

Rethinking the Old Boy Network: Effects of College Peer Ties on Labor Market Outcomes

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Abstract

This project analyzes the role of college classroom peer networks on students' labor search outcomes. Using statewide matched employer-employee data for community college students, I first examine whether taking a class together increases the probability that an individual gets hired at a firm with an incumbent peer in the future. Specifically, I use an identification strategy that exploits variation in section enrollment within courses and find sizable and significant classroom peer effects on job-finding at a firm where a classmate already works. Second, I show that jobs found through peer networks exhibit lower turnover and higher earnings compared to non-network jobs. Additionally, women obtain a significantly higher earnings return and lower separation rates from networks compared to men.

Research Questions

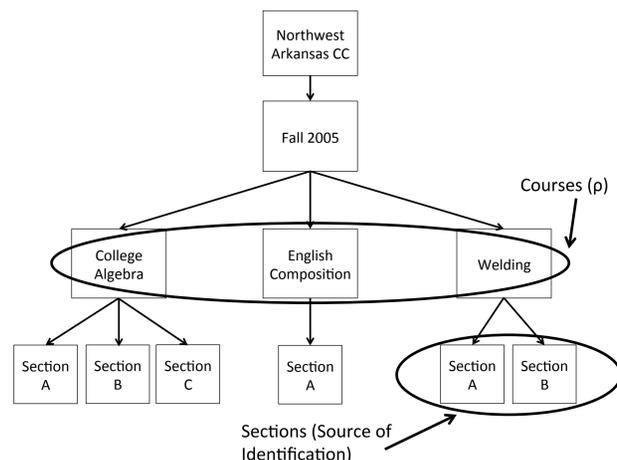
- ▶ 1. How much do classroom peer networks affect where community college students work?
- ▶ 2. What effect do jobs found through peer networks have on labor market outcomes, in terms of earnings and job separation propensity? How do these effects differ by gender?

Data/Setup

Source: Arkansas Department of Higher Education, public community colleges (22 total)

- ▶ College Transcript Files: student background, course-taking information
- ▶ Labor Market Files: quarterly earnings, industry code, employer id number

Figure 1: Structure of Courses



Empirical Strategy

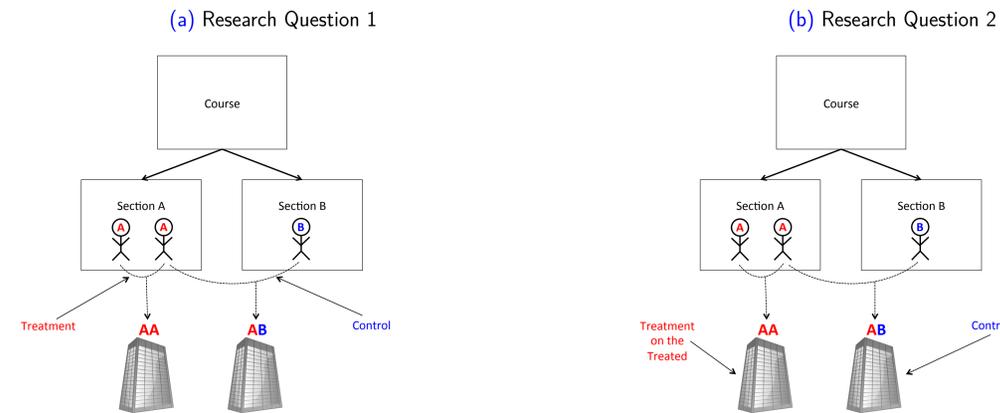
Research Question 1: How much does taking a class together affect the likelihood a student eventually starts working at a firm where his/her peer works?

- ▶ Challenge to identification: students select courses non-randomly
- ▶ Unit of observation: matched pairs of individuals, i and j in course c
- ▶ Strategy: Each semester, many courses at each community college offer multiple sections, as shown in Figure 1. Different sections of a course offer the same content but take place in different classrooms, and I show that conditional on course, enrollment into sections is essentially random. To address the concern that factors affecting course choice may affect firm choice later, this study exploits variation in section enrollment within a course. The empirical strategy measures whether i is more likely to begin working at a firm where a same-section j is incumbent, as opposed to a different section j in the same course (illustrated in Figure 2a):

$$F_{ij} = \rho_c + \gamma P_{ij} + \epsilon_{ij} \quad (1)$$

In Equation 1, F_{ij} is an indicator for i starting to work at a firm where j is incumbent sometime after they take the course, and P_{ij} is an indicator for whether i and j enrolled in the same section. A course fixed-effect, ρ_c , accounts for non-random course selection, and γ is the coefficient of interest.

Figure 2: Empirical Strategy Illustrations



Research Question 2: What effect do peer network jobs have on earnings and job turnover propensity?

- ▶ Challenge to identification: non-random selection into network uptake by students
- ▶ Unit of observation: individual i at time t (panel)
- ▶ Strategy: I regress the outcome of interest (earnings or job turnover), Y_{it} , on an indicator variable, $Network_{it}$, for whether a student works at a job obtained through a network, as well as on $Network_{it}$ interacted with firm tenure. Using the same source of variation as the first research question, as shown in Figure 2b, network jobs are defined as a job where a same-section peer works when a student is hired:

$$Y_{it} = \beta_0 + \beta_1 Network_{it} + \beta_2 (Network_{it} \times Tenure_{it}) + \beta_3 Baseline_Net_{it} + \beta_4 (Baseline_Net_{it} \times Tenure_{it}) + \dots CONTROLS \dots + \eta_i + \tau_t + \rho_{cit} + \epsilon_{it} \quad (2)$$

In Equation 2, a control group indicator variable, $Baseline_Net$, tracks students working at jobs where either a same-section different-section peer of the same course works when at time of hire to ensure networks do not pick up traits affecting both course selection and job outcomes. The course fixed effect, ρ_{cit} , ensures students are compared to peers from similar referral pools and an individual fixed effect, η_i , controls for selection into treatment (i.e. network uptake).

Results

- ▶ Taking a class with a peer leads to a **12% increase** of the baseline propensity for a student to start work at a firm where the peer is incumbent within six year of the course, absent of classroom interactions.
- ▶ **Female students are more likely to obtain a job through networks with other women** as opposed to men, while **male students do not differ** in propensity to network with a given male vs. female peer on average.
- ▶ Network jobs **reduce separation by 2.6% initially for men and by 3.4% for women** (significantly different) compared to peers in control group jobs. For men, this effect stays constant over tenure at firm, while for women the separation rates for network vs. non-network jobs converges by .8% annually.
- ▶ Network jobs **increase earnings by 4.6% initially for men and by 6.9% for women** (significantly different) compared to peers in control group jobs. For men, this effect stays constant over tenure at firm, while for women, this effect increases 1.8% annually with tenure.

Conclusion/Future Work

- ▶ Classroom networks play a role significant in determining place of work—taking a class with a peer increases the propensity that you will start working at a firm where the peer is incumbent.
- ▶ People who obtain jobs through networks have lower turnover rates and earn more than peers in the control group.
- ▶ There is significant gender heterogeneity in the initial magnitude of network effects, as well as the trajectory of these effects over tenure at a firm.
- ▶ Future work: What is the mechanism driving these effects? Why do network effects differ for men vs. women in terms of earnings, separation rate, and the trajectory of earnings/separation rate over job tenure?