Reading note on Black (1999)

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Will better school increase people's willingness to pay for houses in the school district? While past researchers have shown this possibility, they did not fully control for various neighborhood characteristics that may mediate the school quality effect. The author exploits the fact that houses close to a school district boundary should share identical neighborhood characteristics, but residents on the opposite side of the boundary should attend different schools. By investigating the mean housing price between the two sides of the boundary, the author can demonstrate the effect of school quality on housing price while controlling for neighborhood characteristics that are identical on both sides. Using the observations very close to the boundary (0.15 miles), the author finds that a five percent increase in test scores is associated with two percent increase in house prices.

Since better schools could be in better neighborhoods, earlier attempts to show the effect of school quality on housing price may overestimate their result. In this paper, the author revisits this question with an improved strategy to control for neighborhood characteristics. The core idea of her strategy relies on a few arguments. First, school district does not overlap neighborhood district, so the school district boundary may cutoff the same neighborhood. Second, houses in the same neighborhood should have the same neighborhood-level characteristics. Third, the only difference between houses on either side of the school district is the school quality. Consequently, looking at the price difference between houses around the border can control for unobservable neighborhood-level variables. To further ensure a neighborhood is homogeneous, the author chooses Boston suburbs because Boston area has small school districts with homogeneous population within them.

Regarding the data and measurement, the independent variable is school quality which is measured by the "fourth grade Massachusetts Educational Assessment Program (MEAP). The MEAP is designed to allow for comparison across schools, and it is arguably a crucial indicator of school quality for parents. Interestingly, the author only chooses the sum of math and reading scores to measure school quality, neglecting the science, social studies and writing scores,

making implicit assumptions on parent's perceived school quality. With this school quality measure along with observable neighborhood characteristic (e.g., distance to Boston) and school district variable (e.g., per-pupil spending), the author regresses the natural log house price on these right-hand side variables.

The results support the author's initial concern with earlier studies. With boundary fixed effects, the coefficient on school test scores halves. The results also show that if we further restrict our sample closer and closer to the boundary, the difference between the two sides of the boundary decreases in almost all characteristics except test scores. As expected, the coefficients on test scores are positive and significant across all models. Overall, a five percent increase in the school's test score is associated with a 2 percent increase in house price.

This paper combines clever strategy with clear writing to make it a solid piece of work. I particularly admire how she carefully deals with potential challenges. For example, she takes out the district where the boundary clearly divides a neighborhood (e.g., golf course, river, mountain). She even checks whether test scores will affect the price of one – and two-bedroom houses. The logic is that if school quality drives the difference in pricing, then it should influence houses with one or two bedrooms less since their residents are less likely to raise children. The two examples showcase her great attention to detail. In terms of contribution, the researcher provides us with a convincing evidence of school quality's effect on housing price than previous scholars. Moreover, for those who are interested in the relationship between other public goods (e.g., parks) and property price, this paper is a great reminder of potential overestimate problem.

Despite its strength and contribution, I think the paper can be improved or extended upon with three directions. First, researchers should search for better house quality measure to examine whether those people take better care of their house are those who care more about schools. While the researcher has identified the issue, she uses "internal square footage" and "lot size" to capture house quality. However, there is discrepancy between the measurement and her own argument since large square footage or lot size does not entail "taking care of their houses." Second, the paper limits its scope to Massachusetts which is known for its education quality. If parents in Massachusetts are particularly sensitive to school quality, then the effect magnitude

may not be generalizable outside this state. Lastly, it will be interesting to investigate the role of race in the school quality effect. For example, will Asian American be more sensitive to school quality as popular media suggests? Will African American be less sensitive to school quality if the school is predominantly white?

Reference:

Black, S. E. (1999). Do Better Schools Matter? Parental Valuation of Elementary Education. *The Quarterly Journal of Economics*, *114*(2), 577–599. http://www.jstor.org/stable/2587017