Detecting Quality Manipulation Corruption in Scoring Auctions: A Structural Approach*

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Abstract

Scoring auctions are widely used to support the procurement of items that differ in quality. These auctions are particularly susceptible for corruption because the quality assessment usually requires special expertise that the buyer does not possess, which necessitates the participation of a skilled intermediary agent to evaluate quality. Corruption via quality manipulation arises when the agent is bribed to elevate quality score of a seller. It causes a systematic distortion of bids and such distortion is testable. This paper proposes a structural estimation method of scoring auction data and three tests for detecting quality manipulation. We apply them to study a series of server room scoring auctions in China. We find empirical evidence for the primary implications of the theoretical model and some signs of corruption in sub-samples with high quality weight scoring rules and large engineer's estimated costs.

Keywords: Scoring Auction, Structural Estimation, Quality Manipulation, Corruption Detection.

JEL codes: C1, D44, H57, L40, L74.

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