

East Lansing
Michigan

Yuxian Xiao

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EDUCATION

Ph.D. in Economics, Michigan State University Aug 2017 — (Expected) May 2023
M.Sc. in Economics, Shanghai Jiao Tong University, China Aug 2014 — Mar 2017
B.S. in Economics, Huazhong University of Science and Technology, China Aug 2010 — Jun 2014

SKILLS

Tools and Languages R, Stata, Python, ArcGIS, MySQL, and familiarity with Linux/Unix
Quantitative Research Causal Inference, Mathematical Modeling, Machine Learning, A/B testing
Communication English, Chinese

WORK EXPERIENCE

Intern / Economist May 2022 — Aug 2022
Amazon Seattle, Washington

- Estimating Amazon's environmental impacts by combining satellite pollution data with Amazon's package-route activity data.
- Applied causal inference tools (diff-in-diff, matching, and synthetic control) for estimation, and present the research results to management and internal audiences.

Research Assistant / "Bribing Voters to Support a State Carbon Tax" Aug 2019 — May 2022
Michigan State University, for Prof. Soren Anderson East Lansing, Michigan

- Assisted in analyzing the 20000+ survey respondents regarding their support for a hypothetical state carbon tax (based on real policy in Canada) that would redistribute tax revenue to state residents as rebates.
- Used Machine learning algorithms (LASSO, random forest) to study the voter characteristics' impact on their voting decisions.
- Simulated the possibility of passing the state carbon tax with different rebate distribution designs.

Research Assistant / "Can Pigou at the Polls Stop Us Melting the Poles?" Jan 2019 — Jun 2020
Michigan State University, for Prof. Soren Anderson East Lansing, Michigan

- Facilitated the analysis of voter's ideology inclination and their support of carbon tax.
- Cleaned and merged the 2018 election results in Washington State with the demographic data at census block group level.
- Visualized the correlation between voters' ideology score and their support of the Washington state carbon tax referendums.

RESEARCH EXPERIENCE

Research Paper / "The Pollution Reduction from California's Low Emission Program" Jun 2020 — Present
Michigan State University East Lansing, Michigan

- Applied causal inference approaches (difference-in-differences, event study, fixed effects with imputation, and augmented synthetic control) to analyze the impact of California's tailpipe emission standards on ambient air pollution.
- Linked over 20 million ground-level air pollution monitor records with meteorology data, nearby regions' stationary air pollution emissions, and social-economic data, and analyzed the large data sets with parallel computing.
- Presented the research findings to scholars at the egg time session of 2021 Midwest Energy Fest.

Research Paper / "What do regulators do when Air Pollution Monitors are Broken" Aug 2019 — Jun 2020
Michigan State University East Lansing, Michigan

- Applied event study methods to investigate how federal, state, and local regulators changed their inspection behaviors when air pollution monitors were broken/not work.
- Used ArcGIS to link thousands of air pollution monitors with their nearby air pollution emitters, and utilized satellite remote sensing data to determine the "real" pollution levels around broken monitors.
- Presented at MSU's Environmental and Science Policy Program 2020 Fall Research Symposium.

Research Paper / "The Impact of China's Top-1000 Energy-Saving Program" Jan 2016 — Aug 2018
Shanghai Jiao Tong University, coauthored with Haitao Yin, Jon Moon. Shanghai, China & East Lansing, Michigan

- Used propensity score matching and difference-in-differences methods to study how enterprises' competitiveness was affected by China's Top-1000 energy-saving program.
- Runner-up of 2020 Dennis J.O'Brien USAEE/IAEE Best Student Paper Award.
- Published in *The Energy Journal*.

ACTIVITIES

First Year Graduate Student Mentor Program (coordinator, mentor)

Fall 2019 — Spring 2020