Job Market Candidates **2026-2027**

MIT Economics

	Algorithms	Applied Econometrics	Applied Microeconomics	Behavioral	Causal Inference	Corporate Finance	Development	Econometrics	Education	Empirical Market Design	Entrepreneurship	Environmental Economics	Finance	Health	Household Finance	Industrial Organization	International	Labor	Macroeconomics	Market Design	Media/Digital	Organizational	Political Economy	Public Finance	Public Economics	Statistics	Theory	Time Series Econometrics	Trade
Adajar, Phi							S		P	S								P											
Berman, Aaron							P					P																	P
Caravello, Tomas													S						P									S	
Chen, William													P						P										
Cheng, Alden		S												P				S											
Dai, Yifan																						S					P		
Gulek, Ahmet					S		S										S	P											
Jimenez-Gimpel, Vicente													S						P								S		
Karnani, Mohit		S					P		S	P																			
Li, Dean														S		P		P											
Newman-Wang, Jenny				S			P							S															
Noy, Shakked				P														S					P						
Rivera, Eduardo							P																S	S					
Sanguanmoo, Sivakorn															S					S							P		
Sapollnik, Ian						P					S					S									P				
Shimizu, Kazuatsu																			S										P
Vilfort, Vod		P						P																		P			
Wang, Nancy	S		S	P																	S								
Wiles, Edward							S																						P
Zhang, Whitney																		P											

P= Primary Field, S= Secondary Field

MIT Economics

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MIT PLACEMENT ADMINISTRATOR
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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, expected completion June 2027
DISSERTATION: "Essays on the Economics of Education"

DISSERTATION COMMITTEE AND REFERENCES

Professor Parag Pathak
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Professor Esther Duflo
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Professor Nikhil Agarwal
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PRIOR EDUCATION

Massachusetts Institute of Technology 2021
S.B. in Mathematical Economics

CITIZENSHIP USA **GENDER** Non-binary

FIELDS

Primary Fields: Education, Labor
Secondary Fields: IO, Development

TEACHING EXPERIENCE

Kaufman Teaching Certificate, MIT Teaching + Learning Lab 2025
14.19 Market Design (undergraduate) 2023
Teaching Assistant to Professor Parag Pathak (rating 6.6/7)
14.02 Principles of Macroeconomics (undergraduate) 2021
Teaching Assistant to Professor Ricardo Caballero (rating 6.5/7)

14.27 Economics and E-Commerce (undergraduate) 2019
Teaching Assistant to Professor Sara Fisher Ellison (rating 5.8/7)

RELEVANT POSITIONS

Research Associate, Blueprint Labs, MIT 2022–present
Research Assistant, MIT 2022
Professor Parag Pathak
Research Assistant, MIT and Harvard 2020
Professors Benjamin Olken and Gabriel Kreindler
Research Assistant, MIT 2018–2021
Professors Ernst Berndt and Rena Conti

FELLOWSHIPS, HONORS, AND AWARDS

Jerry A. Hausman Dissertation Fellowship, MIT Economics 2025–2026
NBER Doctoral Dissertation Fellowship, Global Math Talent 2025–2026
NSF Graduate Research Fellowship 2021–2026
Phi Beta Kappa, MIT 2021
Burchard Scholar, MIT 2020

Research Grants

George and Obie Shultz Fund	$64,500	2023–2026
Carina Initiatives	$4,300,000	2025, 2026
Founders Pledge	£310,000	2024
Agency Fund	$600,000	2023, 2024
J-PAL Science for Progress Initiative	$72,000	2023

PROFESSIONAL ACTIVITIES

Referee
Econometrica, Review of Economics and Statistics

Service

Graduate Representative, MIT Committee on Undergraduate Admissions and Financial Aid 2025–present
Graduate Resident Advisor, MIT Division of Student Life 2022–present
Graduate Representative, MIT GRA Training Committee 2023
Labor Coffee Organizer, MIT Department of Economics 2022–2023
Educational Counselor (Admissions Interviewer), MIT Alumni Association 2021–2024
Undergraduate Representative, MIT Committee on the Undergraduate Program 2020–2021

RESEARCH PAPERS

"The Winner's Curse in Test-Blind Admissions" (Job Market Paper)
(with Nagisa Tadjfar and Kartik Vira)
High-stakes final exams play two roles in university admissions: they give students an incentive to exert effort, and they give universities information with which to screen applicants, shaping the equilibrium match. We study these forces using the staggered rollout of unconditional offers in the UK, which let some students matriculate without requirements on their age-18 exams (A-levels). Students who accept an unconditional offer score 0.14 SD below those who decline one, conditional on observables. However, using a two-way fixed

effects specification, we find that exposure to unconditional offers has precisely zero impact on students' age-18 exam performance, indicating that the observed gap is driven by private information. Exposure to unconditional offers increases university matriculation by 1.1 percentage points, mostly at middle-tercile universities. A structural model that incorporates the value students place on certainty of admission shows that, in equilibrium, recipients' gains come at the expense of non-recipients. Relative to a ban, unconditional offers lower total student welfare by 0.7%, hurting the three highest-achieving quartiles of students. Post-qualification admissions, under which students apply after receiving their scores, raise welfare by 12.5% through better sorting. Our results highlight how the distributional effects of admissions policies depend on student information, informing current policy debates in the UK.

"Identifying and Nurturing Math Talent: Evidence from Tamil Nadu"
(with Esther Duflo, Glenn Ellison, Sara Fisher Ellison, and Harini Kannan)
This paper presents evidence from a randomized controlled trial designed to test how to best identify and support gifted students from disadvantaged backgrounds. To do so, we offered access to an advanced online prealgebra course and an internet-enabled tablet to 7th-grade public-school students from Tamil Nadu, whom we identified as having high potential using several alternative strategies. Our primary finding is that we were able to successfully identify students who succeeded in challenging coursework originally designed as enrichment material for students with much stronger math preparation. We randomly assigned identification methods, which allowed us to investigate their relative effectiveness. We find that the combination of existing administrative scores and engagement with an extract of the textbook distributed as a physical booklet best predicts engagement and success with the course material. We additionally cross-randomized treatments to evaluate program design (including group and individual tutoring, incentives for students, access to computer labs), and find that the simplest-to-scale version without tutoring led to the highest engagement.

Presented by coauthor at NBER Economics of Talent Meeting (Fall 2025) and NBER Economics of Education Meeting (Spring 2026).

"A Practitioner's Guide to Estimating School Effects in Centralized Assignment Systems"
Centralized school assignment with lottery tie-breaking generates quasi-experiments that identify school effects, but existing methods require applicants' rank-order lists and lottery numbers, data that is not always available. I characterize which data from a match identify a propensity score under which offers are ignorable. When each school draws its own lottery, offers among applicants who reach a school are randomly assigned, so comparing applicants offered and rejected there requires only waitlists. Under a single lottery, this comparison is biased, and the order of each applicant's rejections is also needed. Rank-order lists identify the score without lottery numbers, while the assignment and published aggregates do not in general. I show how to compute each score in finite markets, how waitlist order reveals which schools share a lottery, and how

to handle priorities and screened schools. In simulations, all valid designs recover the true effect, and richer data yields more precise estimates.

RESEARCH IN PROGRESS

"From Cubs to Bears: The Evolution of Charter Effectiveness in Chicago"
This paper estimates how the effectiveness of Chicago charter schools has changed between 2009 and 2025. Using random variation from admissions lotteries, I validate earlier research showing high returns to attending Chicago charter schools. I also show effectiveness decreased during the 2010s, but has rebounded in recent years. I explore determinants of these changes, including teacher qualifications, teacher turnover, leadership changes, curricular changes, and policy changes.

"School-House Shocks: The Effect of Neighborhood-based School Assignment Policies on Intracity Migration"
Affirmative action policies based on geographic characteristics are potentially manipulable by families who move in response to the policy, undermining policy goals and hurting families who the policy is intended to help. I test whether these channels have significant impacts in Chicago, where admissions to selective high schools depend on the demographics of a student's neighborhood. Using data from Chicago Public Schools and the Cook County Assessor's office, I find no effects of marginal tier assignment on short-term migration of families or long-term housing prices.

PRIOR WORK

"A Rising Tide for All or Wave for One? The Effect of Charter School Competition on District Achievement," *MIT Undergraduate Journal of Economics*, Vol. 20, 2021.

"Evaluating Strategic Play: Manipulations with Symmetric Information in the Boston Mechanism," Undergraduate thesis, MIT, 2021.

"The Surprising Hybrid Pedigree of Measures of Diversity and Economic Concentration" (with Ernst Berndt and Rena Conti), *NBER Working Paper* No. 26512, 2019.

MIT Economics

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ACADEMIC POSITIONS
London School of Economics and Political Science
Assistant Professorial Research Fellow (2026-2027)

DOCTORAL STUDIES
Massachusetts Institute of Technology (MIT)
PhD, Economics, May 2026
DISSERTATION: "Essays in Environmental and International Economics"

DISSERTATION COMMITTEE AND REFERENCES

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Professor Clare Balboni
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PRIOR EDUCATION
Yale University 2017
MPH, Health Policy
Yale University 2016
BA, Global Affairs, *summa cum laude*

CITIZENSHIP United States **GENDER** Male

LANGUAGES English (native), Spanish, Mandarin (advanced), Portuguese (intermediate), Indonesian, Cantonese (beginner)

FIELDS Environmental, Trade, Development

TEACHING EXPERIENCE

Environmental Economics (PhD, MIT course 14.475) 2026
Teaching Assistant to Profs. Ben Olken and Jacob Moscona
(Rating: 7.0/7.0)

Applied Economics for Managers (MBA, MIT course 15.024) 2024/26
Teaching Assistant to Profs. Tavneet Suri and Namrata Kala

BREAD-IGC Virtual PhD Lectures on Environmental Economics 2023
Teaching Assistant to Profs. Ben Olken and Seema Jayachandran

Linear Algebra & Real Analysis I (Harvard course Math 23a) 2018
Teaching Assistant to Prof. Paul Bamberg

RELEVANT POSITIONS

Research Assistant to Profs. Ben Olken and Jacob Moscona 2025-2026
Short-term Consultant, World Bank, Jakarta 2024
Research Assistant to Prof. Clare Balboni 2021-2022
Research Assistant to Profs. Rema Hanna and Ben Olken, 2017-2020
Evidence for Policy Design at Harvard Kennedy School

FELLOWSHIPS, HONORS, AND AWARDS

Dartmouth Globalization PhD Fellowship 2025
George and Obie Shultz Fund Grant, MIT 2022, 2023, 2024
Martin Family Society of Fellows for Sustainability, MIT 2023
NBER Pre-Doctoral Fellowship in Health and Aging 2022
National Science Foundation Graduate Research Fellowship 2020
Alpheus Henry Snow Prize, Yale University 2016
Saybrook College Fellows' Prize, Yale University 2016
Dupuy Graduation Prize, Yale University 2016
Phi Beta Kappa, Yale University 2015
Richard U. Light Fellowship for East Asian Language Study 2013

PROFESSIONAL ACTIVITIES

Conference Presentations: LSE Environment Camp (2026), IIFET (2026)

Referee: *American Economic Review*, *Review of Economic Studies*, *American Economic Journal: Economic Policy*, *The Economic Journal*, *Journal of Development Economics*, *Journal of Environmental Economics and Management*

Service:
MIT Presidential Advisory Cabinet (2021-2022)
MIT-Harvard PhD Application Assistance & Mentoring Program (2020-2023)

Departmental:
Scientific Committee, LSE Environment Week (2026)
Organizer, MIT Environmental Economics Lunch (2024-2025)
Organizer, MIT Development Tea (2022-2024)

PUBLICATIONS

The Economics of Tropical Deforestation
(with Clare Balboni, Robin Burgess, and Benjamin A. Olken)
Annual Review of Economics 15, pp. 723-754, September 2023.

Two factors have elevated recent academic and policy interest in tropical deforestation: first, the realization that it is a major contributor to climate change; and second, a revolution in satellite-based measurement that has revealed that it is proceeding at a rapid rate. We begin by reviewing the methodological advances that have enabled measurement of forest loss at a fine spatial resolution across the globe. We then develop a simple benchmark model of deforestation based on classic models of natural resource extraction. Extending this approach to incorporate features that characterize deforestation in developing countries—pressure for land use change, significant local and global externalities, weak property rights, and political economy constraints—provides us with a framework for reviewing the fast-growing empirical literature on the economics of deforestation in the tropics. This combination of theory and empirics provides insights not only into the economic drivers and impacts of tropical deforestation but also into policies that may affect its progression. We conclude by identifying areas where more work is needed in this important body of research.

RESEARCH PAPERS

Pay a Man to Fish: Subsidies, Trade, and Cooperation in the Global Commons *(Job Market Paper)*

Contemporary environmental issues are global in scope, but international cooperation to address them has often remained elusive, resulting in resource depletion across a range of common-pool settings. In this paper, I study whether and how trade agreements can achieve conservation objectives. I develop a model of trade policy in which countries share a renewable resource stock and trade the output. Production subsidies impose externalities on trading partners both through the world price and directly through the shared stock, which changes both unilaterally optimal policy and the incentives to cooperate. To quantify the objects in my model, I assemble a new geospatial panel of the global tuna industry, linking GPS-derived vessel tracks with harmonized administrative catch and effort records. I present evidence that additional fishing pressure lowers contemporaneous fishing productivity for all vessels in a given ground. I then estimate supply from vessels' location, participation, and trip-length choices and demand using ocean-climate shocks as price instruments, and leverage an industry-standard biological model to estimate the dynamics of stock regrowth. I embed these estimates in a dynamic game in which governments set trade and fisheries policy over shared tuna stocks. Acting unilaterally, governments deliver less than a fifth of the conservation gains of a global planner. Most of the gains from cooperation come from stock conservation rather than terms-of-trade adjustment. Because tariffs set to manipulate the terms of trade also restrict fishing, trade liberalization alone lowers both welfare and stocks; most of the welfare gains lie in disciplining fishing on shared grounds alongside trade.

Clearing the Air on the Benefits and Costs of Road Infrastructure
(with Clare Balboni, Johannes Boehm, Lorenzo Marzano, and Mazhar Waseem)

Investments in transportation infrastructure can yield sizable trade and commuting cost gains, but may also contribute to damaging local air pollution from increased vehicle traffic. Accounting for such costs is especially important in developing country cities, which are making significant investments in expanding road networks but where high ambient pollution concentrations contribute to severe health impacts. We develop a quantitative urban equilibrium model, integrating a novel granular atmospheric model of pollution dispersion, in order to estimate the impacts of investing in urban roads accounting for both gains from economic integration and costs from local pollution exposure. We estimate the model using high-resolution data on emissions, pollution transport, commuting and goods trade in Lahore, Pakistan, one of the world's most polluted cities. Counterfactual simulations consider the aggregate and distributional implications of major road infrastructure projects in the city.

Environmental Regulation with Irreversible Investments: Evidence from High Plains Aquifer Depletion
(with Nathaniel Hickok)

Many of the world's major aquifers are rapidly depleting from agricultural irrigation, generating dynamic common-pool externalities by raising future extraction costs. While Pigouvian taxation can restore the first-best outcome, such policies are often infeasible due to political and technological constraints. By contrast, extensive-margin policies that regulate well entry are second-best but administratively simple. We study this tradeoff by developing and estimating a dynamic model of farmers' joint well-drilling and water-use decisions using a novel dataset of aquifer levels, agricultural water use, and crop production in the Kansas High Plains Aquifer from 1959–2022. We find that entry fees can create substantial welfare gains but that their effectiveness erode rapidly over time. In 1960, entry fees would have captured three-quarters of the gains of Pigouvian taxation, by 1980 only one-quarter, and today virtually none. This rapid decline reflects negligible marginal extraction costs relative to fixed well drilling costs, ensuring depletion becomes largely locked in once wells are sunk. Together, these findings highlight the importance of irreversible investments in constraining second-best environmental regulations.

Out with the Old, In with the New: Equity and Efficiency of Secondary Market Subsidies for Electric Vehicles
(with Nathaniel Hickok and Dam Linh Nguyen)

We evaluate the relative cost effectiveness and distributional impacts of primary- and secondary-market subsidies for electric vehicle adoption. We develop a simple theoretical framework that highlights the ambiguous cost-

effectiveness of the two subsidy designs. Relative to subsidies for purchases of used electric vehicles, subsidies for new purchases always induce greater adoption. However, they also lead to more inframarginal government spending due to consumer selection into resale. We study this trade-off empirically by proposing a dynamic model of the vehicle market, which captures sorting of consumers into resale through endogenous vehicle replacement decisions. To analyze the equilibrium consequences of the two subsidy designs, we calibrate the model using granular data on car registrations and transactions in Texas from 2015 to 2022. Counterfactual results indicate that, in our setting, secondary-market subsidies: (1) are more cost-effective than primary-market subsidies due to large decreases in inframarginal spending; and (2) achieve more progressive distributional impacts.

Global Public Goods and Local Public Services: Evidence from Polio Eradication in Pakistan

What are the consequences of limited state capacity in developing countries for the pursuit of global public goods provision? I study this question in the context of polio eradication in Pakistan, where the disease remains endemic and where policy commitment to eradication has escalated over the past decade. Exploiting the incidence of genetic mutations in the oral polio vaccine virus that cause localized outbreaks, I test whether a short-term increase in the intensity of polio eradication activity crowds out the receipt of routine childhood immunizations delivered primarily in local health clinics. I find empirical support for a crowd-out effect: children born in a quarter-year of intensified polio immunization activity are 8.9% less likely to have received the BCG (tuberculosis) vaccine and 19.5% less likely to have received the first dose of the diphtheria, pertussis, and tetanus (DPT) vaccine. I find evidence that these effects are driven mainly by the supply of, rather than demand for, vaccines and health services. My results have implications for the design of health and vaccination campaigns and for assessment of the local costs of public goods provision in developing countries.

RESEARCH IN PROGRESS

Firm-Level Adaptation to Carbon Border Taxes: Evidence from a Randomized Evaluation
(with David Atkin and Banu Demir)

Reducing firm-level emissions while minimizing impacts on economic growth has become a central dilemma facing policymakers in low- and middle-income countries, especially as countries around the world have begun using trade policy to tax the carbon content of imports. In this project, we experimentally evaluate three interventions—consisting of technical training and subsidized loans for investments—aimed at mitigating the economic costs of the European Union's Carbon Border Adjustment Mechanism (CBAM) on small and medium enterprises in Türkiye. The first intervention focuses on direct carbon mitigation measures; the second focuses on product innovation to move firms toward greener product mixes; and the third focuses on improving firm-level productive

efficiency. In the first wave of the experiment, we have randomized over 500 Turkish manufacturing firms using a clustering algorithm to maximize power to detect domestic spillovers (i.e., leakage) of the intervention to untreated firms. Combining newly collected survey data on firm-level investments, production practices, and carbon emissions with administrative data on the universe of Turkish firm-to-firm linkages and sales, we will assess the tradeoffs between environmental and firm growth outcomes and explore whether policies can simultaneously achieve both goals.

Environmental Spillovers of Trade Policy
(with David Atkin and Banu Demir)

A large share of trade tariffs in recent years have targeted heavily polluting industries such as iron and steel production, raising the possibility that trade policy focused on these industries may have unintended environmental consequences. We leverage firm-level administrative data from Türkiye to estimate the effects of the 2018 tariff increases implemented by the United States and subsequent retaliatory tariffs implemented by China, the European Union, and other trading partners. First, we document that Turkish iron and steel firms with higher pre-2018 export shares to the US differentially reallocated exports to the EU after tariffs on Türkiye were introduced. Second, we provide evidence that these Turkish firms concurrently increased their investments in less carbon-intensive production through purchases of specific "green" production technologies prioritized by EU importers. We plan to conduct a full accounting of the carbon emissions consequences of this tariff-driven trade reallocation, decomposing technique, scale, and composition effects.

Spatially Governing the Commons
(with Karl M. Aspelund)

Environmental regulators seek to achieve resource sustainability targets in the face of ecological and economic shocks that affect different areas, producers, and time periods unevenly. While alternative instruments such as taxes, quotas, closures, or input restrictions can deliver the same stock targets in expectation, they differ in how they expose participants in the commons to volatility in harvests and profits. Inequality aversion, diminishing returns to contemporaneous harvests, and the shadow value of future resource stocks make differences in volatility welfare-relevant from a social planner's perspective. We develop a framework, nesting canonical results from the prices versus quantities literature, to evaluate when and how instrument design matters under uncertainty. We use the framework to illustrate how instrument choices in different areas can be cast as a portfolio-choice problem in which regulators can choose levels of risk over aggregate harvests or certain distributional outcomes. The framework explains why policies that appear second-best in a deterministic setting, such as input restrictions or long seasonal closures, can be preferred once their risk-stabilizing properties are recognized. To apply our framework, we collect detailed harvest, price, and ecological data from the U.S. Atlantic scallop fishery, one of the nation's highest-value fisheries, and illustrate how alternative

policy mixes can meaningfully impact welfare outcomes under different degrees of inequality aversion.

Internalizing Environmental Externalities: A Coasean Approach to Urban Solid Waste Management in Kampala, Uganda
(with Mychaela Paetow) Funding: IGC SPF Grant

Cities in developing countries are generating increasing volumes of solid waste, straining existing waste management systems. Open dumping and burning are commons means of disposal, generating meaningful environmental and health externalities, especially in low-income communities and informal settlements. We partner with the Kampala Capital City Authority to test a new intervention designed to deter dumping: installing nets to catch household solid waste that would otherwise flow through rainwater drainage channels, causing flooding downstream. We are piloting a mechanism to elicit downhill households' willingness-to-pay, and uphill households' willingness-to-accept, to install nets along shared drainage channels, facilitating Coasean bargaining to realign private and social costs from improper waste management practices.

The Economics of Informal Recycling Markets: Evidence from Indonesia's Waste Banks
(with Mychaela Paetow) Funding: J-PAL K-CAI

China's Fishing Subsidies in the 21st Century
(with Andrés de Loera)

MIT Economics

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2027
DISSERTATION: "*Essays on Inflation and Monetary Policy*"

DISSERTATION COMMITTEE AND REFERENCES

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PRIOR EDUCATION

Universidad Torcuato di Tella (UTDT)
M.A., Economics 2023
B.A., Economics 2019

CITIZENSHIP Argentina **GENDER** Male

LANGUAGES Spanish (native), English (fluent), German (basic)

FIELDS

Primary Field: Macroeconomics
Secondary Fields: Finance, Time Series Econometrics

TEACHING EXPERIENCE

Massachusetts Institute of Technology
Principles of Macroeconomics (undergraduate, 14.02) 2025
TA to Professor Ricardo Caballero
Data Models and Decisions (Fellows MBA, 15.060) 2023-2024

	TA to Professor David Gamarnik	
	Principles of Macroeconomics (undergraduate, 14.02)	2023
	TA to Professor Martin Beraja	
	Asset Pricing (PhD, 15.470)	2022-2023
	TA to Profs. Lira Mota and Lawrence D. W. Schmidt	
	Universidad Torcuato di Tella	
	Economics I (undergraduate)	2020-2021
	Lecturer	
	Microeconomics III (M.A. in Economics)	2023
	TA to Profs. Leandro Arozamena and Federico Wenscheilbaum	
	Microeconomics II (M.A. in Economics)	2022
	TA to Profs. Leandro Arozamena and Federico Wenscheilbaum	
	Time Series Econometrics (M.A. in Economics)	2020-2021
	TA to Professor Martin Sola	
	Financial Econometrics (M.A. in Finance)	2020
	TA to Professor Martin Sola	
	Risk, Uncertainty, and Finance (undergraduate)	2019-2020
	TA to Professor Martin Sola	
	Public Finance (undergraduate)	2019-2020
	TA to Professor Diego Fernandez Felices	
RELEVANT POSITIONS	Research Assistant to Professor Christian K. Wolf	2023-2025
	Research Assistant to Professor Ivan Werning	2022, 2024
	Research Assistant to Professor Martin Sola	2020-2021
FELLOWSHIPS, HONORS, AND AWARDS	***Massachusetts Institute of Technology***	
	Gordon B. Pye Dissertation Fellowship	2025-2026
	Public Speaking Certificate	2025
	John Krob Castle (1963) Graduate Fellowship in Economics	2022-2023
	MIT Presidential Fellowship	2021-2022
	Universidad Torcuato di Tella	
	Graduate Valedictorian/Best Postgraduate GPA	2023
	Undergraduate Valedictorian/Best Undergraduate GPA	2019
PROFESSIONAL ACTIVITIES	**Conference Presentations:** XXVIII International Economics and Finance Workshop, Insightful Minds in International Macroeconomics (IMIM, virtual), Reserve Bank of Australia (virtual).	
	Referee: Journal of Political Economy; Quarterly Journal of Economics; Journal of Econometrics; Journal of Economic Dynamics and Control; Economic Letters	

PUBLICATIONS

"On the Sources of the Aggregate Risk Premium: Risk Aversion, Bubbles or Regime-Switching?" (with John Driffill, Turalay Kenc, and Martin Sola). Journal of Economic Dynamics and Control, Volume 166, September 2024.

"Rational Bubbles: Too Many to Be True?" (with Zacharias Psaradakis and Martin Sola). Journal of Economic Dynamics and Control, 151, June 2023.

RESEARCH PAPERS

"Pricing Mistakes and the Non-Neutrality of Money" (Job Market Paper)

Standard sticky-price models assume firms reset prices without error. Using UK and Argentine price microdata, I document that consecutive regular price changes are negatively correlated, more strongly at higher adjustment frequencies, and with negligible correlation beyond one spell. A large class of standard models cannot jointly match these facts, but models with idiosyncratic pricing mistakes can. I ask how mistakes affect monetary policy's real effects. First, even when firms perfectly observe monetary shocks, adding mistakes to a standard model can increase cumulative output effects by changing which firms adjust prices. Second, once mistakes are possible, these real effects are completely unidentified from standard micro moments (frequency and kurtosis of price changes) because mistakes distort them. I restore identification with a sufficient statistics result, by adding predictability coefficients. Accounting for mistakes implies around 50% larger real effects in the UK data.

"The Welfare Cost of Inflation Risk" (with Marc de la Barrera)

When borrowing and lending occur in nominal terms, inflation shocks redistribute wealth among agents. The prospect of these shocks reduces welfare ex-ante by exposing both sides to risk and distorting financial trade. We show that heterogeneity and incomplete inflation indexation are necessary for inflation risk to matter for welfare through this channel. The same ingredients generate a positive inflation risk premium even when inflation and aggregate consumption are uncorrelated, consistent with recent U.S. data. We also show that the welfare cost is governed by two key moments: the size of nominal positions and the inflation risk premium. We quantify this channel in a calibrated heterogeneous-agent economy matching key macro and asset-pricing moments and find that the welfare costs of inflation risk are between 0.18% and 0.3% of perpetual aggregate consumption, comparable in magnitude to the costs of trend inflation due to transaction frictions or price dispersion.

"Expectations and the Transmission of Monetary Policy"
(with Vicente Jimenez-Gimpel)

Monetary policy works largely through expectations: core transmission channels, including long-term yields, mortgage rates, and investment, depend on expected future policy. We build a model in which markets interpret policy decisions as informative about the central bank's real-time readings of the economy—readings that persist and guide future policy. At each meeting, the central bank

anticipates how markets will interpret its decision. That interpretation, in turn, depends on how the central bank systematically responds to its readings of the economy. We identify a time-inconsistency problem: meeting-by-meeting rate choices can make market expectations excessively sensitive to policy surprises, leaving the economy inefficiently exposed to mistakes in the central bank's readings. We quantify this mechanism's importance in a New Keynesian model with imperfect and private central bank information, estimated using macroeconomic data, Federal Reserve forecasts, uncertainty estimates for productive capacity, and inflation-swap responses to policy surprises. The optimal ex ante rule responds much less aggressively to estimates of the economy's productive capacity than does meeting-by-meeting policy, limiting the amplification of assessment errors through market expectations and achieving substantially better macroeconomic stabilization.

"Evaluating Monetary Policy Counterfactuals: (When) Do We Need Structural Models?" (with Christian Wolf and Alisdair McKay)

We give conditions under which knowledge of the effects of monetary policy shocks suffices to evaluate policy counterfactuals that change not just the monetary rule, but also the nature of equilibrium selection. For example, the effects of monetary policy shocks in a regime of monetary dominance can be used to evaluate counterfactual outcomes even under a regime switch to fiscal dominance. Since the empirical literature delivers the causal effects of short-lived monetary shocks, the sole remaining role of model structure in evaluating such counterfactuals is thus to extrapolate from the effects of transitory to those of more persistent policy rate changes. Among popular models of monetary policy transmission, household heterogeneity (as in the burgeoning ``HANK" literature) does not change this extrapolation very much, while.

"FCI-star" (with Ricardo J. Caballero and Alp Simsek)

Central banks rely on r*—the neutral interest rate— to assess policy stance. However, monetary policy affects activity through broad financial conditions, not only the short-term rate. We propose FCI^*, the neutral level of a financial conditions index consistent with output at potential. Unlike r*, FCI^* is insulated from financial fluctuations: when asset prices move, FCI captures their estimated effect on output, leaving FCI^* to reflect only what the macroeconomy requires. In U.S. data, r* co-moves with the equity premium; FCI^* does not. FCI gaps provide useful real-time guidance on policy stance, especially when financial conditions diverge from the policy rate.

"Reassessing Central Bank Reputation: Beyond Long-Run Expectations" (with Alex Carrasco-Martinez and Pedro Martinez-Bruera)

We study how shifting perceptions about the central bank's relative preference for inflation stability shape monetary policy. In a New Keynesian model with imperfect information, we show that a hawkish reputation —the perception that

the bank places greater weight on inflation relative to other objectives—reduces stabilization costs by dampening the pass-through of shocks to short-run inflation expectations. Using U.S. private-sector forecast data, we find evidence of this mechanism even when long-run expectations are anchored and stable. A central bank that internalizes the value of reputation reacts more strongly to cost-push shocks than a myopic bank. Moreover, appointing a more hawkish but myopic central banker achieves welfare gains close to those under the optimal policy. During the Great Moderation, internalizing the value of reputation is equivalent to appointing a central banker whose weight on inflation is roughly twice the bank's true preference.

"Financial Conditions Targeting" (with Ricardo J. Caballero and Alp Simsek)

Non-fundamental inflows into the stock market loosen financial conditions and raise output, while the policy rate responds gradually. Such financial noise explains up to 20% of the variance of financial conditions and output. These facts motivate a macroeconomic model with noise traders, risk-averse arbitrageurs, and gradual interest rate adjustment. In this model, Financial Conditions Index (FCI) targeting can improve macroeconomic stabilization: the central bank announces its expected FCI as a soft near-term target and adjusts the policy rate to keep conditions near it. This commitment reduces FCI volatility, thereby "recruiting" arbitrageurs to insulate the FCI and aggregate demand from noise.

"Disentangling sign and size non-linearities" (with Pedro Martinez-Bruera)

We study the identification of non-linear causal effects of macroeconomic shocks using local projections augmented by a non-linear function of the shock of interest. Our analysis focuses on two types of non-linearities: by size and sign of the shock. We characterize the estimand of our non-linear local projections. Our main result is that the local projections identify pure sign non-linearities when they include an even non-linear function of the shock and vice-versa for size non-linearities and odd functions. We illustrate our method with an application to oil supply news shocks, documenting evidence in favor of size (but not sign) non-linearities.

"Chronicle of a Dollarization Foretold: Inflation and Exchange Rates Dynamics" (with Pedro Martinez-Bruera and Iván Werning)

We study the effects of an anticipated dollarization, announced today but planned to be implemented at some future date, in a simple open-economy model. Motivated by the profile of countries considering dollarization we make the following assumptions. First, the government faces a scarcity of dollars to pledge for the future conversion of domestic currency. Second, without dollarization monetary policy finances a deficit via seignorage. We focus on the pre-dollarization period. Our results are as follows. First, the announcement leads to a discrete devaluation on impact. Second, after this jump the

devaluation rate also rises relative to the no dollarization benchmark. Finally, the devaluation and inflation rate may rise over time.

"Dollarization Dynamics" (with Pedro Martinez-Bruera and Iván Werning)

This study explores the consequences of dollarizing an economy with an initial dollar shortage. We show that the resulting transitional dynamics are tantamount to that of a "sudden stop": consumption of tradable goods fall, the real exchange rate depreciates abruptly by a discrete drop in domestic prices and wages followed by a gradual appreciation from positive inflation. With nominal rigidities the economy first falls into a recession. This is true even if all prices and wages are allowed to adjust flexibly on impact. The subsequent recovery in activity always "overshoots" the steady state: the non-tradable sector transitions from the initial recession to a boom, then asymptotes to its steady state.

RESEARCH IN PROGRESS

"Pricing Mistakes at High Inflations: Theory and Evidence from Argentina"

"When Does Uncertainty Justify Monetary Policy Gradualism?" (with Vicente Jimenez-Gimpel)

MIT Economics

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DOCTORAL STUDIES

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DISSERTATION: *Essays on Macroeconomics and Firm Behavior*

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PRIOR EDUCATION

Williams College 2019
B.A. *summa cum laude* in Economics (highest honors), Mathematics

CITIZENSHIP United States **GENDER:** Male

FIELDS Primary Fields: Macroeconomics, Finance

TEACHING EXPERIENCE

14.02 Principles of Macroeconomics 2024-26
Teaching Assistant to Ricardo Caballero (rating 6.3/7)

14.451 Dynamic Optimization Methods with Applications (part of PhD Econ Macro Core) 2023
Teaching Assistant to Fernando Alvarez (rating 6.1/7)

	15.454 Fundamentals of Financial Mathematics (Sloan MFin) Teaching Assistant to Paul F. Mende	2023
RELEVANT POSITIONS	Research Assistant to Professor Lawrence D.W. Schmidt	2024
	Research Assistant to Professor Simon Jäger	2022
	Research Analyst on DSGE Team at Federal Reserve Bank of NY	2019-21
FELLOWSHIPS, HONORS, AND AWARDS	George and Obie Shultz Fund	2024-26
	Castle Krob Fellowship in Economics	2022
	MIT Presidential Graduate Fellowship	2021
	David A. Wells Prize in Political Economy (Best Economics Undergraduate Thesis, Williams College)	2019
	Phi Beta Kappa, Williams College	2019
	Kaneda Prize for Young Outstanding Economist (Best Paper, Carroll Round Conference)	2019
	Carl Van Duyne Prize	2018

PROFESSIONAL ACTIVITIES

Referee: *American Economic Journal: Macroeconomics*; *Journal of Money, Credit and Banking*; *Quarterly Review of Economics and Finance*

US Census Bureau: Special Sworn Status

PUBLICATIONS

"Digital Currency and Banking-Sector Stability" with Gregory Phelan, *Journal of Financial Stability,* June 2024.

"Liquidity Provision and Financial Instability" with Gregory Phelan, *Journal of Money, Credit and Banking,* March-April 2024.

"Should Monetary Policy Target Financial Stability?" with Gregory Phelan, *Review of Economic Dynamics,* July 2023.

"International Coordination of Macroprudential Policies with Capital Flows & Financial Asymmetries" with Gregory Phelan, *Journal of Financial Stability,* October 2021.

"Damped Infinite Energy Solutions of the 3D Euler & Boussinesq Equations" with Alejandro Sarria, *Journal of Differential Equations,* September 2018.

WORKING PAPERS

"Real Price Rigidity and Investment Irreversibility in Customer Markets: Evidence from Credit Supply Shocks" (Job Market Paper)

This paper argues that investment irreversibility in tangible capital leads to greater real price rigidity. The mechanism is that irreversibility strengthens the customer-market incentive: selling more output today builds a sticky customer base, which insures against bad shocks to future demand. Greater ex ante investment in the customer base then leads a firm to choose higher price changes when financial constraints tighten. These higher price changes make

markups more countercyclical and thereby increase output price rigidity. To show that this connection is empirically relevant, I use the bankruptcy of Lehman Brothers as a natural experiment in the credit supplied to firms and find that, while firms in industries with low irreversibility cut prices, firms in industries with high irreversibility do not. Abstracting from general equilibrium effects, aggregate prices are almost 40% more rigid after reductions in credit supply than if all industries had low irreversibility.

"Belief Disagreement in Production Networks"
This paper studies the macroeconomic impact of belief disagreement between firms in different sectors of a production network when firms choose labor quantities before sectoral TFP disturbances are realized. Belief disagreement reduces aggregate output by causing firms to miscoordinate their labor choices, which in turn further reduces output through spillovers. A hypothetical vignette experiment run on US small businesses provides empirical evidence that disagreement between firms and their suppliers can affect firms' own price and input decisions.

RESEARCH IN PROGRESS

"Price and Quantity Frictions in Firm-to-Firm Contracts" with Shlok Goyal and Baiyun Jing
This paper documents price and quantity frictions in a novel dataset constructed from contracts between firms. We use large language models to classify the structure of how prices and quantities can change in these contracts.

"Business Cycles with Irreversibility and Endogenous Demand Uncertainty"
This paper develops a quantitative model to study the business-cycle implications of micro-level investment irreversibility when firms can reduce their idiosyncratic demand uncertainty by investing in a sticky customer base.

"Solving Nonlinear Macro Models with Exogenous Dispersed Information" with Shlok Goyal
This paper applies neural networks to solve nonlinear macroeconomic models in which agents have exogenous dispersed information. We show that these models can be solved when we include the entire history of posterior beliefs as part of the state space, and we handle the resulting curse of dimensionality with neural networks to approximate equilibrium policy functions.

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EMPLOYMENT

National Bureau of Economic Research 2023-present
Postdoctoral Research Associate (with David Molitor)

University of Illinois Urbana-Champaign 2023-present
Gies Health Initiatives Research Scholar

EDUCATION

Massachusetts Institute of Technology, Economics 2017-2023
PhD, Economics
Advisors: Amy Finkelstein, Alberto Abadie, Jonathan Gruber

University of California, Berkeley 2012-2016
BA, Applied Mathematics, Economics, Statistics
Highest Distinction in General Scholarship

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FIELDS

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Secondary Fields: Applied Econometrics, Labor Economics

SEMINAR/ CONFERENCE PRESENTATIONS

ASSA Annual Meeting (scheduled) 2027

NBER Summer Institute Workshop on Aging 2026
NBER Emerging Challenges in Long-Term Care and Caregiving
NBER Economics of Chronic Disease
NBER Health and Healthcare Variations across the Population
NBER Economics of AD/ADRD Meeting (poster)
Annual Health Economics Conference
Economic Science Association 2026 World Meetings
American Society of Health Economists

	Economics of Mental Health Workshop Advances with Field Experiments Midwest Health Economics Conference (discussant) Midwest Economics Association Conference CausNetS, Satellite of NetSci 2026	
	University of Illinois Chicago Imperial College London Midwest Econometrics Group Conference Advances with Field Experiments	2025
	Indiana University Bloomington University of Illinois Urbana-Champaign (Econometrics Seminar) American Society of Health Economists Midwest Health Economics Conference University of Massachusetts Amherst (online)	2024
	Seoul National University Yonsei University International Health Economics Association Webinar	2023
PROFESSIONAL SERVICE	*Referee*: American Economic Review; American Economic Review: Insights; Review of Economics and Statistics; American Economic Journal: Economic Policy; Journal of the European Economic Association; Journal of Public Economics; Journal of Health Economics; American Journal of Health Economics; The B.E. Journal of Economic Analysis & Policy; Review of Economics of the Household	
FUNDING, FELLOWSHIPS, HONORS, AND AWARDS	NBER Research on the Economics of Alzheimer's/Dementia (READ) Grant ($194,590), with Martin Hackmann. Co-PI (award pending). *The Economics of Roommate Assignment for Individuals with AD/ADRD: Implications for Spending, Resident Outcomes, and Care Delivery*.	2026
	Best Paper in Aging and Long-Term Care at the American Society of Health Economists (ASHEcon) Conference	2026
	Best Paper Award at the Economics of Mental Health Workshop	2026
	Sahin (1963) Presidential Fellowship, MIT	2017
	Mark A. Schimbor Prize: Best Undergraduate Research in Economics, UC Berkeley	2016
	Steve Goldman Memorial Prize: Highest Academic Achievement in Economics, UC Berkeley	2016
	University Medal Finalist, UC Berkeley	2016
	Percy Lionel Davis Award: Excellence in Scholarship in Mathematics, UC Berkeley	2016
	Dean's Honors, UC Berkeley	2013-2015

RESEARCH PAPERS

Patient Peer Effects: Evidence from Nursing Home Room Assignments (with Martin Hackmann). **Job Market Paper**. NBER Working Paper 34538.
We provide causal evidence that peer effects among nursing home roommates generate mortality impacts comparable to provider quality differences. Using room availability at the time of admission as instruments for room assignments, we estimate that assignment to a roommate with dementia increases 90-day mortality by 7%, relative to being assigned no roommate. Effects differ sharply by patient type: patients with dementia benefit substantially from cognitively healthy roommates, whereas mortality of patients without dementia does not depend on roommates' cognitive health, implying a unidirectional positive externality. We find that room assignment policies that exploit peer effects can reduce mortality by 4%.

The Illusion of Health Care Exceptionalism? Evidence from Nursing Homes. *Under Review.*
Limited consumer responsiveness to provider quality has long been viewed as a defining feature of health care markets. I show that this apparent exceptionalism partly reflects a failure to distinguish consumer preferences from provider-imposed constraints on access. I estimate mortality-based nursing home value-added, validate the estimates with a distance-based IV, and incorporate them into a structural model of consumer demand and selective admissions by nursing homes. Conventional demand estimates imply zero demand for quality on average, whereas accounting for unobserved rejections reveals positive but modest demand. Despite supply-side constraints, counterfactual simulations suggest that demand-side interventions can improve allocation and outcomes.

From Peer Effects to Network Evolution: Evidence from the Illinois Workplace Wellness Study (with Damon Jones, David Molitor, and Julian Reif)
We randomly assigned eligibility and financial incentives for a two-year workplace wellness program to 4,834 employees. Friendship network data were collected at baseline and again one and two years after randomization. Participation in health screenings rose by 4.2 percentage points for each additional coworker assigned to treatment, and by 6.4 percentage points for each additional coworker induced to participate as a result of treatment. The program also shaped network dynamics: eligibility increased the probability of being listed as a coworker by others in subsequent years by 9 percent, and the intervention increased network homophily along some dimensions. Behavioral spillovers amplified the effect of the intervention on screening participation by 6 percent, while dynamic spillovers through network evolution increased future participation by about 0.8 percent of baseline.

Racial Segregation and Disparities Across Nursing Homes: Mechanisms, Interactions, and Policy Tradeoffs
Racial minorities are disproportionately admitted to lower-quality nursing homes, but the forces generating segregation across facilities need not be the same as those generating racial gaps in quality. Using nationwide administrative data on nursing home residents in the U.S. from 2000–2010, I show that neighborhood sorting explains an important share of across-facility

segregation, yet substantial disparities remain in the quality of nursing homes that different racial groups are admitted to, even conditional on fixed effects for zip code of prior residence. I then document three additional mechanisms that may drive across-facility segregation and disparities: (i) race-based admissions policies, where nursing homes become less likely to admit minority residents when capacity is strained; (ii) in-group preferences, whereby shocks to the minority share at nursing homes lead to persistent changes in the racial composition, and (iii) heterogeneity in responsiveness to quality, where information shocks lead to larger changes in where White residents are admitted. To quantify the contributions of these explanations, I estimate a two-sided matching model with latent choice set constraints in three large states, using distance and short-run within-facility occupancy shocks for identification. Counterfactual simulations show that neighborhood sorting and race-based admissions policies are complementary drivers of segregation: while the sum of their individual contributions accounts for just over one-half of segregation, eliminating both simultaneously reduces segregation by 85–90 percent. In contrast, the drivers of disparities do not always align with drivers of segregation and vary substantially across states as well as between Black-White and Hispanic-White comparisons within states, implying that policies which reduce segregation need not reduce—and may even worsen—disparities for some minority groups.

Avoiding Regulation: Evidence from Nursing Homes (with Riley League). NBER Working Paper 35849.

We study strategic responses by firms to threshold-based regulations. We document extensive bunching in response to additional staffing requirements for California nursing homes with at least 100 beds. To estimate the regulation's effect on staffing, we develop a novel treatment-effects estimator for threshold-based regulations under precise manipulation, by decomposing firms into response types based on counterfactual and realized staffing and size, separating causal effects from selection. We estimate that higher staffing above the threshold is nearly entirely due to selection, with low-staffing facilities manipulating their size to avoid the regulation. These size distortions limit access, particularly for disadvantaged patients.

Estimation of Regression Discontinuity and Kink Designs with Multiple Running Variables [R Package]

In regression discontinuity designs with multiple running variables (MRD), units are assigned different treatments based on whether their values on several observed running variables exceed known thresholds. In such designs, applied work commonly analyzes each running variable separately, estimating a single-dimensional RD design in the first running variable after limiting the sample to the set of individuals qualifying on the second threshold, and vice versa. In this paper, I propose a new estimator for MRD designs using thin plate splines that improves upon the applied practice in two ways. First, the estimator can be used to estimate the conditional average treatment effect at every point on the boundary separating treated and untreated units, and second, it provides efficiency gains by using the entire sample. I also develop analogous estimators for multidimensional regression kink (MRK) and multidimensional regression discontinuity/kink (MRDK) designs. I establish

theoretical properties for these estimators, before presenting simulation results showing that they perform well in finite samples. Finally, I demonstrate the performance of my MRD estimator with two empirical applications: Londoño-Vélez, Rodríguez, and Sánchez (2020) on the effect of financial aid on college enrollment, and Keele and Titiunik (2015) on the effect of political ads on election turnout. Open-source software is available for implementing the proposed methods.

Selection on Unobservables in Discrete Choice Models
Selection on unobservables is an important concern for causal inference in observational studies, and accordingly, previous papers have developed methods for sensitivity analysis for OLS, binary choice models, instrumental variables, and movers designs. In this paper, I develop methods for sensitivity analysis for a setting that has not been previously studied — discrete choice models. In particular, I derive bounds for the omitted variables bias under an assumption about how much the consumer values the omitted variable(s) relative to the included control variables, and about the relationship between the omitted variable and the variable of interest. I provide theoretical results for my bounding procedure, and demonstrate its performance in simulations. Finally, I show in several empirical applications that my procedure produces economically meaningful bounds.

PAST WORK

Does Fake News Affect Voting Behavior? Evidence from Big College Football Games

Challenges in Measuring Mental Health Trends

Cigarette Consumption and Tax Salience

OTHER PUBLICATIONS

Mixed Beam Murine Harderian Gland Tumorigenesis: Predicted Dose-Effect Relationships if neither Synergism nor Antagonism Occurs (with Nopphon Siranart, Eleanor A. Blakely, Naval Handa, and Rainer K. Sachs). *Radiation Research*, 2016.

RELEVANT POSITIONS

Research Assistant to Professor Nikhil Agarwal	2018
Research Assistant to Professor Amy Finkelstein	2017
Research Assistant to Professor David Card	2016
Research Assistant to Professor Stefano DellaVigna	2016

TEACHING EXPERIENCE

14.01 Principles of Microeconomics Teaching Assistant to Professor Sara Ellison	2022
14.01 Principles of Microeconomics Teaching Assistant to Professor Jonathan Gruber	2020
14.30 Introduction to Statistical Methods in Economics Teaching Assistant to Professor Alberto Abadie	2020

CITIZENSHIP Singapore **GENDER:** Male

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MIT Economics

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PRIOR EDUCATION

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CITIZENSHIP China **GENDER:** Male

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FIELDS

Primary Fields: Theory
Secondary Fields: Organizational Economics

TEACHING EXPERIENCE

14.282 Introduction to Organizational Economics; 14.283/4 Advanced Topics in Organizational Economics I/II (PhD) — 2023-26
Teaching Assistant to Professors Robert Gibbons, Charles Angelucci and Namrata Kala
Course evaluations: 7.0/7 in all four course offerings

	14.122 Microeconomic Theory II (PhD core)	2023
	Teaching Assistant to Professor Drew Fudenberg Course evaluation: 6.1/7	
	14.147 Topics in Game Theory (PhD)	2023
	Teaching Assistant to Professor Drew Fudenberg Course evaluation: 7.0/7	
	14.26 Organizational Economics (Undergraduate)	2024
	Teaching Assistant to Professor Robert Gibbons Course evaluation: 6.0/7	
RELEVANT POSITIONS	Research Assistant to Professor Drew Fudenberg	2024-26
	Research Assistant to Professor Ian Ball	2021-24
	Research Assistant to Professor Robert Gibbons	2024
	Research Assistant to Professor Charles Angelucci	2023
FELLOWSHIPS, HONORS, AND AWARDS	Gregory K. Palm (1970) Fellow, MIT	2022-23
	Heising-Simons MIT Presidential Fellowship	2021-22

PROFESSIONAL ACTIVITIES

Referee

American Economic Review: Insights, American Economic Journal: Microeconomics

Presentations

2026: ACM EC'26 (Rome)

2025: SAET 2025 (Ischia), Stony Brook International Conference on Game Theory

2023: Stony Brook International Conference on Game Theory, Econometric Society Asian School in Economic Theory (Keio)

JOB MARKET PAPER

"When Is Mediated Communication Possible?" (with Anna Merotto)

We study when players can truthfully share private information through a mediator. Our analysis focuses on symmetric linear-quadratic games with strategic complements and independent private values. We characterize when mediated communication is informative, meaning that it can induce an outcome different from the unique Bayes-Nash outcome without communication. A sharp dichotomy emerges. When types that prefer higher own actions benefit less from higher opponent actions, informative communication is impossible regardless of the type distribution. By contrast, when those types benefit more from higher opponent actions, informative communication is possible if and only if the relevant extreme type lies sufficiently far from the mean. In a linear-demand Bertrand oligopoly, private costs rule out informative communication, whereas it may arise under private demand. Finally, informative communication weakly benefits every type, but whenever information sharing can raise aggregate welfare, the maximum aggregate payoff under communication is strictly below the maximum over Bayes correlated equilibria.

RESEARCH PAPERS

"The Bounds of Mediated Communication" (with Roberto Corrao)
Revise and Resubmit, Econometrica
Extended Abstract in the Proceedings of EC'23 ("Mediated Communication with Transparent Motives")

We study sender-receiver games with transparent motives, where an uninformed, sender-aligned mediator commits to a communication mechanism but cannot verify the sender's report. We compare mediated communication with cheap talk and Bayesian persuasion. A belief-value distribution is implementable by mediation exactly when it satisfies Bayes plausibility, receiver obedience, and zero covariance between posterior beliefs and sender values. This formulation separates the roles of commitment and verifiability. We show that mediation attains the persuasion value only when cheap talk also does; thus, whenever persuasion strictly outperforms cheap talk, unverifiable reports create a strict loss. We characterize when mediation strictly improves on cheap talk: the sender's value must exhibit countervailing effects along some direction in belief space. In finite-action, binary-state environments, this characterization yields a tractable description of optimal mediation. Applications cover platforms, lobbying, acceptance games, and a reinterpretation of the model as matching with externalities, where we study the efficiency-fairness tradeoff.

"Bayesian Persuasion with Selective Disclosure" (with Drew Fudenberg and Harry Pei)
Revise and Resubmit, Theoretical Economics
Extended Abstract in the Proceedings of EC'26

A sender first publicly commits to an experiment and then can privately run additional experiments and selectively disclose their outcomes to a receiver. The sender has private information about the maximal number of additional experiments they can perform (i.e., their *type*). We show that the sender cannot attain their commitment payoff in any equilibrium if (i) the receiver is sufficiently uncertain about their type and (ii) the sender could benefit from selective disclosure after conducting their full-commitment optimal experiment. Otherwise, there can be equilibria where the sender obtains their commitment payoff.

"Flexible Demand Manipulation" (with Andrew Koh)
Extended Abstract in *the Proceedings of EC'26*

We develop a simple framework to analyze how targeted persuasive advertising shapes market power and welfare. A designer flexibly manipulates the demand curve by influencing individual valuations at a cost. A monopolist prices against this manipulated demand curve. We fully characterize the form of optimal advertising plans under ex ante and ex post welfare measures. Flexibility per se is powerful, and can substantially harm or benefit consumers vis-a-vis uniform

advertising. We discuss implications for regulation, intermediation, and the joint design of manipulation and information.

RESEARCH IN PROGRESS

"Discriminatory Mediated Communication" (with Roberto Corrao and Chanjoo Lee)

We study how targeting and commitment jointly shape communication outcomes. An informed seller communicates with consumers who differ in tastes and outside options, either directly or through an uninformed mediator. Without commitment, allowing the seller to tailor private cheap-talk messages across consumers adds no value over public cheap talk. With a committed mediator, however, targeting is strictly valuable under smooth full-support heterogeneity. Commitment allows the mediator to link targeted messages across consumers to the seller's report, so a misreport that raises sales to some consumers can lower sales to others. In symmetric environments, targeted mediation can attain the seller's maximum payoff from committing to an arbitrary information structure for consumers. These results show the strong complementarity between targeting and mediated communication.

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, May 2025
DISSERTATION:
"Effects of Immigration on Labor Markets: Theory, Methods, and Evidence"

DISSERTATION COMMITTEE
Joshua Angrist, Daron Acemoglu, Amy Finkelstein

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PRIOR EDUCATION

Koc University
Bachelor of Arts in Economics and Bachelor of Science in Mathematics — 2017
Master of Arts in Economics — 2019

CITIZENSHIP Turkish **GENDER:** Male

LANGUAGES Turkish (native), English (fluent), French (intermediate)

FIELDS

Primary: Labor Economics (Immigration, Gender, Minimum Wage, Inequality)
Secondary: Development Economics (Informality), International Trade (Production Networks, Spatial), Causal Inference

TEACHING EXPERIENCE

14.662 Labor Economics 2 (graduate) 2025
Teaching Assistant to Professors David Autor and Nina Roussille
14.41 Public Finance & Public Policy (undergraduate) 2024
Teaching Assistant to Professor Jon Gruber
14.01 Principles of Microeconomics (undergraduate) 2023
Head Teaching Assistant to Professor Sara Ellison
14.01 Principles of Microeconomics (undergraduate) 2021
Teaching Assistant to Professor Jon Gruber
14.64 / 14.661 Labor Economics (undergraduate/graduate) 2021
Teaching Assistant to Professors Joshua Angrist and Heather Sarsons

RELEVANT POSITIONS

Postdoctoral Fellow, Stanford Immigration Policy Lab 2025-present
Supervisors: Ran Abramitzky and Jens Hainmueller
Affiliate, RFBerlin
Guest Researcher, ifo Institute 2026-2028
Research Assistant to Professor Joshua Angrist 2022-2024

FELLOWSHIPS, HONORS, AND AWARDS

LSE Remote and Distributed Work Research Initiative Grant ($15,000) 2026
Institute for Humane Studies (ten awards, $33,350 total) 2022-2026
International Association for Applied Econometrics Conference 2024
Best Paper Presented by a Graduate Student Award
for Synthetic IV estimation in panels (joint with Jaume Vives-i-Bastida)
MIT Shultz Fund (five awards, $20,100 total) 2021-2024
MIT Hausman Dissertation Fellowship 2023
MIT Global Seed Fund ($26,600) 2024
MIT Center for International Studies Fellowship ($7,500) 2022-2023
UniCredit Foundation Crivelli Europe Scholarship (€65,000) 2019-2021

PROFESSIONAL ACTIVITIES

Referee: American Economic Review: Insights, Journal of Development Economics, European Economic Review, The Economic Journal, Journal of Policy Analysis and Management, Journal of Health Economics

Conferences and Presentations:
2027: AEA/ASSA (session organizer and presenter), UC Riverside (Economics Department Seminar, planned)
2026: AEA/ASSA, Global Development Research Symposium (poster), Society of Labor Economists (poster), UC Davis (Global Migration Center Seminar), Nottingham GEP Workshop, 3rd European Workshop on the Macroeconomic Implications of Migration (Rome), European Economic Association (Dublin), European Meeting of the Econometric Society (Dublin), NBER Economics of Talent Conference, 5th Workshop on the

Macroeconomic Implications of Migration (Dallas Fed), LSE Remote and Distributed Work Research Initiative Workshop
2025: Barcelona Summer Forum Migration, CEPR-Rockwool Annual Labor Symposium, Society of Labor Economists World Meeting, Econometric Society World Congress, Lindau Nobel Meeting, 18th AFD-World Bank Migration and Development Conference
2023-2024: International Association of Applied Econometrics, Society of Labor Economists, Identity & Conflict Lab at Yale, American Causal Inference Conference, IZA workshop on Labor Markets and Innovation during Times of War and Reconstruction, Bilkent University, Koc University, Ted University

Service: Organizer, AEA/ASSA 2027 session; Organizer, MIT Labor Lunch (2021-2022); Founder & Captain, MIT Economics basketball team (2019-2025)

PUBLICATIONS

"Driving While Hungry: The Effect of Fasting on Traffic Accidents"
Journal of Development Economics, May 2024.

I study the impact of hunger on traffic accidents by exploiting the fasting that is religiously mandated during the month of Ramadan. Identification comes from working hours not being adjusted during Ramadan in Turkey. I find that driving while fasting at rush hour is associated with a significant increase in road traffic accidents. Using existing survey evidence on fasting rates in Turkey, I conclude that hunger induced by fasting increases the probability of an accident by 25%, which is smaller than the effect of driving while intoxicated, but larger than the effect of mild sleep deprivation.

"Formal Effects of Informal Labor and Work Permits: Evidence from Venezuelan Refugees in Colombia" *(with Dany Bahar and Isabel Di Tella)*
Journal of Labor Economics, forthcoming.

We analyze the Venezuelan refugee crisis in Colombia to separate the labor market effects of informal immigration and work permits. Using Synthetic Instrumental Variables, we find informal immigration displaced natives from both informal and formal sectors, implying high substitutability between worker types (elasticity ≈ 10). A triple difference-in-differences shows work permits reduced competition in the informal sector and raised it in the formal sector. Our model implies this created 22,830 formal jobs and roughly $40 million in annual tax revenue. Results suggest work permits generate productivity spillovers by reducing skill mismatch, providing economic rationale for immigrant integration policies.

"Where Should Refugees Go? Production Networks and the Welfare Gains from Immigrant Placement" ***AEA Papers and Proceedings, in preparation (May 2027).*** Short paper based on the job market paper.

RESEARCH PAPERS

"Effects of Immigrants on Non-host Regions: Evidence from Syrian Refugees in Turkey" (Job Market Paper 1) *Submitted*

I study how local immigration shocks impact labor markets and firms across the economy through production networks. Using Turkey's Syrian refugee crisis and firm-to-firm VAT data, I show that firms buying from host regions demand more labor, while those selling to host regions increase sales. Estimates imply an elasticity of substitution between labor and intermediates of 0.79 and across intermediates of 1.06. Spillover magnitudes depend critically on network centrality and immigrants' skills. A 1% labor supply increase in Istanbul decreases local real wages by 0.56% while increasing non-host wages by 0.38%. For non-central regions, identical shocks reduce local wages by 1% with negligible spillovers. Similarly, high-skill immigrants create larger spillovers and, therefore, larger welfare gains than low-skill immigrants because high-skill-intensive industries are more central than low-skill-intensive industries. Network position and immigrants' skills determine the extent to which immigration only lowers local wages or also generates substantial economy-wide gains.

"Long-Run Effects of H-1B Immigration on the U.S. Economy" (Job Market Paper 2)
(with Ran Abramitzky, Leah Boustan, and Jens Hainmueller) Submitted

We study the effects of H-1B immigration on U.S. industries that employ H-1B workers and their trading partners. Using a novel cross-industry design and the 1999–2003 expansion of the H-1B visa cap for identification, we find that H-1B exposure raised incomes for natives and pre-existing immigrants, with gains concentrated in non-STEM occupations. Income gains propagate forward through supply chains to downstream industries but not backward to upstream industries, consistent with a productivity shock rather than a labor supply shock. We find no direct effect on patenting, suggesting that productivity gains arise from better task execution rather than patentable invention.

"Formal Effects of Informal Labor: Evidence from Syrian Refugees in Turkey"
Revise and resubmit at the *Journal of Human Resources*

I study the effects of Syrian refugees, who are denied work permits and thus can only work informally, on Turkish firms and workers. Using travel distance as an instrument for refugee location, I show that low-skill natives lose both informal and formal salaried jobs. I document two mechanisms: formal firms reduce their formal labor demand and new firms do not enter the formal economy. Estimates imply an elasticity of substitution of 10 between formal and informal workers. Counterfactual exercises predict that granting refugees work permits would have created up to 120,000 formal jobs in the economy through higher informal wages.

"Synthetic IV estimation in panels" *(with Jaume Vives-i-Bastida)*

We propose a Synthetic Instrumental Variables (SIV) estimator for panel data that combines the strengths of instrumental variables and synthetic controls to address unmeasured confounding. We derive conditions under which SIV is consistent and asymptotically normal, even when the standard IV estimator is not. Motivated by the finite sample properties of our estimator, we introduce an ensemble estimator that simultaneously addresses multiple sources of bias and provide a permutation-based inference procedure. We demonstrate the effectiveness of our methods through a calibrated simulation exercise, two shift-share empirical applications, and an application in digital economics that includes both observational data and data from a randomized control trial. In our primary empirical application, we examine the impact of the Syrian refugee crisis on Turkish labor markets. Here, the SIV estimator reveals significant effects that the standard IV does not capture. Similarly, in our digital economics application, the SIV estimator successfully recovers the experimental estimates, whereas the standard IV does not.

"Occupational Heterogeneity of Child Penalty in the United States"
Submitted

I investigate how parenthood reshapes employment patterns across occupations and how this occupational heterogeneity contributes to earning disparities. Using a novel rotating panel approach to estimating child penalties, I document that both men and women change occupations. The well-established null effect of fatherhood hides that men's employment rate decreases in some occupations like finance and increases in others like construction. Women leave most occupations but select into occupations with part-time options. These occupational changes explain 40% of the income penalty for women, most of the income penalty for men, and most of the wage penalty for both genders.

"Effect of Remote Work on the Child Penalty: Evidence from the United States" *(with Christina Langer) Submitted*

We study the effect of the post-COVID expansion of remote work on the child penalty. Our empirical design proceeds in three steps: using pseudo-panels to estimate child penalties across occupations, exploiting cross-occupational variation in remote work adoption, and using synthetic controls to adjust for differential pre-COVID trajectories. Remote work reduces the hours penalty for mothers: each percentage point increase in an occupation's remote work share raises mothers' hours worked by 0.19%, eliminating one-seventh of the baseline hours penalty for the average remote occupation. We find no effects on employment, income, or wages for mothers, and no average effects on men.

RESEARCH IN PROGRESS

"Production Network Propagation of Minimum Wage Shocks: Evidence from Turkey" (draft coming soon)

"Immigration, Housing, and Voting: Evidence from Canada's Post-2015 Immigration Surge" *(with Jeremy Ferwerda and Jens Hainmueller)*

Canada's permanent resident admissions rose from about 270,000 in 2015 to over 480,000 in 2024, following the introduction of the Express Entry system. We study how this surge affected local rents and voting behavior, and how much of the effect on voting runs through the housing market. To identify the effect on rents, we build on the standard past-settlement instrument in two ways: we exploit the policy-induced surge in admissions, and we relax the share-exogeneity assumption embedded in the instrument using Synthetic IV. We find that immigration raises rents in regions with tight labor markets and in regions where geographic constraints make housing supply inelastic. We are currently extending the analysis to house prices, vacancies, and new construction. We will then estimate the effects on voting and use variation in housing supply elasticity to isolate the role of rents in shaping political responses to immigration.

"No Way Back? Reallocation Frictions and Asymmetric Adjustment to Refugee Arrivals and Returns" *(with Sarah Winton)*
data acquisition in progress

The fall of the Assad regime in December 2024 triggered a large, unanticipated return of Syrian refugees from Jordan, reversing the labor supply shock their arrival created a decade earlier. Using novel returns data matched to Syrian refugees' individual work experience, skills, and credentials, we study whether host-country labor markets adjust symmetrically to refugee arrivals and departures, or whether downward wage rigidity, irreversible investments, and sectoral reallocation frictions make adjustment to departures slow and incomplete.

"Remote Work and Fathers' Long Hours: Evidence from the United Kingdom" (draft coming soon)

I study how the post-pandemic expansion of remote work changed the child penalty in the United Kingdom. I estimate child penalties by occupation from the Labour Force Survey and correct for differences in pre-pandemic trends using synthetic controls. Remote work reduced the probability that fathers work long hours relative to childless men. The effect is concentrated between 38 and 49 hours a week and appears nowhere else in the hours distribution. I find no effect on mothers. This reverses the pattern in the United States, where remote work raised mothers' hours and left men unaffected.

"Remote Work, Gender Norms, and the Child Penalty"
(with Natalie Irmert and Christina Langer)

We test whether gender norms and family institutions shape how remote work changes the child penalty. Comparisons across countries mix up norms and institutions, so we pair them with a design inside one country that holds

institutions fixed. Across roughly twenty countries, we estimate child penalties by occupation from labor force surveys and administrative data, correct for differences in pre-pandemic trends using synthetic controls, and relate the effect of remote work to pre-pandemic norms and institutions. Within Sweden, we use population registers to compare children of immigrants whose parents come from countries with different gender norms, but who share the same labor market, family policies, and employers. The registers also record parental leave and days caring for a sick child, taken by each parent. Funded by an LSE Remote and Distributed Work Research Initiative grant.

MIT Economics

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2027
DISSERTATION: "Market Beliefs and Monetary Policy Design"

DISSERTATION COMMITTEE AND REFERENCES

Professor Ricardo J. Caballero
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Professor Iván Werning
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PRIOR EDUCATION

Pontificia Universidad Católica de Chile

M.A. in Economics (ranked 1st of 28)	2020
B.A. in Philosophy (ranked 1st of 10)	2020
B.A. in Economics and Business (ranked 1st of 353)	2017

CITIZENSHIP Chile **GENDER** Male

LANGUAGES Spanish, English

FIELDS Primary Fields: Macroeconomics
Secondary Fields: Financial Economics, Economic Theory

TEACHING EXPERIENCE

Principles of Macroeconomics (U), MIT 14.02 Teaching Assistant to Professor Ricardo J. Caballero (4 semesters)	2024-2026
Advanced Macroeconomics I (PhD), MIT 14.461 Teaching Assistant to Professors Atif Mian and Iván Werning	Fall 2025
Principles of Macroeconomics (U), MIT 14.02 Teaching Assistant to Professor Martin Beraja	Fall 2024
Advanced Macroeconomics I (PhD), MIT 14.461 Teaching Assistant to Professors Martin Beraja and Iván Werning	Fall 2023
Foundations of Modern Finance (MFin), MIT 15.415 Teaching Assistant to Professors Jiang Wang and Lawrence Weiss	Summer 2023
Financial Mathematics (MFin), MIT 15.454 Teaching Assistant to Professor Joel Flynn	Summer 2022
Intermediate Microeconomics (U), Universidad Adolfo Ibáñez Instructor (2 semesters)	2020-2021
Pontificia Universidad Católica de Chile Teaching Assistant for graduate courses: Microeconomic Theory I (3 semesters), Econometric Theory I, Macroeconomic Theory II, Mathematical Economics, and Real Analysis for Economics; additional undergraduate courses in economics, mathematics, and philosophy.	2014-2021

RELEVANT POSITIONS

Research Assistant to Professor Ricardo J. Caballero, MIT	Fall 2023
Research Assistant to Professor David Kohn, PUC	2020-2021

FELLOWSHIPS, HONORS, AND AWARDS

Stanley (1969) and Rhoda Fischer Fellowship, MIT	2021-2023
Academic Excellence Award, M.A. in Economics, PUC	2020
Prize for best graduating student, B.A. in Philosophy, PUC	2020
Raul Yver Oxley Prize for best graduating student, B.A. in Economics, PUC	2019
Academic Excellence Scholarship for M.A., ANID Chile	2019
Matricula de Honor Scholarship (highest GPA of the cohort), PUC	2013-2016
Monseñor Joaquín Larraín Gandarillas Prize (ranked 3rd nationwide in the college admission test), PUC	2013

PROFESSIONAL ACTIVITIES

Presentations

2026: New England Economics PhD Students Conference, Brown University; Boot Camp on Monetary and Fiscal Policy, NBER (poster presentation); Macro Finance Research Program Summer Session for Young Scholars, University of Chicago (poster presentation)

2024: VI Economics Alumni Workshop, PUC Chile

RESEARCH PAPERS

Expectations and the Transmission of Monetary Policy (Job Market Paper) (with Tomás Caravello) [link]

Monetary policy works largely through expectations: core transmission channels, including long-term yields, mortgage rates, and investment, depend on expected future policy. We build a model in which markets interpret policy decisions as informative about the central bank's real-time readings of the economy—readings that persist and guide future policy. At each meeting, the central bank anticipates how markets will interpret its decision. That interpretation, in turn, depends on how the central bank systematically responds to its readings of the economy. We identify a time-inconsistency problem: meeting-by-meeting rate choices can make market expectations excessively sensitive to policy surprises, leaving the economy inefficiently exposed to mistakes in the central bank's readings. We quantify this mechanism's importance in a New Keynesian model with imperfect and private central bank information, estimated using macroeconomic data, Federal Reserve forecasts, uncertainty estimates for productive capacity, and inflation-swap responses to policy surprises. The optimal ex ante rule responds much less aggressively to estimates of the economy's productive capacity than does meeting-by-meeting policy, limiting the amplification of assessment errors through market expectations and achieving substantially better macroeconomic stabilization.

Forward Guidance for Skeptical Markets [link]

This paper develops a theory of forward guidance that captures two key features of central bank communication: announcements are not fully state-contingent, and the private sector is wary of policy mistakes. The central bank tailors announcements along two central dimensions: (i) vagueness—how tightly the announcement constrains future policy; and (ii) data dependence—how aggressively future policy responds to a public signal of the economy. Three main lessons emerge. First, uncertainty affects communication differently depending on its source: sufficiently high uncertainty about either demand or cost-push shocks calls for vaguer guidance, but only demand-side uncertainty increases the optimal degree of data dependence. Second, strict rules are costly: fully precise guidance entails sizable stabilization losses, especially when the Phillips curve is steep. Third, because of the stabilizing role of announcements, optimal forward guidance differs sharply from simply communicating the best forecast of the future optimal policy rate (Delphic guidance).

Market Interpretation and Uncertainty in Monetary Transmission [link]

Monetary policy decisions affect economic activity largely by shaping private-sector expectations. The difficulty of anticipating how agents will interpret a decision is thus an important source of uncertainty about how strongly policy affects the economy (transmission uncertainty). I study a model in which agents infer the central bank's persistent real-time economic assessments from its decisions in a way that the central bank cannot perfectly predict. Systematic policy shapes this inference, making the extent of transmission uncertainty

endogenous. I show that, under discretion—when the central bank chooses its preferred rate after observing its assessments—transmission uncertainty attenuates the policy response, in line with the familiar cautionary principle. However, this caution is inefficient. First, the discretionary rule is too cautious in its overall scale: a stronger policy response improves stabilization without increasing exposure to interpretation risk. Second, a self-reinforcing feedback loop between uncertainty and caution can generate arbitrarily large, avoidable losses.

RESEARCH IN PROGRESS

Financial Attention and Macroeconomic Stabilization

Financial intermediaries devote substantial resources to gathering and analyzing information about credit risk. The value of this information depends on how useful it is for adjusting lending terms when credit risk changes. By affecting the consequences of risk shocks for borrowers and lenders, systematic monetary policy thus shapes intermediaries' incentives to acquire information. I build a New Keynesian model in which financial intermediaries acquire costly information about shocks that affect borrowers' default risk (i.e., shocks to the cross-sectional dispersion of firms' productivity). The information intermediaries acquire shapes the credit-supply reaction to risk shocks. Since firms rely on bank credit to finance production, this feeds into marginal costs and inflation. The central bank faces a novel trade-off. First, greater attention by intermediaries strengthens the feedback between borrowing costs and firms' prices, making inflation and output harder to stabilize. At the same time, discouraging attention in general requires departures from the central bank's preferred inflation–output stabilization mix. I plan to extend the analysis to the allocation of attention between aggregate and firm-specific risk and how this interacts with macroeconomic stabilization. Furthermore, I plan to use evidence on banks' risk assessments to quantify the relevance of this mechanism.

When Does Uncertainty Justify Monetary Policy Gradualism?
(with Tomás Caravello)

Since the seminal contribution of Brainard (1967), uncertainty about monetary transmission has often been used to justify cautious and gradual policy adjustment. We revisit this idea in standard dynamic models and show that attenuation (lower rate volatility) and gradualism (higher rate persistence) do not always come together: while attenuation is a fairly general consequence of transmission uncertainty, whether such uncertainty also makes optimal policy gradual depends on its source and the economy's underlying dynamics. Uncertainty about the sensitivity of demand to interest rates induces gradualism under both backward- and forward-looking private-sector behavior, albeit through different mechanisms. By contrast, uncertainty about the degree of forward-looking behavior has the opposite effect: it decreases the persistence of policy rates by weakening the effectiveness of future policy commitments. We plan to analyze whether the interaction between transmission and forecast uncertainty can reconcile the conflicting results in the literature on whether

uncertainty calls for more or less aggressive policy, and to quantify how much of observed monetary policy gradualism transmission uncertainty can explain.

MIT Economics

MOHIT KARNANI

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics and Statistics, Completed February 2024
DISSERTATION: "Essays in Empirical Matching Systems"

DISSERTATION COMMITTEE AND REFERENCES

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PRIOR EDUCATION

Universidad de Chile — 2017
MSc. in Economics, Ranked 1st/7

Universidad de Chile — 2015
Business Engineering, BSc. in Economics, Ranked 1st/52

CITIZENSHIP Chile **GENDER:** Male

LANGUAGES English, Spanish (native)

FIELDS Primary Fields: Development Economics, Empirical Market Design
Secondary Fields: Economics of Education, Applied Econometrics

TEACHING EXPERIENCE

The Political Economy of the School (Harvard Kennedy School) Teaching Fellow to Professor Paul Peterson	2026
The Politics of American Education (Harvard College) Teaching Fellow to Professor Paul Peterson	2024
Principles of Microeconomics Head Teaching Assistant to Professor Sara Fisher Ellison	2022
Market Design Teaching Assistant to Professor Parag Pathak	2021
Principles of Microeconomics Head Teaching Assistant to Professor Sara Fisher Ellison	2021
Introductory Economics, Macroeconomics and Mathematics Sole Lecturer in 10 Undergraduate courses at Universidad de Chile	2016-17
Various Graduate and Undergraduate courses on Economic Development, Microeconomics, Public Private Partnerships, Labor Economics, Econometrics, Statistics and Mathematics Teaching Assistant (26 times) at Universidad de Chile	2013-17

RELEVANT POSITIONS

Postdoctoral Researcher at Harvard University (Taubman Fellow)	2024-27
Research Consultant at Interamerican Development Bank, Virtual	2023
Research Assistant for Prof. Esther Duflo at MIT, Virtual	2020
Research Intern at Facebook Research, Menlo Park, CA	2019
Research Associate for Prof. Christopher Neilson at the National Bureau of Economic Research (NBER) and Microsoft Research	2018
Instructor, Department of Economics, Universidad de Chile (Teaching and Research, Full-Time Academic Appointment)	2016-18
Research Intern at the Chilean National Economic Prosecutor's Office (Chilean "FTC") Anti-Cartels Unit	2015
Research Assistant for Professors Eduardo Engel, Manuel Agosin, José De Gregorio, all at Universidad de Chile; Andrea Repetto at Universidad Adolfo Ibáñez; and Christian Belmar at the Inter-American Development Bank (IDB)	2014-18

FELLOWSHIPS AND GRANTS

Full Research Grant, Bloomberg Center for the Cities, Harvard University	2026
AI Experimentation Grant, Cosmos Institute	2026
IHS Fund for Scholars, George Mason University	2022-25
RIS Data Grant, Ministry of Social Development and Family, Government of Chile	2025-27
MIT-Pillar AI Collective, MIT School of Engineering	2023
IHS Junior Fellow, George Mason University	2023
Jerry A. Hausman Dissertation Fellowship, MIT Economics	2022-23
Global Priorities Fellowship, University of Oxford	2022-23
George and Obie Schultz Fund, MIT Economics	2019-23

	Castle Krob International Fellowship, MIT Economics	2018-20
	National Masters Scholarship, National Commission of Research in Science and Technology (CONICYT), Government of Chile	2016
	Academic Excellence Scholarship, Universidad de Chile	2016
	Merit Scholarship, Universidad de Chile	2012-15
	National Score Scholarship, Ministry of Education, Government of Chile	2012-15
OTHER ACADEMIC AWARDS	Winner of the International Initiative for Impact Evaluation (3ie) Open Data Challenge	2017
	Best Macroeconomics Instructor and Best Math Instructor, Business Engineering, Universidad de Chile	2017
	Best Graduated Engineer, Chilean Engineers Association	2017
	Best Poster Award, Chilean Economics Society (SECHI)	2016
	Best First and Second Year (Common Plan) Instructor, Business Engineering, Universidad de Chile	2016
	Highest GPA of Cohort, Economics, Universidad de Chile	2016
	School Spirit Award, Universidad de Chile Alumni Network	2016
	Best in Business Award, Beta Gamma Sigma Honor Society, Assoc. to Advance Collegiate Schools of Business (AACSB)	2016
	Honors Board, Business Engineering, Universidad de Chile	2013-15
	First Admission, Business Engineering, Universidad de Chile	2012
	National Champion, National Mathematics Championship	2011

PROFESSIONAL ACTIVITIES

Referee: American Economic Journal: Economic Policy, American Economic Review, AEFP, CLADEA, Econometrica, Estudios Nueva Economia, Journal of Applied Econometrics, Journal of Behavioral and Experimental Finance, Journal of Econometric Methods, Journal of International Money and Finance, Journal of Labor Economics, Review of Economics and Statistics, YES

External Presentations: (*Denotes coauthor presenting)
NEUDC (Scheduled - Ithaca, NY, 2026)
Hoover Institution at Stanford University (Stanford, CA, 2026)
Harvard Graduate School of Education (Cambridge, MA, 2025)
AEFP (Washington, DC, 2025)
Columbia Economics of Education Guest Lecture ×3 (New York, NY, 2024, 2025, & 2026)
Baker Institute at Rice University (Houston, TX, 2024)
APSA ×2 (Boston, MA, 2026 & Los Angeles, CA, 2023)
IHS ×2 (Raleigh, NC, 2023)
EAGxLatAm ×2 (Mexico City, 2023 & 2024)
ChileConf (PUC Santiago and UDEC-Concepción, 2023)
GPI ×2 (Oxford, 2022 & 2023)
SDSCon (Cambridge, MA, 2022)
Jane Street (virtual-NYC, 2022)
WEAI ×3 (virtual-Hawaii, 2021)
ConsiliumBots (virtual, 2021)

NBER Market Design* (virtual-Cambridge, 2020)
Econometric Society* (virtual-Milan, 2020)
SITE* (virtual-Stanford, 2020)
ASSA (San Diego, CA, 2020)
U. Chile (Santiago, 2018)
LACEA & LAMES ×2 (Puebla, 2019 & Buenos Aires, 2017)
FLAUC (Bogotá, 2017)
CLADEA (Riverside, CA, 2017)
LAWEBESS (Cali, 2017)
SECHI ×2 (Santa Cruz, 2017)
SINERGIA & 3ie (virtual-Bogotá, 2016)
RIDGE (Buenos Aires, 2016)

Service at Harvard: Postdoctoral Association Board (2024-); Founding Organizer of the Empirical Methods in Education Reading Group (2024-)

Service at MIT: Treasurer for: (i) Institute for Data Systems and Society (2022-2024), (ii) LatinX Graduate Students Association (2021-2022), (iii) Graduate Economic Association (2019-2021), (iv) Ashdown House (2019-2020); Development Lunch Co-Organizer (2020-2021); Presidential Task-force: Beyond MIT (2020); Residential Scholar Coordinator (2019-2022); and several Graduate Student Council's committees.

Service at UChile: High School Math Teacher in different institutions for underserved students (2012-2017), Volunteer at social entrepreneurship program (2012-2013).

PUBLICATIONS

"Aftermarket Frictions and the Cost of Off-Platform Options in Centralized Assignment Mechanisms" (with A. Kapor and C. Neilson) ***Journal of Political Economy,* 2024.**

We study the welfare and human capital impacts of colleges' (non)participation in Chile's centralized higher-education platform, leveraging administrative data and two policy changes: the introduction of a large scholarship program and the inclusion of additional institutions, which raised the number of on-platform slots by approximately 40%. We first show that the expansion of the platform raised on-time graduation rates. We then develop and estimate a model of college applications, offers, wait lists, matriculation, and graduation. When the platform expands, welfare increases, and welfare, enrollment, and graduation rates are less sensitive to off-platform frictions. Gains are larger for students from lower-socioeconomic-status backgrounds.

"Effects of a Large-Scale Social Media Advertising Campaign on Holiday Travel and COVID-19 Infections: A Cluster Randomized Controlled Trial" (with E. Breza, F. C. Stanford, M. Alsan, B. Alsan, A. Banerjee, A. G. Chandrasekhar, S. Eichmeyer, T. Glushko, P. Goldsmith-Pinkham, K. Holland, E. Hoppe, S. Liegel, T. Loisel, L. Ogbu-Nwobodo, B. Olken, C. Torres, P.

Vautrey, E. Warner, S. Wootton, and E. Duflo)
***Nature Medicine,* 2021.**

During the Coronavirus Disease 2019 (COVID-19) epidemic, many health professionals used social media to promote preventative health behaviors. We conducted a randomized controlled trial of the effect of a Facebook advertising campaign consisting of short videos recorded by doctors and nurses to encourage users to stay at home for the Thanksgiving and Christmas holidays. We randomly assigned counties to high intensity or low intensity. The intervention was delivered to a large fraction of Facebook subscribers in 75% and 25% of randomly assigned zip codes in high- and low-intensity counties, respectively. In total, 6,998 (6,716) zip codes were included, and 11,954,109 (23,302,290) users were reached at Thanksgiving (Christmas). The first two primary outcomes were holiday travel and fraction leaving home, both measured using mobile phone location data of Facebook users. Average distance traveled in high-intensity counties decreased by −0.993 percentage points for the 3 days before each holiday compared to low-intensity counties. The fraction of people who left home on the holiday was not significantly affected. The third primary outcome was COVID-19 infections recorded at the zip code level in the 2-week period starting 5 days after the holiday. Infections declined by 3.5% in intervention compared to control zip codes. Social media messages recorded by health professionals before the winter holidays in the United States led to a significant reduction in holiday travel and subsequent COVID-19 infections.

"Effect of Physician-Delivered COVID-19 Public Health Messages and Messages Acknowledging Racial Inequity on Black and White Adults' Knowledge, Beliefs, and Practices Related to COVID-19: A Randomized Clinical Trial" (with C. Torres, L. Ogbu-Nwobodo, M. Alsan, F. C. Stanford, A. Banerjee, E. Breza, A. G. Chandrasekhar, S. Eichmeyer, T. Loisel, P. Goldsmith-Pinkham, B. Olken, P. Vautrey, E. Warner and E. Duflo)
***JAMA Network Open,* 2021.**

Do messages delivered by physicians increase COVID-19 knowledge and improve preventive behaviors among White and Black individuals? In this randomized clinical trial of 18 223 White and Black adults, a message delivered by a physician increased COVID-19 knowledge and shifted information-seeking and self-protective behaviors. Effects did not differ by race, and tailoring messages to specific communities did not exhibit a differential effect on knowledge or individual behavior. These findings suggest that physician messaging campaigns may be effective in persuading members of society from a broad range of backgrounds to seek information and adopt preventive behaviors to combat COVID-19.

"Sudden Stops of Capital Flows: Do Foreign Assets Behave Differently from Foreign Liabilities?" (with M. Agosin and J. Díaz)
***Journal of International Money and Finance,* 2019.**

We study the determinants of sudden stops in capital flows to emerging markets. Using gross international asset and liability flows (from the point of view of domestic residents), we identify three types of situations: countries that do not experience any type of sudden stops; those who experience a sudden stop in inflows (liabilities), but no sudden stop in their net financial account of the balance of payments; and countries who suffer a sudden stop in inflows and in their net financial account. Based on these three events, we estimate a multinomial logit model and obtain two important results. We find that developed countries have about the same probability of experiencing sudden stops in gross capital inflows as emerging economies. Moreover, the probability of experiencing a sudden stop in gross inflows that winds up becoming a sudden stop in the financial account is affected by the behavior of a country's international assets: countries whose agents possess assets abroad tend to repatriate them during periods of sudden stops in inflows, while the economies of countries whose agents do not possess foreign assets are much more sensitive to the behavior of foreign investors: a sudden stop in inflows can have very adverse effects on output and employment.

Other Pre-PhD Publication:

"Impact Evaluation of a Freshmen Remedial Math Program: A Regression Discontinuity Design" (in Spanish)
***Experiencias de Innovación Docente,* 2017.**
Link: https://web.uchile.cl/archivos/VAA/ExperienciasInnovacionDocente/42/

RESEARCH PAPERS

"Market Power and the Supply-Side of Cash Transfers: Experimental Evidence from Chile" (Job Market Paper) (with C. Martínez and J. Tessada)

This paper studies the impacts of a cash transfer program on local businesses. We conducted a two-stage RCT in a Chilean municipality, transferring funds to the poorest 1/3 of households. We transferred these funds through a novel digital wallet with restricted redemption, so that households could use the proceeds only at participating local retailers. We randomly encouraged local businesses to join the digital wallet platform, so they could sell to households using this new payment method. We also randomized the fraction of firms treated at the local-market level to measure the supply-side responses to these cash transfers under different levels of market saturation. Firms respond to local cash transfers, increasing prices by about 9% and reducing competitive monitoring. However, retailers facing more competitive markets attenuated their price increases: a 10pp increase in the fraction of substitute retailers reduces prices by 3.3%. These results suggest that limiting local market power may avoid unintended price effects in the context of cash transfer programs. Finally, we estimate a structural model describing the use of and competition for cash transfers, identified using the experimental variation and transaction-level microdata. We use these estimates to run counterfactual exercises that evaluate the impact of different program designs on prices and welfare. Our estimates suggest markups average about 13% and most of the benefits of competition are achieved with a 60%

participation rate within the wallet ecosystem.

"Peer Effects in Matching Systems and the Effects of Immigrant Classmates on Native Students"

This paper studies the estimation of peer effects in centralized school choice systems. These centralized assignment mechanisms often ration seats by lottery, and thus classroom composition and the presence of certain types of peers in a cohort can be the result of a random assignment process. We show how this random variation can be exploited to identify peer effects. The estimator relies on two different propensity scores that can be extracted from a general class of centralized matching mechanisms, and it emulates the setting of a stratified clustered randomized experiment. We use this approach to study the impact of immigrant classmates on native children in Chile's public school system. Our findings suggest that the presence of immigrant classmates has no significant impact on native children's academic achievement, but it does reduce reported victimization by classmates and boosts reports of other prosocial attitudes. Additionally, we find that students already enrolled in a school whose grade receives a migrant entrant are more likely to remain enrolled in that school. These results provide insights into the dynamics of peer effects in educational settings and have implications for policy design in school assignment systems.

"RCTs with Interference in Matching Systems"

This paper studies the estimation of treatment effects using data from randomized controlled trials (RCTs) in the context of matching systems, such as centralized school choice systems. If treated units change their inputs (e.g. reported preferences), they can affect the allocation outcomes determined by the matching system in equilibrium. When the outcome of interest is determined in equilibrium (e.g. being matched to a target school), conventional estimators that compare a treatment group against a control group fail to account for violations of the stable unit treatment value assumption (SUTVA) induced by the matching system. Therefore, they yield biased and inconsistent estimates of the average treatment effect on the treated (ATT), even under perfect randomization designs. I propose an estimator that decomposes the observed average difference between the outcomes of the treatment and control units, and consistently estimates the ATT, along with the residual spillover effect. This nonparametric estimator relies on the matching mechanism satisfying a version of the equal treatment of equals (ETE) property. Moreover, the ATT is identified for any counterfactual fraction of treated units, which allows for the estimation of treatment effects under scaled interventions. I illustrate the applicability of this estimator using data on the Chilean centralized school choice system and the Ecuadorian teacher labor market.

"Screening and Recruiting Talent at Teacher Colleges Using Pre-College Academic Achievement" (with F. Calle, S. Gallegos and C. Neilson)

This paper studies screening and recruiting policies that restrict or incentivize entry to teacher-colleges. Using historical records of college entrance exam scores since 1967 and linking them to administrative data on the population of teachers in Chile, we first document a robust positive and concave relationship between precollege academic achievement and several short and long run measures of teacher productivity. We use an RD design to evaluate two recent policies that increased the share of high-scoring students studying to become teachers. We then show how data-driven algorithms and administrative data can enhance similar teacher screening and recruiting policies.

Other Pre-PhD Paper:

"Expiring Budgets and Dynamic Competition in Year-End Public Auctions: Theory and Evidence from Chile" (MSc. Thesis)

Data from Chile's public procurement system shows that auctions become less competitive toward the end of the fiscal year as the number of tenders increases because of use-it-or-lose-it budget provisions. A dynamic price-competition model with capacity constraints rationalizes this finding and has additional predictions that are confirmed by the data. In particular, firms infer a less competitive environment by the end of the year and frequently set their bids around the price cap. This result is driven by the possibility of becoming a single-bidder when competitors exhaust their capacity. Additionally, high capacity firms usually skew their victories toward the end of the year, while smaller firms win more tenders in earlier periods.

RESEARCH IN PROGRESS

"Long-Run Effects of Housing Improvements on Labor, Education and Health Outcomes of Families: Evidence from a Nationwide Field Experiment in Chile" (with D. Contreras, R. Cooper and N. Valdés)

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2027
DISSERTATION: "Essays on Market Power and Technology in Healthcare Labor Markets"

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PRIOR EDUCATION

Yale University 2019
B.A., Economics and Mathematics
B.A., Computer Science
Summa Cum Laude

CITIZENSHIP USA **GENDER:** Male

FIELDS

Primary Fields: Labor Economics, Industrial Organization
Secondary Fields: Health Economics

TEACHING EXPERIENCE

Empirical Topics in IO (14.274, graduate; planned) 2027
TA to Professors Tobias Salz and Michael Whinston
MIT Kaufman Teaching Certificate Program 2026

RELEVANT POSITIONS	Research Intern, Microsoft Research	2021, 2022
	Pre-Doctoral Fellow to Professor Amy Finkelstein, MIT	2019–2021
FELLOWSHIPS, HONORS, AND AWARDS	NBER Pre-Doctoral Fellowship in Aging and Health Research	2023–2025
	George and Obie Shultz Fund (3x)	2022–2024
	NSF Graduate Research Fellowship	2021–2026
	NSF Graduate Research Fellowship (awarded, declined)	2019
	Phi Beta Kappa, Yale University	2019
PROFESSIONAL ACTIVITIES	**Presentations:** Chicago Federal Reserve (scheduled)	2026
	NBER Summer Institute, IO/Digitization*	2023
	ASSA Annual Meeting	2022
	NBER Summer Institute, Health Economics*	2021
	*co-author presenting	
	Service: Organizer, MIT Industrial Organization Lunch	2025
	Organizer, MIT Public Finance Lunch	2024–2025
	Treasurer, MIT Graduate Economics Association	2023–2024

RESEARCH PAPERS

"Worker Training and Firm Screening: Evidence from Hospital Technologies" (Job Market Paper)

Workers accumulate specific skills through work experience, and firms often screen for workers with precisely those skills. On-the-job training may therefore have value through selective job offers, and these job offers, in turn, may shape labor market competition. I study how on-the-job training affects worker choice sets in hospital nursing labor markets, where hospitals value experience with their electronic health record (EHR) platform but do not specifically compensate this experience with higher wages. Instead, the returns to training manifest in the data through worker sorting. An event study around EHR adoption shows that training increases nurses' probabilities of moving to a same-technology hospital by 15 percent. A dynamic labor supply model with firm screening, identified using vacancy shocks to relax hospital screening and commuting distance to shift workers' job valuations, attributes most of this sorting to additional job offers rather than worker preferences for familiar technologies. EHR training is worth $16,000 (about 20 percent of one year's salary) to new nurses, with almost none of it reflected through wages. Because additional offers expand workers' outside options, training makes nurses 30 percent more wage-elastic toward same-system hospitals, the opposite sign of the standard full-choice-set model prediction.

PUBLICATIONS

"What Drives Risky Prescription Opioid Use? Evidence from Migration"
(with Amy Finkelstein and Matthew Gentzkow)
Quarterly Journal of Economics, Volume 140, November 2025

We develop and estimate a dynamic model of risky prescription opioid use that allows us to unpack the role of person- and place-specific drivers of the opioid epidemic and to assess the impact of state opioid policies. Event studies indicate that, among adults receiving federal disability insurance from 2006 to 2019, moves to states with higher rates of risky use produce an immediate jump in the probability of risky use, followed by an additional gradual increase for the next several years. Using a potential outcomes framework, we show how these results map to the person- and place-specific factors in the model. Model estimates imply large effects of place on both the likelihood of transitioning to addiction and the availability of prescription opioids; they also indicate that these place effects change significantly when state laws restricting pain clinics are enacted. A one standard deviation reduction in all place effects would have reduced risky use by about 40 percent over our study period. One particular source of place effects, pain clinic laws, reduced risky use by 5 percent, but could have reduced it by 30 percent if they had been enacted earlier, with much of this magnification operating through the dynamics of addiction.

"Data, Privacy Laws, and Firm Production: Evidence from the GDPR"
(with Mert Demirer, Diego Jiménez Hernández, and Sida Peng)
Journal of Political Economy, Forthcoming (2026)

By regulating how firms collect and use data, privacy laws may alter firm demand for information technology inputs. We study how firms respond to privacy laws in the context of the EU's General Data Protection Regulation (GDPR) by using seven years of data from a global cloud-computing provider. Our difference-in-difference estimates indicate that, in response to the GDPR, EU firms decreased data storage by 26% and data processing by 15% relative to comparable US firms, becoming less "data-intensive." To estimate the costs of the GDPR for firms, we propose and estimate a production function where firms combine data and computation in firm production. We find that data and computation are strong complements and that firm responses are consistent with the GDPR representing a 20% increase in the cost of data. This increase translates into only a 0.1–0.5% rise in overall production costs because data plays a relatively small role in firm production compared to computation.

RESEARCH IN PROGRESS

"The Rise of Healthcare and its Consequences for Local Labor Markets"
(with Amy Finkelstein and Matthew Notowidigdo)

Most net employment growth in the United States over the past 40 years has come from the expansion of healthcare employment. We show that the aging

of the population is an important factor behind this growth and explore how this rising demand for health care workers has reshaped local labor markets between 1980 and 2019. Our empirical strategy isolates plausibly exogenous variation across commuting zones in initial differences in the age distribution. We estimate that every 1 percentage point increase in the share of the population 80+ increases the health care employment-to-population ratio for 25-54 year olds by 0.53 (standard error = 0.11), with increases in both clinical and non-clinical occupations. Employment gains are highly concentrated among direct-care workers and other low-wage occupations \afnote{waiting to see what happens for non-clinical}. Increased demand for direct care workers in turn generates spillovers to the broader local labor market, with a non-health care local employment multiplier of approximately 1, again concentrated in low wage service jobs. Both aging-induced increases in health care employment and their local labor market spillovers are highly concentrated in female employment. Aggregating our local estimates to the national level, we find that between 1980 and 2019, the growth in the share of the population that is 80+ can explain about one-fifth of the rise in health care employment, about one-quarter of the growth in female employment, and about one-fifth of the growth in low-wage service employment. Essentially all of the aging-induced increase in low-wage service employment is female.

"Medical Graduate Training and the Spatial Distribution of Physicians"

Geographic disparities in physician supply have significant implications for healthcare access, with rural regions facing particularly severe shortages. A key friction is that residency location anchors doctors in space: nearly one-quarter of residents take jobs within ten miles of their training hospital, and almost three-fifths remain in the same state. We study how the institution of residency training shapes the geographic distribution of physician supply, highlighting the role of two key forces. Economies of scale in physician education concentrate training in large academic centers, while moving costs drive geographic stickiness. We combine these in a trade-style gravity framework to model physician mobility across training and practice locations. To estimate this model, we link two decades of national physician flows from Medicare claims and residency training information with novel data from a major physician recruitment platform and variation in residency slots and funding across programs. Our framework enables counterfactual evaluation of alternative funding designs for reducing physician shortages in underserved areas.

"Physician Shortages and Allocative Mechanisms: Evidence from a Year-Long National Strike"
(with Sehyun Hong)

We study a national physician strike in South Korea that disrupted physician supply for eighteen months, providing a rare natural experiment on how labor

adjusts within and between hospitals. Using national administrative claims and hospital records, we study how hospitals re-allocate work across the remaining labor force and how patients are prioritized in the face of capacity constraints.

"Specialist Concentration and Returns to Scale in Physician Labor Markets"
(with Brad Setzler and Ben Vatter)

Specialist physicians have become markedly more concentrated over the past two decades, both across hospital systems and within facilities. We document this shift using two decades of physician–hospital affiliation data and show that it is not simply a byproduct of hospital consolidation: specialist concentration has risen faster than the concentration of hospitals or of primary care physicians. We then map labor shares into product market shares by assigning procedures to specialties. Across most specialties, the mapping is convex: a hospital with five percent of a market's specialists performs roughly five percent of its procedures, but a hospital with twenty percent performs thirty to forty percent. These increasing returns admit two different stories. Concentration may raise productivity through specialization and volume, improving patient outcomes; or it may reflect market power as patients face fewer outside options. We aim to distinguish these mechanisms and quantify their consequences for the quality of specialist care.

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DOCTORAL STUDIES

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DISSERTATION: "*Essays in Behavioral Development Economics*"

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PRIOR EDUCATION

University of Chicago — 2018
Bachelor of Science in Mathematics with Specialization in Economics, Bachelor of Arts in Economics with Honors

CITIZENSHIP

United States

FIELDS

Primary Fields: Development Economics
Secondary Fields: Behavioral Economics, Health Economics

TEACHING EXPERIENCE

PhD Development Economics – Micro (14.771), MIT — 2026
Teaching Assistant to Professor Ben Olken

Applied Economics for Managers (15.024), MIT Sloan - MBAs 2026
Teaching Assistant to Professor Tavneet Suri

Economics for Everyone (ECON 190000), University of Chicago 2018
Grader to Professor John List

RELEVANT POSITIONS

RA to Professor Esther Duflo (MIT) 2022-24
RA to Professor Frank Schilbach (MIT) 2021-22
RA to Professor Heather Sarsons (MIT, University of Chicago) 2021-23
Economist/Data Scientist (Lyft) 2018-21
RA to Professor Jeffrey Grogger (University of Chicago) 2016-17

FELLOWSHIPS, HONORS, AND AWARDS

National Science Foundation Graduate Research Fellowship 2021-26
MIT Human Insight Collaborative (MITHIC) Fellowship 2025-26
Weiss Research Grant 2025
Weiss Travel and Piloting Grant 2024
George and Obie Shultz Fund 2021-24
David S. Hu Award for Undergraduate Excellence in Thesis Writing, University of Chicago 2018
Dean's List, University of Chicago 2018
National Merit Scholar 2014

PROFESSIONAL ACTIVITIES

Journal referee: Journal of Political Economy, Journal of Political Economy Microeconomics, Journal of Development Economics

Presentations:

Development Lunch, BLM (University of Zurich) 2026
Advances in Field Experiments (University of Chicago) 2026
North East University Gender Day (Princeton) 2025

Service: Graduate Resident Advisor at MIT Baker House, MIT Development Lunch Organizer, MIT Development Tea Organizer, Mentor for MIT-Harvard Application Assistance and Mentorship Program

RESEARCH PAPERS

When Caring Backfires: Experimental Evidence from Family Caregiving in India *(Job Market Paper)*

Does concern for family caregivers discourage elders from obtaining healthcare? We develop a theoretical framework in which elders may withhold information about healthcare opportunities when they care about caregivers and believe their caregivers would be pressured to help. This inefficiently reduces take-up when caregivers would help willingly. We test three model predictions using two field experiments with elder-caregiver pairs in rural Tamil Nadu, India (N=1,175). First, directly informing caregivers about a check-up opportunity for the elder increases attendance by 30% (5.3 percentage points), relative to informing only the elder, suggesting

elders withhold information relevant for take-up. The effect is strongest for elders who report being worried about burden at baseline, whose attendance more than doubles. Second, worried elders are less willing to share information about the check-up and more sensitive to randomized reductions in caregiver costs than not-worried elders, suggesting worried elders believe sharing information imposes costly pressure on caregivers. Third, caregivers' decisions to help are not sensitive to randomized observability treatments that vary pressure, suggesting caregivers willingly help out of care for the elder. Our results imply that elders' caring preferences can interact with misperceptions of caregiving burden to lead to inefficiently low health investment among older adults.

Self-Detrimental Avoidance of Rest *(with Alexandra V. Schubert)*

Across many cultures, resting instead of working is viewed as a barrier to higher earnings. This belief is also reflected in many canonical economic models. Recent empirical evidence highlighting the productivity benefits of rest challenges this belief. Yet, existing work tends to ignore individuals' demand for restful activities and whether it aligns with their returns. In the context of an online labor market experiment in South Africa, we explore whether workers capitalize on the returns to short rest periods. After eliciting demand for rest, we estimate returns to rest for the same individuals and find that mandated rest boosts productivity by 0.3 standard deviations, thus making up for forgone earnings from resting. At the same time, only 19% of workers voluntarily choose to rest. Contrary to the notion of selection on returns, workers with high financial returns to rest do not select into rest. We provide suggestive evidence that misperceived financial returns are driving the disconnect between demand for and returns to rest. Our results provide proof-of-concept evidence that individuals may be misallocating effort between resting and working and could reach higher overall utility by working less. This highlights the importance of understanding misperceptions around rest, especially in light of the economic burden of long-term costs of overworking such as burnout.

AI-Enhanced Handheld ECGs to Screen for Prior Myocardial Infarction in Rural India *(with Alexander Schubert, Nikhil Kanakamedala, Madeline McKelway, Luke Messac, Cyrus Reginald, Frank Schilbach, T.S. Selvavinayagam, Girija Vaidyanathan, Esther Duflo, and Ziad Obermeyer)*

Underdiagnosis is a major barrier to effective treatment, especially in low- and middle-income countries (LMICs), where health system constraints limit access to testing. Physiological data from low-cost sensors, interpreted by artificial intelligence (AI), could enable diagnosis outside of hospitals, but training data from LMICs are scarce. Here we build an AI system that screens for prior ('silent') myocardial infarction (MI), using a new dataset from rural India pairing consumer

single-lead ECGs with same-day echocardiography. The resulting model estimates likelihood of prior MI, based on cardiologist interpretation of echocardiograms, directly from ECG waveforms. It achieves an AUC of 0.77 (95% CI 0.69–0.84; vs. 0.68 for conventional risk scores), and flags a high-risk group (2.5% of the sample) with 9.3% prevalence of prior MI. Community-based screening for prior MI using this tool would cost $1,984 per life-year saved, comparable to other screening policies in India. Notably, many of the model's high-risk patients appear low-risk by traditional criteria -- e.g., blood pressure, blood sugar, cholesterol -- highlighting the potential for physiological data to improve on risk scores from Western populations.

Community-Based Mental Health Interventions for Elderly Women in Tamil Nadu, India *(with Esther Duflo, Camille Falézan, Madeline McKelway, Miriam Sequeira, Frank Schilbach, and Girija Vaidyanathan)*

Widespread depression among the elderly poses a significant threat to healthy aging in low- and middle-income countries, with especially high rates among elderly women. In partnership with the Government of Tamil Nadu, India, we conducted a large-scale RCT to evaluate two cross-randomized interventions aimed at improving the mental health of elderly women: individual-level cognitive behavioral therapy (CBT), and village-level group activities (GA). The interventions were delivered by trained government workers as part of their regular activities and were designed to be scalable within existing administrative structures. We find that group activities – both on their own and in combination with CBT – lead to significant improvements in depressive symptoms immediately following the intervention, with effect sizes of approximately 0.07 standard deviations (SD). In contrast, CBT alone does not generate detectable improvements. Six months later, the effect of group activities on depression increases to 0.12 SD, and we also observe improvements in functional impairment (0.1 SD) and cognition (0.08 SD). This makes group activities run by government frontline workers a cost-effective intervention to improve the health, well-being, and cognition of elderly women.

OTHER PUBLICATIONS

"The Value of Waiting Time in the United States: Estimates from Nationwide Natural Field Experiments" *American Economic Journal: Economic Policy (forthcoming)* (with Ariel Goldszmidt, John List, Robert Metcalfe, Ian Muir, Kerry V. Smith)

MIT Economics

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DOCTORAL STUDIES

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DISSERTATION: "Essays in Political and Behavioral Economics"

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PRIOR EDUCATION

Victoria University of Wellington (New Zealand) 2021
Master of Commerce in Economics
Bachelor of Arts (Honors) in Philosophy
Bachelor of Science in Mathematics and Economics

CITIZENSHIP USA, New Zealand, Belgium, Israel **GENDER:** Male

FIELDS

Primary Fields: Political Economy, Behavioral Economics
Secondary Fields: Labor Economics

TEACHING EXPERIENCE

Behavioral Economics (PhD, MIT course 14.160) 2025
Teaching Assistant to Professors Frank Schilbach and Abhijit Banerjee [6.9/7.0; link to evaluations]

RELEVANT POSITIONS

Predoctoral Research Assistant for Professors Simon Jäger and Benjamin Schoefer 2020-22

FELLOWSHIPS, HONORS, AND AWARDS

Jerry A. Hausman Graduate Dissertation Fellowship (MIT Econ, 2025-26)
Humane Studies Fellowship (Institute for Humane Studies, 2025)
Emergent Ventures Grant (Mercatus Center, 2023)
Jan Whitwell Prize (New Zealand Association of Economists, 2021)
Seamus Hogan Prize (New Zealand Association of Economists, 2021)
Maurice Goldsmith Prize (Victoria University Philosophy Department, 2021)
MacMorran Prize in Mathematics (Victoria University, 2017)
JT Campbell Prize in Statistics (Victoria University, 2017)
SEF Prize in Second-Year Macroeconomics (Victoria University, 2017)

PROFESSIONAL ACTIVITIES

Refereeing: American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, AER: Insights, Journal of the European Economic Association, Economic Journal, Management Science

Conference presentations:
Early-Career Behavioral Economics Conference (Chicago, 2026)
Behavioral Economics Annual Meeting (JMC workshop, 2026)
Early-Career Behavioral Economics Conference (Bonn, 2024)
Chicago Booth Generative AI and Labor Mini-Conference (2024)
CESifo Behavioral Economics (2023)
NBER SI Digital Economics and Artificial Intelligence (lightning talk, 2023)

PUBLICATIONS

The Transmission of Reliable and Unreliable Information (with Thomas Graeber and Chris Roth), *Quarterly Journal of Economics,* forthcoming

Information often spreads and influences beliefs regardless of its reliability. We show that this occurs in part because indicators of reliability tend to be lost in the process of word-of-mouth transmission. We conduct controlled experiments where participants listen to economic forecasts and pass them on through voice messages. Other participants listen either to original or transmitted audio recordings and report incentivized beliefs. Across various transmitter incentive schemes, a claim's reliability is lost in transmission much more than the claim itself. Reliable and unreliable information, once filtered through transmission, impact listener beliefs similarly. Mechanism experiments show that reliability is lost not because it is perceived as less relevant or harder to transmit, but because it is less likely to come to mind during transmission. Evidence from our experiments, a large corpus of everyday conversations, and economic TV news shows that contextual cues can bring reliability to mind and induce its transmission, but situations in which people share information seldom contain such cues.

Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence (with Whitney Zhang), *Science*, 2023

We examined the productivity effects of a generative artificial intelligence technology—the assistive chatbot ChatGPT—in the context of mid-level professional writing tasks. In a preregistered online experiment, we assigned

occupation-specific, incentivized writing tasks to 453 college-educated professionals, and randomly exposed half of them to ChatGPT. Our results show that ChatGPT substantially raised productivity: average time taken decreased by 40% and output quality rose by 18%. Inequality between workers decreased, and concern and excitement about AI temporarily rose. Workers exposed to ChatGPT during the experiment were 2x as likely to report using it in their real job two weeks after the experiment, and 1.6x as likely two months after the experiment.

The German Model of Industrial Relations: Balancing Flexibility and Collective Action (with Simon Jäger and Benjamin Schoefer), *Journal of Economic Perspectives*, 2022

We give an overview of the two pillars of the "German model" of industrial relations: sectoral collective bargaining and firm-level codetermination. Relative to the United States, Germany outsources collective bargaining to the sectoral level, resulting in higher coverage and the avoidance of firm-level distributional conflict. Relative to other European countries, Germany makes it easy for employers to avoid coverage or use flexibility provisions to deviate downwards from collective agreements. The greater flexibility of the German system may reduce unemployment, but may also erode bargaining coverage and increase inequality. Meanwhile, firm-level codetermination through worker board representation and works councils creates cooperative dialogue between employers and workers. Board representation has few direct impacts owing to worker representatives' minority vote share, but works councils, which hold a range of substantive powers, may be more impactful. Overall, the German model highlights tensions between efficiency-enhancing flexibility and equity-enhancing collective action.

RESEARCH PAPERS

The Supply Side of Social Media (Job Market Paper) (with Aakaash Rao)

We study social media's distinctive model of content production. Unlike legacy media outlets, social media platforms do not professionally produce content optimized to appeal to viewers. Instead, they harvest the output of large numbers of amateur users creating content in pursuit of nonpecuniary rewards. The resulting scale and diversity of platforms' content libraries, combined with their ability to experimentally test new pieces on subsets of viewers, allows them to ex-post discover the pieces most appealing to each viewer. We develop a model of this process and show that it leads the content consumed in equilibrium to depend on viewer preferences (demand) but also on creator preferences (supply), because the scale powering platforms' discovery concentrates where creators are eager to produce. Collecting new data on Instagram, TikTok, and X/Twitter, we show that viewers' feeds are dominated by unpaid amateurs who produce envy-provoking "lifestyle" and partisan political content in pursuit of social status and expressive satisfaction. We experimentally generate supply- and demand-side shifters by manipulating viewers' feeds and eliciting creators' incentivized preferences while paying them to produce content. On the demand

side, pieces of lifestyle and partisan content are less likely to highly engage viewers than more benign entertainment. But creators enjoy creating lifestyle and partisan content and therefore produce it at enormous scale. This supply-driven scale enables platforms to cherry-pick the minority of such pieces viewers find more engaging than the marginal piece of entertainment. Estimating our model using the experimental variation, we calculate that supply-side preferences account for one- to two-thirds of the prevalence of lifestyle and partisan content in viewers' feeds.

The Business of the Culture War (with Aakaash Rao), 2026

We link the contemporary American "culture war" to the entry of 24-hour cable news networks, which we find emphasize cultural issues more than the broadcast networks preceding them and far more than political candidates. Estimating viewer preferences using household-by-second data, we show cable news faces a tradeoff: cultural content attracts non-news entertainment viewers while economic content attracts viewers of rival news outlets. Broadcast news and politicians similarly trade off the cultural content that appeals to the politically disengaged against the economic content that appeals to the politically engaged, but we show why cable has the strongest incentives to emphasize culture. In turn, constituencies quasi-randomly more exposed to cable news networks assign greater importance to cultural issues, and politicians run more cultural campaigns.

RESEARCH IN PROGRESS

Complexity, Cooperation, and Conflict (with Thomas Graeber and Aakaash Rao)

MIT Economics

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD student in Economics, 2021–present
Expected completion: 2027
DISSERTATION: "Cash Transfers, Demand Composition, and Demand Reallocation"

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PRIOR EDUCATION

Instituto Tecnológico Autónomo de México (ITAM) 2019
BA in Economics, 2014–2019

LANGUAGES

Spanish and English (fluent); French (basic)

FIELDS

Primary: Development Economics
Secondary: Political Economy and Public Finance

TEACHING EXPERIENCE

Public Finance and Public Policy (14.41) 2026
Teaching Assistant to Professor Jonathan Gruber

Principles of Microeconomics (14.01) 2024
Teaching Assistant to Professor Sara Ellison

Inference on Causal and Structural Parameters Using ML and AI (14.38/14.388) 2025
Teaching Assistant to Professor Victor Chernozhukov

RELEVANT POSITIONS

Research Assistant to Professor Benjamin Olken, MIT 2023-2024
Research on tax administration in Indonesia, comparing additional tax personnel with increased operating budgets.

FELLOWSHIPS, HONORS, AND AWARDS

MIT PhD Fellowship, 2021–2023
Highest GPA at ITAM, 2019

RESEARCH PAPERS

Redistribution and Productivity: Cash Transfers and the Role of Consumer Demand (*Job Market Paper)* (*with Agustina Colonna and Marco Medina)***

How cash transfers should be targeted is a central question in social policy. This paper shows that beneficiary composition shapes not only redistribution but also the composition of local demand, labor allocation across formal and informal firms, and aggregate productivity. We exploit the 2019 universalization of Mexico's non-contributory pension, which extended pension benefits across the income distribution. Using difference-in-differences designs at the household and municipality levels, we find that beneficiary households increased consumption by 5.7%, with spending disproportionately directed toward formal establishments, consistent with non-homotheticities in formal-sector demand. Formal employment increased by 6.1% in municipalities highly exposed to the reform relative to less exposed municipalities, with no statistically significant effect on informal employment. This expansion was concentrated among firms in industries where household estimates show the largest increases in demand. Formalization gains were larger where new beneficiaries ranked higher in the local resource distribution and where the rise in transfers was driven by expanded coverage to richer households rather than increased benefits for existing recipients. These patterns are consistent with a demand-led reallocation toward the formal sector induced by the pension reform. A sufficient-statistic calculation shows that the transfer-induced reallocation raised aggregate productivity by 0.32%. A model in which the marginal propensity to spend formally rises with household resources and formal firms face larger average labor wedges rationalizes these findings.

Apex Corruption Erodes Democratic Values (*with Enrique Seira and Saumitra Jha)*

We combine a field experiment with cross-country evidence to demonstrate that apex corruption—corrupt acts implicating top-level politicians—causes large decreases in democratic values and associated behaviors, including voter turnout, volunteering in election organization, and honesty and trust in incentivized games. These effects are strongest when corruption is revealed near elections and among incumbents ex ante viewed as honest. We further show, both experimentally and by drawing upon evidence from revelations across 17 countries, that apex corruption weakens explicit support for democracy. These findings reveal a transparency–legitimacy tradeoff: exposing apex corruption may strengthen accountability while eroding support for democracy.

Imagined Communities, Imagined Selves: Nation Building and Identity
(with Benjamin Krause, Michael Kremer, and Enrique Seira)

In a classic formulation, nations are imagined communities, sustained by narratives of who belongs. We ask whether inclusive narratives can build national identity and prosociality among disadvantaged groups, and reshape their members' self-image. In a field experiment, Mexican high school students from indigenous villages toured historical sites guided by the Mestizaje narrative, the official national unifying account of post-revolutionary Mexico. At baseline, students declare themselves markedly lighter-skinned than their photographs show. The tour narrows this gap: students become more likely to self-identify as dark-skinned and of indigenous origin. Stated, implicit, and incentivized measures of national identity rise. Costly prosociality toward co-nationals rises, with no increase in out-group animosity. Effects largely persist six months later.

RESEARCH IN PROGRESS

Public Pensions and Household Labor Supply
(*with Agustina Colonna and Marco Medina)*

Public pensions can change how families share the burden of paid and unpaid work. We study this adjustment using Mexico's 2019 pension universalization, comparing individuals and households around the eligibility cutoff before and after the reform. Employment falls by 2 percentage points among eligible older adults and by 1.2 percentage points among co-resident adults per eligible elder. Yet their unpaid work moves in opposite directions: older adults reduce household production, while younger members increase it and withdraw primarily from informal employment. These patterns suggest that pension income enables a reorganization of household labor, with younger adults substituting household production for market work and older adults reducing both. The findings reveal a margin of adjustment beyond recipients' employment: income support in old age can also shift household responsibilities away from older adults.

Public Banks, Financial Inclusion, and Credit Supply
(*with Agustina Colonna and Marco Medina)*

We study the effect of public bank expansion on financial intermediation and local economic activity. We exploit the opening dates of more than three thousand public bank branches in Mexico between 2021 and 2024, using municipal data on deposit holdings, credit origination, and activity at the municipal level. These public banks offer deposit and debit services but do not extend credit, which allows us to study how the increase in deposit-taking, decoupled from credit, affects the use of financial services and economic activity at the municipal level. The entry of the public bank can have opposing effects on the municipality: on the one hand, it can bring previously unbanked households into the financial system and increase available deposits, or it can displace private bank deposits, reducing the funds available for local credit. We compare the increase in total deposits with the reduction in private bank deposits and analyze the extent to which private banks finance their local credit with local deposits.

MIT Economics

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DOCTORAL STUDIES

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PRIOR EDUCATION

University of Wisconsin-Madison — 2021
B.S., Mathematics with honors; B.S. in Economics with honors — GPA: 4.0/4.0

CITIZENSHIP Thai

GENDER: Male

LANGUAGES Thai, English

FIELDS
Primary Field: Theory
Secondary Fields: Market Design, Industrial Organization

TEACHING EXPERIENCE

Microeconomic Theory: Adverse Selection and Moral Hazard (Graduate) — 2026
Teaching Assistant to Professor Alexander Wolitzky
(Rating: 7.0/7.0)

Microeconomic Theory: Consumer and Producer Theory (Graduate) — 2024, 2025
Teaching Assistant to Professor Parag Pathak
(Rating: 6.1/7.0, 6.3/7.0)

Market Design (Graduate) — 2024, 2025
Teaching Assistant to Professor Nikhil Agarwal and Professor Parag Pathak
(Rating: 6.8/7.0, 5.3/7.0)

Strategy and Information (Undergraduate) — 2025
Teaching Assistant to Professor Ian Ball and Professor Muhamet Yildiz
(Rating: 6.0/7.0)

Economic Applications of Game Theory (Undergraduate) — 2023
Teaching Assistant to Professor Tomasz Sadzik
(Rating: 6.0/7.0)

Market Design (Undergraduate) — 2023
Teaching Assistant to Professor Parag Pathak
(Rating: 5.9/7.0)

Mathematical Methods for Quantitative Finance (MITx) — 2022
Teaching Assistant to Professor Paul Mende

RELEVANT POSITIONS

Research Assistant for Professor Stephen Morris, MIT — 2022
Research Assistant for Professor Nikhil Agarwal, MIT — 2022-2023
Research Assistant for Professor Marzena Rostek, University of Wisconsin-Madison — 2021

FELLOWSHIPS, HONORS, AND AWARDS

Best Graduate TA award, MIT Economics, 2026

UK AI Security Institute 'Alignment Project' grant for 'An Economic Framework for Alignment and Control' (with D. Bergemann, A. Koh, S. Morris, & Z. Yang), 2026

MIT Presidential Fellowship, MIT Economics, 2021-2023

Honorable Mention, William Lowell Putnam Mathematical Competition, 2017, 2018, 2019

Silver Medal, International Mathematical Olympiad, 2014, 2015, 2016

PROFESSIONAL ACTIVITIES

Referee
Econometrica, American Economic Review, American Economic Review: Insights

Seminar and Conference Presentations
Northwestern-Kellogg Summer School in Economic Theory, 2026
North American Summer Meeting, 2026
ASSA Annual Meeting ('Attention and Engagement on Platforms'), 2025
Stony Brook International Conference on Game Theory, 2023
AMS Fall Central Sectional Meeting ('Connecting Network Structure and Behavior of Biological Interaction Systems'), 2019

Supervision
Sitta Tantikul, MIT UROP, "Interview Design: Job Assessment versus Precision," 2026-present (co-supervised with Professor Glenn Ellison and Farrell Wu)

RESEARCH PAPERS

"Robustness and Simple Contracts in Sequential Screening" (Job Market Paper) [link]

Sellers often contract with buyers before buyers learn their valuations, but the contracts are simpler than Bayesian sequential screening predicts. We study a sequential-screening environment in which the seller knows demand but not how the buyer learns, and maximizes worst-case profit over all learning processes consistent with demand. Under natural conditions on cost and the shape of demand, the essentially unique robustly optimal mechanism is a single refund contract that the buyer always accepts. The value of sequential screening then comes from information about both learning and demand. We quantify this value and show that knowing how the buyer learns can raise both the seller's profit and total welfare.

"Attention Capture" (with Andrew Koh) **[link]**
Revise and Resubmit, *Journal of Political Economy*

We develop a unified analysis of how information captures attention. A decision maker (DM) faces a dynamic information structure and decides when to stop paying attention. We characterize the convex-order frontier and extreme points of feasible stopping times, as well as dynamic information structures which implement them. This delivers the form of optimal attention capture as a function of the designer and DM's relative time preferences. Intertemporal commitment is unnecessary: sequentially optimal information structures always exist by inducing stochastic interim beliefs. We further analyze optimal attention capture under noninstrumental value for information. Our results speak directly to the attention economy.

"Robust Technology Regulation" (with Andrew Koh) **[link]**
Extended abstract in *27th ACM conference on Economics and Computation*

We analyze how uncertain technologies should be robustly regulated and how regulation should evolve with new information. An adaptive sandbox comprising a zero marginal tax up to an evolving quantity limit is (i) robust: it delivers optimal payoff guarantees when the agent's learning process and/or preferences are chosen adversarially; (ii) dominant: it outperforms other robust and regular mechanisms across all agent learning processes and preferences; (iii) time-consistent: it is the only robust mechanism that can be implemented without commitment. Robustness is important: absent robust regulation, worst-case payoffs can be arbitrarily poor and are induced by weak but growing optimism that encourages excessive risk-taking. Our results offer optimality foundations for existing policy and speak directly to current debates around managing emerging technologies.

"Persuasion and Optimal Stopping" (with Andrew Koh and Weijie Zhong) **[link]**
Extended abstract in *27th ACM conference on Economics and Computation*

We develop a duality-based first-order approach to dynamic persuasion in optimal stopping problems with general action-, state-, and time-dependent preferences. A direct-communication reduction recasts the design problem as a semi-static program over joint distributions of stopping beliefs and times; strong duality and a near-necessary first-order condition then reduce it to a one-dimensional differential equation in a multiplier that prices the agent's continuation incentive, characterizing the optimum as a concavification of a multiplier-augmented payoff. We demonstrate the method in three applications: dynamic binary persuasion, where optimal policies combine suspense generation with action-targeting; a structural result by which the principal's time-risk preferences alone determine whether suspense is optimal; and dynamic linear persuasion, where the optimum is dynamic tail-censorship.

"Informational Puts" (with Andrew Koh and Kei Uzui) **[link]**
Extended abstract in *25th ACM conference on Economics and Computation*

We analyze how dynamic information should be provided to uniquely implement the largest equilibrium in binary-action coordination games. The designer offers an informational put: she stays silent if players choose her preferred action, but injects asymmetric and inconclusive public information if they lose faith. There is (i) no multiplicity gap: the largest (partially) implementable equilibrium can be implemented uniquely; and (ii) no commitment gap: the policy is sequentially optimal. Our results have sharp implications for the design of policy in coordination environments.

"Technology Speed Limits" (with Andrew Koh) **[link]**

We study optimal technology regulation when private learning occurs both through doing (scaling up the technology) and through waiting (as time passes). We show that an adaptive speed limit—a cap on the rate at which the technology can increase per unit time—delivers optimal worst-case guarantees over all learning processes and/or preferences, and is the only time-consistent mechanism that does so.

"Memory Correlated Equilibrium" (with Andrew Koh) **[link]**

We develop a framework for modeling random and correlated memory in games: a memory correlated equilibrium (MCE) comprises (i) a base extensive-form game; and (ii) a memory structure that delivers self-locating information. We define progressively stronger versions of MCE, show their existence, and develop a revelation principle that paves the way for memory design in games. We illustrate applications to cooperation, mechanisms, coordination, and hold-up problems, as well as discuss implications for the design of algorithms and artificial agents.

RESEARCH IN PROGRESS

"Multiple Signaling Channels in the College Admissions Problem" [link]

I model a multi-channel college admission policy in which students differ along both intrinsic qualities and test-taking abilities, while a college only values students' intrinsic qualities. Students signal their qualities to the college by choosing between a test and a portfolio track. Test scores depend on both quality and test-taking ability and have high precision, while portfolio scores depend only on quality and have low precision. I give tight conditions under which non-trivial equilibria exist. I then compare the multi-channel policy with a test-only (portfolio-only) policy that uses only test (portfolio) scores to sort students and show that the multi-channel policy always yields a weakly better expected quality of accepted students. Moreover, the welfare outcome of the portfolio-only policy is always strictly dominated by either the multi-channel or test-only policy.

"Implementable Dynamic Information Structures under Outside Learning"

I study which dynamic information structures can be implemented for an agent who also learns from an outside source. The designer refines the agent's outside filtration and may reveal in advance what the agent will learn from the outside source.

MIT Economics

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DOCTORAL STUDIES

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DISSERTATION: "Essays in Public Finance"

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PRIOR EDUCATION

The University of British Columbia — 2019
Bachelor of Arts, Honours in Economics

CITIZENSHIP Canada, Argentina **GENDER** Male

LANGUAGES English (native), Spanish (native), French (proficient)

FIELDS Primary Fields: Public Finance, Corporate Finance

Secondary Fields: Entrepreneurship, Household Finance

TEACHING EXPERIENCE

14.471 PhD Public Finance I — 2023
Teaching Assistant to Professors Jim Poterba and Iván Werning
14.32/14.320 Undergraduate/Masters Econometrics — 2023–2026
Teaching Assistant to Professor Anna Mikusheva

RELEVANT POSITIONS

RA to Professor Jonathan Parker, MIT Sloan	2022
RA to Professor Atif Mian, Princeton	2019–2021
Student Analyst, Department of Finance Canada	2018

FELLOWSHIPS, HONORS, AND AWARDS

George and Obie Shultz Fund Grant, MIT	2022, 2023, 2025
Doctoral Fellowship, SSHRC	2021–2025
C. Lowell Harriss Dissertation Fellowship, Lincoln Institute	2022
Best Undergraduate Research Paper, Canadian Economics Association	2019
Joseph A. Crumb Prize in Economics, UBC	2019

PROFESSIONAL ACTIVITIES

Presentations: Canadian Public Economics Group (scheduled), NBER Economic Analysis of Business Taxation (scheduled), MIT Public/Labor Seminar, Canadian Economics Association, MIT Applied Micro Lunch, MIT Public Finance Lunch

PUBLICATIONS

"Tax Policy and Business Entry," *Journal of Public Economics* Vol. 252 (Dec 2025): 105537, *with Dustin Swonder*

This paper measures the effects of state corporate and personal income tax reforms on business entry using an event study research design. We focus on reforms that do not coincide with federal tax changes, are preceded and followed by stable tax policy, and substantially change tax burdens. Corporate tax reforms cause meaningful changes in business entry: we measure a five-year elasticity of 2.7 with respect to the net-of-tax rate. This is driven primarily by large effects of tax cuts. Corporate tax cuts also reduce the predicted growth potential of entrants. We do not find strong evidence of cross-border spillovers, and find no evidence that personal income tax reforms affect business entry.

RESEARCH PAPERS

"Crisis Relief Through the Tax Code: Effects of Corporate Loss Refunds on Firms and Workers" (Job Market Paper), *with Dustin Swonder*

Governments spend heavily to keep firms alive in crises, yet the corporate income tax works against them: profits are taxed immediately, while losses are relieved only later, and not at all if the firm exits. Tax loss carrybacks narrow this asymmetry by refunding taxes paid on prior-year profits, and because eligibility depends on years already closed, firms cannot manipulate it. We study Australia's 2020 carryback using the universe of business tax returns linked to monthly payroll records. Refunds reached larger firms with persistent profit histories, and conditional on entitlement, more financially constrained firms were more likely to claim. Comparing corporations to matched pass-through entities, which were statutorily excluded, we find that the average refund raised two-year survival by 0.25 percentage points. Each dollar of entitlement raised cumulative payroll by 77 cents over sixteen months, mainly through retention of incumbent workers, with no detectable change in pay per employee. Following workers across employers, roughly 30 percent of this response appears as higher earnings; the rest would have been earned elsewhere. Using pre-policy loss cohorts, we estimate that 52 cents of each refunded dollar would have been deducted within seven years.

"Shared Appreciation Loans for Homebuyers: Evidence from a California Lottery", *with Dustin Swonder*

Prospective homebuyers choose from a limited menu of mortgage products. How does mortgage market incompleteness affect homebuying decisions? This paper studies an initiative which expanded the financing menu for certain California homebuyers, offering a down payment assistance loan for up to 20% of a home's purchase price in exchange for a share of future appreciation. Leveraging random lottery variation, we find that shared appreciation loan offers increase homebuying by 42.5 percentage points within six quarters. Among homebuyers induced by offers to buy homes using shared appreciation loans, 70% would not buy homes otherwise. Buying with shared appreciation loan financing does not cause credit distress for these marginal homebuyers, but it does cause them to sacrifice neighborhood quality to attain homeownership. Inframarginal homebuyers use shared appreciation loans to decrease their mortgage borrowing by about $43,000 on average, rather than to buy more expensive homes.

RESEARCH IN PROGRESS

"The Emergence of Silicon Valleys: A Role for Government", *with Ofer Eldar and Adair Morse*

Can government support create entrepreneurial ecosystems rather than merely subsidize firms? We study the U.S. Small Business Investment Company (SBIC) program, which since 1958 has licensed privately managed investment funds and expanded their capacity with SBA-guaranteed leverage. Using a new historical registry linked to venture deals, exits, patents, patent-linked labor demand, and local Census outcomes, we uncover a mechanism through which government support for financial intermediaries creates spillover location effects. SBIC venture investments are followed by investor entry and return, startup entry, more new companies with patents, stronger patent-linked labor demand, and later non-SBIC investment by the same fund families. Financing rises first and exits later, consistent with entrepreneurial hub formation. The evidence suggests that government support can facilitate a VC ecosystem by building private intermediation capacity.

MISCELLANEOUS

MIT Economics Mental Health and Peer Support Group 2022–2025
Volunteer Bike Mechanic, MIT Bike Lab 2024–

MIT Economics

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PRIOR EDUCATION

Swarthmore College 2019
BA- Economics, Highest Honors; Phi Beta Kappa

CITIZENSHIP

Japan

LANGUAGES

English, Japanese (native), Italian (intermediate)

FIELDS

Primary Fields: International Trade, International Macroeconomics
Secondary Field: Macroeconomics

SOFTWARE

MATLAB, Python (JAX), Stata

TEACHING EXPERIENCE

14.581 International Economics I (graduate) 2024, 25
Teaching assistant to Professor Arnaud Costinot and Professor David Atkin

	14.54 International Trade (undergraduate) Teaching Assistant to Professor Arnaud Costinot	2023, 24, 25
	14.05 Intermediate Macroeconomics (undergraduate) Teaching Assistant to Professor Chris Cotton	2023

RELEVANT POSITIONS

Globalization PhD Fellow (visiting), Dartmouth College	2026
Research Assistant, MIT Department of Economics- Arnaud Costinot	2025
Research Assistant, MIT Department of Economics- Ivan Werning	2022
Academic Assistant, University of Tokyo- Kenichi Ueda (with Chang-Tai Hsieh)	2020-21
Research Professional, Becker Friedman Institute, University of Chicago- Erik Hurst and Chang-Tai Hsieh	2019-21
Research Assistant, University of Chicago Booth School of Business- Chang-Tai Hsieh	2018
Research Assistant, Swarthmore College- Stephen Golub	2017

FELLOWSHIPS, HONORS, AND AWARDS

Best Teaching Assistant Award, MIT Department of Economics, 2024-2025
JASSO Graduate Scholarship, 2021-24

PROFESSIONAL ACTIVITIES

Participant, Princeton Initiative: Macro, Money, and Finance, 2023
Participant, Stanford Big-Data Initiative in International Macro-Finance Conference, 2023
Referee: Econometrica; American Economic Review

PUBLICATIONS

"Task-Based Discrimination" (with Erik Hurst and Yona Rubinstein)
American Economic Review, 114(6): 1723–1768, 2024.

We develop a task-based model of occupational sorting to identify and quantify the effects of discrimination, racial skill gaps, and aggregate task prices on Black-White differences in labor market outcomes over time. At the heart of our framework is the idea that the size and nature of racial barriers faced by Black workers vary by the task requirements of each job. We introduce a task measure capturing interactions with coworkers and customers and show, through model estimation and supporting microdata, that the racial gap in this measure is a good proxy for direct labor market discrimination. Our estimated model attributes substantial convergence in jobs involving interpersonal contact to declining discrimination, while persistent racial barriers limit convergence in jobs requiring analytical tasks. These task-specific barriers also imply that race-neutral changes in task prices can widen racial wage gaps. Quantitatively, rising returns to analytical tasks widened the Black-White wage gap by approximately seven log points between 1980 and 2018. This force offset gains from reduced discrimination and narrower racial skill gaps, leaving the overall wage gap largely unchanged.

RESEARCH PAPERS

"The Keynesian Case for Trade Protection: A Modern Treatment" (Job Market Paper) (with Keelan Beirne)

We revisit the Keynesian rationale for tariffs: when downward nominal wage rigidity creates inefficient employment losses, tariffs can serve as second-best instruments by expanding labor demand in affected sectors. To do so, we characterize optimal tariffs in a dynamic multisector economy with wage rigidities and a flexible exchange rate. Our contribution is twofold. First, we show analytically that tariffs can be counterproductive instruments: a broad tariff intervention reduces labor demand in the very sectors it is meant to protect, as currency appreciation depresses foreign import demand and discourages current spending. As a result, optimal policy calls for import subsidies across sectors when wage rigidity causes employment shortfalls across a sufficiently broad segment of the economy. Second, we undertake a quantitative evaluation and find that optimal interventions and the associated welfare gains remain modest in our U.S. application even when labor distortions are sizable. Optimal tariffs turn out to be small because of their limited effectiveness in shifting employment across sectors relative to the distortions they create.

"Romer or Ricardo?" (with Chang-Tai Hsieh and Peter Klenow)
Working paper, 2022; revision in progress.

How do new varieties and quality improvements shape trade, growth, and the gains from foreign innovation? We develop a multicountry model combining new variety creation and international technology diffusion. On the theoretical front, we show that foreign growth through new variety creation raises home welfare by creating new sources of comparative advantage, while foreign growth through creative destruction can lower home welfare by eroding home's comparative advantage and worsening its terms of trade. On the empirical front, we use product-level export and import dynamics to infer countries' innovation patterns. The estimates suggest that the United States specializes in creating new varieties, while China relies more heavily on improving products developed abroad.

RESEARCH IN PROGRESS

"Trade Protection and Global Value Chains: The Good, the Bad, and the Optimal" (with Arnaud Costinot)

We study trade policy in a general neoclassical environment with Global Value Chains (GVCs). Our starting point is that GVCs expand governments' ability to tax foreigners. This simple observation has three implications. First, tariffs can mechanically improve a country's terms of trade. Holding factor prices fixed, the associated change in a country's terms of trade is, to a first-order approximation, the tariff content of its exports. Second, the same economic force implies that tariffs can backfire when factor prices endogenously adjust, a GVC-induced Lerner paradox. Third, under a weak and realistic assumption, namely that countries cannot manipulate relative factor prices abroad, it is

optimal to leave trade undistorted within GVCs, an application of Diamond and Mirrlees's (1971) Production Efficiency Theorem.

"The Costs of Trade Wars: Theory and Evidence from the Great Depression" (with Keelan Beirne)

Did the trade war deepen the Great Depression? We argue that the gold standard amplified the adverse effects of tariffs on trading partners by tightening their monetary conditions. Using a shift-share design based on product-level tariff data, we show that countries exposed to higher foreign tariffs experienced lower output and higher unemployment, yet faced higher short-term interest rates and accompanying gold outflows. To explain these responses, we develop a Keynesian model of trade under the gold standard with downward nominal wage rigidity. In the model, unilateral tariffs ease domestic monetary conditions and stimulate employment at trading partners' expense, while a global trade war depresses aggregate demand. Quantitative results from a model calibrated to 17 interwar economies suggest substantial employment gains in some countries and losses in others.

POLICY REPORTS

"Export Diversification and Inclusive Growth in Land-Locked Countries in Asia: Bhutan, Kazakhstan, Mongolia and Turkmenistan" (with Stephen Golub and Anastasia Vasilyeva). Report prepared for UNCTAD, 2017.

MIT Economics

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics and Statistics, Expected completion June 2027
DISSERTATION: "Essays in Econometrics"

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PRIOR EDUCATION

Yale University — 2021
BA, Economics and Mathematics, *magna cum laude*

CITIZENSHIP USA **GENDER:** Male

FIELDS Econometrics, Applied Econometrics, Statistics

TEACHING EXPERIENCE

New Econometric Methods (14.386), MIT — Spring 2027
TA to Professors Alberto Abadie and Ashesh Rambachan

Nonlinear Econometric Analysis (14.385), MIT — Fall 2026
TA to Professors Alberto Abadie and Isaiah Andrews

Nonlinear Econometric Analysis (14.385), MIT — Fall 2025
TA to Professors Alberto Abadie and Isaiah Andrews

Introduction to Statistical Methods in Economics (14.30), MIT — Fall 2025

	TA to Professor Alberto Abadie	
RELEVANT POSITIONS	RA to Professor Anna Mikusheva, MIT	2021–22
	RA to Professor James Choi, Yale	2019
	RA to Professor Ebonya Washington, Yale	2019
FELLOWSHIPS, HONORS, AND AWARDS	Jerry A. Hausman Dissertation Fellowship, MIT	2024
	George and Obie Shultz Fund Grant, MIT	2023
	Robert M. Solow Fellowship, MIT	2022
	National Science Foundation Graduate Research Fellowship	2021
	MIT Economics Departmental Fellowship	2021
	Phi Beta Kappa, Yale	2021
	Valedictorian, AEA Summer Training and Scholarship Program	2020
	Connecticut Governor's Scholar	2016

PROFESSIONAL ACTIVITIES

Refereeing: American Economic Review

Service: Contributor to MIT Econometrics Clinic (2024), Organizer for MIT Econometrics Lunch (2024–25) and MIT Third-Year Lunch (2023–24), Mentor for Economics Mentoring Program (2022–2025)

RESEARCH PAPERS

Robust Inference for Weighted Estimands (Job Market Paper).

Researchers often conduct inference on weighted estimands, defined as weighted averages of group-level effects. Example settings include event studies with cohort-level effects and experiments with site-level effects. Under heterogeneous effects, different weighting schemes yield estimands with distinct empirical and policy interpretations, leading to ambiguity and disagreement over the choice of weights. I establish bounds on differences between weighted estimands and confidence bounds on effect heterogeneity, which I use to construct estimators that minimize worst-case bias and confidence intervals that are uniformly valid over classes of weighted estimands. I apply these methods to an event study in Lakdawala, Nakasone, and Kho (2023), which studies the effects of school-based internet access on test scores. I find that results are robust to broad classes of weights. I then apply the methods to Tennessee's Project STAR experiment and find that results are sensitive to small departures from baseline weights.

Interpreting TSLS Estimators in Information Provision Experiments (with Whitney Zhang), *American Economic Review: Insights* (2025).

In information provision experiments, researchers often estimate the causal effects of beliefs on actions using two-stage least squares (TSLS). This paper formalizes exclusion and monotonicity conditions that ensure that TSLS recovers a positive-weighted average of causal effects. We assess common TSLS estimators for both passive and active control designs from the literature; we find that two commonly used passive control estimators generally allow for

negative weights. The choice of passive control estimator affects the magnitude and significance of estimates in simulations and in an empirical application. We give practical recommendations for addressing these issues.

Headline Estimation with Multiple Research Designs.

To study a scalar parameter, a researcher may consider multiple research designs. Based on the evidence across designs, the researcher may wish to formulate a headline estimate of the parameter. I examine how to choose this headline when it is unclear which design is most appropriate for studying the parameter. I model this setting by assuming that (i) exactly one of the designs is valid for the parameter and (ii) the researcher has ambiguity about which design is valid, represented by a class of priors over the candidate designs. To account for ambiguity, I propose reporting the headline estimate that minimizes the worst-case posterior risk over the class of priors. In three applications, I show cases where accounting for ambiguity materially affects the quantitative conclusion and cases where an existing headline is already close to optimal.

"Post" Pre-Analysis Plans: Valid Inference for Non-Preregistered Specifications (with Reca Sarfati).

Pre-analysis plans are now standard in experimental economics, but researchers often supplement preregistered analyses with non-prespecified results after observing the data. We study inference in this setting when the decision to report additional results depends on realized findings. We show that conventional confidence intervals and point estimates can be invalid even absent manipulation, because non-preregistered results are observed only in selected data realizations. We derive conditional inference procedures that account for selective reporting, characterize when the implied corrections are large or negligible, and apply the approach to Bessone et al. (2021). We conclude with guidance for empirical researchers and journals.

Integrating Diagnostic Checks into Estimation (with Reca Sarfati).

Empirical researchers often use diagnostic checks to assess the plausibility of their modeling assumptions, such as testing for covariate balance in RCTs, pre-trends in event studies, or instrument validity in IV designs. While these checks are traditionally treated as external hurdles to estimation, we argue they should be integrated into the estimation process itself. In particular, we propose residualizing one's baseline estimator against the vector of diagnostic check statistics to remove the component of baseline sampling variation explained by the diagnostic checks. This residualized estimator offers researchers a "free lunch," delivering three properties simultaneously: (i) eliminating inference distortions from check-based selective reporting; (ii) reducing variance without changing the estimand when the baseline model is correctly specified; and (iii) minimizing worst-case bias under bounded local misspecification within the class of linear adjustments. We apply our method to the RCT in Kaur et al. (2024) and find that, even in a setting where all

balance checks pass comfortably, residualization increases the magnitude of the baseline point estimate and reduces its standard error, equivalent to approximately a 10% increase in sample size.

RESEARCH IN PROGRESS

Federated Learning and Privacy Protection (with Dirk Bergemann, Alessandro Bonatti, and Mert Demirer).

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DOCTORAL STUDIES

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PRIOR EDUCATION

Massachusetts Institute of Technology (MIT) 2019
SB Chemical-Biological Engineering and SB Mathematical Economics

CITIZENSHIP USA **GENDER:** Female

FIELDS

Primary Field: Behavioral
Secondary Fields: Algorithms, Media/Digital, Applied Micro

TEACHING EXPERIENCE

PhD Foundations of Behavioral Economics (14.164), MIT Fall 2026
TA to Professors Drew Fudenberg and Ben Enke

Principles of Microeconomics (14.01), MIT Fall 2025
TA to Professor Jonathan Gruber

Entrepreneurship Workshop, MIT Global Teaching Labs 2019

	Topics in Biology, Statistics, and Physics, MIT Global Teaching Labs	2018
	Physics II: Electricity and Magnetism (8.02) TA to Professor Jesse Thaler	2016
RELEVANT POSITIONS	RA to Professor Alexander Wolitzky	2022
	RA to Professors Frank Schilbach and Nina Roussille	2022
	RA to Professors Daniel Benjamin, David Cesarini, David Laibson, and Patrick Turley	2019-21
	Summer Analyst, Goldman Sachs	2018
FELLOWSHIPS, HONORS, AND AWARDS	Association for Comparative Economic Studies Research Award	2025
	Jerry A. Hausman Graduate Dissertation Fellowship	2024-25
	J-PAL North America US Health Care Delivery Initiative ($50,000)	2024
	Institute for Humane Studies Grant	2024
	George & Obie Shultz Fund Grant	2022-25
	Finalist for P.D. Soros Fellowship for New Americans	2022
	National Science Foundation Graduate Research Fellowship	2021-26
	Phi Beta Kappa	2019
	MIT Lourdes C. and Wing S. Fong Memorial Prize	2019
	1st Place in MIT Undergraduate Economics Competition (best paper)	2019
	Tau Beta Pi Engineering Honor Society	2019
	National Merit Scholar	2015

PROFESSIONAL ACTIVITIES

Conference Presentations: 2026 – Behavioral Economics Annual Meeting (Yale); Caltech Behavioral and Experimental Workshop; CEPR Workshop on Media, Technology, Politics, and Society (EIEF); North East Universities Gender Day (Princeton); Advances with Field Experiments.
2025 – North East Universities Gender Day (Yale).

Service: MIT Baker House Graduate Resident Advisor, MIT Graduate Economics Association President, MIT Economics Third Year Lunch Organizer, Harvard and MIT Application Assistance and Mentoring Program

RESEARCH PAPERS

"Algorithms and Parasitic Content" (Job Market Paper)
(with Hannah Solheim)

To shed light on how recommendation algorithms are optimized to maintain user attention with content that makes users worse off, we introduce the concept of *parasitic content* and show its relevance in two experiments. We first define parasitic content in a model of a user with dual selves interacting with an algorithm. Parasitic content is a user-specific temptation good, targeted to a user tagged as susceptible based on her consumption of other, non-tempting content. We study this phenomenon on TikTok. In an eight-week online field experiment, 424 young women were randomly assigned TikTok accounts seeded with varying levels of body-positive engagement. Leveraging second-by-second watch histories spanning 1.3 million videos, we find that body-

positive seeding caused the algorithm to serve not only more body-positive *but also* more weight-loss content, and worsened body image by 0.27 standard deviations. To disentangle the roles of body-positive and weight-loss content in this decline, we conducted a mechanism experiment with 1,000 young women. Weight-loss content worsened body image and mood, while body-positive content improved them. Consistent with temptation, nearly half of participants preferred ex ante to avoid weight-loss content—37% of whom were willing to pay to do so—yet consumed it when served. Thus, for many young women, weight-loss content is parasitic to body-positive content on TikTok. Watch histories from the field experiment further demonstrate that weight-loss content served in response to body-positive seeding increased per-video engagement and ad revenue. By learning how engagement with one content area predicts engagement with others, algorithms can identify and deliver personalized temptations, increasing revenue at the expense of user well-being.

"Firms Believing Women Get Less Means They Do"
(with Nagisa Tadjfar)

This paper examines an employer-driven mechanism behind the early-career gender earnings gap using novel data on MIT graduates' job offers and negotiation process. We document three key findings. First, women receive lower initial compensation offers than men within an employer-occupation. Second, this gap is entirely concentrated in non-salary components—signing bonus and equity—with no gap in base salary. Third, we find no gender differences in job search, and women negotiate as frequently and successfully as men. These findings also generalize to a national sample of high-skill workers in a dataset from Levels.fyi. To understand these patterns, we develop a model showing that a small number of discriminatory firms leads all firms in the market to lowball women in equilibrium. This market-wide gender gap is sustained through outside offers and cannot be closed by changes in worker behavior. We validate this mechanism using an incentivized resume evaluation experiment with recruiters, where we find that firms expect other firms to offer women less. Our results highlight the role of firm behavior—rather than worker decisions alone—in perpetuating gender pay disparities.

RESEARCH IN PROGRESS

"Autoplay and Engagement: Evidence from YouTube"

Many online video platforms reduce frictions to continue consuming content by using design features such as autoplay, which automatically begins the next suggested video after the previous video ends. I study how these features affect users' time on the platform by leveraging the 2015 redesign of YouTube's recommendation system, which was among the first major deployments of autoplay by a social media platform. Using data on browsing behavior for a panel of over 40,000 U.S. households, I employ an interrupted time series design around the date of the platform redesign. I find that the change in recommendation system increased weekly time on YouTube by 10-14 minutes—a 5-7% increase over the pre-change weekly average. Placebo tests

using weeks adjacent to the change show no such effect. These results suggest that seemingly small changes in platform design can lower behavioral frictions and increase consumption online.

"Confidence in Ability and Job Search"
(with Maxim Massenkoff and Nagisa Tadjfar)

Can a credible ability signal to high-skill workers augment job search behavior and improve worker allocation across firms? We partner with a large online interviewing platform that screens workers for employers in the tech sector and identifies exceptional users as "one of the best-performing coders on the platform," communicates this fact to the worker, and subsequently offers them access to interview with select firms. Using a fuzzy regression discontinuity design around the exogenous performance threshold used to identify these users, we find evidence of increased and more ambitious job search as a result of the signal. Workers just above the threshold are 20pp more likely to switch jobs within a year, with effects concentrated among workers with less than 5 years of experience. Workers from lower-ranked universities who did not previously work at an elite firm see improved labor market outcomes 2-5 years after first using the platform—these workers are 21pp more likely to work at an elite tech firm and work at companies with 12% higher expected compensation. We find that more than 85% of job switches occur off-platform, suggesting that access to interviews on the platform did not mediate these effects. Instead, our findings are consistent with increased and more ambitious worker search after receiving a credible signal about their ability, particularly among groups that were previously less likely to have considered these opportunities. Our next steps include generating measures of worker self-confidence from self-assessment and video recordings of interviews and characterizing worker-firm match quality.

PUBLICATIONS

"Polygenic Prediction Within and Between Families from a 3-Million-Person GWAS of Educational Attainment" *Nature Genetics, 2022.*
Aysu Okbay, Yeda Wu, **Nancy Wang**, Hariharan Jayashankar, Michael Bennett, Seyed Moeen Nehzati, …, David Cesarini, Patrick Turley, Peter M. Visscher, Jonathan P. Beauchamp, Daniel J. Benjamin, Alexander I. Young.

"Problems with Using Polygenic Scores to Select Embryos" *New England Journal of Medicine, 2021.*
Patrick Turley, Michelle N. Meyer, **Nancy Wang**, David Cesarini, Evelynn Hammonds, Alicia R. Martin, Benjamin M. Neale, Heidi L. Rehm, Louise Wilkins-Haug, Daniel J. Benjamin, Steven Hyman, David Laibson, Peter M. Visscher.

"Resource profile and user guide of the Polygenic Index Repository" *Nature Human Behaviour, 2021.*

Joel Becker, Casper A.P. Burik, Grant Goldman, **Nancy Wang**, Hariharan Jayashankar, Michael Bennett, …, David Cesarini, Daniel J. Benjamin, Patrick Turley, Aysu Okbay.

"3D-printed gastric resident electronics" *Advanced Materials Technologies, 2019.*
Yong Lin Kong, Xingyu Zou, Caitlin A. McCandler, Ameya R. Kirtane, Shen Ning, Jianlin Zhou, …, **Nancy Wang**, …, Robert Langer, Giovanni Traverso.

MIT Economics

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CURRENT POSITION
Postdoctoral Academy Scholar (2025-2027)
Harvard Academy for International and Area Studies

DOCTORAL STUDIES
Massachusetts Institute of Technology (MIT)
PhD, Economics, completed June 2025
DISSERTATION: "Essays in Development Economics and Trade"

DISSERTATION COMMITTEE AND REFERENCES

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Professor Abhijit Banerjee
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PRIOR EDUCATION

London School of Economics — 2018
MSc Economics
(Distinction)

London School of Economics — 2015
BSc Economics
(First Class Honours)

CITIZENSHIP United Kingdom, Canada

GENDER: Male

LANGUAGES English, French

FIELDS

Primary Fields: Trade
Secondary Fields: Development Economics

TEACHING EXPERIENCE

Development Economics: Micro (PhD level) 2021, 2024
TA to Professors Esther Duflo and Ben Olken (MIT)

Political Economy and Development (Undergraduate level) 2022, 2024
TA to Professors Ben Olken and Abhijit Banerjee (MIT)

The Challenge of World Poverty (Undergraduate level) 2021, 2023
TA to Professors Esther Duflo and Frank Schilbach (MIT)

Macroeconomics (Masters level) 2018
TA to Professor Alwyn Young (LSE)

RELEVANT POSITIONS

Research Assistant to Professor Nava Ashraf (LSE) 2018-2019

HONORS AND AWARDS

TA of the Year Award 2024
Awarded annually to one TA in economics by the MIT Undergraduate Economics Association.

Graduate Student Council Teaching Award 2022
Awarded annually to one instructor in each of MIT's five schools for excellence in teaching a graduate-level course.

Arrow Award 2020
Awarded to the best paper in health economics in English in 2020, by the International Health Economics Association.

Kennedy Scholarship 2019
National merit scholarship awarded annually to up to ten British graduate students to study at MIT or Harvard.

John Hicks Prize 2018
Awarded annually to the highest ranked student in LSE MSc Economics.

RESEARCH GRANTS

Private Enterprise Development in Low-Income Countries (£14,600) 2025
with V. Bassi, D. Houeix, M. Keenan.

Private Enterprise Development in Low-Income Countries (£19,500) 2025
with D. Houeix.

International Growth Centre (£18,561) 2025
with D. Houeix

International Science Partnerships Fund (£99,866) 2024
with N. Ashraf, O. Bandiera, V. Mukonka.

International Growth Centre (£19,981) 2024
with N. Ashraf, O. Bandiera.

George and Obie Shultz Fund ($15,833.33) 2024
with D. Houeix

International Growth Centre (£20,000) 2023
with N. Ashraf, O. Bandiera.

Private Enterprise Development in Low-Income Countries (£31,000) with D. Houeix.	2023
Private Enterprise Development in Low-Income Countries (£20,720) with T. Garg.	2023
George and Obie Shultz Fund ($14,251.67) with D. Houeix	2023
George and Obie Shultz Fund ($14,982.76) with D. Houeix	2022
George and Obie Shultz Fund ($6,000) with T. Garg	2022
Structural Transformation and Economic Growth (£11,960) with T. Garg.	2021
George and Obie Shultz Fund ($12,000) with I. Puri	2020
International Growth Centre (£9,346) with N. Ashraf.	2019

PROFESSIONAL ACTIVITIES

Referee: *American Economic Review, Econometrica, Economica, Journal of Development Economics, Journal of Economic Behavior and Organization, Journal of Political Economy, Labour Economics, Quarterly Journal of Economics*

Conference and Workshop Presentations:

NBER International Trade and Investment, Fall Meeting	2026
Conference on Urban and Regional Economics (Columbia)	2026
NBER Summer Institute, Development Economics	2026
Theoretical Research in Economic Development (Geneva)	2026
IGC/EGC Conference on Firms, Trade, and Development (Yale)	2025
Institutions, Trade, and Economic Development (Alberta)	2025
NBER Summer Institute, International Trade and Investment	2025
NEUDC (Northeastern)	2024
Cities and Development Workshop (Harvard)	2024
Junior Trade Workshop (LSE-Warwick)	2024

PUBLICATIONS

Losing Prosociality in the Quest for Talent? Sorting, Selection, and Productivity in the Delivery of Public Services (with Nava Ashraf, Oriana Bandiera, and Scott S. Lee). *American Economic Review*, 2020, 110(5): 1355-1394.

We embed a field experiment in a nationwide recruitment drive for a new health care position in Zambia to test whether career benefits attract talent at the expense of prosocial motivation. In line with common wisdom, offering career

opportunities attracts less prosocial applicants. However, the trade-off exists only at low levels of talent; the marginal applicants in treatment are more talented and equally prosocial. These are hired, and perform better at every step of the causal chain: they provide more inputs, increase facility utilization, and improve health outcomes including a 25 percent decrease in child malnutrition.

Awarded the Arrow Award for the best paper published in health economics in English in 2020 by the International Health Economics Association.

RESEARCH PAPERS

Aggregate Consequences of Relationship Dynamics (Job Market Paper) (with Pulak Ghosh)

Most trade takes place in buyer–seller relationships that expand gradually over time. A growing body of empirical evidence suggests that this pattern may reflect the importance of relational contracting: when formal enforcement is limited, continued trade itself provides incentives. Using rich firm-to-firm transaction data from India, we show that value traded in a typical relationship approximately doubles over the course of a year, that this growth curve is flatter in states with stronger contract enforcement, and that this growth curve is invariant to firm size. These facts mean that adjustments to trade shocks are inherently dynamic, as firms must build trust with new suppliers. To quantify the aggregate consequences of these micro-level adjustments, we develop a dynamic multi-country general-equilibrium model that embeds optimal relational contracts within a tractable Eaton–Kortum-style framework, generating endogenous growth in traded quantities as relationships age. Using the microdata to estimate the model, we compare the dynamic vs static welfare consequences of a reduction in trade costs.

Relational Frictions along the Supply Chain: Evidence from Senegalese Traders (with Deivy Houeix)

We study search and trust frictions in international sourcing, and whether the growth of ``social commerce'' in lower-income countries can alleviate them. We document that firms use social media as sourcing infrastructure in ways related to these frictions. Guided by a relational-contracting model, we run a field experiment with 1,862 Senegalese garment retailers, matching them to suppliers in Türkiye (search) and cross-randomizing information about types (adverse selection) and incentives (moral hazard). New matches expand access to varieties and quality, but only develop into relationships when trust frictions are alleviated. Structural estimates imply trust frictions are complements and substantially limit trade.

Quantifying the Sensitivity of Quantitative Trade Models (with Habib Chenguiti Ansari and Dave Donaldson)

Modern quantitative trade models emphasize cross-country heterogeneity in productivity across goods as the source of trade and its benefits. In workhorse

versions, this heterogeneity is assumed to follow specific functional forms, such as i.i.d. Frechet or Pareto. We provide a systematic exploration of how sensitive the gains from trade estimated from these models are to relaxing this assumption---first, with a new formula for sharp bounds on gains from trade across all possible distributions, and then with a numerical characterization for the case where distributions must be close to the workhorse form. Importantly, for each candidate distribution we ensure that its implied trade model is consistent with standard estimation methods such as the ability to match all bilateral trade data points and an exogeneity assumption. Our estimated bounds are wide, even for small departures from the canonical model: the maximal gain is about four times larger and the minimal gain is zero. Imposing high-level restrictions on the distributions considered---for example, maintaining Frechet or Pareto marginals while relaxing independence, or vice versa---does little to shrink these bounds.

RESEARCH IN PROGRESS

Trade Credit and Digital Records: Evidence from Cote d'Ivoire (with Deivy Houeix)

Trade credit—suppliers allowing buyers to purchase inventory now and pay later—is central to firm-to-firm commerce but depends on trust. In settings with limited contract enforcement, suppliers often ration credit to unfamiliar buyers, limiting firm growth and creating barriers to entry. We study whether firms can use increasingly available mobile payments records to signal creditworthiness to potential suppliers or lenders---an open finance model---and how this affects relationship development and firm- and market-level outcomes. We collaborate with a large mobile money provider in Cote d'Ivoire to build and evaluate a tool for firms to provided verified disclosures, as well as a fintech specializing in trade credit to study how specialized intermediaries use such records. We run an RCT with 2,000 retailers in the packaged drinks sector, where we randomize whether firms can access the new disclosure tool and whether we connect them with the specialized trade credit lender. Pilot results show that the ability to do verified disclosures increases supplier willingness to extend credit by 20 percentage points. The full RCT is active, with outcomes of interest including credit access, supplier relationships, product varieties, prices, stockouts, and profits and sales.

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DOCTORAL STUDIES

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PRIOR EDUCATION

Massachusetts Institute of Technology 2021
S.B. Mathematical Economics, Minor in Computer Science

CITIZENSHIP USA **GENDER** Female

FIELDS Labor

TEACHING EXPERIENCE

Competitive Strategy Bootcamp (MBA, MIT course 15.906) 2025
Teaching assistant to Professor Danielle Li

Psychology and Economics (Undergraduate, MIT course 14.13) 2025
Teaching assistant to Professor Frank Schilbach

RELEVANT POSITIONS

Research advisor (short term contract), Mercor economics team	2026
Research assistant to Professor Nina Rousille	2023
Research assistant to Professor Jon Gruber	2022
Research assistant to Professor Heather Sarsons	2022
Summer analyst, Federal Reserve Bank of New York	2020

FELLOWSHIPS, HONORS, AND AWARDS

Schmidt Sciences AI at Work Program Grant ($30,000)	2026
Hausman Dissertation Fellowship, MIT	2025
Washington Center for Equitable Growth Early Career Grant ($15,000)	2025
George and Obie Shultz Fund Grant, MIT	2022-26
National Science Foundation Graduate Research Fellowship	2021

PROFESSIONAL ACTIVITIES

Referee: *Review of Economics and Statistics, AER: Insights, Journal of Labor Economics, Journal of the European Economic Association, Organization Science, Science Advances*

Service:
Organizer, MIT Labor Lunch
Organizer, MIT Labor Coffee
MIT-Harvard PhD Application Assistance & Mentoring Program

Seminars and Conferences:
OpenAI AGI Economy Conference (2026)
NBER SI Digital Economics and Artificial Intelligence, Zurich AI + Economics Workshop, Microsoft AI Cognition and the Economy (2023)

PUBLICATIONS

Interpreting TSLS Estimators in Information Provision Experiments (with Vod Vilfort), *AER:Insights,* 2025.

In information provision experiments, researchers often estimate the causal effects of beliefs on actions using two-stage least squares (TSLS). This paper formalizes exclusion and monotonicity conditions that ensure that TSLS recovers a positive-weighted average of causal effects. We assess common TSLS estimators for both passive and active control designs from the literature; we find that two commonly used passive control estimators generally allow for negative weights. The choice of passive control estimator affects the magnitude and significance of estimates in simulations and in an empirical application. We give practical recommendations for addressing these issues.

Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence (with Shakked Noy), *Science,* 2023.

We examined the productivity effects of a generative artificial intelligence (AI) technology, the assistive chatbot ChatGPT, in the context of midlevel professional writing tasks. In a preregistered online experiment, we assigned occupation-specific, incentivized writing tasks to 453 college-educated

professionals and randomly exposed half of them to ChatGPT. Our results show that ChatGPT substantially raised productivity: The average time taken decreased by 40% and output quality rose by 18%. Inequality between workers decreased, and concern and excitement about AI temporarily rose. Workers exposed to ChatGPT during the experiment were 2 times as likely to report using it in their real job 2 weeks after the experiment and 1.6 times as likely 2 months after the experiment.

Improving Commuting Zones Using the Louvain Community Detection Algorithm, *Economics Letters,* 2022. (Undergraduate thesis)

Well-defined commuting zones are essential for accurate research on US local labor markets. I improve upon currently used "ERS" commuting zones in two ways. First, I test multiple edge weights. Second, the algorithm to produce ERS commuting zones requires specifying a theoretically-unguided cutoff parameter; results may be sensitive to the parameter choice. Instead, I use the Louvain algorithm, which optimizes for "modularity", a graph-intrinsic parameter that is greater when there is higher intra-commuting zone flow and lower inter-commuting zone flow. Compared to ERS, my new delineations TS Louvain and Sum Louvain have 0.05 to 0.15 greater modularity, Sum Louvain has a 0.01 to 0.02 higher share of people who work and live in the same commuting zone, and in a case study, TS Louvain produces greater estimates and t-statistics. These metrics suggest that these new commuting zones improve upon the existing delineations.

RESEARCH PAPERS

Adversarial Hiring (Job Market Paper) (with Arjun Ramani)

We provide labor market-wide evidence on the effects of technologies that shape the informativeness of signals in hiring. Using historical edits to resume text, we find that applicants' individually advantageous AI usage has led to aggregate signal erosion. Then, we construct a new panel of interview processes tied to hiring outcomes for nearly 10,000 firms, comprising 12% of US employment. Using variation in the availability of AI-proof signals across occupations, we find signal erosion has led to an adversarial equilibrium: firms rely more on experience and credentials, source more hires from referrals and recruiters, intensify interviews, and ultimately reduce the quantity and diversity of entry-level hiring. In contrast, we show that automated assessments like coding tests in the 2010s enhanced signals of applicant ability, leading to higher quantity, quality, and diversity of hires. Our results offer a unified account of how technology has changed hiring in recent decades—including explaining over half of the recent entry-level hiring slowdown—and show that technologies can worsen welfare in adversarial settings.

RESEARCH IN PROGRESS

Tacit Objectives: Human-AI Complementarity in Hiring
(with Arjun Ramani)

While algorithms play a critical role in initial screening, firms nevertheless still conduct human evaluations in hiring, especially for knowledge work roles. We hypothesize that this is because humans have private, tacit hiring objectives (e.g. culture fit) that are difficult to specify and therefore cannot be algorithmically replaced. In a partnership with a large technology firm, we study their rollout of an AI interview bot. The bot provides an additional early screening signal that the firm uses to determine who to select for human evaluations. By combining data on AI interview bot transcripts, human interview transcripts, human hiring decisions, and on-the-job performance, we analyze how humans and algorithms can serve complementary functions in the hiring process. We then generate counterfactuals to understand what the optimal design is for human interviews, conditional on algorithmic capabilities.

Unobservability and Underprovision of Amenities
(with Nathan Lazarus and Lucy Li)

We hypothesize that many important amenities are not known to workers ex-ante, and are only learned on-the-job. We theoretically show this distorts workers' job search and leads firms to underprovide amenities relative to wages. We test this hypothesis in three sources of data. First, in payroll data, we find that the quality of workers' schedules is correlated with worker retention, but not firms' ability to recruit workers. Second, using Brazilian administrative data, we build on the revealed preference approach of Sorkin (2018), and rank firms on both their ex-ante and ex-post valuations. We test whether amenities impact ex-post but not ex-ante valuations. Third, we use data from a gig work platform, where we observe worker ratings of jobs, but workers cannot see each other's ratings. We test whether workers are likely to accept low-rated jobs, but unlikely to return, indicating mistakes in job selection. Finally, we estimate the extent to which job quality is underprovided due to ex-ante amenity unobservability.