

Sequential Auctions with Heterogeneous Objects*

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Abstract

We consider sequential second-price auctions where two heterogeneous objects are sold to bidders with a unit demand and a single dimensional type. We focus on the “regular equilibrium”: the symmetric Bayesian Nash equilibrium such that the highest type bidder wins first and then the second highest type bidder wins. We first characterize the necessary and sufficient condition that the regular equilibrium exists. Then, we provide clear conditions for declining or increasing prices in equilibrium when the regular equilibrium exists. Especially, when two objects have the same mean, price declines if more dispersive object is sold first. Finally, we show that when the seller can choose the order of sales, she achieves the efficient allocation and earns higher expected revenue by selling a more dispersive object first.

Keywords: sequential auctions, declining price anomaly

JEL code: D44

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