Xianru Han

Last updated: November 5, 2025

Agricultural and Resource Economics
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EDUCATION

Ph.D. Agricultural and Resource Economics, University of Maryland, College Park, MD (expected Spring 2026)
M.S. Agricultural and Resource Economics, University of Maryland, College Park, MD, 2024
M.A. Statistics, Columbia University, New York, NY, 2020
B.S. Agricultural and Resource Economics & Statistics, University of Maryland, College Park, MD, 2018
B.A. Economics, China Agricultural University, Beijing, China, 2018

DISSERTATION

Title: "Essays on Environmental Economics"
Committee: Drs. Anna Alberini (Chair), Cinzia Cirillo, Maureen Cropper, Colin Vance, Roberton Williams.

RESEARCH FIELDS

Environmental and energy economics, transportation economics, and applied microeconomics

PUBLICATIONS

Fu, Xiao, Wentao Kang, Haoluan Wang, and **Xianru Han** (2025). Eliciting Consumer Preferences for Used Vehicle E-Commerce Platforms: A Discrete Choice Experiment Approach. *Research in Transportation Economics*, *113*, 101641.

Han, Xianru, Wenying Li, and Haoluan Wang (2024). A Burning Issue: Wildfire Smoke Exposure, Retail Sales, and Demand for Adaptation in Healthcare. *Environmental and Resource Economics, 87(11), 3011-3039.*

Han, Xianru, Haoluan Wang, and Jiaao Yu (2024). Navigate Through the Haze: Wildfire Smoke Exposure and Metrorail Ridership. *Transportation Research Part D: Transport and Environment*, *133*, 104309.

PAPERS

Han, Xianru (2025), "Potential v. Actual Environmental Regulation: Evidence from Germany's Car Market," University of Maryland, College Park, August (Job Market Paper).

Epanchin-Niell, Rebecca, Alexandra Thompson, **Xianru Han**, Jessica Post, Jarrod Miller, David Newburn, Keryn Gedan, and Kate Tully (2024), "Coastal Agricultural Land Use Adaptation to Sea Level Rise and Saltwater Intrusion," University of Maryland, College Park, July.

Han, Xianru (2024), "The Distributional Effects of Tighter Regulations: New Evidence from Sugarcane Burning in Florida," University of Maryland, College Park, April.

WORK IN PROGRESS

Lou, Jiehong, Xingchi Shen, Tania Lamprea, and **Xianru Han**, "Powering Equity: Government Incentives and Access to EV Charging in the San Joaquin Valley," University of Maryland, College Park.

Han, Xianru, Anna Alberini, and Colin Vance, "What Are the Effects of Local Driving Regulations? Evidence from Germany," University of Maryland, College Park.

PRESENTATIONS

"Potential v. Actual Environmental Regulation: Evidence from Germany's Car Market," presented at:

- 1th International Alpine Workshop on Energy Economics and Policy (AWEEP), Airolo, Switzerland, September 2025;
- 26th CU Environmental and Resource Economics Workshop, Vail, CO, September 2025;
- Ethics and Governance of Markets and Innovation Graduate Workshop, hosted by the Institute for Humane Studies, Virtual, July 2025;
- 2025 Summer Graduate Conference, hosted by the Institute for Humane Studies, Virtual, May 2025;
- RWI – Leibniz Institute for Economics Research Brown Bag Seminar, Essen, Germany, April 2025;
- Institute for Humane Studies Graduate Workshop on "Giving an Effective Job Talk," Louisville, KY, March 2025;
- 16th Empirical Methods in Energy Economics Workshop (EMEE), Washington, D.C., January 2025;
- Nordic Annual Environmental and Resource Economics (NAERE) Workshop, Bergen, Norway, June 2024.

"A Burning Issue: Wildfire Smoke Exposure, Retail Sales, and Demand for Adaptation in Healthcare," presented at:

- Harvard Climate Economics Pipeline Workshop, Cambridge, MA, June 2024;

- Heartland Environmental and Resource Economics Workshop, Champaign, IL, October 2023;
- Race, Ethnicity and Place Conference, Washington, D.C., October 2023;
- 24th CU Environmental and Resource Economics Workshop, Vail, CO, September 2023.

"The Distributional Effects of Tighter Regulations: New Evidence from Sugarcane Burning in Florida," presented at:

- Agricultural & Applied Economics Association (AAEA) Annual Meeting, Washington, D.C., July 2023;
- Association of Environmental and Resource Economists (AERE) Summer Conference, Portland, ME, May 2023;
- Interdisciplinary PhD Workshop in Sustainable Development (IPWSD) at Columbia University, New York, NY, March 2023.

RESEARCH EXPERIENCE:

Visiting Researcher, Environmental and Resources, RWI – Leibniz Institute for Economics Research, Essen, Germany, March 2025-April 2025

Research Assistant to:

Dr. Jiehong Lou, University of Maryland**,** May 2024-present

Dr. Anna Alberini, University of Maryland**,** June 2024-Aug 2025

Dr. Rebecca Epanchin-Niell, University of Maryland**,** June 2022-Jan 2024

Dr. Kenneth L. Leonard**,** University of Maryland, Jan 2021-Aug 2021

Dr. Jack Willis, Columbia University**,** May 2019-Dec 2019

Dr. Martin Rotemberg, New York University, May 2019-Dec 2019

TEACHING EXPERIENCE:

Teaching Assistant to:

Dr. Jorge Holzer, University of Maryland, College Park, MD, AREC610: Microeconomic Applications in Agricultural and Resource Markets (Ph.D. core course), Spring 2024, Spring 2022

Dr. Kenneth L. Leonard, University of Maryland, College Park, MD, AREC260: The Science of Gender in Economics and Development, Fall 2021

Dr. Michel Leonard, Columbia University, New York, NY, GR5293: Topics in Data Science: Applied Machine Learning for Financial Modeling (Graduate), Spring 2020

AWARDS:

- Academic Mentorship Award, Institute for Humane Studies, 2025 ($8000)
- Humane Studies Fellowship, Institute for Humane Studies, 2025 ($5000)
- Residency Funding, Institute for Humane Studies, 2025 ($5000)
- Humane Studies Fellowship, Institute for Humane Studies, 2024 ($2500)
- Dean's Fellowship, University of Maryland, 2020 ($5000), 2023 ($2500), 2024 ($5000)
- International Conference Student Support Award, University of Maryland, 2024
- Jacob K. Goldhaber Travel Grant, University of Maryland, 2023, 2024
- Magna Cum Laude Honor Graduate, University of Maryland, 2018
- Ray A. Murray Scholarship, University of Maryland, 2016–2018
- China Merited Undergraduate Student Scholarship, China Agricultural University, 2014–2016
- China National Scholarship, China Agricultural University, 2014–2015

PROFESSIONAL SERVICE:

Referee: Energy Economics, 2024, 2025
Discussant: Nordic Annual Environmental and Resource Economics (NAERE) Workshop, Bergen, Norway, June 2024
Mentor: AREC First Year Ph.D. Student Mentor, University of Maryland, 2024
Committee: AREC Search Committee for Assistant Director for the Ph.D. Program, University of Maryland, 2023

ACADEMIC ORGANIZATIONS:

- Association of Environmental and Resource Economists
- European Association of Environmental and Resource Economists
- Agricultural and Applied Economics Association

MEDIA COVERAGE:

Invited Contributor, Uncommon Econ Curriculum Project: Featured in an educational video on Production, Costs, and Regulation in the Sugarcane Industry, Spring 2024. https://www.uncommonecon.com/episode2

SKILLS:

R, Stata, MATLAB, Python, SQL, JavaScript

LANGUAGES:

English (fluent), Chinese (native)

REFERENCES:

Dr. Anna Alberini (primary advisor), Department of Agricultural and Resource Economics, University of Maryland, 2210 Symons Hall, College Park, MD, 20742; 301-405-1267; aalberin@umd.edu

Dr. Maureen Cropper, Department of Economics, University of Maryland, 4106A Tydings Hall, College Park, MD, 20742; 301-405-3483; mcropper@umd.edu

Dr. Colin Vance, Environment and Resources, RWI – Leibniz Institute for Economic Research; Constructor University Bremen, 45030 Essen, Germany; +49 201 8149 237; Colin.Vance@rwi-essen.de

PAPER ABSTRACTS:

Potential v. Actual Environmental Regulation: Evidence from Germany's Car Market

Abstract: Policymakers often announce or debate new regulations long before they are enforced, yet how such credible threats of future policy influence behavior remains understudied. This paper examines how potential v. actual regulatory pressure to reduce diesel emissions affects the new and used car markets in Germany, and consequently affects air pollution. I interpret the lawsuits initiated by an environmental organization against local governments as credible signals of potential future regulation, and exploit the staggered timing of the lawsuits in different German counties to examine their effects on car sales. I find evidence of a decline in the sales of used diesel vehicles in areas with ongoing lawsuits, and modest increases in sales of 7–12-year-old gasoline cars. In the new car market, private households increase gasoline car purchases, but diesel sales to both households and firms remain largely unchanged. These behavioral shifts coincide with a measurable reduction in ambient nitrogen dioxide concentrations. Comparing the effects of these regulatory threats with those of implemented diesel bans, I find that about two-thirds to three-quarters of the total adjustment in used-diesel markets occurs before the enforcement of diesel bans. Using data on more than 30 million used-car listings, I further show that bans reduce the resale value of high-emitting diesels by 3–5 percent and their listing volumes by roughly 20 percent.

The Distributional Effects of Tighter Regulations: New Evidence from Sugarcane Burning in Florida

Abstract: Environmental regulations shape the spatial distribution of pollution, influencing the burden on different communities. In South Florida, wind-based sugarcane burning regulations have historically favored wealthier, densely populated areas by limiting burning during specific wind conditions. In 2019, additional restrictions were introduced to limit burning on days with low air quality. By using satellite fire data and Aerosol Optical Depth (AOD) data, I assess the impact of these stringent restrictions on burning and air pollution. Results reveal a 41 percent decrease in burning on restricted days within the main cultivation area, potentially leading to increased burning on days without restrictions. This unintended consequence exacerbates air quality issues for the region's most vulnerable populations. The study reveals that regulatory enhancements can inadvertently exacerbate environmental inequities, underscoring the need for environmental justice policies that address historical and systemic discrimination in pollution distribution.