School segregation and intergenerational mobility

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Extended Abstract

Understanding the drivers of equal opportunities in education is a major question in economics. A very relevant feature of different schooling models and school choice mechanisms concerns school segregation by family background. School segregation has a mechanical negative effect on intergenerational mobility, and moreover, it is likely to affect parental investment behavior, potentially reinforcing the decrease in mobility.

The goal of this paper is to understand the role of school segregation in explaining intergenerational mobility, inequality, and human capital accumulation. Using four waves (2003-2015) of PISA data across OECD countries, we show that school segregation is strongly negatively correlated with intergenerational educational mobility (Figure 1, correlation of -0.7), consistent with recent evidence outlining the large effects of neighborhoods on intergenerational mobility (Chetty and Hendren (2015), Chetty et al. (2016)). Based on the idea that the fiscal and social spillovers of residential segregation lead to a positive correlation between parental background and school quality (Benabou, 1996), we extend the benchmark model of intergenerational mobility (Solon, 1999) to account for school segregation, characterized as a mean-preserving change in the returns to parental investments across schools, with access to better schools positively correlated with parental income. We study how this affects optimal parental choices, intergenerational mobility, and the steady state level of human capital and inequality in the model. Our main result is that segregation, combined with income inequality alone, leads to a trade-off between aggregate human capital accumulation and equality and intergenerational mobility, regardless of genetic inheritability. The effect of segregation on parental investments is ambiguous, but the effect on human capital is positive: the parents reducing investment are those with access to worse schools, where parental investment is less productive; while those increasing investment are those with access to better schools, where parental investment is more productive.

The main contribution of this paper is to include school segregation within the classical model of intergenerational mobility (Solon, 1999, Becker and Tomes, 1979). Crucially, our model outlines the interaction between income inequality and the school system for intergenerational mobility, regardless of any genetic inheritability of ability. This makes the lack of mobility in educational attainment less socially acceptable, and the efficiency gains of a segregated school system more surprising compared to models where intergenerational mobility and efficiency are driven by the heritability of academic ability (Hare and Ulph, 1979, Cremer et al., 2010). In those models, the efficiency-equity tradeoff is based on the heritability of child ability. Concentrating good students in better schools would maximize educational outcomes and because students from richer families are by heritability on average better students, it will also increase inequality and lower intergenerational mobility.

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Figure 1: Association between inter-decile mobility and school segregation index

Note: the school segregation is measured by using the dissimilarity index for a partition of the student’s economics, social and cultural status around the median ESCS. Inter-decile mobility is based on the average of the students’ inter-decile mobility (expressed in percent of the perfect mobility: equal chance). Source: PISA 2003-2015 and own calculations.

References


