William Troske

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Dept. of Agricultural & Resource Economics,
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Education

Ph.D. in Agricultural and Resource Economics, University of California, Davis (Expected) 2027

Committee: Jim Sanchirico, Jamie Hansen-Lewis, Erich Muehlegger

M.A. in Economics, University of Wisconsin, Madison 2022

B.S.E. in Chemical Engineering, University of Michigan 2017

Research Fields

Environmental Economics, Industrial Organization, Agricultural Economics, Trade

Academic Publications

"Carious Lesions: Nanoparticle-Based Targeting and Detection of Microcavities" (2017) *Advanced Healthcare Materials* 6(1), 2192-2640. DOI: 10.1002/adhm.201600883 (with Nathan A. Jones, Sywe-Ren Chang, Brian H. Clarkson, Joerg Lahann)

Research in Progress

The Behavioral Impact of Sulfur Fuel Content Regulations

Abstract In 2012, the US and Canada implemented a technological regulation, called the ECA (emission control area), in their exclusive economic zone to reduce emissions from ocean-going ships. The ECA required ships to use low-sulfur fuel, increasing a ship's main operating cost. The EPA estimated that the operational cost of ships would increase by $18 for a twenty-foot-equivalent container. Operation costs, however, are not the only costs of regulation. In international trade, fuel and capital are substitutes and an increase in fuel prices leads to demand for larger (more fuel-efficient) ships. In this paper, I use data from 2006 to 2016 on commercial container ships' calls to US ports, from the Army Corps of Engineers, to construct a panel at the port-quarter level that tracks ship size and port exposure to the ECA for all US ports. Port exposure measures the average time a ship operates in ECA-regulated waters before reaching said port. I use the variation in port exposure to estimate the relative change in ship size for more exposed US ports after the ECA. I find the ECA led to about 3% larger ships for ports further along container routes. This is driven by larger ships shifting to serve the more exposed US ports. These findings show that fuel regulations favor larger ships, with implications for container movement along trade routes and investments for port expansions.

Behavioral Responses to Information on PFAS in Drinking Water
with Laura Alcocer Quiñones and Jeff Hadachek

Abstract As Per- and Polyfluoroalkyl Substances (PFAS) move towards being tested regularly through the Safe Drinking Water Act, we want to understand the margin through which consumers adapt to information on these chemicals in their water. This project aims to estimate the impact of information and contaminant alerts on consumer behavior, focusing on PFAS chemicals in drinking water. We will first use online data to assess public awareness of PFAS. Then, using a difference-in-differences framework with Nielsen scanner data, we will analyze whether consumers' purchases respond defensively to PFAS violations.

Scholarships, Honors, and Awards

UC Davis Jastro-Shields Graduate Research Award 2024

UC Davis Summer Research Fellow 2024

UW Madison, Honorable Mention Scholarship (Outstanding Research Paper in Applied Econometrics) 2022

Teaching Experience

Teaching Assistant, University of California, Davis

Intermediate Microeconomics	Spring 2025, Fall 2024, Fall 2022
Econometric Theory & Applications	Summer 2024
Environmental Economics	Fall 2025, Winter 2025, Spring 2024
Operations Research & Management Science	Summer 2023

Research Experience

Research Assistant, University of California, Davis

Tim Beatty & Joakim Weill: Estimated the labor response to wildfire smoke Fall 2023 - Winter 2024

Research Assistant, University of Wisconsin, Madison

Sarah Johnston: Created an algorithm in R to match car information to VIN numbers Summer 2022

Research Assistant, University of Michigan, Ann Arbor

Nathan Jones: Developed a starch nanopartical to identify carious legions Fall 2015 - Spring 2017

Professional Activities

UCD Natural Resource Economics and Policy Lab

Graduate Student Coordinator 2025 - Present

UCD ARE Graduate Student Association

Representative Fall 2022 - Fall 2024

Co-President Fall 2024 - Present

Policy Researcher - Clean Wisconsin March 2022 - Aug 2022

Summarized current academic knowledge around Natural Climate Techniques (Agroforestry or cover crops, for example) for carbon sequestration in agriculture, and made estimates to their effectiveness in Wisconsin

Quoting and Process Engineer - Advanced Plating Technologies Jan 2018 - July 2020

Served as an engineering resource and initial contact for customers in need of surfacing finishes for their parts.

Presentations and Workshops

8th Annual Social Cost of Water Pollution	Sept, 2025
Giannini Foundation of Agricultural and Resource Economics Student Conference	May, 2025
UChicago Price Theory Summer Camp	June, 2025

Other Writing and Media

Advanced Plating Technologies - Technical Blog

Solderable Gold Plating of Electrical Contacts (Aug 6th, 2020)

Nitric vs Citric Acid Passivation (July 11th, 2019)

Other

Software

Stata, R, Python, Julia, Git, ImageJ

References

Dr. Jim Sanchirico (Chair)
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Environmental Science and Policy
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Dr. Jamie Hansen-Lewis
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