Inference on Welfare and Market Power in Markets with Multiple Equilibria*

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Abstract

We propose a methodology to empirically study the behavior of firms deciding whether to enter into a market and the prices they charge if they enter. Generally, we should expect firms to self-select themselves strategically into markets that better match their observable and unobservable characteristics, and such non-random allocation can lead to self-selection bias in the estimation of the parameters of demand and cost functions. We develop a multi-agent selection model where firms simultaneously play an entry game, and, conditional on entry, set profit maximizing prices. We test the methodology with a series of Monte Carlo experiments to show the selection bias when using traditional estimation methodologies such as GMM and to study the properties of the methodology here proposed. We show very preliminary but suggestive results for the case with two firms. The results show that a standard estimation with GMM that does not take into account for self-selection of firms into markets returns biased estimates of the parameters. The bias is economically significant, as we find that the estimated markup is 40 percent smaller than the markup at the true parameter values. We also show that the bias is not a function of the choice of the true parameter value. [*HERE, THE EMPIRICAL RESULTS*].

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