SUMMARY

Most business situations are interactive, in that the outcome emerges from separate decisions of different people. Game theory is that branch of social science that studies strategic decision making and has been used to explain about rational behavior in situations involving interdependence. Auction bidding behavior and auction design are areas that are closely linked to the real estate business and for which much game theoretic analysis have been made. Formulation of strategic decisions within such game theoretic frameworks would assist an investor in meeting his investment objectives.

In determining the value of a land ready for development in an auction environment, how would a bidder strategically respond to decisions made by other competitive bidders in order to achieve the winning bid? What is the role of the conventional residual method in a game theoretic land bid strategy? How would game theory help in developing strategies to provide the winning bid in a sealed-bid auction environment? This dissertation therefore attempts to analyze the rationale of the bidders’ behavior and to probe the application of a suitable bidding model that could provide more information in devising winning strategies.
It is acknowledged that each bidding situation has unique properties and must be treated individually. Each bidding problem therefore has a different solution depending on the objectives of the bidder. Hence the bidder’s motivation should be identified to devise appropriate strategies. In the plethora of auction literature, the types of auction environment are also briefly examined to provide game theoretic analysis in the strategic decision making process.

Concepts of the basic development appraisal process are reviewed to provide the basis for the application of the optimal bidding model. The model is illustrated with a case study to analyze its applicability in the local context. It was found that the model could provide additional information on the probability estimates of winning the bid and thus provide a framework for developers to bid rationally amidst the uncertainties. The model also provides information on the range of bids that analyze the plausible gains and losses at the respective bids. Although subjective judgement techniques such as the probability estimates are employed in the model, it nevertheless appears to be one of the feasible tools to assist in devising strategic decisions.
Finally the study recognizes the potential of using the bidding model because additional information could be extracted on competitors' previous bidding patterns which could help formulate appropriate strategies.

Keywords

Game Theory

Sealed-Bid Auction

Residual Method

Optimal Bidding Model

Probability Estimates

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