Three Essays on the Economics of Education

Chapter 1: “Estimating the Impact of Online Education on Labor-Market Outcomes”

This paper provides the first evidence on the effect of online education on labor-market outcomes. The analysis herein uses administrative data on individuals who enroll in a statewide community-college system paired with unemployment-insurance records from the state. Together, these data track the educational attainment and earnings of over 100,000 first-time college students.

I use an individual-fixed-effects estimation strategy and show that students who complete courses in the online format experience larger earnings gains than their peers who complete courses in the traditional, face-to-face format. Estimates show large benefits to completing online coursework in the years immediately following initial enrollment, when a student may still be enrolled or may have just exited college. Estimates also show that earnings fall less during enrolled periods for students who enroll in online courses. These findings suggest that online education allows students to acquire college credit at a lower opportunity cost. In the long run, estimates show that there is a large, positive benefit associated with completing any amount of online credits but no significant dosage effect of completing greater amounts of online coursework.

Chapter 2: “Online Instruction and Student Success: Evidence from Community Colleges”

This study looks at the effect of online instruction on student success in college. Fixed effects and instrumental variables estimation strategies are implemented to remove bias and generate plausibly causal estimates. The fixed effects estimates suggest that students are 7.5 - 11 percentage points less likely to pass an online class. The IV estimate falls in this range at 8.3 percentage points. These averages mask substantial heterogeneity across students and courses. Older, female, and better-prepared students fare better in online courses. The estimates also suggest an element of "learning as you go" in online education--students with prior online experience fare better in online classes than those without prior experience.
(with Susan Dynarski)

This project examines how the geography of school choice has evolved over time, space, and demographics from 1990 to 2008. Throughout this time period, the number of charter schools and non-Catholic private schools has been growing. This alone does not tell us whether more individuals are gaining access to any choice (such as a private school or charter school opening in an area where there was previously only a traditional public school) or if individuals’ choice sets are growing (such as multiple private schools and charter schools opening in the same area). This project uses data from the Private School Universe Survey and the Common Core of Data to map the landscape of school choice over the past two decades. School locations from these two datasets are then merged on to restricted access Census and American Community Survey data from 1990, 2000 and 2008 to understand how school choice has evolved for different subsets of the population.

We find that the share of school-aged children with any option (including all private schools and public charter schools) has not changed since 1990. The share of those with a secular choice (including secular private schools and charter schools) has grown rapidly. This growth is particularly strong for children in disadvantaged groups. Our evidence suggests that options within choice sets are shifting -- Catholic schools are exiting and secular options are growing.