Reading Note 3
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Do Better Schools Matter? Parental Valuation of Elementary Education by Sandra Black

Improvements in school quality have been linked to a number of positive outcomes, yet the causal link required to establish the relationship has been difficult. Rather than attempting to directly measure the positive effect of better schools on students, this article evaluates the relationship between school quality and housing prices. The author argues that this relationship can be used to estimate the value that parents place on their children attending better schools. Ultimately, the article finds that parents will pay about 2.1% more for a 5% increase in test scores and suggests that school improvements can bolster home values and therefore wealth for the broader local population.

Early studies on school quality focused on differences in student outcomes, but these analyses were often inconclusive due to the multitude of factors that shape student outcomes alongside schooling. An alternative means of evaluating the value of better schools is to look at how parents value them, linking school quality to an immediate outcome – prices – rather than long-term student outcomes.

Evaluating the relationship between schools and housing is nonetheless difficult due to the number of variables that are relevant but unobservable. Omitted variables arise at both the school district and neighborhood level, which can lead to biased estimates. To address these problems, the author focuses on variation in housing prices on the attendance boundaries of schools, within the same school district. This strategy allows for comparison within rather than between school districts, and by looking only at houses close to these boundaries we can abstract from neighborhood-level omitted variables.

The analysis specifically examines 3 counties in Massachusetts from 1993 to 1995. The dependent variable is housing prices, while the independent variable is school quality as measured by the MEAP, the author also includes school-district and neighborhood characteristics as control variables. Each school-district evaluated has multiple elementary schools therein, and attendance boundaries that determine to which school a household sends their children. The author assigns each household to the boundary they are closest too, and then investigates to what extent housing prices vary on opposite sides of each boundary, based on differences in school quality.

The model's initial estimation looks only at the effect of school quality on housing, without limiting comparison to solely houses that share a boundary. The results are as expected, showing that housing prices are decreasing in pupil/teacher ratio, and increasing in per-pupil spending. The results also indicate that a 5% increase in test scores is associated with a 4.9% increase in housing prices. However, since this initial model does not limit to comparison of households that are near attendance boundaries, it fails to account for unmeasured neighborhood-level characteristics. As such, the author runs the same model restricting to the sample to only houses close to the boundary, under the assumption this means they are in the same (or similar) neighborhoods. In the resulting models, the coefficient on test scores falls to less than half its prior value. While it remains significant and positive under all specifications, the additional restrictions diminish the estimated effect of test scores such that a 5% increase in scores is associated with only a 2.1% increase in housing prices. This large change suggests that neighborhood-level characteristics are an important factor that cannot be ignored in the relationship between test scores and housing prices.

School quality is important to parents because it may be a factor in student success later in life, it is important enough that parents are willing to pay more for equivalent housing associated with better schools. Determining how much more parents are willing to pay is necessary in correctly valuing improvements in school quality, yet prior studies dramatically overvalued this valuation by neglecting to control for neighborhood and school-district characteristics. By comparing households that are in the same/similar neighborhoods but attend different schools, this article draws out the relationship between school quality and housing prices, while remaining robust to tests of omitted variable biases. Ultimately, since better schools improve the prices of all households in the attendance districts, we can use this methodology to estimate the value of better schools for not just parents, but also for the overall population which provides an important means of measuring the overall benefit of educational policies.