613 reading note 3

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This paper discusses how much more parents pay for houses located in the areas with better schools. Though a wide range of previous works has tried to establish the causal relationship between parents' willingness to pay and the education quality, the causal effects of school's quality have been complicated by unobserved neighborhood characteristics. To solve such omitted variable bias in estimations, the author compares houses on opposites sides of attendance district boundaries that determine which schools a child can attend. With the housing price data from 1993 to 1995 in Massachusetts, the author regresses the house price on the MEAP test scores, a measure of schools' quality, with the control of boundary fixed effects. As a result, the paper indicates that parents are willing to pay 2.5 percent more for a 5 percent increase in test scores.

The economic theory believes that the price of the house was determined by a linear function of education quality, along with neighborhood and school district characteristics of the area. In practice, it is difficult for economists to control for all such features, causing omitted variable biases in their estimation. Those omitted variables include the unobserved variables within and across the school districts, such as property tax rates, public goods supply, and neighborhood characteristics. To solve such problems, the author develops an econometric tool to compare houses close to the attendance district boundaries but on different sides. The author regresses the house price on school's performance with border fixed effects. This tool can estimate the causal effects of education quality on house price, assuming that those houses share similar neighborhood characteristics. The boundary fixed effects can control for them in the regression.

In the regression analysis, the author chooses the housing price data in Massachusetts from 1993 to 1995 to generate the dependent variable, the log housing price. The author chooses this area because such regions' comparatively smaller school areas can ensure population homogeneity. The independent variable of interest is from the MEAP test scores, a statewide assessment held every two years on elementary schools students. As previous literature suggests, the author uses average scores of the sum of math the reading scores as a proxy of the educational quality. Apart from the boundary fixed effects, the control variables include school and neighborhood characteristics.

The results show that the test scores are positively correlated with the house price, ceteris paribus. The author also restricts the sample to houses that are

closer and closer to the boundary to alleviate the neighborhood's impacts. The coefficients are significant across different specifications. To ensure internal validity, the author tests the concern that the boundary may not correctly reflect the actual neighborhood and consider the impacts of natural progression in neighborhoods and house quality. Nevertheless, the results are still robust in all sensitive tests.

In conclusion, the paper constructs the causal relationship between house price and elementary schools' quality. By controlling the boundary fixed effects, the regression analysis rules out the omitted variable bias caused by unobserved neighborhood characteristics. The results indicate that parents are willing to pay a higher house price for better education of their children. Nonetheless, since the paper focuses on a Massachusetts sample, the selection bias may exist, and such a small sample cannot ensure the results' external validity. Further research is needed to explore the effects of education quality using the larger sample at a country level.