Huihui Li

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Academic Positions

Xiamen University, School of Economics & Wang Yanan Institute for Studies in Economics
   Assistant Professor, 2016–Present

Education

Ph.D. in Economics, Pennsylvania State University, 2016
   Dissertation Title: "Nonparametric Identification and Estimation of k-Double Auctions"

M.A. in Economics, Peking University, 2010
B.A. in Economics & B.S. in Statistics, Peking University, 2007

Research Interests

Econometrics, Industrial Organization, Applied Microeconomics

Publications

1. Han, Xinxin, Huihui Li, Yi-Lang Tang, Judith Palfrey, and Jiming Zhu (2022). "The Association of State-level Drug and Opioid Overdose Deaths with the Capacity of Behavioural Health Professionals in the United States." Forthcoming in *Health and Social Care in the Community*.

2. Chu, Chia-Shang J., Tianyi Wang, and Huihui Li (2011). "China's Macroeconomic Stability: An Empirical Study based on Survey Data." *China Economic Journal*, 4(1), 43–64.

3. Li, Huihui (2009). "Catastrophic Risk Management in China: Experience and Development." *Economic and Social Development*, 7(11), 25–28. (Chinese)

4. Li, Huihui, Jiazi Guo, Ting Han, and Yunbo Liu (2006). "Empirical Study on Performance Evaluation of Property Insurance Companies in China." *Risk Management and Economic Safety: Viewpoint of Finance and Insurance Industries*. Proceedings of CCISSR 2006 Conference, 62–82. (Chinese)

Working Papers

5. Li, Huihui and Kai Li. "Offline Size and Online Scale: A Tale of Two Platforms."

The online market can be categorized into two platforms: the reseller and the marketplace. Given that the relative scale of reseller to marketplace is larger in the United States than in China, our study proposes a novel explanation characterized by different pricing mechanisms for this online scale difference: we attribute this online scale difference to an offline determinant, the firm size distribution. Decentralized pricing, commonly adopted by a marketplace to attract firms to sell from it, is more favorable to smaller firms compared with the centralized pricing set by a reseller. Thus, the relative scale of the marketplace to the reseller is larger in China, given that the offline firm size distribution in China is skewed towards small firms compared with the United States.

6. Çelen, Boğaçhan, Sen Geng, and Huihui Li. "Belief Error and Non-Bayesian Social Learning: Experimental Evidence."

This paper experimentally studies whether individuals hold a first-order belief that others apply Bayes' rule to incorporate private information into their beliefs, which is a fundamental assumption in many Bayesian and non-Bayesian social learning models. We design a novel experimental setting in which the first-order belief assumption implies that social information is equivalent to private information. Our main finding is that participants' reported reservation prices of social information are significantly lower than those of private information, which provides evidence that casts doubt on the first-order belief assumption. We also build a novel belief error model in which participants form a random posterior belief with a Bayesian posterior belief kernel to explain the experimental findings. A structural estimation of the model suggests that participants' sophisticated consideration of others' belief error and their exaggeration of the error both contribute to the difference in reservation prices.

7. Li, Huihui. "Nonparametric Identification of k-Double Auctions using Price Data."

This paper studies the model identification problem of k-double auctions between one buyer and one seller when the transaction price, rather than the traders' bids, can be observed. Given that only the price data is available, I explore an identification strategy that utilizes the double auctions with extreme pricing weight ($k = 1$ or 0) and exclusive covariates that shift only one trader's value distribution to identify both the buyer's and the seller's value distributions nonparametrically. First, as each exclusive covariate can take at least two values, the buyer's and the seller's value distributions are partially identified from the price distribution for $k = 1$ or $k = 0$. The identified set is sharp and can be easily computed. I provide a set of sufficient conditions under which the traders' value distributions are point identified. Second, when the exclusive covariates are continuous, it is shown that the buyer's and the seller's value distributions will be uniquely determined by a partial differential equation that only depends on the price distribution, provided that the value distributions are known for at least one value of the exclusive covariates.

8. Li, Huihui and Nianqing Liu. "Nonparametric Identification and Estimation of Double Auctions with Bargaining."

This paper studies the nonparametric identification and estimation of double auctions with one buyer and one seller. This model assumes that both bidders submit their own sealed bids, and the transaction price is determined by a weighted average between the submitted bids when the buyer's offer is higher than the seller's ask. It captures the bargaining process between two parties. Working within this double auction model, we first establish the nonparametric identification of both the buyer's and the seller's private value distributions in two bid data scenarios; from the ideal situation in which all bids are available, to a more realistic setting in which only the transacted bids are available. Specifically, we can identify both private value distributions when all of the bids are observed. However, we can only partially identify the private value distributions on the support with positive (conditional) probability of trade when only the transacted bids are available in the data. Second, we estimate double auctions with bargaining using a two-step procedure that incorporates bias correction. We then show that our value density estimator achieves the same uniform convergence rate as Guerre, Perrigne, and Vuong (2000) for one-sided auctions. Monte Carlo experiments show that, in finite samples, our estimation procedure works well on the whole support and significantly reduces the large bias of the standard estimator without bias correction in both interior and boundary regions. We finally applies our approach to a union-management wage negotiations data for UK coalfields over 1893–1914.

9. Li, Huihui. "Uniform Consistency of a Boundary Corrected Kernel Density Estimator."

Zhang, Karunamuni, and Jones (1999) proposed a method of boundary correction for kernel density estimation, which is later improved by Karunamuni and Zhang (2008). This method uses the reflection technique involving reflecting a transformation of the data. In this paper, I consider a generalization of Zhang, Karunamuni, and Jones's estimator. The generalized estimator allows one to consistently estimate the density function, not only on a compact support, but also on arbitrary compact subinterval of the support on which the density is continuous but possibly has discontinuity at the endpoints. I establish the uniform consistency of the generalized estimator and show that it has a uniform convergence rate of $O_p(h^2 + \sqrt{\log n/(nh)})$, provided that the primary and the secondary bandwidths shrink at proper rates. The potential extension of the estimator in order to correct higher order bias is also discussed in the paper.

Work in Progress

10. "Psychiatric Workforce in China from 2017 to 2019."

11. "Semi-nonparametric Estimation of Double Auctions using Price Data."

12. "Costly Observation and Welfare in a Social Learning Environment."

13. "Group Membership Detection in High-Dimensional Panel Data."

14. "Improved Computational Method for Multidimensional Continuous-Choice Dynamic Problems."

Editorial Service

Referee for *Journal of Econometrics*

Seminars & Conference Presentations

2022   Asian Meeting of the Econometric Society in China

2019   Shanghai University of Finance and Economics, Monash/Xiamen Workshop on FEES

2018   California Econometrics Conference

2017   Shandong University, China Meeting of the Econometric Society, Annual Conference of International Association for Applied Econometrics

2016   Lancaster University, Xiamen University

2015   Midwest Econometrics Group, Canadian Econometric Study Group

2014   European Meeting of the Econometric Society, University of Hong Kong, Shanghai University of Finance and Economics, Renmin University of China

Teaching

Xiamen University (Instructor)

Advanced Econometrics (Graudate): Fall 2016–2022
Mathematical Statistics (Undergraduate): Spring 2022–2023
Mathematical Economics (Undergraduate): Fall 2016–2017, Spring 2019
Thesis Writing (Undergraduate): Spring 2020–2021

Pennsylvania State University (Teaching Assistant)

Intermediate Econometrics (Undergraduate): Spring 2012, Spring 2015
Economics of Uncertainty (Undergraduate): Fall 2014
Labor Economics (Undergraduate): Spring 2014
Empirical Methods (Graudate): Fall 2012
Introductory Macroeconomics (Undergraduate): Fall 2010, Spring 2011

Peking University (Teaching Assistant)

Managerial Economics (MBA): Fall 2009	Fundamentals of Management (MBA): Spring 2009
Managerial Accounting (MBA): Fall 2009	Corporate Finance (MBA): Fall 2008
Marketing in China (MBA): Spring 2009	

Advising

Master Students, as Primary Advisor

Jiahui Cheng (2020), Wanjun Fu (2020), Kangle Zhu (2020), Angda Li (2021), Xiaohui Wu (2021), Yuxuan, Huang (2022), Shuwei Xu (2022), Yuqin Gan (2023 expected), Xuekun Cheng (2023 expected), Xingquan Zheng (2023 expected).

Language & Skills

English (fluent), Chinese (native).

MATLAB, Python, Stata, R, C, SAS; LaTeX.

Certified China Associate Actuary.