

THE IMPACT OF INFORMATION DIFFUSION ON BIDDING BEHAVIOR IN SECRET RESERVE PRICE AUCTIONS

Oliver Hinz^{*}
Martin Spann^{}**

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Contact Information:

^{*} Johann Wolfgang Goethe-University, Mertonstr. 17-25, 60054 Frankfurt am Main, Germany.
Phone: +49-69-798-22377, Fax: +49-69-798-28973, e-mail: ohinz@wiwi.uni-frankfurt.de.

^{**} University of Passau, Innstr. 27, 94032 Passau, Germany. Phone: +49-851-509-2421,
Fax: +49-851-509-2422, e-mail: spann@spann.de.

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Abstract

The interactive nature of the Internet promotes collaborative business models (e.g. auctions) and facilitates information-sharing via social networks. In Internet auctions, an important design option for sellers is the setting of a secret reserve price which has to be met by a buyer's bid for a successful purchase. Bidders have strong incentives to learn more about the secret reserve price in these auctions, thereby relying on their own network of friends or digital networks of users with similar interests and information needs. Information-sharing and flow in digital networks, both person-to-person and via communities, can change bidding behavior and thus can have important implications for buyers and sellers in secret reserve price auctions. This paper uses a multi-paradigm approach to analyze the impact of information diffusion in social networks on bidding behavior in secret reserve price auctions. We first develop an analytical model for the effect of shared information on individual bidding behavior in a secret reserve price auction with a single buyer facing a single seller similar to eBay's Best Offer and some variants of NYOP. Next, we combine the implications from our analytical model with relational data which describe the individual's position in social networks. We empirically test the implications of our analytical model in a laboratory experiment, and examine the impact of information diffusion in social networks on bidding behavior in a field study with real purchases, where we utilize a virtual world as proxy for the real world. We find that the amount and dispersion of information in the individualized context, and betweenness centrality in the social network context, have a significant impact on bidding behavior. Finally, we discuss the implications of our results for buyers and sellers.