



C. William
Swank Program
in Rural-Urban Policy

SCHOOL CHOICE IN OHIO

MOVING FROM THEORY TO PRACTICE

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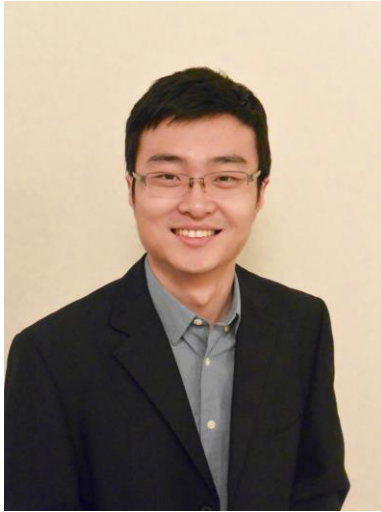
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About the C. William Swank Program on Rural-Urban Policy

The C. William Swank Program in Rural-Urban Policy is nationally and internationally recognized research and outreach program focused on priority issues related to rural and urban communities and their growth.

Led by Professor Mark Partridge, the Swank Program combines innovative approaches in economic theory, planning, advanced statistical research, and geographical information systems to create products that can be used by the academic community, stakeholders, policymakers, students, and the public. In turn, the Swank Program will help inform and facilitate teaching and student research at Ohio State and elsewhere.

The Swank Program conducts and supports research, teaching, and outreach within the College of Food, Agricultural, and Environmental Sciences; the Ohio Agricultural Research and Development Center; and Ohio State University Extension.

Learn more about the C. William Swank Program on Rural-Urban Policy at <http://aede.osu.edu/programs/c-william-swank-program-rural-urban-policy>

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Executive Summary

Over the last twenty years, the education landscape in Ohio has dramatically changed as school choice policies have opened up public funding to private schools and charter schools, increasing school options for parents and students. In recent years, the utilization of Ohio's school choice programs has rapidly grown, with more than 350,000 Ohio students participating in a school choice program in 2014. As these programs have grown, the amount of public funds involved in school choice program has also grown, well exceeding \$1.5 billion in 2014. This rise has shifted the public discourse around school choice from theory to practice, with a greater focus on whether school choice policies are delivering on their promises of better student outcomes and great efficiency in the delivery of education.

A review of the economics literature testing these theories through the evaluation of school choice policies across the country finds inconclusive results. While generally the effects of these programs on academic performance are found to be negligible, research has consistently found that school choice programs like charter schools and private school vouchers can have positive effects on academic outcomes when they are applied to low income, urban, minority students in elementary and middle school. These groups are often the least mobile, and therefore unable to choose a better traditional public school by moving to a different area, suggesting that in some cases expanding choices can improve academic outcomes. The estimates of the effect of school choice programs on more mobile groups have found negligible or negative results. Economic research has also been inconclusive when evaluating the efficiency gains from school choice. Finally, the economics literature sheds light on some of the unintended consequences of school choice policies, finding that school choice policies can have a significant effect on housing prices.

This policy brief analyzes Ohio's three largest school choice programs—charter schools, private school vouchers, and open enrollment. Much of the assessment of these programs has focused on charter schools, which, on average, have been found to underperform compared to traditional public schools in Ohio and to charter schools nationally. Charter e-schools have been found to more severely underperform, lagging both brick-and-mortar charters and traditional public schools. The state has taken some steps in recent months to introduce reforms that aim at improving charter school performance, but an area that we find is still in need of improvement is the charter school authorization process. With an increasing body of research on charter school performance, we believe that the state can go further to adopt an evidence based approach to charter school authorization to weed out models that are simply not working.

While a portion of school choice programs are funded by state tax dollars distributed to school districts, Ohio's education funding mechanism requires that a portion of school choice financing is paid with local district funds. We estimate that school choice programs represent the annual transfer of nearly \$500 million in local tax revenues to charter schools, private schools, and across district boundaries. This system fundamentally challenges the traditional model of local control of locally funded public schools. These transfers can have significant effects on school finances and even local economies, and the funding mechanism for school choice programs should be more transparent so that local taxpayers understand the full implications of these policies.

We pay particular attention to the geographic dimension of Ohio's school choice policies. We find that the quantity and quality of school choice options varies greatly and across urban and rural areas. While school choice programs like charter schools and private school vouchers have historically been targeted in urban areas with underperforming public schools, data suggests that demand in rural area for school choice is very high. More students in rural areas utilize open enrollment options than in urban and suburban districts combined, and a disproportionate number of rural students are now enrolling in charter e-schools, many of which have significantly underperformed traditional public schools in academic achievement. Because rural areas are typically left out of the school choice discourse, there is much we still do not know about the impact of school choice on rural students and traditional rural public schools. With more than 10% of rural students now utilizing a school choice program, extending attention to rural needs and the effects of these policies in rural areas is critical.

Finally, we see opportunities for the state to continue its progress in school assessment and transparency. We are encouraged by the state's adoption of "value-added" measures which help to control for unobserved student characteristics like background and ability when evaluating both traditional public schools and charter schools. Yet, these same measures are not applied to evaluating private schools participating the state's voucher program. As the program continues its rapid growth, participating private schools should be subject to the same evaluation as traditional public schools and charter schools. The growing role of data in education should open up new frontiers for rigorous research and evaluation of Ohio's evolving education system and help Ohio's parents make more informed decisions for their children's education. Improved educational performance is not just good for affected families, but also for the state's economy that depends on a quality workforce.

Introduction

Education has long been a topic of interest for economists. Research has focused on the role of schools in developing human capital, public finance and the provision of education as a public good, and the effects of school quality on property values and residential choice.

Over the last two decades, economists have played an increased role in shaping school and education policy by applying market theories to the educational system. This unique perspective offered by economists helps to highlight the incentives and constraints that shape the educational system. This focus on market dynamics has led to the proliferation of “school choice” policies across the United States. These policies have been adopted with several stated goals, including increasing innovation within the public education system, expanding school options for students and parents, and increased competition among schools.

Since the late 1990s, Ohio has been slowly adopting and expanding its school choice policies. Some of these policies have followed the lead of other states, such as the state’s charter school (“community school”) system. In other cases, Ohio has led the nation in expanding school choice, such as the Cleveland Public School’s private school voucher program which led to a landmark Supreme Court decision that provided for the expansion of school choice policies across the country.

As these policies have become more ingrained and more students enroll in options that break the mold of traditional public education, public attention has shifted from the theoretical arguments for school choice, to evaluating the outcomes of these policies. The increased interest in and scrutiny of school choice policies has brought Ohio to an evolutionary moment in its educational policy. Recent attention on particular cases of failing charter schools has led to public outcry to overhaul the state’s charter school system, resulting in the adoption of House Bill 2 in October of 2015 that introduced significant reform measures. While charter schools represent just one component of Ohio’s school choice system, the increased public discourse around charters affords the opportunity to consider how the state’s various school choice policies can work together with the traditional public education system to expand educational opportunities. This brief seeks to expand the policy conversation by looking at Ohio’s school choice policies, while bringing in insights from the last two decades to help frame the policy discussion.

The National Context for School Choice

The last several decades have witnessed a dramatic change in the public education system. States across the country have adopted policies that break the mold of the traditional public education system in an effort to promote innovation, expand household educational options, and increase competition among schools. Broadly, these policies have been labeled “school choice” policies.

It is a bit misleading though to suggest that these policies represent the introduction of choice into the US educational system. It is well documented empirically and anecdotally that households—especially those with children—make residential decisions based on their preferences for schools (Black & Machin, 2011). This method of choice is the result of a system in which the constraints on a household's school options are geographically defined. Households who have a strong preference for school quality might choose a school or district first, and then choose a place to live within that district. This sorting into locations in order to access schools which are geographically constrained is a form of school choice, but one in which a household's choice is limited by its income and the availability of housing in a desired enrollment area.

At their core, school choice policies aim to relax constraints on the delivery of education and on households' educational options. School choice typically fall into two policy types. The first, are targeted policies. These polices target a particular student group, such as low income students, students living in areas with failing schools or districts, or students with special needs. These targeted policies seek to expand educational options for those students with the goal of promoting educational equity. Voucher and charter schools are typically structured as targeted policies.

The second policy type is universal school choice policies. These policies are structured to increase school options for all students. Universal policies include open enrollment, post-secondary option, and joint-vocation schools. While these policies are typically open to all students, they can be constrained by the number of slots available.

This section provides an overview of the basic framework of the most common school choice policies, and highlights national trends.

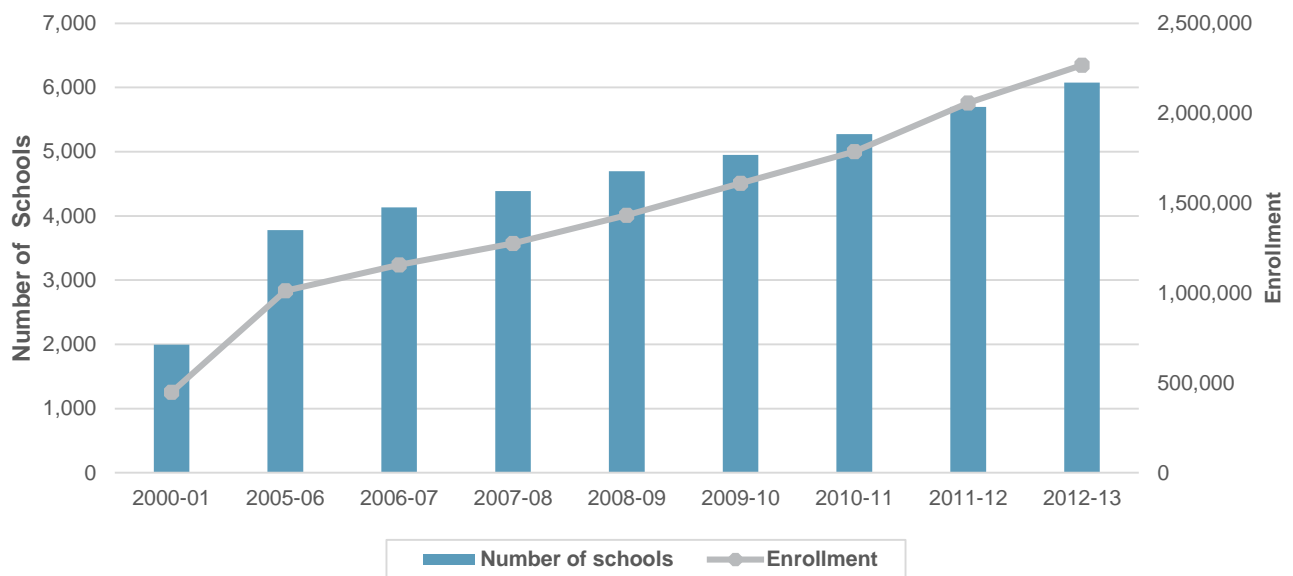
Charter Schools

Charter schools are a form of public schools exempted from regular state and local regulations under state charter laws. Normally, charter schools are granted a greater level of autonomy than traditional public schools, but unlike private schools that receive no public funding, and charter schools are funded primarily by state governments.

Charter schools are normally established by state authorized sponsors. The sponsor sets up the governing structure of the charter school, and ensures the school is operating under academic, financial and other standards. Usually, charter schools are operated by organizations, such as non-profit "charter management organizations" (CMOs) and for-profit "education management organizations" (EMOs). As those entities are private organizations, charter schools are often under less scrutiny than traditional public schools.

According to National Center for Education Statistics (NCES), the numbers of charter schools and students enrolled have increased dramatically since 2000 (Chart 1). In school year 2000-01, there were only 2000 charter schools in the U.S., but the number had tripled by 2012. Charter school enrollment rose at an even faster rate, growing from less than half a million to over 2 million between 2000 and 2013. Even through charter schools have seen dramatic growth, they account for only 5 percent of total enrollment in public schools by 2012-13.

Chart 1. National Charter School Number and Enrollment

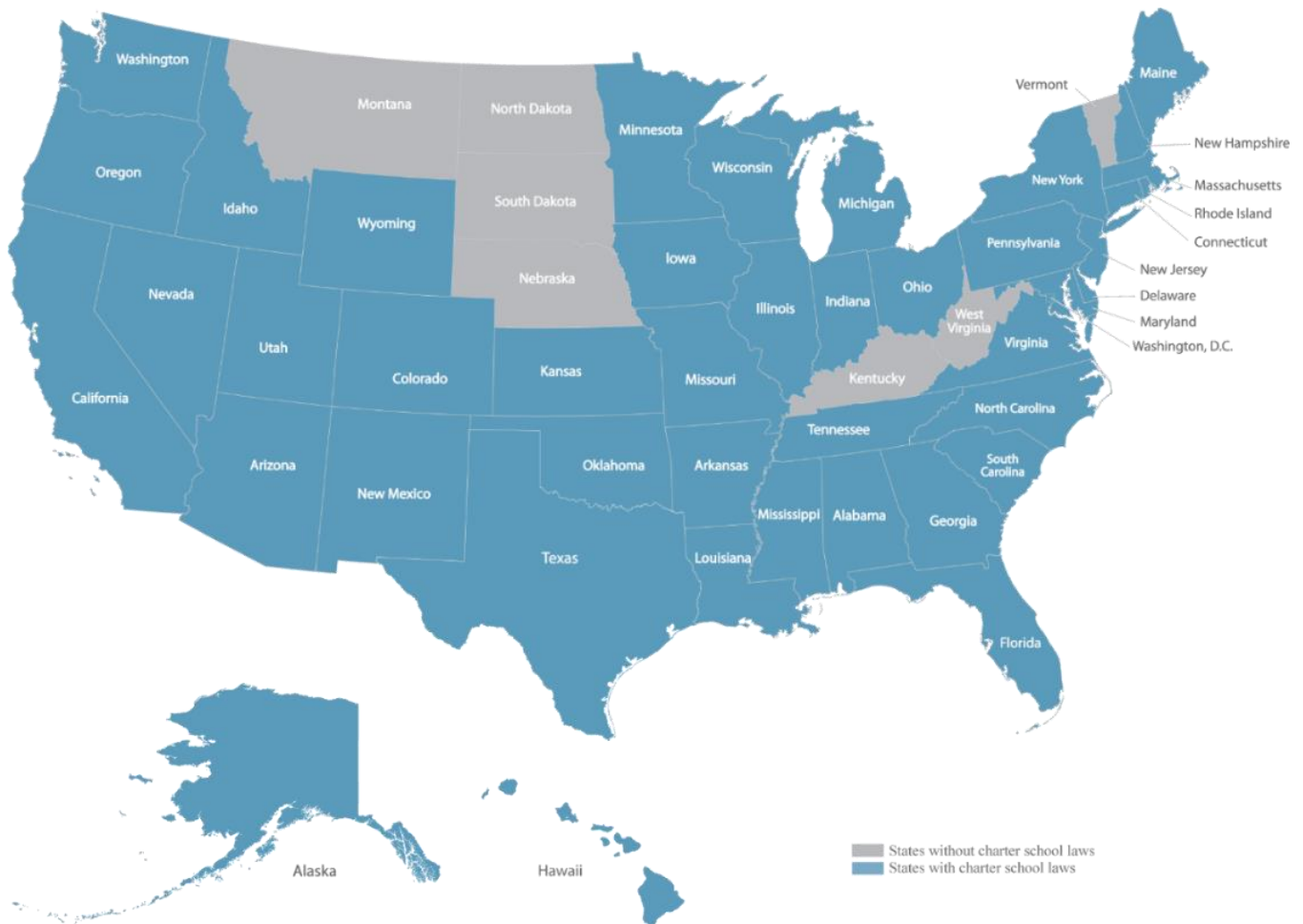


Source: National Center for Education Statistics (NCES)

The majority of states and the District of Columbia have passed charter laws. Those states that have not passed a charter school law are mostly rural (Map 1).

Even though they are primarily funded by public sources, the expenditures per pupil of charter schools are significantly smaller than that of traditional public schools. Focusing on current expenditures, which measures day-to-day operation cost of schools, traditional public schools spend about \$1,400 more per pupil than charter schools on average. This difference is rooted in both revenue and expenditure factors.

Map 1. States with Charter Laws



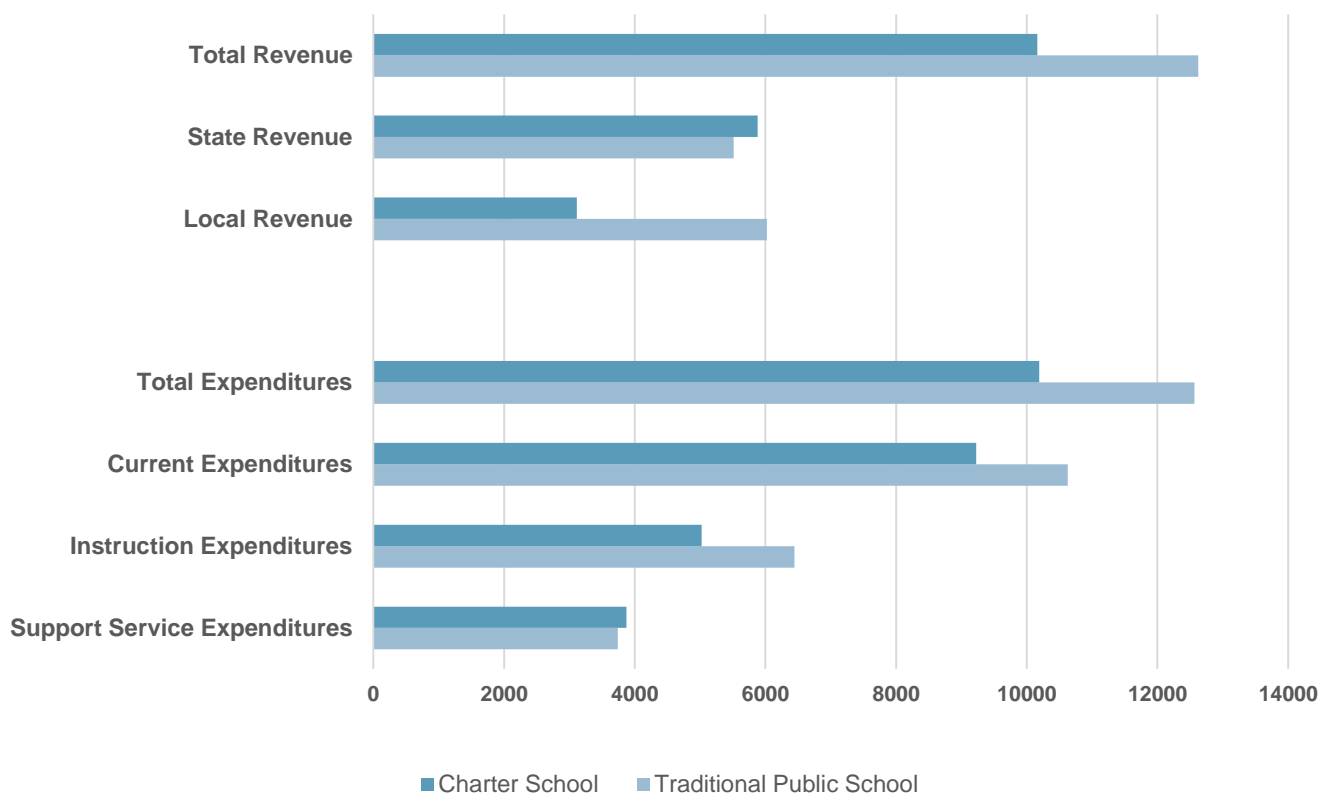
Source: Education Commission of the States, ECS

In 2012, charter schools received about \$3,000 less per pupil than traditional public schools.¹ The majority of this difference was driven by the fact that charter schools are typically unable to raise local taxes, and instead receive funding from the state on a per pupil basis, sometimes in the form of a transfer from the student's home district. In some states, every student received the same amount of state funding regardless of the kind of school they attend, while in other states, charter students only receive a portion of per pupil state funding based on a separate funding formula.

¹ Local Education Agency (LEA) Finance Survey Data, National Center for Education Statistics, are used to construct chart 1 and 2. LEAs associated with both charter and non-charter public schools, about 5% of all LEAs, are excluded in calculation. Both charts do not include states without charter schools.

The expenditure side of the story is more complicated. Statistics show that current expenditures per pupil in charters are around \$1,400 less than that of traditional public schools. This gap is almost entirely accounted for by differences in per pupil instruction expenditures, which includes teacher salaries and other instructional materials. Charter schools spend roughly the same as traditional public schools on support services covering costs from administration to health personnel. However, this spending difference could simply be a feature of the fact that charter schools are operated differently than traditional public schools, as they are less restricted by state legislations. They often offer a different range of grades and serve different groups of students. Charter advocates often argue that charter schools operate more efficiently than traditional public schools. On the other hand, hidden expenditures borne by local school districts, such as transportation, contribute to measurement complication. Besides issues mentioned above, recent studies also find some charter schools run by non-profit charter management organizations (CMO) spent substantially more than similar traditional public schools (Baker et al.,2012). The large variation of charter spending across the nation makes direct comparison of expenditures with traditional public school problematic.

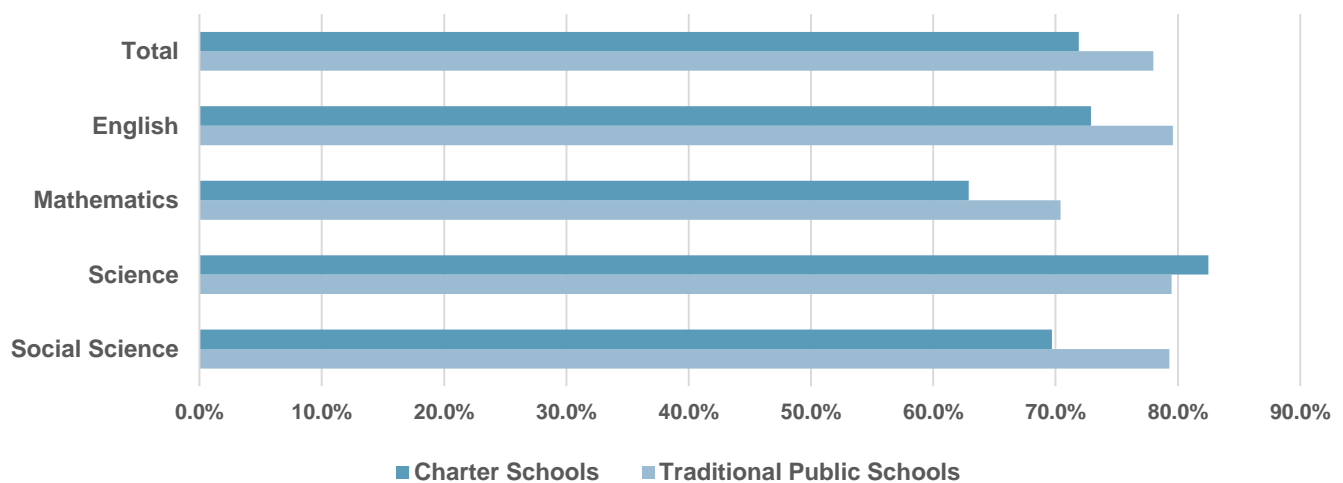
Chart 2. Revenue and Expenditure Per Pupil in 2011-12



Source: Local Education Agency (LEA) Finance Survey Data, NCES.

Teacher experience also helps to explain some of the difference between charter school and traditional public school district expenditures. A study of Michigan charter teachers shows that during 1999-2000, the average charter school teacher earned more than \$15,000 less than the average traditional public school teacher. Lack of experience and certification were found to explain two thirds of this salary difference. Teachers in charter schools tend to be considerably younger, with less experience, and from minority groups (Rui and Boe, 2012). A study of school year 2007-2008 finds charter teachers, on average, had about 7 years of total teaching experience, while traditional public school teachers average more than 13 years of experience (Cannata and Penaloza, 2012). Charter teachers are less likely to have majored in their main subject area than their peers in traditional public schools (Chart 3). Similarly, 73% charter teachers have teaching certifications compared to 84% of teachers in traditional public schools.² It is also quite likely that charter schools do not use collective bargaining with teachers.

Chart 3. Percentage of Teachers Majored in Their Main Assignments 2011-12



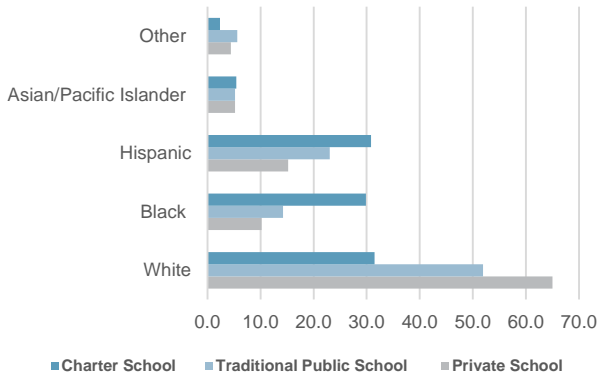
Source: NCES

A significant difference between charter schools and traditional public schools is the demographic composition of the students they serve. Students attending charter schools are more likely to be from socioeconomically disadvantaged backgrounds. Minorities are the majority in charter schools, where Hispanic and Black students compose over 60% of charter school population. Further, more students in charter schools have single parents than those in traditional public schools or private schools. Their parents tend to have lower education level than parents of non-charter schools students. Additionally, there is a higher poverty rate among charter school students.

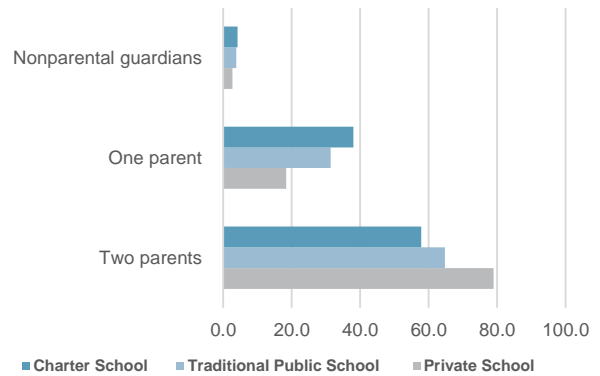
² The Schools and Staffing Survey 2011-2012, National Center for Education Statistics

Chart 4. Statistics of Charter Students 2011-2012

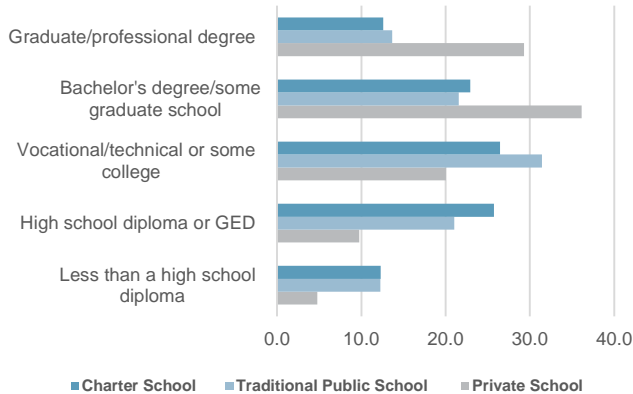
Percentage Distribution of Students by Race / Ethnicity



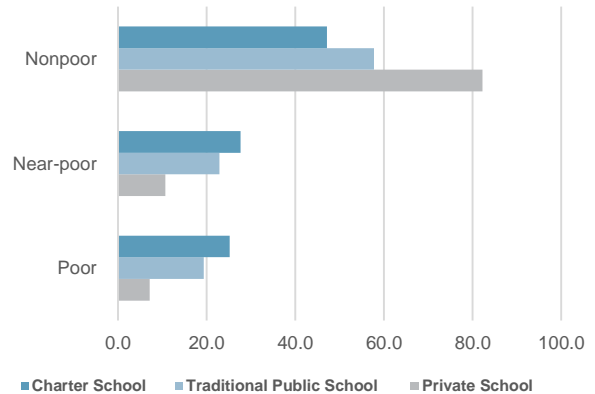
Percentage Distribution of Students by # of Parents



Percentage Distribution of Students by Parents Education Level



Percentage Distribution of Students by Poverty status

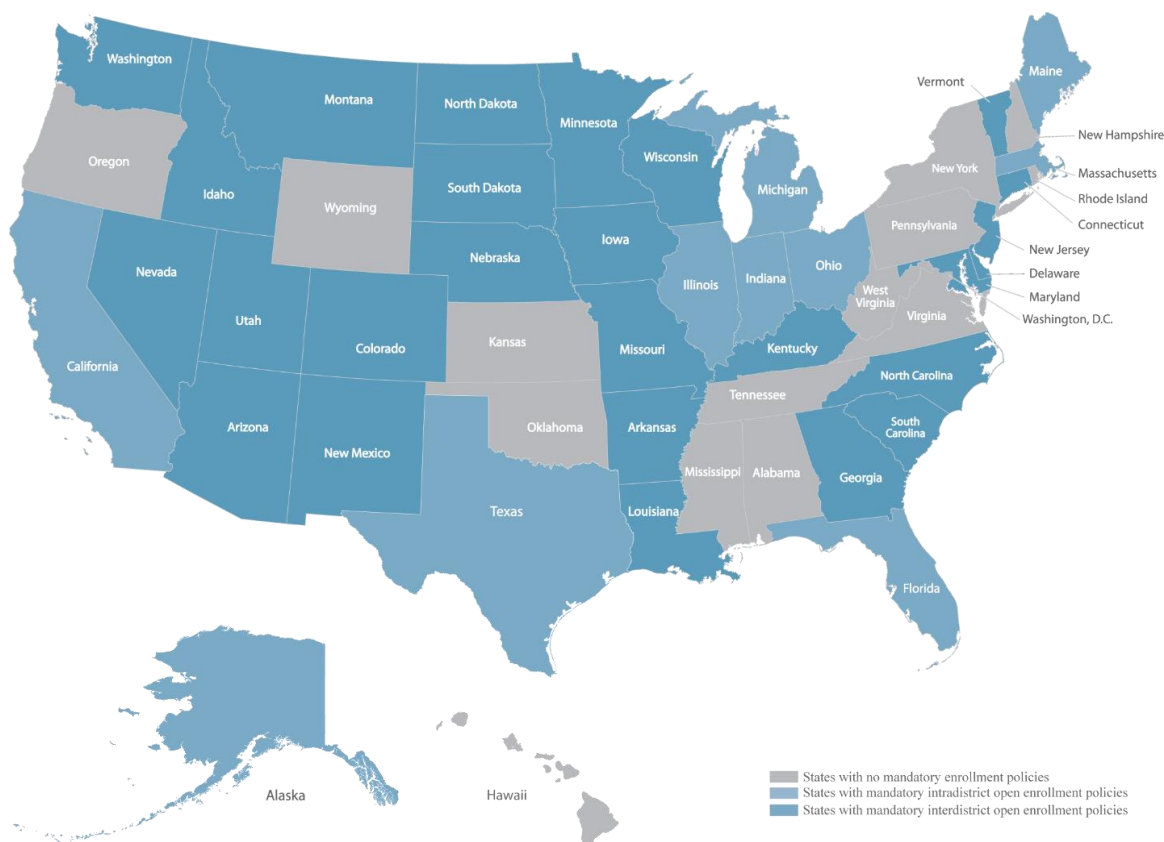


Source: NCES

Open Enrollment

Open Enrollment policies allow students to attend a public school other than the one to which they were assigned. While charter schools and private schools tend to dominate the public discourse on school choice, open enrollment is the most widely used school choice option nationally. Twenty-two states have passed “mandatory” inter-district open enrollment policies, which obligate public schools to accept students from other districts, while another 10 states have “mandatory” intra-district open enrollment policies, which enable students to transfer to another school within their home district (Map 2). Many states have also adopted voluntary open enrollment policies that allow districts to choose whether to participate in the program.

Map 2. State with Mandatory Intra/Inter District Open Enrollment Policies



Source: ECS

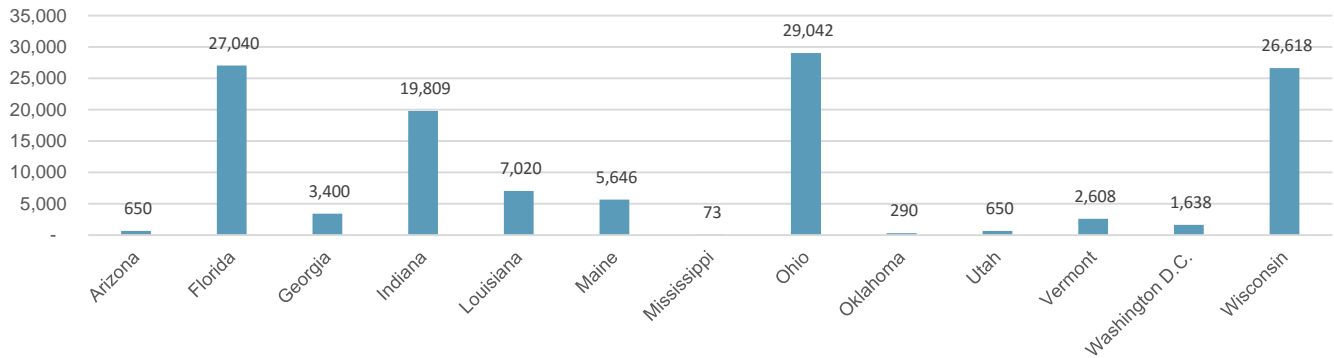
The defining feature that differentiates open enrollment policies is the procedure by which students are matched to schools. These procedures range from completely decentralized systems, in which principals and superintendents have total control over setting the number of open enrollment spots and the criteria by which they are filled, to highly centralized matching protocols such as the “Boston Mechanism,” which uses algorithmic mechanisms to optimally match students with schools.

Private School Vouchers

States with school voucher programs give students more options by allowing them to use public funding to enroll in private schools. Currently, 14 states and the District of Columbia have such programs (Map 3).³ Ohio, Wisconsin, Florida and Indiana are states with the most students using vouchers to enroll private schools (Chart 5).

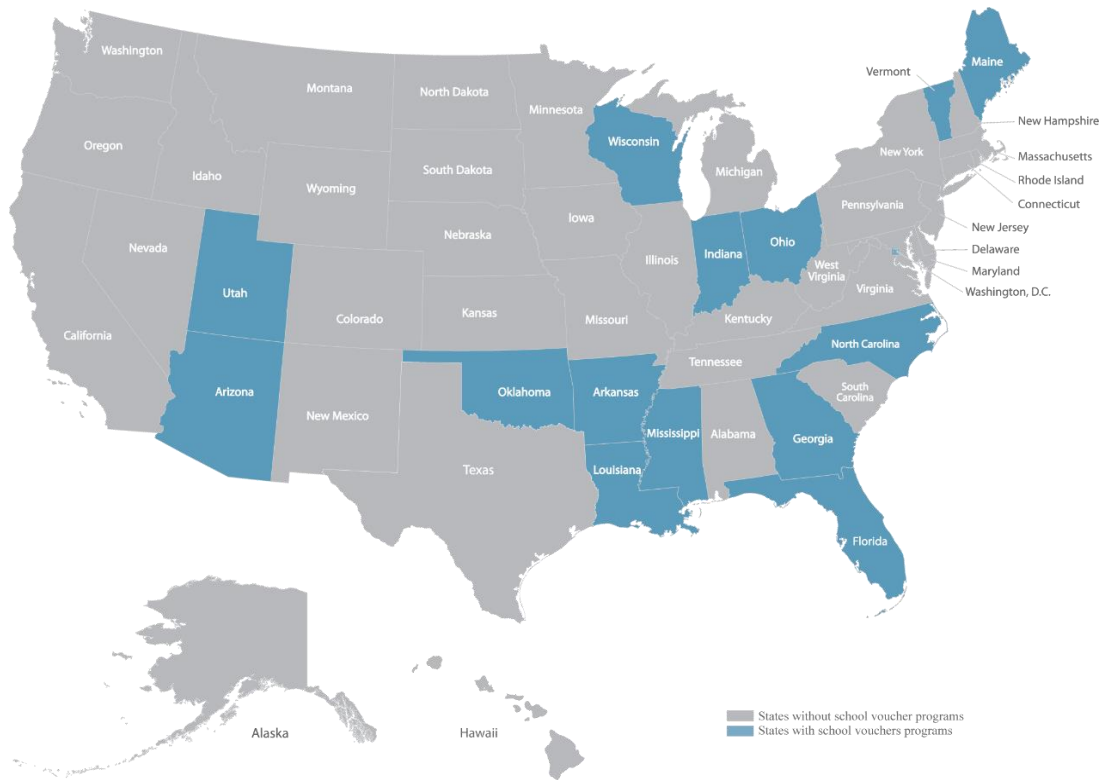
³ The state legislature of Arkansas passed House Bill 1552 regarding its school voucher program on April 2015. The program is expected to

Chart 5. Number of Students Enrolled Using School Vouchers 2013-2014



Source: ECS

Map 3. States with Voucher Programs



Source: National Conference of State Legislatures

help students with disabilities receive scholarship to private schools stating in year 2016-17.

States with voucher programs usually have specific requirements for voucher recipients (Table 1). Students with certain disabilities or those from low income families are eligible for vouchers in most states. Students living in a school district with failing public schools are also qualified for vouchers in Arizona, Indiana, Louisiana and Ohio. Most states require voucher recipients to have previously attended public school, with exceptions for D.C., Maine, Mississippi, Vermont and most of Wisconsin. This requirement is waived in cases of disabilities or special needs in Indiana and Louisiana.

Table 1. State Requirements for Students to Qualify for Voucher Programs

	Disabilities	Individual Education Plan	Poverty	Failing Public School	No Public School
Arizona	Yes			Yes	
D.C.			Yes		
Florida	Yes	Yes			
Georgia	Yes				
Indiana		With Poverty	Yes	Yes	
Louisiana	With IEP	With Disabilities	Yes	Yes	
Maine					Yes
Mississippi	Yes				
North Carolina		Yes	Yes		
Ohio	Yes	With Disabilities	Yes	Yes	
Oklahoma	Yes	With Disabilities			
Utah	With IEP	With Disabilities			
Vermont					Voters' Approval
Wisconsin			Yes		

Source: NCSL

Note: Disabilities, students with disabilities; Individual Education Plan (IEP), a legal document developed for public school children who need special education; Poverty, students living in low income family; Failing Public School, students living in a school district with public schools performing below government standards. No Public School, students living in a region with no access to public schools.

States also have requirements for private schools participating in voucher programs (Table 2). Private schools in most states are required to administer a state assessment to students with vouchers, and report academic performance to parents. Several states also require private school to have certain accreditation for financial stability or education quality. Most states do not cap the number of available vouchers each year except for Indiana, North Carolina, Ohio and Wisconsin. However, they do have caps on the maximum dollar value of each voucher. The majority of states issue vouchers worth at most as much as the average funding of public school students.

Table 2. State Requirements for Private Schools That Accept Vouchers

	State Assessment	Report to Parents	Financial Stability/ Quality Accredited	Others
Arizona	No			
D.C.	Yes	Yes		
Florida	If required by parents	Yes		
Georgia	If required by parents	Yes	Yes	
Indiana	Yes		Yes	Teacher Evaluation/Graded by State
Louisiana	Yes			Graded by State
Maine	Yes if over 60% students are voucher recipients			Non-Religious
Mississippi		Yes	Yes	
North Carolina	Yes	Yes		Report Student Data with 25+ Recipients
Ohio	Yes			Chartered Nonpublic School
Oklahoma		Yes	Yes	
Utah	Yes	Yes	Yes	
Vermont			Yes	
Wisconsin	Yes		Yes	No Rejection Unless No Space Available

Source: NCLS

Note: State Assessment, administering state assessment to voucher recipients; Report to Parents, reporting academic performance of voucher recipients to their parents; Financial Stability, providing evidence or certification of financial stability; Quality Accredited, providing accreditation of school quality.

What does economic analysis tell us about school choice?

For the last twenty years, economists have been putting the theoretical implications of school choice to the test by working to identify the various effects of school choice, including its impact on educational outcomes, school finances and efficiency, and housing values. This work has primarily focused on three of the four school choice options: charter schools, voucher programs, and open enrollment.

The Competitive Effect of School Choice

A central argument for increased school choice revolves around the theoretical expectation that increasing competition for funding and students will increase the efficiency and effectiveness of traditional public schools, raising the quality of education for all students, including those that remain in traditional public schools.

Much of the research on the competitive effects of school choice has focused on Michigan. Michigan offers a unique opportunity to explore this question. Michigan introduced charter schools in 1993, and by 2006 had the third largest charter school enrollment in the country. Shortly thereafter, school funding in Michigan was reformed, centralizing funding at the state level and restricting local voters from increasing taxes to support local school operations. Thus, district and charter school operating revenues are almost exclusively dependent on the number of students enrolled, offering a unique and highly competitive context for evaluating the effects of increasing competition.

The results of this research have been mixed. Hoxby (2003) controls for each school's baseline productivity and pre-existing trends and finds that public schools increased their achievement in response to charter school competition. Yet, one of the drawbacks of this approach is that it does not control for variables that can change over time as a result of charter school competition that might be correlated with levels of achievement, such as the composition of students at charter and public schools. Bettinger (2005) focuses on the effect of new charter schools in Michigan, controlling for changes in student composition over time. He finds that after charters were introduced in Michigan, new charter school students scored on average lower than students in neighboring public schools. This fact could bias estimates by mechanically increasing the average test scores in public schools as lower performing students transfer to charter schools. Accounting for the changing composition of students in public schools over the period of analysis, Bettinger finds no significant effect of charter schools on test scores.

Arsen and Ni (2012) raise questions about Hoxby's findings by highlighting the fact that we still do not have a clear understanding of the mechanisms that drive improvements in productivity within a district. If school choice does in fact improve the quality of the public schools with which they compete, what changes are actually taking place within the public schools to improve quality?

Arsen and Ni explore the effect of competition on key areas of district expenditures. They are unable to identify significant effects on the allocation of resources to basic instruction arising from an increase in charter competition, although they do find significant increases in instructional spending as inter-district competition rises. Generally, they find that the allocation of resources within a district remain largely unchanged even after years of competition from charters. They also find that district fund balances are significantly negatively impacted by competition from charter schools, as revenues fall faster than savings are achieved, creating greater fiscal distress in public school districts subject to high levels of charter competition.

School Choice and Educational Outcomes

Proponents of school choice often argue that giving families and students more options will allow them to select the highest quality school that meets their individual preferences. When we observe students who have increased options selecting to attend charter schools or private schools, theory would lead us to conclude that these schools are of higher quality than the public school alternative, and that we should, in turn, observe improved educational outcomes for students attending charters and private schools.

Dozens of studies have looked at the effect of school choice on educational outcomes, yet we still have little conclusive evidence showing the casual effect of increased school choice on student achievement. Betts and Tang (2012) conducted a meta-analysis of twenty-five papers examining the effect of charter schools on student achievement. They find that charter schools outperform or perform about as well as traditional public schools in elementary school math and reading, and middle school math. The analysis finds little or no overall significant effect of charter schools at the high school level.

The studies considered by Betts and Tang seek to identify the average effect on educational outcomes on attending charter schools versus traditional public schools. They find a wide variation in estimates of these effect, some negative, and some positive, which on average show little significant effect. Understanding this variation can help to shed additional light on the question of school choice on educational outcomes.

There could be several potential sources for this variation on the effect of school choice on educational outcomes. First, there might be great variation in the quality of charter schools, with some significantly outperforming traditional public schools, and some significantly underperforming public schools. Angrist et al. (2013) explore this heterogeneity by analyzing the relationship between charter school characteristics and student performance in Massachusetts. They found that the most significant factor differentiating overperforming and underperforming middle and high school charter schools is the adherence of overperforming charters to the No Excuses instructional approach which emphasizes strict discipline, uniforms, college preparation, tutoring programs, the use of Teach for America alumni, and rigorous teacher evaluation and instruction.

A second source of variation arises from the possibility that school choice options might affect different types of students in different ways. Peterson et al. (2003) evaluate the effect of randomized private school voucher programs in New York City, Washington, D.C. and Dayton, Ohio. In all three cities, they found that the positive and significant effects of switching from a public school to a private school was limited to Black students, while switching had no discernable effects on students from other racial groups. Betts and Tang and Angrist et al. came to similar conclusions, finding that the effects of charter schools were most pronounced in urban areas with large Black populations. These findings support the theoretical conclusion that school choice programs can have significant impact on low income families that face housing constraints and are unable to move to access better quality schools, but have little effect on families and students that are able to select a public school through their residential location decision.

The effect of school choice on housing values

One of the most overlooked implications of school choice policy is the effect that it has on decoupling the relationship between housing and schools. Under the traditional public education system in which access to schools are defined by geographic boundaries, households with a strong preference for school quality can incorporate school choice into their residential choice decision. While the traditional system does offer choice, the breadth of a household's choice set is constrained by its income and its ability obtain housing in a particular area. As a result, school quality and housing values can be strongly linked, an insight that has been well documented in the economics literature (see Black & Machin, 2011 for an overview).

Vouchers, charter schools, and open enrollment all expand a household's school choice set by adding options that are either independent of geography or only loosely determined by it. Expanding choice will not only effect which school a student chooses to attend, but will also change where households choose to reside. This can result in significant spillover effects, especially on housing values. In areas where schools receive the majority of their revenue from local property taxes—like in Ohio—these effects can impact school finances in unexpected ways.

Nechyba (2003) explores the effects on housing from introducing of private school vouchers by simulating the location decisions of households in a metropolitan area. The analysis finds that when private school vouchers are introduced in targeted areas, the policy can have a significant effect on the location decisions of households. The model predicts that if voucher eligibility is targeted in low income areas with low housing costs and poor school quality, middle income households with strong preferences for education will move into the lower income areas from areas with high housing costs to take advantage of lower housing costs, while using vouchers to send their children to private schools. Thus, one implication of school choice policy is that under certain policy structures, it has the potential to reduce income segregation that arises from capitalization of school quality into housing values.

Reback (2005) tests these results empirically, looking at the effect of the introduction of a mandatory open enrollment policy in Minnesota. He finds that the introduction of this policy had a large and significant effect on housing prices. He finds that a 1 percent increase in the rate of students transferring out of a district after the policy was introduced resulted in a 1.7 percent increase in housing values, while a 1 percent increase in the rate of students transferring into a district reduced housing values by about 1 percent.

Considering the interrelationship between school choice and housing is critical when crafting policy. School choice policies can affect welfare and the growth and development of communities in ways that extend beyond the classroom, resulting in a redistribution of wealth and households across communities. In some cases, these welfare effects might be desirable, but in other cases, the effects may be undesirable and irreversible, and thus should not be overlooked or taken lightly.

The interrelationship between school choice and housing can also impact the behavior of school districts facing school choice. Reback finds that districts that experience a moderate rate of out-

transfer may have the revenue losses offset by the additional revenue generated by increased housing values. He estimates that this offset could be as high as 50 percent of the cost of losing a student, greatly decreasing the “penalty” that school choice policies can seek to exact for poor school performance. This effect could potentially suppress some of the competitive effects of school choice, especially in areas where public schools are largely funded by local property taxes, but lessen the negative financial aspect that could create a downward funding cycle.

School Choice in Ohio

Since the late 1990s Ohio has aggressively built a robust school choice system, which today serves more than 350,000 students and accounts for well over \$1.5 billion on education spending (ODE-2015⁴). This analysis will focus on charter schools, private school vouchers, and open enrollment. These programs account for about two-thirds of school choice utilization, have the greatest effect on school finances, and receive the greatest public attention. Yet, it should be noted that more than 130,000 Ohio students utilize school choice programs beyond the scope of this analysis, including career technical education through joint vocational schools, and high school-college dual enrollment programs.

Community Schools

In 1997, Ohio passed legislation establishing a system of public charter schools, which have come to be known as Community Schools. The charter school sector has grown rapidly in the state. In 2014 – 2015, more than 120,000 students were enrolled in charter schools, accounting for more than \$1 billion in education spending (ODE-2015).

Charter schools are public, non-sectarian schools that receive public funding and function as a system within the broader public education systems. Charter schools are designed to be granted greater flexibility and autonomy than traditional public schools, but Ohio charter schools are required to fulfill the same testing requirements as traditional public schools, and are subjected to the same accountability grading system.

Currently, the state earmarks state spending on education at a per-pupil funding level of \$5,800. State aid is distributed to districts based on economic need by multiplying \$5,800 by a State Share Index to determine the foundation of per pupil state aid. This index is based on the economic conditions of the district, and ranges from 5 percent (\$290 per pupil) to 90 percent (\$5,220 per pupil), with the average district receiving about fifty percent of the \$5,800 per pupil earmark (ODE-2015). Districts receive

⁴ Ohio Department of Education FY2015 Foundation Funding Report Final #1

additional funding based on students attending joint vocational programs, and students with special needs. This funding is also calibrated based on the State Share Index.

Charter schools receive state funding on a per pupil basis, which is passed through the student's home district. Charters are granted the full \$5,800 per student, plus any additional state aid attached to the student due to special needs. Since the average district receives only half of that amount in state aid, districts are required to make up the difference using local tax revenues. In 2014 – 2015, we estimate that at a minimum, \$286 million of the nearly \$1 billion in charter school spending was paid for by local tax revenues (ODE-2015).⁵ Additionally, public schools are required to provide transportation to the charter schools their students attend if they fall within a 30-minute drive. Given that public schools already face more government mandates, there is potential for charter schools to have a noteworthy financial advantage on public schools. This funding system has generated great controversy, but charter school advocates say it is necessary given that charter schools do not have the taxing authority to raise local funds on their own.

The structure of Ohio's charter schools is often composed of two entities. First, charter schools are established and operated by a sponsor authorized by the state. Eligible sponsors include local public school districts, an educational service center, designated state universities, or qualified non-profit entities. Sponsors establish the governing structure of the charter school, ensuring that the school meets the state's academic, financial, and operational standards, serving as entity analogues to a local school board.

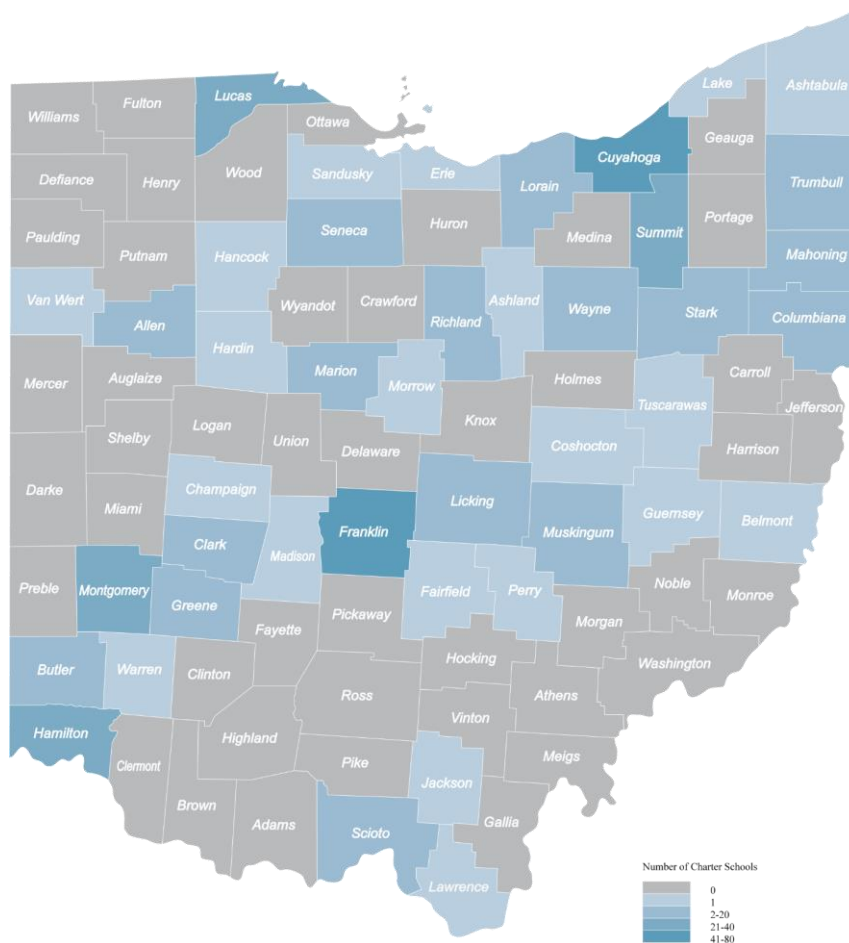
The second entity is responsible for the operation of the charter school. This entity takes two different forms. In 2011, half of all charter schools were managed by large management organizations which are contracted by charter sponsors to manage the operations of the school. These organizations typically function in many states, and along with managing day-to-day operations of the charter schools they serve, they seek to achieve economies of scale by centralizing certain operational activities such as accounting, human resources, and curriculum development. 20 percent of charter schools were managed by non-profit "charter management organizations" (CMOs), such as the nationally recognized KIPP, Uncommon Schools, and Achievement First. As non-profit organizations, CMOs can leverage additional philanthropic resources to support the schools they manage, and some charters managed by CMO's have levels of per-pupil spending far exceeding their traditional public school counterparts. Thirty percent of charters were managed by for-profit "education management organizations" (EMOs).⁶ Because CMOs and EMOs are private entities, they are not subject to the same level of scrutiny as public school administrators. Little public information is available about the functioning of these organizations, and the Ohio Department of Education does not make information on the management arrangement of Ohio charter schools readily available. The remaining half of Ohio charter schools in 2011 were freestanding organizations in which the sponsor makes the direct decisions on the staff hired to manage the operations of the charter school.

⁵ # of students from district attending charter schools * \$5,800 * (1 – State Share Index)

⁶ <http://www.publiccharters.org/dashboard/schools/page/mgmt/state/OH/year/2011>

Charter schools in Ohio can be created by establishing a new, start-up school or by converting an existing public school into a charter. The state regulates where start-up charters can be established, limiting them to the “Big Eight” urban public school districts and districts designated as challenged district. Start-up charters account for 82 percent of active charter schools in Ohio. Conversion charter schools can be established in any public school district in the state, and account for the remaining 18 percent of charter schools. These regulations have affected the geographic distribution of charter schools across the state. Eighty-eight percent of brick and mortar charter schools are located in urban districts, 2 percent are located in suburban districts, and 10 percent are located in rural districts.⁷

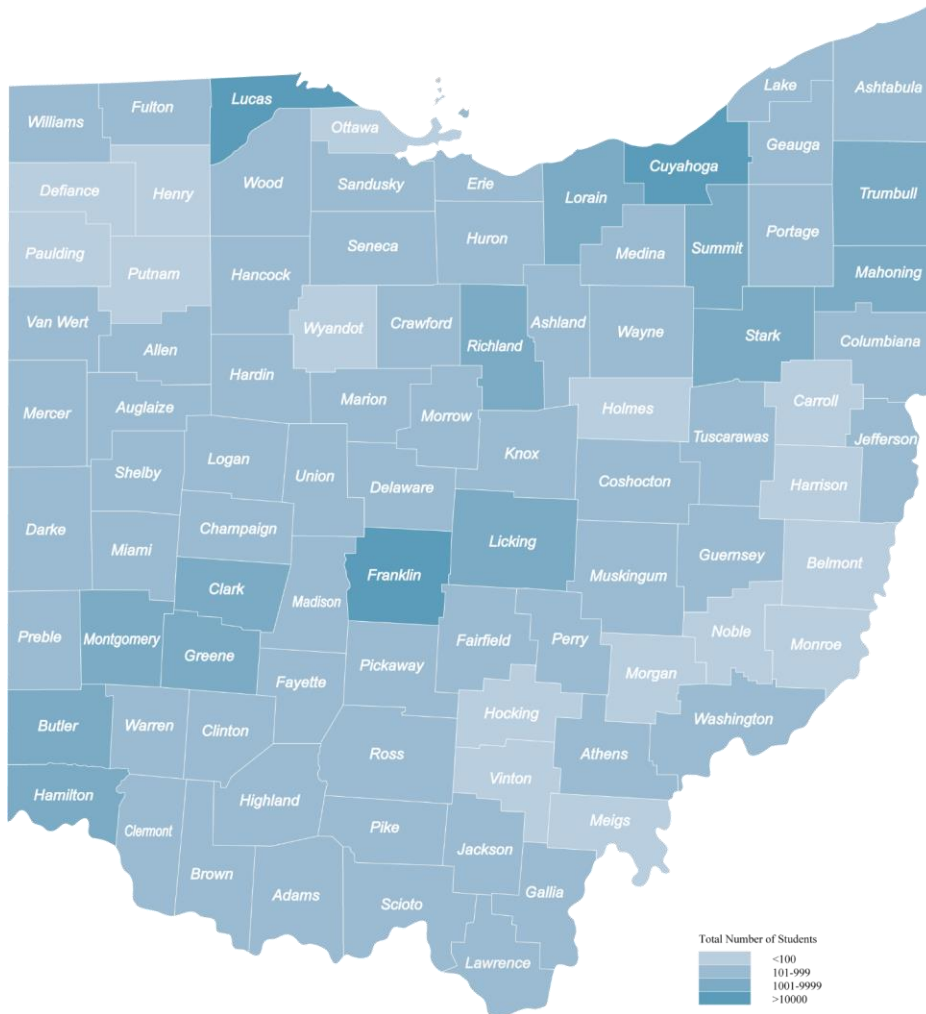
Map 4. Brick & Mortar Charter School Density: 2015



Source: ODE

⁷ The Ohio Department of Education defines districts based on seven types: (1) Rural - High Student Poverty, (2) Rural - Average Student Poverty, (3) Small Town - Low Student Poverty, (4) Small Town - High Student Poverty, (5) Suburban - Low Student Poverty, (6) Suburban - Very Low Student Poverty, (7) Urban - High Student Poverty, & (8) Urban - Very High Student Poverty. For this analysis, types 1 – 4 are combined and designated as rural, types 5 – 6 are combined and designated as suburban, and types 7 – 8 are combined and designated as urban.

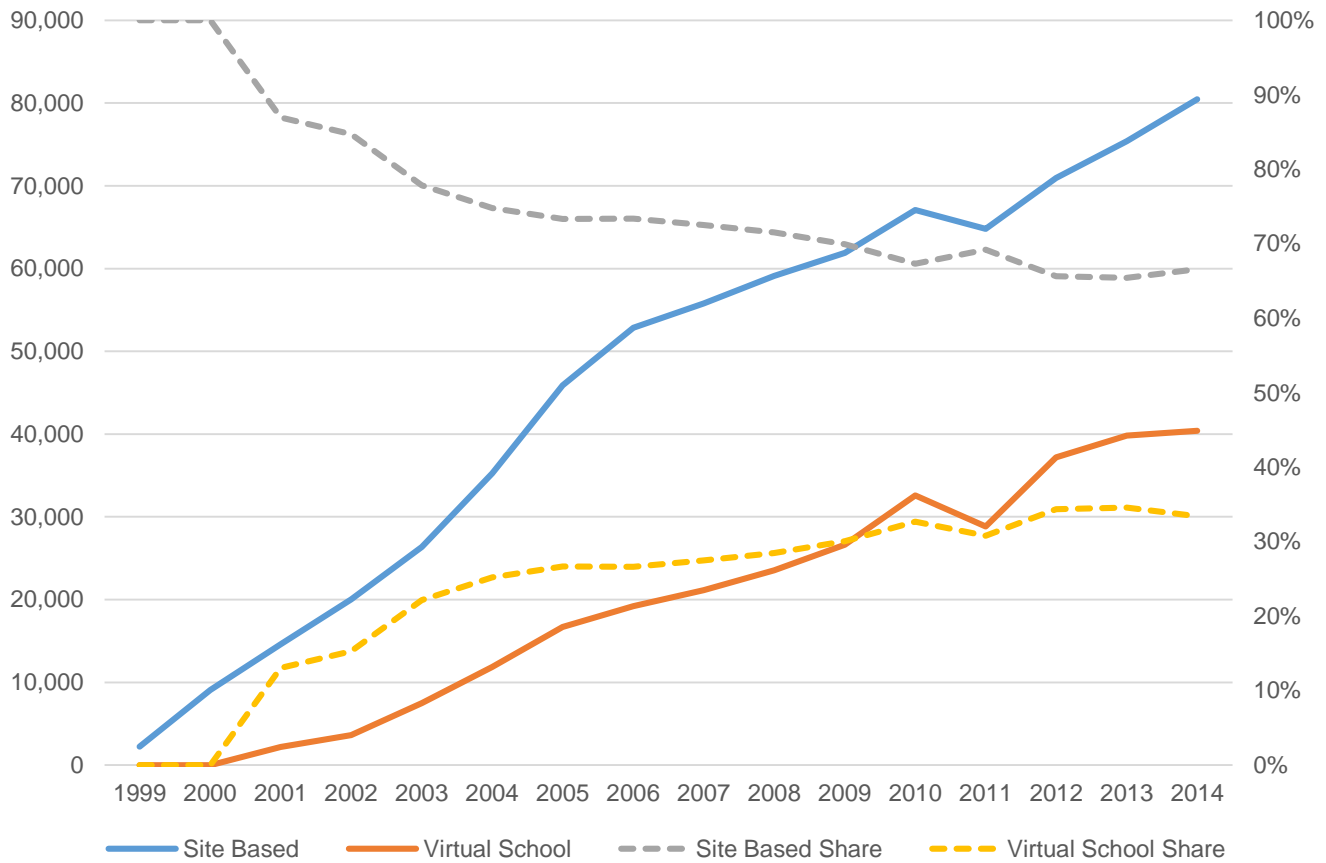
Map 5. Charter School Enrollment: 2014 - 2015



Source: ODE

Brick and mortar charters account for the majority of charter school enrollment, but in recent years online public charter schools, or e-schools, have rapidly increased their share of the charter school market. The first e-schools opened in Ohio in 2000, enrolling just over 2,000 students. In 2014 - 2015, e-schools enrolled just under 40,000 students, accounting for more than 30 percent of total charter school enrollment in Ohio.

Chart 6. Brick & Mortar and E-school Enrollment



Source: ODE

Given the constraints the state has placed on the creation of brick and mortar charter schools, e-schools have become the primary charter school option for students living in rural and suburban areas. Suburban and rural students make up just under 12 percent of the brick and mortar charter school enrollment population, but account for nearly 60 percent of the e-school enrollment population.

Table 3. Charter School Location & Enrollment by District Type

	Locations of Brick & Mortar Charter Schools*	Total Charter Enrollment	Brick & Mortar Charter School Enrollment	E-School Enrollment
Urban	88.3%	73.3%	88.2%	41.5%
Suburban	2.3%	10.9%	6.2%	21.1%
Rural	9.5%	15.8%	5.6%	37.4%

Enrollment numbers from 2014 – 2015 school year. Charter school locations as of November, 2015.
*349 brick & mortar charter schools

Source: ODE

As the charter school system has grown, so has scrutiny of the system. A report from the Center for Research on Education Outcomes at Stanford University (CREDO, 2013) evaluating the performance of charter schools in Ohio from 2007 – 2008 to 2012 – 2013 found that the typical charter school student had learned less in a year compared to his or her traditional school peers. Using student level data and controlling for the demographic and socio-economic characteristics of the students, the study found that the difference amounts to just over 14 fewer days per year of learning in reading and 43 fewer days per year of learning in math. Looking at the average effect hides the great heterogeneity within the Ohio charter school system. Black students in poverty attending charter schools were found to significantly exceed the performance of black students in poverty that did not attend charter schools. Charter school students in Cleveland outperformed their public school peers, on average, while students attending charters in Cincinnati, Dayton, and Columbus were at best on par with, and often lagged their public school counterparts. The study also found success among charter middle school students, who on average outperformed their traditional school peers, while elementary school students performed equally well, students at charter high schools and mixed grade schools significantly underperformed their public school peers. Of greatest concern, the report found that over 40 percent of Ohio’s charter schools had smaller student academic gains and lower levels of overall achievement than their public school counterparts.

CREDO’s (2015) most recent analysis focuses on e-schools. It found that the typical Ohio e-school student not only underperforms compared to traditional public school peers, but also underperforms compared to peers at brick and mortar charters. This finding was similar to a recent report from the Ohio Educational Resource Center (OERC, 2015) which found that students experienced a significant drop in performance after transferring to an e-school. Performing a multi-year analysis, the study

found that performance did improve gradually over time while enrolled at an e-school, but never compensated for the large initial drop. Students who attended both brick and mortar schools and e-schools were found to have the most significant drop in performance.

The difficulty charter schools have had in achieving comparable results with traditional public schools can be observed in the rapid turnover of charter schools. Since the first charter schools were opened in Ohio in 1998, 178 charter schools have opened and closed, nearly half of which were either ordered closed or were forced by law due to a variety of reasons including academic non-compliance, financial viability, non-compliance with charter school regulation, or the inability to obtain a sponsor. Of the charter schools that closed, the average lifespan was about five years, and the average enrollment at the time of closing was 115 students. In recent years, the state has strengthened and clarified the process for addressing and closing failing charter schools.

The rapid growth of the charter school sector and its implications for the distribution of public education funds has been associated with growing campaign contributions being made to state legislatures by charter school operators and traditional public school interest groups. Since 1998, two of the largest charter school operators in Ohio have contributed about \$6.5 million to Ohio lawmakers (The Ohio Charter School Accountability Project). During that same period, the Ohio Education Association—the Ohio teachers' union—and public school teachers, administrators & officials contributed just over \$1 million to state lawmakers, although contributions from this group from 2010-2014 have nearly tripled compared 2004 - 2009 (National Institute on Money in State Politics). Not surprisingly, the relative explosion of contributions from the charter school industry has alarmed some that they are trying to garner favorable treatment from legislators.

Private School Voucher Program

Ohio's first private school voucher program was launched in 1996 as a pilot program in the Cleveland Metropolitan School District. It was the first private school voucher program in the US to allow religiously affiliated private schools to accept vouchers, sparking a lawsuit questioning the constitutionality of the law which was eventually heard by the U.S. Supreme Court. The court ruled in the state's favor, and opened up the door for nearly 20 years of private school voucher expansion in Ohio and across the country.

Ohio provides private school voucher through five programs. The largest of the state's vouchers programs is the EdChoice program, established in 2006. This program provides vouchers to students who would otherwise be assigned to attend a "challenged school" as designated by the Ohio Department of Education. EduChoice vouchers are worth up to \$4,250 for grades K-8, and \$5,000 for grades 9 – 12. The voucher payment is made as a transfer from a student's home district. As is the case with charter school funding, this means that for some districts, a portion of the voucher payment is paid for with state aid, and a portion is paid for with local revenue. Private schools must accept the

voucher as full tuition for students at or below 200 percent of the federal poverty line, but may charge additional tuition and fees to students that exceed the 200 percent benchmark.

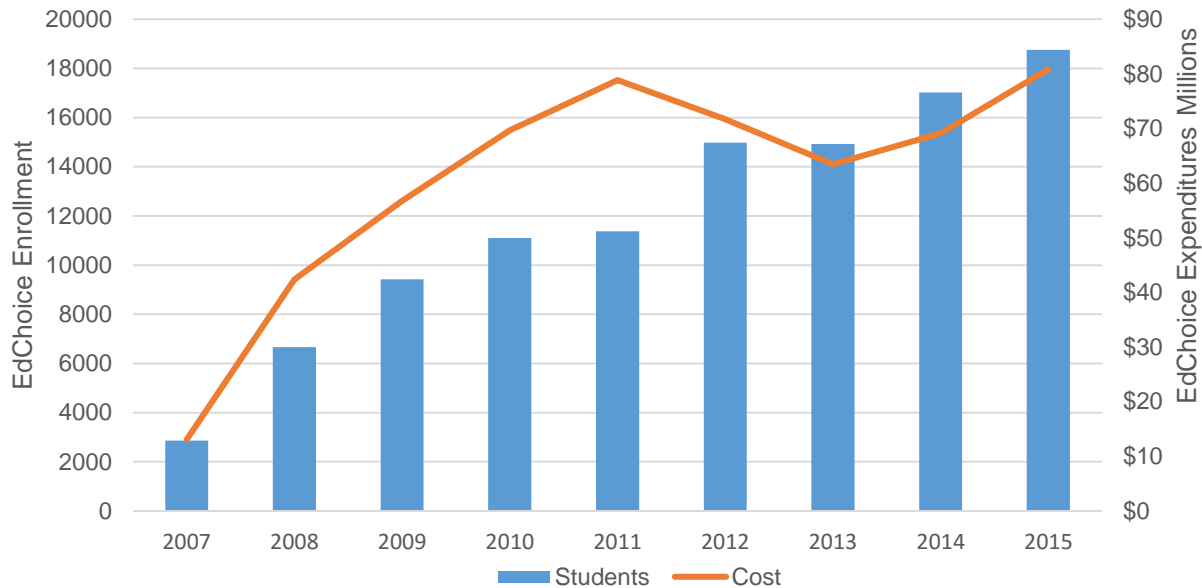
For the 2015 – 2016 school year, nearly 120,000 students attending 255 schools were eligible for EdChoice vouchers (ODE). There is large variation in the utilization of the program across the state. The Cincinnati City Schools had the highest total number of students utilizing EdChoice vouchers in 2014, even though the Columbus City Schools had nearly twice as many eligible students. Utilization rates were highest in two smaller districts, Youngstown City Schools and Springfield City Schools, where more than 20 percent of students eligible for EdChoice used a voucher. 476 private schools are approved to accept EdChoice vouchers. During the 2013 – 2014 school year, EdChoice vouchers were used at 285 private schools. Students who use EdChoice vouchers tend to be younger, with average per-grade enrollment for grades K-8 double that of grades 9 through 12. In 2014, more than half of students using EdChoice vouchers had been participating in the EdChoice program for more than three years.

While private schools are exempt from many regulations and requirements governing public schools, accepting EdChoice vouchers does require private schools to administer the Ohio Achievement Assessment (OAA) tests for grades 3 – 8 to all students using EdChoice vouchers. In the case that a private school's enrollment is composed of more than sixty-five percent of students using EdChoice vouchers, the school must administer the OAA tests to all students. High school students using EdChoice vouchers are required to meet all of the graduation requirements defined for public school students.

In 2013, the state expanded the EdChoice program by opening it to any "low- income" students entering kindergarten, first-grade, or second-grade. Vouchers are valued on a sliding scale based on incomes up to 400 percent of the federal poverty level, or \$97,000 for a family of four in 2015 – 2016.

Growth in the EdChoice program has been rapid since its launch in 2006. In its initial year, 2,800 students used EdChoice vouchers. During the 2014 – 2015 school year, more than 18,751 students used EdChoice vouchers, a more than 500% increase in utilization in less than ten years. The cost of the EdChoice program has increased at a similar rate, rising from just of \$13 million in 2007 to over \$80 million in 2015.

Chart 7. EdChoice Enrollment & Expenditures



Source: ODE

Along with EdChoice, Ohio offers two additional voucher programs for students with autism and disabilities to receive private education services, including private schooling. Cleveland Metropolitan School District continues to operate the original Cleveland Scholarship Program separately from the statewide EdChoice program. In 2014 - 2015, total spending on voucher programs in Ohio totaled over \$177 million.

Open Enrollment

Open enrollment is the oldest school choice program in Ohio. In 2014 – 2015, more than 71,000 students attended a public school in a district other than the one to which they were assigned, resulting in a transfer of more than \$400 million between districts.

Districts are permitted to determine the degree of their participation in open enrollment. Just over 80 percent of districts participate in some form of open enrollment, either allowing students from just neighboring districts or students from any district to enroll. There is great variation in participation across different areas of the state. Nearly all rural area districts participate in some form of open enrollment, while just a third of suburban districts participate, and just over half of urban districts participate.

Table 4. District Participation Rates in Inter-District Open Enrollment: 2015

	No Open Enrollment	Open Enrollment: Only Neighboring Districts	Open Enrollment: All Districts
All Districts	19%	8%	73%
Urban Districts	41.8%	1.8%	56.4%
Suburban Districts	66.4%	4.9%	28.7%
Rural Districts	2.6%	9.8%	87.6%

615 total districts

Source: ODE

The process of open enrollment is controlled and determined by the local school district. Districts set the number of open enrollment slots, the schedule for applying, the application process, and the criteria used to select applicants. Funding is transferred between districts on a per pupil basis based on the \$5,800 state foundation funding amount. Since all districts receive less than the \$5,800 per pupil amount in state aid, a portion of the open enrollment transfer must be paid for with the local revenues of the district the student is leaving.

This funding structure has raised concerns from districts that lose a substantial number of students, but it has also become a contentious issue for receiving districts. While receiving \$5,800 per incoming open enrollment student is more than the per pupil aid a district receives from the state, it is usually less than the total per pupil spending for a district, the difference of which must be made up by the local revenues in the receiving district. Thus, taxpayers in districts with substantial levels of incoming students have also raised concern that their tax dollars are subsidizing the cost of lower performing districts that are losing students through open enrollment. Even with this arrangement, districts can have an incentive to attract students through open enrollment if it allows them maximize efficiency by spreading fixed costs across a broader population of students.

Concern has been raised about the effects of school choice on equality within the broader school system. In 2014, the *Akron Beacon Journal* conducted a study of 8,000 Ohio students who left city school districts to attend schools in wealthier suburban districts through open enrollment. It found that students were disproportionately white and middle class, while the students attending the schools

they left behind were largely minority and poor.⁸ This is a significant difference when compared to charter school participation, which is dominated by lower income minorities.

While the dynamic between urban and suburban schools tend to get the most attention, open enrollment policies most significantly impact rural areas. In 2014 – 2015, 46,000 rural students participated in open enrollment, more than double the number of students from suburban and urban districts combined. Rural students tended to attend other rural districts, and overall rural districts gained more than 10,000 students through open enrollment in 2014 – 2015.

Table 5. Open Enrollment by District Type: 2014 - 2015

	Outgoing Total	Share of student Population	Incoming Total	Share of student Population	Net Gain(Loss)
Rural	46,270	7.2%	56,807	8.9%	10,537
Suburban	7,279	1.3%	5,687	1.0%	(1,592)
Urban	17,764	3.5%	8,371	1.7%	(9,393)

Source: ODE

Conclusion & Policy Discussion

Ohio has developed a robust school choice program infrastructure, and given the rapid growth in the utilization of these programs, these policies are clearly satisfying the demand for choice from families and students. In 2014, more than 350,000 students utilized a school choice program, including one-in-four urban students.

This policy brief has focused on the three largest school choice programs, but there are other programs beyond the scope of this discussion that expand the choice set for parents and students, including the state’s dual college-high school enrollment program “College Credit Plus,” and career technical education at joint vocational schools.

We have focused on vouchers, charter schools, and open enrollment because they have a significant impact on school finance, they are typically the focus of school choice debates, their complexities make them prone to be misunderstood, and because they are well explored topics by the economics literature. Together, these programs accounted for more than \$1.5 billion in state education spending, in 2014 – 2015.

⁸ <http://www.ohio.com/news/local/open-enrollment-in-ohio-schools-leads-to-racial-economic-segregation-in-akron-and-elsewhere->

It appears likely that school choice will continue to grow and play an even larger role in the state education system, and as it grows, policymakers will be required to continually return to the structure of the policies to insure that they are achieving societal goals. This process has been observed clearly in the last year, as the growth of the charter school system has forced policymakers to reform the system in an effort to improve outcomes and reduce waste. Likewise, it is apparent that arguments that increasing choice and “competition” by itself were too simplistic, and more holistic approaches to choice are necessary, including evaluating effects on long-term funding of traditional K-12 education.

It is important to recognize that the realization of school choice policies at any given time will reflect the priorities of the policymakers and administrators that set the structure and implementation of the programs. These priorities might include improving outcomes in the education system, increasing the competition and efficiency of the education system, or simply increasing the choices families and students have when making schooling decisions. As these priorities change over time, we will likely see the school choice system evolve. Economists tend to focus outcomes and efficiency when evaluating policy, and that will be the lens through which we will offer this concluding policy discussion.

Geography matters in the landscape of school choice

As we’ve noted above, school choice policies vary greatly across geographies. Some of this variation is by design, such as restrictions on charter school start-ups and targeting the voucher program to students in challenged districts. This geographic variation also reflects the interplay between choosing public schools by choosing a place of residence, and the availability of other choice options.

Table 6. 2014 – 2015 School Choice Utilization

	Urban	Suburban	Rural
Charter Schools	89,673 (17.7%)	13,357 (2.4%)	19,271 (3.0%)
Vouchers	20,851 (4.1%)	2,788 (0.5%)	1,631 (0.3%)
Open Enrollment	17,764 (3.5%)	7,279 (1.3%)	46,270 (7.2%)
Total	128,288 (25.3%)	23,425 (4.1%)	67,173 (10.5%)

(%) – percentage of given student population utilizing school choice option

Source: ODE

Not surprisingly, school choice policies primarily impact urban students, with more than 25% of students from urban districts utilizing some form of school choice in 2014 – 2015. Although rural areas are not typically included in the school choice discourse, more than 10% of the rural student population utilize school choice policy, more than twice the rate of suburban students. These usage rates confirm that traditional public schools serve as the choice option for suburban households that make their choice through their residential decision rather than through sending their children to different schools.

As we've noted, the long standing link between property values and school quality adds an additional spatial component to considering school choice policies. Evidence suggests that policies that break this link can have significant effects on the distribution of wealth, and geographic segregation. Some of these byproducts of school choice policies might be desirable to policymakers, and thus policy might want to be structured in a way that maximizes such virtuous effects. Conversely, some of these effects might be undesirable and irreversible, which should motivate a thorough investigation into the secondary effects of school choice policies.

The geographic implications of school choice should be part of the policy discussion. Special attention should be paid to school choice in rural areas. Despite the fact that access to charter schools and private school vouchers are most limited in rural areas, utilization of open enrollment is significant. Further study should be devoted to determining if open enrollment is the optimal policy for providing choice in rural areas, or whether other policies should be developed or expanded to serve rural populations.

Adopt an evidence based approach to charter school authorization

There is a clear recognition that Ohio must improve the performance and stability of its charter school system. The state has already taken some meaningful steps to improve charter school accountability and to reduce loopholes in the system that allow for rent-seeking and more inefficiency. Yet more changes are likely needed.

A valuable step the state can take is to use an evidence based approach to improve the process of authorizing charter schools. As we have discussed, several decades of charter school experience across the country has allowed for countless studies evaluating the effectiveness of charter schools on improving outcomes. While these studies have not been conclusive, there are several instances in which studies have consistently found charter schools improve the outcomes of students:

- On average, charter schools have been found to have significant effect on improving outcomes for younger students at the elementary and middle school levels. At best, charter high schools

tend to perform as well as their public school counterparts, and often underperform in comparison.

- Charter schools produce the largest improvements for low income students. These students tend to have the fewest options in regards to their ability to access better schools by moving. There is very little evidence suggesting that charter schools benefit middle or high income students, as it is likely that these households have already made a school choice by choosing a residence with good public schools, thus the average effect of transferring to a charter school is marginal. In these cases, charter schools could be damaging if it puts public funding under pressure.
- Not all charter schools are created equal. While the charter system offers greater flexibility in the delivery of education, this results in large heterogeneity in performance among charter schools. More research is needed to determine the most successful charter models, although several studies have found an association between schools that use the “No Excuses” model and levels student improvement that exceed traditional public schools (Baude, 2014; Angrist et al., 2013). Yet, Ohio needs to make further strides in weeding out models that are simply not working.

Evidence would suggest that prioritizing the authorization of charter schools that are designed around these proven factors could help to improve the overall performance of charter schools in the state and reduce the turnover of charters resulting from academic failure.

Reassess the school choice funding mechanisms

The system for funding education in Ohio has long been a topic of heated public discourse, but the growth of school choice has raised many new questions that require attention. The premise of locally funded public schools in Ohio is based on the idea that local taxpayers maintain some level of control and oversight over the schools that they fund through local school boards. Yet, as school choice programs become a larger part of the educational system, the share of local tax dollars going to entities that are outside of the influence of local taxpayers continues to grow. While the state does not report the transfer of local tax dollars directly, we conservatively estimate that in 2014 – 2015, nearly \$500 million in local tax revenues were transferred to charter schools, private schools, and across district boundaries.⁹

⁹ The local tax transfer for a single district is calculated using the following formula using data from the Ohio Department of Education FY2015 Foundation Funding Report Final #1:

$$\text{Local tax transfer} = [\text{Charter Enrollment} * \$5800 * (1 - \text{State Share})] + [\text{Outgoing Open Enrollment} * \$5800 * (1 - \text{State Share})] + [\text{EdChoice Enrollment} * \$4500 * (1 - \text{State Share})]$$

Single district local tax transfers are then summed to calculate a total.

We believe this is a conservative estimate. Additional funds are transferred for students that receive designated state funding for special

The current system of funding Ohio's school choice programs sets up a conflict between local school districts and school choice options. Punishing districts by requiring them to fund students utilizing school choice programs is based on the theory that such an incentive structure will motivate districts to improve their quality and become more efficient. As we've noted above, we do not yet have conclusive evidence that districts behave in this way. In the best cases, districts continue to operate as they did before the increase in competition, with no change in student performance. In the worst cases, the performance of traditional public schools actually decline as the loss in revenues outpaces the savings realized as student enrollment declines. More research is also needed to determine the effect that school choice has on the ability for school districts to raise levies to offset the loss of local tax revenue.

There are several critical questions raised by this situation regarding equity and the relationship between local tax payers and their influence over our education systems. One issue in particular deserving consideration is the effect of e-schools, which we estimate received more than \$100 million in local tax dollars in 2014 - 2015. When a brick and mortar charter or private school operates in a community, local tax revenues are transferred from the school district to the charter school, but the tax revenues typically stay in the community. Some portion of these tax revenues are used to maintain the charter school facility, hire teachers and administrators, and purchase goods and services from area businesses. Thus, the tax dollars transferred to the charter or private school continues to have a multiplier effect in the community that is similar to the multiplier effect produced when the local tax dollars are spent by the school district. Furthermore, brick and mortar charter and private schools are typically involved in the communities that they serve, making them more likely to be responsive to the particular context and needs of the communities, as we would expect a local district to be. Although local taxpayers might not have direct control or influence over their operation, they may be able to influence the way they serve local students through other channels.

When a student attends a state-wide e-school, the local tax revenue transferred to the e-school is removed from the community without producing any multiplier effect through local spending or job creation. E-schools typically do not have a physical presence in the communities that they serve, and it can be more difficult for local community leaders and stakeholders to communicate local needs and conditions. Further, the loss of students may make smaller school districts less sustainable, which could have adverse effects on the broader community's economic development.

This situation is in need of greater consideration as it relates to rural communities, where in many cases the local school district is the area's largest employer. In 2014 – 2015, nearly \$40 million in local tax revenues from Ohio's rural communities were spent on e-schools. This issue is particularly critical given that the laws governing charter school creation in the state leave e-schools as the only charter

needs. When districts receive these funds they are calibrated based on the district's State Share index, although the full amount is transferred when a student utilizes a school choice program. Thus, a portion of these additional funds are paid for with local tax dollars. We disregard these additional transfers for simplicity. A second method for estimating this amount is to simply multiply each districts transfer payment for charter school students, voucher students, and open enrollment students by $(1 - \text{State Share})$, although there are several issues that could bias this estimate up. For reference, this approach results an estimate of \$624 million.

options for most rural students, a fact that is clearly demonstrated by the disproportionate number of rural students enrolled in e-schools.

Making assessment and transparency a top priority

Assessment and transparency are essential to an effective educational system that expands opportunities and improves outcomes for all students. The state of Ohio has made important progress in recent years in adopting a “value-added” measure to evaluate teacher, school, and district performance. While no statistical method offers a perfect solution to academic evaluation, the value-added statistical method is widely used by economists analyzing student achievement, reflecting its positive statistical properties. The method seeks to isolate the contribution that a given teacher, school building, or district provides to the academic growth of an individual student in a given year, while controlling for variables like demographics, past performance, and socio-economic factors. If properly used as part of a multifaceted approach to evaluating teachers, administrators, schools, and districts, this data can help to identify best practices, target resources to support teacher and principal development, and provide a common framework of evaluation across schools and districts.

While it is important that the state has applied the same measures to evaluating charter schools, the culture around the assessment and reporting of this data must be addressed. In the past year, several troubling revelations have surfaced showing that state officials have misled federal agencies and Ohio taxpayers by failing to include data from poor performing schools in state reports and evaluations (Candisky, 2015). All of the time, effort, and money we spend on school evaluation and assessment is for naught if we cannot trust the state to report the data truthfully and with full transparency. Furthermore, public scrutiny must be paid to legislators that receive generous contributions from the charter school industry (and public school advocates) in order to ensure that student welfare is put above their reelection.

One area where the state can still improve assessment and transparency is in the EdChoice voucher program. This program has been rapidly expanding both in terms of the number of participating students—more than 20,000 in 2014—and the number of available vouchers, which Governor Kasich more than quadrupled from 14,000 to 60,000. As the school voucher programs increases its share of school choice spending, it should be subject to the same assessment and transparency as traditional public schools and charter schools. Students utilizing the program are required to take all state standardized tests, but the state only reports the percent of EdChoice students in a private school that pass a given test compared to the share of students passing the test in the public school the student would have attended. Given the state’s move to value-added assessment, it is concerning that it is using a much less rigorous approach to evaluating students in the EdChoice program. While protecting student privacy can be a concern in the EdChoice context, the state should take steps in evaluating and assessing private schools accepting EdChoice vouchers with the same rigor with which to evaluates charter and traditional public schools, while making these assessments available to students and parents so that they can make informed school choice decisions.

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