Xian Li

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Education

Ph.D. Economics, Pennsylvania State University, 2012-2018 (Expected)

B.S. Mathematics, Peking University, 2006-2010.

B.A. Economics, Peking University, 2007-2010.

Fields

Primary: Econometrics

Secondary: Industrial Organization, Applied Microeconomics

Teaching Experience

Instructor

Introduction to Econometrics (Undergraduate), 2014 Summer

Teaching Assistant

Econometrics I (Graduate), 2013 Fall
Introduction to Econometrics (Undergraduate), 2014 Fall
Introduction to Econometrics, Honor (Undergraduate), 2015 Spring
Industrial Organization (Undergraduate), 2015 Fall
Econometrics II (Graduate), 2016 Spring
Econometrics I (Graduate), 2016 Fall

Awards and Fellowships

University Graduate Fellowship, Pennsylvania State University, 2012-2013

Professional Activities

Referee for *Journal of Econometrics*

Research Assistant for Professor Patrik Guggenberger

"Inference on the Maximum of Two Means," 2014 Spring
"Identification- and Singularity-Robust Inference for Moment Condition Models," 2017 Spring

Working Papers

"**Robust Inference for Differentiated Product Demand Systems**" (Job Market Paper)

Abstract: This paper provides robust inference for differentiated product demand with measurement error in market shares. Market shares have been used as estimators for choice probabilities generated from a (random coefficient) discrete choice model. However, there are situations in which market shares are inaccurately measured, such in the cases of unobserved choice set variations (e.g., stock-out events), sampling error and measurement error in market sizes. The existing point identification approaches to address measurement error introduced by stock-out events do not allow for endogenous price. The partial identification approach by moment inequalities (e.g., Gandhi et al. (2013)), in general, does not characterize a sharp identified set and the demand function can only be estimated based on market level variations. This paper gives a sharp characterization of the identified set using moment equalities with latent variables. A feasible estimation of such sets requires reducing the dimension of an optimization problem. The existing duality approach does not have a natural generalization to the demand estimation environment due to the special dependence structure inside the market. This paper further contributes to the existing econometric literature by providing a new method to reduce the dimension that exploits the convexity nature of this problem to accommodate within market dependence. Theoretically, the method is proven to be robust to measurement error in market shares, and it is also verified by simulations and empirical studies.

"**Identification and Estimation of Price Competition with Capacity Constraints**"

Abstract: Traditional models of price competition assume that the sales of firms are the exact realizations of the demand of the market, and firms compete by setting prices accordingly. However, in the case when firms have capacity constraints, the sales maybe the capacity cap of firms rather than the realized market demand (e.g. parking deck, hotel rooms). This paper presents an oligopoly model with homogeneous product in which the firms set up capacities first, then compete in price. The parameters of both demand and cost function are shown to be point identified with observed capacity and partially identified with unobserved capacity. An estimation procedure is proposed based on the identification result.

References

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Additional Information

Language: Chinese (Native), English (Fluent)

Skills: Matlab, Julia, GAUSS, Stata, C/C++, LaTeX