Research Statement

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November 10, 2019

I'm an applied microeconomist focused on labor and personnel economics, with an emphasis on careers in the skilled professions—i.e., occupations requiring a high degree of specialization. Skilled professionals tend to interact with economic forces that I find interesting, including private information, internal labor markets, team production, and heirarchy. In what follows, I will summarize my current research projects.

Careers in the Skilled Professions

My job market paper *The Inverted Job Ladder in Skilled Professions* presents an alternative to the standard job ladder framework for describing how skilled professionals are reallocated between firms. In a standard job ladder, poached workers tend to reallocate to better firms, while workers who are displaced into unemployment move to worse firms. Using a new historical dataset that I developed, I show that lawyers traverse the job ladder in the *opposite* direction—with poached lawyers moving down and displaced lawyers moving up. I document two empirical patterns in law that I argue are relevant to the inverted job ladder. First, law firms specialize in different degrees of talent. Second, separating lawyers are adversely selected (a fact that is often interpreted as evidence of private employer information).

In a second step, I present a model that explains why skilled professions like law should have an inverted job ladder. Consistent with the empirical patterns, the model assumes that each firm's comparative advantage is to employ talent that matches its rank in the ladder, and that

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firms use private information about employee talent in order to selectively match outside offers. These two features seem commonplace to most skilled professions, and differ from the standard job ladder literature. In the model, private-learning creates a lemons problem where job-switching workers are adversely selected. Firms who are willing to poach from rivals in spite of this winner's curse tend to be lower in the ladder, and thus more specialized in lemons. Workers who are retained are revealed to be above average talent, and thus will move to better firms—but not until they are displaced from the firm and the winner's curse is temporarily lifted.

The final step of the paper is to use my dataset to structurally estimate my model and estimate the degree of misallocation in the market for lawyers. I find that information frictions cost the market approximately 20% of expected output compared to a full-information benchmark. In addition to refining our understanding of job ladders, my job market paper makes an important contribution to the literature on private learning by allowing for a long time horizon, which appears to be quantitatively very important for accurately assessing misallocation.

I also have a working paper with Moshe Buchinsky at UCLA and John deFiguereido at Duke, entitled *Retention and Adapative Paysetting in Large Organizations.* In this paper we ask whether government wages should be marked to market indices, and if so, which indices–occupational or spatial ones. We present new evidence on this important policy question using administrative payroll data from the US federal government. In order to study how different pay indexation policies influence retention, we estimate a structural model of employee quit behavior. To estimate the model, we exploit variation in pay caused by a pay-indexation policy known as the Federal Employees Pay Comparability Act of 1991 (FEPCA). Our identification strategy exploits a unique feature of FEPCA's implementation. FEPCA created pay gap indices for a rich set of employee groups, but chose to base subsequent pay supplements on each locality's average pay gap. Thus, employees' "treatment" was largely determined by the plausibly exogenous composition of nearby federal workers.

The economics of collusion

My paper with Daehyun Kim at Wuhan University, entitled *Collusive Capacity*, is a theory paper that challenges a fundamental concept in antitrust economics about how reduced market concentration causes cartels

to unravel. The basic idea *unraveling* idea is that as the number of cartel members increases, collusive profits become diluted, while the profits of deviating from the cartel stay approximately fixed. By adding endogenous plant capacity to an otherwise standard dynamic oligopoly game, we show that relatively unsophisticated *collusive capacity* choices will prevent such an unraveling. By voluntarily restricting their own capacity, cartel members pre-commit against future deviations.

Future work

Social returns to pre-job market signaling. My job market paper predicts that increasing the precision of information about talent through the use of public signals will raise both the level and inequality of earnings. In order to test this prediction, I intend to use historical Census microdata in order to evaluate changes in the earnings distribution of US accountants after the staggered introduction of Certified Public Accounting (CPA) exams across US states in the early 1900s. Passing the exam was required to bear the CPA title, but was not mandatory for being an accountant, so CPA exams were a newly introduced signaling technology that can be used to test the prediction of my job market paper.

Collusive wage-setting. One of my newer projects involves testing for collusive wage-setting, with an application to elite law firms. A reason to suspect possible collusion is that, in surveys of recent law school graduates at top firms, most of them report *exactly the same* starting salaries, year after year, despite large heterogeneity in firm profitability and non-wage amenities. Collusive wage-setting has become an important issue, partly due to how new technology has facilitated the monitoring of competitors' wages, and this is evidenced by a $300 million settlement for wage collusion in Silicon Valley in 2014.

Income variability penalties in progressive taxes. Most progressive tax systems implicitly penalize the variability in an income process. This subtle point comes from Jensen's inequality: if after-tax income is a concave function of pre-tax income, then any mean-preserving spread of a pre-tax income process will result in higher average taxes. Thus, occupations with volatile income are penalized, and this includes not only occupations with idiosyncratic income risk, like farmers and finance professionals, but also occupations with large lifecycle earnings growth, such as doctors. Such

penalties are likely to create unwanted distortions in choices that affect the variability of income processes. I use simulations to show that income variability penalties are large, especially for US doctors. In a companion project, I am gathering a cross-country dataset on annual crop yields, crop prices, and agricultural tax policy to test for evidence of whether income variability penalties distort risky crop choices.