The National Charter School Landscape

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First established in Minnesota in 1991, a charter school is a publicly funded elementary or secondary school that is privately managed by an entity that enters into a short-term contract with the appropriate authorizing agency, which might be the state, the district, or an independent board. This contract temporarily offers greater flexibility in exchange for heightened accountability, exempting the school from many rules and regulations that apply to traditional, district-run schools. In return, the charter school agrees to meet a set of performance goals before its charter expires and it must apply for renewal. Currently, there are approximately seven thousand charter schools serving 3.2 million students in the United States.[1] The majority of these schools are brick-and-mortar schools run by nonprofit organizations, although some states such as Virginia and Michigan do allow for-profit providers and twenty-one states permit virtual charter schools.[2] Although some of the best-known charter school networks adhere to a common "no excuses" pedagogical approach featuring strict discipline and an unwavering focus on maximizing students' test score gains, there is great pedagogical diversity in this sector, with charter schools dedicated to the arts, science and technology, dual-language instruction, and single-sex instruction available to parents who share those preferences. In many states, it is also possible for students to attend a conversion charter school, which is the result when a district school converts to a charter school if a majority of teachers or parents, or both, are supportive of the reform proposal. It is typically the case that conversion charter schools were previously low-performing district schools facing immense pressure to stimulate improvements in student outcomes, but this is not universally true.[3] Sometimes a high-performing district school converts to charter status in part because of the freedom that status confers from regulations and restrictions on their operations.[4] Finally, most charter schools do not engage in collective bargaining with their teachers.

Various arguments have been presented as motivation for school choice broadly, and charter schools specifically. The libertarian rationale, advanced by intellectuals such as John Stuart Mill, presents an argument for school choice as a way to preserve individual liberty, a hedge against indoctrination by the state, and a strategy for gaining more widespread support for a universal educational system. The economic argument, associated with Milton Friedman, is that a rising tide lifts all boats because schools of choice create a competitive environment that promotes higher performance by all schools, regardless of sector.[5] Sociologist James Coleman reasons that school choice facilitates the creation of voluntary communities defined by higher levels of trust and social capital.[6] From a political

science perspective, John Chubb and Terry Moe reason that the district-run traditional public school system inevitably leads to excessive bureaucratization and is at odds with education's goal of personalization, which they argue is essential for effective instruction.[7] Another justification for charter schools is the innovation argument.[8] Supporters such as Joe Nathan claim charter schools spur experimentation and the development of new ideas and practices, which neighboring district schools can imitate if they appear to be successful.[9] Finally, modern-day advocates and academics such as Howard Fuller have advanced the humanitarian rationale for school choice, which is that wealthy families already exercise self-funded forms of school choice and are privileged to experience feelings of self-determination as a result. Formal programs that use state funds to expand school choice to lower-income families represent a form of social justice. This latter argument of school choice as a means to advance equity can be a source of tension among social justice advocates who are active in the area of education reform.

Political resistance to charter schools is fueled, in part, by teachers' unions. Labor unions often work in tandem with other organizations and groups, including school districts, as political opponents fighting charter school expansion on four fronts: in the legislature, in the courts, in the battle to influence public opinion, and by attempting to unionize charter school teachers. For example, after schools across the country began to shut down in spring 2020 in an effort to curb the spread of COVID-19, the Pennsylvania Association of School Administrators (PASA) moved quickly to lobby the state for a moratorium on cyber charter school enrollments while traditional public schools are closed.[10] Mark DiRocco, PASA's executive director, said, "It would be very disruptive for everyone involved if students tried to pivot the last few months to cyber charters. It could have been a huge financial hit at a time school districts need all the resources they can [get]."[11] The state legislature and Gov. Tom Wolf sided with the union, agreeing to freeze cyber charter school funding based on enrollment counts from March 13, 2020, the date when the state's shutdown began. As a result, cyber charter schools cannot receive any funding for new students accepted after that date until the shutdown is lifted.

As another example of political resistance to charter schools, in October 2016 the sixty-four-member board of directors of the nation's oldest civil rights group, the National Association for the Advancement of Colored People (NAACP), ratified a resolution calling for a moratorium on charter school expansion. Education advocates responded passionately.[12] Black education and faith leaders wrote a letter to the civil rights organization's leaders asking them to rethink their stance on charter schools, a petition opposing the moratorium collected over three thousand signatures, and two organizations—the Black Alliance for Education Options and the National Alliance for Public Charter Schools—invited NAACP leaders to discuss the implications of such a moratorium for black families. In response, an NAACP task force was assembled and embarked on a seven-city tour to discuss the subject. Nevertheless, the organization's position on the issue remained unchanged. In July 2017, the task force issued a wide-ranging report recommending an end to for-profit charter schools

and a wider reduction in overall charter school autonomy. In an apparent softening of its stance a year later, NAACP President Derrick Johnson told *Politico* his organization was not taking the position that it was opposed to all charter schools, acknowledging, "There are some charter schools that have some really good best practices. . . . Our position is a quality education should be afforded to all children."[13] Nevertheless, on the issue of charter schools, tension persists among education reformers of color.

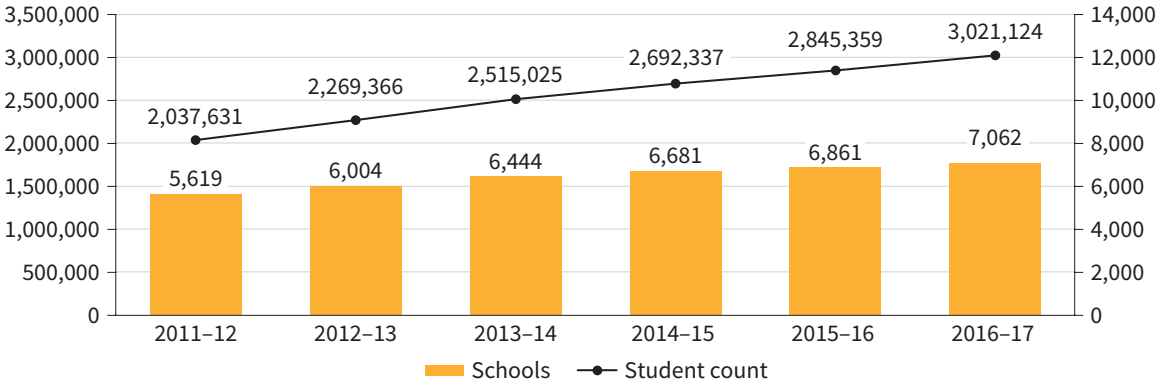
In the sections that follow, I review enrollment statistics, sharing descriptive statistics about this fast-growing sector. I then discuss factors affecting enrollment growth and review the research literature on the short- and long-run effects of attending a charter school or having one open near a district school. The section that follows discusses contemporary issues charter schools face, and the concluding section offers evidence-based recommendations.

Charter Sector Enrollment Statistics

In fall 2000, enrollment in charter schools was just 448,000 students but grew to over three million students by 2016, a mammoth 571 percent increase.[14] Much of this growth occurred in the most recent five-year span for which we have data. But the impressive acceleration observed around 2012 in particular has slowed in more recent years. National charter school student enrollment counts jumped by almost a quarter of a million students between 2012–13 and 2013–14 (245,659 students), representing a remarkable 11 percent growth rate (figure 1). In more recent years, the percentage change in student enrollment remains positive but has dropped to an annual increase of about 6 percent (appendix A). The same pattern is observed in the count of charter schools by year, which started this period with annual growth rates of 7 percent (or 385 net growth in schools), dropping to 3 percent (or 201 net growth in schools) in 2016–17.

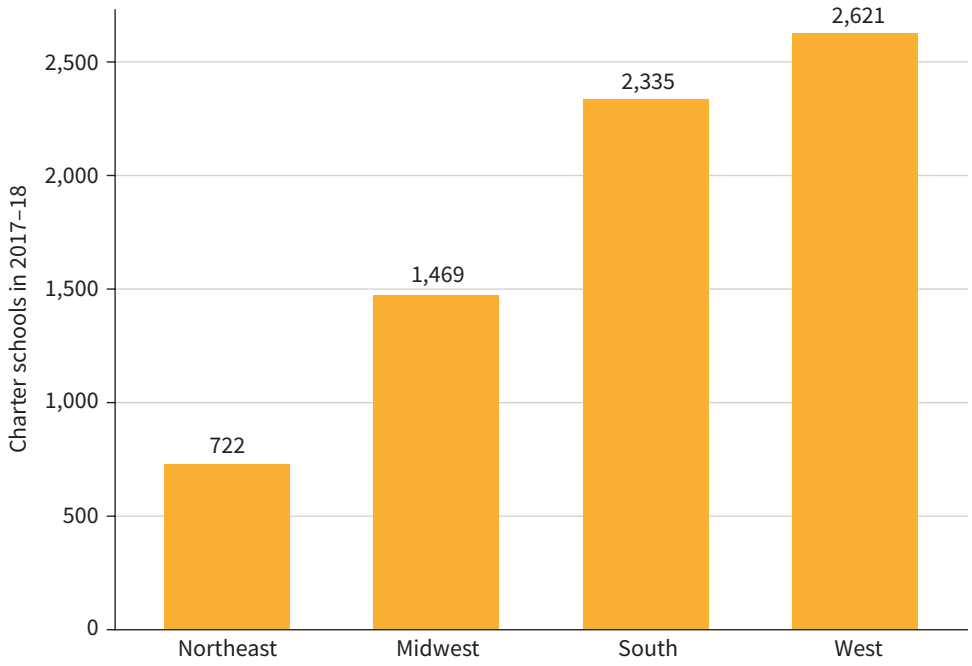
In addition to examining overall trends, we can delve more deeply into contemporary data available from the US Department of Education's Common Core of Data to identify regional

Figure 1. Charter school enrollment counts by year (2011–12 through 2016–17)



Source: National Alliance for Public Charter Schools, Data Dashboard.

Figure 2. Charter school counts by region, 2017–18



Defining the census regions: Northeast: *Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New Jersey, New York, Pennsylvania.* Midwest: *Indiana, Illinois, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.* South: *Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Alabama, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma, Texas.* West: *Arizona, Colorado, Idaho, New Mexico, Montana, Utah, Nevada, Wyoming, Alaska, California, Hawaii, Oregon, Washington*

Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a; "Public Elementary/Secondary School Universe Survey Geographic Data (EDGE)," 2017–18 v.1a.

and demographic trends in charter school enrollment. There were 7,147 charter schools in 2017–18, the most recent year for which data are available. In terms of raw counts, the largest proportion of these schools (2,621 schools, or 37 percent of all charter schools nationally) were located in the western part of the country (figure 2). In contrast, the northeastern region hosts the smallest number of charter schools (722 schools), representing about 10 percent of all charter schools nationally. Looking more closely at the western region, this statistic is largely driven by two states: California (home to 48 percent of charter schools in this region, 1,261 schools) and Arizona (21 percent, 549 schools).

In addition to regional variation, charter schools have penetrated certain cities and states to a greater degree than others. The city of New Orleans is an outlier, the only school district in the country that is virtually all charter. Other cities boast more modest charter market shares. In 2017–18, twenty-one districts had at least 30 percent of their students attending charter schools. In the District of Columbia, for example, 44 percent of public school students attend charter schools. In Boston, a 2010 state education reform law resulted

in charter market share jumping to 31 percent in 2015, up from just 15 percent five years earlier.[15] At the state level, as already alluded to, California has the greatest absolute number of charter school enrollees, with over six hundred thousand students in this sector in 2016, representing 10 percent of all public school students in the state. Indeed, there are eight states plus the District of Columbia in which charter school enrollment is 10 percent or more of total public school enrollment (Arizona, California, Colorado, Delaware, Florida, Louisiana, Michigan, and Utah; table 1).

Table 1. School and student counts of public elementary and secondary charter schools, 2016–17

	Number of charter schools	*Fall enrollment in charter schools*	*Charter schools as a percent of total public schools*	*Charter school enrollment as a percent of total fall enrollment in public schools*
United States	7,011	3,010,287	7.1	6.0
Alabama	1	n/a	0.1	n/a
Alaska	28	6,677	5.5	5.0
Arizona	550	185,588	23.8	16.6
Arkansas	75	27,896	6.9	5.7
California	1,248	602,837	12.1	9.7
Colorado	238	114,694	12.6	12.7
Connecticut	24	9,573	1.9	1.8
Delaware	27	14,722	11.8	10.8
District of Columbia	110	37,151	49.3	43.7
Florida	655	283,560	15.7	10.1
Georgia	84	66,905	3.7	3.8
Hawaii	34	10,669	11.7	5.9
Idaho	57	20,579	7.7	6.9
Illinois	63	65,169	1.5	3.2
Indiana	93	43,079	4.8	4.1
Iowa	3	398	0.2	0.1
Kansas	10	3,159	0.8	0.6
Kentucky	0	0	0.0	0.0
Louisiana	151	79,022	10.8	11.0
Maine	9	1,955	1.5	1.1
Maryland	49	22,366	3.4	2.5
Massachusetts	78	42,596	4.2	4.5
Michigan	376	147,061	10.9	10.0
Minnesota	220	54,211	8.8	6.2
Mississippi	3	523	0.3	0.1
Missouri	72	22,803	3.0	2.5
Montana	0	0	0.0	0.0
Nebraska	0	0	0.0	0.0
Nevada	49	40,074	7.5	8.5
New Hampshire	31	3,422	6.3	1.9

(continued)

Table 1 (*continued*)

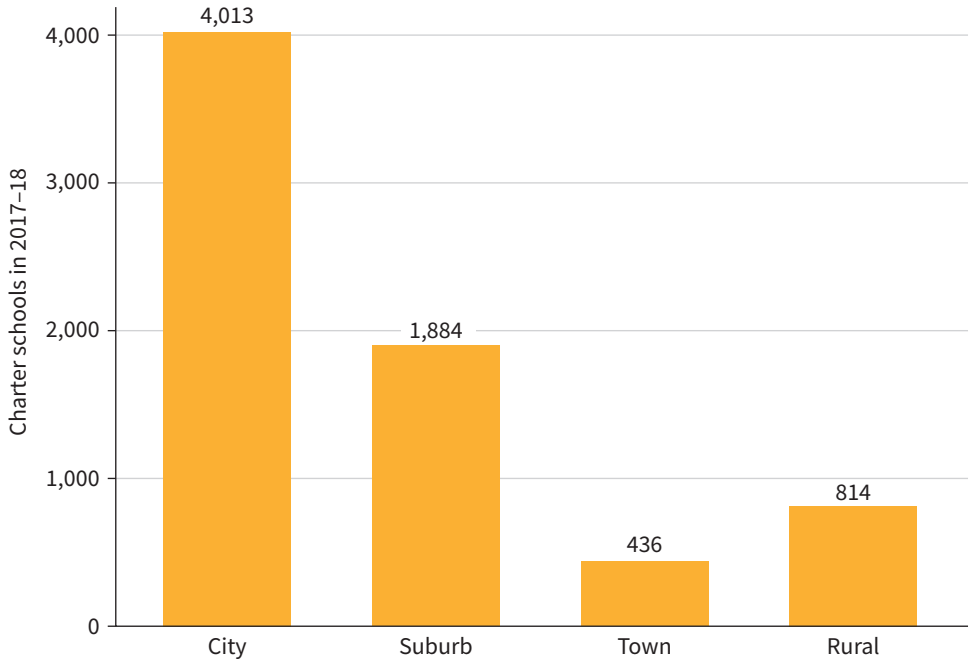
	Number of charter schools	*Fall enrollment in charter schools*	*Charter schools as a percent of total public schools*	*Charter school enrollment as a percent of total fall enrollment in public schools*
New Jersey	88	46,274	3.4	3.4
New Mexico	99	25,139	11.4	7.6
New York	267	128,784	5.6	4.8
North Carolina	167	92,281	6.4	6.0
North Dakota	0	0	0.0	0.0
Ohio	362	116,279	10.1	6.8
Oklahoma	48	24,248	2.7	3.5
Oregon	124	32,323	10.0	5.7
Pennsylvania	179	132,979	6.0	7.8
Rhode Island	30	8,137	9.5	5.8
South Carolina	70	32,343	5.6	4.2
South Dakota	0	0	0.0	0.0
Tennessee	104	34,984	5.9	3.5
Texas	753	310,846	8.5	5.8
Utah	124	71,417	12.0	10.8
Vermont	0	0	0.0	0.0
Virginia	8	1,176	0.4	0.1
Washington	8	1,676	0.3	0.2
West Virginia	0	0	0.0	0.0
Wisconsin	237	44,209	10.5	5.1
Wyoming	5	503	1.3	0.5

Source: US Department of Education, National Center for Education Statistics, Digest of Education Statistics, 2018.

In general, most charter schools across the United States are located in urban areas where large numbers of students are from low-income families and many are students of color (figure 3). Over half of all charters in 2017–18 were located in cities (4,013 schools, 56 percent of the total), and a quarter were located in suburban areas (1,884 schools, 26 percent).

In terms of demographic characteristics, students attending charter schools differ from their counterparts in traditional public schools. Charter school students are far more likely to be black (26 percent vs. 15 percent) or Hispanic (33 percent vs. 26 percent) than district school students. About one-third (32 percent) of charter school students are white, compared to approximately half (49 percent) of students in district schools. Furthermore, an examination of commonly used measures of disadvantage reveals charter school students differ from their counterparts attending district schools in important ways. Charter school students are lower achieving on previous years' standardized tests.[16] They are more likely to be eligible for free or reduced-price lunches.[17] In the 2016–17 school year, roughly one-third (36 percent) of charter schools were classified as high-poverty schools (defined as schools

Figure 3. Charter school counts by urbanicity of locale, 2017–18



Defining urbanicity: City (large, mid-size, small), Town (fringe, distant, remote), Suburb (large, mid-size, small), Rural (fringe, distant, remote)

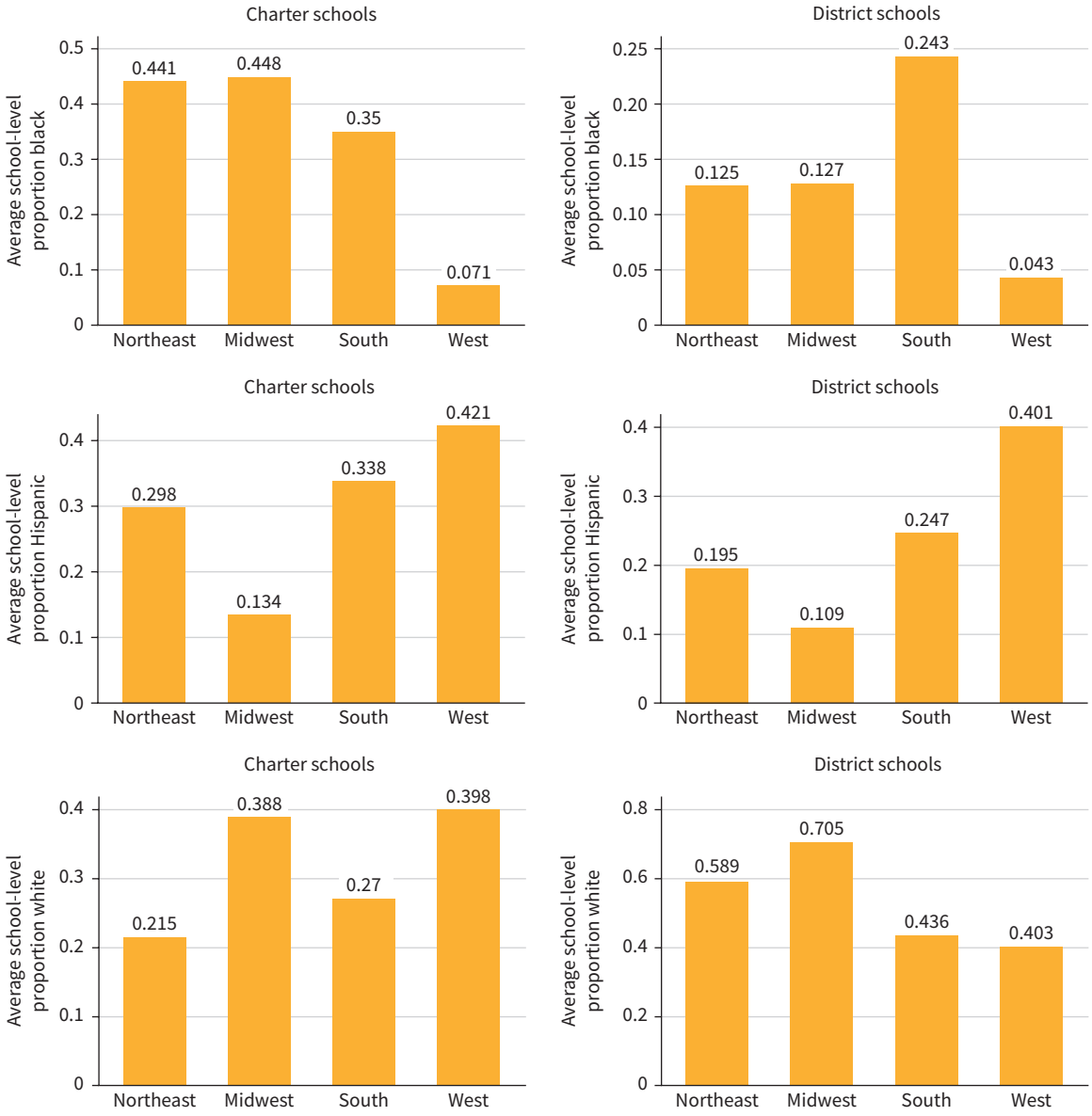
Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a.

in which more than three-quarters of the student body is eligible for free or reduced-price lunches), compared to about one-quarter (24 percent) of traditional public schools.[18]

Looking at the racial/ethnic makeup of individual charter schools, the average charter school is 28 percent black, 33 percent Hispanic, and 24 percent white. These characteristics vary regionally, however (figure 4). The school proportion of black students is highest in the Northeast (44 percent in charters, compared to 13 percent in district schools) and Midwest (45 percent in charters, compared to 13 percent in district schools). The school proportion of Hispanic students is highest in the West (42 percent in charters, compared to 40 percent in district schools) and South (34 percent in charters, compared to 25 percent in district schools). The school proportion of white students is highest in the West (40 percent in charters, compared to 40 percent in district schools) and Midwest (39 percent, compared to 70 percent in district schools).

We can also examine student poverty in charter schools by looking at the average proportion of students who qualify for free or reduced-price lunches (FRL; figure 5). This statistic is highest in the Northeast, where the average charter school FRL enrollment is 73 percent (compared to 46 percent in district schools), followed by the Midwest (66 percent, compared to 47 percent in district schools).

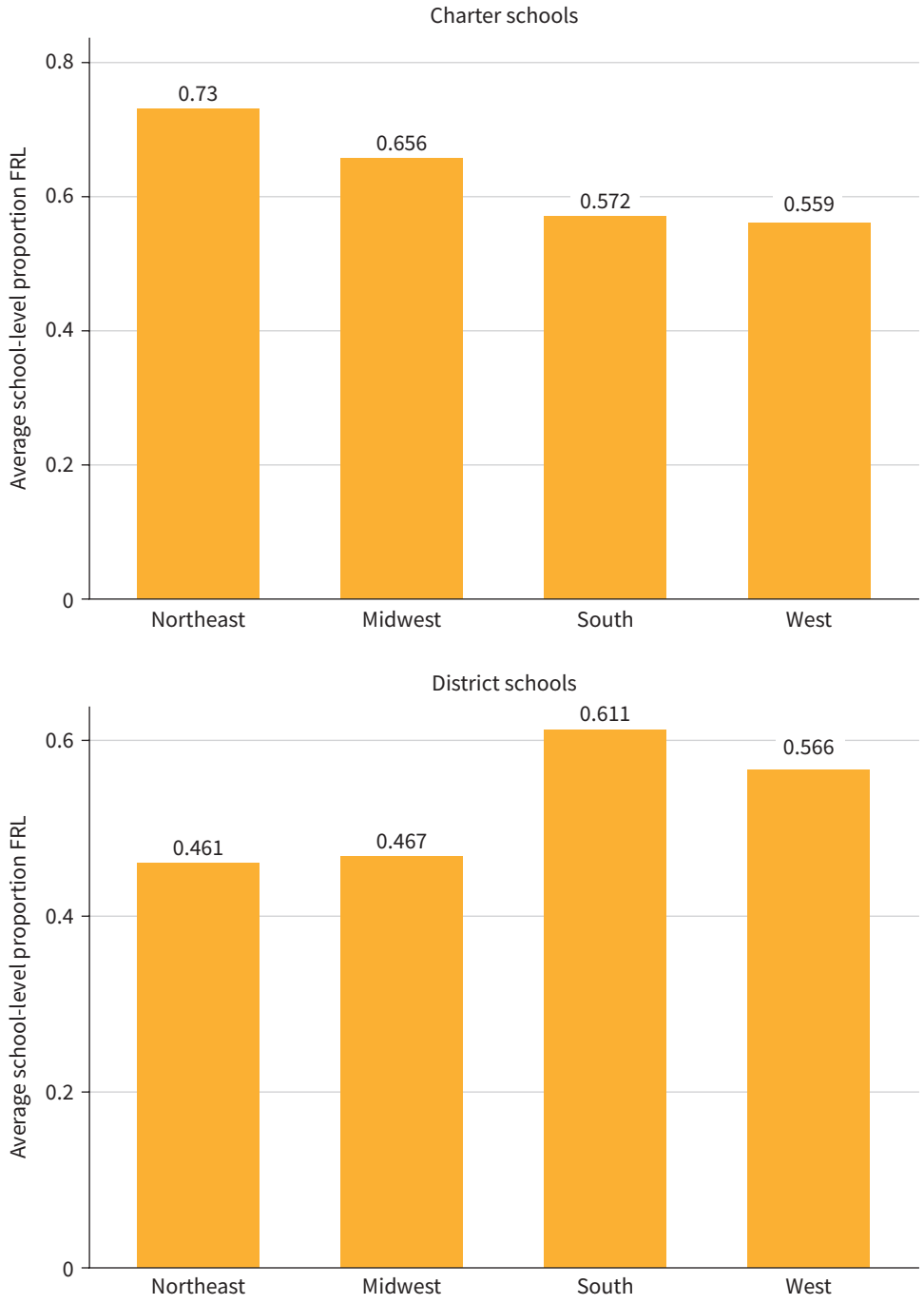
Figure 4. Average proportion of black, Hispanic, and white students in charter and district schools by region, 2017–18



Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a.

From a policy perspective, it is interesting to note that sustained growth in charter school enrollments can be observed over the school reform periods of presidents George W. Bush and Barack Obama (2001–17) in particular. These presidents made education a domestic policy priority and centered charter schools as a key component of those efforts.[19] Despite their differing preferences in other policy areas, both the Republican and the Democrat promoted charter school expansion with the lure of federal funding through the Charter

Figure 5. Average proportion of FRL students (those who qualify for free or reduced-price lunches) in charter and district schools by region, 2017–18



Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a.

Schools Program and the Charter Schools Facilities Program. They also incorporated support for charter schooling into their signature federal education reforms: the No Child Left Behind Act of 2001 and the competitive grant program known as Race to the Top of 2009. However, national charter school growth rates started to slow toward the latter half of this period. Up until 2014, the annual growth rate had been hovering between 6 percent and 9 percent. But in 2015 and 2016, the growth rate dropped below 2 percent.[20] In their study of California charter schools, Lake and colleagues propose three explanations for this slowdown: a scarcity of school facilities, fierce competition among existing charter schools for students and resources, and political backlash to this educational reform from traditional school districts and teachers' unions. For example, there is evidence of local school districts blocking facilities access to charter schools, bringing time-consuming and expensive lawsuits against their competitors, and making their compliance with already onerous administrative regulations challenging. At the same time, the teachers' unions have been paying for statewide advertising campaigns and coordinated charter school "resistance" movements. Addressing the slowdown "will require new ideas and new strategic investments," write Lake et al., calling for new ideas and strategies to reinvigorate growth.

In addition to policy considerations, forecasts of future growth in this sector should be informed by estimates of regional population growth. The US Census Bureau reports that Nevada and Idaho are the nation's fastest-growing states; their populations increased by about 2 percent from July 1, 2017, to July 1, 2018. Other states with high rates of population growth are Utah (1.9 percent) and Arizona (1.7 percent). In these regions, charter school enrollment will not necessarily come at the expense of enrollments in the district sector.

Parental Demand for Charter Schools

Ironically, in the face of these numerous barriers capping potential charter school growth, there is still significant unmet parental demand for charter school seats. This can be crudely estimated by observing charter school wait lists, which were estimated to exceed one million names in 2014.[21] Given inconsistencies in how these data are gathered within and between states, it is impossible to know how many names on these lists are duplicates, such as when families apply to more than one oversubscribed school. It is also impossible to judge how many families on wait lists would truly act on the opportunity to enroll in a charter school if given the chance. Nevertheless, the size of these lists is the first clue that there is significant unmet demand for charter school spots. It is also informative to examine the reasons for charter school closures, which are rarely driven by low student enrollment, and to gauge public opinion on the subject by way of nationally representative polls. In 2019, the *Education Next* poll reported that just under half (48 percent) of members of the general public are supportive of charter schools. A further 13 percent are ambivalent toward them—neither supporting nor opposing such schools. Support levels are higher among black (55 percent) and Hispanic (51 percent) respondents than whites (48 percent).

Related to these considerations about pent-up demand for seats in charter schools are the potential spillover effects associated with growth in this sector. Higher enrollments in charter schools may come at the expense of enrollment in the private school sector, which has experienced dramatic decreases in enrollment in recent decades.[22] Private school enrollment declines have been steepest among middle-class Hispanic families, dropping from 15 percent to 3 percent between 1959 and 2013.[23] Barrows et al. propose the overall threat to private school enrollment is related to charter school parents' relatively high levels of satisfaction with their schools' climate, student behavior, and school-to-parent communication.[24] That is, although parental satisfaction remains highest in absolute terms in private schools, second place is awarded to charter schools, which have the added benefit of being tuition-free. Indeed, many charter schools advertise themselves as mirroring a private school "brand" but with a secular ethos and free tuition.[25] In some cases, financially struggling Catholic schools have even converted to charter status, maintaining their teaching staff, curriculum, and small class sizes but completely removing religious instruction from the school day.[26]

Factors Affecting Charter School Growth

Several factors are likely influencing charter school growth trends. These include legal differences in charter school laws across the states, often shaped by political opposition to charter schooling; funding differences by state; and the availability of federal and philanthropic support.

Differences in Charter School Laws and Regulations across the States

Charter school legislation has been passed in forty-five states and the District of Columbia. The remaining five states without a charter law are Montana, Nebraska, North Dakota, South Dakota, and Vermont. Charter laws differ along a number of key dimensions, such as which entities are empowered to authorize new charter schools, whether teacher certification is required, the presence of a "cap" on the total number of charter schools permitted to operate in a state at any given time, and how schools are held accountable (table 2).

Table 2 presents a comparison of sample charter school regulations across states. For example, the question of whether the state provides start-up or planning grants to new charter schools can greatly influence which providers are able to get off the ground quickly and easily. Seventeen states currently provide start-up or planning grants for charter schools. For example, the Louisiana Charter School Start-Up Loan Fund provides zero-interest loans of up to $100,000 to assist with instructional purchases, facilities upgrades, technology acquisition, and so on. Both new and existing charter schools are eligible to apply for these funds, which are subject to legislative appropriation.

A related issue concerns facilities access for both new and existing charter schools. Thirty-four states have created explicit provisions to directly finance charter school facilities.

Table 2. Comparison of sample charter school regulations across states

Regulation	*Count of states answering "yes"*	*List of states answering "yes"*
Does the state provide start-up or planning grants to new charter schools?	17	AK, AZ, CA, CT, DE, IL, IN, LA, NV, NM, NY, OH, OK, PA, RI, UT, VA
Does the state have provisions that directly fund charter school facilities?	34	AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IN, LA, MA, MI, MN, MS, NV, NH, NM, NY, NC, OH, OK, OR, PA, RI, SC, TN, UT, WA, WY
Does the state have provisions that indirectly fund charter school facilities?	44	AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, KS, LA, ME, MD, MA, MI, MN, MS, MO, NV, NH, NJ, NM, NY, NC, OH, OK, OR, PA, RI, SC, TN, TX, UT, VA, WA, WV, WI, WY
Does the state have a cap on the total number of charter schools permitted to operate?	18	AL, AR, CA, DC, IL, IA, ME, MA, MS, NM, NY, OH, OK, RI, TX, WA, WV, WI
Does the state have any regulations or policies in place that specify who should provide student transportation to charter schools?	16	CT, DE, FL, ID, IA, KS, LA, MA, MN, NH, NJ, OH, OK, OR, PA, TX
Do charter school teachers have to be certified?	36	AL, CA, CO, CT, DE, FL, HI, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MS, NV, NH, NJ, NM, NY, NC, OH, OR, PA, RI, SC, TN, TX, UT, VA, WA, WI, WY
Does state law permit virtual charter schools?	21	AZ, CO, FL, GA, HI, ID, IL, IN, KS, LA, ME, MI, MN, NV, NH, OH, OK, OR, PA, UT, WI

Source: Education Commission of the States.

In California, Proposition 39 requires every traditional public school district to make space available to charter schools operating in that district sufficient to accommodate students who live in that district. Nevertheless, savvy districts have become adept at using bureaucratic tactics to delay charter school facilities requests, such as being slow to respond to requests to renew the one-year leases the law requires of them.[27] Connecticut also provides facilities funding, but awards are made through a competitive grants program that assigns higher priority to charter school applicants that can demonstrate they have also been awarded nonstate sources of funding. Even in states that don't directly fund charter school facilities, there are often indirect funding sources that can be tapped, and many states offer both direct and indirect funding opportunities, given the salience of this issue. Specifically, forty-four states offer indirect facilities funding to charter schools. In many cases, such as in Alabama, Alaska, Maine, and Mississippi, what this looks like is receiving the right of first refusal to lease or purchase district-owned facilities when they become available. Georgia's policy is more generous, as charter schools are not required to pay a lease for accessing unused district facilities. Furthermore, local school boards are responsible for the upkeep of these facilities and must maintain them at the same standard as district schools. In Indiana, school corporations can lease unused school facilities to charter schools for $1 per year or sell the facilities to them outright for $1.

Even in states that provide start-up grants to support new charter school providers and have access to facilities funding, a regulation that can nonetheless stifle growth is the presence of a cap that limits the number of charter schools in that state. Eighteen states currently impose such a cap. Maine's policy is particularly restrictive, stipulating that no more than ten charter schools may operate at any given time. Rhode Island's policy is slightly more generous, permitting the operation of up to thirty-five charter schools at any given time, provided that half of charter schools target at-risk student groups. Instead of capping the total number of charter schools permitted to operate, other states have opted instead to limit growth by capping the number of charter school approvals that can be granted annually. Mississippi permits fifteen charter school approvals per year. When states and locales hit their overall cap on charter school growth, as has recently occurred in Connecticut, Maine, Massachusetts, New York City, and Rhode Island, state leaders face tough policy decisions about how to proceed. Sometimes, charter school cap policies have built-in flexibility such that the cap automatically increases once the count of charter schools begins to approach the limit. In Arkansas, for example, the cap automatically increases by five schools whenever the number of existing charter schools comes within two schools of the existing cap.

Another key difference in charter school laws across the states is the question of student transportation to charter schools: Who must provide it and who pays for it? Currently, sixteen states have specific regulations or policies in place that specify who should provide student transportation to charter schools. In many cases, however, the question of funding for transportation is ambiguous. In Maine and New York, for example, individual charter schools must include in their charter applications a plan for how they will address students' transportation needs. In North Carolina, charter schools may contract with the local school district for transportation services, but they will be billed for these services. In Connecticut, on the other hand, the local or regional school board must provide transportation services for charter school students who live in that district. Similarly, in Delaware, the transportation service can be provided by the school district, the charter school, or a third-party contractor, but the charter school is eligible for state transportation aid if it is the provider. Even among states that do not have a specific policy about the provision of transportation for charter school students, transportation accommodations may be observed. In Washington, DC, for example, both traditional public school and charter school students are eligible for public transportation discounts.

Another regulation of consequence for charter schools relates to teacher certification. Such regulations are widespread, with provisions observed in thirty-six states. Not all state regulations are the same, however. In some cases, the teacher certification requirement applies to fewer than 100 percent of teaching staff, and uncertified teachers are simply required to be working toward certification. In Connecticut, for example, only 50 percent of teachers need to be traditionally certified, but the remaining 50 percent must be alternatively certified or be working toward standard certification.

Finally, it is helpful to observe the influence of politics on charter school regulations. In 2017, Massachusetts voters shot down Question 2, which would have modestly altered the cap on charter schools by permitting the establishment of up to twelve new schools per year.[28] In light of equity concerns, priority would have been given to applicants who sought to establish new charter schools in the state's lowest-performing public school districts. Despite receiving support from high-profile public figures, including then US secretary of education John King, and despite the fact that supporters of the ballot initiative outspent opponents by almost $10 million, Question 2 was rejected by 62 percent of voters.[29] Even in the city of Boston, which has documented the largest positive charter school impact estimates in the United States, the "no" votes won 159,940 to 99,781. This outcome is perhaps puzzling, given that the National Association of Charter School Authorizers deems Massachusetts' charter school application and review process among the most rigorous in the nation and numerous studies have shown particularly large, positive impacts of Boston charter schools on the educational outcomes of the city's most disadvantaged students. But it points towards the political disadvantage of orienting an education policy around urban, low-income families, mobilizing what are arguably the weakest constituents. The messaging war was ultimately won by key public officials, including Democratic Mayor Marty Walsh and Sen. Elizabeth Warren, who spoke out in public opposition to Question 2.

Charter School Funding

The specifics of charter school funding formulas vary by state but, typically, charter schools receive whatever base level of support the state would have allocated for the student to be educated in a district school and none of the local revenue generated from property taxes or bond measures.[30] Charter schools also usually receive state and federal categorical funding streams to support special populations, such as extra funds for economically disadvantaged students or those with special educational needs. This includes Title I funds to support students in poverty; Title II funds for teacher professional development; Title III, VI, VII, and IX funds for special student subgroups; and IDEA (Individuals with Disabilities Education Act) funds for students with disabilities. The flow of these funds varies between and even within states, however. In some cases, federal funds are received by the local public school district and subsequently distributed to charter schools. In other cases, these funds stay with the public school districts, which then provide the special services to students in charter schools.

The common policy decision to direct just the state sources of revenue and none of the local funds toward charter schools has different implications by state. On average, across the United States, the state contributes 47 percent and the local district contributes 45 percent of the total revenues for public elementary and secondary education, with the remaining 8 percent provided by the federal government (table 3). In states such as Illinois and New Hampshire where a greater portion of overall educational revenue comes from local sources (67 percent and 61 percent, respectively), every additional charter school enrollee actually improves the fiscal outlook for the district he departs, as more funds are left behind that

Table 3. Revenues for public elementary and secondary education by state (2015–16)

	Revenues in thousands of dollars ($)				*Revenues (%)*		
	Total	**Local**	**State**	**Federal**	**Local**	**State**	**Federal**
United States	$678,378,476	$303,824,317	$318,572,978	$55,981,180	45	47	8
Alabama	7,586,636	2,591,770	4,148,799	846,066	34	55	11
Alaska	2,497,340	573,693	1,614,053	309,593	23	65	12
Arizona	10,225,235	4,238,042	4,694,392	1,292,800	41	46	13
Arkansas	5,383,382	2,008,641	2,750,455	624,286	37	51	12
California	85,779,627	27,542,328	50,967,666	7,269,632	32	59	8
Colorado	10,237,008	5,038,762	4,475,646	722,600	49	44	7
Connecticut	11,697,383	6,473,865	4,718,878	504,641	55	40	4
Delaware	2,190,905	750,420	1,257,941	182,544	34	57	8
DC	2,274,302	2,048,093	n/a	226,209	90	n/a	10
Florida	27,929,250	13,734,743	10,963,798	3,230,709	49	39	12
Georgia	19,617,068	8,756,085	8,993,752	1,867,232	45	46	10
Hawaii	3,031,312	59,026	2,711,156	261,130	2	89	9
Idaho	2,413,672	581,097	1,576,287	256,288	24	65	11
Illinois	27,704,831	18,684,782	6,687,655	2,332,394	67	24	8
Indiana	12,437,534	4,529,251	6,909,225	999,058	36	56	8
Iowa	6,657,857	2,590,700	3,583,116	484,041	39	54	7
Kansas	6,297,498	1,789,870	3,976,653	530,976	28	63	8
Kentucky	7,634,758	2,568,095	4,179,014	887,650	34	55	12
Louisiana	8,930,136	3,910,197	3,883,978	1,135,961	44	43	13
Maine	2,809,790	1,505,907	1,106,375	197,509	54	39	7
Maryland	14,420,623	7,243,758	6,334,951	841,914	50	44	6
Massachusetts	17,962,854	10,274,138	6,788,790	899,926	57	38	5
Michigan	19,835,653	6,136,833	11,937,148	1,761,671	31	60	9
Minnesota	12,725,423	3,505,065	8,506,328	714,029	28	67	6
Mississippi	4,712,456	1,607,939	2,412,932	691,584	34	51	15
Missouri	11,147,752	6,510,008	3,676,108	961,637	58	33	9
Montana	1,781,468	706,227	850,640	224,601	40	48	13
Nebraska	4,351,337	2,551,637	1,438,008	361,692	59	33	8
Nevada	4,683,088	2,598,356	1,668,136	416,596	55	36	9
New Hampshire	3,055,956	1,876,842	1,005,148	173,966	61	33	6
New Jersey	29,671,607	15,758,639	12,666,167	1,246,800	53	43	4
New Mexico	3,987,279	647,002	2,792,814	547,463	16	70	14
New York	65,776,757	35,003,275	27,460,780	3,312,702	53	42	5
North Carolina	14,072,129	3,701,020	8,735,404	1,635,705	26	62	12
North Dakota	1,705,036	564,234	985,340	155,462	33	58	9
Ohio	24,956,848	11,829,089	11,202,038	1,925,720	47	45	8
Oklahoma	6,270,084	2,518,436	3,030,336	721,312	40	48	12
Oregon	7,377,456	2,952,336	3,861,421	563,698	40	52	8
Pennsylvania	29,892,129	16,615,708	11,238,423	2,037,997	56	38	7

(continued)

Table 3 (*continued*)

	Revenues in thousands of dollars ($)				*Revenues (%)*		
	Total	**Local**	**State**	**Federal**	**Local**	**State**	**Federal**
Rhode Island	2,485,803	1,265,241	1,029,125	191,437	51	41	8
South Carolina	9,442,258	4,041,777	4,505,718	894,762	43	48	9
South Dakota	1,461,886	816,118	444,457	201,311	56	30	14
Tennessee	9,596,867	4,061,738	4,434,856	1,100,272	42	46	11
Texas	58,954,734	28,626,935	24,104,698	6,223,101	49	41	11
Utah	5,447,070	2,017,234	2,975,371	454,465	37	55	8
Vermont	1,724,527	69,270	1,540,670	114,588	4	89	7
Virginia	15,927,348	8,571,742	6,297,600	1,058,006	54	40	7
Washington	14,830,244	4,513,039	9,218,360	1,098,846	30	62	7
West Virginia	3,433,438	1,170,422	1,906,257	356,760	34	56	10
Wisconsin	11,309,921	5,351,302	5,150,347	808,271	47	46	7
Wyoming	2,042,925	743,590	1,175,770	123,566	36	58	6

Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey (NPEFS)," fiscal year 2016, provisional version 1a.

do not automatically transfer to the charter school to support the transitioning student.[31] In contrast, states where a smaller portion of overall educational revenue comes from local sources, such as New Mexico (16 percent), total funding for charter school students will more closely match the per-pupil funding in the surrounding district schools.[32]

In summary, when a child departs a district school to attend a charter school, the sending school loses the federal and state funds associated with that child but usually retains the local funds. The ironic implication is that as charter school enrollments increase, the fiscal situation of the public school districts students depart can actually improve. The specifics of this phenomenon vary by state and can have meaningful implications for a state's ability to attract charter school operators to establish new campuses in states where the per-pupil funding will be significantly lower than what they are accustomed to working with.

The fiscal implications of charter school presence also depend on the portion of district school costs that are fixed versus variable. Scafidi analyzes state-specific school district finances to ascertain their ability to reduce expenditures in the face of a sudden reduction in the student population—such as when students depart for a charter school—by breaking total expenditures per student into short-run fixed costs and short-run variable costs (in the long run, all costs are variable).[33] Of the $12,450 spent nationally per student in 2008–09, 36 percent were fixed and 64 percent were variable costs. This breakdown varies across the states from a high of $13,741 in variable costs in New York to a low of $5,192 in variable costs in Utah. So long as the funding being redirected to the charter school is the same or lower than the variable costs of education for that district, the district's overall fiscal health

may actually be improved by the transfer as there will be more resources left behind for the students who choose to remain in the district schools.[34]

On the whole, charter schools almost always receive fewer dollars per pupil than the district schools against which they compete, even if they can demonstrate greater relative benefits to students. DeAngelis et al. estimate the typical share of funding of charters received in fourteen American cities they studied was $5,828 less than the revenues received by district schools in the 2015–16 school year, a gap of 27 percent.[35] As a result, some choice-friendly lawmakers have proposed finance reforms that attempt to level the playing field. In Florida, charter schools receive the same funds as traditional public schools, including federal, state, and local sources of funding such as discretionary millage levy funds and proceeds from the Florida Lottery. North Carolina's funding model is also unique. In addition to the state funds allocated by the state board of education, the local school district in which the child resides is required to transfer to the charter schools the per-pupil share of local funding for that year. In some states, these charter school funding reforms have been pushed across the finish line by robust, bipartisan coalitions. In Colorado, for example, the 2017 legislative session saw the passage of House Bill 17-1375, which requires school districts to share additional money raised from local property tax increases known as mill levy overrides with charter schools. The bill's prime sponsors were Brittany Pettersen (D) and Lang Sias (R) in the state House of Representatives and Angela Williams (D) and Owen Hill (R) in the state senate, demonstrating the bipartisan coalition required to secure its passage.

The Role of the Federal Government

The federal government's role in supporting charter schools consists of a collection of laws, regulations, and funding priorities. If this feels haphazard, it's largely an artifact of the variation across the states in charter school regulations (discussed above) and the lack of a clear national charter school policy.

The primary avenue through which the federal government supports charter schools is the federal Charter School Program (CSP), which was created in 1994 as part of the Improving America's Schools Act, a reauthorization of the Elementary and Secondary Education Act, and noticeably expanded under presidents Bush and Obama.[36] In fiscal year 2020, the CSP has a budget of $400 million, thus maintaining the prior year's funding level. Nevertheless, the future of this program is uncertain in light of the Trump administration's proposals in spring 2020 to merge education awards into a single block grant, which would effectively decrease overall funding for charter schools. Other federal sources of funding that have been accessed by charter schools include the Community Facilities Direct Loan & Grant Program, administered through the US Department of Agriculture; the Credit Enhancement for Charter School Facilities Program (US Department of Education); the State Charter School Facilities Incentive Grants (US Department of Education); and four programs run by the US Treasury Department: New Markets Tax Credit Program, CDFI Bond Guarantee Program, private activity bonds, and Qualified Zone Academy Bonds.[37]

Charter management organizations with an impressive track record of academic success, particularly schools that follow what has been termed a "no excuses" model, often find it easier to secure support for scaling up. These schools follow a common set of pedagogical practices that include high expectations for academic achievement, strict discipline, high-intensity tutoring, a longer school day or year, and data-driven instruction. For example, the KIPP network of charter schools received a five-year, $50 million US Department of Education Investing in Innovation scale-up grant in 2010, fueling impressive growth in student enrollment from about 27,000 in 2010 to over 59,000 students in 2015.[38]

Even if the overall dollar value of the federal government's investment in charter schools is relatively modest, it can serve as a catalyst for charter school growth. When New Orleans was rebuilding after Hurricane Katrina decimated both its physical and political infrastructure on August 29, 2005, the city was faced with the choice of rebuilding the dysfunctional, corrupt, and poorly performing public school system that had existed before the storm or starting afresh with an entirely new system built to maximize choice and accountability.[39] Under President Bush, the federal government played an important role in supporting the development of charter schools in that city by informing state and local officials just one month after the storm of a $20.9 million federal grant program for the purpose of opening new charter schools. Private foundations and nonprofit organizations also made significant investments in that city to support the transition to a "portfolio model" of school choice. This list includes the Gates, Broad, Fisher, and Walton Family foundations and the New Schools Venture Fund. Thus, although many groups ultimately played important roles in supporting the city's transition to an all-charter district, the federal carrot served as a timely inducement that helped launch new charter schools during a critical policy window when such a major change was possible.

Finally, charter school growth may also be affected by the competitive environment their introduction often creates. Districts like Miami-Dade County Public Schools in Florida have opted to respond to the competitive pressure from charter schools by dramatically expanding their own portfolios of district schools of choice, including magnet schools, career academies, and international programs.[40] As a result, more than three-quarters of all Miami-Dade students are currently enrolled in a school of choice, creating stiff competition among providers.

Charter School Impacts

The Charter School Achievement Effects Literature

On average, charter schools tend to perform about as well as their traditional public school counterparts. But findings from the charter school achievement effects literature vary greatly, depending on whether the analysis sample incorporates only the most popular charter schools or a more representative sample of all charter schools in a state or region. Experimental studies that leverage the natural randomization produced by admission

lotteries for oversubscribed charter schools—primarily, these are urban charter schools serving large proportions of low-income and minority students—are very helpful for generating rigorous causal impact estimates of the effect of attending an oversubscribed school. Studies of this subset of schools have revealed remarkably large positive impacts on student achievement. But lottery studies of charter schools following a "no excuses" model can rarely be generalized to describe the average charter school student's experience. Quasi-experimental or observational study designs, on the other hand, incorporate a much broader range of schools in their samples by using statistical adjustments in an attempt to approximate an experiment's robust research design. Below, I review the findings from both sets of literature.

The vast majority of lottery-based studies have been conducted in urban centers, where the number of student applications to charter schools far exceeds the number of seats available. This generates a treatment group and a comparison group that are identical, on average, in terms of both observable (e.g., family background) and unobservable (e.g., motivation) characteristics. Studies from these locations have revealed statistically significant, large, and educationally meaningful achievement gains for lottery winners.[41] Particularly dramatic gains have been observed for disadvantaged students, students of color, and English language learners.[42] Boston charters in particular have been extensively studied and have been shown to substantially boost both math and English language arts scores.[43] The magnitude of these positive impacts is remarkable. For example, Cohodes et al. estimate achievement gains of 0.26 standard deviations in math and 0.14 standard deviations in English language arts for middle school students.[44] For high school students, they observe even larger gains of 0.35 standard deviations in math and 0.27 standard deviations in English language arts.

While many of the lottery-based studies discussed so far focus on cities in the northeastern states, there have been two large-scale, lottery-based studies of charter school effectiveness that rely on multistate samples.[45] Gleason and colleagues estimate the academic impacts of thirty-six charter middle schools in fifteen states, concluding that the charter schools in their sample are neither more nor less successful than district schools in improving math or reading test scores.[46] A closer examination of the specific school effects reveals a wide range of diverging impacts, however, with school-specific impacts ranging from –0.78 to +0.65 standard deviations in math and –0.43 to +0.33 standard deviations in English. The most successful schools were those serving low-income students, usually in urban areas. A second multistate study of charter school impacts focuses on charter school management organizations (CMOs), which are operators of networked charter schools that share a common ethos, instructional approach, and other resources.[47] Test score impacts for the CMOs in this study were positive, but not statistically significant. Although informative, it is important to note that neither of these studies includes a nationally representative sample of states or charter schools. Alternative methodologies must be employed, therefore, to study greater numbers of charter schools, a literature we turn to next.

While excess demand for a limited number of charter school seats creates ideal conditions for an experimental study of charter school effectiveness, the majority of charter schools are not oversubscribed and thus don't lend themselves to an analysis of this type. The Center for Research on Education Outcomes (CREDO) at Stanford University addresses this problem by utilizing an observational research design to calculate impact estimates for students attending a more representative sample of charter schools by comparing their performance to that of a virtual twin, which represents a simulation of their expected academic achievement if they had not switched into a charter school. A robustness analysis of the CREDO matching model by Ackerman and Egalite comparing the CREDO estimates to those produced by an alternative, quasi-experimental research design reports estimates that are similar in both magnitude and direction to those produced by the CREDO approach, generating confidence in the validity of this matching model.[48] Two recent CREDO studies merit closer discussion.

First, a CREDO study of the national charter school landscape pooled data from twenty-seven states over a six-year time frame to generate an average charter school impact estimate in what is widely regarded as the most comprehensive and influential study of charter school impacts conducted to date.[49] The study estimates learning gains that are small and positive in reading (about 1 percent of a standard deviation) and null impacts in math. Second, a CREDO study of urban charter schools incorporated data from forty-one urban areas in twenty-two states.[50] Using the same matching design, the urban charter study reports positive impacts of 0.04 standard deviations in reading and 0.06 standard deviations in math. Effects are largest for students of color, low-income students, and those with special educational needs.

CREDO also produces state-specific charter school reports. Evidence from the West Coast, where charter school enrollment is at its highest, merits closer attention. In California, for example, a 2014 CREDO report estimates a small positive charter impact of 0.02 standard deviations in reading and a small negative impact of –0.02 standard deviations in math. In Arizona, a 2009 CREDO report estimates a small negative effect of –0.01 standard deviations in reading and –0.04 standard deviations in math. By a student's third year of attendance at an Arizona charter school, however, the impact is insignificant in both subjects.

Collectively, this body of research reveals that charter schools are heterogeneous in the effects they have on student achievement. Many charter schools are no more effective than their district school counterparts at raising student test scores. However, research has consistently shown that particular charter school networks with a common set of attributes have dramatic impacts on student learning. In particular, the nation's largest network of charter schools—Knowledge Is Power Program (KIPP)—has been shown to have large positive impacts on student test scores.[51] In Boston, for example, KIPP students have been shown to score 0.40 standard deviations higher in math and 0.12 standard deviations higher in English language arts.[52] In Newark, New Jersey, Winters reports first-year impact estimates of 0.39 standard deviations in math and 0.40 standard deviations in English language arts for

students attending charter schools operated by either the KIPP or Uncommon charter school networks.[53]

The Charter School Attainment Effects Literature

Even though many of the studies discussed so far demonstrate remarkable impacts on students' cognitive ability, as measured by standardized test scores, it doesn't necessarily follow that charter school students will enjoy persistent, longer-term benefits, such as better preparation for college and the workforce. The charter school attainment effects literature addresses this concern by studying long-run outcomes that signal meaningful human capital gains, including college enrollment, college graduation, and earnings in adulthood.

The attainment literature is promising, although positive impacts are not uniformly observed. In Boston, for example, Angrist et al. show that charter high schools boost students' college preparation and entry, increasing their SAT scores, Advanced Placement credits, and enrollments in four-year colleges.[54] In Chicago, charter school lottery winners were 10 percentage points more likely to enroll in college.[55] A randomized, controlled trial of 1,177 students in KIPP middle schools across the country revealed students who attended a KIPP middle school after winning an application lottery were 12.9 percentage points more likely to enroll in a four-year college than similar students who lost the lottery.[56] Charter high school students in Florida and Chicago are 7 to 15 percentage points more likely to graduate from high school and 8 to 10 percentage points more likely to enroll in college.[57] Charter high school students are also more likely to persist beyond their first year of college (a 12 percentage point advantage) and enjoy 12 percent higher earnings by the time they reach age twenty-five.[58]

The attainment literature is not uniformly positive, however. A recent multistate study of charter middle schools found no relationship between students' test score performance and later college enrollment and graduation.[59] It may be the case that the steps needed to prepare students to perform well on achievement tests differ from the steps necessary to prepare students for college. Research on college preparation practices in KIPP high schools reveals deliberate efforts to promote advanced course-taking among students and more in-depth discussions about how to pay for college.[60] It is also interesting to note the limited body of research that has been conducted on students' behavioral outcomes, which might contribute to their longer-term attainment goals. Dobbie and Fryer show that attending a charter middle school in the Harlem Children's Zone in New York City is associated with a reduction in teen pregnancy (10.1 percentage points) for female students and lower incarceration rates (4.4 percentage points) for males.[61]

The Impacts of Charter Schools on the Districts in Which They Are Located

A question that is central to the policy debate on this issue is whether charter schools hurt neighboring district schools by draining resources and high-achieving peers. Charter

school proponents argue increased competition from these public schools of choice will induce districts to strategically rethink how education dollars are being allocated. Thus, the presence of a charter school can positively impact student achievement if the district schools use these reallocated funds to imitate effective charter practices, such as providing high-intensity tutoring, increasing instructional time by way of a longer school day or year, and prioritizing data-driven instruction. Opponents argue the loss of per-pupil funds that results from student transfers into charter schools hampers the ability of district schools to respond to competition by subjecting them to unfair fiscal pressure. One solution to this concern is to temporarily refund district schools for the loss of funds associated with declining enrollment owing to charter school expansion, thus holding them harmless during the transition period. Such temporary refund policies exist in New York, Illinois, New Hampshire, Pennsylvania, and Massachusetts. This is the context in which Ridley and Terrier directly assess the fiscal and educational impacts of charter school expansion in Massachusetts.[62] The researchers examine a 2011 state educational reform that lifted charter school caps in underperforming districts, finding that increased charter school attendance actually *increases* overall per-pupil expenditures in the traditional public schools by about 4.8 percent and shifts district expenditures toward instruction and away from "support services," which include services such as teacher training. They also find evidence that student achievement increases in the wake of charter school expansion. That is, moving from 10 to 15 percent of Massachusetts students enrolled in charter schools leads to an estimated 0.03 standard deviations increase in math scores and 0.02 standard deviations in English language arts. Given the unique nature of Massachusetts' funding formula, however, it is instructive to also review the findings of competitive effects studies that rely on data from other states, which I do in the next section.

Concerns about the scale-up of public school choice programs have prompted numerous "competitive effects studies" that test for changes in district schools' academic achievement that can be attributed to the presence of charter schools.[63] Broadly speaking, these studies generally find neutral to positive impacts on student achievement, with one exception. In Florida, for example, Sass reports modest positive effects on math achievement and null effects on reading scores.[64] Similarly, in New York City, Winters reports null to mildly positive effects in both math and English.[65] In North Carolina, Jinnai also finds positive achievement effects on students in overlapping grades.[66] In Michigan, Bettinger reports null effects.[67] In contrast, in an unnamed southwestern district, Imberman reports small, negative effects on elementary school students' math and language test scores and null effects on students in middle and high schools.[68] It is interesting to note that positive results are observed in states that have taken steps to ease the financial shock during the transition period for district schools as the charter sector grows.

A related concern is whether charter schools contribute to racial segregation across schools, which has fueled political pushback by the National Education Association and others.[69] A recent comprehensive examination of this question using national data over a

seventeen-year period and a rigorous research design finds there is a small increase in school segregation associated with expanding charter school enrollment. To put the small effect size in context, however, the authors calculate the expected benefit of totally eliminating all charter schools, reporting it would lead to a decrease of just 5 percent in the segregation of black and Hispanic students.[70]

Contemporary Issues

I turn next to the major contemporary issues facing the charter school sector, including the question of charter school authorizing; consideration of how subgroups of learners with unique educational needs fare in charter school environments, such as students with disabilities and English language learners; potential avenues for cooperation between the charter and district school sectors; and the issue of scaling up effective charter schools.

Charter School Authorizing

Charter school authorizers are independent bodies that grant or deny charter school applications. They also oversee existing charter schools and have the power to revoke a charter when appropriate. Evidence shows that charter schools closed by authorizers are disproportionately less effective than those that remain open.[71] The organizations or agencies granted the power to authorize charter schools vary by state and can include a statewide charter school commission (e.g., Alabama), the state board of education (e.g., Delaware), local school boards (e.g., Alaska), a county board of education (e.g., California), a school district (e.g., Colorado), community colleges and universities (e.g., Missouri), or a nonsectarian, nonprofit organization (e.g., Minnesota). Table 4 documents the specific authorizing models by state, revealing the most common model of charter school authorizing, which is to receive approval from the local school district. This approach to charter school authorization is present in forty states. The next most popular model across the states is to have the state board of education serve as an authorizing authority (twenty-one states) or some other statewide authorizing body, such as a charter school authorizing commission (nineteen states).

Are All Learners Well Served in Charter Schools?

Two student subgroups of particular interest include students with special educational needs and English language learners. Do these students enroll in charter schools at similar rates as district schools and are they well served by their schools of choice? Data on special education enrollments in Louisiana schools reveal an enrollment gap of 2.5 percentage points between the charter schools (of which 8.5 percent of students had a disability) and district schools (where 11 percent of students had a disability) in school year 2010–11, but this declined to 0.5 percentage points by 2013–14.[72] There are two important considerations worth bearing in mind when analyzing such gaps. The first is that each individual charter school cannot be expected to mirror the distribution of disabilities across an entire school

Table 4. Charter school authorizer types by state

State	*Local school boards*	*The state board of education*	*Other statewide authorizing body*	*An institution of higher education*	*A county, regional, or intermediate board of education*	*The state department of education*	*Other*
AL	X		X				
AK	X	X					
AZ		X	X	X			
AR	X	X	X			X	
CA	X	X			X		
CO	X		X				
CT	X	X			X		
DE	X					X	
DC	X		X				
FL	X			X			
GA	X	X	X				
HI			X	X	X	X	X
ID	X		X	X			
IL	X	X					
IN	X		X	X			X
IA	X	X					
KS	X	X					
KY	X						X
LA	X	X					
ME	X		X				
MD		X			X		
MA	X	X					X
MI	X			X	X		
MN	X			X	X		X
MS			X				
MO	X		X	X			
NV	X		X	X			
NH	X	X					
NJ	X						X
NM	X		X			X	X
NY	X	X		X			X
NC		X					
OH	X			X		X	X
OK	X		X	X			X
OR	X	X					
PA	X					X	
RI	X	X					X
SC	X		X	X			
TN	X	X	X				X

Table 4 (*continued*)

State	*Local school boards*	*The state board of education*	*Other statewide authorizing body*	*An institution of higher education*	*A county, regional, or intermediate board of education*	*The state department of education*	*Other*
TX	X						X
UT	X		X	X			
VA	X	X					
WA	X	X	X				
WV		X			X		
WI	X			X			X
WY	X						
Totals	40	21	19	15	7	6	14

Notes: The "Other statewide authorizing body" category refers to units that are distinct from the state board of education. This includes a statewide charter school "commission" (Alabama, Georgia, Hawaii, Idaho, Maine, Missouri, Tennessee, Washington), a "state board for charter schools" (Arizona, Indiana, Utah), a "charter schools authorizing panel" (Arkansas), the "state charter school institute" (Colorado), the "Public Charter School Board" (District of Columbia), the "Charter School Authorizer Board" (Mississippi), the "State Public Charter School Authority" (Nevada), the "Public Education Commission" (New Mexico), the "Statewide Virtual Charter School Board" (Oklahoma), and the "Public Charter School District Board of Trustees" (South Carolina). The "Other" category includes governing boards of nonprofit organizations (Hawaii, Minnesota), the state commissioner of education (New Jersey, Rhode Island, Texas), or a city executive (e.g., the mayor of Indianapolis, Indiana, has authorizing authority through the Indianapolis charter school board; similarly, in Kentucky, the mayor of a consolidated city or CEO of an urban-county government can serve as a charter authorizer). In Massachusetts, this category includes a type of charter school termed a "Horace Mann charter school," which requires approval by the local collective bargaining unit of that school district, in addition to approval by the district board of education. In New Mexico, if the statewide charter school authorizer doesn't rule on a charter school application in a timely manner, the approval decision goes to the state secretary of education. In New York, the district chancellor for an urban school district with a population greater than one million people can also serve as an authorizer. In Ohio, this category includes educational service centers, certain tax-exempt organizations, and city mayors. In Oklahoma, this category includes certain federally recognized Indian tribes. In Tennessee, this category includes the Achievement School District. In Wisconsin, this category includes the City of Milwaukee and Waukesha County.

Source: The Education Commission of the States.

district, just as a single school cannot be expected to offer the same wide range of services as an entire school district. Second, an important part of the special education gap between district and charter schools can be explained by differences in labeling practices. The same student who was classified as requiring special education services in a district school may lose this label after transferring to a charter school. Ackerman and Egalite show this in Florida data, where an individual student's probability of special education classification drops by 4 percent upon transfer to a charter school.[73] A study from Denver unpacks this finding further by comparing differences in the nature of disabilities recorded across sectors. Students who transfer into charter schools are no more or less likely to be classified as having speech and language disabilities or autism (two objectively diagnosed disabilities), but they are less likely to be recorded as having a specific learning disability, a classification that relies heavily on experts' subjective judgment and discretion.[74]

Setren examines the question of special populations using data from Boston charter schools.[75] The interesting paradox observed here is that students who transfer into a

charter school often lose the label that entitles them to targeted services and higher funding in the district schools they depart, yet the overall higher quality of the general education program in Boston charter schools results in even higher performance than they would have otherwise achieved. In terms of academic achievement, Setren observed that both of these student groups experienced large achievement gains after switching into a charter school, even among the most disadvantaged populations. For example, students with special educational needs who previously scored in the bottom third on the state exams scored 0.24 standard deviations higher in math after switching into a charter school. Similarly, those English language learners with the lowest level of English proficiency saw the biggest gains on the state test after enrolling in a charter school. Impacts weren't just limited to test score gains. Special education students who switched into a charter school were four times more likely to graduate from a two-year college, and English language learners experienced a doubling in their likelihood of enrolling in a four-year college.

Cooperation between the District and Charter Sectors

Thus, it appears that charter schools are successfully educating both general and special populations. Nevertheless, only 6 percent of all students, nationwide, are enrolled in such schools. A key policy question, therefore, is whether charter schools can have a broader impact on the districts in which they are located. Numerous avenues are available for cooperation between district and charter school sectors, including "co-location," which is when a district and a charter school share the same physical building but operate as two distinct schools. This practice is commonplace in cities such as New York, Los Angeles, and San Diego. The pairing arrangement can be purely functional, taking advantage of underused or vacant district-owned facilities to offer affordable classroom space to charter schools that are struggling to find appropriate facilities. In other cases, however, the co-location practice has more ambitious goals than simply sharing facilities. DeArmond, Nelson, and Bruns document the experiences of four co-location models that are explicitly collaborative.[76] In four districts, high-performing charter schools were paired with academically struggling district schools with the hope of improving performance in the traditional public school. The researchers studying these partnerships concluded that such models would require considerable resources and effort to achieve their ambitious goals of cross-pollination and mutual improvement, which haven't been fully realized in any of these locations yet. Despite disappointing findings in the realm of district school improvement resulting from sharing facilities with a high-performing charter school, the evidence is growing that district schools are at least not harmed academically by the presence of a charter school roommate. Cordes shows that students in a co-located district school experience achievement benefits of 0.09 standard deviations in math and 0.06 standard deviations in English language arts.[77] Data garnered from parent and teacher surveys at these schools suggest the mechanisms by which these gains occur likely include

higher academic expectations at the district school after co-location occurs, higher levels of student engagement, and improved levels of respect and school cleanliness.

How successful has the district sector been at imitating charter practices? Although no single school district has adopted the entire suite of "no excuses" practices at scale, early results are promising. For instance, pilot studies in Houston, Denver, and Chicago that focused on injecting best practices from high-performing charter schools into low-performing traditional public schools resulted in positive math impacts of 0.15 to 0.18 standard deviations; reading scores were unchanged.[78] Another study of low-performing traditional public schools that converted to charter status in New Orleans and Boston revealed exceptionally large positive impacts of 0.3 to 0.4 standard deviations per year in Boston and 0.2 to 0.4 in New Orleans. To learn more about the potential for these "charter school best practices" models to influence a broader cross-section of students in a city or state, it is instructive to turn next to the replication literature.

Can Effective Charter Schools Scale Up?

Although individual charter schools have shown impressive achievement impacts, a natural question is whether successful charter schools can be replicated. The answer to this scale-up question is not just intuitively interesting but could have policy implications for state and local bodies making charter school authorization decisions, for agencies deciding which campuses to prioritize when awarding start-up funds, and for program officers deciding how philanthropic investments in this area should be directed. Two major obstacles to the charter school scale-up challenge include labor market issues (can new campuses identify and attract highly talented teachers and leaders to staff their schools?), environmental factors (how successful is the new campus at soliciting support from the local community?), and differences in the student population served by new campuses (does the school leadership have the necessary expertise to serve a student body with perhaps different characteristics than students the network has previously served successfully?). The federal government does offer financial support for charter school replication, awarding large grants of approximately $100 million to IDEA Public Schools in 2019, for example. Research evidence supporting these investments is growing. Leveraging randomized admission lotteries from charter middle schools in Boston, Cohodes, Setren, and Walters examine the effectiveness of replication charter schools to test if their impacts are on par with those of their high-performing parent campuses.[79] Estimates of their effectiveness are impressive, and the large achievement gains initially observed tend to be replicated at the spin-off campuses.

Thus far, I have surveyed the national landscape on charter school policy and prevalence, reviewed the research literature in this area, and identified pressing policy issues as this particular education reform matures. In the next section, I draw on these statistics and observations to offer concrete policy recommendations.

Recommendations

The following practical policy recommendations would increase access to effective charter schools while keeping common goals such as promoting excellence and advancing equity in mind. Such changes range in complexity and ease of implementation.

Recommendation 1: Facilitate Expansion by Proven Providers

The first recommendation is to make it easier for "proven providers" to scale up their operations to serve a greater number of students. This can be accomplished by expediting the bureaucratic process for charter renewal and expansion, providing financial incentives to support their growth, or lengthening the time covered by their charter. In Missouri, for example, renewal charters can be approved for up to ten years; in Florida, high performers can be awarded a fifteen-year charter; and in North Carolina, the legislature has directed the state board of education to develop a fast-track approval process for high-performing charter schools seeking to replicate. Beyond easing the paperwork burden, it's also possible for states to financially support charter school growth. In Georgia, the state board of education is authorized to offer replication grants that make it easier for high-performing charter schools to expand their reach, with priority given to charter schools targeting special education and disadvantaged students and those proposing to serve rural areas of the state.

The political challenge to scaling up existing networks, however, is to do so in a way that is sensitive to the racial dynamics of education reform leadership. Without this awareness of the political dynamics surrounding this issue, attempts to scale up existing charter school networks will be met with resistance because so many of these organizations are led by white men, often backed by billionaire philanthropists, and frequently feature a "no excuses" model.[80]

Recommendation 2: Invest in Common Enrollment Systems

"Common" or "unified" enrollment systems are a simple reform that can greatly improve equity in access to charter schools. With a goal of simplifying multiple, burdensome application processes into a single, streamlined school enrollment procedure, these transparent enrollment systems feature one website, one deadline, and one application form. In New Orleans, for example, the One App system efficiently matches families to a school of their choice using the same complex algorithm that was developed by Nobel laureate Alvin Roth to match donor kidneys to patients for transplantation. Common enrollment systems such as this have been hailed as equity-enhancing tools as they can boost school choice participation by traditionally disadvantaged groups. In Denver, for example, participation in the common enrollment system increased enrollment in charter elementary schools by students of color, those who are eligible for free or reduced-price lunches, and those who speak English as a second language.[81]

The trade-offs involved in this transition are relatively modest, including a loss of autonomy for participating schools, which must coordinate common application dates, processes, and forms. If, however, individual schools are given the option about whether they agree to opt in to a common enrollment system, a viability threshold may not be reached, which implies a central decision maker may need to mandate all public schools' participation in such a system. Additionally, some may raise concerns about whether such systems reduce parental investment in the choice process by making it "too easy" for families to participate. Others may offer the opposite argument, making the case that such systems may increase parental investment by finally making it possible for a time- and resource-constrained parent to pay attention to school choice options. This last set of competing hypotheses represents testable assertions that can be measured as common enrollment systems become more commonplace.

Recommendation 3: Permit Experimentation in Charter Schools' Approach to Funding Retirement Benefits

In many states, underfunded teacher pension plans have led to serious fiscal distress and prompted reactions that depress current and future teacher salaries and serve as a major drain on general school funds that could otherwise go to support students. Marchitello estimates that 19 percent of all spending on American public and secondary education in 2014 went toward benefits (i.e., teacher health care and pension costs, which are often not reported separately), an increase of 24 percent from 2005.[82] For comparison, spending on instruction increased just 2.6 percent over that same time. Finding themselves in increasingly precarious positions, fiscally distressed states have enacted reforms that include increasing both employee and employer contribution rates (in Illinois, employer contribution rates are now as high as 39.1 percent), reducing benefits for new teachers (such as increasing the retirement age), and requiring new teachers to wait a longer period before vesting in the state's plan. On this latter point, nine states have recently increased the vesting period from five to ten years, which means a teacher departing after 9.5 years cedes every dollar of the employer contributions that have been made up to that point on his behalf. As a result of reforms such as these, Aldeman and Rotherham estimate that fewer than half of new teachers nationwide will stay in their jobs long enough to receive *any* pension benefits.[83] More innovative problem solving and experimentation are necessary to find more equitable solutions to the pension crisis, to assure new teachers they will likely receive promised future benefits, and to prevent the next financial crisis and recession from again completely undermining state retirement plans.

Interestingly, charter schools in nineteen states are permitted to opt out of their states' teacher pension plans. Research in five of those states—Arizona, California, Florida, Louisiana, and Michigan—finds that charter schools associated with a management organization are most likely to take advantage of this flexibility and opt out of the state pension plans.[84] The reasons given for opting out of a state plan include reduced costs, portable benefits, greater control over total teacher compensation, and more investment options. The alternative retirement

plans selected were most often a 401(k) plan (selected by 68 percent of opt-out charter schools surveyed) or 403(b) plan (selected by 25 percent of schools), with vesting occurring in a year or less and 100 percent employee matching up to some limit, usually 4.3 percent. Such experimentation is a welcome development that could yield workable solutions for states broadly. The trade-off of this reform involves public relations, as any changes to retirement benefits can be presented negatively as anti-teacher by reform-resistant groups, such as teachers' unions. Successful implementation, therefore, requires careful attention to honest and transparent messaging about the benefits and costs of such changes.

Recommendation 4: Codify Charter School Transportation Policies

As the charter school sector continues to scale up, the transportation need will become more pressing and greater numbers of families will feel the financial and temporal burden of figuring out school transportation for their children. In a study of parents in Denver, 40 percent of parents report the availability of transportation is a significant factor influencing their school choice.[85] As charter schooling grows in popularity, states should anticipate this growing need and formalize their charter school transportation plans now to better clarify which entity is responsible for providing student transportation and how this will be funded. Such steps are essential if growth in this sector is to continue at its current pace to meet parental demand and to promote equity in access.

School transportation is costly and complicated. In 2014–15, the most recent year for which national data are available, public school student transportation cost approximately $24 million annually, or $932 per pupil.[86] Thirty-one states currently offer transportation funding or services for charter school students, but the specific limitations on these services vary widely by state.[87] For example, charter school students in Indiana can participate in state-funded school transportation but only if their path from home to school aligns with an existing bus route. Restrictions such as this may become untenable as greater proportions of the school-age population express a desire to make the switch into schools of choice. We should anticipate that equity considerations will move to the forefront if low-income families in choice-rich locations cannot physically attend desirable schools. Middle-income families may also find themselves blocked from the exercise of school choice once they start to feel the direct burden of self-financing transportation costs. Facing these inequities, state leaders will find themselves grappling with tough political questions about which school-age residents of their state they have a mandate to transport and to which public schools, district or charter.

Recommendation 5: Relax Teacher Certification Rules

In an attempt to improve teacher quality, one approach policy makers have pursued has been to raise the minimum credentials required for entry into the profession. Teacher certification rules are present in all fifty states, and the charter school sector regularly finds itself subject to these same restrictions on who can teach and who cannot. Today, teacher certification regulations for charter school employees are present in thirty-six states, which is

an interesting restriction to place on otherwise largely autonomous schools given that there is little empirical evidence of the effectiveness of such rules when it comes to raising student achievement.[88] Releasing charter schools from traditional teacher certification rules would reduce the barriers to entry into teaching, reduce staffing shortages, and allow schools to attract mid-career professionals looking for a career change. If such experimentation proves fruitful, onerous certification rules could be relaxed for all schools nationally.

Recommendation 6: Pay Attention to Charter School Authorizer Quality

As the charter school sector continues to grow, it is a good time to consider what charter school authorization reform should look like and how these institutions might be prodded to create more effective systems of schools as opposed to simply monitoring compliance with bean-counting metrics. On the question of accountability, who should provide oversight for the authorizers themselves and what metrics should they rely on to judge authorizer performance? The "right" answers will vary according to local context, but a list of common questions to weigh can prompt helpful and productive debates.

Many have pointed toward Washington, DC, as an excellent charter school authorizer model worth emulating, but what is feasible and practical will vary by state. In Georgia, the state charter schools commission is regularly reviewed by an independent body to make sure it is following best practices for charter school authorizing. In Minnesota, it is the state commissioner of education who oversees the charter school authorizers, reviewing their performance every five years. In terms of what metrics these bodies rely upon, that too varies by state. In Hawaii, the oversight is focused on the academic performance of the charter schools the authorizer oversees. Unsatisfactory academic performance of a portfolio of charter schools can trigger a review of the authorizer. For underperforming authorizers, the sanctions are not immediate. In Alabama, for example, authorizers are given sixty days to remedy any problems before their chartering authority is revoked. It's also common for states to build in safety nets as a hedge against bad authorizers. In Oregon, for example, start-up charter school applicants who are denied a charter by the local school board can appeal to the state board of education. For states seeking to review their practices and regulations surrounding charter school authorization, it is helpful to consider the following set of questions:

- How are charter school authorizers held accountable for their decisions?
- What metrics are used to judge authorizer performance?
- What do sanctions for unsatisfactory authorizers look like?
- Under what circumstances is chartering authority revoked?
- What, if any, avenues for appeal are available when applications for new charter schools are denied?

Conclusion

The evidence reviewed here demonstrates positive short- and long-run effects for students who enroll in charter schools across the United States. In particular, these benefits are felt by low-income students, particularly students of color, living in urban areas. If this sector is to continue to expand, there are significant policy hurdles to be overcome at the state and local levels. These include differences in laws and regulations pertaining to charter schools across the states, the creation of more equitable funding practices, and attention to charter authorizer best practices.

Appendix A: Additional Descriptive Graphs on Charter School Enrollment Trends

National charter school student enrollment counts jumped by almost a quarter of a million students between 2012–13 and 2013–14 (245,659 students), representing an 11 percent growth rate (table A1). In more recent years, the percent change in student enrollment has dropped to an annual increase of about 6 percent. The same pattern is observed in the count of charter schools by year, which started this period with annual growth rates of 7 percent (or 385 net growth in schools), dropping to 3 percent (or 201 net growth in schools) in 2016–17.

Table A1. Charter school enrollment counts by year

	Schools			*Students*		
	N	Δ	*% change*	*N*	Δ	*% change*
2011–12	5,619			2,037,631		
2012–13	6,004	385	0.07	2,269,366	231,735	0.11
2013–14	6,444	440	0.07	2,515,025	245,659	0.11
2014–15	6,681	237	0.04	2,692,337	177,312	0.07
2015–16	6,861	180	0.03	2,845,359	153,022	0.06
2016–17	7,062	201	0.03	3,021,124	175,765	0.06

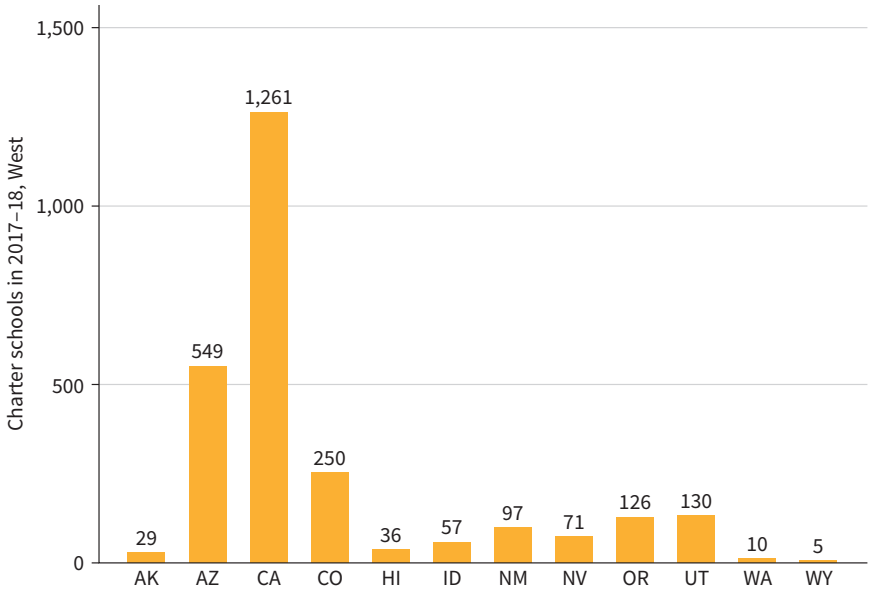
Notes: N signifies the count of schools or students by year; Δ signifies the change from the prior year, expressed as a count; % change signifies the change from the prior year, expressed as a percentage.

Source: National Alliance for Public Charter Schools, Data Dashboard.

Looking more closely at the western region (figure A1), which has the greatest total number of charter schools nationally, this statistic is largely driven by California (home to 48 percent of charter schools in this region, 1,261 schools) and Arizona (21 percent, 549 schools).

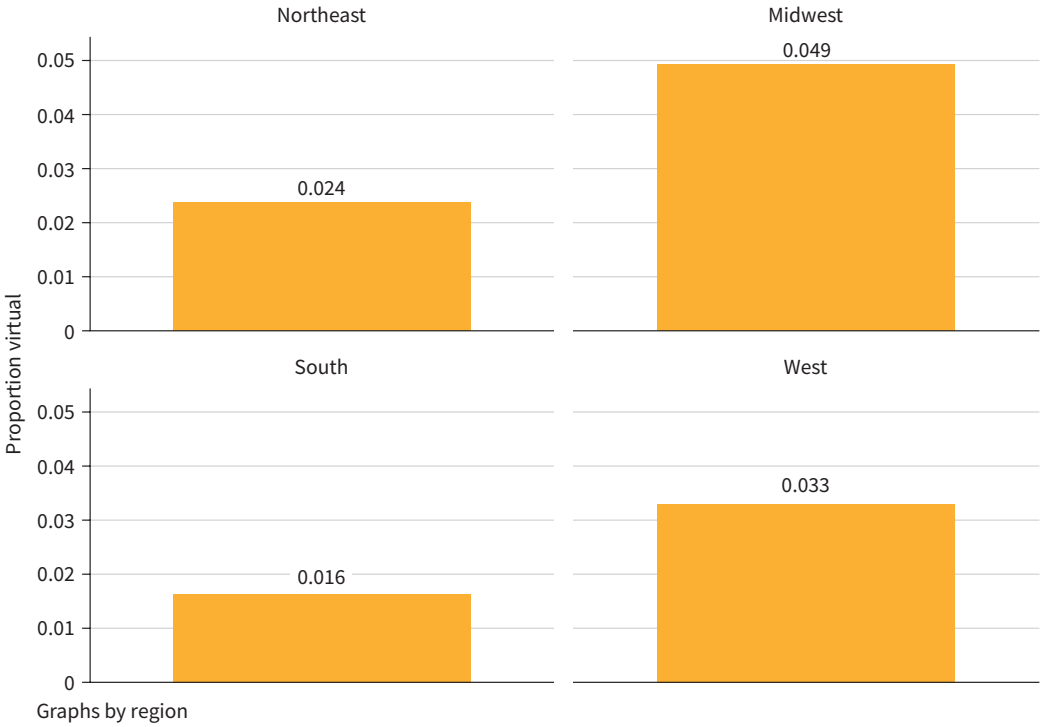
Just 3 percent of charter schools nationally are virtual schools. This percentage is highest in the Midwest (5 percent) and lowest in the South (2 percent) and Northeast (2 percent; figure A2).

Figure A1. Charter school counts by state, West region, 2017–18



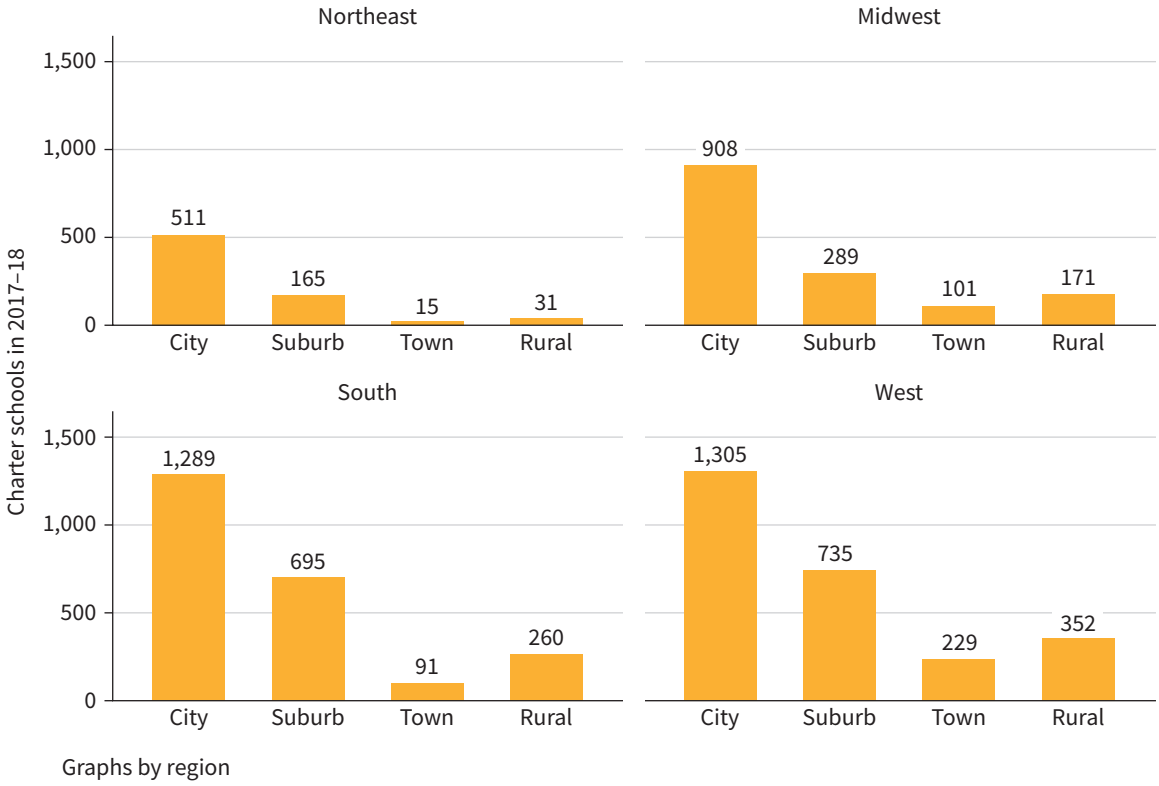
Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a; "Public Elementary/Secondary School Universe Survey Geographic Data (EDGE)," 2017–18 v.1a.

Figure A2. Virtual charter schools by region, 2017–18



Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a; "Public Elementary/Secondary School Universe Survey Geographic Data (EDGE)," 2017–18 v.1a.

Figure A3. Charter school counts by urbanicity of locale and region, 2017–18



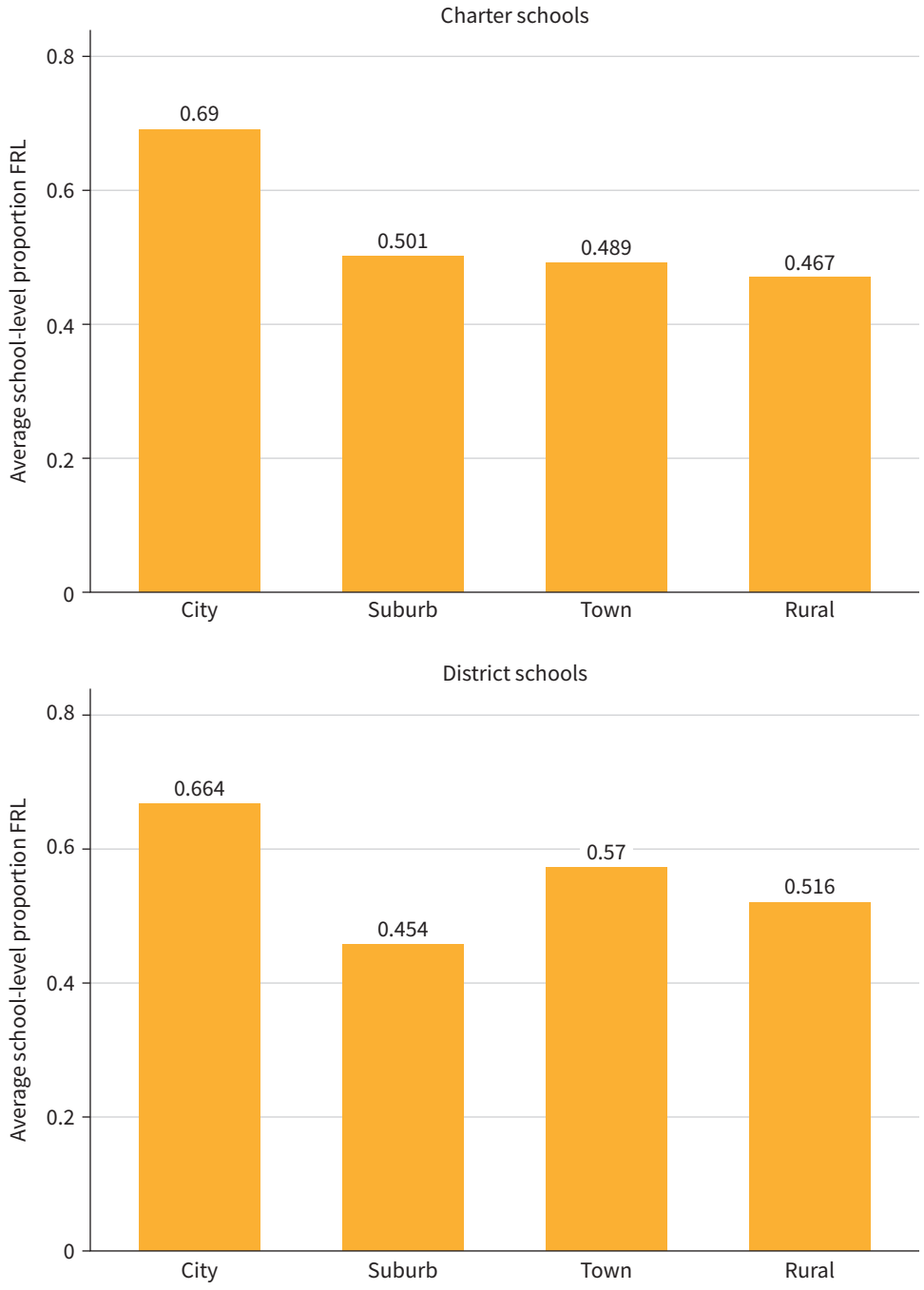
Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2017–18 v.1a, 2018–19 v.1a.

Most charter schools across the United States are located in cities (4,013 schools, 56 percent of total) or suburbs (1,884 schools, 26 percent). This pattern is mirrored within each individual region, with higher numbers of charter schools establishing in cities than in suburbs, towns, or rural areas across all four regions of the country (figure A3).

We can also examine student poverty in charter schools by looking at the average proportion of students who qualify for free or reduced-price lunches. This statistic is highest in the Northeast, where the average charter school FRL is 73 percent (compared to 46 percent in district schools), followed by the Midwest (66 percent, compared to 47 percent in district schools).

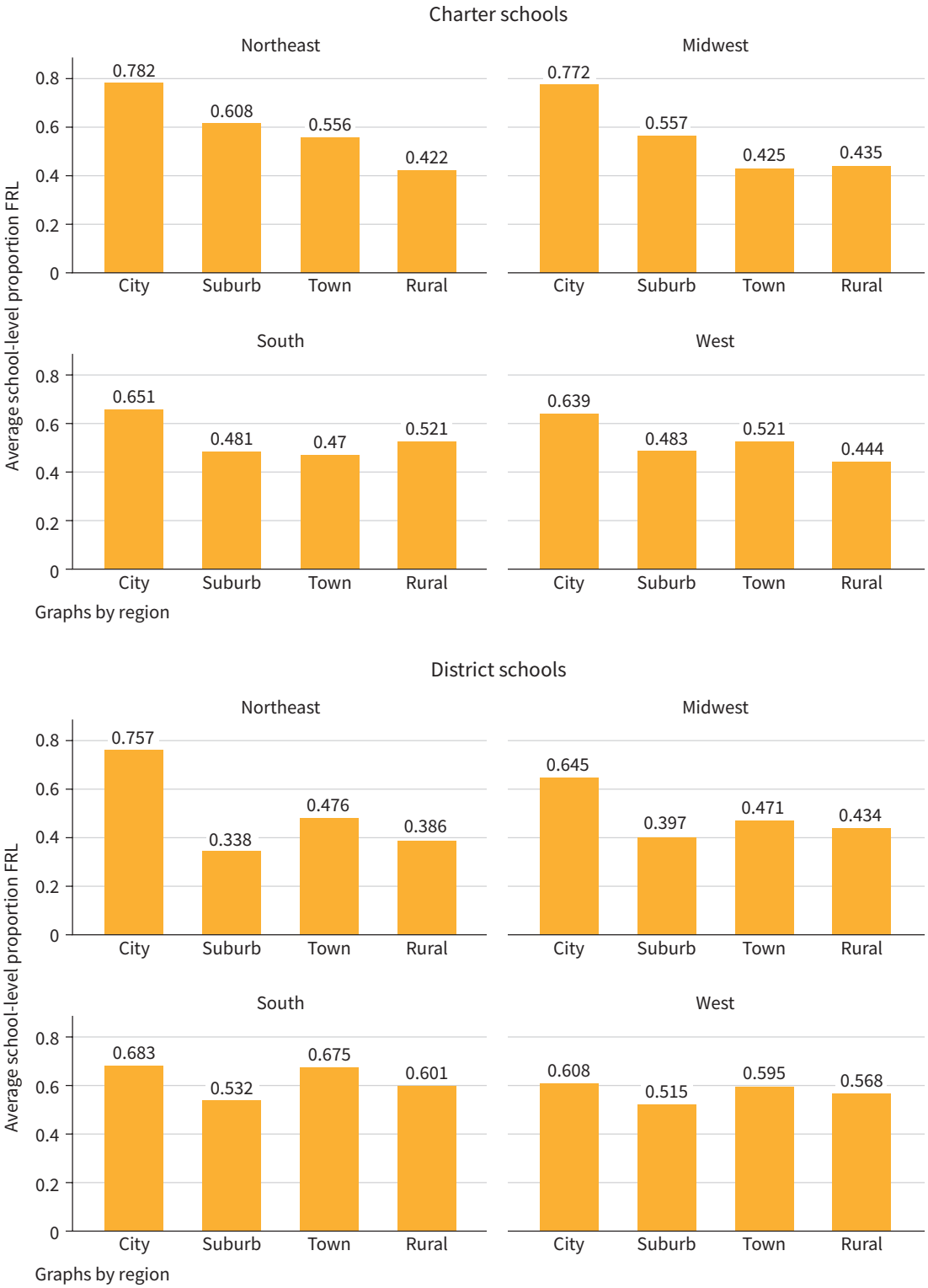
As we might expect, student poverty rates are highest in cities, where the average charter school FRL is 69 percent, compared to 66 percent in district schools (figure A4). This pattern is reflected across all regions of the country (figure A5).

Figure A4. Average proportion of FRL students (those who qualify for free or reduced-price lunches) in charter and district schools by urbanicity of locale, 2017–18



Source: US Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey", 2017–18 v.1a, 2018–19 v.1a.

Figure A5. Average proportion of FRL students in charter and district schools by urbanicity of locale and region, 2017–18



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