

MIT Economics

MOHIT KARNANI

OFFICE CONTACT INFORMATION

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HOME CONTACT INFORMATION

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MIT PLACEMENT OFFICER

Professor Stephen Morris
semorris@mit.edu
617-253-5193

MIT PLACEMENT ADMINISTRATOR

Mrs. Shannon Robinson
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617-324-5857

DOCTORAL STUDIES

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

DISSERTATION COMMITTEE AND REFERENCES

Professor Esther Dufo
University of Zurich
Department of Economics
Schonberggasse 1, 8001 Zurich
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esther.duflo@econ.uzh.ch

Professor Parag Pathak
MIT Department of Economics
77 Massachusetts Avenue, E52-426
Cambridge, MA 02139
617-253-7458
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Professor Paul E. Peterson
Harvard Kennedy School
79 JFK St, Littauer 104
Cambridge, MA 02138
617-495-7976
ppeterso@gov.harvard.edu

PRIOR EDUCATION

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

2017

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

2015

CITIZENSHIP

Chile

GENDER: Male

LANGUAGES

English, Spanish (native)

FIELDS

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

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

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	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, AEF, 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, 2 presentations) 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, 3 presentations) 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, 2 presentations)
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.

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 3.4%. 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.

“Charter School Expansion and Achievement: Evidence from Harlem”

(with P. Peterson)

We estimate community-wide effects on student achievement, as measured by performance on New York State proficiency tests, of charter school expansions in Harlem. Synthetic difference-in-differences (SDID) models estimate trends before and after enactment of the 2007 New York Charter Schools Act amendment, an exogenous supply shock that doubled the limit on the number of charter schools throughout the state, including an additional 50 in New York City. Approximately 400 weighted control schools with near identical pre-treatment trends in test scores are selected from 50 large urban districts in the state. Harlem’s charter enrollment share increased from 11% in 2007 to 47% in 2019, as compared to minimal change in the comparison districts. Post-enactment, Harlem’s ELA and Math proficiency rates, relative to those at the synthetic counterfactual, each rose by 13.8 percentage points. Both charter and district sectors contributed to these gains, though the largest gains came from the charter sector.

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)