

## Analyzing Competition in Public Construction Projects

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**Abstract :** Construction projects in the public sector are commonly awarded through competitive bidding. In the last decade, the Construction projects environment in the Middle East went through many changes. These changes have been caused by different factors including the economic crisis, delays in monthly payments, international competition and reduced number of projects. These factors had a great impact on the bidding behaviors of contractors and their pricing strategies. This paper examines the competition characteristics in public construction projects through an analysis of bidding results of contractors in public construction projects over a period of 6 years (2006-2011) in Jordan. The analyzed projects include all categories of projects such as infrastructure, buildings, transportation and engineering services (design and supervision contracts). Data for the projects were obtained from the General Tender's Directorate in Jordan and includes 462 projects. The analysis performed in this projects includes, studying the bid spread in all projects as it is an indication of the level of competition in the analyzed bids. The analysis studied the factors that affect bid spread such as number of bidders, Value of the project, Project category and years. It also studying the "Signal to Noise Ratio" in all projects as it is an indication of the accuracy of cost estimating performed by competing bidders and bidder's evaluation of project risks. The analysis performed includes the relationship between signal to noise ratio and different parameters such as project category, number of bidders and changes over years. Moreover, the analysis includes determining the bidder's aggressiveness in bidding as it is an indication of competition level in such projects. This was performed by determining the pack price which can be considered as the true value of the project and comparing it with the lowest bid submitted for each project to determine the level of aggressiveness in submitted bids. The analysis performed in this project should prove to be useful to owners in understanding bidding behaviors of contractors and pointing out areas that needs improvement in preparing bidding documents. Also the project should be useful to contractors in understanding the competitive bidding environment and should help them to improve their bidding strategies to maximize the success rate in obtaining contracts.

**Keywords :** construction projects, competitive bidding, public construction, competition

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