

The law of one price in auctions with outside competition

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Abstract

In this paper we theoretically and experimentally investigate price formation in hybrid markets. All buyers are faced with unit demand for a single object that is offered by various sellers. There are two market mechanisms utilized by sellers. First, there is a single auction seller offering a single object for sale. Second, there is a vast posted prices market where substitute objects are exchanged, however, prices are dispersed and buyers have to search for them before any transaction where search is costly. The timing in the hybrid market is sequential where the auction is held before any buyer can participate in the posted prices market.

To keep the setting as simple as possible, we employ a second-price auction and assume that buyers' valuations are independently distributed and their private information. We characterize equilibrium behavior in the hybrid market and use it to predict behavior in the experiment.

Theoretically we find that – depending on the demand structure – the price in the auction either is carried over from the vast posted prices market to the auction so that the law of one price holds or equals a smaller bargain-price. In other words, depending on demand, the model explains why rare bargain-prices in auctions can coexist with a series of identical higher prices with identical objects exchanged in the market.

Experimentally we find that bidders behave myopically so that auction prices are higher than predicted since bidding in the auction does not fully take advantage of the potential benefits derived from potentially participating in the posted prices market.

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