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EDUCATION
Ph.D., Economics, Boston University, Boston MA, May 2024 (expected)
    Dissertation Title: *Network Industries with Spatial Data*
    Main advisor: Marc Rysman
    Dissertation Committee: Marc Rysman, Jihye Jeon and Randall P. Ellis

M.S., Economics, Duke University, Durham, NC, 2018

B.A., Economics *(Summa Cum Laude)*, Boston University, Boston MA, May 2015

B.S., Business Administration *(Summa Cum Laude)*, Concentration in Accounting and
    Finance, Boston University, Boston MA, May 2015

FIELDS OF INTEREST
Empirical Industrial Organization, Applied Microeconomics

WORKING PAPERS
"Network Externalities and Spatial Spillovers of Entry: A Dynamic Analysis of Investment in
    Electric Vehicle Charging Stations in the U.S.," September 2023. Job Market paper.

WORK IN PROGRESS
"Competition Among Concert Promoters: A Study of Concert Tour Routing Network"

FELLOWSHIPS AND AWARDS
Doctoral Fellowship, Boston University, Fall 2018 – Fall 2023
Summer Non-service Fellowship, Boston University, Summer 2019 – Summer 2022
M.A. Merit Scholar Award (20% Tuition Waiver), Duke University, Fall 2016 – Spring 2018
Dean's List, Boston University, Fall 2011 – Spring 2015

WORK EXPERIENCE
Research Assistant for Professor Jihye Jeon, Department of Economics, Boston University,
    September 2020 – August 2021
Research Assistant for Professor Huseyin Yildirim, Department of Economics, Duke
    University, May 2017 – May 2018
Research Assistant for Professor Giuseppe Lopomo, The Fuqua School of Business, Duke
    University, December 2017 – May 2018
Economist Intern, Core AI Team, Amazon.com, Seattle WA, May 2022 – September 2022

DEPARTMENTAL SERVICE
Co-organizer, Empirical IO Reading Group, Boston University, Fall 2021 – Spring 2022

TEACHING EXPERIENCE

Instructor, An Introduction to Game Theory (CEEC0905), Summer Pre-College Program, Brown University, Summer 2021

Teaching Assistant, Department of Economics, Boston University

Game Theory (EC513, MA level), Spring 2020, Fall 2020, Fall 2022 – Fall 2023

Game Theory (EC403), Fall 2019 – Fall 2023

Market Structure and Economic Performance (EC332), Spring 2022

Market Structure and Industrial Organization (EC531, MA level), Fall 2021

Market Organization and Public Policy (EC333), Fall 2021

Introductory Microeconomic Analysis (EC101), Summer I 2020

Economics of Information (EC404), Fall 2019

Teaching Assistant, Competitive Strategy and Industrial Organization (ECON 564, MA level), Department of Economics, Duke University, Spring 2018

Teaching Assistant, Intermediate Accounting I (AC347), Questrom School of Business, Boston University, Fall 2014, Spring 2015

LANGUAGES

Chinese (Native), English (Fluent), Korean (Conversational)

COMPUTER SKILLS: R, MATLAB, Python, SQL, STATA, LaTeX, SAS, Java

CITIZENSHIP/VISA STATUS: China/F1

REFERENCES

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YAJIE TANG

Network Externalities and Spatial Spillovers of Entry: A Dynamic Analysis of Investment in Electric Vehicle Charging Stations in the U.S. (Job Market Paper)

Investment in charging infrastructure plays a crucial role in facilitating the widespread adoption of electric vehicles (EVs). Beyond the well-recognized network externalities, the establishment of a charging station also gives rise to spatial spillover effects, where the presence of a station in a remote area can positively influence EV adoption in other regions. Unlike vertically integrated firms like Tesla, *independent* stations often lack the incentive to fully internalize both sources of externalities, which can lead to over-provision of stations in urban areas and under-provision in rural areas. This paper investigates the effect of the geographical distribution of public fast-speed charging stations on EV adoption in the U.S. from 2009 to 2019. I develop a dynamic model of station entry that characterizes the interdependence between the growth of EV adoption and investment in charging stations. A novel component of the model is the way it captures features of a charging network such as its density at local regions and connectivity over long distances. I estimate the model using spatial data on charging stations and EV registration data. Assuming that station owners are motivated to strategically build charging stations at optimal locations to effectively promote the widespread adoption of EV, I simulate counterfactual industry outcomes, such as station entry and EV stock. The results indicate that optimizing the geographic distribution of independent charging stations through the reallocation of 9% of stations in urban counties to non-urban counties could have resulted in a 70% increase in non-Tesla EV stock by 2019 while maintaining the same total number of stations.

Competition Among Concert Promoters: A Study of Concert Tour Routing Network

Concert promoters are firms primarily responsible for assisting artists in securing and booking venues for their performances. Ownership consolidation of promoters in recent decades facilitates a geographical network of venues that an integrated promoter has control over across the country, which allows national promoters to internalize the potential coordination problem when scheduling touring routes for different artists. This paper analyzes this source of efficiency gain from a merger of promoters. I construct a structural model of promoter oligopoly competition in which each promoter takes the ticket prices as exogenous and maximizes the aggregate profit over the course of a year across a portfolio of artists and make decisions regarding the date and location of each concert. I take a revealed preference approach to estimate the structural model and then simulate a merger between the two largest US promoters in order to evaluate the efficiency gains from coordination.

November 2023