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A REVIEW ON STRATEGY OF BIDDING AND COMPETITIVE BIDDING PROCESS

Meet Patel[1], Asst.Prof. MamataB Rajgor[2]

Student of M.Tech (Construction Engineering and management), U.V Patel College of Engineering, Ganpat University, Kherva, Gujarat, India[1]
Assistant Professor, Babaria Institute of technology, varnama, Vadodara[2]

Abstract -*Construction bidding is the process of submitting a tender to undertake, or manage the undertaking of a construction project. The process starts with a cost estimate from blueprints and material take offs. In construction bidding time there are many factors affecting and influences. This scenario is highly relevant to the specific project and construction environment. It is very difficult to the applied on short term projects by construction management team. This paper understands about bidding, factors affecting in construction bidding strategy, advantages of bidding, pricing strategies in bidding and process of bidding in construction industry.*

Keywords-*Meanings of bidding, Competitive bidding process, Advantages of bidding process, Factors affecting on bidding strategy*

I. INTRODUCTION

In the construction industry, contractors typically earn construction contracts through either direct negotiation or competitive bidding. Government agencies and private sector clients most often employ competitive bidding. Government agencies and private sector clients most often employ competitive bidding. Government agencies and private sector clients not often employ competitive bidding, which commonly adopts last bid pricing as the main award criterion. The bid price usually consists of the cost of construction plus a markup; the latter being typically calculated as a certain percentage of construction costs. Markup size correlate positively with earned profit- the primary motivator for a contractor to win and execute a contract (Dikmen et al. 2007). Research into competitive bidding strategy models has been conducted since the 1950s (Friedman, 1956). Despite the lane number of competitive bidding strategy models developed, few have been primarily to their failure to address due primarily to their failure to address practical construction contractor needs.(Hegazy et al; 1995; Shash 1990). A successful contractor is the one that selects the most optimal bid markup that secures both the contract and contract profitability (Shash et al; 1992).

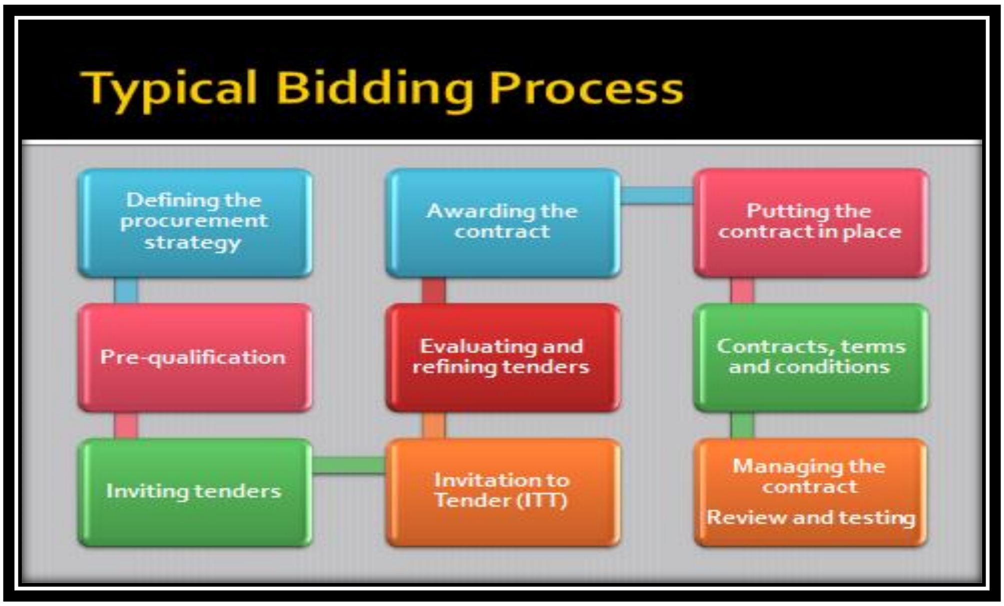

Figure1. Typical Bidding Process

II. ADVANTAGES OF BIDDING

1. Its main advantage is that it forces contractors to continuously try to lower costs by adopting cost-saving technological and managerial innovations.

2. Being a familiar method, Competitive Bid projects is an easier sell, and they're easier to manage because the scopes and stages are rigidly defined. Because the design team and contractor both report to the owner, the owner has a greater degree of control over the process. As the name suggests, the bidding process typically results in the best price.

3. The construction manager is working "at risk," usually under guaranteed maximum price, they have incentive to act, not only in the owner's interest, but also to continually manage the construction costs, since the CM would be liable for any amount in excess of the GMP. Because the CM is managing the entire process, phase overlap is possible, which allows a faster construction schedule. Perhaps the biggest advantage is the ability of this method to handle changes in design or scope.

4. Since the Design/Build firm serves as a kind of "master craftsman" accountable for the entire project, the owner has a single point of contract throughout the work, and design can be tailored to the budget and easily changed if necessary. These projects tend to be significantly faster than Competitive Bid jobs, and slightly faster than Construction Manager at Risk jobs, and they give the owner peace of mind, since the GMP is settled early in the process.

III. DISADVANTAGES OF BIDDING

1. Leading suppliers may not tender:Most Australian government procurement guidelines only allow suppliers who actually tender to be considered for a procurement decision. If the leading supplier or suppliers do not tender, the purchaser can only consider bids from suppliers who do tender. If leading suppliers are not considered, the purchaser may end up buying inferior product or service.
2. Barriers to communication between supplier and customers:When making significant purchases, frank and open communication between potential supplier and customer is crucial. Competitive tendering is not conducive to open communication. "Practitioners have recognized that competitive tendering stifles valuable coordination between the procurer and potential supplier before the plans and specifications are finalized. To see this, note that the primary information that the procurer receives from suppliers in a competitive tender is their bid. A supplier has no incentive to offer the procurer advice on how to improve the plans or avoid certain pitfalls. In fact, the supplier would have the incentive to keep any findings of this kind to himself as they offer him a competitive advantage over his rivals in a competitive tendering process". However, when more effective procurement methods are used "the procurer and supplier typically spend a good deal of time discussing the project before the work begins. During such negotiations the procurer can elicit the supplier's views about where the designs and specifications can be improved". Potential problems and pitfalls with the proposed work can also be discussed.
3. The cost-plus phenomena: Competitive tendering often results in strictly worded contacts between supplier and procurer. Deviations to contractual terms can be extremely expensive. This can create a situation that is sometimes referred to as "cost-plus". To run the game of cost plus in industry a supplier offers a bid so low that he is almost sure to get the business. He gets it. The customer discovers that an engineering change it vital. The supplier is extremely obliging, but discovers that this change will double the cost of the items. It is too late for the customer to try and make other arrangements. Production is under way and must be continued without interruption. The vendor comes out ahead".
4. Use of cheaper, poor quality materials and/or labor.: A supplier forced to play the competitive tendering game may come under pressure to keep costs down to ensure he gets a satisfactory profit margin. One way a supplier can lower costs is by using cheaper labor and/or materials. If the cheaper labor and materials are poor quality, the procurer will often end up with inferior, poor quality product or service.
5. Safety shortcuts: Another area where suppliers may be tempted to lower costs is safety standards. The British film "The Navigators" provides an example of a safety short cut taken as a result of competitive pressures. To keep costs down the tendering group reduces costs by cutting back on manning. In this case, the manning reduced is a safety critical role. The result is the death of a co-worker.
6. Competitive tendering can be extremely slow: When government agencies use competitive tendering it can take several years to choose a successful bidder. The result is the customer can wait incredibly long periods for product or service that may be required quickly. By comparison, the use of direct sourcing procurement can take a fraction of that time.
7. A Supplier who wins the tender, but is unable to meet the contractual requirements. A problem that compounds the problem of competitive tendering's lengthy time frame, is when a selected supplier is unable to meet the requirement that he has contracted for. To the procurer's frustration, the lengthy competitive tendering process may have to begin again.

IV. COMPETITIVE BIDDING PROCESS

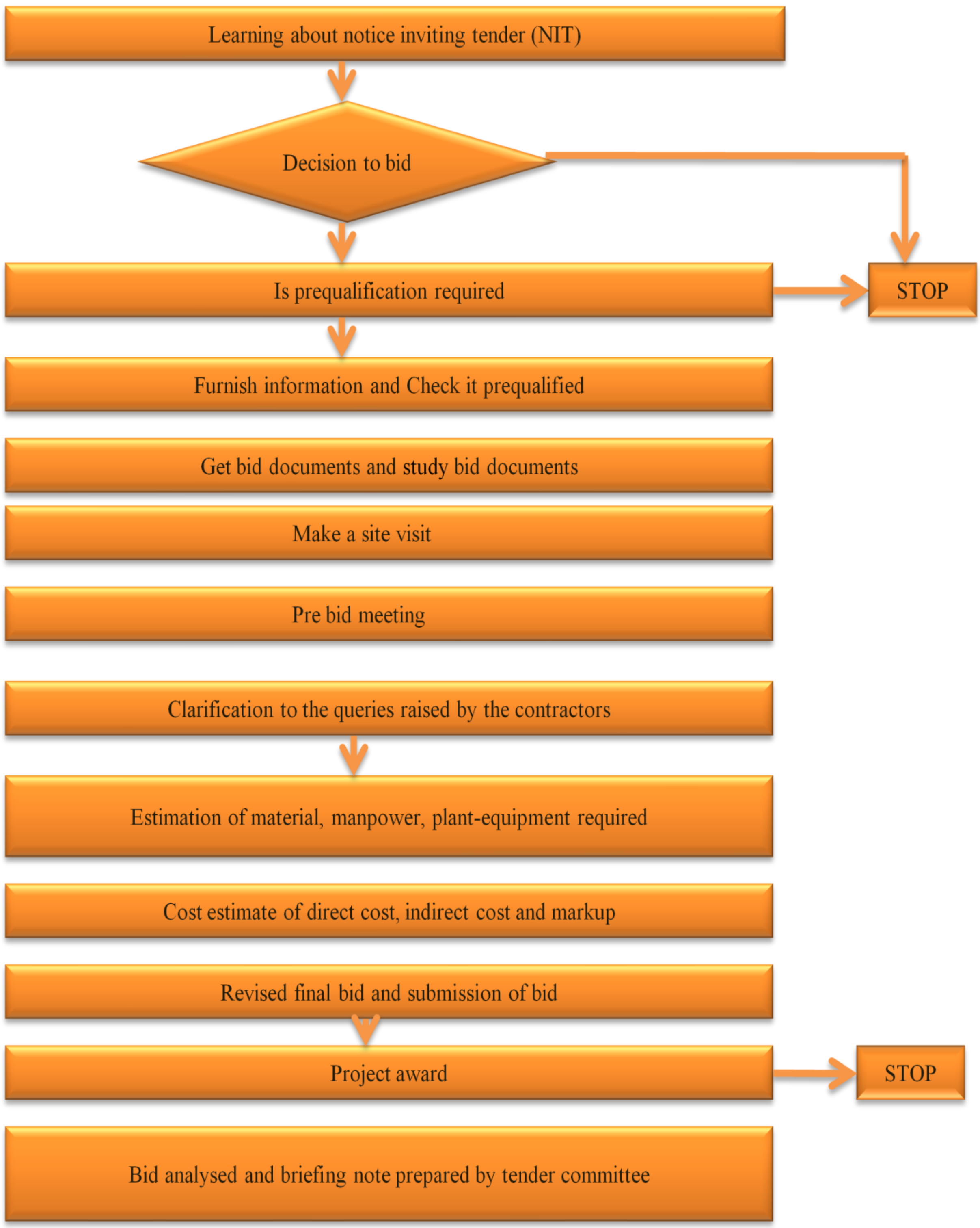

Figure 2 Competitive Bidding Process

V. FACTOR AFFECTING BIDDING DECISION

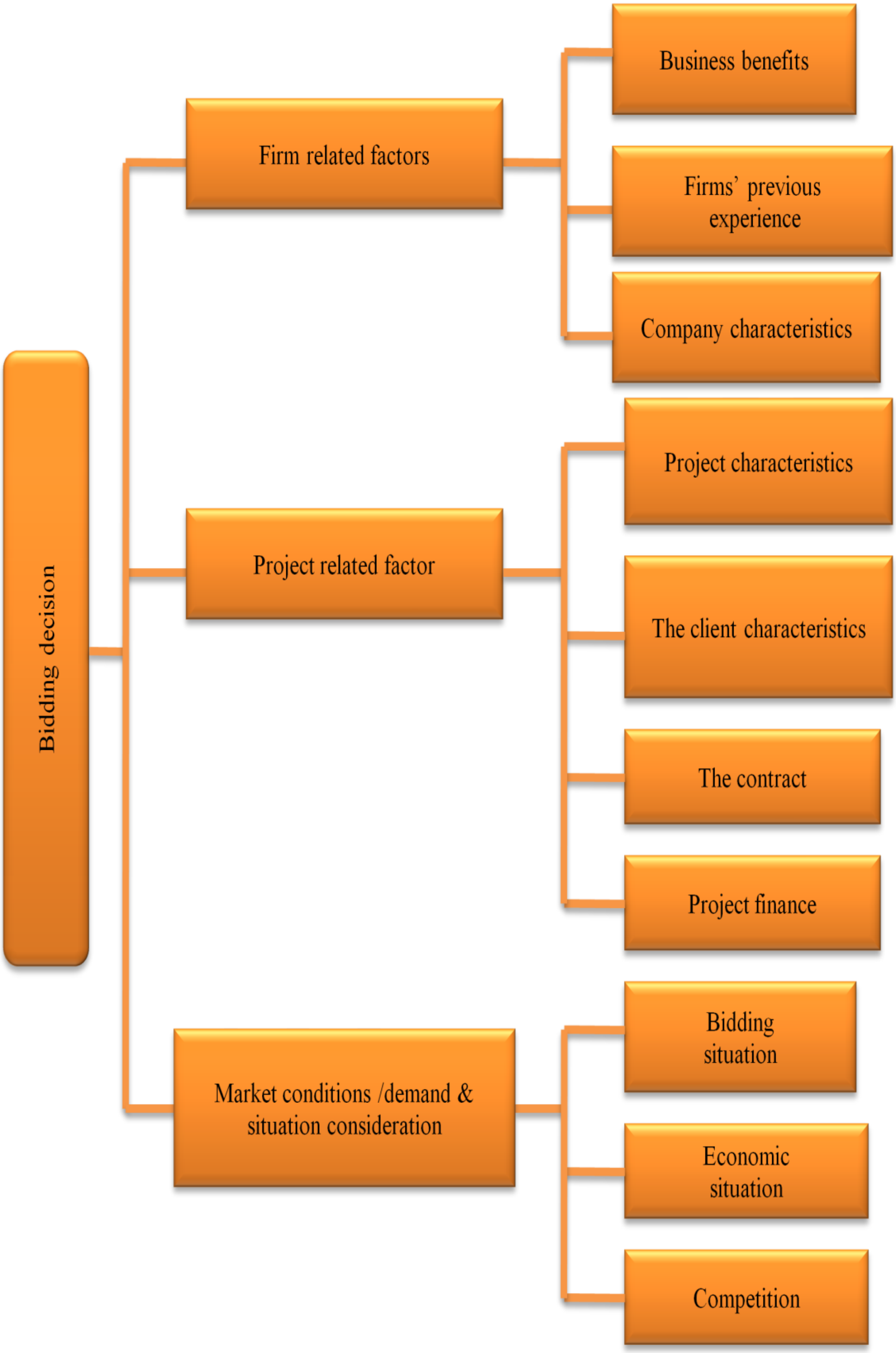

Figure 3. Factor affecting bidding decision

SR NO	Factors affecting on contractor's bidding strategy	Group
1	Duration of the project	Project Characteristics
2	Type of project	
3	Job Start time	
4	Methods of construction (manually, mechanically)	
5	Location of the project	
6	Type of equipment and type of labour required	
7	Site clearance of obstruction and site accessibility	
8	Design quality and team	
9	Local climate	
10	Degree of technological difficulties	
11	Safety hazards	
12	Completeness of drawings and specification	
13	Type of procurement method	
14	Degree of possible alternative to reduce cost	
15	Expecting date commencing	
16	The benefits expected in terms of the company reputation	Business Benefits
17	Need for continuity in employment of personal company reputation.	
18	Establishing long relationship with client	
19	Relationship with owner	The Client Characteristics
20	The reputation among other contractors, with whom they had worked	
21	The client requirement	
22	Prompt payment habit of the client	
23	The client financial capacity	
24	Size of the client	
25	Type of contract and contract condition	The Contract
26	Clearness of the work and specification	
27	Fines for delay	
28	Consultants 'interpretation of the specification	
29	The contract special requirements	
30	Original price estimated by the client	Project Finance
31	Work capital required to start the job	
32	The possibility of delay or shortage on payment	
33	The project mark-up size	
34	Anticipated value of liquidated damage	
35	Financial goals of the company	
36	Availability of required cash	Company Characteristics/ Situation
37	Ability of doing the job	
38	Availability of required human resources	
39	Past experience with similar project	Firm's Previous Experience
40	Past profit in similar job	
41	Required bond capacity	Bidding Situation
42	Tendering duration	
43	Bidding method	

44	Prequalification requirements	
45	Risk involved in investment	Economic Situation
46	Quality of available labour	
47	Availability of equipment and materials	
48	Future project	Competition
49	Market condition	

Table1. Factors affecting on contractor's bidding strategy

I. CONCLUSION

A large percentage of all construction work is still awarded on the basis of competitive bidding. Under this system, the owner of a project invites a number of prospective contractors to compete for a project by tendering bids or proposed bid prices. The award is made on the basis of the proposed bid prices, the project generally being awarded to the lowest responsible bidder. In order to bid for a project, expectations of a general contractor should be satisfied which is different from one competitor to another. As a process of finalizing bid packages has a considerable non-refundable estimation cost for the general contractor, therefore this decision should be considered carefully by the bidding staff after invitation of contractors for a released project. There are several factors that influence this decision such as project type, job mix, degree of financial risk, location, bidding climate, chance of winning and reputation of the client.

REERENCES

[1] Ahmad, I., and Minkarah, I., (1988), Questionnaire survey on bidding in construction, Journal of management in engineering ASCE, **4**(3), 229–243.
[2] Ahmad, I., and Minkarah, I., (1987), Optimum markup for bidding: A preference-uncertainty trade off approach. *Civil Engineering System*, **4**, 170-174
[3] Abdulrahman Bagies and Chris Fortune "Bid/ no-bid decision modelling for construction projects", Association of Researchers in Construction Management, 4-6 September 2006, 511-521.
[4] Ahmad, I. (1990) Decision-support system for modelling the bid/no bid decision problem."Journal of Construction Engineering and Management", 116(4), 595–607.
[5]Bagies A. and Chris F. "Bid/ No-Bid Decision Modelling for Construction Projects" ,In: Boyd, D (Ed)Procs 22nd Annual ARCOM Conference, Birmingham, UK, Association of Researchers in Construction Management, September 2006,511-521.
[6] Banki M.T., Esmaeeli B., Ravanshadnia M. "The Assessment of Bidding Strategy of Iranian Construction Firm" ,International Journal of Management Science and Engineering Management, ISSN1750-9653, Vol. 4 ,No. 2, June 2008,153-160.
[7]Chien-Liang L., Wei L., Min-Ren Y. "Exploring Contractor's Opportunistic Bidding Behavior and itsImpacts on Construction Market" International system dynamic,2003, 1-17.
[8Drew D. S., Lo H. and Skitmore R. "The Effect of Client nd Type and Size of Construction Work on A Contractor Is Bidding Strategy", Building and environment 36(3):pp. 393-406,2001
[9] Jennings E. and Holt G. "Prequalification and Multi-Criteria Selection – A Measure of Contractor's Opinions", Journal of Construction Engineering Management and Economics, ISSN 1756-5154 , Vol. 16,No. 6, 1998, 651-660.
[10] Kumaraswamy M., and Walker D. "Multiple Performance Criteria for Evaluating ConstructionContractors'', Procurement Systems A Guide to Best Practice in Construction" , 2000,228–251.
[11] Ioannou G. "Bidding Models Symmetry and State of Information", Journal of Construction Engineeringand Management, ISSN: 0733-9364,Vol. 114, No. 2, 1997,214-232.
[12] Ioannou G., Sou-Sen L. "Average Bid Method A Competitive Bidding Strategy" Journal of ConstructionEngineering and Management, ISSN: 0733-9364 ,Vol. 199, No.1, 2000,131-147.
[13]Mills A. and Skitmore, Martin R. " A Comparison of Client and Contractor Attitudes to PrequalificationCriteria" , Proceedings The International Council for Building Research Studies and Documentation(CIB) "Portable Partneringin Construction and Procurement", 1999, 699-708.
[14] Mohammad S. El-Mashaleh, Ashraf Al-Jundi ,Saed M. , Rayan A. and Jamal A. "Understanding KeyBidding Factors Considered by Top Jordanian Contractors" Jordan Journal of Civil Engineering, ISSN 1993-0461,Vol 8, No.4. 2014,455-464.

[15] Mochtar K. "Pricing Strategy of Indonesian Contractors, Indonesia", Construction Engineering Management and Economics, ISSN 1756-5154, Vol.19, 2010, 405-415.
[16] NyomanYudha Astana, Rusdi HA, and MohamadAgungWibowo "Factors affecting bidding strategy in construction", Australian Journal of Basic Applied Sciences, 9(5) March 2015, Page: 211-215
[17]Oo B. , Drew D., and Lo H. "Applying A Random Coefficients Logistic Model to Contractors' Decisionto Bid", Journal of Construction Engineering Management and Economics, ISSN 1756-5154, Vol. 25,No. 4, 2007,387-398.
[18]Xiaohong Huang (2011) "An Analysis of the Selection of Project Contractor in the ConstructionManagement Process", International Journal of Business and Management, ISSN 1833-3850, Vol. 6, No.3, 2011, 184-189.