

Shangzhi Xu

22 March 2022

Reading Note on “Do Better Schools Matter? Parental Valuation of Elementary Education”

To understand the value of better schools, the author examines the effect of school quality on house prices, which reflect the willingness to pay of parents for houses located in areas with better schools. Since better neighborhoods tend to have better schools, neighborhood characteristics need to be fully controlled for in order to isolate the relationship between school quality and house prices. The author focuses on houses close to attendance district boundaries, which have similar neighborhood characteristics but may mean different schools for children, demonstrating that a 5 percent increase in test scores of schools leads to a 2.1 percent increase in house prices.

Previous research employs the basic hedonic regression that controls for house, neighborhood and school district characteristics, which leads to biased estimation due to omitted variables, overestimating the value of better schools. To solve this problem, the author replaces the vector of neighborhood and school district characteristics with boundary dummies indicating houses on the same attendance district boundary. These houses share a school district and hardly have neighborhood differences, so that help to eliminate the concern of omitted variables. The author focuses on the elementary schools in Massachusetts, drawing housing price data from 1993 to 1995 and matching houses to census data and school-district-level data. The sum of reading and math scores in the MEAP (Massachusetts Educational Assessment Program) is used as the proxy for school quality, ranging from 0 to 32.00. As suggested by previous research, test scores are related to future outcomes and used by parents as a primary measure of school quality.

According to the basic hedonic regression, a 5 percent increase in test scores is associated with a 4.9 percent increase in house prices. The author then runs the new regression with boundary fixed effects on houses within 0.35/ 0.20/ 0.15 miles from the nearest boundary, and gets an increase of 2.3 percent, 1.8 percent, 2.1 percent respectively, which are less than a half of the result of the first regression. The difference

is not because of the change in the sample size, since the author runs the first regression on houses within 0.15 miles from the nearest boundary and observes no difference in the coefficient compared to the same regression on the full sample.

To check the validity of the result, the author compares houses with one or two bedrooms and houses with three or four bedrooms. Residents in three- and four-bedroom houses are more likely to have children, so prices of these houses should be more affected by school quality. The author includes interactions of the test score variable and the dummy indicating whether the house has one or two bedrooms and the dummy indicating whether the house has three or four bedrooms respectively, and finds that only the coefficient of the first interaction is still statistically significant. That is, school quality only has an impact on the prices of houses that are primarily for residents with children. Therefore, the difference in house prices is indeed caused by school quality instead of omitted variables.

In this paper, the author quantitates the value of better schools in terms of the additional money parents are willing to pay for houses within the attendance district. As the test score increases by 5 percent, houses prices increase by 2.1 percent. With this measure of the value of school quality, the efficiency of education policies can be estimated. Moreover, the relationship between school quality and house prices offers useful information for home buyers and owners, as well as those investing in the housing market. Since the research focuses on Massachusetts, it may not be generalizable to other states or nations. I am also curious whether the sum of reading and math scores is actually a good proxy for school quality. From my perspective, reading and math does not seem to matter that much in elementary education.