

Supplementary Material for “Setting reserve prices in second-price auctions with unobserved bids”

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Data used in Experiments

In accordance with the data policy of *INFORMS Journal on Computing*, we are sharing the datasets used in the paper. This document contains a description of the datasets. The files containing the data can also be found at https://github.com/Hematita1991/RP_IJOC.

Ebay Data

The experiments in Section 6 of the main text and Section EC.3 of the Supplementary Materials make use of an eBay dataset that was used in Mohri and Medina (2016). The original data set can be found at the following website: <http://cims.nyu.edu/~munoz/data>. In the paper we performed a number of pre-processing steps on the original data and the pre-processed data is subsequently used in our experiments. The file `ebay_data_clusters_10.csv` contains the data after performing the clustering as described in Section 6. The experiments in Section EC.3 are based on a different clustering of the bids. The file `ebay_data_clusters_6.csv` contains the data after performing the clustering as described in Section EC.3.

Each file has three variables: `SB`, `TB`, `cluster_id`. The variable `TB` indicates the highest bid, the variable `SB` indicates the second highest bid and the variable `cluster_id` indicates the cluster in which the bids are placed.

Header bidding Data

The experiments in Section 7 of the main text and Section EC.4 of the Supplementary Materials make use of a dataset that was provided by our industry partner. In the paper we performed a number of pre-processing steps (which are detailed in Section 7.1) on the raw data and the pre-processed data is subsequently used in our experiments. The files `data_website_A.csv` and `data_website_B.csv` contain the data after performing the pre-processing steps.

Each file has three variables: `max_bid_scaled`, `hour`, `second_bid_scaled`. The variable `max_bid_scaled` indicates the highest bid, the variable `second_bid_scaled` indicates the second highest bid and the variable `hour` indicates the hour at which the bids are placed.

References

Mohri M, Medina AM (2016) Learning algorithms for second-price auctions with reserve. *J. Mach. Learn. Res.* 17(1):2632–2656.