Parents care about children's future, and generally, scores are the indicators of children's future and the measure of the quality of a school. To increase children's test scores, parents might be willing to own houses with higher property taxes determined by the proportion of house prices to finance schools to become better. However, parents' characteristics would complicate the causal relationship between test scores and school quality. To solve the problem, this paper exploits the presence of discontinuities on school district boundaries to estimate parents' willingness to pay for houses located in areas with better schools.

The paper uses four levels of data, house, school, school district, and neighborhood. In house-level data, the housing price data records every purchase and sale transaction from 1993 to 1995 for three counties in Massachusetts. In school-level data, the author uses the sum of the math and reading scores, averaged over the three years in fourth grade Massachusetts Educational Assessment Program (MEAP), as her proxy for school quality. As for school-district level data, it includes per-pupil expenditures, pupil/teacher ratios, and property taxes. Finally, in neighborhood-level data, various demographic variables are considered such as the proportion of Hispanics, non-Hispanic blacks, and so on. In addition, the distance from a house to the attendance district boundary allows the author to narrow down the sample as she tries to test the assumption that there are no significant neighborhood differences.

Previous research use hedonic regression to estimate the relationship between house prices and school quality. Nevertheless, this typical version does not only limit the focus on comparison to houses on opposite sides of an attendance district boundary. Therefore, the drawback is that some omitted neighborhood-level variables might vary within and across school districts, then the impact of good schools on housing prices will likely be overestimated. Since it is not enough to eliminate differences in the neighborhood effectively in a previous way, the key innovation of this paper it to addresses this problem by demarcating each school from school-district level to boundary and adding boundary fixed effects. In this way, the challenge of omitting neighborhood characteristics can be avoided for the discontinuity in house prices would be almost attributable to differences in the valuation of the assigned schools.

The result demonstrates that a unit increase in test scores raises house prices by 3.6 percent for the whole sample and by only 1.6 percent when controlling for boundary fixed effect and the sample is restricted to 0.35 miles from the boundary. Using the same model, we can also interpret the result in terms of one standard deviation increase in test scores. It shows that one standard deviation increase in test scores raises house prices by 4.9 percent for the whole sample and by only 2.1 percent when controlling for boundary fixed effects. This finding also suggests that a move from a school that scores in the twenty-fifth percentile of the sample to that in the seventy-fifth percentile would cause a house price to increase $5452. Notice that the difference in those two coefficients (4.9 and 2.1) validates the concern for unobserved neighborhood characteristics and the resulting overestimation of the effect of school quality. In addition, to test the assumption that there are no significant neighborhood differences, the sample is further restricted at houses 0.35, 0.25, and 0.15 miles from

the boundary. It turns out the coefficients do not change significantly. Lastly, the concern that the decrease in the sample size lowers the coefficient is also addressed since there are no significant differences between the coefficient of all houses and within 0.15 miles from the boundary in the typical hedonic model.

To ensure those results are robust to different tests of specification and endogeneity problems, the author runs a series of sensitivity tests. The main concern is that compared neighborhoods are not the same in terms of physical attributes and neighborhood characteristics. For example, the potential possibility might result from the decision of attendance district boundaries such as building highways and railroad tracks could represent neighborhood division. In this case, the author excludes these types of boundaries, and the resulting coefficient is still significant and close to that of the previous estimate. After several robustness checks, the results strengthen the concept that the differences in housing prices are assumed to reflect the differences in school test scores only.

Finally, I outline one concern. As measuring school quality is subjective, the results might differ from the measure one chooses. Aside from test scores, there are other indications of school quality, which can be divided into input-based metrics and output-based measurements. The paper can also include two input-based metrics, per-pupil spending, and teacher-pupil ratio.

In conclusion, this paper examines the value that parents place on school quality by comparing the prices of houses on opposite sides of a street which is considered a boundary between attendance districts. The result from the typical hedonic regression shows that parents are willing to pay the higher price of the house to acquire higher school quality. Nevertheless, even after considering the omitted variable problem, better school quality, as measured by test scores, still has a positive effect with a lower magnitude on housing prices. Last but not least, there are two implications. First, although the sample of three counties in Boston might not be representative, the method still can be applied in the future when policymakers try to evaluate the reform. Second, it demonstrates that school test scores are capitalized in housing prices and that homeowners and politicians also care about the price effect of a house located near a better school apart from parents.