

# THE VALUE OF LOCAL EDUCATION REFORM: EVIDENCE FROM HOUSING MARKETS

*Research Notes, March 2007, Number 5.*

Urban education is a central public policy issue as the gap between education standards in wealthy suburban neighborhoods and the inner city has widened to its most critical point in many years. Urban school systems are plagued with low-performance, including low test scores, high dropout rates and rapid turnover of qualified teachers. As education is a primary consideration when a family buys a home, many middle income and more affluent families are pulled to the suburbs in search of access to better public and private schools. However, when flight of higher performing students occurs, the quality of urban schools further deteriorates, reinforcing the effects of declining tax bases and administration failures on school quality.

The most talked about approach to improving urban schools involves increased emphasis on high-stakes testing, under which schools are held accountable, through a variety of sanctions, for their students' failure to meet or exceed the thresholds on standardized tests. However, the evaluation of numerous school reforms requires some notion of the value of better schools. It is difficult to measure the nexus of school quality and student outcomes. In principle, though, we can use information from the housing market to infer the value parents place on school quality.

One approach relates property values to school quality in order to assess the value people place on the quality differences in their public schools. Haurin and Brasington (1996), Hayes and Taylor (1996), and Black (1999), as examples, measure school quality through standardized test scores. Using cross-sectional analysis, they show a positive relationship between test scores and house prices. But education and labor economists argue that student test scores do not provide a proper measure of school quality; average test scores are flawed to the extent they also reflect changes due to student mobility and non-school factors that contribute to student achievement such as family, community characteristics and prior achievement (Meyer, 1997). The perspective offered by labor economists emphasizes that a school is responsible for the additional knowledge that it imparts to its students and not for students' innate aptitudes or their parents' characteristics.

This measurement issue, however, will become even more important in the future, because the No Child Left Behind Act of 2001 requires states to test all students in grades three through eight and publicly report the results. Furthermore, local governments are increasingly focused on measuring the gain in student test scores to the point that some states provide financial incentives to schools and teachers whose students score well on the standardized tests.<sup>1</sup> Thus, by publishing school report cards, the local governments are providing additional information about school quality beyond test score data.

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<sup>1</sup> While supporters claim that testing provides accountability and raises test scores, critics note that test score gains have been shown to be test-specific and thus may be ephemeral. Another concern is that the emphasis on high-stakes testing may increase the temptation for students, teachers, and administrators to

Research on the extent to which published school rankings provide useful information to parents is relatively new. Most recent studies focus on whether the housing market responds to the discrete grade distinctions between schools assigned by the state once the effects of publicly observed school attributes on property values, such as test scores, are taken into account. Figlio and Lucas (2004) find some evidence that public exposure of school “report cards” impacts house values in Florida. They use data from before and after the introduction of report cards in 1999 and conclude that an assigned letter grade is associated with an approximately 10 percent increase in a house price for each full grade increment in the months directly following the release of the grade. This is the first evidence of the effects of school grade assignment on the housing market, and it suggests that innocuous-seeming school classifications may have far-reaching implications. Therefore, policy-makers should exercise caution when classifying schools. Figlio and Lucas also note that one should be careful, however, in interpreting these results. While they find large effects of school grading in the year following grade imposition, they cannot test whether these market effects are permanent or transitory. While it is too early to tell, their results suggest that the market appears to be returning to its pre-shock condition over time.

In contrast, Kane, et al. (2003) find no impact of the categorical ranking system in North Carolina. They evaluate the effects on house values of test scores and composite school ratings. Using data from home sales in Mecklenburg County, North Carolina, they find that differences between schools’ long-term average test scores are reflected in property values, but that year-to-year fluctuations in scores for individual schools are not. Homeowners care about school quality, but appear to be aware that test scores are imperfect indicators of school quality. The study also finds that test scores may be related to unmeasured housing and neighborhood characteristics, which makes it difficult to separate neighborhood peer effects and test score effects on property values. House prices tend to increase with proximity to a neighborhood school, particularly in poor neighborhoods, and are more responsive to the test scores of white students than of black students. Further, local house prices did not decline for local schools labeled “low-performing” when composite school ratings were introduced—suggesting that residents already knew that these schools were low-performing.

Most recently, Zahirovic-Herbert and Turnbull (2007) examine the capitalization effects of changes in school attendance zones within the single unified school district in East Baton Rouge Parish, Louisiana. The policy change was designed and implemented on short notice creating an exogenous change in school characteristics in a setting that provides a natural experiment in education policy. The changes in attendance zones produce direct and indirect changes in school quality for individual houses, where the

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cheat on standardized tests. Jacob and Levitt (2003) examined records from approximately 1,000 Chicago public school classrooms in grades 3-7 from the years 1993-2000. They found that on any given exam, school personnel appear to cheat in 4 to 5 percent of classrooms. The methods of cheating include changing students’ answers, providing students with answers and quizzing students before the test with actual test questions. They also find evidence of greater cheating when policies place greater weight on test outcomes.

state school quality measure primarily reflects test scores. The direct change in school quality occurs for houses assigned to new schools. In such circumstances, the assignment to a new school opens the opportunity for changes in both peer composition and measured school performance. The indirect change in school quality occurs for houses with the same school assignment for which the changes in attendance zones boundaries alter peer composition and possibly measured school quality.

Zahirovic-Herbert and Turnbull (2007) argue that since housing is a heterogeneous good that is spatially distinct, buyers and sellers must expend resources to find potential matches and complete a transaction. Thus, school quality can affect both house price and liquidity, where liquidity measures how quickly or easily the property can be sold. They argue that prices and liquidity are co-determined in the housing market, so that prices alone need not fully reflect all of the differences in school quality. Difficulty of sale can be affected, too.

Like Kane, et. al. (2003), Zahirovic-Herbert and Turnbull find that house prices do not reflect declining school performance. However, when looking at the difficulty of sale, declining schools' categorical rankings extend marketing time by about 14 percent of the variation in marketing time observed in the market. So, while there is no direct effect on selling prices, declining schools do make it significantly more difficult to sell houses. When considering improvement in school performance, improving schools' categorical rankings increase house prices, as expected. At the mean, houses increase in value by about five percent. This effect on property value is somewhat lower than that found in Figlio and Lucas (2004).

A house is typically a family's largest single asset. The quality of local public schools is often a major consideration in housing decisions. A family with school-age children makes two investment decisions when it chooses a residential location: the first is the investment in housing, and the second is the investment in the human capital of their child. Most families are risk-averse agents who are, at once, investing in housing and education, both long-term and illiquid investments. This note summarizes the empirical evidence for how school reform effort affects local housing markets. Some states have begun to focus financial rewards on schools that meet or exceed growth targets. While the estimated effects on property values differ across studies, the research to date nonetheless shows that the housing market shares state policymakers' enthusiasm for these measures; changes in school quality not only affect selling price, but also the ease of sale.

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