

Optimal threat in efficient mechanism design

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Abstract

We study independent private value efficient mechanism design in situations where agents' payoff depend on the chosen alternative even if they do not participate to the mechanism. In addition to an allocation rule and a payment rule the designer must choose appropriate threats in order to give agents the incentive to participate and maximize her own expected surplus. We show that the solution of the design problem can be found by solving a saddle point problem. We apply our results to design an efficient multiunit auction when a buyer in possession of the good causes negative externalities on other buyers.