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Education

Harvard University
Ph.D. Economics, 2018 to present
Expected completion date 2024

Harvard University
M.A. Economics 2020

University of California, Berkeley
B.A. in Applied Mathematics and Economics (Highest Honors) 2017

Fields

Labor Economics
Economics of Innovation, Industrial Organization

References

Lawrence Katz
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Claudia Goldin
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David Card
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Elie Tamer
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Fellowships & Awards

Stone Ph.D. Scholar in Inequality and Wealth Concentration, 2019-2023
Thomas J. Sargent Dissertation Fellowship (San Francisco Fed), Summer 2022
Mark A. Schimbor Prize in Economics (Best Honors Thesis), 2017
Dorothea Klumpke Roberts Prize in Mathematics (Top Eight Math Seniors), 2017
Phi Beta Kappa (Junior Year), 2016

Teaching

Fall 2022 Harvard Econ 2120, First-year PhD Econometrics, TA to Elie Tamer,
Fall 2021 With Distinction in Teaching
Spr 2021 Harvard Econ 2140, Econometrics Tutor for First-year PhDs
Fall 2020 Harvard Econ 1126, Undergrad Advanced Econometrics, TA to Elie Tamer,
With Distinction in Teaching
2016-2017 UC Berkeley, Undergrad Stata Workshops

Research

Spring 2023 Harvard, RA to Claudia Goldin
Summer 2019 Harvard, RA to Larry Katz
2017-2018 Princeton, RA to Janet Currie
2015-2017 UC Berkeley, RA to David Card

Job Market Paper

"Do You See What I See? Employer Learning in the Labor Market of Computer Scientists"

Abstract:

Identification of talent is necessary for the efficient allocation of workers to firms and tasks. However, employers often begin with limited information and learn about workers to maximize private information rents rather than public talent revelation. This paper provides

empirical tests of employer learning, and quantifies its impacts on job mobility and innovation outputs in the labor market for computer scientists. The large volume of CS conference proceedings offers insights into on-the-job research that is hard to observe, especially for workers outside academia. About 20% of papers by authors in the industry can be matched to a patent application, which indicates a more valuable innovation. Yet the patenting decision remains private information with the incumbent employer for more than a year. Workers with a new paper are 13% - 26% more mobile than similar coworkers without a paper. But on the asymmetric margin, workers with a matched patent are less likely to move than those with a paper only, which can be explained by incumbent employers offering higher wages than outside employers with less information. Once a patent application is publicly revealed, workers with a matched patent are 10-15% more likely to move and especially from less productive firms into top firms in the tech sector. These findings confirm the predictions of a dynamic model with two-sided heterogeneity that takes into account firms' endogenous investment in learning. Structural estimates of the model suggest that if matched patents were disclosed at the same time as papers, job mobility of higher-ability workers would increase immediately, movers would be 10% more productive than before, and the productivity gains from positive assortative matching offset the costs of firms' under-investment in public learning.

Publications

"Gender Bias in Rumors Among Professionals: An Identity-based Interpretation," *Review of Economics and Statistics*, 102, 5, pp. 867-880. December 2020.

"Gendered Language on the Economics Job Market Rumors Forum," *AEA Papers and Proceedings*. 108: 175-79. May 2018.

Working Papers

1) "Who Becomes an Inventor? The Role of Firms in Talent Discovery" *(joint with Sabrina Di Addario)*

Abstract:

How does firm productivity relate to the speed of talent discovery? We assess this relationship empirically in the labor market of Italian inventors. We define talent discovery as a worker becoming an inventor who files a patent application for the first time. Using the employer-employee data from the Italian Social Security Institute matched with patent applications between 1987 and 2009, we find large heterogeneity in talent discovery across firms, particularly for workers early in their careers. On average a worker younger than 35 is 175% more likely to become an inventor at firms in the top quartile of productivity than at firms in the bottom quartile, conditional on differences across sectors and geographic areas. Workers who do invent at the bottom quartile on average receive an 8-10 log point increase in wages, rather than 2-4 log points at more productive firms. We interpret the empirical findings in an employer learning framework. We are working on a counterfactual low-productivity firms are subsidized for increasing invention opportunities for young workers, and aim to investigate whether the gap in talent discovery between the bottom and top quartile would shrink, and total innovation outputs would increase.

2) Life-cycle Returns to Math and Social Skills: The Roles of Gender, Sorting and Employer Learning

Abstract:

This paper documents gender differences in life-cycle returns to social skills and math skills in the labor market. Using the National Longitudinal Survey of Youth 1979 data, I test for whether women and men sort into occupations that match with their pre-market skills, and whether there are increasing returns to skills as employers learn about workers' abilities over time. Workers with higher social skills choose occupations that put a higher emphasis on job interactions, but this sorting effect is stronger for men than for women and the gap is widening over the life cycle. Math skills are also positively correlated with social characteristics of an occupation such as leadership activities, and there is a significant gender gap in sorting by math skills. I then estimate the returns to each skill and the growth of returns with experience. Returns to social skills and math skills grow at a faster rate

for men than for women, suggesting a differential speed of employer learning. However, the initial return to a female worker's math skills is significantly higher such that on average women enjoy higher returns to math skills in the first 10-15 years of their career. These findings reflect gender differences in both workers' occupational sorting and employers' belief updating process and suggest a higher return to investing in skills that counter beliefs about gender stereotypes.

In Progress

1) "Signaling in the Labor Market of Software Engineers: Evidence from Open Source Contributions" *(joint with Jacob Weber)*
Abstract:
How do workers credibly signal their ability to potential employers, and does self signaling matter for labor market outcomes? We answer these questions in the labor market of software engineers. By matching GitHub and LinkedIn profiles, we measure self signaling from a worker's contributions to open-source projects, which are publicly observable to recruiters. We test if workers increase signaling before they change jobs, and estimate differential returns to signaling for workers from different education or demographic backgrounds.

2) Knowledge Sharing and Organizational Structure: Evidence from Trade Secret Litigation *(joint with Evgenii Fadeev)*
Abstract:
We apply deep learning language models on trade secret litigation records to classify legal cases based on whether the (claimed) misappropriation of trade secrets happened through employees or business partners (e.g., input suppliers) and to compare technologies involved in trade secret litigation with inventions disclosed in patent files. We use this information to study how firms change their patenting, employment, and input sourcing decisions following misappropriation of trade secrets.

Seminars & Conferences

2023: Harvard Labor Workshop, Bank of Italy (scheduled)
2022: Federal Reserve Bank of San Francisco, Harvard Labor Workshop, HKS Inequality PhD Seminar
2021: Harvard Labor Workshop, Harvard Public Workshop, University of Michigan Economics, Cornell Sociology
2020: Harvard Labor Workshop, Federal Reserve Women in Economics, Compass Lexecon
2019: Paris Seminar on the Economics of Digitization, Berkeley Data Science Connector Course (guest lecture), 9th ifo Dresden Workshop on Labor Economics, Keystone Strategy
2018: American Economic Association Meetings (Philadelphia), Princeton Economics, Princeton Quantitative Social Science Colloquium, Cornell Social Dynamics Lab
2017: UC Berkeley Center for Labor Economics, Harvard Business School, Bowdoin College

Academic Service

Referee for American Economic Review, Journal of Public Economics, Quarterly Journal of Economics
Co-Organizer for Harvard Labor/Public Student Workshop, 2021-2022