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	Ph.D. in Economics, Princeton University
2010	A.B. in Applied Math - Economics, Brown University

Fields of Interest

Labor Economics, Consumer Finance, Education

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	*magna cum laude* with Honors in Economics, Brown University
2009	*Phi Beta Kappa* (Junior Year), Brown University

Teaching Experience

Spring 2019	Instructor, ECO481 *Economics of Wage Determination*
Spring 2019	Instructor, ECO382 *Labor and Public Policy*
Summer 2014/15/16	Instructor, Advanced Math Camp, Princeton MPA program

Professional Activities

	Referee for *American Economic Journal: Applied Economics, Economics of Education Review, Quantitative Economics, Quarterly Journal of Economics, Journal of Human Resources, Journal of Policy Analysis and Management, Review of Economics and Statistics,* and *Review of Economic 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 APPAM Annual Research Conference, CFPB Research Conference, Federal Reserve Board, IZA Economics of Education Workshop, Jain Family Institute, Kansas State University, MIT Golub Center, National Academy of Education Research Conference, National Tax Association Research Conference, RAND Corporation, Society of Labor Economists Annual Meeting, Vanderbilt University, Rutgers University, University of Arizona

PUBLICATIONS

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 (γ) is $\gamma = 0.12$ (SE = 0.03, N = 34), with a between-study standard deviation of τ^2=0.16. The mean estimated g γ-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 τ^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.

RESEARCH PAPERS

2019 **"Liquidity and Insurance in Student-Loan Contracts: The Effects of Income-Driven Repayment on Borrower Outcomes"** *(Under Review)*

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.

2018 **"Unions and Inequality Over the Twentieth Century: New Evidence from Survey Data"** (with Henry Farber, Ilyana Kuziemko, Suresh Naidu)

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 ≈ 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.

WORKS IN PROGRESS

2018 **"Behavioral Barriers to Student Loan Repayment: A Field Experiment on Student Loan Counseling"** ***(Currently in the Field),*** *Winner, 2017 NAEd/Spencer Dissertation Fellowship*

Roughly ten percent of student borrowers default on their loans within two years of graduating, despite often being eligible for more favorable repayment terms under a variety of alternative repayment options such as income-driven repayment. Low take-up of these programs suggests psychological frictions like inattention, lack of information, or enrollment complexity may prevent optimal decision-making in student loan repayment. In collaboration with a student loan servicer and debt counseling non-profit, I design and implement a randomized control trial which evaluates several behavioral interventions aimed at lowering such psychological frictions. I then track repayment program take-up and default/delinquency rates across experimental groups, thereby identifying behavioral determinants of the repayment decision as well as policy measures which may reduce default through these channels.

2018 **"Adverse Selection, Income Insurance, and Student Loan Repayment"**

Many governments offer income-contingent student loans as a form of implicit insurance against post-graduate earnings risk. But if student borrowers value a reduction in earnings uncertainty, why has there been virtually no private market for such loans? This paper argues that adverse selection prevents repayment-based income insurance from being sold profitably. I formalize this hypothesis through a

model of student debt repayment in which borrowers hold private knowledge of future income. The model generates conditions for 1.) the existence of private information, and 2.) complete market unraveling. I test for these conditions using NCES survey data on borrowers' privately stated income expectations. A comparison of out-of-sample random forest predictions finds that including private survey responses leads to a significant improvement in root-mean-square error and R-squared relative to predictions using only publicly screenable borrower characteristics, suggesting borrowers hold private information concerning their future income. Using quantile-regression forests (QRFs) to characterize the complete distribution of privately expected future income and implied cost of insurance provision, the model predicts a complete unraveling of insurance markets under reasonable values of risk-aversion in a CRRA utility function. These results provide a rationale for public provision of IDR or other means of income insurance for student borrowers, as these policies correct for the market failures associated with asymmetric information in human capital financing.