

Qi Pan

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Education

University of Pennsylvania

Ph.D, Economics

○ Advisor: Aviv Nevo, Committee: Eric Bradlow, Pinar Yildirim

Philadelphia, PA

2020 (Expected)

Renmin University of China

M.S, Economics

○ Advisor: Young Li

Beijing, China

2014

Sun Yat-Sen University (Zhongshan University)

B.S, Mathematics and Applied Mathematics

Guangzhou, China

2011

Research Interests

- Quantitative Marketing
- Econometric Modeling
- Empirical Industrial Organization
- Dynamic Pricing
- Sharing Economy

Publication

1. "Testing Volatility Persistence on Markov Switching Stochastic Volatility Models," with Yong Li, *Economic Modelling*, Vol 35, Issue 1, 45-50.

Working Paper

"Costly Price Adjustment and Automated Pricing: The Case of Airbnb" (Job Market Paper)

On many e-commerce platforms such as Airbnb, StubHub and TURO, where each seller sells a fixed inventory over a finite horizon, the pricing problems are intrinsically dynamic. However, many sellers on these platforms do not update prices frequently. In this paper, I develop a dynamic pricing model to study the revenue and welfare implication of automated pricing which allows sellers to update their prices without manual interference. The model focuses on three factors through which automated pricing influences sellers: price adjustment cost, buyer's varying willingness to pay and inventory structure. In the model, I also take into account competition among sellers. Utilizing a unique data set of detailed Airbnb rental history and price trajectory in New York City, I find that the price rigidity observed in the data can be rationalized by a price adjustment cost ranging from 0.9% to 2.2% of the listed price. Moreover, automated pricing can increase the platform's revenue by 4.8% and the hosts' (sellers') by 3.9%. The renters (buyers) could be either better off or worse off depending on the length of their stays.

Working in Progress

1. *"The Impact of Airbnb on Housing Affordability"*, joint with Wen Wang
2. *"Credit Rating Stability and Quality with Multiple Credit Rating Agencies"*, joint with Wei Tan

Teaching Experience

University of Pennsylvania

Industrial Organization, Recitation Instructor

2017

University of Pennsylvania

Introductory Economics, Teaching Assistant & Instructor

2015,2017

Renmin University of China

Applied Econometrics, Instructor

2014

Honors and Awards

- Xingmei Zhang & Yongge Dai Fellowship, University of Pennsylvania, 2014-2015
- National Scholarship for Graduate Students, Renmin University of China, 2013
- Outstanding Graduate Students, Renmin University of China, 2012
- Renmin University of China Graduate Students First-Class Scholarship, 2011-2013

Language and Computer Skills

- Chinese (Cantonese & Mandarin: native); English (fluent)
- Proficient in Matlab, Stata, R and Python

Doctoral Coursework

- Microeconomic Theory I: Steven Matthews, Andrew Postlewaite
- Microeconomic Theory II: George Mailath, Mallesh Pai
- Empirical Models in Marketing: Eric Bradlow
- Econometrics I: Frank Schorfheide, Xu Chen
- Econometrics II: Francis Diebold
- Econometrics III: Petra Todd
- Econometrics IV: Frank Schorfheide, Francis J. DiTraglia
- Empirical Methods of Industrial Organization: Aviv Nevo
- Numerical Methods in Economics: Ulrich Doraszelski
- Structural Econometrics: Robert Miller
- Firm Dynamics and Aggregate Productivity: Ezra Oberfield

References

- Aviv Nevo (Advisor)
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University of Pennsylvania, Philadelphia, PA 19104-6304
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- Eric T. Bradlow (Committee member)
K.P. Chao Professor, Professor of Marketing, Statistics, Education and Economics
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- Pinar Yildirim (Committee member)
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