

Study on the Construction Bidding Qualification Evaluation of Beijing

XU Bing^{[a],*}; FENG Peng^[a]

^[a] School of Economy and Management, North China Technology University, Beijing, China.

*Corresponding author.

Supported by Social Science Research Common Program of Beijing Municipal Commission of Education.

Received 15 September 2012; accepted 21 November 2012

Abstract

The Qualification Evaluation is an important part of construction project bidding activities. It can effectively improve the work efficiency of the bidding, reduce the bidding risk and ensure the smooth conduct of the bidding. Beijing is more rapid development of economic construction of the region. A large number of construction projects to public tender, and a large number of excellent engineering and contracting unit to participate in the bidding competition. Degree of standardization of the Qualification Evaluation system is related to its ability to play its due role. This article is to start from the concepts and procedures of the Qualification Evaluation. Using questionnaire method, this paper analyzes the current state of the Beijing project bidding Qualification Evaluation in-depth. It highlights their Qualification Evaluation requirements and the main problems. On this basis, it studies the domestic and international parts of Qualification Evaluation requirements and characteristics through comparative analysis. Finally, it puts forward suggestions and opinions on Beijing Qualification Evaluation requirements from the accreditation process, content and methods.

Keywords: Bidding; Qualification evaluation; Prequalification

XU Bing, FENG Peng (2012). Study on the Construction Bidding Qualification Evaluation of Beijing. *Management Science and Engineering*, 6(4), 65-70. Available from: <http://www.cscanada.net/index.php/mse/article/view/j.mse.1913035X20120604.Z2520> DOI: <http://dx.doi.org/10.3968/j.mse.1913035X20120604.Z2520>

INTRODUCTION

1) The Concept of Qualification Evaluation

Qualification evaluation of project bidding artificially determine whether potential bidders or bidders have the ability to complete the proposed project and its business qualifications, reputation, experience in engineering, technical level, management level, the financial position of the comprehensive assessment activities. In this paper the study is to qualify for prequalification.

2) Qualification Evaluation Procedures and Methods

Qualification evaluation procedures are generally as follows: The preparation of the pre-qualification documents; publish prequalification notice; the sale of pre-qualification documents; preparation and submission of pre-qualification application documents; organize qualification evaluation, to determine the qualified applicants; notification of the result, the sale of tender documents. The main methods of qualification evaluation have percentile scoring, comprehensive score, a mandatory standard method and fixed-rate method.

1. BEIJING PROJECT BIDDING QUALIFICATION EVALUATION ANALYSIS

1) Beijing Project Bidding and Tendering Provisions of the Qualification Evaluation

This section in accordance with Beijing bidding Ordinance, Beijing pre-construction bidding qualification of engineering construction projects approach and other local regulations, general puts forward the project bidding qualification evaluation general procedure, review the content and method.

The pre-qualification procedure for: The preparation of the pre-qualification document; release the pre-qualification announcement; send pre-qualification document; prepare and submit the pre-qualification documents; organize qualification evaluation; sure qualified applicants.

The pre-qualification can use the quantitative evaluation method, qualitative evaluation method or legal rules and regulations allowed other methods. Review contents shall generally contain the applicant for similar projects before bidding of construction project experience and performance, credit standing, the production and business operation state, financial status and ability, registered capital, technical skills, equipment condition, personnel quality and equipped, etc..

2) The Main Problems of Qualification Evaluation of Beijing Project Bidding

- Questionnaire design, collation and analysis.

Questionnaire on the range of project bidding employees for sample, 30 copies of 30 back. The data is true and reliable. The results of the questionnaire show in Table 1.

Figure 1 to 5 are the investigation results about the situation of enterprises, financial position, engineering experience, technical qualification and credit, etc..

- Beijing project bidding qualification evaluation shortcomings.

Beijing pre-qualification procedures conforms our basic requirements of relevant laws and regulations. But it lacks of regulation according to different level of project pre-qualification score basis and standard.

The questionnaire investigation of the simple analysis shows that, Beijing qualification evaluation examination content mainly divided into enterprise basic situation, financial status, performance, technology qualification, credit the aspect of content. Review of organizations construction and associated body investigate the situation some limitations. In addition, the intended bidders' financial ability, the special ability to complete a similar bid, and decided to engineering project success or failure of the attention of key personnel is not enough. The review content often can truly reflect the potential bidders have the financial capacity of aiming project, whether with advanced management mode, the original construction methods to achieve the ultimate goal of the project. In addition, the government lax supervision, relevant documentation is not standard, the bidding agent is not standard is also improved urgently.

Table 1
The Beijing Project Bidding and Tender Qualification Evaluation Status Quo Questionnaire Results

Survey content	Survey object	Survey results are summarized
Basic situation investigation	<i>Respondents unit types</i>	Construction units, consulting units, etc.
	<i>Respondents work fixed number of year</i>	Within 10 years the majority
	<i>The pre-qualification ratio</i>	More than 60%
To qualify the proportion of investigation	<i>Which the prequalification method</i>	The quantitative and qualitative evaluation, Scoring points
To qualify for the investigation of the existing problems	<i>Qualify the processing of the ratings</i>	Into a serious bid ratings
	<i>The main problems of the prequalification</i>	Fraud, The lack of question agency
	<i>The basic conditions of examination according to the enterprise</i>	Registered capital, Qualification grade, the company property, etc.
The contents of the qualification evaluation survey	<i>Financial status evaluation content</i>	Credit and debt service, financing ability; Financial statement, credit certification, etc.
	<i>Engineering experience evaluation content</i>	Similar engineering experience, the past performance contract the optimal evaluation; Already the project, the project under construction situation table, etc.

2. THE COMPARATIVE ANALYSIS OF DIFFIERENT QULIFICATION EVALUATION

This chapter is about the listing comparison of the domestic and foreign typical qualification evaluation,

shown in Table 2. The analysis of the characteristics of all kinds of provisions as follows:

The provision of qualification evaluation of Hunan Province is much more detailed. Evaluation result is reasonable as choosing methods of action according to the characteristics of different engineering.

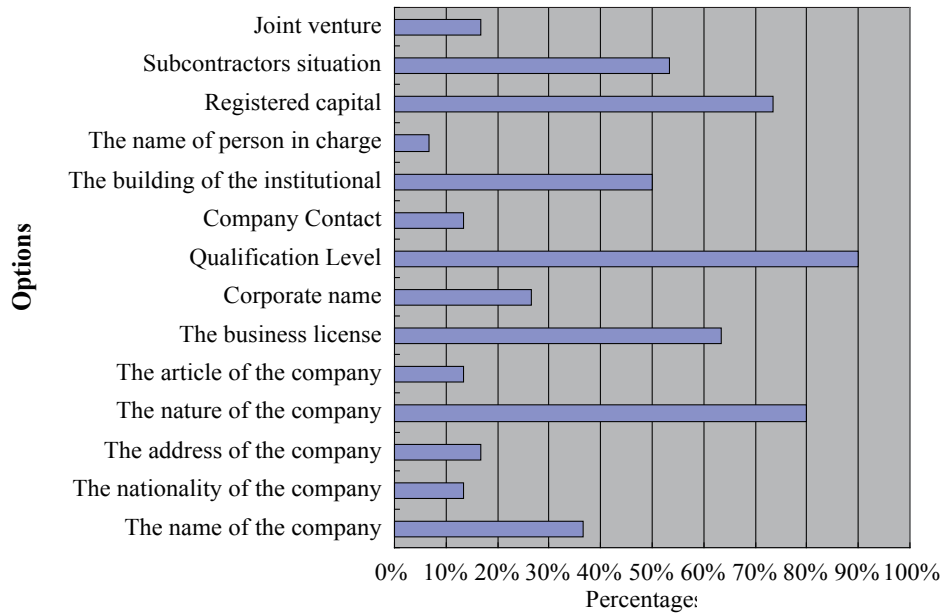


Figure 1
Basic Situation of Enterprises

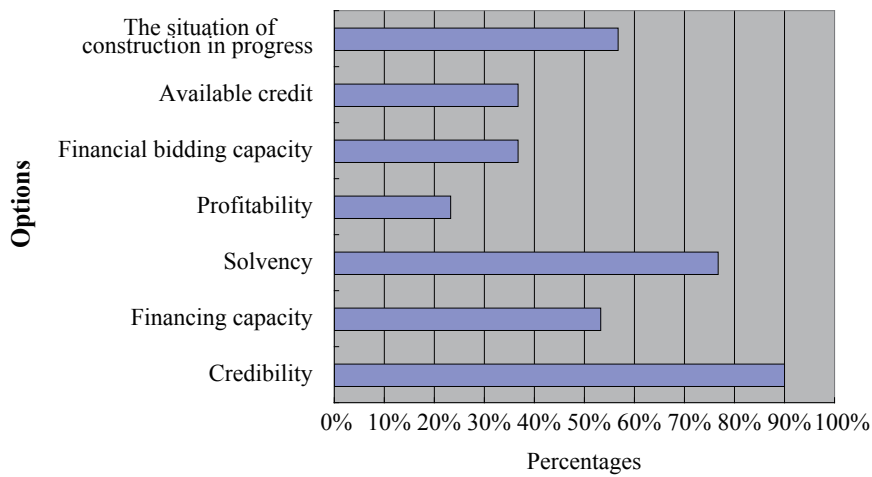


Figure 2
Financial Position of Enterprises

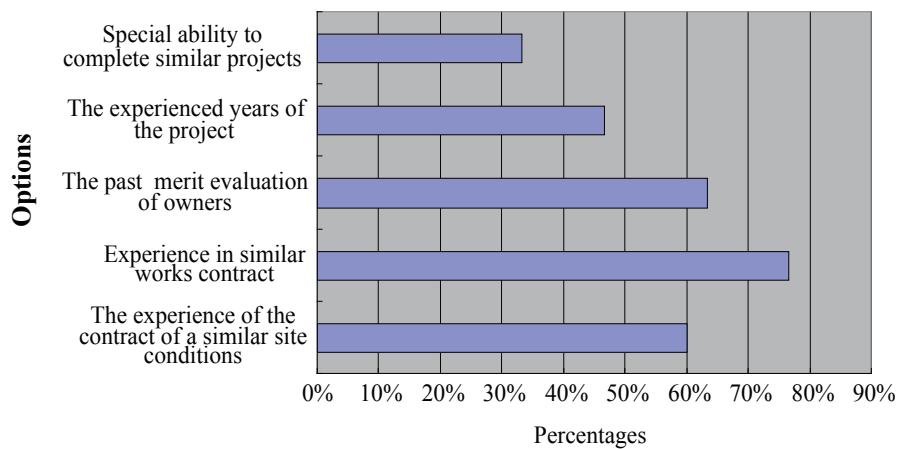


Figure 3
Engineering Experience

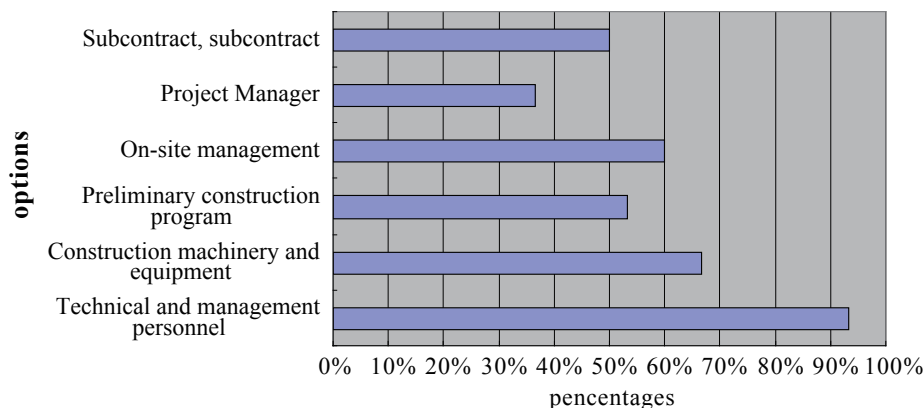


Figure 4
The Technical Qualifications

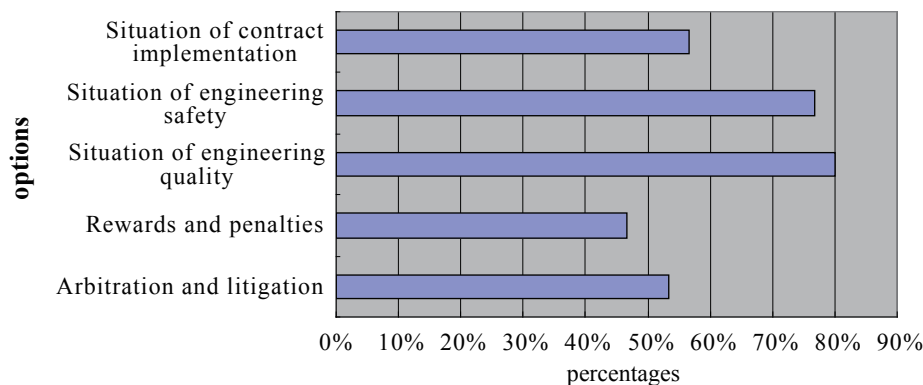


Figure 5
Credit of Enterprises

Table 2
The Beijing Project Bidding and Tender Qualification Evaluation Status Quo Questionnaire Results

The object of evaluation	Procedure	Content	Method
Project bidding project in Hunan Province	The tenderee selected short-listed bidders Randomly in outside of short-listed qualified bidders, then make a written record	The qualification evaluation application letter; lawful identity certificate or power of attorney; the Commonwealth Agreement	Assessment need to determine qualified bidders and the finalists which are from qualified bidders people
Project bidding project in Hebei Province	Tenderees need to investigate to bidders and organize qualification evaluation	Organization, performance data sheet; subcontract plan; corporate social reputation	Qualification evaluation include compliance evaluation , the mandatory qualifications evaluation , eligibility evaluation or rating, clarify and verify
Project bidding project in Jiaxing city	Program states need to write the accreditation report	Business license, construction quality; project manager qualifications, construction capacity; project performance; performance reputation	The prequalification documents through the preliminary and detailed review to quantify the scoring, and sorting
Loan Project of the World Bank	Preparation of prequalification documents; preparation and submission of prequalification applications; review; to determine the pre-qualified applicants.	Eligibility review; history of performance of the contract; financial performance, the average annual construction turnover; general construction and specialized construction experience	Preliminary approval or not
International Federation of Consulting Engineers Project	Evaluation prequalification respondents of bidders	Personnel; equipment; financial condition; construction experience	Field trips, national public notary
Project bidding project in Japan	None	The average annual total value of completed projects; the net value of the items; time working on the Project; engaged in special project experience; such as workers' welfare	The establishment of a public project contractor accreditation system, each year through the systematic assessment of the contractor in order to be invited to tender
Project bidding project in USA	None	Basic qualifications; reputation; Engineering letter of guarantee; completed project-satisfaction	Specifically recognized credit company qualification

The content of the qualification evaluation is presented by the form of data in Hebei Province. Compared to “two steps in evaluation” of Beijing Province, the “four steps in evaluation” of Hebei Province is more conducive to control qualification evaluation process for tenderers.

The provision of qualification evaluation in Jiaying City reflects the evaluation characteristics of majority provinces and cities. Its content is simple and undefined, even the process of qualification evaluation is lack of the clear basis.

The method of qualification evaluation of the World Bank is named “mandatory standards law” which is not commonly used in china. It can bring more potential chance for bidders to bid, by reason of the division of evaluation results and complement to special and professional subcontractor as potential bidders.

It is mentioned in FIDIC contract that the relevant testimonial letters are needed to be notarized, which can bring a better legal protection for tender inviting party in the process of the qualification evaluation.

In addition, the “public project contractor qualification evaluation system” is established by government departments in Japan, which is facilitating for tenderers to select qualified bidders in long-term construction projects. The provisions in USA indicate it is more conducive to the unified management for organizing the qualification evaluation by the specifically recognized credit company.

3. THE PROPOSAL OF QUALIFICATION EVALUATION REGULATIONS OF BEIJING

On the basis of the study, this chapter put forward some suggestions for Beijing bidding qualification evaluation regulation.

The program of the suggestions is: Determine the bidding forms of the aiming project; for qualification of the tender inviting party; prepare the documents of qualification examination; selling the documents of qualification examination; prepare and submit the application documents of qualification examination; organization review; write and submit the qualification review report which include prequalification document, members list of qualification evaluation committee and some procedure files such as files which cannot pass qualify instructions; release the pre-qualification results, and sell the tender documents to qualified bidders.

Under the premise of the related materials of prequalification documents meet integrity, constructing two levels of qualification evaluation index system. One class index is basic situation, financial status, engineering experience, technical qualifications and reputation of the enterprise, below every one class index have corresponding secondary indexes. An evaluation index system of qualify shown in Table 3.

Table 3
The Beijing Project Bidding and Tender Qualification Evaluation Status Quo Questionnaire Results

Level 1 index	Level 2 index	Examine foundation
Basic information of the enterprise F ₁	Company name, nationality, address, articles of association, and the nature	Related certificate correspondence
	Legal person name, registered capital Enterprise qualification grade, the business license Organization construction The subcontractor, associated body	
Financial status F ₂	Name of project director	By audit of financial reports, in investment project under construction, proposed project funds use plan, with an annual turnover of the data table, the bank credit certificate, tender security, etc.
	Credit ability Financing ability Solvency Profitability Financial bidding ability Available credit	
Engineering experience F ₃	Project under construction situation	Completed project summary table, the construction project situation table, introduced original method, the past owner satisfaction, the contract schedule, etc.
	Similar conditions in the field of contract experience Similar to the experience of the project contract Engineering experience fixed number of year Complete a similar project of the special abilities The optimal evaluation in the past performance	
Technical qualifications F ₄	Technology, management personnel Construction machinery equipment Site management	In the project to technology, management personnel table, in the project to project manager and key personnel experience a resume, original method is introduced, the organizational structure, preliminary the construction organization design, engineering the subcontract plan etc.
	The project, subcontract Project manager Preliminary construction scheme	
Credit F ₅	Rewards and punishment Arbitration and litigation	Certificates, punishment record, litigation history records, safety production license, engineering safety record, project quality to appraise the qualified, contract execution rate, etc.
	Engineering safety Engineering quality Contract execution	

The tender inviting party should give emphasis the right weight value to the corresponding index according to the project characteristics and examines. Review staff can consult each index corresponding examination basis for grading and will be able to quantify the scores level index score, or according to the related to how important indicators for sorting, using the method of scoring, item by item, from the most important indicators start, before a index comply with the requirements, can enter to the next step of the review process.

In the engineering practice, the relevant competent departments should establish a benefit to the enterprise long-term investment of long-term construction projects bidding mechanism gradually, or may be established special company of qualification evaluation by the national recognized or form a qualification evaluation department, strengthen government control, promote the smooth development of the qualification evaluation activities.

CONCLUSION

1) This paper puts forward to Beijing qualification evaluation procedures of the proposal, both sides of the standard for bidding document for ability, tender inviting party organization ability and the government's control review ability put forward more strict requirements.

2) Construction of qualification evaluation evaluation index system specifies the qualification review examines the content and examines the basis.

3) Suggest the evaluation method of the scoring points than a single ranking more diversified.

4) But for sample capacity is limited, not fully show the actual situation of Beijing, this study still has some limitations. In the future research should also in view of the actual cases, for more in-depth empirical research.

REFERENCES

- [1] DU, Hongxia (2010). Prequalification Problems Analysis in the Bidding Process. *Value Engineering*, 15, 58.
- [2] World Bank. (2006). *Procurement of Works & User's Guide*. Washington, D.C.: The World Bank.
- [3] FU, Jianhua (2008). Current Situation, Existing Problems and Countermeasures in the Bidding. *China Investigation & Design*, 3, 64-67.
- [4] SHI, Xiaoyan (2009). Analysis on the Current Situation of the Construction Project Bidding in China. *Shanxi Architecture*, 12, 250-251.
- [5] SHANG, Mei (2003). Qualification Appraisal for Construction Projects Based on Concentrated Ordering of Fuzzy Inputs. *Optimization of Capital Construction*, 24(6), 7-11.
- [6] P. Anagnostopoulos, A. P. (2006). Vavatsikos Democritus University of Thrace, Greece. An AHP Model for Construction Contractor Prequalification. *Operational Research*, 3, 333-346.
- [7] Osama Abudayyeh, Saad J. Zidan, & Sherif Yehia *et al.* (2007). Hybrid Prequalification-Based, Innovative Contracting Model Using AHP. *ASCE*, 88, 88-96.
- [8] LI, Yawei, NIE, Xiangtian, & CHEN, Shouyu (2007). Fuzzy Approach to Prequalifying Construction Contractors. *ASCE*, 40, 40-49.