Estimation of first-price auctions with local linear estimators

Yusuke Matsuki*and Mari Sakudo†

April 21, 2019

Abstract

This paper proposes a remedy for boundary effects in estimation of the first-price sealed-bid auction model. While most studies employ trimming to alleviate the boundary problem, the procedure can lead to lots of data loss. We introduce two approaches based on the local linear function that are simple to implement and boundary corrected by construction. Monte Carlo simulations are conducted to assess their finite sample performance.

*Faculty of Economics, Nagasaki University, 4-2-1 Katafuchi, Nagasaki 850-8506, Japan. Email: ymatsuki@nagasaki-u.ac.jp.

†Faculty of Engineering, Information and Systems, University of Tsukuba, Tennodai 1-1-1, Tsukuba, Ibaraki 305-8573, Japan. Email: sakudo@sk.tsukuba.ac.jp.