

Multi-unit auctions with uncertain supply and single-unit demand

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Abstract

We study multi-unit auctions where bidders have single-unit demand and asymmetric information. For symmetric equilibria, we identify circumstances where uniform-pricing is better for the auctioneer than pay-as-bid pricing, and where transparency improves the revenue of the auctioneer. An issue with the uniform-price auction is that seemingly collusive equilibria can exist. We show that such outcomes are less likely if the traded volume of the auctioneer is uncertain. But if bidders are asymmetric ex-ante, then both a price floor and a price cap are normally needed to get a unique equilibrium, which is well behaved.

Keywords Multi-unit auction, single-unit demand, uniform pricing, pay-as-bid, asymmetric information, publicity effect

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