MATTHEW A. TARDUNO

Contact Information

matthewtarduno@g.harvard.edu
https://matt-tarduno.github.io
+1-585-880-4777

Postdoctoral Fellow
Harvard University Center for the Environment

FIELDS: Environmental Economics, Public Economics

Professor James Sallee
sallee@berkeley.edu
+1 (773) 316-3480
Department of Agricultural
& Resource Economics

Professor Reed Walker
rwalker@berkeley.edu
+1 (510) 965-3298
Department of Economics
Haas School of Business

Professor Michael Anderson
mlanderson@berkeley.edu
Department of Agricultural
& Resource Economics

Education

University of California, Berkeley	Ph.D. Agricultural and Resource Economics	2022
Williams College	B.A. Mathematics, Economics	2016

Teaching

MBA Microeconomics	Haas School of Business	2021
Intermediate Microeconomics	Dept. of Agricultural & Resource Economics	2018

Grants, Fellowships, and Awards

2021	Research Fellow, *Law, Economics, and Politics Center at UC Berkeley*, Berkeley XLab Research Grant
2020	Research Fellow, *Law, Economics, and Politics Center at UC Berkeley*. Berkeley XLab Research Grant, Sacheti Family Fellowship.

Research Papers

"For Whom the Bridge Tolls: Congestion, Air Pollution, and Second-Best Road Pricing"
JOB MARKET PAPER. [Most Recent Version]

Real-world congestion zones are imperfect because they charge heterogeneous road users uniform prices, and invite externality spillovers in space and time. I show that given these imperfections, calculating optimal prices requires (i) individual-level externalities, (ii) individual elasticities, and (iii) cross-price elasticities between priced and unpriced trips. Using tolling microdata from California, I estimate a model of driving demand that yields these parameters. I then estimate optimal prices for proposed zones in three U.S. cities. I find that leakage pushes second-best prices below trip-level externalities, and that optimal peak pricing recovers just 30-40% of the welfare gains of a first-best policy.

Tarduno, Matthew. **"The Congestion Costs of Uber and Lyft"** *The Journal of Urban Economics*, 2021, 122, 103318. [Publication][Ungated]

Abstract: I study the impact of transportation network companies (TNC) on traffic delays using a natural experiment created by the abrupt departure of Uber and Lyft from Austin, TX. Applying difference in differences and regression discontinuity specifications to high-frequency traffic data, I estimate that Uber and Lyft together decreased daytime traffic speeds in Austin by roughly 2.3%. Using Austin-specific measures of the value of travel time, I translate these slowdowns to estimates of citywide congestion costs that range from $33 to $52 million dollars annually. Back of the envelope calculations imply that these costs are similar in magnitude to the consumer surplus provided by TNCs in Austin. Together these results suggest that while TNCs may impose modest travel time externalities, restricting or taxing TNC activity is unlikely to generate large net welfare gains through reduced congestion.

Research in Progress

"What Drives Support for Inefficient Environmental Policies?" [Pilot Results]

Negative externalities are often regulated with performance standards (e.g., fuel economy standards) where economic theory suggests that price-based mechanisms (e.g., fuel taxes) offer a more efficient alternative. The relative popularity of performance-based policies is puzzling: Given the cost-effectiveness of Pigouvian taxation and the ability of governments to pair these policies with redistribution, it should be possible to construct a price-based regulation that dominates a performance-based alternative on at least one of the three dimensions of efficacy, fairness, or cost, holding fixed the others. In this paper, I use an information provision experiment to understand what drives differences in voter support for these two policy types. Specifically, this experiment allows me to answer two questions: How do voters' perceptions of policy cost, effectiveness, and regressivity influence policy support? And do misperceptions of policy attributes explain the relative popularity of nontax corrective policies? Preliminary results from a pilot experiment conducted around a 2020 energy ballot initiative suggest that voters overestimate the effectiveness of performance-based policies at reducing carbon emissions. Oaxaca-blinder decompositions, however, suggest that differences in beliefs about policy attributes explain only a quarter of the difference in support for performance vs. price-based policies. As a result, neither rectifying misperceptions about policy attributes, nor redesigning price-based policies to compensate swing voters appear likely to significantly bolster support for price-based corrective policies.

"The role of information in the willingness to pay for clean air" with Reed Walker

"Can targeted rebates foster equity in congestion pricing schemes?" with James Sallee

Prior Employment	**Stanford University**	Research Assistant to Marcella Alsan	2016-2017

Talks Urban Economics Association (2022); UC Berkeley Environment and Resource Economics Seminar (2020, 2021); NC State Camp Resources (2021); UC Berkeley Law, Economics and Politics Center (2021); Giannini Agricultural and Resource Economics Student Conference (2019).

Activities	*Giannini Agricultural and Resource Economics Student Conference* (Organizer)	2020
	Berkeley ARE Diversity, Equity, and Inclusion Committee (Pedagogy Subcomittee Member)	2020-2021
	Student-Faculty Relations Committee	2021