Consumer Surplus in Online Auctions

Ravi Bapna, Wolfgang Jank, Galit Shmueli

Despite the growing research interest in Internet auctions, particularly those on eBay, little is known about quantifiable consumer surplus levels in such mechanisms. Using an ongoing novel field experiment that involves real bidders participating in real auctions, and voting with real dollars, we collect and examine a unique data set to estimate consumer surplus in eBay auctions. The estimation procedure relies mainly on knowing the highest bid, which is not disclosed by eBay but is available to us from our experiment. At the outset we assume a private value second-price sealed-bid auction setting, as well as a lack of alternative buying options within or outside eBay. Our analysis, based on a sample of 4,514 eBay auctions, indicates that consumers extract a median surplus of at least $4 per eBay auction. This estimate is unbiased under the above assumptions; otherwise it is a lower bound. The surplus distribution is highly skewed given the diverse nature of the data. We find that eBay's auctions generated at least $7.05 billion in total consumer surplus in 2003 and could generate up to $7.68 billion if the private value sealed-bid assumption does not hold. We check for the validity of our assumptions and the robustness of our estimates using an additional data set from 2005 and a randomly sampled validation data set from eBay.

*To read the Full paper, please contact Arun_Kumar@isb.edu