Theory, Identification, and Estimation for Scoring Auctions*

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Abstract

This paper offers an analytical framework for scoring auctions. We first examine symmetric pure-monotone equilibria in the scoring auction. We then propose a method to semiparametrically identify the joint distribution of the bidder's multidimensional signal from scoring auction data. Our approach allows for a broad class of scoring rules in settings with multidimensional signals. Finally, using our analytical framework, we conduct an empirical experiment to estimate impacts of the change of auction formats and scoring rules. The data on scoring auctions are from public procurement auctions for construction projects in Japan.

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