

# Huihui Li 黎暉暉

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## Academic Positions

City University of Hong Kong, Department of Economics and Finance

Visiting Fellow, 2024–Present

Xiamen University, School of Economics & Wang Yanan Institute for Studies in Economics

Assistant Professor, 2016–2023

## 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. Zhu, Jiming, Haiyu Pang, Peicheng Wang, Yanhua Chen, Huihui Li, Qing Liu, Luwen Wang, Hangmei Jin, Liyan Gong, Jingyan Xie, Ting Lai, Aiyang Li, Lubin Liu, Mengsha Yan, Lifei Zhou, Yanqiu Luan, Lin Wang, Xiaoli Li, Xiping Luo, ... Lan Zhu (2024). “Female Urinary Incontinence in China after 15 Years’ Efforts: Results from Large-Scale Nationwide Surveys.” *Science Bulletin*, 69(20), 3272–3282.
2. Li, Dajun, Nan Zhang, and Huihui Li (2024). “Money versus Time: The Effects of Social Media Exclusion on Mental Construal and Donation Behaviors.” *Journal of Behavioral Decision Making*, 37(3), e2396.
3. Shen, Lijun, Ziyue Wu, Huihui Li, Feng Jiang, Yi-Lang Tang, Huanzhong Liu, Yuanli Liu, Tingfang Liu, and Jiming Zhu (2024). “Mental Health Professionals in China from 2017 to 2019: More Educated, Better Paid, but Less Satisfied.” *Asian Journal of Psychiatry*, 96, 104015. (Extended version)
4. Flaherty, Eóin, Xidong Guo, Huihui Li, and Jiming Zhu (2024). “The More Private Patients, the Fewer Public Patients? Evaluating the 2014 Hospitals Reform in Ireland.” UCD Geary Institute for Public Policy.
5. 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.” *Health and Social Care in the Community*, 30(6), e4585–e4593.
6. 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.
7. Li, Huihui (2009). “Catastrophic Risk Management in China: Experience and Development.” *Economic and Social Development*, 7(11), 25–28. (Chinese)
8. 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)

9. Li, Huihui and Nianqing Liu. “Nonparametric Identification and Estimation of Double Auctions with Bargaining.” (Revise and resubmit to *Econometric Theory*)

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 case of all bids being available, to the case of only transacted bids being available. Specifically, both private value distributions are point identified when all of the bids are observed. They are, however, partially identified when only the transacted bids are available. A sharp characterization of the identified set is provided in the latter case. Second, we estimate double auctions with bargaining using a two-step procedure that incorporates both boundary and interior bias correction. We then show that our value density estimators achieve the optimal uniform convergence rate of first-price 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 an estimator without bias correction in both boundary and interior regions.

10. Li, Huihui and Kai Li. “Offline Size and Online Scale: A Tale of Two Platforms.” (Revise and resubmit to *Journal of Economic Behavior and Organization*)

The online market operates through one of two prevalent business modes: the reseller or the marketplace. Although resellers and marketplaces coexist in many countries, their relative scales differ significantly. Motivated by the observation that the relative scale of resellers to marketplaces is typically larger in countries like the United States than in countries like China, we propose a novel explanation for this difference, linking it to offline firm heterogeneity—specifically, the firm size distribution. Instead of examining the factors that drive the exclusive adoption of one mode over the other, our study explores the heterogeneity that influences the relative scale of coexisting platforms. We find that revenue-sharing, commonly used by marketplaces, is more favorable to smaller firms than the retail pricing mechanism employed by resellers. Consequently, the relative scale of the marketplace to the reseller tends to be larger in countries where the offline firm size distribution skews toward smaller firms. These welfare implications also align with the observed differences in relative scale.

11. Li, Dajun, Liang Chen, Huihui Li, and Nan Zhang. “Confucian *Zhongyong* and Sustainable Behaviors: A Moderated Mediation Model Based on the Construal Level Theory.” (Submitted)

This study aims to understand whether and how Eastern culture-rooted *Zhongyong* thinking (often referred to as the golden mean) may affect individuals' sustainable behaviors. *Zhongyong* is a typical oriental Confucius thought that addresses interpersonal and environmental harmony. This study proposes a moderated mediating model to explore the underlying mechanism based on construal level theory and shed light on the moderating roles of *Mianzi* (reputation awareness) and public observability (public vs. private) in the topic of sustainability. A representative sample of 995 Chinese participants spanning across all provinces of China from a cross-sectional survey in this study, and the regression results showed that *Zhongyong* positively affected sustainable behavior through direct and indirect (e.g., construal level) paths. Notably, *Mianzi* exerts a significant moderating effect on both direct and indirect paths, while public observability predominantly influences the direct path. Our research findings could potentially inspire environmental organization managers to leverage this rich oriental cultural heritage for advancing sustainability objectives through online and offline green communication and campaigns.

12. Li, Dajun, Nan Zhang, and Huihui Li. “Confucianism Still Matters: The Role of *Zhongyong* on the Passive Social Media Users' Mental Health.” (Submitted)

Passive use of social media can have both positive and negative impacts on users' mental health. This study proposes that self-regulation theory related media use goals (mastery vs. performance) act as initial conditions for these effects. Mastery-goal oriented passive use can bolster mental health through social learning, whereas performance-goal oriented passive use may lead to detrimental upward social comparison, potentially resulting in mental health issues. Moreover, this study finds that *Zhongyong* (the golden mean) can amplify the positive path, such as social learning, through *Zhongyong*'s metacognition thinking and mitigate the negative path, such as social comparison, through its harmony orientation. The underlying mechanisms of *Zhongyong* and strategies for leveraging this oriental cultural heritage to improve media users' mental health are further discussed.

13. Guo, Xidong, Eóin T. Flaherty, Huihui Li, and Jiming Zhu. “The More Private Patients, the Fewer Public Patients? Evaluating the 2014 Hospitals Reform in Ireland.” (Submitted)

This study evaluates the 2014 hospital reform in Ireland, which allowed public hospitals to accommodate private patients in public wards. Concerns arose that this reform might incentivize consultants to prioritize private patients; however, consultants are contractually bound to treat three to four public patients for every private one. Using administrative hospital inpatient discharge records from the Hospital In-Patient Enquiry (2009–2015), which contain over 2.3 million observations, we assess the reform’s impact on hospital admissions, the ratio of private patients, and patients’ length of stay (LOS). Employing a difference-in-differences method, we use emergency department (ED) admissions as the control group and inpatients admitted electively as the treatment group. Our findings at the department level show no increase in the share of private patients but a significant rise in public admissions. Individual-level analysis indicates reduced LOS for both patient groups, suggesting increased public admissions without compromising patient outcomes, as mortality rates remained stable. This study demonstrates that with well-designed contracts, allowing private practice in public hospitals can increase public patient treatment without adverse effects.

14. 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.

15. 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.

16. 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

17. “Semi-nonparametric Estimation of Double Auctions using Price Data.”
18. “Costly Observation and Welfare in a Social Learning Environment.”
19. “Group Membership Detection in High-Dimensional Panel Data.”
20. “Improved Computational Method for Multidimensional Continuous-Choice Dynamic Problems.”

## Editorial Service

Referee for *Journal of Econometrics*, *China Finance Review International*

## 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

### *City University of Hong Kong (Instructor)*

- Economics for Business (Graduate): Fall 2024
- Microeconomics (Undergraduate): Fall 2024, Spring 2025

### *Xiamen University (Instructor)*

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

### *Massive Open Online Course / MOOC (Instructor)*

- [Thesis Writing: A Guide for Economic Students](#): 2024–Present

### *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 (Graduate): Fall 2012
- Introductory Macroeconomics (Undergraduate): Fall 2010, Spring 2011

### *Peking University (Teaching Assistant)*

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|--|---|
| 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), Xuekun Cheng (2023), Xingquan Zheng (2023).

### *Master Students, as Co-Advisor*

Xiwen Feng (2024), Shaolin Zheng (2024).

### **Skills, Certifications & Awards**

English (fluent), Chinese (native).

MATLAB, Python, Stata, R, C, SAS;  $\text{\LaTeX}$ .

Certified China Associate Actuary.

Xiamen University 2020 ZIQIANG Award for Teaching Excellence (awarded to 2 faculty members each year).

Second Prize of 2018 Xiamen University Teaching Competition.