Do Better Schools Matter? Parental Valuation of Elementary Education - Reading Notes III

Econ 613

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School quality influences local housing values. Black [1999] estimates school quality effects on house prices by comparing house prices on either side of, but adjacent to, elementary school zoning boundaries of school districts in Massachusetts. Black [1999] introduces boundary fixed effects (BFE) method to address concerns that better schools are in better neighborhoods and students from affluent neighborhoods tend to have higher grades. The paper finds that parents are willing to pay 2.5 percent more for a 5 percent increase in test scores. Findings also suggest that a move from a school that scores in the twenty-fifth percentile to a school in the seventy-fifth percentile would result in a house price increase of $5,452. These findings are robust to a number of sensitivity tests. Moreover, the paper provides information on parents' preferences on schools with higher test scores and helps to evaluate various education policies.

The paper analyzes housing sales and purchase data from suburbs of Boston from 1993 to 1995. Standard parametric hedonic price model raises two types of omitted variable bias. First, there are omitted variables that vary at the school district level. Second, there are omitted variables that can change over space, both within and across school districts. To minimize the potential bias, Black [1999] proposes BFE approach. One key assumption of the BFE method is that houses near school attendances boundaries need to be sufficiently close to each other such that once house characteristics are controlled for, any differences in housing prices are attributable to school quality.

In the empirical part, the standard hedonic price model overestimates the treatment effect of test scores due to omitted variable problems. The results show that parents are willing to pay 2.5 percent more for a 5 percent increase in test scores. Findings also suggest that a move from a school that scores in the twenty-fifth percentile to a school in the seventy-fifth percentile would result in a house price increase of $5452. The comparison of magnitude further suggests that the standard hedonic model overestimates the value of school quality on housing price.

To summarise, Black [1999] compares house prices on opposite sides of school attendance zone boundaries and argues that the difference in prices revealed the willingness to pay for school quality. Moreover, the paper helps to evaluate various education policies. One concern is

that estimation of test scores on housing prices suffers from "sorting bias": the observed gap in prices overstates the willingness to pay for some families. Black [1999]'s BFE estimation is one special case where everyone has the same preferences. One future direction might be to allow heterogeneity in preferences.

References

Black, Sandra E., "Do Better Schools Matter? Parental Valuation of Elementary Education," *The Quarterly Journal of Economics*, 1999, *114* (2), 577–599.