

Patrick Baylis

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Professional appointments

2016-Present POSTDOCTORAL FELLOW, Stanford Institute on Food Security and the Environment
2017 (deferred) ASSISTANT PROFESSOR, Vancouver School of Economics, University of British Columbia
2014-2016 GRADUATE STUDENT RESEARCH ASSISTANT, Lawrence Berkeley National Labs
2011-2016 GRADUATE STUDENT RESEARCHER, Energy Institute at Haas
2009-2011 SUSTAINABILITY CONSULTANT, Ackerstein Sustainability
2008-2009 MANAGEMENT CONSULTANT, Arcadia Solutions

Education

2016 PH.D. in Agricultural and Resource Economics, University of California, Berkeley
• Areas of specialization: Environmental economics and applied econometrics
• Dissertation: Essays on the Human Effects of Climate Change
– Committee: [Max Auffhammer](#) (chair), [Severin Borenstein](#), [Meredith Fowlie](#),
[Solomon Hsiang](#)
2012 M.S. in Agricultural and Resource Economics, University of California, Berkeley
2008 B.A. in Political Science/International Relations, Carleton College

Research

WORKING PAPERS

TEMPERATURE AND TEMPERAMENT: EVIDENCE FROM A BILLION TWEETS

I combine observations from a geographically and temporally dense corpus of more than a billion Twitter status updates with sentiment analysis and machine learning algorithms in order to understand preferences for temperature, with implications for climate change.

DEFAULT EFFECTS, FOLLOW-ON BEHAVIOR AND WELFARE IN RESIDENTIAL ELECTRICITY PRICING PROGRAMS (with **Peter Cappers**, **Meredith Fowlie**, **Anna Spurlock**, **Annika Todd**, and **Catherine Wolfram**)

- We study default effects in the context of a large randomized controlled trial of electricity pricing strategies. By comparing results from both opt-in and opt-out treatment groups, we estimate the effect of the program on customers who only enroll in the program when placed in an opt-out treatment group.

WORKS IN PROGRESS

PROJECTING THE IMPACT OF CLIMATE CHANGE ON U.S. ELECTRICITY LOAD (with **Max Auffhammer** and **Catherine Hausman**)

- Using a panel of disaggregated electricity demand consumption data that covers the entire United States, we link a statistically estimated relationship between temperature and load to a set of 20 climate models to predict changes in electricity demand.

WILDFIRE AND INSURANCE IN A CHANGING CLIMATE (with **Judson Boomhower**)

- We model and empirically investigate the interaction between spatial spillovers of wildfire prevention and the competitive structure of the fire insurance industry.

THE PSYCHOLOGICAL IMPACTS OF CLIMATE CHANGE (with **Nick Obradovich**)

- Using large datasets on human expressions, we identify psychological channels through which climate change will impact economic outcomes.

THE IMPACT OF AIR POLLUTION ON COGNITIVE EXPRESSION (with **Nick Obradovich**, **Josh Graff Zivin**, and **Matt Neidell**)

- We investigate the effect of air pollution on cognitive impairment using multiple novel measures of cognitive capacity from the social media platform Twitter.

CRITICAL GAS: MEASURING THE BICYCLE USAGE RESPONSE TO GAS PRICES

- I construct estimates of the bike usage elasticity to changes in the price of gas, employing a novel panel dataset constructed from Google searches over time.

Teaching

- 2013 GRADUATE STUDENT INSTRUCTOR, **ARE212: Multiple Equation Estimation**
- Graduate econometrics; **Max Auffhammer**, instructor
 - Section **material** applies economic theory to empirical data work using R
 - Received Outstanding Graduate Student Instructor award

Presentations

- 2016 June 30: UC-Berkeley (Energy Camp)
April 21: UC-Berkeley (Energy Institute Research in Progress Seminar)
March 15: National Center for Atmospheric Research (Invited presentation)
February 8: Stanford Management Science & Engineering (Invited presentation)
February 3: University of British Columbia (Invited presentation)
February 1: Stanford Center on Food Security and the Environment (Invited presentation)
January 27: Pittsburgh University (Invited presentation)
January 20: Montana State University (Invited presentation)
- 2015 October 23: UC-Berkeley (Energy Institute Seminar)
October 17: University of Illinois (Heartland Workshop)
September 25: UC-Berkeley (ARE Seminar)
September 4: University of Colorado (Vail Workshop)
July 15: UC-Berkeley (Climate Workshop)
July 13: UC-Berkeley (Energy Institute Research in Progress Seminar)
June 5: Associate of Environmental and Resource Economics Annual Conference (Sponsored presenter)
April 16: UC-Berkeley (Climate Change Economics Lunch)
- 2014 October 27: UC-Berkeley (Energy Institute Research in Progress Seminar)
April 25: UC-Berkeley (Energy Institute Research in Progress Seminar)

Grants, Honors & Awards

- 2016 National Center for Atmospheric Researcher visiting researcher
2015 Giannini Foundation grant (joint with Judson Boomhower)
2013 Outstanding Graduate Student Instructor award

Service

ADMISSIONS COMMITTEE, Student representative, University of California Berkeley
MEMBER, American Economic Association
MEMBER, Association of Environmental and Resource Economists

Other

REFeree

Energy Economics

MEDIA

TEMPERATURE AND TEMPERAMENT: EVIDENCE FROM A BILLION TWEETS: Popular Science, Washington Post, Time, Weather Channel, Berkeley News, UC Newsroom, ChicagoInno