Testing for Common Costs in the City of Helsinki Bus Transit Auctions

This study performs tests developed by Haile et al. (2003) for the common values paradigm in first-price sealed-bid auctions, using data from bus transit auctions in the city of Helsinki. First the bidder's expected costs conditional on winning the auction are estimated using bids following Li et al. (2002). In common costs setting these costs are increasing in the number of bidders whereas with private costs they are invariant. Two tests for stochastic dominance between the cost distributions for different number of bidders are conducted. The first test compares quantile trimmed means and the second is a Kolmogorov-Smirnov type test based on subsampling. This study shows the need for additional robustness checks for some arbitrary choices in these tests. In the means test the choice of quantile does not matter asymptotically and is thus chosen arbitrarily. However the test is not robust to the choice of the quantile in this particular small data set. The second test is not robust to the choice of subsample size, number of subsamples taken or other repetitions of the test in some model specifications. Also pooling and controlling for observed bidder asymmetry are introduced. Results imply that the bus companies that have garages close to the contracted routes operate in an environment where the common costs components dominate the private ones and the bus companies that have garages far from these routes operate in an environment where private cost components dominate the common ones.