Dean Li

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EDUCATION

MIT - GPA: 4.00/4.00; *NSF GRFP, NBER Fellow in Health and Aging* **Cambridge, MA • 2021 - 2027**
Doctorate in Economics
Fields: Health Economics, Labor Economics, Industrial Organization
Advisors: Amy Finkelstein, Daron Acemoglu, Nikhil Agarwal, Nancy Rose

Yale University - GPA: 3.96/4.00; *Summa Cum Laude, Phi Beta Kappa* **New Haven, CT • Class of 2019**
Bachelor of Arts in Economics and Mathematics
Bachelor of Arts in Computer Science

RESEARCH

"What Drives Risky Prescription Opioid Use: Evidence from Migration" with Amy Finkelstein and Matt Gentzkow (Forthcoming at the Quarterly Journal of Economics)

Abstract: 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 2006to 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 (Revise and Re-submit at the Journal of Political Economy)

Abstract: 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.

"Technological Fragmentation and Labor Market Competition" (draft available upon request)

Abstract: Firm technology choices shape how firms hire and train workers. Technologically-specific skills also shape how firms compete over workers. To what extent does technological fragmentation create horizontal differentiation among workplaces and drive labor market power? I study this question in the context of electronic health record systems in the healthcare industry. First, I use job postings and a direct survey of nurses to show heterogeneity across electronic health record systems creates meaningful differentiation in the nursing labor market. Nurses report being unwilling to switch technologies and suggest that they would search for a new job or require additional compensation. Next, I show that work experience with specific technologies becomes a meaningful predictor of worker mobility patterns after hospitals adopt these technologies—the friction from switching systems is approximately equivalent to adding 10 - 15 miles of distance between hospitals. Motivated by

this evidence, I extend a discrete choice model of worker labor supply to a dynamic setting by allowing forward-looking workers to gain on-the-job work experience and to move across firms. I estimate the present-discounted value of the technological friction to be nearly $23,000. Technological differentiation makes firms more likely to retain existing workers but less likely to poach workers from other firms. I estimate that this additional differentiation generated an 8.0% increase in markdowns and a 5.2% decrease in wages.

SELECTED WORKS IN PROGRESS

"Medical Graduate Training and the Spatial Distribution of Physician" with Raymond Han

Abstract: Medicare distributes over $15 billion dollars a year to hospitals for the training of resident physicians, but the hospital-specific division of this funding has been largely frozen since 1997. The spatial distribution of this funding plays an important role in determining the geographic distribution of physicians. This project assesses the potential for reallocation of funding for medical graduate training to redress disparities in physician access across places. To separate the effects of residency location from physician preferences, we leverage a sudden redistribution of residency slots mandated by the Medicare Modernization Act in 2004. We document that hospitals that expanded their residency programs in response to the redistribution increased the number of newly licensed physicians in their local markets, but that these effects are substantially tempered by hospitals who were inframarginal to the additional funding they received. Our results show that the effectiveness of increased residency funding in boosting local physician supply turns on the types of hospitals that are targeted; a substantial share of current funding for physician training is likely a transfer to hospitals.

"The Rise of Healthcare and its Consequences on Labor Markets" with Amy Finkelstein and Matt Notowidigdo

"Regulating Quality Nursing Homes: Quantities vs. Prices"

RESEARCH POSITIONS

Microsoft Research **Cambridge, MA • 2021 & 2022**
Research Intern
- Analyzed US Census data with Daron Acemoglu to examine wage inequality and the decline of "good jobs."
- Conducted joint analysis with Mert Demirer, Diego Jiménez Hernández, and Sida Peng on how firms use data, focusing on the margin between data processing and data storage

Massachusetts Institute of Technology **Cambridge, MA • 2019 - 2021**
Pre-Doctoral Fellow to Professor Amy Finkelstein
- Provided research assistance on projects related to selection in cancer screening, scope of practice in direct-care workforce, market design in health insurance, geographic variation in healthcare costs and how they relate to wage inequality, and the role of patient-based and place-based channels in influencing hazardous opioid prescribing.
- Implemented models to estimate willingness to pay for indemnity insurance against cancer diagnosis.

GRANTS and AWARDS

National Bureau of Economic Research **Cambridge, MA • 2023 - 2025**
Pre-Doctoral Fellow in Health and Aging

George and Obie Shultz Fund **Cambridge, MA • 2022 - 2024**
2024 ($24,000), 2023 ($21,000), 2022 ($7,338)

National Science Foundation **Alexandria, VA • 2021 - 2026**
2021 NSF GRFP ($138,000 Accepted)
2019 NSF GRFP ($138,000 Awarded)

LANGUAGES AND TECHNICAL SKILLS

Programming Languages: Stata, R, Python, Julia, C, Shell