## NIBBLING, SNIPING AND THE ROLE OF INFORMATION IN SECOND-PRICE, HARD-CLOSE AUCTIONS: EMPIRICAL EVIDENCE FROM EBAY

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## ABSTRACT

Over the past decade, Internet auctions have gained widespread appeal as an efficient and effective means of buying and selling goods and services. These auctions provide a market that brings together a large number of participants, a large selection of goods and services to be exchanged, and a more flexible time frame within which to conduct transactions. Our study focuses on eBay, one of the most well-known Internet auction websites. At first glance, eBay's auction format is similar to that of a second-price, hard-close auction, which gives a rational participant an incentive to submit a bid that is equal to his/her reservation price (or the maximum he/she is willing to pay). But while traditional second-price, hard close auctions assume that participants have reliable information about other participants' reservation prices, eBay participants usually do not. This raises the possibility that eBay participants may adapt bidding strategies that differ from second-price, hard close auctions, and thus not bid their reservation prices. In this paper, we empirically examine the bidding patterns of on-line bidders and compare our findings to the behavior of bidders in more conventional auction settings.

## METHODOLGY

We randomly selected items from completed auctions on eBay for two types of goods: one that exhibits a significant degree of uncertainty about the product's value (used cars); and one where there is significantly less uncertainty about the product's value (coins). Using nonparametric (Mann-Whitney) analysis of variance and Spearman correlation analysis, we test four hypotheses: 1) the amount of nibbling (the use of an incremental bid process to approximately deduce the value of the good) will be significantly greater for goods of higher perceived risk (used cars); 2) the intensity of nibbling will be significantly greater for goods of higher perceived risk; 3) there will be significant association between the amount of nibbling and the presence of sniping (a bidder with a very high reservation value waiting until the final moments of a hard-close auction to submit his/her bid); and 4) There will be significant association between the intensity of nibbling and the presence of sniping.

## **RESULTS AND CONCLUSIONS**

Our results indicate that auctions with a high amount of perceived risk exhibit significantly more nibbling. Specifically, more nibbling occurred both in terms of the number (and proportion) of participants who use a nibbling strategy, as well as the number (and proportion) of incremental bids that are submitted over the course of the auction. Auction participants were also more prone to engage in sniping in auctions with more perceived risk. Moreover, sniping occurred more often in an auction when several other participants attempted nibbling strategies.