Do Better Schools Matter? Parental Valuation of Elementary Education

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It is interesting to explore the value of school quality, but there is a great debate because of the indeterminate results. One strategy is to examine the causal effect of school quality on house prices. But insufficient control variables (neighborhood characteristics) may lead to overestimating the value of better schools. To solve the problems, the author compares houses on opposite sides of attendance district boundaries because these houses differ only by the elementary school. By using this way, this paper finds that a 5% increase in test scores results in the willingness to pay 2.5% more.

First, the author introduces the basic methodology used in the paper. She uses a vector of boundary dummies to replace the vector of observed neighborhood and school district characteristics in the hedonic price function. Using this methodology can address omitted variable problems because the houses being compared are in the same city, and school district-level factors do not vary. Moreover, the author compares houses very close to attendance district boundaries to avoid endogeneity problems with omitted neighborhood characteristics.

Second, the author reports the empirical results in this paper. She first estimates the parameters by using basic hedonic price regression. The results show a positive relationship between school test scores and house prices. Then, she adds boundary fixed effect in the model and estimates the parameters for the sample of houses located within 0.35 miles, 0.2 miles, and 0.15 miles from the nearest boundary. The results show that the coefficient on school test scores after adding boundary fixed effect is nearly half of the coefficient using hedonic housing price regression. Moreover, the author shows the houses on opposite sides of the boundary become more similar as houses are closer to the bound-

ary. This paper also compares the magnitude of the results to better understand what they suggest, showing that the overestimation is great if one does not consider sufficient control variables for neighborhood characteristics.

Third, the author tests the results' sensitivity. One concern is that the attendance district boundaries are neighborhood divisions. She uses data excluding railroad tracks, highways, or even major streets, and obtains the similar results to eliminate this concern. In addition to, there is one concern that if better schools are located in better neighborhoods, these results may move neighborhoods from worse to better, which correlates with elementary school test scores. After adding a "hi" dummy indicating that the house is on the "better" side of the boundary, the author can show the empirical results are picking up differences in schools rather than the progression of neighborhoods. Finally, the author verifies the idea that the results are due to the differences in elementary school rather than simply because of unobserved differences in the quality of the houses.

In conclusion, the author adds the boundary fixed effect in the basic hedonic housing price regression to avoid omitted variable bias. The results show that a 5% increase in test scores leads to a willingness to pay 2.5% more. The findings in this paper have some implications. First, this method can help researchers evaluate some education policies' effects. Second, parents, homeowners, and politicians are concerned about the value of better schools because increasing school quality can increase housing prices.

In my opinion, the paper also has one limitation. The time of housing price data and the school test score is inconsistent, which may result in some biases. Also, I think the author can explain why she chooses the score test in 1988, 1990, and 1992 instead of other years.