The market system is based on competition. Firms compete for consumers’ dollars and, in the process, tend to improve each other’s performance. The consumer is rewarded with higher-quality products at lower prices. This is true for nearly every industry, including those essential for human existence, such as food, clothing, and housing. But in the area of education, competition is relatively limited. Parents are taxed to pay for government-run schools that their children are assigned to attend. There are, of course, private schools that operate outside this system. But only about 11 percent of elementary, middle, and high school students are enrolled in such institutions.

A major reason for the relatively low rate of private school attendance is cost. Many families simply cannot afford to pay twice for education — once with their tax dollars and then again when the tuition bill from the private school arrives.

Some education analysts have argued that the best solution is to give parents vouchers roughly equal to the amount of money they pay each year to fund their local public school. If they are happy with that school’s performance, they could continue sending their children to it and not use the voucher. But if they think their children could do better elsewhere, they could use the voucher to help pay the tuition bill at a private school of their choosing.

Some cities, such as Cleveland and Milwaukee, have implemented limited voucher systems. But well-organized opposition from teacher unions and other groups have prevented their adoption in most places.

So reformers have turned to a less controversial option: charter schools. These schools receive public funds but are allowed greater flexibility in setting their curricula than are traditional public schools. Currently, about 685,000 students are enrolled in charter schools across the country. (Charter schools are permitted in the District of Columbia and 41 states, including all of those in the Fifth District except West Virginia.)

The most obvious benefits of charter schools accrue to the students who attend them. They are able to opt for an educational environment that better suits their needs and interests. But those students who remain in traditional public schools also benefit from the existence of charter schools, according to a new paper published by the National Bureau of Economic Research.

In “Does School Choice Increase School Quality?” economists George M. Holmes, Jeff DeSimone, and Nicholas G. Rupp examine standardized test scores for students enrolled in North Carolina’s public schools from 1996 to 2000 — a period in which the number of charter schools jumped from zero to nearly 100. They find that when a traditional school faces competition from a charter school, test scores at the traditional school increase considerably.

One might say this stands to reason: Students who are faring the worst in traditional schools are those most likely to leave for charter schools, thus increasing average test scores at the traditional schools. Actually, quite the opposite is true. Of students the authors were able to identify, “approximately 75 percent of those who switched had a higher score than the average score in the traditional school the year before they left. This is direct evidence that charter-induced growth in traditional school performance is not a manifestation of an exodus of low-scoring students.”

Instead it is probably a manifestation of competition. “When a charter school opens, the traditional school, which previously held a monopoly on public education in a feeder district, faces the prospect of losing students to the new competitor,” the authors write. “To the extent that the school’s agent (ostensibly a principal) experiences disutility from a decline in enrollment, this might lead to an increase in the traditional school’s quality in order to retain students.”

In other words, the charter school represents a threat to the traditional school’s market. This can encourage the traditional school to improve its level of instruction — just as the opening of, say, a new restaurant might encourage nearby eateries to improve the quality of their food and service.

But in both cases the competitor must be relatively nearby, otherwise it does not pose a credible threat to the incumbent. The authors argue that the effects of charter schools beyond roughly 15 miles from a traditional school are likely to be quite small. Fortunately, though, this is not a huge problem in North Carolina. In those counties with charter schools, 90 percent of traditional schools are located within 12.5 miles of the charter.