MIT Economics

DEAN LI

OFFICE CONTACT INFORMATION
MIT Department of Economics
77 Massachusetts Avenue, E52-564
Cambridge, MA 02139
deanli@mit.edu
https://dean-li.com

HOME CONTACT INFORMATION
246 Brookline Street
Cambridge, MA 02139
Mobile: 847-312-6988

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

MIT PLACEMENT ADMINISTRATOR
Mrs. Shannon Robinson
shmay@mit.edu
617-324-5857

DOCTORAL STUDIES

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

DISSERTATION COMMITTEE AND REFERENCES

Professor Daron Acemoglu
MIT Department of Economics
77 Massachusetts Avenue, E52-446
Cambridge, MA 02139
617-253-1927
daron@mit.edu

Professor Nikhil Agarwal
MIT Department of Economics
77 Massachusetts Avenue, E52-440
Cambridge, MA 02139
617-324-6804
agarwaln@mit.edu

Professor Amy Finkelstein
MIT Department of Economics
77 Massachusetts Avenue, E52-442
Cambridge, MA 02139
617-253-4149
afink@mit.edu

Professor Nina Roussille
MIT Department of Economics
77 Massachusetts Avenue, E52-456
Cambridge, MA 02139
617-253-3399
nroussil@mit.edu

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 future job offers, which in turn shape which firms compete for workers. 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 compensate this experience with higher wages. Instead, the returns to training are reflected in sorting. An event study around EHR adoption shows that training increases nurses' probabilities of moving to a same-technology hospital by 20 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. Training in the most common local EHR system is worth approximately $16,000 (about 20 percent of the average annual RN salary) to new nurses. Because additional offers expand workers' outside options, training makes new nurses more wage-elastic on average toward same-system hospitals, the opposite sign of the standard full-choice-set model prediction. Finally, the specificity of training shapes whether it creates lock-in or strengthens competition.

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

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-differences 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

"Health Care Employment Growth and the Transformation of the Labor Market"
(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 health care 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 service occupations and are much larger for female than male employment. Increased demand for direct care workers in turn generates positive spillovers to the broader local labor market, again highly concentrated in low-wage service jobs and 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-fifth of the growth in overall low-wage service employment coming almost entirely from growth in female employment in low-wage services, and about one-quarter of the overall growth in female employment.

"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. I 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. I combine these in a trade-style gravity framework to model physician mobility across training and practice locations. To estimate this model, I 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. This framework enables counterfactual evaluation of alternative funding designs for reducing physician shortages in underserved areas.

"Specialist Concentration and Returns to Scale in Physician Labor Markets"
(with Bradley Setzler and Benjamin 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 use Medicare data to map labor shares into product market shares by assigning procedures to specialties, and we supplement this with all-payer claims data for Massachusetts. 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.

"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 reallocate work across the remaining labor force and how patients are prioritized in the face of capacity constraints.