Research Statement

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October 25, 2019

My research lies at the intersection of microeconomic theory with labor economics and industrial organization. I use dynamic games and mechanism design to study topics in applied microeconomics where individuals must make decisions over time, with a particular focus on the design of optimal policy and the distributional effects of policy. My job market paper is a study of income-sharing agreements, a new source of funding available to a growing number of college students where students promise to share a fraction of their future income for a period of time following graduation in exchange for the payment of part of their tuition. I model the labor search decisions made by students with these agreements and allow students to endogenously select into income-sharing. This contributes to a new literature on income-sharing in higher education, and is the analysis of the labor-market implications of income-sharing to date.

I consider myself an applied theorist, using game theory and mechanism design to study applied economics questions. I am fundamentally interested in modeling complex real-world behaviors, and I believe that economic theory and empirical economics complement each other when done well. My work emphasizes the testable predictions of my models, and I see it as an early step in the study of specific phenomena. For example, as income-sharing agreements in higher education were established only within the last three years, and only at a small but growing selection of universities, not enough data yet exist to empirically study the affects of income-sharing on labor-market outcomes, but I am able to predict the effect on wages, search times, and other variables of interest in my job market paper.

I have additionally studied the optimal design of informal organizations. With Aaron Kolb and Curtis Taylor, I studied how community organizers can rely on reputation to manage large groups of people who all support each other. With direct applications to labor-managed firms, we found the optimal way to reward or punish members of the community in order to avoid free-riding as much as possible.

I anticipate continuing to work on a broad range of applied theory questions, particularly within educational and organizational economics. I have begun working on a follow-up to my job market paper where I study income-share agreements' affects on decision-making while students remain in college.

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Income-Share Agreements on the Job Market: Debt Versus Equity (Job market paper)

Income-share agreements (ISAs) recently have been gaining traction as a way for students to finance college education, marketed as a way for students to reduce the down-side risk of winding up in a low-paying job with high student debt. Because ISA payments are a fraction of the on-the-job wage, incentives for both applicant and provider are different from a traditional debt-financed job applicant on the job market. I develop a labor-search model to show how financing affects job-market outcomes such as wages, search duration, and overall utility, set within an equilibrium framework where the terms and methods of financing are endogenous. I show that ISAs can constitute an important part of the college-financing decision for financially-disadvantaged potential college students, and can act well as a substitute for traditional debt-markets when the cost of college is neither very low nor very high.

Communities, Co-Ops, and Clubs: Social Capital and Incentives in Large Collective Organizations

Forthcoming in *American Economic Journal: Microeconomics.* Joint work with Aaron M. Kolb and Curtis R. Taylor. We propose a model of organization design in which there is a large number of small agents, whose efforts exert positive externalities but whose interactions are such that high effort can only be incentivized through a central reputation system. Absent transfer payments, agents must be permitted to shirk in some instances after good performance. Using techniques in stochastic calculus, we characterize the steady state of the organization as a stationary distribution over continuation values. Finally, we frame the social planner's optimization problem in terms of the steady state distribution, where she optimizes the design parameters subject to a feasibility constraint. We identify a fundamental trade-off between the size and feasibility of the organization, mediated by a mass of shirking agents.