Reading notes 3

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The evaluation of school quality not only matters to parents: it is a topic of interest for economists, educators, and policymakers as they investigate school reforms. The vast amount of research on this topic, however, gave inconclusive results that failed to fully control different neighborhood characteristic. To avoid this error, the author Sandra E. Black specifically focuses on a sample with houses that locate on opposite sides of attendance district boundaries (which are geographic boundaries that determine which schools' children attend based on the location of their residency). Such methodology allows her to show that parents are willing to pay an additional 2.1 percent or $3948 at the mean house price of $188,000 for a 5 percent increase in test scores which is about half of previous research.

Since better school tend to be located in better neighborhood, without sufficiently controlling for neighborhood characteristics, past research may overestimate the value of better school. The author attempts to solve this problem by selecting samples closing to the attendance boundaries. The methodology depends on two arguments. First, the boundaries can run through the neighborhood, in other words, the attendance boundaries and the neighborhood boundaries don't coincide with each other (which is proved in the part of sensitive test). Second, because the houses on either side of the boundaries belong to same neighborhood, the qualities of them are almost same and the only difference is the school quality. Therefore, by estimating the price difference of these houses, the author can quantify how much parents are willing to pay for better school.

To estimate the quality difference of schools, the author sets MEAP (fourth grade Massachusetts Educational Assessment Program) as independent variable, which is considered as an important indicators of school quality by parents. Then the author constructs two hedonic price functions. The first one is similar with past research and the second one replaces the observed characteristics with a full set of boundary dummies that indicate houses sharing an attendance district boundary. The results of the first regression are consistent with previous work, which shows a 5 percent increase of school quality is associated with a 4.9 percent increase in the house price. However, after including boundary fixed effects, the coefficient on test scores is approximately half. The

results also show that if the samples selected are closer to the boundaries, the difference between the two sides of the district borders are smaller in almost all characteristics except test scores, which further corroborates the correctness of the author's basic arguments. Overall, after controlling the neighborhood characteristics, the result shows a 5 percent increase in the test score is related to a 2 percent increase in house price.

To ensure the accuracy of the research, the author then conducts sensitivity tests. For instance, the paper considers the concern that the areas being compared, on opposite sides of attendance district boundaries are not really the same neighborhoods. The author conducts a regression with the sample in which all boundaries are railroads, tracks, highways, or even major streets. The result shows there is only a slight decrease in the coefficient on test scores, with the new estimate statistically the same as the previous estimate. Other similar tests in this part ensure that research results are not disturbed by other factors. To summarize, a list of sensitive tests further proves the feasibility and correctness of the author's measurement method.

By using the approach that compares houses that are close to each other but are associated with different elementary schools, the author shows that parents do care about school quality, and they are willing to pay about 2.1 percent more for houses associated with test scores that are 5 percent higher at the mean. Besides, compared with past research, the new measurement method masterly controls for neighborhood characteristics, avoiding the overestimating of the value.

The possible limitation of the article is that only using data in Massachusetts may introduce certain biases. For example, people in Massachusetts may be more demanding of education or housing quality. If the author can firstly exclude the possibility that people in different regions have different preferences for education or housing, the results will be more rigorous.