

# Daniel Herbst

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## CONTACT INFORMATION

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## ACADEMIC APPOINTMENTS

2018 - Assistant Professor, Department of Economics, University of Arizona  
2019 - 2020 Visiting Scholar, MIT Golub Center for Finance and Policy

## EDUCATION

2018 PhD in Economics, Princeton University  
2010 AB in Applied Math - Economics, Brown University

## FIELDS OF INTEREST

Labor Economics, Public Economics, Consumer Finance

## FELLOWSHIPS, AWARDS, AND HONORS

2017 - 2018 National Academy of Education/Spencer Dissertation Fellowship  
2016 Towbes Prize for Outstanding Teaching  
2016 - 2017 Richard A. Lester Fellowship for Industrial Relations  
2013 - 2014 Louis A. Simpson Graduate Fellowship  
2014 Princeton IES Summer Fellowship  
2010 *Phi Beta Kappa & magna cum laude* with Honors in Economics, Brown University

## TEACHING EXPERIENCE

Fall 2021/2023 Instructor, ECO696H *Labor Economics* (PhD Course)  
2019 - 2025 Instructor, ECO481 *Economics of Wage Determination*  
2019 - 2025 Instructor, ECO382 *Labor and Public Policy*  
Summer 2014/15/16 Instructor, Advanced Math Camp, Princeton MPA program

## PROFESSIONAL ACTIVITIES

Referee for *American Economic Review*, *American Economic Review: Insights*,  
*American Economic Journal: Applied Economics*, *Econometrica*, *Economics of*  
*Education Review*, *Industrial and Labor Relations Review*, *PNAS*, *Quantitative*  
*Economics*, *Quarterly Journal of Economics*, *Journal of Labor Economics*, *Journal*  
*of Human Resources*, *Journal of Policy Analysis and Management*, *Journal of*  
*Political Economy*, *Review of Economics and Statistics*, *Review of Economic Studies*,  
*Review of Financial Studies*  
2010 - 2012 Assistant Economist, Federal Reserve Bank of New York  
2010 Research Associate, NERA Economic Consulting  
2009 Intern, Federal Reserve Board

## INVITED TALKS AND PRESENTATIONS

2018 - 2024      AEA Annual Research Conference, APPAM Annual Research Conference, Arizona State University, Carnegie Mellon University, CFPB Research Conference, Eastern Economic Association Conference, Econometric Society Winter Meetings, FDIC Consumer Research Symposium, Dartmouth University, Federal Reserve Bank of New York, Federal Reserve Board, IIPF Annual Congress, IPA and GPRL Annual Research Gathering, IZA Economics of Education Workshop, Jain Family Institute, JPMorgan Chase Institute Conference on Economic Research, Kansas State University, MIT Golub Center, National Academy of Education Research Conference, National Tax Association Research Conference, NBER Education Workshop, NBER Labor Workshop, NBER Public Economics Workshop, NBER Insurance Group Workshop, NBER Summer Institute Household Finance Meetings, Princeton University NLSE Workshop, RAND Corporation, Rutgers University, SOLE Annual Meeting, University of Arizona, University of Bristol, UCLA, UC Merced, University of Hong Kong, Vanderbilt University

## PUBLICATIONS

2024      **“Opportunity Unraveled: Private Information and Missing Markets for Human Capital”** (with Nathaniel Hendren) *American Economic Review* 114.7 (2024): 2024-2072.

We examine whether adverse selection has unraveled private markets for equity and state-contingent debt contracts for financing higher education. Using survey data on beliefs, we show a typical college-goer would have to repay \$1.64 in present value for every \$1 of financing to overcome adverse selection in an equity market. We find that risk-averse college-goers are not willing to accept these terms, so markets unravel. We discuss why moral hazard, biased beliefs, and outside credit options are less likely to explain the absence of these markets. We quantify the welfare gains for subsidizing equity-like contracts that mitigate college-going risks.

2023      **“The Impact of Income-Driven Repayment on Student Borrower Outcomes”** *AEJ: Applied Economics* 15.1 (2023): 1-25.

Traditional student loan payments fall on borrowers early in their careers and provide no insurance against earnings shocks. By contrast, Income-Driven Repayment (IDR) lowers monthly minimums to a share of borrower income until debt is repaid or some forgiveness period has been reached, increasing short-run liquidity at the potential cost of long-run debt forgiveness or distorted labor supply. In this paper, I use an administrative panel of student loans to estimate IDR’s effect on short- and long-run borrower outcomes and predict its fiscal costs. Exploiting variation in loan-servicing calls, I find that enrolling in IDR results in 22pp fewer delinquencies and \$368 lower balances within eight months of take-up. Three years later, IDR enrollees are 2.0pp more likely to hold mortgages, 1.8pp more likely to move to a higher-income zip code, and hold 0.2 more credit cards than non-enrollees. By contrast, I find no effects on unemployment deferments, a proxy for borrower employment status. I also find that most enrollees exit IDR and return to standard repayment after just one year, meaning the predicted incidence of debt forgiveness under IDR is close to zero. Taken together, my results suggest IDR provides short-term liquidity benefits but limited lifetime insurance value, carrying minimal long-run fiscal costs or labor supply distortions.

2020

**“Unions and Inequality Over the Twentieth Century: New Evidence from Survey Data”** (with Henry Farber, Ilyana Kuziemko, Suresh Naidu), *The Quarterly Journal of Economics* 136.3 (2021): 1325-1385.

It is well-documented that, since at least the early twentieth century, U.S. income inequality has varied inversely with union density. But moving beyond this aggregate relationship has proven difficult, in part because of the absence of micro-level data on union membership prior to 1973. We develop a new source of micro-data on union membership, opinion polls primarily from Gallup ( $N \approx 980,000$ ), to look at the effects of unions on inequality from 1936 to the present. First, we present a new time series of household union membership from this period. Second, we use these data to show that, throughout this period, union density is inversely correlated with the relative skill of union members. When density was at its peak in the 1950s and 1960s, union members were relatively less-skilled, whereas today and in the pre-World War II period, union members are equally skilled as non-members. Third, we estimate union household income premiums over this same period, finding that despite large changes in union density and selection, the premium holds steady, at roughly 15–20 log points, over the past eighty years. Finally, we present a number of direct results that, across a variety of identifying assumptions, suggest unions have had a significant, equalizing effect on the income distribution over our long sample period.

2015

**“Peer effects on worker output in the laboratory generalize to the field”** (with Alexandre Mas), *Science* 350.6260 (2015): 545-549.

We compare estimates of peer effects on worker output in laboratory experiments and field studies from naturally occurring environments. The mean study-level estimate of a change in a worker's productivity in response to an increase in a co-worker's productivity ( $\gamma$ ) is  $\gamma = 0.12$  ( $SE = 0.03$ ,  $N = 34$ ), with a between-study standard deviation of  $\tau^2 = 0.16$ . The mean estimated  $\gamma$ -values are close between laboratory and field studies ( $\gamma_{lab} - \gamma_{field} = 0.04$ ,  $P = 0.55$ ,  $n_{lab} = 11$ ,  $n_{field} = 23$ ), as are estimates of between-study variance  $\tau^2$  ( $\tau^2_{lab} - \tau^2_{field} = -0.003$ ,  $P = 0.89$ ). The small mean difference between laboratory and field estimates holds even after controlling for sample characteristics such as incentive schemes and work complexity ( $\gamma_{lab} - \gamma_{field} = 0.03$ ,  $P = 0.62$ ,  $n_{samples} = 46$ ). Laboratory experiments generalize quantitatively in that they provide an accurate description of the mean and variance of productivity spillovers.

## **WORKING PAPERS**

### **2025 “Asymmetric Information in Labor Contracts: Evidence from an Online Experiment”**

For workers facing uncertain output, hourly wage contracts provide implicit insurance compared to self-employment or task-based pay. But like any insurance product, these contracts are prone to market distortions through moral hazard and adverse selection. Using a model of wage contracts under asymmetric information, I show how these distortions can be identified as potential outcomes in a marginal treatment effects framework. I apply this framework to a field experiment in which data entry workers are offered a choice between a randomized hourly wage and a standardized piece rate. Using experimental wage offers as an instrument for hourly wage take-up, I find that hourly wage contracts reduce average worker output value by 6.32%. At the same time, I find evidence of adverse selection on productivity—a 10% increase in the hourly wage offer attracts a marginal worker with 1.44% higher productivity relative to the mean. I estimate the welfare loss associated with asymmetric information and calculate marginal values of public funds (MVPFs) across a range of hourly wage subsidies. My estimates imply a socially optimal hourly wage subsidy of \$1.00 per hour or less, depending on the cost of public financing.

### **2025 “The Determinants of Credit Access in the United States” (with Trevor Bakker, Eric English, Jamie Fogel, and Nathaniel Hendren)**

We construct new population-level linked administrative data to study households’ access to credit in the United States. We document large differences in credit access by race and class. On average, Black individuals and those who grew up in low-income families have persistently smaller balances, more credit inquiries, higher utilization rates, and lower credit scores than other groups throughout the life cycle. We then study the determinants of these disparities. Biases in credit scoring algorithms do not appear to contribute to these gaps, as the scores actually underpredict differences in realized loan delinquencies by race and class. For example, among those with a 650 credit score, Black borrowers are 30% more likely to fall delinquent on a loan than White borrowers, and those who grew up in the bottom quintile of parental income are 27% more likely to fall delinquent than those who grew up in the top quintile. Measures of individuals’ income profiles and wealth do little to explain these repayment gaps. Differences in repayment patterns emerge shortly after borrowers obtain credit in their early twenties, generally on credit cards and student loans, suggesting that childhood and early life experiences play a role. Using a movers design, we show that childhood exposure to places with high repayment rates causes an increase in one’s own likelihood of repayment. Places that promote repayment are similar to those that tend to promote upward income mobility but differ in some respects (e.g., they have lower divorce rates). Our results suggest that credit constraints in adulthood have roots in childhood.

2024

**“Equity and Incentives in Household Financing”** (with Constantine Yannelis and Miguel Palacios)

We conduct a field experiment to identify adverse selection, moral hazard, and liquidity effects in equity-like contracts called income-share agreements (ISAs), which provide individuals with up-front financing in exchange for a share of future earnings. Our experiment randomly varies contract offers across two dimensions: (1) the share of income owed, and (2) a flat monthly payment. Comparing “decliners” across treatment groups—those who faced different menus of options but ultimately chose the same pre-offer contract terms—identifies adverse selection. At the same time, because these two treatment contracts offer the same earnings disincentive (income-share reduction) but different liquidity benefits (flat monthly payment), estimating their treatment effects relative to control borrowers allows us to separately identify moral hazard and liquidity effects. Preliminary results suggest those with private knowledge of poor earnings prospects are adversely selected into income-contingent contracts.