

Spencer Kennedy, University of Virginia

Supply and Demand Influences on Teacher Qualifications
(Dissertation)

I study how changes in overarching factors can affect teacher qualifications through the supply and demand in the teaching labor market. The first chapter (JMP) investigates how economic downturns influence the qualifications of teachers hired during them. Due to strict collective bargaining agreements, teacher salaries fall relatively less than alternative professions during economic downturns. This may influence highly qualified individuals on the margin of becoming a teacher to enter the profession during poor labor markets. Using New York State Education Department data, I employ a fixed effects regression model to estimate the effect of local unemployment rates on teacher qualifications, as well as other demographic variables. I find that higher local unemployment rates lead districts to hire more qualified teachers. These more qualified teachers are younger, more local, and teach for fewer years. All of these results are consistent with economic downturns increasing the supply of teachers in the local labor market, pulling from a pool of teaching candidates on the margin of entering the profession.

The second chapter examines the effects of the demand side of the teaching labor market, through school districts' budgets, on teacher qualifications. School districts in New York are required to contribute a fraction, which changes each year, of their teacher salaries toward the statewide pension fund. By interacting this fraction with the proportion of teachers in a district near the retirement age—who typically have the highest salaries—I create an exogenous variable, which is different for each year and district, and influences the total contribution to the pension fund. Because the total budget of the district is a fixed amount, a higher required contribution to the pension fund puts budgetary pressure on the district, potentially requiring budget cuts in other areas. One such area is teacher hiring. I test the effect of a larger contribution to the pension fund on the qualifications of newly hired teachers, using the interacted variable above as an instrument for the pension fund contribution. Preliminary results suggest that schools hire fewer teachers, but that those teachers maintain the same level of qualifications. Additionally, schools appear to lay off non-tenured teachers as the number and proportion of non-tenured teachers decreases.

The third chapter examines how districts adapt to budget constraints using data from the New York State Education Data and Research Hub. I test the effect of an increase in a school district's pension contribution on their other budget categories, using the same variable as in chapter 2 for the instrument. Preliminary results suggest that school districts reduce investment in instructional expenditures, facility maintenance, and debt reduction.

JEL Classifications: I21, I22, I28, J24, J45, H72, H75

Keywords: Teacher Qualifications, Teacher Labor Markets, School District Budget