Essays on Human Capital Accumulation in the Presence of Social Influences

Dissertation Abstract

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The Formation and Human Capital Consequences of High School Social Networks*

This paper improves our understanding of how education policy interacts with peer effects to impact academic outcomes. In particular, I show that altering a student’s prospective friends – classmates who a student encounters and may befriend – affects high school and college success through friendships that subsequently develop. Policies such as ability tracking, the establishment of charter schools, and student busing are important in determining these prospective friends. In this paper, I undertake two related analyses. First, I first show that the attributes of a student’s prospective friends are associated with better academic performance during and after high school using variation in these pools across grade-levels within schools. Second, I measure heterogeneity across schools in the rate at which different types of students meet one another using a dynamic model of network formation. The model allows me to differentiate between preferences for friends, school composition, and meeting rates. Relative to other empirical models of social network formation, my model has two distinct advantages. First, I identify the meeting rates separately from preferences for friend attributes using data on friend rankings. Second, students in my model form expectations over future meetings and take into account the results of peer effects. Using the estimates, I measure the relationship between unequal meeting rates and an ad hoc measure of tracking. Finally, I use the estimated model to simulate changes to meeting rates and their impact on high school and college outcomes.

Social Networks and the College Attendance Decision

This paper quantifies the impact of social networks, specifically the choices made by friends of an individual, on college application and attendance decisions. An instrumental variable – the size of the extracurriculars in which a student participates – uses previously documented features of high school friend networks to relax an assumption common to the literature: that friendship network formation is exogenous. School fixed effects control for unobserved selection into schools. For estimation, I use student, friendship, and school data from the Wisconsin Longitudinal Study. The IV effects of friends are large and significant for submitting any college application and attending college but smaller and insignificant for having ever considered college attendance. I interpret this as evidence that friends have the largest effect when a student is near the margin of attending college but are not able to move a student to college attendance if they have never considered it.

The Effect of Bargaining in Marriage on Human Capital Accumulation

When marriage results in the transfer of income from one spouse to another, agents should evaluate the returns to investment in human capital differently than they would in a world without marriage. Existing empirical work on life-cycle human capital decisions does not account for these incentives. This paper considers a case where Nash bargaining between spouses determines how households allocate consumption and choose labor force participation. First, I show that, given this bargaining, marriage lowers the marginal return to human capital, even when potential wages determine bargaining positions. I then construct a multi-period model of education, labor market, and marriage decisions in which agents account for the bargaining environment of marriage. I estimate parameters using data moments primarily from the NLSY ’79 and show that, relative to what a social planner would choose, individuals under invest in human capital due to marriage.

*Job Market Paper