Estimating Demand from eBay Prices

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Abstract

This paper presents results for identification and estimation of the value distribution from eBay auction prices. The paper presents results for eBay type auctions with independent private values and unobserved participation. It is first shown that the distribution of values is identified from observing the distribution of prices and knowing the distribution of potential bidders. The main result presents conditions for which the distribution of values and the distribution of potential bidders are simultaneously identified. Not surprisingly, the intuition is similar to the standard results for identifying demand from observed equilibrium prices. The estimation method suggested by the identification results is used to estimate the demand for the “C5” Chevrolet Corvette on eBay. The results suggest that a simple OLS model on prices will over estimate the mean value of the item. The order statistics approach also provides much more efficient estimates of the hedonic model.

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