Chloe Yunjie Song

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Education

Ph.D. Candidate in Economics, **Boston University**, Boston, MA, 2021-2027 (Expected)

Fields: Empirical Industrial Organization; Applied Econometrics

B.A. in Economics with honors (Summa Cum Laude), **New York University Shanghai**, 2016-2020

Double major in Data Science

New York University Abu Dhabi (Study Away), Fall 2018

New York University (Study Away), Spring 2019

Research

Demand for Interconnection at U.S. Colocation Data Centers (job market paper)

Colocation data centers are critical Internet infrastructure, serving as physical hubs where Internet Service Providers (ISPs) interconnect to exchange data. Despite the industry's scale and rapid growth, little is known about the forces shaping the geographic distribution of these facilities. This paper studies how network effects and geographic frictions jointly shape ISP interconnection decisions and evaluates whether the observed spatial distribution of data centers can be improved. I document reduced-form evidence that network density raises connection probabilities and geographic distance deters connection for both multi-homing and single-homing providers, with distance sensitivity varying sharply by service technology. I then estimate a structural demand model in which ISP connection choices and data center popularity are jointly determined as a perfect Bayesian Nash equilibrium of a simultaneous-move game of incomplete information via a constrained maximum likelihood (MPEC) approach. Data centers with a longstanding presence in the market are treated as anchor players with an exogenous number of connections, and the network effect is identified from the nonanchor facilities. Network effects are positive for both multi-homing and single-homing providers (0.06 and 0.05, respectively). Counterfactual entry raises aggregate ISP welfare primarily by expanding connection options, with network effects adding a smaller positive contribution. These gains mask distributional differences: benefits are concentrated among providers eligible to use the entrant, while the median provider experiences a small loss. Network feedback transmits entry's effects across state boundaries, suggesting that the demand-side effects of a state-level data-center subsidy may extend beyond the subsidizing state.

Market Power vs. Network Effects: Evidence from the Internet Services Market (with Marc Rysman)

When two prominent Internet service providers (ISPs) merge, they could either leverage efficiency gains to attract more customers or exercise their increased market power, which could drive away customers. In this paper, we empirically study the effects of a merger between two Tier-1 ISPs, Level 3 and CenturyLink, in 2017. Using data from Center for Applied Internet Data Analysis (CAIDA), we construct a panel of ISP connectivity relationships and examine how Internet connectivity changed following the horizontal merger. Using a difference-in-differences design, we find that the number of customers of the merged CenturyLink-Level 3

decreased by 26% relative to the control firms. Post-merger, the merged firm gained 4% fewer new customers and lost smaller customers than the control firms.

The Making of a World Champion: How Much Does Individual Talent Matter in Formula One Racing?
This project examines the relative importance of individual talent versus team quality in Formula One racing. Success in racing depends on both exceptional skill and access to high-performing cars, but the relative importance of the two remains an empirical question. I apply the AKM framework to decompose race results into driver, constructor, and match fixed effects. Exploiting team structure and driver mobility, I estimate the contribution of each component to overall performance. Preliminary results indicate that constructor effects account for roughly 35% of outcome variance, driver effects for about 18%, and sorting effects for approximately 30%.

Intergenerational Wealth Mobility in South Korea: Evidence from the Korean Labor and Income Panel Study (KLIPS) (Undergraduate Thesis)
This paper measures intergenerational wealth mobility in South Korea using data from the Korean Labor and Income Panel Study. I estimate intergenerational elasticity, a quintile transition matrix, and rank-rank correlation. A key observation from the transition matrix is that wealth persistence is strongest among the wealthiest and poorest populations. Among children from the bottom wealth quintile, 29% remain in the bottom, while 28% of children from the top quintile remain in the top.

Work Experience

Summer 2025	Economist Intern, Amazon
2023-2024	Research Assistant for Prof. Tesary Lin and Andrey Fradkin, Boston University
2022-2023	Research Assistant for Prof. Jetson Leder-Luis, Boston University
Summer 2022	Ph.D. Intern, Massachusetts Department of Housing and Community Development
Summer 2020	Research Assistant for Prof. Jens Hougaard, NYU Shanghai
Fall 2019	Research Assistant at NYU Shanghai Volatility Institute, NYU Shanghai
Fall 2018	Research Assistant, Abu Dhabi Department of Economic Development
Summer 2018	Research Assistant for Prof. Ryo Okui, NYU Shanghai

Teaching Experience

Boston University

Spring 2026	Teaching Assistant, Health Economics (Undergraduate&Graduate); Behavioral Economics (Graduate)
Spring/Fall 2025	Teaching Assistant, Industrial Organization (Undergraduate)
Fall 2023, Fall 2024	Teaching Assistant, Introductory Microeconomics

NYU Shanghai

Spring 2021	Teaching Associate, Machine Learning
Fall 2020	Instructor of record, Introduction to Computer Programming

Honors, Scholarships, and Fellowships

2021-2026	Dean's Fellowship, Boston University
2019	Recognition Award, NYU Shanghai

Presentations and Conferences/Workshops

INFORMS Annual Meeting, Job Market Showcase, 2026
European Association for Research in Industrial Economics (EARIE), Rising Star, 2026
NBER Digital Economics and AI Tutorial, 2023, 2026
North American Network Operators' Group (NANOG), 2024

Research Grants

Institute for Economic Development Data Grant, Boston University, $3,000 (2024)

Academic Service

Boston University Empirical Industrial Organization Reading Group, Co-organizer, 2023-24

Software Skills

Python, Stata, R, SQL, MATLAB, GitHub