderer, if present.
 - (c) The envelope marked as no. 2 and containing the covering letter of the tenderer and other documents as required shall than be opened. These details shall be scrutinized and comments or conditions which have financial implications shall be evaluated by the architect of the owner. Based on the recommendation and evaluation of the architect, the owner may discuss comments or conditions with the tenderers.
 - (d) The envelope marked as no. 3 and containing the sealed priced tender shall than be opened on a separate date which shall be intimated to the representative of the tenders who are present.

- (e) As it is desired to complete the formalities as quickly as possible, it is suggested that a senior representative of the tenderer having authority to take decisions may remain present at the time of opening of tenders and for the discussion thereafter.

IV. Evaluation Criteria

Many authors have proposed different set of criteria for choosing the best among the candidate sponsors for selection of the bidder of the project. Some authors focused on prequalification criteria, while many else have proposed criteria to be satisfied for the final awarding.

Name of Criteria	Significance of criteria
1) Financial and Economical criteria 	<ul style="list-style-type: none"> • Sound financial analysis • Reasonable source and structure of funds • Innovation of financing method • Net present value • Tariff/toll setting up and adjustment mechanism • Ability to address commercial risk • Minimal financial risks to the client • Internal rate of return • Financial strength of the participants in the project company • Financial guarantee • Total investment schedule • Concession period • Strong financial commitments from shareholders • Pay-Back Period • Profitability Index
2) Technical criteria 	<ul style="list-style-type: none"> • Qualifications and experiences of key design and construction personnel • Experience in similar projects • Conforming to client's requirements • Competencies of designer/subdesigners • Contractor/subcontractors • Conforming to design requirements • Construction programs and abilities to meet them • Design and construction quality control schemes • Use of advanced technologies • Maintainability • Design life • Design standard • Quality management and assurance systems
3) Safety, Health, and Environmental Criteria	<ul style="list-style-type: none"> • Qualifications/experience of relevant personnel • Management system of safety, health and environment • Conformance to laws and regulations • Construction/demolition waste disposal • Control of air and water pollution • Past environmental performance • Protection of items of cultural/archeological values • Management safety accountability • Noise reduction and dust reduction
4) Social Criteria	<ul style="list-style-type: none"> • Importance of the project for public transport
5) Managerial Criteria	<ul style="list-style-type: none"> • Project management skills • Constitution of the management, their qualification and experience • Coordination system within the consortium • Success rate of cooperation among private consortium • Leadership and allocation of responsibilities in the consortium • Effective project controlling system • Working relationship among participants

Conclusion

The tendering phase is one of the most important aspects in any infrastructure projects but not much attention has been paid on this issue in comparison to other ones, like Value for Money and risk management. An overview about the tendering procedures would be useful to understand what procedures are mainly used and whether there is a relationship between these and the economy of such countries. Moreover, it would be of great significance to understand how transaction costs increase by adding phases like prequalification and negotiation and if this increase is justified by the consequent benefits in terms of best and final offer. Moreover, even if the contributions about evaluation criteria for the private partner selection are quite exhaustive, it could enlarge the knowledge in this field. Finally, this overview on tendering methods in infrastructure project can be a starting point for the definition of appropriate awarding process in the different sector. Consequently, setting tendering procedures which foster competition and best fit the features of this particular market is essential.

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