

DISSERTATION AND RESEARCH SYNOPSIS

My dissertation consists of three papers in the labor/demographic economics area. Two related papers quantify sorting and statistical discrimination patterns in high schools, and the third paper describes the effects of a change in one's best friend on achievement levels. All papers in the dissertation use the National Longitudinal Survey of Adolescent Health (Add Health) for empirical analysis. The feature of Add Health that is exploited throughout all the papers is that survey respondents are asked to name their five best friends of each gender, in order of rank. From the survey, the characteristics of the friendship nominations can be obtained, thereby revealing the exact characteristics of a respondent's friendship group. The advantage that Add Health has over other data sets that have peer characteristics is that most measures of friendship characteristics are objectively determined by the Add Health surveyor, and not subjectively approximated by the respondent.

Sorting and Statistical Discrimination Over Time in Schools: An Analysis Using the National Longitudinal Study of Adolescent Health

The first paper in the dissertation (job market paper) measures sorting and statistical discrimination ("stereotyping") patterns along racial and achievement lines over time. There exists significant sorting along both lines, both separately and simultaneously. All races exhibit strong preferences for friendships within their own race, which is a phenomenon known as homophily. Also, within each race, there is homophily along academic lines. It is also shown that statistical discrimination on academic lines is prevalent against blacks and Hispanics, but is insignificant against whites. However, statistical discrimination wanes over time. A policy implication of the research is that care must be taken when implementing re-distribution policies (like school redistricting and affirmative action) because the interactions are not just random; they involve processes fueled by homophily and statistical discrimination. If a goal is to maximize interracial contact, it may be disadvantageous to introduce certain sets of people outlined in the paper into areas with certain other sets of people.

Descriptive and Structural Analysis of Racial and Academic Statistical Discrimination in Schools

The second paper in the dissertation (co-authored with Peter Arcidiacono) follows a similar format, but only uses one cross-section of the data, along with more races. The main difference here is that a structural model of statistical discrimination is being developed, where individuals receive a noisy signal on the academic characteristics of potential friends, and guesses on the signal are influenced by characteristics of other peers. With a structural model, redistribution

policies like a redistricting program which attempts to desegregate schools can be simulated to see what friendships types of friendships form.

Moving On: The Effect of a Change in Friends on Achievement

The third paper in the dissertation calculates the effect of changing one's type of friend on achievement (measured using GPA). An education production function is estimated with the changing of friends (on racial and social lines). Since the act of changing friends is endogenous, a few different techniques can be employed in order to correct for the endogeneity. One way is to either instrument the changing of friends with those friends who move away (assumed to be exogenous) between the time that the first and second wave of the survey was conducted or to only look at those friends that move away between the two waves. Another method of analysis is to determine the average treatment effect (ATE) of changing friends. The later method corrects any selection on observables that can occur when choosing a type of friend, as well as allowing the estimation to be performed non-parametrically.

In addition to my dissertation work, I have experience and interests in other forms of applied microeconomic research. For example, I am a co-author of "Dementia and Medicare at Life's End" with Vicki Lamb and Frank Sloan, which is a health economics paper. This paper uses dementia as a "treatment" variable in an ATE analysis of the cost of medical care at the end of life. It is shown that, around the time of diagnosis, dementia related expenses only have a small impact on total Medicare expenditures. In addition to continuing research in labor/demography, I am also interested in possibly applying techniques used in my past research (such as treatment effects) into development economics topics.