Abstract: This paper studies the nature and implications of firm wage-setting conduct on a large online job board for full-time U.S. tech workers. Utilizing granular data on the choice sets and decisions of firms and job seekers, we first develop and implement a novel estimator of worker preferences that accounts for both the vertical and horizontal differentiation of firms. The average worker is willing to pay 14% of their salary for a standard deviation increase in firm amenities. However, at the average firm, the standard deviation of valuations of that firm’s amenities across coworkers is also equivalent to 14% of their salaries, indicating that preferences are not well-described by a single ranking of firms. Following the “New Empirical Industrial Organization” literature, we use our labor supply estimates to compute the wage markdowns implied by a series of models of firm conduct that vary in the degree to which worker preference heterogeneity gives rise to market power. We then formulate a testing procedure that can discriminate between these models. Oligopsonistic models of wage setting are rejected in favor of monopsonistic models exhibiting near uniform markdowns of roughly 18%. Relative to a competitive benchmark, imperfect competition substantially exacerbates gender gaps in both wages and welfare.

Other References:

Principal Advisor: Professor Patrick Kline
Other References: Professors Christopher Walters and Matthew Backus

Pre-doctoral Studies: Harvard College
Degree: B.A.
Date: 2014
Field: Applied Mathematics (magna cum laude with highest honors)

JOB MARKET PAPER:

- Bidding for Talent: Equilibrium Wage Dispersion on a High-Wage Online Job Board (with Nina Roussille)
  
  Abstract: This paper studies the extent to which variation across indigent criminal defendants can be attributed to variation in the quality of their assigned counsel. Applying nonparametric Empirical Bayes techniques to data on case outcomes from three Texas counties that assign cases through conditionally randomized “wheel” systems, I find that attorney quality is highly variable. For defendants in felony cases, a one-standard-deviation decrease in attorney quality is associated with a 5.6 percentage-point increase in the probability of incarceration. Using estimates of attorney quality, I evaluate the effects of a program that allowed defendants to choose attorneys. Because attorney quality is difficult to predict using observable characteristics, the program had essentially no effects on aggregate case outcomes, although it did significantly shift the burden of caseloads across attorneys. To infer attorney quality from observational data, I propose a novel, data-adaptive sample selection and re-weighting procedure that allows estimation of attorney effects by semiparametric propensity score methods. I employ matrix factorization techniques to estimate a high-dimensional propensity score under a sparsity condition, propose a decision-theoretic criterion for selecting the largest subsample of the data for which overlap is likely to hold, and implement an algorithm for constructing that set. The procedure I propose is applicable in many other contexts, including the estimation of value added and in so-called “judge leniency designs.”

- Spinning the Wheel: Heterogeneity and Choice in the Provision of Indigent Defense
  
  Abstract: This project quantifies the extent to which variation in case outcomes across indigent criminal defendants can be attributed to variation in the quality of their assigned counsel. Applying nonparametric Empirical Bayes techniques to data on case outcomes from three Texas counties that assign cases through conditionally randomized “wheel” systems, I find that attorney quality is highly variable. For defendants in felony cases, a one-standard-deviation decrease in attorney quality is associated with a 5.6 percentage-point increase in the probability of incarceration. Using estimates of attorney quality, I evaluate the effects of a program that allowed defendants to choose attorneys. Because attorney quality is difficult to predict using observable characteristics, the program had essentially no effects on aggregate case outcomes, although it did significantly shift the burden of caseloads across attorneys. To infer attorney quality from observational data, I propose a novel, data-adaptive sample selection and re-weighting procedure that allows estimation of attorney effects by semiparametric propensity score methods. I employ matrix factorization techniques to estimate a high-dimensional propensity score under a sparsity condition, propose a decision-theoretic criterion for selecting the largest subsample of the data for which overlap is likely to hold, and implement an algorithm for constructing that set. The procedure I propose is applicable in many other contexts, including the estimation of value added and in so-called “judge leniency designs.”

- Measuring the Incidence of Wage Subsidies Under Imperfect Competition (with Nina Roussille)
  
  Abstract: This paper examines the incidence of wage subsidies, like the EITC, on workers and firms in imperfectly competitive labor markets. While it is well known that a portion of the incidence of wage subsidies falls on employers, existing estimates assume that the labor market is competitive. When employers exercise market power, however, they may capture a larger share of wage subsidies than is predicted by standard competitive models, with a greater share of subsidies captured by firms that exert relatively more market power. Although this phenomenon ostensibly undermines the policy goals of wage subsidies, the theory of imperfect labor market competition also suggests that firms may be inefficiently small in equilibrium, and that wage subsidies may lead to efficient increases in firm size. Using French administrative data, we will empirically estimate the relative importance of these two channels by analyzing a reform to an employer wage subsidy. We will then use our estimates to explore optimal wage subsidy policies.
Pinpointing Discrimination in Jury Selection: Operationalizing *Batson*

Abstract: This paper explores the possibility that modern econometric tools that have been successfully used to pinpoint racial discrimination could be used to operationalize *Batson v. Kentucky* (1986), in which the Supreme Court ruled that individuals could not be excluded from participating on juries on the basis of their race. In practice, it has proven difficult to disentangle pretextual reasons for striking jurors that obscure invidious motives from allowed, race-neutral reasons. Building on tools developed by Kline and Walters (2021) to detect illegal discrimination in hiring, I will characterize the distribution of discriminatory behavior across attorneys and construct bounds on the probability that any individual attorney is systematically engaged in discriminatory behavior. I will implement this analysis using detailed records on the demographic characteristics and randomization order of potential jurors in North Carolina where, on average, black potential jurors are less likely to be seated than their white counterparts. Whether the large average gap in jury participation between white and black potential jurors is driven by behavior that is uniform across attorneys or driven by a smaller share of heavily discriminatory attorneys is of particular policy interest. Estimates of the likelihood of discriminatory behavior for individual attorneys could be used by courts or bar associations to identify attorneys who regularly defy the commands of *Batson*.

PROFESSIONAL EXPERIENCE:
RESEARCH:
Research Assistant: Professors Patrick Kline and Christopher Walters, UC Berkeley Department of Economics (2018-2021)  
Predoctoral Fellow: Professors Raj Chetty, Nathan Hendren, and John Friedman, Harvard LEAP (2014-2016)

TEACHING:
Teaching Assistant, UC Berkeley Department of Economics  
Economics 140 (undergraduate econometrics), Fall 2020  
Economics 202A (graduate macroeconomics – consumption and investment), Fall 2018  
Economics 134 (undergraduate macroeconomic policy), Spring 2018  
Economics 100A (undergraduate intermediate microeconomic theory), Fall 2017

PUBLICATIONS:

PRESENTATIONS:
2021 Stanford SITE Micro and Macro of Labor Markets, IZA Online Labor Markets Conference, UC Berkeley Labor Seminar  
2020 UC Berkeley (Labor Lunch and Econometrics Seminars)

FELLOWSHIPS AND AWARDS:
2021 UC Berkeley Doctoral Completion Fellowship; Strandberg Grant for Gender in Economics Research (with Nina Roussille); UC Berkeley Economics Department Summer Grant  
2020-2021 Institute for Research on Labor and Employment Dissertation Fellowship  
2020 Washington Center for Equitable Growth Doctoral Grant; UC Berkeley Law, Economics, and Politics Center Research Fellowship; UC Berkeley Opportunity Lab Labor Science Initiative Graduate Research Award; UC Berkeley Economics Department Summer Grant  
2016 Honorable Mention, National Science Foundation Graduate Research Fellowship  
2014 Thomas Temple Hoopes Prize for Outstanding Senior Thesis  
2013 Phi Beta Kappa (senior early selection)

OTHER INFORMATION
Citizenship: U.S.