

Placement Directors:	Professor Benjamin Golub	847-491-8230	<a href="mailto:benjamin.golub@northwestern.edu">benjamin.golub@northwestern.edu</a>
	Professor Rob Porter	847-491-3491	<a href="mailto:r-porter@northwestern.edu">r-porter@northwestern.edu</a>
Placement Administrator:	Lola May Ittner	847-491-8200	<a href="mailto:econjobmarket@northwestern.edu">econjobmarket@northwestern.edu</a>

## Contact Information

Department of Economics  
Northwestern University  
2211 Campus Drive  
Evanston, IL 60208

Mobile: 206-617-4230  
[johanna.rayl@northwestern.edu](mailto:johanna.rayl@northwestern.edu)  
[jrayl.github.io](https://jrayl.github.io)  
Citizenship: USA

## Fields

Research: Energy and Environmental Economics, Public Economics, Industrial Organization  
Teaching: Energy and Environmental Economics, Public Economics, Industrial Organization

## Education

Ph.D., Economics, Northwestern University, 2026 (Anticipated)  
Committee: Mar Reguant (Chair), Piotr Dworczak, Chris Udry, Silvia Vannutelli  
M.A., Economics, University of Chicago, 2019  
B.A., Environmental Analysis, *cum laude*, Pomona College, 2016

## Fellowships & Awards

Vising Scholar, Federal Reserve Bank of Chicago, Microeconomic and Regional Teams, 2024  
University Fellowship, Northwestern University, 2022-2023 & 2025-2026  
National Science Foundation Graduate Research Fellowship, 2018-2024

## Teaching Experience

Teaching Assistant, Northwestern University, 2025  
MMSS Senior Seminar (Gastón Illanes)  
Curriculum Development, University of Chicago, 2016-2017  
Global Energy and Climate Challenge (Michael Greenstone and John Deutch)

## Research Experience

Research Specialist, Climate Impact Lab, 2018-2019  
Research Assistant, Michael Greenstone, Energy Policy Institute of the University of Chicago, 2016-2018  
Summer Research Intern, Yusuke Kuwayama, Resources for the Future, 2015

## External Talks

Federal Reserve Bank of Chicago, Brown Bag in Microeconomics, 2025  
Group for Research in Applied Economics (GRAPE) Inequality-aware Market Design (IMD) Seminar, 2024

## Professional Experience

Referee for *JAERE*  
U.S. Census Bureau Special Sworn Status, 2025-present  
Sloan/Berkeley EEE Summer School, 2023  
Creator and Organizer, Energy and Climate Lunch & Learn, University of Chicago, 2017-2018

## Job Market Paper

**“Redistribution with Limited Information: Fuel Subsidies and Cash Transfers in Indonesia”** with Budy Resosudarmo  
In-kind transfers may outperform cash as a means of progressive redistribution when a government has limited data with which to identify poor households. We formulate a model of redistribution with limited information to examine the grounds for one of the most common types of in-kind transfers worldwide: energy subsidies. In our model, a planner with progressive redistributive goals and

limited information chooses between cash transfers and nonlinear fuel subsidies. The optimality of a nonlinear fuel subsidy over a targeted cash transfer is determined by the joint distribution of household income, observable characteristics, and household fuel demand. We estimate the primitives of this model for the Indonesian population using rich administrative survey data and variation generated by large fuel policy reforms. We quantify optimal interventions among nonlinear fuel prices, targeted cash transfers, and combinations of the two. Combinations of cash and in-kind programs, involving self-financing fuel pricing policies, outperform single interventions.

## Works in progress

**“The Effects and Effectiveness of Emergency Price Controls during Natural Disasters”** with Michael Dinerstein, Nadia Lucas, Ishan Nath

Anti-price gouging laws, present in most US states, penalize retailers if they make large price increases to disaster supplies during states of emergency. Price caps during periods of high and inelastic demand may worsen or alleviate shortages of essential supplies – they can decrease the incentive to restock supplies by reducing the resale price at which the new inventory sells, or they can increase the incentive to restock supplies by generating more unmet demand at initial inventory levels. We use retailer scanner data and novel trucking data to estimate the effects of US natural disasters on quantities transacted and prices. We estimate that disasters increase demand for a set of 20 essential goods, with increases in mean quantities transacted but also in the probability of having a stockout. Prices increase, with the largest changes concentrated in a minority of retailers, but we see no effects of anti-price gouging laws on the probability of price hikes. On the supply-side, we see limited evidence of marginal cost increases and we estimate a shift in restocking from the disaster period to the week proceeding it. Motivated by this evidence, we specify a structural model that will evaluate how stringent enforcement of price caps would affect shortages and consumer surplus during disasters. We construct a non-parametric identification argument that combines an instrument for restocking costs with the observed joint distribution of restocking and quantities transacted to recover latent demand and initial inventory levels.

**“Paid Maternity Leave and Childrens’ Outcomes in the Long Run”** with Tessa Bonomo

*Approved US Census Bureau Project*

The US is one of few countries worldwide without a national mandate for paid maternity leave, and as such, we know little about the effects of paid leave in this context. The first cases of statewide maternity leave in the U.S. came about somewhat unintentionally through changes in state Temporary Disability Insurance (TDI) in the 1960s and 1970s. Six to seven decades later, we have the opportunity to explore the long run effects of access to paid maternity leave on children, later in their lives. We do so employing a differences-in-discontinuities design around changes in state TDI policies which made disability insurance available for pregnancy. In “first stage” results, we provide new estimates of the effects of paid maternity leave availability on infant birth weights, improving upon existing methodologies estimating the same effect in the literature, and finding much larger positive effects. In a “second stage” exercise, we will link measures of the education and earnings of children with their birthdate records using Census and Numident data to provide the first estimates of the long run impacts of paid maternity leave on children for the US.

**“Income Downscaling with Nightlights”** with Tamma Carleton, James Rising

## Working papers

**“Does the Value of Reliability Capitalize in Water Markets”** with Yusuke Kuwayama, Tyler Treakle

## Published papers

**“Private Markets and Public Assistance for Natural Disaster Supplies”** with Michael Dinerstein, Nadia Lucas, Ishan Nath, *AEA Papers and Proceedings*, 2025

## Languages

English (fluent), Spanish (limited working proficiency)

**References**

Professor Mar Reguant  
Department of Economics  
Northwestern University  
2211 Campus Drive  
Evanston, IL 60208  
847.491.8221  
[mar.reguant@northwestern.edu](mailto:mar.reguant@northwestern.edu)

Professor Christopher Udry  
Department of Economics  
Northwestern University  
2211 Campus Drive  
Evanston, IL 60208  
847.491.8209  
[christopher.udry@northwestern.edu](mailto:christopher.udry@northwestern.edu)

Professor Piotr Dworczak  
Department of Economics  
Northwestern University  
2211 Campus Drive  
Evanston, IL 60208  
847.491.8203  
[piotr.dworczak@northwestern.edu](mailto:piotr.dworczak@northwestern.edu)

Professor Silvia Vannutelli  
Department of Economics  
Northwestern University  
2211 Campus Drive  
Evanston, IL 60208  
847.491.8234  
[silvia.vannutelli@northwestern.edu](mailto:silvia.vannutelli@northwestern.edu)