

Revenue-capped efficient auctions

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Abstract

This paper studies auctions that maximize the expected social surplus under a constraint of an upper bound of the expected revenue for the seller. Such a constrained-efficient auction also maximizes the weighted sum of the buyer's payoffs and the seller's payoff in auctions without a revenue cap, where the former has a larger weight than the latter. We provide a constrained-efficient auction mechanism, and show that the mechanism takes a simple form when the virtual value function is either convex or concave. We also show that the seller does not keep the object in the constrained-efficient auction whenever the distribution satisfies the monotone virtual value condition.

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