The Buy Price in
Auctions with Discrete Type Distributions

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Abstract

This paper considers second-price, sealed-bid auctions with a buy price where bidders' types are discretely distributed. We characterize all equilibria, restricting our attention to equilibria where bidders whose types are not greater than a buy price bid their own valuations. Budish and Takeyama (2001) analyzed the two-bidder, two-type framework, and showed that if bidders are risk-averse, a seller can obtain a higher expected revenue from the auction with a certain buy price than from the auction without a buy price. We extend their revenue improvement result to the n-bidder, two-type framework. However, in case of three or more types, bidders' risk aversion is not a sufficient condition for the revenue improvement. Our example illustrates that even if bidders are risk-averse, a seller cannot always obtain a higher expected revenue from the auction with a buy price.

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Key words: Auction; Buy price; Risk aversion