

Professional Summary

Econometrician with extensive experience in applied and theoretical research. Expert in causal inference and statistical modeling, including A/B testing, Differences in Differences, Synthetic Control, Double Machine Learning, Instrumental Variable, and Generalized Method of Moments. Proficient in Python, Stata, and SQL for implementing complex data analysis. Effective communicator of complex economic and technical concepts.

Technical Skills

Software: Python, Stata, SQL, GraphViz, LaTeX.

Statistical Methods: A/B Testing, Treatment Effect, Differences in Differences, Synthetic Control, Double Machine Learning, Covariate Adjustment, Sample Selection/Weighting, Regression Discontinuity, Instrumental Variable, Control Function, Generalized Method of Moments, Logit, Probit, Tobit, Markov Chain Monte Carlo, Bootstrapping Methods.

Professional Experience

Assistant Professor, Tippie College of Business - University of Iowa 08/2020 - 05/2025

- Conducted research in applied and theoretical econometrics. Taught undergraduate and Ph.D. econometrics courses with strong focus on causal inference.

Graduate Student Instructor, Department of Economics - UC Berkeley 01/2015-05/2019

- As a teaching assistant, led discussion sections for undergraduate and Ph.D. economics courses. Received Outstanding Graduate Instructor Award.

Research Assistant, Department of Economics - UC Berkeley 06/2016-01/2017

- Wrote Python code that implements importance sampling and bootstrapping of graphs (adjacency matrices) with a given degree sequence. Wrote and verified statistical models.

Selected Research Projects

“Network of Loyalty Programs: A Sequential Formation”

- Utilizes novel data collected from 10Q and 10K, a structural model, and Markov Chain Monte Carlo estimation to study partnership formation among credit card issuers, hotel chains, and airlines.
- Finds (1) firms are more likely to form partnerships with a firm that is already a partner of a competitor (e.g., Amex is a competitor of Citi) than otherwise, (2) firms value how a new partner complements their existing portfolio of partners. These results hold above and beyond the individual characteristics (KPIs) of both firms involved in a partnership formation.

“Dyadic Regression with Block Fixed Effects and Application to Input-Output Matrix”

- Proposes a novel dyadic logit model with two-way block-specific fixed effects. Uses it to study the relationship among industries that constitute the U.S. Input Output matrix.
- Key innovation is integrating stochastic blockmodel with dyadic logit to (1) circumvent the incidental parameter problem and (2) reduce computation cost.

Education

UC Berkeley

- Ph.D., Economics 07/2014 - 08/2020
- B.A., Applied Mathematics and Economics, *high distinction, Phi Beta Kappa* 01/2011 - 05/2013

Other

- U.S. Permanent Resident, South Korean Citizen.
- Scored 586/600 on xAI Cognitive Reasoning Assessment (in my defense, I had a flu at the time :p).