

Education Issue Brief

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How Does School Choice Affect Student Achievement in Traditional Public Schools?

A key goal of school choice is creating competition that spurs innovation and improvement in traditional public schools. If schools of choice attract students away from traditional public schools—leading to lower enrollment and reduced funding for traditional public schools—district and school leaders may respond to this competitive pressure by strengthening the quality of the affected schools. However, critics of school choice have raised the concern that this competitive pressure might negatively affect students in traditional public schools. For example, reduced funding for traditional public schools could lead to weaker instructional programs for students, or schools of choice might attract the highest-performing students away from traditional public schools, leaving behind a larger proportion of lower-performing students or students with special needs.

Policymakers considering school choice need to understand how it affects students who attend schools of choice, but they should also account for its effect on students who remain in traditional public schools. Recent work has summarized the evidence on how school choice affects students who participate. In contrast, this brief describes key findings on how two types of school choice—charter schools and private school vouchers—affect student achievement in traditional public schools. The brief also addresses the implications of this evidence for policymakers and proposes next steps for research.

A. Key findings on the effect of school choice on traditional public schools

We scanned the research over the past 20 years to identify studies that measured the effect of school choice on traditional public schools. Although there is a large amount of research on the effects of school choice, only a small portion of the studies focused on how school choice affects student achievement in traditional public schools.

We summarize key findings from 35 studies that plausibly isolate the effect of school choice on achievement in traditional public schools (a Literature Review to Inform Research for Action on School Choice, with more detail about the literature scan, is available upon request). Although school choice

could affect other student outcomes in traditional public schools, this review focused specifically on student achievement. These studies measured how the achievement of traditional public school students changed over time as their schools faced

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increasing—or decreasing—competition from school choice (for example, as the number of charter schools located nearby increased). To increase the likelihood that these studies isolate the effect of school choice on achievement, we excluded studies that did not account for (1) changes in the composition of students in the traditional public schools, and (2) the possibility that schools of choice purposefully locate near low-performing traditional public schools. Although we intended to present findings for multiple types of school choice, all but 2 of the 35 identified studies focused on charter schools and vouchers. None of the studies that met our requirements measured the effects of magnet schools on traditional public schools.

The available evidence from the 35 studies suggests the following:

- 1. Most studies find that charter schools have either no effect or a small positive effect on the achievement of students who remain in traditional public schools.** Almost all of the studies found that charter schools had no effect on achievement in traditional public schools (10 studies), mixed effects (2 studies), or small positive effects (9 studies) (See Figure 1). The studies examined the effect of charter schools in 14 large urban school districts and across six states during time periods when the number of charter schools expanded.¹

The effect of charter schools on traditional public schools may depend, in part, on the amount of competition from charter schools. For example, large effects on traditional public schools might not be expected until a substantial proportion of students in a district attend charter schools. Most of the studies measured effects in the years after charters were first introduced or expanded, so the overall proportion of students attending charter schools tended to be low. For example, four of the studies examined charter schools in North Carolina, where about 1 percent of public school students attended charter schools.

All of the studies focused on elementary and middle school grades, and seven of the studies also included high schools. Any positive effects on traditional public schools were typically small. For example,

Figure 1. Summary of findings on the effect of charter schools on traditional public schools

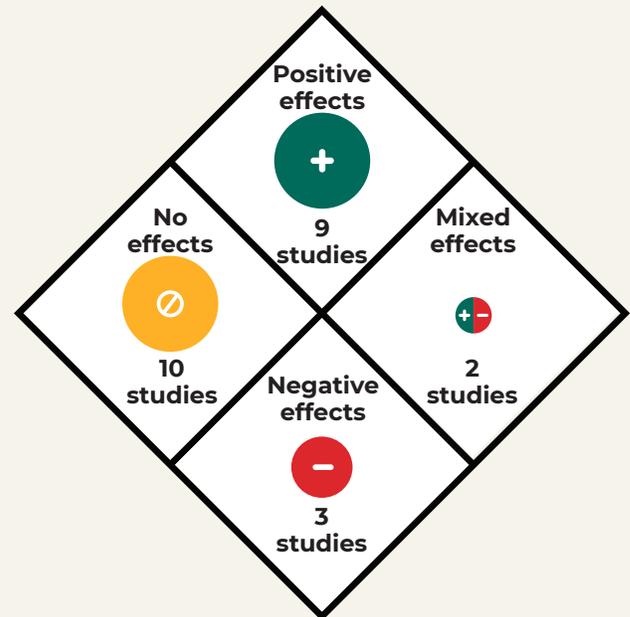


Figure 2. Summary of findings on the effect of private school vouchers on traditional public schools

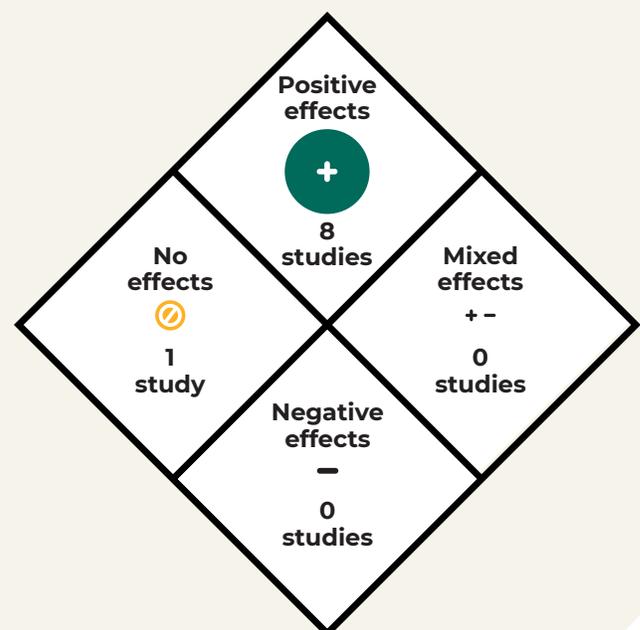
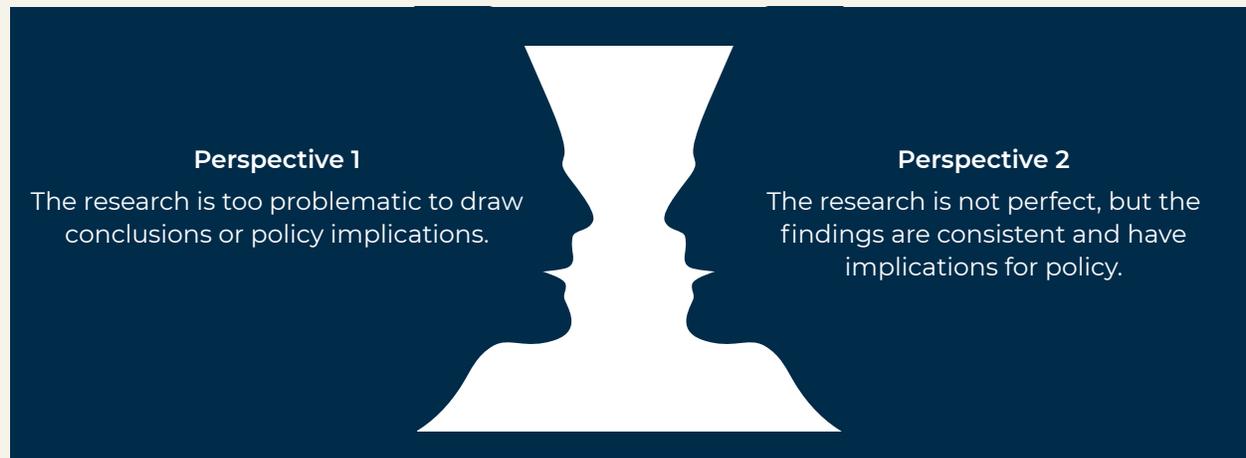


Figure 3. Two perspectives on policy implications of the research



when a charter school located within 2.5 to 5 miles of a traditional public school, student achievement increased by about 1 percentile point in math and reading. Only 3 of the 35 studies found negative effects on traditional public schools.

A national study of charter schools was released after we completed our review of the literature (Griffith 2019). The study measured the combined effect of charter schools on the students they serve and on students in traditional public schools. Although the study did not directly measure the competitive effect of charters, the author suggests an effect that is consistent with our overall finding of a small effect or no effect on students in traditional public schools.

2. Studies consistently find that private school voucher programs lead to modest improvements in the achievement of non-participating students. All but one of the nine studies of vouchers found that they had a positive effect on the achievement of students in traditional public schools. These studies examined the effect of two statewide voucher programs (Ohio and Florida) and voucher programs in three large, urban districts (Milwaukee, San Antonio, and Washington, DC). Although the voucher programs in these studies often served a large number of students—for example, approximately 2,000 in Washington, DC, 7,000

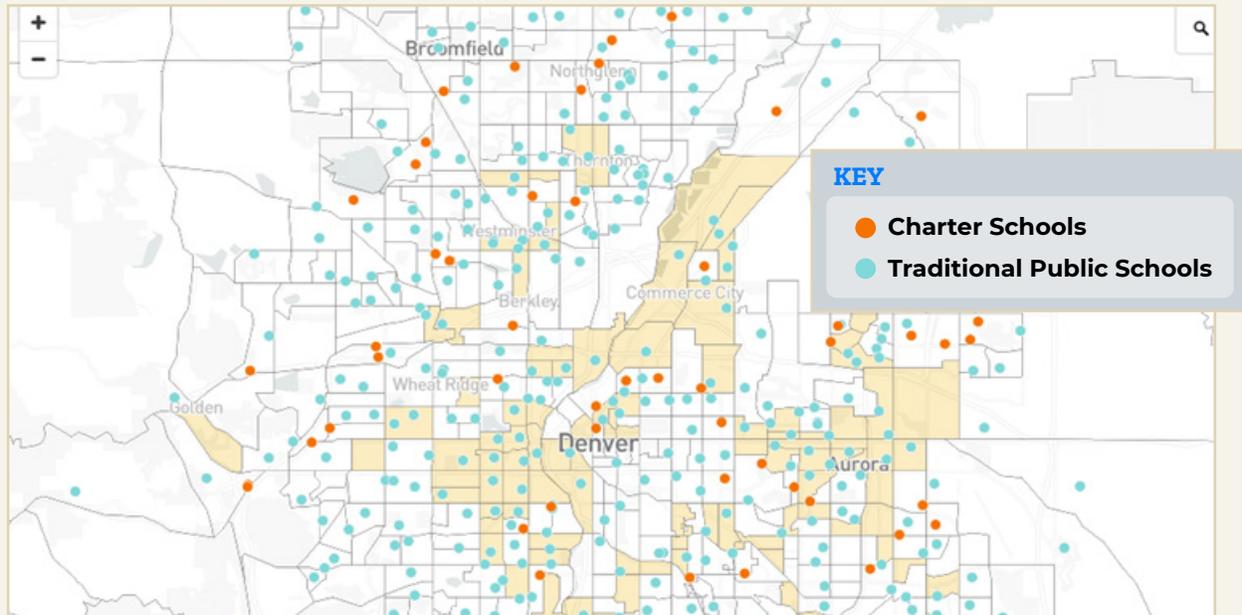
in Ohio, and 28,000 in Florida—they tended to represent a fairly small proportion of overall public school enrollment.² Three of the programs targeted vouchers to students from low-income families or students in the lowest-performing schools, while the other two programs were available to all students. The size of student achievement gains was modest in most of the studies according to the authors, but Florida’s A-Plus program, which combined vouchers with school accountability, found fairly large impacts.

B. Two perspectives on the policy implications of the research

Despite fairly consistent findings across the studies identified in our evidence review, a symposium of researchers and policymakers sponsored by the Walton Family Foundation in December 2018 revealed different perspectives about how policymakers should respond to this research. We provide a high-level summary of the two perspectives below.

Perspective 1: The research is too problematic to draw conclusions or policy implications.

One perspective noted that the reviewed studies use research designs that are imperfect and could either

Figure 4. Example of charter school competition in Denver Public Schools

Source: <https://fordhaminstitute.org/charter-school-deserts/>

overestimate or underestimate the benefits (or costs) of school choice on traditional public schools. Rigorously studying the effect of school choice on traditional public schools is difficult. The strongest research design—an experiment that randomly assigns different levels of charter school competition to different traditional public schools—is not feasible in this context. As a result, the studies use a less rigorous design that examines how outcomes in traditional public schools change when faced with changing levels of competition from school choice.

In addition, about half of these studies measure the effect of *school-level* responses to choice and do not fully measure the effect of *districtwide* responses to school choice competition. If competition from school choice affects all schools in a district (and not just those facing the most direct competition from school choice), the studies may not fully capture how traditional public schools respond to competition. This is problematic because schools may be limited in their ability to respond to competition from school choice. For example, schools may have minimal influence over how their funding is allocated or which curricula or instructional program

their teachers use. A few studies found that schools responded to charter competition with additional marketing strategies to recruit students, but did not make substantial curricular or instructional changes (Zimmer and Buddin 2009; Loeb et al. 2011; Lubienski 2006; Kim et al. 2013).

Any real change brought about by competition may come from actions of the school district, which could affect all schools in the district (including those facing less direct competition from school choice). For example, districts may implement new instructional programs, take additional steps to improve school quality, or find ways to use resources more efficiently. If districts lose funding as students transfer to schools of choice, they may reduce the amount of services or instructional resources in schools across the district. In some cases, districts may seek opportunities for collaboration between schools of choice and traditional public schools (Holley et al. 2013). Alternatively, districts may also take steps to slow the growth of charter schools or limit their access to resources needed to compete with traditional public schools.

Measuring district-level responses to school choice is challenging, making it difficult to produce credible evidence. To measure district-level effects, researchers need to use statewide data to make comparisons between schools across multiple school districts that face differing levels of competition from schools of choice. Among the studies we identified, twelve measured the district-level effect of charter school competition (in four states). The findings from these studies are consistent with the broader set of findings—nine of the twelve studies found that charter school competition had no effect or led to small improvements in the achievement of traditional public school students (two studies found a negative effect and one found mixed effects). However, additional evidence on district-level effects is needed to reach a consensus on the findings.

Perspective 2: The research is not perfect, but the findings are consistent and have implications for policy.

Another perspective views the research findings as offering consistent evidence that charter schools and vouchers do not negatively affect achievement in traditional public schools, and may lead to improvement

in achievement. Although the studies did not use the most rigorous experimental designs, they used a variety of non-experimental approaches—each with their own strengths and weaknesses—to measure school choice in a variety of contexts and taken together they have produced consistent findings.

This perspective suggests a few policy implications. First, the findings do not support a common critique of school choice—that it harms the achievement of students in traditional public schools. Critics have raised concerns that school choice could shift money away from traditional public schools or attract the highest-performing or most-motivated students away from these schools. However, the studies provide consistent evidence that charter schools and voucher programs do not harm student achievement in traditional public schools and they potentially improve it.

Second, neither does the evidence support a key premise behind school choice—that competition from schools of choice will improve the quality of traditional public schools. Given that charter schools had no effect or led to small improvements in traditional public schools, this suggests that opening charter schools and introducing vouchers are not strong policy levers for improving achievement in traditional public schools. On the other hand, studies suggest that a potential benefit of voucher programs is their small positive effect on student achievement in traditional public schools. Policy-makers must balance this evidence with the effects of vouchers on students who use them. Overall, this perspective suggests that districts can focus their decisions about expanding school choice based on how they think schools of choice will affect students who attend them, without harming or helping the students who remain in traditional public schools.

Recommendations for Research

- ✔ Analyze district-level responses to school choice competition
- ✔ Examine the possibility of a tipping point for school choice competition.
- ✔ Understand how districts respond to competition from school choice.
- ✔ Examine how school choice effects other student outcomes.
- ✔ Expand research to understand how other types of school choice effect achievement in traditional public schools.

C. Recommendations for additional research necessary to inform school choice policy

The findings from our literature scan and the differing perspectives on their policy implications suggest a few key areas where additional evidence is needed.

Improve methods for analyzing the effect of district-level responses to school choice competition.

If policy responses to charter competition are more likely to happen at the district level, it is critical for policymakers to understand the effect of these district-level responses to school choice. Measuring district-level effects requires statewide data to make comparisons across districts—for example, measuring gains in achievement in districts that faced increasing competition from school choice relative to gains in achievement in similar districts that did not face increasing competition. Ideally, these studies would measure both district- and school-level responses to school choice to understand their relative importance. A clear conceptual framework for the different ways that districts and schools respond to school choice and how those responses ultimately influence teaching and learning is needed to guide this research.

Examine the possibility of a tipping point for competition from school choice. One potential limitation of the current evidence is that several of the studies measured the effect of charter competition fairly early in the evolution of the charter school sector. If the intensity or scale of a district's response depends on the amount of competition from school choice, then the level of competition may not have been sufficient to fully affect traditional public schools. It is critical for studies to characterize the level of competition from school choice and for policymakers to understand this context when assessing the results. Future research could address this need by assessing whether there is a tipping point needed for school choice competition to affect students in traditional public schools.

Develop an understanding of how districts respond to competition from school choice. Although measuring the effect of district responses to school choice is a challenge, the field can conduct studies that improve understanding of how districts respond to competition. Policymakers may not explicitly link certain policy shifts to competition from school choice, even though the competition could have contributed to the policy direction.

Therefore, studies may need to document key district policies or interview district officials before and after a change in charter school competition. These studies could address questions such as: What are the most common policy responses to school choice? How do these responses differ when the district authorizes local charter schools? What aspects of the local context influence these responses (for example, a district with declining student enrollment)?

These studies could inform the design of studies that examine how district-level responses affect traditional public schools. For example, if districts tend to use a particular set of policies or programs in response to competition, studies could measure the effect of each of these policies and programs to understand how charter competition influences student achievement.

Consider the effect of school choice competition on other types of student outcomes. While student achievement is an important predictor of students' long-term outcomes, it is important for policymakers to understand how competition from school choice affects other types of outcomes that have consequences for students. For example, if charter schools have a particular focus on civics that leads to improvements in students' civic participation, might this lead nearby traditional public schools to try some of the same strategies? Or, if charter schools have a strong focus on reducing dropouts and increasing college enrollment, could that encourage traditional public schools to take steps that improve those outcomes for their students? More broadly, could competition from school choice lead to different social-emotional learning outcomes (for example, if school choice attracts certain types of students away from traditional public schools, it may affect the learning environment within those schools). A key concern for policymakers is whether school choice affects the level of racial and economic integration across schools (see the companion brief [“How Does School Choice Affect Racial Integration?”](#) for more). Future research should consider how school choice affects these other types of outcomes for students in traditional public schools.

Address the lack of research on the effects of magnet schools, districtwide choice, and inter-district choice on traditional public schools.

Although there is evidence on the effect of magnet schools, districtwide choice, and inter-district choice on students who take advantage of these choice options, our review did not identify rigorous studies that examined how they affect students who remain in their neighborhood school. Magnet schools are fairly prevalent across the country—there are over 3,000 magnet schools in 600 school districts (Polikoff and Hardaway 2017)—and districtwide choice and inter-district choice are becoming more prevalent (Education Commission of the States 2017). As policymakers are faced with decisions about whether to implement these types of school choice offerings, they need an evidence base to guide their decisions. In addition to measuring the impact of these school choice options on student achievement, it will also be important to understand the contextual and programmatic factors that influence their effectiveness.

Endnotes

¹ The studies examined the following districts: Chicago, Denver, Milwaukee, New York City, Philadelphia, San Diego, Washington, DC, a large southwestern district, and six California districts; and the following states: Florida, Massachusetts, Michigan, North Carolina, Ohio, and Texas.

² One exception is Milwaukee, where about 17,000 students or about 18 percent of the district's students participated in the Milwaukee Parental Choice Program.

References

Education Commission of the States. "Does the State Have Open Enrollment Programs?" Washington, DC: Education Commission of the States, 2017. Available at <http://ecs.force.com/mbdata/MBQuestNB2n?rep=OE1701>.

Griffith, D. "Rising Tide: Charter School Market Share and Student Achievement." Washington, DC: Thomas B. Fordham Institute, September 2019.

Holley, M., A. Egalite, and M. Lueken. "Competition with Charters Motivates Districts." *Education Next*, vol. 13, 2013, pp. 28–35.

Kim, W.J., and P. Youngs. "The Impact of Competition Associated with Charter Schools and Inter-District School Choice Policies on Educators and Schools." *International Journal of Quantitative Research in Education*, vol. 1, 2013, pp. 316–340.

Loeb, S., J. Valant, and M. Kasman. "Increasing Choice in the Market for Schools: Recent Reforms and Their Effects on Student Achievement." *National Tax Journal*, vol. 64, 2011, pp. 141–163.

Lubienski, C. "Incentives for School Diversification: Competition and Promotional Patterns in Local Education Markets." *Journal of School Choice*, vol. 1, 2006, pp. 1–31.

Polikoff, M., and T. Hardaway. "Don't Forget Magnet Schools When Thinking About School Choice." Washington, DC: Brookings Institute, 2017.

Studies of charter schools that found positive effects on traditional public schools

Booker, K., S.M. Gilpatric, T. Gronberg, and D. Jansen. "The Effect of Charter Schools on Traditional Public School Students in Texas: Are Children Who Stay Behind Left Behind?" *Journal of Urban Economics*, vol. 64, 2008, pp. 123–145.

Cordes, S.A. "In Pursuit of the Common Good: The Spillover Effects of Charter Schools on Public School Students in New York City." *Education Finance and Policy*, vol. 13, no. 4, 2017, pp. 1–49.

Ferreira, M., and G. Kosenok. "Charter School Entry and School Choice: The Case of Washington, D.C." *Journal of Public Economics*, vol. 159, 2018, pp. 160–182.

Gray, N.L. "School Choice and Achievement: The Ohio Charter School Experience." *CATO Journal*, vol. 32, 2012, pp. 557–579.

Holmes, G.M., J. DeSimone, and N.G. Rupp. "Does School Choice Increase School Quality?" Working Paper No. 9683. Cambridge, MA: National Bureau of Economic Research, 2003.

Jinnai, Y. "Direct and Indirect Impact of Charter Schools' Entry on Traditional Public Schools: New Evidence from North Carolina." *Economics Letters*, vol. 124, 2014, pp. 452–456.

Sass, Tim. "Charter Schools and Student Achievement in Florida." *Education Finance and Policy*, vol. 1, 2006, pp. 91–122.

Terrier, C., S. O'Connell, and M. Ridley. "Fiscal and Education Spillovers from Charter School Expansion." Working Paper 25070. Cambridge, MA: National Bureau of Economic Research, 2018.

Zimmer, R., B. Gill, K. Booker, S. Lavertu, T.R. Sass, J. Witte, and RAND Education. "Charter Schools in Eight States: Effects on Achievement, Attainment, Integration, and Competition." Santa Monica, CA: RAND Corporation, 2009a–g.¹

Studies of charter schools that found no effect on traditional public schools

Bifulco, R., and H.F. Ladd. "The Impacts of Charter Schools on Student Achievement: Evidence from North Carolina." *Education Finance and Policy*, vol. 1, 2006, pp. 50–90.

Bettinger, E.P. "The Effect of Charter Schools on Charter Students and Public Schools." *Economics of Education Review*, vol. 24, 2005, pp. 133–147.

Winters, M.A. "Measuring the Effect of Charter Schools on Public School Student Achievement in an Urban Environment: Evidence from New York City." *Economics of Education Review*, vol. 31, 2012, pp. 293–301.

Zimmer, R., and R. Buddin. "Is Charter School Competition in California Improving the Performance of Traditional Public Schools?" *Public Administration Review*, vol. 69, 2009, pp. 831–845.

Zimmer, R., B. Gill, K. Booker, S. Lavertu, T.R. Sass, J. Witte, and RAND Education. "Charter Schools in Eight States: Effects on Achievement, Attainment, Integration, and Competition." Santa Monica, CA: RAND Corporation, 2009a–g.¹

Studies of charter schools that found mixed effects on traditional public schools

Cremata, Edward, Devora Davis, Kathleen Dickey, Kristina Lawyer, Yohannes Negassi, Margaret E. Raymond, and James L. Woodworth. "National Charter School Study." Stanford, CA: Center for Research on Education Outcomes, 2013.

Horvath, J. "Charter School Effects on Charter School Students and Traditional Public School Students in North Carolina." Doctoral dissertation. Chapel Hill: University of North Carolina, 2018.

Studies of charter schools that found negative effects on traditional public schools

Carr, Matthew, and Gary Ritter. "Measuring the Competitive Effect of Charter Schools on Student Achievement in Ohio's Traditional Public Schools." Fayetteville, AR: University of Arkansas, 2007.

Imberman, S.A. "The Effect of Charter Schools on Achievement and Behavior of Public School Students." *Journal of Public Economics*, vol. 95, 2011, pp. 850–863.

Ni, Yongmei. "The Impact of Charter Schools on the Efficiency of Traditional Public Schools: Evidence from Michigan." *Economics of Education Review*, vol. 28, 2009, pp. 571–584.

Studies of vouchers that found positive effects on traditional public schools

Carr, M. "The Impact of Ohio's EdChoice on Traditional Public School Performance." *CATO Journal*, vol. 31, 2011, pp. 257–284.

Chakrabarti, R. "Impact of Voucher Design on Public School Performance: Evidence from Florida and Milwaukee Voucher Programs." SSRN Scholarly Paper No. ID 1086772. Rochester, NY: Social Science Research Network, 2008.

Chakrabarti, R. "Vouchers, Public School Response, and the Role of Incentives: Evidence from Florida." *Economic Inquiry*, vol. 51, 2013, pp. 500–526.

Figlio, D., and C.M.D. Hart. "Does Competition Improve Public Schools? New Evidence from the Florida Tax-Credit Scholarship Program." *Education Next*, vol. 11, 2011, pp. 74–80.

Gray, N., J. Merrifield, and K. Adzima. "A Private Universal Voucher Program's Effects on Traditional Public Schools." *Journal of Economics and Finance*, vol. 40, 2016, pp. 319–344.

Greene, J.P., and R.H. Marsh. "The Effect of Milwaukee's Parental Choice Program on Student Achievement in Milwaukee Public Schools." SCDP Comprehensive Longitudinal Evaluation of the Milwaukee Parental Choice Program. Report #11. Fayetteville, AR: School Choice Demonstration Project, 2009.

Greene, J.P., and M.A. Winters. "When Schools Compete: The Effects of Vouchers on Florida Public School Achievement." Education Working Paper. New York, NY: Center for Civic Innovation at the Manhattan Institute, 2003.

Studies of vouchers that found no effect on traditional public schools

Greene, J.P., and M.A. Winters. "An Evaluation of the Effect of D.C.'s Voucher Program on Public School Achievement and Racial Integration After One Year." Education Working Paper No. 10. New York, NY: Center for Civic Innovation at the Manhattan Institute, 2006.

Studies of inter-district choice that found positive effects on traditional public schools

Babington, M., and D.M. Welsch. "Open Enrollment, Competition, and Student Performance." *Journal of Education Finance*, vol. 42, 2017, pp. 414–434.

Welsch, D.M., and D.M. Zimmer. "Do Student Migrations Affect School Performance? Evidence from Wisconsin's Inter-District Public School Program." *Economics of Education Review*, vol. 31, 2012, pp. 195–207.

Reference Notes

¹ This study conducted separate analyses of charter schools across seven different locations. We count each location as a separate study for the purpose of our literature review. The study found positive effects on traditional public schools in Texas and no effect in Ohio, Chicago, Denver, Milwaukee, Philadelphia, and San Diego.

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