### Peer Effects From Exits to Private and Charter Schools: Evidence from Project STAR

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Imagine yourself as an elementary school teacher trying to manage an unruly group of students. Do you seat them across the classroom from each other, hoping that once separated they stop their disruptive behavior? Or does this choice mean that they’ll simply find someone else to talk to, resulting in further disruption? Answering these questions may prove instrumental for the success of your students. There exists an extensive empirical literature examining the effect of exogenous policy shifts on student achievement; however, most of this research has generated inconclusive results. Much of the focus today is centered around the estimation of peer effects: the unobserved, peer-to-peer spillovers from students both inside and outside the classroom. Given the lack of experimental data; however, these effects remain understudied – especially with regard to the peer effects of attrition and withdrawal from public schools.

The entry of private and charter schools has brought significant competition into the educational marketplace. As a result, the literature has documented the effects of increased competition on education production. It is well known that private schools create rivalrous conditions through rationing. For one, there are tuition barriers: there is evidence of a strong correlation between household income and private school enrollment.[[1]](#footnote-1) At the same time, given the existence of entrance exam cutoffs as a requirement for admission to many private and charter schools, it may be the case that many of the students who exit public schools for private schools are high-achieving.

My paper aims to analyze the effects of such attrition. Assuming that student-to-student peer effects do in fact exist, it may be the case that the act of exiting a school may have an unobserved effect on peers in the classroom. If the distribution of students that exit public schools for charters or private schools consists primarily of high-achieving students, perhaps there exist negative peer effects from such withdrawal.

Since the publication of the Coleman Report in 1966 there has been suspicion that student unobservables have a significant impact on education production.[[2]](#footnote-2) The classic education production function predicts that test scores can be represented as a function of class size and confounds.[[3]](#footnote-3) Subsequent research has shown that such a relationship is likely incorrect. Some, as first described by Lazear (2001), theorize that disruption in the classroom presents a tradeoff between learning and class size. Regardless of such disagreements, it is clear that unobserved effects have a significant relationship with student achievement. Peer effects estimators are well defined throughout the existing literature. Models for estimating peer effects with missing data are demonstrated in Aaron Sojurner’s 2011 paper “Identification of Peer Effects with Missing Peer Data: Evidence from Project Star.” Additionally, more conventional estimators are outlined in Pagani and Pica’s 2021 paper “A peer like me? Early exposure to high achievers in math and later educational outcomes.”

There are two robust sets of experimental data I could leverage for this topic: Project STAR and NCERDC. Project STAR was class-size randomization experiment across grades K-3 in Tennessee between 1985-1989. 11,600 students across 79 schools voluntarily participated in the study and tracked a number of robust covariates. Randomization occurred at both the teacher and student level within schools and during the entry wave. Given that attrition was an issue in this experiment, I may utilize this dataset; however, missing data issues are abundant – especially with exit data (i.e. it is unclear in many observations whether or not the students left for a private school). Another dataset, which requires a faculty sponsor, is the NCERDC data. This is a longitudinal dataset between 1995-2006, inclusive, which tracks teacher-school and teacher-student connections. Similar to STAR, there exists a robust number of controls including teacher and student characteristics as well as common core enrollment info. Though a significant caveat is that this data is not a randomized trial, so I would require taking a quasi-experimental approach to teasing out peer effects.

1. Murnane, R. J. (2020, July 16). *Who goes to private school?* Education Next. Retrieved September 16, 2021, from https://www.educationnext.org/who-goes-private-school-long-term-enrollment-trends-family-income/.  [↑](#footnote-ref-1)
2. Dickinson, E. E. (2016, December 2). *Coleman report set the standard for the study of Public Education*. The Hub. Retrieved September 16, 2021, from https://hub.jhu.edu/magazine/2016/winter/coleman-report-public-education/.  [↑](#footnote-ref-2)
3. Lazear, E. P. (2001). Educational Production. *The Quarterly Journal of Economics*, *116*(3), 777–803. http://www.jstor.org/stable/2696418 [↑](#footnote-ref-3)