

Does Competition Among Public Schools Benefit Students and Taxpayers? A Comment on Hoxby (2000)

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There is widespread agreement that American public schools perform poorly. Many proposed policy responses—charter schools and school vouchers, for example—are motivated by the idea that schools will improve if forced to compete to attract students. If parents are given the freedom to choose their children’s schools, and if they prefer productive schools, then school administrators who hope to attract students will face incentives to raise productivity.

Researchers have attempted to evaluate claims that competition among schools will raise student outcomes and lower costs, but there are substantial hurdles. The biggest is that there has never been a large-scale implementation of school vouchers in the United States. It is difficult to learn about the systemic effects of school competition from the small voucher programs that have been implemented: With only a small fraction of any school’s students are eligible, any competitive incentives are greatly muted.

As a result, much of what we know about the systemic effects of choice programs comes from analogies to forms of school choice other than vouchers. One is to residential choice: The quality of the local schools is an important factor in many families’ decisions about where to live, and the competition among neighboring schools and districts to attract residents may resemble competition among voucherized schools to attract students. Parents’ choices of schools via housing location decisions are known as

Tiebout choice, after economist Charles Tiebout.

Study Description

In an influential paper, “Does Competition Among Public Schools Benefit Students and Taxpayers?,” published in the December 2000 issue of the *American Economic Review*, Professor Caroline Hoxby of Harvard University examined the effect of Tiebout choice on student test scores, per-pupil spending, productivity, and student sorting. She argued that the relevant choice is among school districts, so that metropolitan areas with more school districts offer more Tiebout choice. Thus, if Tiebout choice induces competition that leads to better performing schools, the number of school districts serving a metropolitan area should have a causal effect on average test scores of students in that area.

One might infer the effect of competition on performance by comparing metropolitan areas with more districts (like Boston, with over 200 districts) to those with fewer (like Miami, with one). Hoxby argued, however, that this may not provide a reliable indication of competition’s effect, as it may also reflect reverse causation of test scores on competition. For example, one might expect districts to be unwilling to consolidate with their neighbors when the neighbors perform poorly.

To distinguish the effect of competition, Hoxby used an “instrumental variables” strategy, which requires identifying a determinant of competition that could not plausibly be directly related to test scores. Specifically, she notes that the number of rivers and streams flowing through a metropolitan area predicts the number of school districts, as early settlers might have chosen to establish a larger number of smaller districts in areas where streams made it difficult for students to travel to school. As it is difficult to imagine that the number of streams has much direct effect on modern life—and even harder to imagine an effect on the quality of the public schools—a finding that test scores were higher in metropolitan areas with more streams would suggest that having more school districts causes higher test scores, presumably through increased competition. Hoxby indeed found this, and concluded that expanded school choice has the potential for large impacts on the quality of American education.

However, in a recent paper, “Does Competition Among Public Schools Benefit Students and Taxpayers? A Comment on Hoxby (2000),” Jesse Rothstein, assistant professor of economics and public affairs at Princeton University’s Woodrow Wilson School of Public and International Affairs, finds that Hoxby’s results are overstated. Rothstein re-analyzed Hoxby’s data and computer code and found many flaws with each. When these are corrected, the relationship between streams and the number of school districts is weaker and less convincing than Hoxby’s paper would suggest.

Rothstein argues that the positive relationship between the number of streams in a metropolitan area and average test scores is very sensitive to arbitrary decisions about how to count streams. Hoxby distinguished between larger and smaller streams, defining the former as those more than 3.5 miles long and “of a certain width” and counting them by hand from printed maps. Rothstein considers several alternative measures of larger streams that do not rely on the researcher’s judgment. For example, one counts all streams more than 3.5 miles in length, while another uses all streams that flow across county borders. Analyses using any of the alter-

native measures produce different results from those that Hoxby reports, indicating no meaningful relationship between the number of rivers and average test scores.

Rothstein concludes that Hoxby’s analysis offers little reliable evidence of a positive effect of Tiebout competition on student performance, and indeed that the most reasonable reading of the evidence indicates little to no effect. A version of his paper will be published by the *American Economic Review* as a comment to Hoxby’s article.

Policy Implications

Hoxby’s analysis and results have been well received by market advocates and proffered as evidence that vouchers, charter schools, and other forms of school choice have the potential to revolutionize American education. Rothstein’s findings suggest that competition among neighboring school districts to attract residents does not lead to meaningful improvements in school quality. This does not mean that other forms of competition cannot provide such benefits, but neither can Tiebout choice be considered evidence in favor of claims that they will. More direct studies of vouchers or other proposed programs will be needed before policy makers, parents, and media commentators can conclude that choice-induced competition will lead to improvements in school quality and student outcomes.

A copy of the policy brief can be found at:

http://www.wws.princeton.edu/policybriefs/rothstein_schools.pdf

A copy of the complete paper can be found at:

<http://www.ers.princeton.edu/workingpapers/10ers.pdf>

The website for the Woodrow Wilson School of Public and International Affairs: <http://www.wws.princeton.edu>

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