Rejection prices and an auctioneer with non-monotonic utility

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January 5, 2017

Abstract

This paper considers an auctioneer who has a non-monotonic utility function with a unique maximum point. The auctioneer is able to reject all bids over some amount by using rejection prices. We analyze the bidders' bidding strategies given any rejection price and show that the optimal rejection price for such an auctioneer is lower than (equal to) that maximum point in a first-price (second-price) auction. Further, we characterize a necessary and sufficient condition that the auctioneer chooses the optimal rejection price can result in a Pareto improvement, compared to the standard auction.

Keywords: Auction, Rejection prices, non-monotonic utility

JEL Classification: D44, D82