

Comparative Analysis of Selection of Contractor in Both Public And Private Sectors In Construction Industry In Nigeria

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Abstract: This research was carried out to appraise the comparative study of contractor selection in construction industry. Field surveys in different construction industries in Lagos State were conducted. Data were collected with the aid of structured questionnaire. Fifty questionnaires were distributed to construction professionals of which forty responses were retrieved and analyzed, information gathered includes: the major contractor's criteria and extent of verification of contractor document used to assess contractor on building construction work. Statistical package for social science (SPSS) were used to compute the mean score of the contractors selection criteria in relation to overall response of the professional in the construction industry. This study covers the technical capacity with over 68% of the professional considered it is very important among the major selection criteria. Organization reputation was appreciated about 30% of the professional considered were important. Past performance and quality among the contractor's prequalification criteria with over 54% responses considered were very important and political consideration with only 7% responses considers it very important. Also, evidences of the incorporation of the name and registered among evidence of document and information submitted for prequalification with about 60% respondent considered as the most important.

Keywords: Construction, Contractor, Private sector, Project and Public sector

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I. Introduction

Contractor selection is one of the most challenging decision making stages in construction project, due to the complexity involved in this process. Clients are becoming more aware of the fact that the selection of a contractor based on bid price alone is quiet risky and may lead to failure of the project in terms of time delay and poor quality standards (Singh and Tiong, 2006).

The selection of contractors are very often conducted during tendering, tendering give a client a choice in awarding contract to a company which proposes the lowest price and short construction cycles. Cost or price consideration has for a long time been the main evaluation factor that may affect the selection of contractor in both private and public sector in the construction industry (Xiao Hong, 2011).

The client mostly use 'bidding price' as the starting point to select a contractor among the others.

However the details such as the bidders and the type of tender reveal the situations for questioning the dominance of the 'bidding price' criterion. If the bidder is a public institution, then the evaluation process is surrounded by the sharp boundaries of various laws, regulations and procedures, and a price based evaluation system comes into picture. On the other hand, if the client is the private sector, then this brings certain flexibility to the process and it creates an environment for the rational evaluation of other criteria which are or will be present except the price within the scope of the process.

The private sector's clients mostly develop their own procedures and have unrestrictive system for bid evaluation while the method implemented in the public sector is that of awarding the contract to the lowest bidder because client are publicly responsible and must demonstrate that the value for their money has been obtained.

In view, the selection of a proper construction contractor increase chances of successful completion of a construction project (Yalmus and caffer, 2000). It can also fulfill the client goals and keep the schedule of cost, time and quality. So it is extremely critical to select an appropriate contractor in the process of construction management (Xiao Hong, 2011).

It is complicated to select a suitable contractor, bid evaluation is one of the major challenges that face owners and consultants in the public and private sectors. Nevertheless, there are objectives means to gauge the ability of a contractor to properly manage business aspect of the construction

project. (Xiao Hong, 2011). For the criteria for selecting contractor in both the public and private sector in the construction industry, very few has considered non client stakeholders view to date.

II. Literature Review

Contractor pre-qualification and bid evaluation procedure are used in many countries, which involve the development and consideration of a wide range and sufficient decision criteria to evaluate the overall capacity of contractors.

Different researchers revealed that existence of various criteria, types of information and methods of assessment in selecting contractors are differ in both public and private sectors. Hatush and Skitmore (1997) identified five main elements as common factors in the contractor's selection process for all types of procurement arrangements. These are project packaging, invitation, prequalification, short listing and bid evaluation.

2.1 Pre-qualification and Bid Evaluation Criteria

Pre-qualification and bid evaluation procedures are part of different types of criterion to evaluate the overall suitability of contractors such as: General, technical, managerial, and financial criteria (Hunt,1996). Moselhi and Martinelli, (1990), stated that financial stability, managerial capability and organizational strength, technical expertise and experience, size of firm, and safety record, are crucial in contractor's selection.

Herbert and Biggart, 1993 mentioned that management capability, delivery capability and experience, relationships, industrial relations, occupational health and safety, and claim and dispute history and financial status, were several criteria investigated for selecting a suitable contractor for jobs.

2.2 Bid Evaluation

Bid evaluation is used to denote the procedure for strategic assessment to tender bids submitted by pre-qualified contractors. The strategy used for bid evaluation should reflect the client's objectives (Hardy, 2005).

Herbsman and Ellis (1992) proposed further project-specific criteria, including safety, durability, security, and maintenance.

More objective methods have been proposed by (Moselhi and Martinell,1990) by means of multi-attribute utility techniques for combining the bid price and contractor

selection criteria. The evaluation of bids by multi-attribute methods may encounter some difficulties when comparing different criteria measured by different scales. Thus bidders should submit a projected cash flow so that clients can determine the present value of bids. (Herbsman and Ellis, 1992), mentioned that a proposed time/cost approach to determine the winning bid in the highway construction contracts. By converting the contract time to cost, a straight forward comparison can be made on a single criterion.

2.3 Criteria for Prequalification Process

Prequalification is a process used to investigate and assess the capabilities of the contractors to carry out a contract before a project can be awarded to the contractor. The process itself has been examined by many researchers (Russel, 1988). Prequalification provides a client with a list of contractor that is invited to tender on a regular basis. This is the approach most currently used by many countries and in which many and different types of criteria are considered to evaluate the overall suitable of contractors.

2.4 Criteria for Bid Evaluation

The term "evaluation" describes the procedure for the assessment of tender bids submitted by prequalified contractors. The procedures in the UK broadly follow the concepts outlined in guidance notes of The Institution of Civil Engineers which are concerned with the justification of the lowest priced bid. Several clients however also emphasize the significance of timely completion in the selection of the successful renderer.

A review of such prequalification records should satisfy both the consultant and the client in that each bidder should have: the financial strength to sustains the cash flows likely to arise during the project; experience of the similar nature of projects, competency and plant capacity to complete the project within the constraints of the likely contract; technical capability (including human resources) sufficient to satisfy the requirement of the contract; a complete understanding of similar project scopes and ability to absorb subsequent changes; the facilities (testing, quality control etc.) necessary to endorse assurance of quality; and comply in all respects with health and safety regulations.

These criteria and their weights suggested by the client and would be specific to a particular projects. Such additional criteria include safety, durability, security and maintenance. Therefore in this case it is suggested that the criteria to be considered are bid prices and contract time (the road user cost is applied to the contract time)

by converting the contract time to a cost to the client a straight forward comparison can be made on a single criterion.

2.5 Technical Resources and References

The technical appraisal includes the following criteria:

- Type of work the firm wishes to be done and could carry out which are not covered by the categories offered by the clients.
- Financial penalties previously levied in respect of failures to perform to the terms of a contract. Contracts the firm has had terminated or determined under the terms of contracts.
- Contracts not renewed due to failure to perform in accordance with the terms of contracts.
- Suitability and competence of potential employees.

This involves the consideration of job descriptions, application forms, references, qualifications, inspection of previous works, trial periods before confirmation of employment and personal recommendations. Skills including professional, managerial and technical expertise that are available to the company, qualifications and relevant experience. Staffing level in the company including management, professional/technical, administrative/clerical and manual supervisor Currency of records of employees name addresses of details of work carried out recently for public sector clients other than this authority, including supervising officer, contract title, tender price and type of work.

Contracts carried out for the clients in the last three years, main plant and equipment owned by the company. An initial assessment leads to a reduced number of contractors followed by a detailed investigation involving request for information from referees. Here information on different criteria is requested and different methods of judgment are used.

2.6 Pre –qualification

To ensure the quality of contractor, the valuation can be done beforehand with a prequalification method. Facing the owner’s scrutiny regarding its competency to handle the business aspects of the construction project once it has passed has passed through prequalification and been short listed. This also allows the owner’s bid evaluation team to focus only on the specific elements of the project, without being distracted by the other business considerations. In the simplest meaning prequalification is a before tendering procedure which allows to choose the most appropriate candidates from amongst those declaring willingness to participate in the tendering. The aim of prequalification is often not only contractor competence evaluation but also limitation of the potential bidders.

III. Presentation And Discussion Of The Result

Table 1: Ranking Result on Factors that Affect Contractor Selection in both Public and Private Sector in the Construction Industry.

	Minimum	Maximum	Mean	Std. Deviation	Ranking
Favorable policies with respect to lending for private and public construction projects.	1.00	4.00	2.03	.70	2 th
Project technical feasibility	1.00	4.00	2.03	.66	2 th
Financial capacity/ ability of the parties	1.00	4.00	1.94	.61	3 rd
Stable macro-economic environment	1.00	4.00	1.87	.70	4 th
Well- organized public agency	1.00	2.00	1.74	.44	6 th
Well-organized private sector	1.00	5.00	2.04	1.08	1 st
Strong private consortia	1.00	5.00	1.87	.99	4 nd
Availability of competent personnel to participate in Private and Public project	1.00	5.00	1.77	.94	5 th

The table 1 above shows the ranking result of factors that affect contractor selection in both public and private sectors in the construction industry, the result shows that Well-organized private sector which ranked first with mean 2.04. Favorable policies with respect to lending for private and public construction projects and Project technical feasibility are second in construction industry with 2.0. Financial capacity/ ability of the parties ranked third with mean 1.94 and statistically significant. Stable macro-economic environment and Strong private consortia are forth in construction industry with ranked 1.87 and statistically significant at 0.05 level of significant, then Availability of competent personnel to participate in Private and Public project occurs fifth in ranking with mean 1.77 and statistically significant while Well- organized public agency is ranked sixth. This implies that the majority of the respondent proved the factor affecting selection of contractors in construction industry is Well-organized in private section.

Table 2 Ranking Analysis Result on How Contractor be Selected in both Public and Private Sectors in the Construction Industry.

	Minimum	Maximum	Mean	Std. Deviation	Ranking
Experience in similar projects	1.00	5.00	1.81	1.01	6 th
Familiarity with local market	1.00	5.00	1.76	.84	7 th
Submitting the lowest bid	1.00	4.00	1.67	.63	9 th
Compliance with schedule	1.00	4.00	1.69	.55	8 th
Financial strength	1.00	5.00	2.21	.90	1 st
Available of resources	1.00	4.00	1.93	.64	4 th
Reputation in industry	1.00	5.00	1.93	.80	4 th
Good project execution plan	1.00	4.00	2.10	.64	2 nd
Well-defined QA/QC	1.00	5.00	2.06	.90	3 rd
Good past business relationship	1.00	4.00	1.8857	.79021	5 th

The table 2 above show the ranking result of how contractor be selected in both public and private sectors in the construction industry, the shows that financial strength which ranked first with mean 2.21. Good project execution plan ranked second with mean 2.10. Well-defined QA/QC third in construction industry with mean 2.06. Available resources and Reputation in industry ranked fourth with mean 1.93. Good past business relationship ranked fifth with mean 1.89. Experience in similar projects ranked sixth with mean 1.81. Familiarity with local market ranked seventh with mean 1.76. Compliance with schedule ranked eighth with mean 1.69. Submitting the lowest bid ranked ninth with mean 1.67. This shows that contractor be selected in both public and private sectors in the construction industry by Financial strength.

Table 3 Ranking Analysis Result on the Effect of Selection Criteria in both Public and Private sectors

	Minimum	Maximum	Mean	Std. Deviation	Ranking	P-Value
Lack of management expertise	1.00	4.00	1.96	.84	1 st	0.00
Tendering burden	1.00	2.00	1.60	.49	3 rd	0.00
Misinterpretation of client's requirements	1.00	5.00	1.79	1.02	2 nd	0.00
ability for timely delivery cost of service	1.00	5.00	1.71	.85	4 th	0.00
Lack of experience in the building industry	1.00	5.00	1.70	.86	5 th	0.00
Lack of project team organization structure	1.00	5.00	1.69	.75	6 th	0.00

The table 3 above shows the result of the effect of selection criteria in public and private sectors, the results revealed that main Lack of management expertise ranked first with mean 1.96. Misinterpretation of client's requirements ranked second with mean 1.79. Tendering burden ranked third with mean 1.60. Then ability for timely delivery cost of service ranked fourth with mean 1.7. Lack of experience in the building industry ranked fifth with mean 1.70, while Lack of project team organization structure ranked sixth with mean 1.69 and the result of the analysis revealed that the major effect of selection criteria in both public and private sector is Lack of management expertise.

IV. Conclusion And Recommendation

5.1 Conclusion

This study examine the comparative analysis of selection of contractor in both public and private sectors in construction industry, the result revealed that contractor can be selected in both public and private sectors in the construction industry by Financial strength also, the analysis of the result and the response of the respondent in construction company proved that the major effect of selecting criteria in both public and private sector is Lack of management expertise. The result also shows that majority of the factor affecting selection of contractors in construction industry is Well-organized private.

Furthermore the t-test statistics which test the significant of all the factor that employed in examine the analysis of selection of contractors in construction industry give an output of 0.000 which less than the alpha at 0.05 level of significant prove that there is significant relationship between all the factors examine on selecting contractors in construction company in Nigeria.

5.2 Recommendation

Based on the findings of the research the following were recommended, contractor's performance must be put into consideration to be able to select the contractor in both public and private sectors, both public and private sector in the construction industry must be guided by the criteria used percentage score allocation to each criteria.

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