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EDUCATION

Ph.D. Candidate in Economics, University of Pittsburgh, expected completion date: December 2020. Thesis Title: "Essays on Estimation of Microeconomic Models"
Thesis Committee: Prof. Arie Beresteanu, Prof. Osea Giuntella, Prof. Federico Zincenko, Prof. Akshaya Jha

M.A. in Economics, Peking University HSBC Business School, Shenzhen, China, 2014.

M.A. in Finance, The University of Hong Kong, Hong Kong, 2014.

B.A. in Biological Science, Peking University, Beijing, China, 2011.
B.A. in Economics (double degree), Peking University, Beijing, China, 2011.

RESEARCH INTERESTS

Primary Fields: Empirical Industrial Organization
Secondary Fields: Labor Economics, Mathematical and Quantitative Methods

WORKING PAPERS

"**Paying More for a Shorter Flight? - Hidden City Ticketing.**" (*Job Market Paper*)

"Maximum Likelihood Optimization via Parallel Estimating Gradient Ascent." (*joint with Yining Wang, submitted to INFORMS Journal on Computing*)

"**Does H-1B Visa Reforms Affect Whether US Natives Major in STEM Fields?**"

RELEVANT POSITIONS HELD:

Research Assistant to Prof. David Ong and Prof. Jun Lu, Peking University HSBC Business School, 2011-2013.

TEACHING EXPERIENCE:

University of Pittsburgh:
Instructor, *Introduction to Macroeconomic Theory* (undergraduate), Summer 2019, Summer 2018.
Teaching Assistant, *Introduction to Macroeconomic Theory* (undergraduate), Fall 2019 (to Prof. Tod Porter), Spring 2018 (to Dr. Jing Xie), Summer 2017 (to Prof. Hao Feng), Spring 2017 (to Prof. David Hewitt).
Teaching Assistant, *Introduction to Microeconomic Theory* (undergraduate), Fall 2017 (to Prof. Kevin Shaver).
Teaching Assistant, *Advanced Microeconomic Theory I* (graduate), Fall 2016 (to Prof. Roee Teper).

Peking University HSBC Business School:
Teaching Assistant, *Game Theory* (graduate), Spring 2014 (to Prof. Young Joon Park).
Teaching Assistant, *Advanced Econometrics I* (graduate), Spring 2013 (to Prof. Yu Zhou).
Teaching Assistant, *Advanced Financial Economics* (graduate), Fall 2012 (to Prof. Sungbin Sohn).
Teaching Assistant, *Advanced Microeconomics I* (graduate), Fall 2012 (to Prof. Young Joon Park).

The University of Hong Kong:
Teaching Assistant, *Financial Engineering* (graduate), Fall 2013 (to Prof. Matthias Buehlmaier).
Teaching Assistant, *Spreadsheet Modeling in Finance* (graduate), Fall 2013 (to Prof. Po-Hsuan Hsu).

WORKING PAPERS ABSTRACTS

"**Paying More for a Shorter Flight? - Hidden City Ticketing**" (*Job Market Paper*)
Abstract: Hidden city ticketing occurs when an indirect flight from city A to city C through connection node city B is cheaper than the direct flight from city A to city B. Then passengers traveling from A to B have an incentive to purchase the ticket from A to C but get off the plane at B. In this paper, I build a structural model to explain the cause and impact of hidden city ticketing. I collect empirical data from the Skiplagged webpage and apply global optimization algorithms to estimate the parameters of my model. I also conduct counterfactual analysis to shed some light on policy implications. I find that hidden city opportunity occurs only when airlines are applying a hub-and-spoke network structure, under which they intend to lower their flying costs compared to a fully connected network. I find that in the short run, hidden city ticketing does not necessarily decrease airlines' expected profits. Consumer welfare and total surplus always increase. In the long run, the welfare outcomes become more complicated. For some routes airlines have the incentive to switch from hub-and-spoke network to a fully connected one when there are more and more passengers informed of hidden city ticketing. During this process, firms always result in lower expected revenue, while consumers and the whole society are not necessarily better off.

"Maximum Likelihood Optimization via Parallel Estimating Gradient Ascent." (*joint with Yining Wang*)
Abstract: Global optimization without access to gradient information is a central task to many econometric applications as the tool to obtain maximum likelihood estimators for very complicated likelihood functions. The estimating gradient descent framework is particularly popular, which uses local functional evaluation to build gradient estimates and perform gradient descent from multiple initial points. In this work, we study the problem of coordination between the multiple "threads" of estimating gradient descent in order to pause or terminate unpromising threads early. The high-level idea is to make predictions, either conservative or aggressive, on the potential progress of each estimating gradient descent threads and to compare them with the progress on other threads. We also test our proposed methodology on both synthetic data and real airline pricing data, and compare with competitive methods including the genetic algorithm and the pattern search algorithm. The numerical results show the effectiveness and efficiency of our proposed approach.

"**Does H-1B Visa Reforms Affect Whether US Natives Major in STEM Fields?**"
Abstract: This paper exploits large changes in the H-1B visa program and examines the effect of changes in H-1B admission levels on the likelihood that US natives major in STEM fields. Compare to impact on labor market outcomes, the possible impact of H-1B visa reforms on natives' college major choices indicate effect over longer horizons. I find some evidence that H-1B population adversely affect natives' choices in STEM fields when they enter the college and graduate from it. Both male and White subgroups have been negatively affected, and the native Asian subgroup suffer from the most dramatic crowding-out effect. Since foreign born Asian account for a large proportion of H-1B visa holders, there might be an interesting "Asian crowd out Asian" story.

SEMINAR AND CONFERENCE PRESENTATIONS:

2019 China Meeting of the Econometric Society, Guangzhou, China, Jun 2019.
14th Economics Graduate Student Conference, St. Louis, MO, Oct 2019.
2020 APPAM DC Regional Student Conference, Washington, DC, Apr 2020. (Accepted, conference switched to online program due to COVID-19)
The Second International Workshop "Market Studies and Spatial Economics", Moscow, Russia, Apr 2020. (Accepted, conference cancelled due to COVID-19)

HONORS, FELLOWSHIPS AND GRANTS:

University of Pittsburgh:
Social Sciences Doctoral Dissertation (SSDD) Fellowships, 2018-2019.

Peking University HSBC Business School:
National Scholarship for Graduate Students, 2013-2014.
Second-class Tuition Scholarship, 2011-2014.
Academic Excellence Award, 2012-2013.

Peking University:
21st Century Financial News Scholarship, 2009-2010.

LANGUAGES:

Mother Tongue: Mandarin
English: Fluent

SKILLS:

Stata
MATLAB
R
SQL

REFERENCES:

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