

Expanding Educational Opportunity through Choice and Competition

The Council of Economic Advisers
October 2020



Executive Summary

During the last 30 years, school choice programs have undergone dramatic expansion in the United States. These programs—organized at the Federal, State, or local level—share a common goal of expanding access to education options that exist alongside and ultimately improve public school options for primary and secondary education. Under a district public school (DPS) system, students are assigned to schools based on where they live, and the only form of school choice requires physically moving to an area with better schools for those families that can afford to do so. School choice programs have altered this landscape in fundamental ways by increasing competition in the school system and enhancing educational opportunities for all students, especially those from disadvantaged groups.

One rapidly growing school choice option is charter schools. Charter schools are public schools that educate millions of students using public funding, but with operational autonomy from the local public school system. Additionally, scholarship programs—funded both publicly and privately—assist hundreds of thousands of students with tuition at private schools and can provide access to courses, work-based learning opportunities, concurrent and dual enrollment, home education, special education services and therapies, tutoring, and more. These and other choice programs are providing opportunities for families that lack them, thereby ensuring that all schools have an incentive to deliver a high-quality education.

This report documents the development and expansion of school choice programs since 1990, when the first major school choice program was introduced in this country. We provide an overview of school choice programs, describing the main types of programs with examples from around the country. We also discuss the role of Federal policy, including recent actions of the Trump Administration to further expand school choice.

We next explain the key benefit of expanding school choice policies: more educational competition that empowers families and pressures schools to deliver more value. School choice programs can extend competition to all areas, including those where families with lower incomes have little ability to move to more affluent areas in search of better schools. The programs enable families to hold accountable what in some cases is a failing local education monopoly. This can benefit the children who use school choice programs as well as the children who remain in a DPS, because all schools must compete for student enrollment by providing a higher-quality educational experience. We discuss the growing empirical evidence that carefully crafted school choice programs do improve educational outcomes for all students. In other words, competition can be the tide that lifts all boats.

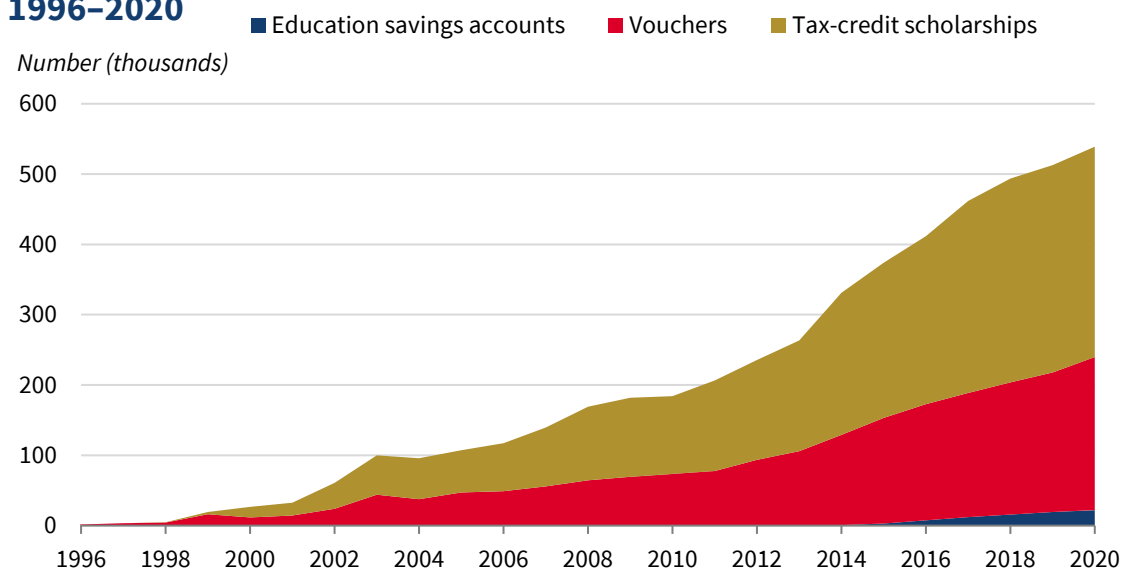
Introduction

School choice refers to policies, legislation, and organizations that foster alternatives to residentially assigned district public school (DPS) education. This report provides an overview of school choice programs in the United States and the role of Federal policy in helping to foster them. It also discusses the economic theory of competition that motivates these programs. And finally, it reviews the empirical research on the programs' impact.

The first major school choice programs were introduced in the early 1990s. The programs originated from concerns that students from low-income families had no alternatives to residentially assigned DPSs, especially in places where the local DPS had a poor performance record. In 1990, the State of Wisconsin enacted the Milwaukee Parental Choice Program, the first major voucher program in the Nation. This program, which continues to operate today, offers publicly funded vouchers to eligible students in Milwaukee who choose to attend private schools. In 1991, the State of Minnesota enacted the first charter school law, with the first public charter school opening in Saint Paul in 1992. Over time, demand for alternatives to residentially assigned DPSs has increased, and school choice programs have been introduced in many school districts throughout the country.

Today, private choice programs provide financial support that enables hundreds of thousands of students to attend private schools. As we discuss in more detail below, these programs include vouchers, tax-credit scholarships, and State-funded education savings accounts (ESAs) (figure 1), which together now number about 539,000 (EdChoice 2020a).

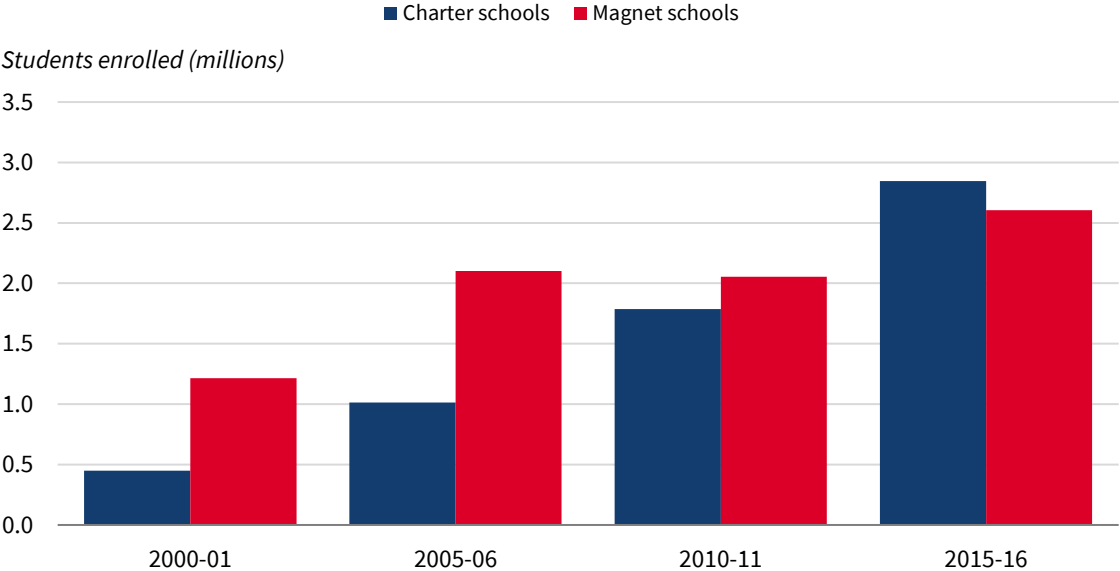
Figure 1. Number of ESAs, Vouchers, and Tax-Credit Scholarships, 1996–2020



Source: EdChoice.

Public choice programs further allow millions of students to attend schools other than the DPS they would attend based on geographic residency. In addition to establishing public charter schools, States and local governments have introduced other public choice programs, such as magnet schools, which are public schools with specialized programs of study. Enrollment in public charter schools and magnet schools has grown over time (figure 2). In 2017–18, charter schools and magnet schools enrolled 3.1 million and 2.7 million students, respectively (NCES 2019a). Many public school systems have also introduced open enrollment programs that permit students to attend public schools other than a residentially assigned DPS.

Figure 2. Enrollment in Public Choice Programs Over Time

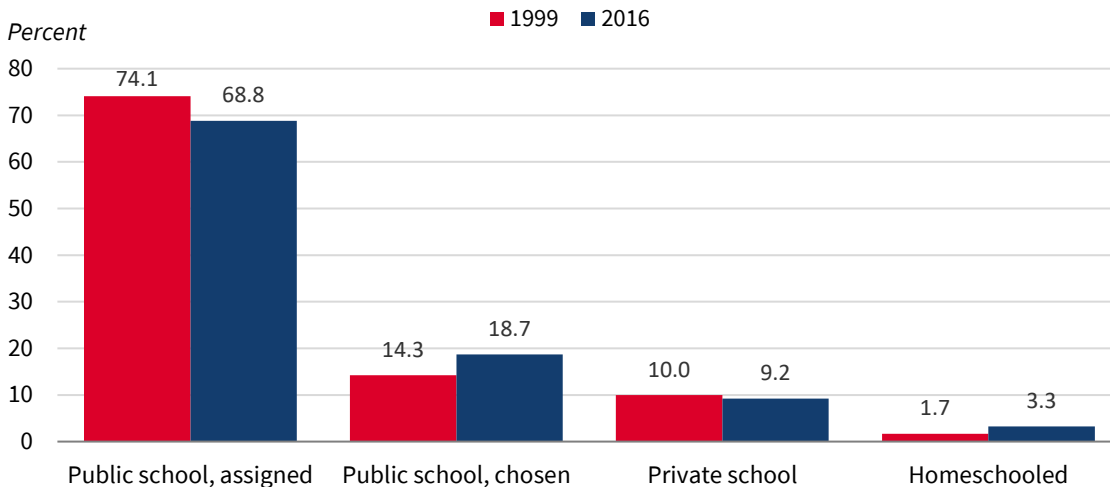


Source: National Center for Education Statistics.

Although Federal funding plays a relatively minor role in K-12 school funding, Federal policy does support State and local governments seeking to expand school choice. Below, we discuss the main Federal programs that support school choice, including the Magnet Schools Assistance Program and the Charter Schools Program. We also report on recent policies implemented under the Trump Administration to enhance this support, including the expansion of 529 ESAs to primary and secondary education under the 2017 Tax Cuts and Jobs Act (TCJA).

Although school choice programs have grown dramatically, the majority of students in K-12 school continue to attend a residentially assigned DPS. As shown in figure 3, the proportion of students attending a residentially assigned DPS fell by about 5 percentage points between 1999 and 2016. Over the same period, the proportion of students attending a public school of their choosing rose by about 4 percentage points.

Figure 3. Percentage Distribution of Students Age 5 through 17 Attending Kindergarten through 12th Grade by School Type, 1999 and 2016



Source: National Center for Education Statistics

In the second section of this report, we discuss the economic theory of competition that motivates school choice. School choice programs are founded on the idea that when schools are exposed to increased competition, educational outcomes will improve. The intellectual foundation is often credited to the Nobel laureate Milton Friedman (1955), who argued that when public schools face competition, they have stronger incentives to provide a high-quality, cost-effective education. As described by Hoxby (2003), the beneficial effects of competition come into force through the power of choice. Because charter schools are not guaranteed any enrollment, they are spurred to provide a better education than competing DPSs in order to attract students. Private schools face similar incentives but, because they charge tuition, they are not financially accessible to some families. Private choice programs seek to expand access to private schools and make them more competitive with DPSs by subsidizing the cost. Far from acting as a one-way street, however, competition may also induce a response by DPSs. When faced with the threat of losing students to a competitive charter or private school, a DPS may work to improve its performance in order to retain students and the funding that comes with them.

As we explain in this report, the design of school choice programs can help ensure that competition leads to benefits for all students. In theory, choice programs could disproportionately entice away more advanced or more motivated students from the DPS system, leaving behind struggling students who lose the benefits of interacting with their high-performing peers. Similar to the default method of school choice—the ability to move to a more affluent area with better schools—this might create segmentation by family background that harms some students who remain in the DPS system. However, as we discuss, these theoretical concerns are not borne out by empirical research, in part because most school choice programs include design features that avoid such outcomes by targeting eligibility or providing more generous resources to relatively disadvantaged students.

In the last section of the report, we review the empirical evidence on the impact of school choice programs. For students participating in these programs, achievement results as measured by test scores are mixed, although several studies have found large positive results for minority and low-income students. We explain that some positive outcomes of school choice emerge later in a child's development through higher educational attainment, and studies of these longer-term outcomes are generally more positive. Thus, policymakers should consider a broad range of outcomes when evaluating efforts to promote higher education quality through school choice. We also discuss studies of school choice relating to racial and ethnic integration, longer-term nonacademic outcomes, and fiscal effects. Finally, in terms of the impact on students who remain in their residentially assigned DPS, we discuss emerging empirical research suggesting that all students can benefit from the expansion of school choice programs in their local district, regardless of whether they participate themselves in the programs or decide to remain in their DPS. Thus, choice can be a tide that lifts all boats, not because of the inherent superiority of any one school type over another, but rather because competition pressures all schools to improve quality and deliver value.

Overview of School Choice Programs and Federal Policy

In this section, we describe the main types of private and public choice programs. Each type has unique advantages, which are highlighted in their respective subsections. We then provide examples of school choice in five regions of the country. Finally, we discuss Federal actions, including actions taken by the Trump Administration, to support school choice.

Private Choice Programs

There are three basic types of private choice programs: vouchers, tax-credit scholarships, and education savings accounts. Together, these programs enroll hundreds of thousands of students (figure 1) (EdChoice 2020a). Eight States also offer an individual tax deduction or tax credit for certain educational expenses, which are typically expended on one's own child.

Voucher programs provide a subsidy to parents to enroll their child in a private school. The voucher subsidy is typically set at a specific share of the public funding intended for that child's education. Though vouchers may not necessarily cover the full cost of tuition, they make private education more affordable for parents. During the 2018–19 school year, 28 voucher programs operated in 17 States, the District of Columbia, and Puerto Rico. Together, these programs served more than 188,000 students (EdChoice 2019). Many programs are targeted at low-income students or students with disabilities: seven States and the District of Columbia provide vouchers to low-income students, and eleven States provide vouchers for students with disabilities.

Tax credit scholarships allow students to receive private funding from nonprofit organizations to attend private schools or may pay for other educational expenses, including tutoring, online learning, dual or concurrent enrollment, and homeschooling expenses. Individuals and businesses may donate to these nonprofit organizations and receive a State income tax credit in return. States limit the total amount of tax credits that will be offered for the year and/or the amount that each business or individual can claim.

Tax credit scholarships often target low-income students, students with disabilities, or students assigned to a low-performing DPS. During the 2018–19 school year, 23 programs operated in 18 States and served nearly 275,000 students (EdChoice 2019; Kaplan and Owings 2018). One of these programs, the Montana tax credit scholarship program, became inoperable in late 2018 when the Montana Supreme Court ruled that the program violated the State’s constitution. However, that decision was reversed by the Supreme Court of the United States in June 2020 (see box 1).

Box 1. The Supreme Court’s *Espinoza v. Montana Department of Revenue* Decision

In June 2020, the Supreme Court of the United States (SCOTUS) reversed the decision of the Montana Supreme Court in *Espinoza v. Montana Department of Revenue* (Supreme Court of the United States 2019). The central judgment, taken from Chief Justice Roberts’s majority opinion, is that “A State need not subsidize private education. But once a State decides to do so, it cannot disqualify some private schools solely because they are religious.”

The decision automatically reinstated a Montana tax credit scholarship program that the State court had ended because it violated a “no-aid” provision, also referred to as a Blaine amendment, in the State’s constitution. SCOTUS found this particular application of the no-aid provision discriminatory against religious schools and their prospective pupils’ families, and thus the application violated the U.S. Constitution’s free exercise clause.

The original Blaine amendment was a proposed amendment to the U.S. Constitution that narrowly failed Senate approval in 1875. The Blaine amendment, founded in anti-Catholic immigrant sentiment with the purpose of keeping schools Protestant, would have expanded the reach of the Establishment Clause in the First Amendment to explicitly prohibit public spending on religious schools or organizations. Subsequently, a majority of States added Blaine language to their State constitutions; Montana became a State in 1889 and included a Blaine clause in its original constitution.

Montana’s scholarship program, passed in 2015, provided for tax credits worth a maximum of \$150 for gifts made to organizations that provide private school scholarships. All Montana students are eligible for the program. However, due to the litigation and the \$150 maximum gift, only 25 students in Montana received funds from the program in the 2016–17 school year.

Education savings accounts or ESAs are multiuse scholarships that allow participating parents to pay for current educational expenses, such as private school tuition, homeschool expenses, contracted services provided by a public school or school district, courses, concurrent and dual enrollment, special education services and therapies, and tutoring, as well as for future educational expenses such as college. During the 2018–19 school year, five programs operated in five States supporting more than 18,700 students. Most States restrict eligibility to students with disabilities. Arizona’s program also includes other groups of students, including low-income students, students assigned to a low-performing DPS, students who are adopted or in foster care, students who live on a tribal land, and children of active-duty military or who were killed in the line of duty. The funding amount varies by State, with some States setting a flat amount per pupil, such as \$6,500 in Mississippi, and others giving a portion of the State’s education funds per pupil to the parents. In some States, higher scholarship

amounts are provided to low-income students or students with disabilities. For example, in Arizona, students from households with income up to 250 percent of the Federal poverty line receive 100 percent of State per-pupil funding, whereas other eligible students receive 90 percent (EdChoice 2020a).

Public Choice Programs

Public choice programs include charter schools, magnet schools, and open enrollment policies.

Charter schools are tuition-free public schools that operate independently from district public schools and thus have more autonomy over their educational programs, hiring, operations, and budget in exchange for greater accountability. Although the programs differ by State, many charter schools receive per-pupil funding that follows students from their residentially assigned DPS to the charter school. In addition to providing funding for charter schools, State governments grant entities the role of charter authorizers. Charter authorizers come in a variety of types, including independent chartering boards, nonprofit organizations, institutions of higher education, and State and local education agencies. The charter authorizers can then approve charter operators to run schools. Most charter school operators are independent entities (e.g., a group of teachers or parents, or a local nonprofit or community organization), but about 35 percent of charter schools are operated by nonprofit or for-profit management organizations as part of larger networks of schools. Examples of such networks include the Knowledge Is Power Program (KIPP) and Charter Schools USA. Charter school operators are accountable to the organization that grants their charter, and the schools are subject to periodic reviews (Kaplan and Owings 2018; David 2018).

Because public charter schools operate outside of the restraints that bind a DPS system, they can be more innovative than DPSs. Grube and Anderson (2018) discuss innovations such as Montessori schools and dual-language immersion schools. Charter schools based on the “no-excuse” approach have proved popular in urban settings. These schools include features such as uniforms, strong discipline, extended classroom hours, and intensive tutoring (Angrist et al. 2016). The KIPP Foundation is known for these schools.

In terms of enrollment, charter schools typically have a mandate to accept all eligible applicants and to use a lottery to select students if they are oversubscribed. The charter school segment has grown rapidly. Between the 2000-1 and 2017-18 school years, the number of charter schools increased by about 260 percent, with student enrollment increasing about 600 percent. As of Fall 2017, more than 6 percent of students enrolled in public elementary and secondary schools attended these institutions. Enrollment in charter schools is generally higher in urban areas where minority and low-income student populations are higher (NCES 2019a).

Magnet schools are public schools that offer specialized programs meant to bring together students with common interests or skillsets. These schools specialize in specific areas, such as mathematics, science, or the performing arts. Some magnet schools also include niche subjects, such as the culinary arts or aerospace engineering. Originally, magnet schools were created to foster desegregation by intentionally enrolling students from diverse populations (OII 2004). Many magnet schools continue to serve this mission.

Enrollment in magnet schools is handled through various application frameworks. Some magnet schools have attendance zones, where part of the student population is enrolled based on geographic location while the remaining slots are filled by applicants from throughout the rest of the district. Other magnet schools do not have attendance zones and instead grant all seats through an application process. Admission may also be handled through a lottery system; some magnets use random lottery systems, while others use weighted lottery systems that prioritize students with certain qualifications (OII 2004; Ayscue et al. 2015). As of the 2017–18 academic year, there were 3,421 magnet schools in operation, enrolling 2.7 million students (NCES 2019a).

Open enrollment school districts facilitate interdistrict or intradistrict public school choice, which allows students to select the school they wish to attend instead of taking a district public school assignment. Intradistrict policies allow choice among schools within a student’s designated district, while interdistrict policies give students the option to attend schools within a State or larger defined region (EdChoice 2020b). Open enrollment programs help households by giving students access to higher-quality public schools while also providing competition between public schools. Still, not all States and school districts cover the costs of traveling to nonneighborhood schools, and this may pose a barrier to some families, limiting their ability to exercise choice. As of 2018, most States had enacted policies related to open enrollment. In 34 States, school districts choose whether to participate, while 28 States mandate open enrollment in some cases (ECS 2018).

Other types of competition to DPSs include homeschooling and virtual school. The Department of Education defines homeschooling to include students who attend less than 25 hours of public/private school weekly. As of 2016, 1.7 million students were homeschooled, representing 3.3 percent of all students, up from 1.7 percent in 1999 (figure 3; NCES 2019b). Virtual school may include a hybrid of in-person and online instruction or be a fully online curriculum run by either private or public schools. In 2017, about 280,000 students were enrolled in virtual school (NCES 2019a). However, during the coronavirus pandemic, many more students are experiencing some form of virtual learning (EdSurge 2020).

Examples of School Choice

Although school choice has grown in communities throughout the United States, it is instructive to compare how school choice developed in specific places. Here, we consider several examples where school choice has come to play a particularly prominent role in the education environment: Milwaukee, Florida, New Orleans, Massachusetts, and the District of Columbia.

Milwaukee. The Milwaukee Parental Choice Program was established in 1990 as a voucher program targeted at low-income students. Initially, the program was restricted to families with incomes below 175 percent of the Federal poverty line. Enrollment was also limited to 1 percent of students in the Milwaukee public school district (MPS), with a randomized selection process for most students. The program did not initially include religious private schools, which made up about 80 percent of private school student enrollment in the area (Witte 1998). After 1998, when the Wisconsin Supreme Court ruled that the inclusion of religious schools in the voucher program did not violate the Wisconsin Constitution, the voucher program grew more quickly. Today, the program has expanded to allow families with incomes up to 300 percent of the poverty level, has no enrollment cap, and uses a lottery

system for selection when particular schools are oversubscribed. As of 2019, there were 120 schools participating and more than 28,900 students enrolled (EdChoice 2020c).

Milwaukee introduced charter schools in 1996. Today, Milwaukee has 44 charter schools with an enrollment of more than 18,000 students (Wisconsin Department of Public Instruction 2020). Some of the schools are authorized by the MPS, while others are independent of it and are authorized by the University of Wisconsin–Milwaukee and the City of Milwaukee. The independent charters have more autonomy than those run by the MPS and make up almost half of all charters in Milwaukee. Milwaukee’s choice schools have spurred new educational approaches. In 1999, the MPS began to introduce changes, such as opening new Montessori schools in response to the competitive pressure (Grube and Anderson 2018).

Florida. In 2001, the Florida legislature established the Florida Tax Credit Scholarship program. The program offers State tax credits to corporations that donate to nonprofit scholarship-funding organizations. The scholarships can be used for tuition and fees at private schools or for transportation to a public school outside a student’s residential school district. When the program was initially passed, only students with household incomes below 185 percent of the Federal poverty line were eligible, and the program expenditures were capped at \$50 million annually. The program has since been expanded so that students with household incomes between 200 and 260 percent of the Federal poverty line are eligible for partial scholarships, while students from lower-income families are eligible for full scholarships. In the 2018–19 school year, nearly \$645 million in scholarships was awarded to 104,091 students attending 1,825 participating private schools (Florida Department of Education 2019c).

Florida has also established other State-funded school choice programs. The McKay Scholarship Program was established in 2000 as the Nation’s first school voucher program for students with special needs. The program provides scholarships for students to attend a private school or to transfer to a different public school. In 2018–19, the program awarded about \$220 million in scholarships to 30,695 students. The Gardiner Scholarship Program, established in 2014, is an ESA program that provides funds for special needs students to purchase products and services to support their learning. In 2018–19, the program awarded about \$125 million in scholarships to about 12,188 students. The Family Empowerment Scholarship program, which was established this past year, provides scholarships for up to 18,000 students from disadvantaged families to attend private schools, with priority for students from households with incomes less than 185 percent of the Federal poverty line. Florida also operates the Statewide virtual school known as the Florida Virtual School. This is the largest virtual school in the country, with 215,505 students enrolled during the 2018–19 school year. Finally, Florida has a large public charter school sector that enrolled 313,000 students in the 2018–19 school year (Florida Department of Education 2019a, 2019b).

New Orleans. Before Hurricane Katrina, the New Orleans public schools had one of the worst performance records in the country. In the 2004–5 school year, only 35 percent of students in the New Orleans schools achieved proficient scores on State exams, and high school graduation rates were about 54 percent (Teach New Orleans 2020). In 2003, the New Orleans Recovery School District (RSD) was created as a way to reform the public schools. In 2005, in response to the devastation left by Katrina, the RSD assumed control of 114 low-performing schools. With the help of \$20.9 million in funding from

the Department of Education, New Orleans began to open new charter schools. Over time, the RSD eliminated some of the low-performing schools and converted others to charters. By 2014, all the RSD schools were charter schools, and nearly all educators had been replaced. Furthermore, district public school attendance zones were eliminated, making New Orleans the only all-choice school system in the country. The reforms led to dramatic gains among New Orleans schoolchildren. By the 2013–14 school year, student proficiency on State exams had increased to 62 percent. High school graduation rates, college entry rates, and college graduation rates all rose substantially (Harris and Larsen 2018).

In 2008, Louisiana also launched a voucher program for students in New Orleans, known today as the Louisiana Scholarship Program. The program was targeted to children in failing schools with family incomes at or below 250 percent of the poverty line. Over the first four years, it grew slowly, reaching about 1,900 in annual vouchers in the 2011–12 school year. In 2012, the program was expanded to the rest of the State, and by 2014, more than 6,500 vouchers were awarded.

Massachusetts. In 1993, the Massachusetts legislature passed the Education Reform Act, increasing the State’s role in education. The act allowed for the creation of charter schools, reserving the right to authorize them for the Massachusetts Department of Elementary and Secondary Education. In the 2019–20 school year, 81 charter schools operated in Massachusetts, educating just under 48,000 students. The schools have proved popular, and spots are typically allocated by lottery. In the 2019–20 school year, 73 charter schools had waiting lists, and there were nearly 28,000 students on one or more of the lists (Massachusetts Department of Education 2016, 2019). In 2010, Massachusetts passed legislation allowing charter schools with a successful track record to expand. In Boston, the number of charter schools doubled as a result. Despite the large expansion, a recent study found that the new schools generated achievement gains on par with the original charter schools (Cohodes, Setren, and Walters 2020).

For grades 1 through 8, Boston’s public school system also facilitates school choice through an assignment system, known as the Home-Based School Assignment Policy (Boston School Finder 2020). The policy seeks to find a balance between allowing students to attend a neighborhood school and giving more students a chance to attend high-quality schools. Families choose from a list of schools and are allowed to express preferences. A lottery mechanism is used to assign students to schools, taking these preferences into account. Over time, the mechanism has been adjusted in response to concerns about student travel times and persistent racial inequities (Abdulkadiroğlu et al. 2006).

District of Columbia. The voucher program in the District of Columbia is the only private school choice program run by the Federal Government. Signed into law by President George W. Bush in 2004, the DC School Choice Incentive Act created the DC Opportunity Scholarship Program, which is intended to improve education in the District, especially for disadvantaged students. Although Congress has continuously funded the program, the Obama Administration sought to phase it out and prevented new students from enrolling in the 2009–10 and 2010–11 school years. However, the Trump Administration has strongly supported the program and helped increase participation by more than 40 percent between the 2016–17 and 2017–18 school years to more than 1,600 students (CRS 2019). In the 2020–21 school year, vouchers are worth up to \$9,161 for K-8 students and up to \$13,742 for high school students. In addition to the voucher program, Washington has a large public charter school sector that

dates back to 1996. In the 2019–20 school year, these schools enrolled more than 43,500 students in grades PreK-12 and adult learning programs (DCPCSB 2020).

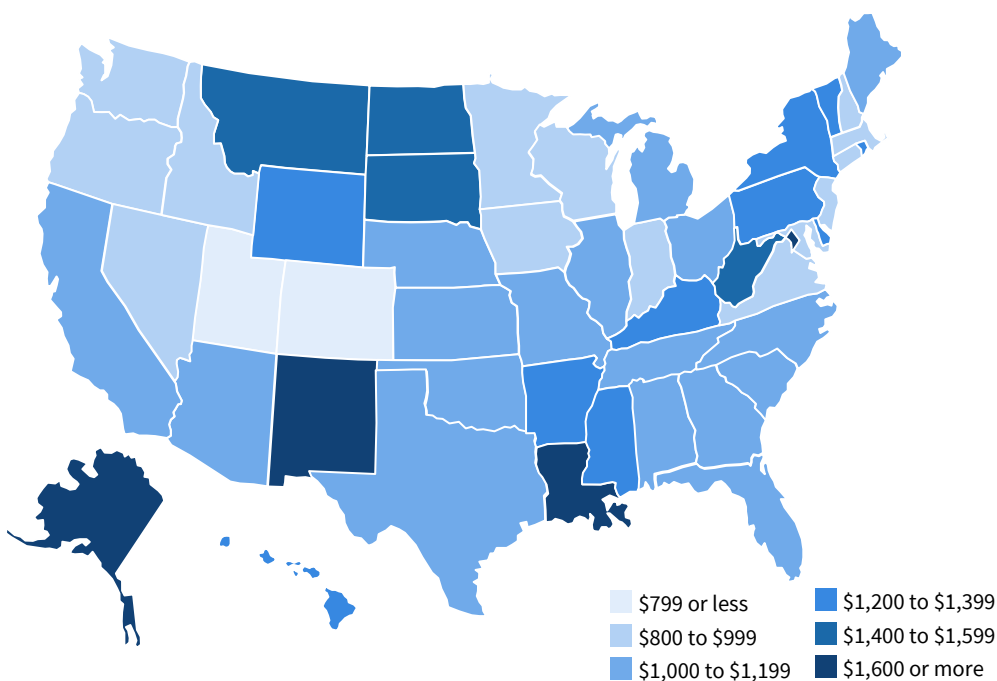
The Role of Federal Policy in School Choice

In this subsection, we discuss the role of Federal policy in school choice. We first provide an overview of the organization of K-12 education, its funding, and the Federal contribution. We then describe the main Federal policies that are related to school choice. Finally, we highlight recent actions of the Trump Administration to further support and expand school choice.

State and local governments are primarily responsible for K-12 education in the United States. Along with public and private organizations, they establish new schools, determine graduation standards, and develop curricula (U.S. Department of Education 2017). State and local governments also primarily finance K-12 education. Of the \$736 billion allocated for public elementary and secondary education for the 2016–17 school year, the majority was allocated from State and local governments—47 percent and 45 percent, respectively. Only \$60 billion (8 percent) was from Federal sources (NCES 2020a).

More than half of Federal funding from the Department of Education supports students with low family incomes or disabilities. A large share of Federal funds, about 26 percent, is spent on Title I grants, which supplement State and local funding in school districts with a high share of low-income students. An additional 20 percent of Federal funding focuses on children with disabilities (NCES 2020b). Because States have different demographics, Federal funding per student varies by State. Figure 4 shows the Federal funding per student for public primary and elementary schools by State (NCES 2019c).

Figure 4. Federal Funding per Student for Public Primary and Elementary Schools by State, 2016–17



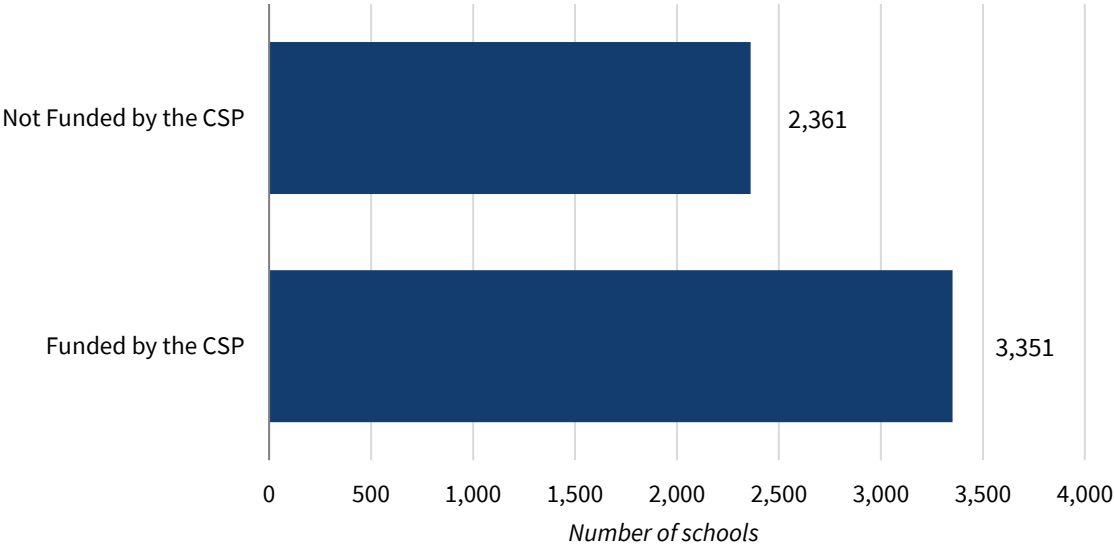
Source: National Center for Education Statistics.

The Federal Government also provides resources to support school choice programs. The Department of Education oversees the key Federal programs that promote choice. These include the Magnet Schools Assistance Program and the Charter Schools Program, as well as the District of Columbia Opportunity Scholarship Program discussed above (U.S. Department of Education 2019a, 2019b, 2020a).

The Magnet Schools Assistance Program provides funding for magnet schools that are part of an approved plan to desegregate schools. These magnet schools are designed to bring students from different backgrounds together to reduce minority group isolation in schools with many minority students. As discussed, magnet schools are typically focused on specific academic areas—such as science, technology, engineering, and mathematics, known as STEM; the arts; language immersion—or implement alternative teaching philosophies, such as international baccalaureate programs or Montessori methods (U.S. Department of Education 2020a).

The Charter Schools Program (CSP) was established in 1994 to encourage the formation of new charter schools. Its initial budget of \$4.5 million grew to \$440 million as of 2019. In 2019, 85 percent of CSP funding went toward the creation of new charters, although the program also supports the expansion of existing charter schools. Between the 2006-7 and 2016-17 school years, the majority of new charter schools were started using funding from the CSP (figure 5). Charters funded by the CSP serve a higher percentage of Hispanic and Black students than residentially assigned district public schools (table 1) (U.S. Department of Education 2015, 2019b).

Figure 5. Number of Charter Schools Opened, 2006–7 to 2016–17



Source: Department of Education
Note: CSP = Charter School Program.

Table 1. Demographics of CSP-Funded Schools and District Public Schools, 2016–17

Demographics	CSP-Funded schools (n = 3,129)		Residentially assigned DPS (n = 88,320)	
	students	Percent	students	Percent
Hispanic	454,605	33.9%	12,282,085	26.0%
Black	409,010	30.5%	6,901,043	14.6%
White	371,462	27.7%	23,268,443	49.2%
Asian	50,637	3.8%	2,440,986	5.2%
Two or more races	43,410	3.2%	1,719,774	3.6%
American Indian/Alaska Native	7,759	0.6%	482,088	1.0%
Hawaiian Native/Pacific Islander	4,597	0.3%	172,123	0.4%
Total number of students	1,341,480	100%	47,266,542	100%

Sources: Department of Education.

Note: CSP = Charter School Program.

Some Federal programs interact with other Federal initiatives to enhance the total impact of Federal Government action. For example, earlier in 2020, the Department of Education provided an additional \$65 million through the CSP, targeting charter schools in Opportunity Zones. These distressed areas have high poverty rates and low incomes. Currently, less than 30 percent of Opportunity Zones have at least one charter school. Additional funding for charter schools will complement tax incentives in Opportunity Zones to spur much-needed economic opportunity in these areas (U.S. Department of Education 2020b). A recent CEA report provides an initial assessment of the Opportunity Zone program (CEA 2020).

The Trump Administration has sought to further aid the expansion of State-based school choice. President Trump supports the proposed Education Freedom Scholarships and Opportunity Act, which would give Federal tax credits to individuals and businesses that contribute to organizations that grant scholarships to students. States would designate qualified expenses, which can be for primary, secondary, career, and technical education. Expenses that might be recognized include advanced, remedial, and elective course fees; tuition at private schools; apprenticeships and industry certifications; concurrent and dual enrollment for college credit; private and home education; special education services and therapies; transportation to education providers outside of a family's zoned school; tutoring, especially for students in low-performing schools; and summer and after-school education programs (U.S. Department of Education 2019c). Individual taxpayers would be allowed to redeem a credit up to 10 percent of their adjusted gross income, and corporations would be allowed to redeem a credit up to 5 percent of their taxable income. States would have the responsibility to recognize scholarship-granting organizations and to decide the nature of the scholarships and eligibility criteria. For States with existing tax credit scholarship programs, the program would incentivize additional private donations. State participation would be voluntary (Office of Senator Ted Cruz 2019). For a discussion of related legislation, see box 2.

Box 2. The School Choice Now Act

As part of ongoing COVID-relief legislative efforts, Senator Tim Scott and Senator Lamar Alexander introduced the School Choice Now Act on July 22, 2020. If passed, the act would authorize the Department of Education to allocate 10 percent of its emergency CARES funding to States in the form of emergency education grants. The act would also encourage donations to certain scholarship-granting organizations by establishing Federal tax credits.

Bill proponents point out that more than 100, mostly Catholic, private schools—which enrolled more than 16,000 total students—have permanently closed because of the coronavirus. Adding all, or even a significant portion, of these 16,000 students to the public school population could strain already-delicate local government budgets at a critical time (McShane 2020).

The Trump Administration has also supported school choice as part of the 2017 Tax Cuts and Jobs Act (TCJA). The TCJA expanded the purview of the Qualified Tuition Program, known as a 529 program. Dating back to the 1990s, these programs have long allowed an individual to contribute money to an investment account from which a student's expenses for higher education (college or vocational school) can be paid without the earnings on the contributions being taxed. The TCJA allows 529 plans to be used to pay for primary and secondary education as well. Funds can be withdrawn tax-free to pay for up to \$10,000 in tuition per beneficiary per year at any public, private, or parochial school (CRS 18). The 529 program offers an alternative to Coverdell Education Savings Accounts. Coverdell ESAs similarly allow individuals to contribute money to an account that grows tax-free for use on qualified educational expenses for a student. However, there is a limit on how much can be contributed per year (currently \$2,000) and a phase-out by annual income by the contributor (CRS 2018).

School Choice and Competition

As we have seen, school choice programs have expanded significantly in the United States over the last three decades. In this section, we explain how school choice promotes competition among schools for students, which can ultimately lead to improved educational experiences for all children. We begin by explaining how mobility-based school choice has long existed in the DPS system for affluent families that can afford to move to higher-quality school districts. We next discuss how school choice programs introduce a different form of competition that can raise the educational quality received by all students, including those in less affluent neighborhoods, whether they participate in a choice program or remain in a DPS.

Competition between School Districts

Even before the school choice movement, parents in general exercised substantial discretion over where their children attend school, as families with the means to do so can move to higher-quality school districts. Tiebout (1956) describes how local governments compete with one another by adjusting levels of public good provision to meet the demand of potential residents. The model implies that families with the financial means to do so will live in certain kinds of communities based on their preferences for various public goods, including education. Localities will generally face pressure to increase quality, subject to a given level of cost, in order to increase their number of taxpaying residents.

In the United States, school quality is an important factor for many parents in determining where to live. According to a 2018 survey, more than half (52 percent) of recent homebuyers with children considered the quality of schools when making their decision on the neighborhood in which to live (National Association of Realtors 2018). Studies of parental choices have found that preferences for school quality are multidimensional, with parents placing different weights on factors such as academic performance, teaching quality, class size, safety, and discipline (Chakrabarti and Roy 2010).

Although this form of competition allows more affluent families to seek out a higher-quality education, the benefits may be financially out of reach for many less-affluent families. In fact, a Senate committee report finds that the median home price in neighborhoods with the highest-quality schools is about \$486,000, which is four times larger than the median price of \$122,000 in neighborhoods with the lowest-quality schools (JEC 2019). In addition, this form of competition can potentially have negative consequences for lower-income and minority students when it leads to increased segregation along racial and income lines (Urquiola 2005; Rothstein 2006).

Two important lessons emerge from the research on traditional mobility-based competition. First, because of the financial barriers that lower-income students' families face to moving, competition between districts for residents is likely insufficient on its own to substantially improve school quality for such students. Thus, additional school choice within a district may be needed to foster the procompetitive effects that hold schools accountable for delivering better outcomes. Second, to avoid negative consequences for students who remain in a residentially assigned DPS, school choice programs should be designed so that schools compete on their value added and not on their ability to siphon off students with more advantaged backgrounds from DPSs. Nonetheless, even when some selective sorting occurs, school choice programs may still outperform the traditional mobility-based system that relies on sorting across neighborhoods based in part on family affluence.

Designing School Choice Systems

We next explain why carefully designed school choice programs can improve the quality of education for all students within a district.

In early research on school choice, Hoxby (2003) developed models to explain why exposing DPSs to competition can lead to better schools. The models characterize decisionmaking for different types of schools, but all of them rest on the basic assumption that for a given out-of-pocket cost, parents choose the school they value the most. This power of choice is the mechanism by which the beneficial effects of competition come in to play.

To illustrate, consider the case of a charter school that can receive a government payment for each student it attracts away from a DPS, although it is prevented from charging additional fees. Because the school cannot compete on price, it must compete on quality. By increasing its quality, the school can attract more students from DPSs and thus earn more revenue. Because quality is expensive to produce, the school faces a trade-off between attracting more students and keeping costs down. Where the school falls on this trade-off will depend on the structure of both demand (how much parents and students value quality) and supply (how expensive quality is to supply). At a minimum, however, a charter school must provide parents and students with at least as much value as the DPS.

This direct effect of school choice on program participants is distinguished from the indirect competitive effect that arises when a DPS responds to the competitive pressure from a charter or other choice school. As discussed by Hoxby (2003), if a DPS loses funding when students enroll in a different school, it should have an incentive to retain students. The strength of the effect will depend both on how much funding is lost and how many students are threatening to leave. If the competitive pressure is not robust, a DPS may not react to it. For example, choice programs that cap enrollment at low levels may not place much pressure on DPSs that are to a large extent guaranteed enrollment. This is quite different from the direct effect of school choice: any charter school, no matter how small, must compete with DPSs in order to enroll students.

When DPSs respond to competitive pressure from choice programs by increasing their value added, their students will benefit. However, it is not axiomatic that school choice will inevitably improve educational quality through competition in the same way that is often true in other markets. This is because of the important role that peer effects play in education provision. In most markets, the quality of a service that one person receives is not directly affected by the characteristics of the other people that consume that service. However, in education, students are both consumers and producers of education quality—not merely passive consumers—because of how peers have a direct impact on the education quality received by their classmates. As a result, school choice reforms that induce shifts in student sorting across schools could have large effects both on the students who leave and on those who remain in residentially assigned DPSs because of changes in peer composition. If a school choice program attracts highly motivated or affluent students, it might have negative effects on students who remain in DPSs surrounded by less-motivated, less-affluent peers.

However, as actually implemented, school choice programs often incorporate features designed to prevent such an outcome from occurring, and the empirical evidence finds little support for these theoretical concerns. For example, voucher programs often restrict participation to students from low-income families or provide resources that are more generous to relatively disadvantaged students, which directly limits the potential for income-related sorting. Designs that require oversubscribed schools to use lotteries to allocate slots also limit the potential for selective sorting. The result is that schools will compete based on value added rather than on their ability to select students. In the United States, many school choice programs incorporate these design features (Epple, Romano, and Urquiola 2017). Expanding school choice to more students while providing more generous assistance to disadvantaged families could further build upon these benefits (Epple and Romano 2008).

Evidence on the Impact of School Competition

Finally, we turn to the important question of whether the theoretical procompetitive benefits of school choice are borne out empirically. This evidence can help determine whether school choice program designs in different contexts have in fact promoted positive student outcomes, and it can help inform better school choice policies in the future. We first discuss the literature that examines the direct effects of school choice programs on the students who participate in them. We then discuss the literature that examines the indirect competitive effects of school choice programs on DPS students.

Direct Value-Added Effects

That charter schools must compete with DPSs is so basic that there is a sense in which we should not be surprised by evidence that they do. Simply put, if a charter school or voucher program does not offer parents and students additional value relative to the DPS, then it is unlikely to thrive (Hoxby 2003). Consistent with this, a recent survey showed that a larger share of parents with children in private schools (77 percent) or that had chosen public schools (60 percent) report being “very satisfied” with their schools compared with parents assigned to local public schools (54 percent) (Wang, Rathbun, and Musu 2019). That said, there is value for policymakers in understanding which types of school choice programs have worked best and for whom, as they test new approaches and encourage expansion of the most promising programs. Accordingly, a large body of literature has arisen to study the direct effects of school choice programs on their students. In our discussion, we divide the literature into studies of academic achievement as measured by test scores, studies of academic attainment such as graduation rates or college enrollment, studies of racial and ethnic integration, and studies of longer-term, nonacademic outcomes. We also discuss studies of the fiscal impact of choice programs.

Much of the literature on academic achievement focuses on student performance on national or Statewide tests. This may be surprising in light of the small role such tests play in the educational experiences of students. However, these test scores are more amenable to empirical study than measures that vary widely across schools, such as grades or pass rates for courses. Tests that are taken by most students are also more amenable for study than scores on national tests such as the Scholastic Aptitude Test (SAT) that are taken by only a subset of high-performing students (Hoxby 2003). National accountability systems also emphasize performance on national and Statewide tests. However, test scores have been criticized as being a poor measure of the educational experience (Hitt, McShane, and Wolf 2018).

For private school choice programs, although results vary by individual study, Epple, Romano, and Urquiola (2017) conclude that most studies of voucher programs in the United States have not revealed large or statistically significant test score improvements for students in general. However, multiple studies uncover substantial test score improvements among Black students. For example, Mayer and others (2002) find that the School Choice Scholarship Foundation voucher program in New York City did not yield higher test scores on average for all students; but for Black students, test scores increased by about 6 percentage points. One notable exception to the positive findings for Black students is the Louisiana Scholarship Program (LSP). Abdulkadiroğlu, Pathak, and Walters (2018) find that the LSP led to a large decrease in math test scores among participants. They link this to the selection of low-quality, low-tuition schools into the program, pointing to the importance of program design for the success of private school choice.

For charter school programs, Epple, Romano, and Zimmer (2016) conclude that researchers have not reached a consensus on their effectiveness for academic achievement. Broad studies, including those done by the Stanford Center for Research on Education Outcomes (CREDO 2009, 2013), have not revealed large or statistically significant test score improvements for charter school students on average (these studies compare test scores of students in charter schools with those of students that have similar observable attributes—“virtual twins”—in the fallback DPS). However, numerous studies

of programs in urban areas find large, statistically significant gains. In particular, most studies of oversubscribed charter schools find positive effects on test scores. These studies are noted for the strength of their research design (they compare students who win the lottery with students that have similar observable attributes who lose the lottery; Epple, Romano, and Zimmer 2016). A recent study of a Massachusetts law that allowed charter schools with a successful track record to expand found that the new schools generated gains on par with the original schools (Cohodes, Setren, and Walters 2019). A study of Texas charter schools suggests that the effectiveness of charter schools has been increasing over time, as successful charter schools expand and poorly performing schools exit (Baude et al. 2020). In both Massachusetts and Texas, many of the successful charter schools that have expanded use the “no excuses” approach, which features strong discipline, extended classroom instruction, and intensive tutoring. Of note, in a study of Boston, Walters (2018) finds evidence that charter expansion programs may be most effective if they target students who are unlikely to apply, including low achievers, because these students have the most to gain.

In comparison with test score studies, studies of educational attainment on the whole find more encouraging results. This is true for both voucher programs and charter programs (Epple, Romano, and Urquiola 2017; Epple, Romano, and Zimmer 2016). For example, in a study of the Washington Opportunity Scholarship Program, Wolf and others (2010, 2013) estimate that vouchers raised high school graduation rates by 21 percentage points. As with test scores, vouchers appear to have had an even more beneficial impact on the graduation rates of Black students. Shifting attention to college, Chingos and Peterson (2015) identify a 6-percentage-point boost to enrollment rates among Black students offered vouchers in New York City, although they find less evidence of an effect among a broader group of students. Sass and others (2016) find that students in Florida's charter schools stay in college longer than students in DPSs, reinforcing related findings by Booker Sass, and Zimmer (2011). Dobbie and Fryer (2015) find that students admitted to a high-performing charter school in the Harlem neighborhood of New York City are more likely to graduate from high school on time and enroll in college immediately after graduation, although they ultimately attain about the same amount of college education as DPS students.

The divergence between the results on test scores and the results on educational attainment leads some researchers to question whether test scores are a useful yardstick for evaluating school performance. Hitt, McShane, and Wolf (2018) review studies of a wide variety of school choice programs that measure test scores and educational attainment as part of the same study. They find little within-study correlation between results on test scores and educational attainment. Epple, Romano, and Zimmer (2016) also comment on this divergence, pointing to Wolf and others (2010) as an example of a study that finds no significant effects on test scores but strong positive effects on high school graduation rates.

Some studies address the impact of school choice on racial and ethnic integration. By separating the decision of where to attend school from where one lives, school choice has the potential to reduce the role of income and race disparities in providing educational opportunity. Many school choice programs began in areas with high concentrations of minority and low-income students specifically to serve the needs of underserved communities with often poorly performing DPSs. As a result, charter schools

educate a disproportionate number of such students relative to the national average. In the 2017–18 school year, Black and Hispanic students accounted for 26 percent and 33 percent of charter school enrollment, respectively, while accounting for only 15 and 27 percent, respectively, of enrollment across all public schools (NCES 2019d). Regarding the impact of school choice on racial and ethnic stratification, Epple, Romano, and Zimmer (2016) discuss a large body of research and conclude that charter schools and public schools exhibit similar degrees of racial and ethnic segregation, with charter schools more likely to have a disproportionately nonwhite student population and DPSs more likely to have a disproportionately White student population. Moreover, Zimmer and others (2009) conclude that charters have only modest effects on the racial mix of schools. Butler and others (2013) analyze the decision to attend charter schools and find a role for socioeconomic characteristics but not race as a driving factor. In terms of voucher programs, a recent study by Egalite, Mills, and Wolf (2017) assessing the Louisiana Scholarship Program finds that most students using the vouchers reduced racial stratification in the public schools that they left and had only small effects on racial stratification in the schools to which they transfer. In addition, in school districts under Federal desegregation orders, voucher transfers caused a large drop in DPSs’ racial stratification levels but had no impact on private schools.

Another body of literature focuses on the long-run benefit of school choice programs on outcomes such as civic engagement and criminal behavior. These studies are relatively rare because they require data from a period of many years. Two studies of the Milwaukee Parental Choice voucher program are worthy of note. DeAngelis and Wolf (2019) use data from the Milwaukee program to compare young adult voting behavior between program participants and similar students in DPS. They find no evidence of statistically different voting patterns, helping to allay potential concerns that private choice programs might provide less instruction in citizenship skills. DeAngelis and Wolf (2020) use the data from the Milwaukee program to analyze the prevalence of criminal activity. They find some evidence that voucher program participants are less likely to be involved in criminal activity relative to DPS students, including a large and statistically significant reduction in property damage convictions. Dobbie and Fryer (2015) find that for students admitted by lottery to a high-performing charter school in Harlem, New York City, female students are less likely to be pregnant as teenagers and male students are less likely to be incarcerated in comparison with similar students who are not admitted.

The discussion so far has focused on student outcomes in school choice programs. However, another relevant question is how much money is spent to achieve these outcomes. Several studies have found that charter schools and voucher programs educate program participants at a lower cost per-pupil than DPSs. DeAngelis and others (2018) found that across 14 metropolitan areas, public charter schools received on average \$5,828 less revenue per pupil than DPSs in the 2016 fiscal year. In a study of 16 voucher programs, Leuken (2018) found that the voucher programs generated average savings of almost \$3,100 per voucher recipient for State and local budgets in the 2015 fiscal year.

Indirect Procompetitive Effects

Finally, we turn to studies of the indirect procompetitive effects of school choice programs on DPSs. Such studies face several challenges. First, the penetration of choice programs in many areas of the United States is simply too small for robust procompetitive effects to have a reasonable chance of emerging. A DPS is little affected if it is only at risk of losing a handful of students to a choice program,

in which case it does not face much market pressure to improve. Where school choice programs have reached sufficient penetration to enable study, researchers must try to distinguish competitive efforts by a DPS to improve its quality from effects related to changes in the DPS student composition and effects related to changes in DPS funding. However, the recent growth of school choice programs is enabling a growing number of well-designed empirical evaluations.

Figlio and Hart (2014) and Figlio, Hart, and Karbownik (2020) study the impact on DPS students of the Tax Credit Scholarship program in Florida. The latter study focuses on the scaling up of the program in recent years. They exploit the fact that some students were more exposed to this expansion due to the differing availability of nearby private schools before the policy was implemented. Public school students more heavily exposed to competition experience improved test scores as well as fewer suspensions and absences. Positive effects of increased competition from private schools were largest for students from low-income families whose parents had less educational attainment. In addition, procompetitive effects on public schools increased over time as the program scaled up. Similarly, Chakrabarti (2008) finds that expansion of the private voucher program to religious schools in Milwaukee led to larger increases in public school test scores. In a review of the literature, Epple, Romano, and Urquiola (2017) conclude that studies generally find that private school vouchers improve the performance of students in DPSs. They also find little evidence that school choice gives rise to adverse sorting. There are examples where the students who leave DPSs for a voucher program are of higher, lower, or equal ability relative to the peers they leave behind. Moreover, because voucher programs are often targeted to lower-income families, voucher students tend to come from families with lower or equal income to their peers in the DPSs that they leave behind. The empirical evidence on the positive returns from scaling up voucher programs and the absence of adverse sorting effects suggests that many more students could benefit from an expansion of voucher programs.

Positive competitive effects have been found for charter schools as well. Gilraine, Petronijevic, and Singleton (2019) find that when North Carolina lifted caps on new charter schools, students who lived closer to new charter schools experienced larger growth in test scores. Ridley and Terrier (2018) find that the 2011 reform in Massachusetts, which raised the cap on charter schools, led to increased spending per-pupil in DPSs and a shift in DPS spending from support services to instruction, and they similarly find small positive effects of charter schools on the test scores of DPS students. Dispelling concerns related to sorting and peer effects, Epple, Romano, and Zimmer (2016) synthesize the findings from several studies showing that students who transfer to charter schools have a similar or slightly lower ability relative to the DPS from which they are drawn. In a survey of further research on this topic vis-à-vis charter schools, Anderson (2017) finds that charter schools often serve lower- or similarly performing students than DPSs.

Thus, the evidence from voucher and charter school studies alike suggest that there is little evidence to warrant fears about DPS students being left behind. Instead, such students tend to benefit from the improvement in their own schools that comes about from choice-induced educational competition.

As a final note, we return to the question of the fiscal effect of school choice programs on DPSs. As discussed, several studies have found that public charter schools and voucher programs educate students with less per-pupil public funding than DPSs. This implies that when a student switches from

the DPS to a choice program, the school district realizes savings that could be used to improve DPS education, although there may be an adjustment period before a district can realize those savings (Epple, Romano, and Zimmer 2016). To date, there has been relatively little research on this topic; but see Bifulco and Reback (2014) and Ladd and Singleton (2020) for case studies of New York and North Carolina. Buerger and Bifulco (2019) find that New York State school districts with larger charter school enrollments experience decreases in the cost of providing DPS education, both in the short run and the long run, though districts with only a small charter school presence can experience short-run increases in costs that are subsequently offset by efficiency gains. Some States provide temporary funding increases to DPSs to help them adjust to charter school expansion, including Massachusetts, as documented by Ridley and Terrier (2018).

Conclusion

School choice programs have grown dramatically over the past 30 years as evidence has accumulated about the benefits they provide. Parents are increasingly choosing alternatives to their assigned DPS as they seek out a higher-quality educational experience for their children. Federal policy has long supported school choice, both in the Trump Administration and in earlier administrations on both sides of the political aisle.

School choice can level the playing field and provide enhanced educational opportunity to all families, particularly when implemented to maximize competition and facilitate participation by disadvantaged students. The alternative to this modern form of school choice for the masses is the traditional system of school choice for the affluent and mobile, whereby those with financial means relocate to districts with better schools. In the traditional system, lower-income and minority students are disproportionately left behind in lower-performing schools, while other families may move away from neighborhoods that they enjoy solely to gain access to better schools. School choice programs that provide students with choices of public, charter, magnet, private, or home school can improve quality for all students, including those who remain in DPSs that are forced to adapt because of competitive pressure. Emerging empirical evidence has identified these positive effects at work in the United States.

As school choice continues to expand, lessons from existing programs can inform ways to maximize the benefits for children from all backgrounds. Research suggests that low-income and minority students tend to enjoy the greatest benefits, and the evidence on procompetitive effects suggests that substantial gains are possible from scaling up school choice. As a result, continuing to grow school choice programs is a promising way to reduce opportunity gaps and create a level playing field for all children. Research also suggests that a broader set of metrics should be used to assess school choice programs beyond standardized test scores in light of the evidence that such choice programs can improve outcomes later in life. Parents themselves are also a source of wisdom in that they can incorporate other aspects of quality into their decisionmaking than the criteria that are officially measured. Ultimately, a focus on expanding opportunity for all students combined with a commitment to innovation that is grounded in evidence can help improve educational quality for all children.

References

- Abdulkadiroğlu, A., P. Pathak, A. Roth, and T. Sönmez. 2006. *Changing the Boston School Choice Mechanism*. NBER Working Paper 11965. Cambridge, MA: National Bureau of Economic Research.
- Abdulkadiroğlu, A., P. Pathak, and C. Walters. 2018. “Free to Choose: Can School Choice Reduce Student Achievement?” *American Economic Journal: Applied Economics* 10, no. 1: 175–206.
- Anderson, K. 2017. “Evidence on Charter School Practices Related to Student Enrollment and Retention.” *Journal of School Choice* 11, no. 4: 527–45.
- Angrist, J., S. Cohodes, S. Dynarski, P. Pathak, and C. Walters. 2016. “Stand and Deliver: Effects of Boston’s Charter High Schools on College Preparation, Entry, and Choice.” *Journal of Labor Economics* 34, no. 2.
- Ayscue, J., R. Levy, G. Siegel-Hawley, and B. Woodward. 2015. “Choices Worth Making: Creating, Sustaining, and Expanding Diverse Magnet Schools.” Civil Rights Project / Proyecto Derechos Civiles.
- Baude, P., M. Casey, E. Hanushek, G. Phelan, and S. Rivkin. 2020. “The Evolution of Charter School Quality.” *Economica* 87, no. 345: 158–89.
- Bifulco, R., and R. Reback. 2014. “Fiscal Impacts of Charter Schools: Lessons from New York.” *Education Finance and Policy* 9, no. 1: 86–107.
- Booker, K., T. Sass, and R. Zimmer. 2011. “The Effects of Charter High Schools on Educational Attainment.” *Journal of Labor Economics* 29, no. 2: 377–415.
- Boston School Finder. 2020. “What Is the Home-Based Assignment Policy (HBAP)?” <https://www.bostonschoolfinder.org/home-based-assignment-policy-hbap>.
- Buerger, C., and R. Bifulco. 2019. “The Effect of Charter Schools on Districts’ Student Composition, Costs, and Efficiency: The Case of New York State.” *Economics of Education Review* 69: 61–72.
- Butler, J., D. Carr, E. Toma, and R. Zimmer. 2013. “Choice in a World of New School Types.” *Journal of Policy Analysis and Management* 32, no. 4: 785–806.
- CEA (Council of Economic Advisers). 2020. “The Impact of Opportunity Zones: An Initial Assessment.” <https://www.whitehouse.gov/wp-content/uploads/2020/08/The-Impact-of-Opportunity-Zones-An-Initial-Assessment.pdf>.
- Chakrabarti, R. 2008. “Can Increasing Private School Participation and Monetary Loss in a Voucher Program Affect Public School Performance? Evidence from Milwaukee.” *Journal of Public Economics* 92, nos. 5–6: 1371–93.
- Chakrabarti, R., and J. Roy. 2010. “The Economics of Parental Choice.” *Economics of Education* 3: 336–42.
- Cohodes, S., E. Setren, and C. Walters. 2020. “Can Successful Schools Replicate? Scaling Up Boston’s Charter School Sector.” *American Economic Journal: Economic Policy*, forthcoming. <https://www.aeaweb.org/articles?id=10.1257/pol.20190259>.

- CREDO (Center for Research on Education Outcomes). 2009. "Multiple Choice: Charter School Performance in 16 States." Stanford University.
- . 2013. "National Charter School Study." Stanford University. https://credo.stanford.edu/sites/g/files/sbiybj6481/f/ncss_2013_final_draft.pdf.
- CRS (Congressional Research Service). 2018. "Higher Education Tax Benefits: Brief Overview and Budgetary Effects." <https://files.eric.ed.gov/fulltext/ED593609.pdf>.
- . 2019. "District of Columbia Opportunity Scholarship Program (DC OSP): Overview, Implementation, and Issues." <https://fas.org/sgp/crs/misc/R45581.pdf>.
- David, R. 2018. "National Charter School Management Overview." National Alliance for Public Charter Schools. https://www.publiccharters.org/sites/default/files/documents/2019-06/napcs_management_report_web_06172019.pdf.
- DeAngelis, C., P. Wolf, L. Maloney, and J. May. 2018. "Charter School Funding: (More) Inequity in the City." November. School Choice Demonstration Project.
- DeAngelis, C., and P. Wolf. 2019. "Will democracy endure private school choice? The effect of the Milwaukee Parental Choice Program on adult voting behavior." *The Journal of Private Enterprise*.
- DeAngelis, C., and P. Wolf. 2020. "Private school choice and character: More evidence from Milwaukee." *The Journal of Private Enterprise*.
- Dobbie, W., and R. Fryer. 2015. "The Medium-Term Impacts of High-Achieving Charter Schools." *Journal of Political Economy* 123, no. 5: 985–1037.
- DCPCSB (DC Public Charter School Board). 2020. "Student Enrollment." <https://dcpcsb.org/student-enrollment>.
- ECS (Education Commission of the States). 2018. "Open Enrollment Quick Guide." <https://www.ecs.org/wp-content/uploads/Open-Enrollment-Quick-Guide.pdf>.
- EdChoice. 2019. "Fast Facts on School Choice." <https://www.edchoice.org/engage/fast-facts/>.
- . 2020a. "The ABCs of School Choice." January 7. <https://www.edchoice.org/wp-content/uploads/2020/01/2020-ABCs-of-School-Choice-WEB-OPTIMIZED-REVISED.pdf>.
- . 2020b. "Types of School Choice." <https://www.edchoice.org/school-choice/types-of-school-choice/>.
- . 2020c. "Wisconsin—Milwaukee Parental Choice Program." <https://www.edchoice.org/school-choice/programs/wisconsin-milwaukee-parental-choice-program/>.
- EdSurge 2020. "What's the Plan? How K-12 School Districts Are Preparing to Resume and Reopen." <https://www.edsurge.com/research/guides/what-s-the-plan-how-k-12-school-districts-are-preparing-to-resume-and-reopen>.
- Egalite, A., J. Mills, and P. Wolf. 2017. "The Impact of Targeted School Vouchers on Racial Stratification in Louisiana Schools." *Education and Urban Society* 49, no. 3: 271–96.

- Epple, D., and R. Romano. 2008. "Educational Vouchers and Cream Skimming." *International Economic Review* 49, no. 4: 1395–1435.
- Epple, D., R. Romano, and M. Urquiola. 2017. "School Vouchers: A Survey of the Economic Literature." *Journal of Economic Literature* 55, no. 2: 441–91.
- Epple, D., R. Romano, and R. Zimmer. 2016. "Chapter 3: Charter Schools—A Survey of Research on Their Characteristics and Effectiveness." In *Handbook of the Economics of Education* 5: 139–208.
- Figlio, D., and C. Hart. 2014. "Competitive Effects of Means-Tested School Vouchers." *American Economic Journal: Applied Economics* 6, no. 1: 133–56.
- Figlio, D., C. Hart, and K. Karbownik. 2020. *Effects of Scaling Up Private School Choice Programs on Public School Students*. NBER Working Paper 26758. Cambridge, MA: National Bureau of Economic Research.
- Florida Department of Education. 2019a. "School Choice." <http://www.fldoe.org/schools/school-choice/>.
- . 2019b. "Florida's Charter Schools." <http://www.fldoe.org/core/fileparse.php/7696/urlt/Charter-Sept-2019.pdf>.
- . 2019c. "Fact Sheet: Florida Tax Credit Scholarship Program." <http://www.fldoe.org/core/fileparse.php/5606/urlt/FTC-Sept-2019-line.pdf>.
- Friedman, M. 1955. "The Role of Government in Education." In *Economics and the Public Interest*. New Brunswick, NJ: Rutgers University Press.
- Gilraine, M., U. Petronijevic, and J. Singleton. 2019. *Horizontal Differentiation and the Policy Effect of Charter Schools*. EdWorkingPaper 19-80. <https://edworkingpapers.com/sites/default/files/ai19-80.pdf>.
- Grube, L., and D. Anderson. 2018. "School Choice and Charter Schools in Review: What Have We Learned?" *Journal of Private Enterprise* 33, no. 4: 21–44.
- Harris, D., and M. Larsen. 2018. "What Effect Did the New Orleans School Reforms Have on Student Achievement, High School Graduation, and College Outcomes?" Education Research Alliance for New Orleans. July 15. <https://educationresearchalliancenaola.org/files/publications/071518-Harris-Larsen-What-Effect-Did-the-New-Orleans-School-Reforms-Have-on-Student-Achievement-High-School-Graduation-and-College-Outcomes.pdf>.
- Hitt, C., M. McShane, and P. Wolf. 2018. "Do Impacts on Test Scores Even Matter? Lessons from Long-Run Outcomes in School Choice Research." American Enterprise Institute. <https://www.aei.org/research-products/report/do-impacts-on-test-scores-even-matter-lessons-from-long-run-outcomes-in-school-choice-research/>
- Hoxby, C. 2003. "Chapter 8: School Choice and School Productivity: Could School Choice Be a Tide That Lifts All Boats?" In *The Economics of School Choice*, ed. C. Hoxby. Cambridge, MA: National Bureau of Economic Research.

- JEC (Joint Economic Committee). 2019. *Zoned Out: How School and Residential Zoning Limit Educational Opportunity*. November. SCP Report 6-19.
- Kaplan, L., and W. Owings. 2018. “Funding School Choice: Implications for American Education.” *Journal of Education Finance* 44, no. 2: 199–217.
- Ladd, H., and J. Singleton. 2020. “The Fiscal Externalities of Charter Schools: Evidence from North Carolina.” *Education Finance and Policy* 15, no. 1: 191–208.
- Leuken, M. 2018. *Fiscal Effects of School Vouchers: Examining the Savings and Costs of America’s Private School Voucher Programs*. Indianapolis: EdChoice.
- Massachusetts Department of Elementary and Secondary Education. 2016. “Enrollment Policy and Practice Frequently Asked Questions.” <http://www.doe.mass.edu/charter/guidance/2016-3-faq.html>.
- . 2019. “Massachusetts Charter School Waitlist Initial Report for 2019-2020 (FY20).” March 15. <http://www.doe.mass.edu/charter/enrollment/fy2020/waitlist.html#:~:text=73%20out%20of%2081%20charter,waitlists%2C%20representing%2027%2C743%20unique%20students.>
- Mayer, D., P. Peterson, D. Myers, C. Tuttle, and W. Howell. 2002. “School Choice in New York City after Three Years: An Evaluation of the School Choice Scholarships Program.” Mathematica Policy Research.
- McShane, M. 2020. “The School Choice Now Act and the Fate of Private Schools.” *Forbes*, July 23. <https://www.forbes.com/sites/mikemcshane/2020/07/23/the-school-choice-now-act-and-the-fate-of-private-schools/#2db492ef7278>.
- National Association of Realtors. 2018. “2018 Profile of Home Buyers and Sellers.” https://nationalmortgageprofessional.com/sites/default/files/NAR_HBS_2018_10_29_18.pdf.
- NCES (National Center for Education Statistics). 2019a. “Table 216.20. Number and Enrollment of Public Elementary and Secondary Schools by School Level, Type, and Charter, Magnet, and Virtual Status: Selected Years, 1990–91 through 2017–2018.” https://nces.ed.gov/programs/digest/d19/tables/dt19_216.20.asp?current=yes.
- . 2019b. “School Choice in the United States: 2019.” https://nces.ed.gov/programs/schoolchoice/ind_02.asp.
- . 2019c. “Table 235.20: Revenues for Public Elementary and Secondary Schools, by Source of Funds and State or Jurisdiction: 2016–2017.” https://nces.ed.gov/programs/digest/d19/tables/dt19_235.20.asp?current=yes.
- . 2019d. “Table 216.30: Number and Percentage Distribution of Public Elementary and Secondary Students and Schools, by Traditional or Charter School Status and Selected Characteristics: Selected Years, 1999–2000 through 2017–18.” https://nces.ed.gov/programs/digest/d19/tables/dt19_216.30.asp?current=yes
- . 2020a. “Public School Revenue Sources.” https://nces.ed.gov/programs/coe/indicator_cma.asp.

- . 2020b. "Revenues and Expenditures for Public Elementary and Secondary Education: FY 17." <https://nces.ed.gov/pubs2020/2020303.pdf>.
- Office of Senator Ted Cruz. 2019. "Sen. Cruz Introduces Education Freedom Scholarships and Opportunity Act." February 28. https://www.cruz.senate.gov/?p=press_release&id=4343.
- OII (Office of Innovation and Improvement). 2004. "Creating Successful Magnet School Programs." U.S. Department of Education. <https://www2.ed.gov/admins/comm/choice/magnet/report.pdf>.
- Ridley, M., and C. Terrier. 2018. *Fiscal and Education Spillovers from Charter School Expansion*. NBER Working Paper 25070. Cambridge, MA: National Bureau of Economic Research.
- Rothstein, J. 2006. "Good Principals or Good Peers? Parental Valuation of School Characteristics, Tiebout Equilibrium, and the Incentive Effects of Competition among Jurisdictions." *American Economic Review* 96, no. 4: 1333–49.
- Sass, T., R. Zimmer, B. Gill, and T. Booker. 2016. "Charter High School's Effect on Long-Term Attainment and Earnings." *Journal of Policy Analysis and Management* 35, no. 3: 683–706.
- Supreme Court of the United States. 2019. *Espinoza et al. v. Montana Department of Revenue*. https://www.supremecourt.gov/opinions/19pdf/18-1195_g314.pdf#page=23.
- Teach New Orleans. 2020. "Nola by the Numbers." <https://teachneworleans.net/nola-by-the-numbers/#:~:text=98%25%20of%20students%20attend%20charter,create%20its%20own%20unique%20culture>.
- Tiebout, C. 1956. "A pure theory of local expenditures." *Journal of Political Economy*. no. 5: 416-424.
- Urquiola, M. 2005. "Does school choice lead to sorting? Evidence from Tiebout variation." *American Economic Review* 95, no. 4: 1310-1326.
- U.S. Department of Education. 2015. "Welcome to ED's Charter Schools Program." <https://www2.ed.gov/about/offices/list/oii/csp/index.html>.
- . 2017. "The Federal Role in Education." <https://www2.ed.gov/about/overview/fed/role.html>.
- . 2019a. "School Choice Improvement Programs." <https://oese.ed.gov/offices/office-of-discretionary-grants-support-services/school-choice-improvement-programs/>.
- . 2019b. "The U.S. Department of Education's Charter Schools Program Overview." <https://oese.ed.gov/files/2019/12/CSP-Data-Overview-WestEd-7.22.2019.pdf>.
- . 2019c. "How Education Freedom Scholarships Can Expand Private and Home Education Options." <https://sites.ed.gov/freedom/2019/09/26/how-education-freedom-scholarships-can-expand-private-and-home-education-options/>.
- . 2020a. "Magnet Schools Assistance Program." <https://oese.ed.gov/offices/office-of-discretionary-grants-support-services/school-choice-improvement-programs-assistance-program-msap/>.

- . 2020b. “Secretary DeVos Awards \$65 Million to Create and Expand Public Charter Schools in Areas of Greatest Need.” <https://www.ed.gov/news/press-releases/secretary-devos-awards-65-million-create-and-expand-public-charter-schools-areas-greatest-need>.
- Walters, C. 2018. “The Demand for Effective Charter Schools.” *Journal of Political Economy* 126, no. 6: 2179–2223.
- Wang, K., A. Rathbun, and L. Musu. 2019. “School Choice in the United States: 2019. NCES Report 2019-106.” National Center for Education Statistics, U.S. Department of Education. <https://nces.ed.gov/pubs2019/2019106.pdf>.
- Wisconsin Department of Public Instruction. 2020. “2019–2020 Charter School Enrollment.” <https://dpi.wi.gov/sms/charter-schools/current>.
- Witte, J. 1998. “The Milwaukee Voucher Experiment.” *Educational Evaluation and Policy Analysis* 20, no. 4: 229-251.
- Wolf, P., B. Gutmann, M. Puma, B. Kisida, L. Rizzo, N. Eissa., and M. Carr. 2010. “Evaluation of the DC Opportunity Scholarship Program.” National Center for Education Evaluation and Regional Assistance. <https://ies.ed.gov/ncee/pubs/20104018/pdf/20104018.pdf>.
- Wolf, P., B. Kisida, B. Gutmann, M. Puma, N. Eissa, and L. Rizzo. 2013. “School Vouchers and Student Outcomes: Experimental Evidence from Washington, DC.” *Journal of Policy Analysis and Management* 32, no. 2: 246-70.
- Zimmer, R., B. Gill, K. Booker, S. Lavertu, T.R. Sass, and J. Witte. 2009. “Charter Schools in Eight States: Effects on Achievement, Attainment, Integration, and Competition.” RAND Corporation.



ABOUT THE COUNCIL OF ECONOMIC ADVISERS

The Council of Economic Advisers, an agency within the Executive Office of the President, is charged with offering the President objective economic advice on the formulation of both domestic and international economic policy. The Council bases its recommendations and analysis on economic research and empirical evidence, using the best data available to support the President in setting our nation's economic policy.

www.whitehouse.gov/cea

October 2020