### JACOB BRADT

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Education **Harvard University** 

Ph.D. Public Policy, 2018 to 2024 (expected)

A.B. Environmental Science and Public Policy with a Secondary in Economics, 2016

**Fields** Primary: Environmental Economics

Secondary: Industrial Organization

References Professor Joseph E. Aldy Professor Myrto Kalouptsidi

617-496-7213, joseph aldy@hks.harvard.edu 617-496-0832, myrto@g.harvard.edu

Professor Robin S. Lee Professor Ariel Pakes

617-495-5320, apakes@fas.harvard.edu 617-495-2997, robinlee@fas.harvard.edu

**Fellowships &** 2018 to present Harvard Environmental Economics Program Pre-Doctoral Fellow **Awards** 2022 Pre-Doctoral Fellowship on Carbon Pricing and Alternative Instruments in Future U.S. Energy and Climate Policy, Harvard University Vicki Norberg-Bohm Fellowship, Harvard University 2021 2020, '21, '22 Certificate of Teaching Excellence, Derek Bok Center, Harvard University Harvard Environmental Economics Program Prize for Best Thesis 2016 **Teaching** Ph.D. Math Camp Instructor, Harvard Public Policy, Health Policy, and August 2022 **Business Administration Programs** Spring 2021, '22 Economics of Climate Change and Environmental Policy, Harvard University, teaching fellow for Professor Robert N. Stavins Fall 2020, '21 American Economic Policy, Harvard University, teaching fellow for Professors Jeffrey Liebman and Larry Summers

> Fall 2020, '21 Climate Change Policy: Economics and Politics, Harvard Kennedy School,

Executive Education Program, teaching fellow for Professor Robert N. Stavins

**Employment** 2016 to 2018 Booz Allen Hamilton

White House Council on Environmental Quality 2015

2014 U.S. Environmental Protection Agency, National Center for Environmental

**Economics** 

Wharton Risk Management and Decision Processes Center, University of Research 2019 to 2020

Pennsylvania, research assistant to Dr. Carolyn Kousky

A Policy by Any Other Name: Unconventional Industrial Policy in the US Residential Solar Job Market Paper

**Industry** 

Consumer subsidies are a common policy tool for supporting the adoption of clean, energy-efficient technologies as illustrated by the Inflation Reduction Act of 2022. In addition to increasing take-up of new technologies, policymakers often justify consumer subsidy programs as a means of stimulating

infant industries, arguing that the presence of learning-by-doing and inter-firm knowledge spillovers reduce barriers to entry. This argument ignores the fact that potential knowledge transfers also make cost reductions—in part—a public good, thereby reducing the incentives for firms to expand output, reduce costs, and lower potential barriers to entry. To explore these tradeoffs, I estimate a dynamic structural model of the market for residential solar PV installations in California that endogenizes installation firms' entry and exit decisions and allows for learning-by-doing (LBD) with incomplete spillovers. I estimate that a 1% increase in a firm's experience leads to a 0.5% reduction in installation-specific costs and that industry experience is approximately 85% as effective at reducing costs as appropriable, own-firm experience. I use the model to determine the effect of several state and federal consumer subsidy programs on PV installer market structure and find that these programs can increase installer entry by as much as 20%.

#### **Publications**

**Bradt**, J.T., C. Kousky and O.E.J. Wing. 2021. "Voluntary Purchases and Adverse Selection in the Market for Flood Insurance." *Journal of Environmental Economics and Management*, 110.

Stock, J.H. and **J.T. Bradt**. 2020. "Analysis of Proposed 20-year Mineral Leasing Withdrawal in Superior National Forest." *Ecological Economics*, 174.

Keenan, J.M. and **J.T. Bradt**. 2020. 'Underwaterwriting:' From Theory to Empiricism in Regional Mortgage Markets in the US." *Climatic Change*, 162: 2043-2067.

**Bradt, J.T.** 2019. "Comparing the Effects of Behaviorally Informed Interventions on Flood Insurance Demand: An Experimental Analysis of 'Boosts' and 'Nudges." *Behavioural Public Policy*, 6(3): 485-515.

#### **Working Papers**

**Private Benefits from Public Investment in Climate Adaptation and Resilience** (w/ Joseph E. Aldy)

Flood protection infrastructure investments, such as Army Corps of Engineer levees, can enhance resilience to flood risks amplified by climate change. We estimate the benefits from levees by exploiting repeat residential property transactions. In areas protected by levees, home values increase 3 percent. Levees impose adverse spillover flood risks to nearby areas that reduce affected home values by 1 percent. Capitalized benefits in protected areas are progressive, but adverse spillover impacts are regressive. While there is little variation across race in capitalized benefits at levee construction, racial sorting occurs post-construction. Capitalized residential property benefits do not exceed levee construction costs.

# Papers in Progress

Two Birds, Two Stones: Complementarities and Optimal Targeting of Electric Vehicle and Solar PV Subsidies (w/ Frank Pinter)

Increasing the Adoption of Rooftop Solar in Madhya Pradesh (w/ Teevrat Garg and Meera Mahadevan)

Spatial Sorting, Agglomeration Economies, and Travel Cost Endogeneity in Recreation Demand Models

Clearing the Air: The Welfare Effects of the Clean Air Act's Regional Haze Rule

Hashtags for Hotelling: User-generated Social Media Data and Recreation Demand Models

## Seminars & Conferences

2023

National Bureau of Economic Research (NBER) Environmental and Energy Economics Summer Institute; Columbia University Managed Retreat Conference; Association of Environmental and Resource Economists (AERE) Summer Conference; University of California (UC) Virtual Environmental Economics Seminar; UC San Diego; Stanford University; Department of the Treasury; American Economic Association (AEA) Annual Meeting

2022 The Workshop in Environmental Economics and Data Science (egg timer); Northeast Workshop on Energy Policy and Environmental Economics (egg timer); AERE Summer Conference 2021 AERE Summer Conference; First Street Foundation Flood Lab 2020 Federal Housing Finance Authority **Academic Service** Referee for: Environmental & Resource Economics, Climate Risk Management, Behavioural Public Policy, Natural Hazards, Economic Inquiry Co-organizer of Harvard Environmental Economics Graduate Research Lunch, 2020-2022 Memberships American Economic Association, Association of Environmental and Resource Economists Software skills R, Julia, Stata, Matlab, LaTex Personal US Citizen, Married information