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Charter School Funding: (More) Inequity in the City

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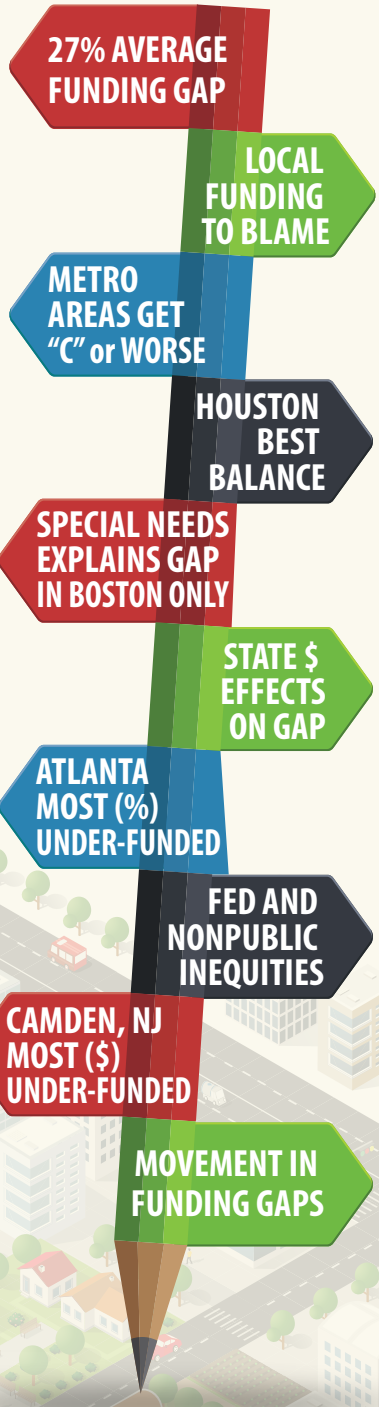

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The University of Arkansas was founded in 1871 as the flagship institution of higher education for the state of Arkansas. Established as a land grant university, its mandate was threefold: to teach students, conduct research, and perform service and outreach.

The College of Education and Health Professions established the Department of Education Reform in 2005. The department's mission is to advance education and economic development by focusing on the improvement of academic achievement in elementary and secondary schools. It conducts research and demonstration projects in five primary areas of reform: teacher quality, leadership, policy, accountability, and school choice.

The School Choice Demonstration Project (SCDP), based within the Department of Education Reform, is an education research center devoted to the non-partisan study of the effects of school choice policy and is staffed by leading school choice researchers and scholars. Led by Dr. Patrick J. Wolf, Professor of Education Reform and Endowed 21st Century Chair in School Choice, SCDP's national team of researchers, institutional research partners and staff are devoted to the rigorous evaluation of school choice programs and other school improvement efforts across the country. The SCDP is committed to raising and advancing the public's understanding of the strengths and limitations of school choice policies and programs by conducting comprehensive research on what happens to students, families, schools and communities when more parents are allowed to choose their child's school.

Corrections Made to the Original Version

This sheet lists corrections made to the original release version of *Charter School Funding: (More) Inequity in the City*, by Corey A. DeAngelis, Patrick J. Wolf, Larry D. Maloney, and Jay F. May. School Choice Demonstration Project. University of Arkansas.

Location	*Error*	*Correction*
p. 10, Box 1	*omission*	Added new item 4) Account for dollar value of any facility support provided to charters; and renumbered remaining items
p. 14, par. 3, line 3	*6* percent	7 percent
p. 32, par. 1, line 5	89 percent *more*	89 percent less
p. 32, par. 1, line 6	*which differs dramatically from*	consistent with
p. 32, par. 1, line 8	34 percent *less*	34 percent more
p. 32, par. 1, line 9	exception of *state funding*	exception of state and local funding
p. 32, par. 1, line 10	favor *(local funding)*	favor
p. 32, Table 8, row 1	*84.5%*	-85%
p. 32, Table 8, row 2	*85.5%*	-86%
p. 32, Table 8, row 3	*89.0%*	-89%
p. 32, Table 8, row 4	*-33.9%*	34%
p. 32, Table 8, row 5	*94.2%*	-94%
p. 32, Table 8, row 6	*90.0%*	-90%
p. 32, Table 8, row 7	*116.4%*	-116%
p. 32, Table 8, row 8	*98.2%*	-98%
p. 46, Table C15, row 1	*84.5%*	-85%
p. 46, Table C15, row 2	*85.5%*	-86%
p. 46, Table C15, row 3	*89.0%*	-89%
p. 46, Table C15, row 4	*-33.9%*	34%
p. 46, Table C15, row 5	*94.2%*	-94%
p. 46, Table C15, row 6	*90.0%*	-90%
p. 46, Table C15, row 7	*116.4%*	-116%
p. 46, Table C15, row 8	*98.2%*	-98%

Executive Summary

Public charter schools increasingly are part of both the national conversation about education policy and the local urban scene in America. Previous studies of public charter schools have examined their achievement effects focused on both the state and metropolitan levels, and funding disparities focused on the state levels. This report is an update to the first study of funding inequities to concentrate on revenue disparities between charters and traditional public schools where charters are most common: metropolitan areas across the country. The 15 urban areas that primarily inform our study include Atlanta, Boston, Camden, Denver, Houston, Indianapolis, Little Rock, Los Angeles, Memphis, New Orleans, New York City, Oakland, San Antonio, Tulsa, and Washington, D.C. Because these locations include eight for which we have at least some prior data, we are able to examine funding inequities over time.

Our data regarding the charter school funding gap was carefully collected from official state documents and audited school reports regarding the 2015-16 school year, which is equivalent to the 2016 fiscal year. Because we have to wait a few years for revenue data to be complete and reliable, our study is necessarily retrospective. As a result, we describe our findings in the past tense, as they reflect conditions during the 2015-16 school year – the school year with the most recent and reliable data available to date. In the report's conclusion, we describe recent policy changes in some of the cities that likely have affected their current charter school funding gaps.

We define a public charter school as any school that (1) operates based on a formal charter in place of direct school district management and (2) reports its finances independently from the school district. We define all other public schools as traditional public schools (TPS).

This study answers two main research questions: Did both public charter schools and TPS in major metropolitan areas receive equitable per-pupil funding during the 2015-16

We are grateful to those who made this project possible. We appreciate the guidance of Gary Larson, Molly O'Brien, and Angela Montagna Holmes of Larson Communications in making this complicated information accessible to the public. We are thankful for the expertise of Marlo Crandall of Remedy Creative in designing and formatting the report. We appreciate Elizabeth Reaves' excellent logistical support. We thank the Walton Family Foundation for their grant support and acknowledge that the content of this report is entirely the responsibility of the authors and does not necessarily reflect the positions of the Foundation or the University of Arkansas.

school year? If not, what explains the funding gap? New Orleans is unique in ways that led us to treat it separately in our analysis. For the remaining 14 metropolitan areas, we find:

- Public charter schools received an average of $5,828 less per-pupil than TPS – the largest overall funding inequity gap ever reported by our research team – which represents a funding gap of 27 percent;
- Across the 8 cities with longitudinal data back to 2003, the overall funding gap favoring TPS has grown 58 percent since 2003 and shrunk about 10 percent since 2014;
- Across the 14 cities with longitudinal data back to 2013, the overall funding gap favoring TPS has shrunk 2 percent since 2013 and widened 0.03 percent since 2014;
- Thirteen out of 14 metropolitan areas in our study receive a C or lower grade for charter school funding equity because students who attended charters received more than 10 percent less in funding than their peers in traditional public schools;
- Houston demonstrated the greatest revenue balance between charters and TPS, as charters received 95 percent of the per-pupil funding average of TPS;
- Public charter schools in Camden, New Jersey, were the most underfunded in terms of dollars, receiving an average of $14,671 less in per-pupil funding than TPS, representing a 36 percent funding inequity; Public charter schools in Atlanta, Georgia, were the most underfunded in percentage terms, receiving an average of $8,894 less in per-pupil funding than TPS, representing a 49 percent funding inequity.
- Differences in the rates of enrolling students with special educational needs only explained the charter school funding gap in one of the 14 cities: Boston;
- A dearth of education funding from local sources was most responsible for the charter school funding gap, as 8 of the areas provided either no or a trivial amount of local funds to their public charter schools;
- On average, state revenues increased the charter school funding gaps in the same number of cities as they decreased them and net increased the funding gap by 4 percent overall;
- Federal education revenues, on average, worsened the charter school funding inequities by 40 percent, while private or nonpublic sources of funding varied dramatically across the 14 locations and did not completely close the charter school funding gap in any location;
- The public charter school funding gap declined from 2003 to 2016 in Houston, Boston, and Indianapolis, while it grew in Atlanta, Los Angeles, Denver, Washington, D.C., and New York City; Gaps increased from 2014 to 2016 in Atlanta, Houston, Little Rock, New York City, San Antonio, Shelby County (Memphis), and Tulsa, while they decreased in Boston, Camden, Denver, Indianapolis, Los Angeles, Oakland, and Washington, D.C.

Our research indicates that urban charters tended to receive substantially less revenue on a per-pupil basis to serve their students than did traditional public schools in 2015-16. Once again, charter school funding represents an inequity in the city.

Introduction

Public charter schools are a growing part of K-12 education. Charter schools are public schools that are granted operational autonomy by their authorizing agency in return for a commitment to achieve performance levels specified in a contract. Like traditional public schools, charter schools are prohibited from charging tuition, must not discriminate in admissions or be religious in their operation or affiliation, and are overseen by a public entity. Unlike traditional public schools, however, most charters are open to all students who wish to apply, regardless of where they live. If a charter school is over-subscribed, random lotteries usually determine which students are admitted. Most charter schools are independent of the traditional public school district in which they operate.[1]

Public charter schools have become a major feature of the education landscape. The first public charter school was established in St. Paul, Minnesota, in 1991. In 2015-16, there were over 6,800 public charter schools serving about 3 million students in 43 states and the District of Columbia.[2] That year, the number of charter schools grew by about 2 percent and the number of students they served increased by 9 percent. In New Orleans, Washington, D.C., and Detroit, public charter schools educate over 40 percent of K-12 students. What explains the growing popularity of public charter schools?

In 2015-16, there were over 6,800 public charter schools serving about 3 million students in 43 states and the District of Columbia.

Evidence

Research indicates that families enjoy[3] the empowerment to opt out of residentially assigned public schools, if needed.[4] Further, the autonomy granted to public charter schools allows them to establish a specialized mission and deeply rooted organizational culture.[5] The additional autonomy that charters enjoy allows them to serve students based on student interests and learning styles, rather than the standardized approach to education commonly mandated in traditional public schools.

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1 What is a charter school? National Charter School Research Center. U.S. Department of Education.

2 A closer look at the charter school movement. National Alliance for Public Charter Schools.

3 Barrows, S., Peterson, P. E., & West, M. R. (2017). What do parents think of their children's schools? *Education Next*, *17*(2).

4 Stewart, T., & Wolf, P. J. (2014). *The school choice journey: School vouchers and the empowerment of urban families* (New York: Palgrave MacMillan, 2014).

5 See for example Fox, R. A., & Buchanan, N. K. (2014). *Proud to be different: Ethnocentric niche charter schools in America* (Lanham, MD: Rowman & Littlefield).

The scientific evidence on the effectiveness of public charter schools is abundant, though studies have varied in quality. A meta-analysis of 24 rigorous studies showed that, overall, charters have had small positive effects on student achievement, as measured by standardized test scores.[6] A national study of charter school performance in 26 states and the District of Columbia largely confirmed those results,[7] though a U.S. Department of Education evaluation limited to charter middle schools reported no statistically significant effects.[8] More relevant to our study here, an examination of charter school achievement effects in 41 large metropolitan areas across the country showed that urban charters consistently have boosted student achievement and the gains for students from disadvantaged backgrounds have been large.[9] The most recent systematic review[10] of the most rigorous evidence shows that public charter schools have increased high school graduation and college enrollment,[11] while experimental evaluations have found that winning a lottery to attend a public charter school reduced the likelihood that males were incarcerated and the chance that females became pregnant as teenagers.[12]

An examination of charter school achievement effects in 41 large metropolitan areas across the country showed that urban charters consistently have boosted student achievement and the gains for students from disadvantaged backgrounds have been large.

Funding Equity

Findings that public charter schools tend to increase student achievement, but only slightly, have led policymakers to consider the amount of resources available to charters. Do charter schools receive higher per-pupil revenue allocations than traditional public schools (TPS)? Is funding equal across the two public school sectors? Do public charter schools receive less per-pupil revenue than TPS? Might

6 Betts, J. R., & Tang, Y. E. (2011). *The effect of charter schools on student achievement: A meta-analysis of the literature*. Bothell, WA: Center on Reinventing Public Education.

7 Cremata, E., Davis, D., Dickey, K., Lawyer, K., Negassi, Y., Raymond, M., & Woodworth, J. L. (2013). *National charter school study*. Stanford, CA: Center for Research on Education Outcomes.

8 Gleason, P., Clark, M., Tuttle, C. C., and Dwoyer, E. (2010). The evaluation of charter school impacts: Final report (NCEE 2010-4029). Washington, D.C.: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

9 CREDO (2013). Urban charter school study. Stanford, CA: Center for Research on Education Outcomes.

10 Foreman, L. M. (2017). Educational attainment effects of public and private school choice. *Journal of School Choice*, *11*(4), 642-654.

11 Deming, D. J., Hastings, J. S., Kane, T. J., & Staiger, D. O. (2014). School choice, school quality, and postsecondary attainment. *American Economic Review*, *104*(3), 991-1013; Sass, T. R., Zimmer, R. W., Gill, B. P., & Booker, T. K. (2016). Charter high schools' effects on long-term attainment and earnings. *Journal of Policy Analysis and Management*, *35*(3), 683-706.

12 Dobbie, W., & Fryer Jr, R. G. (2015). The medium-term impacts of high-achieving charter schools. *Journal of Political Economy*, *123*(5), 985-1037; Deming, D. J. (2011). Better schools, less crime? *Quarterly Journal of Economics*, *126*(4), 2063-2115.

charters produce even better results if they were better resourced? Members of our research team have provided evidenced-based answers to these questions for over a decade.

In *Charter School Funding: Inequity's Next Frontier*, we compared student funding in public charters versus TPS in 27 districts in 16 states plus the District of Columbia (DC) during school year 2002-03.[13] We found that public charter school students were funded at levels below TPS students in all but one state, Minnesota, and all but one school district, Albuquerque, NM. On average, charter students in the study received 21.7 percent less in funding than their TPS peers, with the state-level gaps favoring TPS ranging from 4.8 percent in New Mexico to 39.5 percent in South Carolina. This pioneering research concluded that, when a given student switched from a residentially assigned public school to a public charter school in 2002-03, less than four-fifths of the resources dedicated to the education of that student followed them into their charter school.

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One might assume that policymakers moved swiftly to remedy the injustice of charter school funding inequity revealed in the 2005 report. Sadly, that was not the case. We re-examined the charter school funding gap using data from 2006-07 and adding seven more states to our sample. In *Charter School Funding: Inequity Persists*, we reported that the gap favoring TPS stood at 19.2 percent nationally, only trivially smaller than the original gap of 21.7 percent.[14] Even more concerning, a third study of 2010-11 revenue data identified the gap across an expansive sample of 30 states plus D.C. to average 28.4 percent more funding for TPS than charters, provoking the report title of *Charter School Funding: Inequity Expands*.[15] All three of these charter school revenue studies have concluded that funding gaps are larger in urban areas, due to more local funding and

A third study of 2010-11 revenue data identified the gap across an expansive sample of 30 states plus D.C. to average 28.4 percent more funding for TPS than charters.

13 Batdorff, M., Finn, C. E. Jr., Hassel, B., Maloney, L., Osberg, E., Speakman, S., & Terrell, M. G. (2005). Charter school funding: Inequity's next frontier. Washington, DC: Thomas B. Fordham Institute.

14 Batdorff, M., Maloney, L., May, J., Doyle, D., & Hassel, B. (2010). Charter school funding: Inequity persists. Indianapolis, IN: Ball State University.

15 Batdorff, M., Maloney, L., May, J. F., Speakman, S. T., Wolf, P., & Cheng, A. (2014). Charter school funding: Inequity expands. Fayetteville, AR: School Choice Demonstration Project.

categorical funding earmarked for districts with disadvantaged students going to TPS than to charters, even though public charter schools enroll a high proportion of low-income students. Educational resources targeted to disadvantaged students in urban areas often miss their targets when those children are in public charter schools.

Two other public charter school funding inequity studies have been performed at the city level. The first report examined per-pupil funding discrepancies between TPS and charters across 92 cities in the state of Michigan. The study found that Michigan charter schools received about $2,782, or 20 percent, less funding per pupil than TPS in the 2014-15 school year.[16] The funding advantage for TPS was statistically significant even after controlling for sector differences in the percent of students that were identified as: special needs, economically disadvantaged, English Language Learners, minorities, and females.

Educational resources targeted to disadvantaged students in urban areas often miss their targets when those children are in public charter schools.

Across the 14 cities included in our primary analysis, we found that public charter schools received an average of $5,721, or about 29 percent, less per-pupil than TPS.

This study represents the latest evidence regarding remaining public charter school funding inequities where charters are most common: in cities.

Our most recent report, *Charter School Funding: Inequity in the City*, contributed to the school funding policy literature by taking a deep dive into the realities of charter and TPS funding in major urban areas across the country. We examined funding disparity levels from all possible revenue sources in 15 different metropolitan areas for the 2013-14 school year. We selected the locations based on either a high concentration of charters in the metropolitan area or potential for charter school growth there. Across the 14 cities included in our primary analysis, we found that public charter schools received an average of $5,721, or about 29 percent, less per-pupil than TPS.[17]

16 DeAngelis, C. A., & DeGrow, B. (2018). Doing more with less: The charter school advantage in Michigan. Mackinac Center for Public Policy.

17 Wolf, P. J., Maloney, L. D., May, J. F., DeAngelis, C. A. (2018). Charter school funding: Inequity in the city. Fayetteville, AR: School Choice Demonstration Project.

Our current report serves as an update to the previous analysis, as it draws upon data for the 2015-16 school year. We highlight differences in local, state, and federal public funding, as well as all nonpublic funding for the same locations. This study represents the latest evidence regarding remaining public charter school funding inequities where charters are most common: in cities.

2015-2016 Results

Total Revenue

- For each table, we order the locations from the one with the biggest percentage funding disparity favoring charters at the top to the one with the biggest percentage funding gap favoring TPS at the bottom;
- For each figure, we order the locations from left (biggest gap favoring charters) to right (biggest gap favoring TPS);
- Each location is assigned a grade based on the equality of revenues allocated to children in charter schools compared to TPS;
- We highlight funding disparities regardless of the sector that is receiving the short end of the revenue stick;
- A specific location receives an A if per-pupil charter funding is within 5 percent of traditional public school funding, regardless of which sector is receiving more, a B if the funding disparity is between 5 and 10 percent, a C if the gap is 10 to 15 percent, a D if it is 15 to 25 percent, and an F if it is over 25 percent;
- The overall disparity grade appears in the far left column of Table 1 and is consistently displayed in the far left column of all subsequent tables as a point of reference for the reader;
- Summary tables regarding all the revenue disparities for each separate location are provided in Appendix C. Public indeterminate and unspecified indeterminate revenue streams are shown in tables in Appendix D.

Box 1: The core practices that generate our reliable comparisons are that we:

1) Compare per-pupil revenues for all charter schools to all traditional public schools within the geographic boundary of each city or county;
2) Provide a comprehensive accounting of school revenues that accounts for all funds received by all schools in the public charter and TPS sectors from all possible sources; §
3) Credit all revenues to the school sector upon whose students the revenue will be spent, assigning any funding directed to charter school students that passes through TPS to the charter sector and not the TPS sector;
4) Account for dollar value of any facility support provided to charters;
5) Apply true weighted averages to all cross-location totals to assure appropriate per-pupil amounts for all data groupings;
6) Rely on data of record collected by states, and, when those are unavailable, approved, audited financial statements as our source materials;
7) Conduct a special analysis of the charter school funding gap, excluding all special education funding, to demonstrate whether the inequities in charter school funding are explained by higher special education enrollment rates in TPS.

§ The only exception to this rule is any revenue received due to debt restructuring.

Methololology

This is a study of the revenues actually received by public charter schools and TPS. Revenues equal funding. Revenues signal the amount of resources that are being mobilized in support of students in the two different types of public schools. Some critics of these types of analyses argue that our revenue study should, instead, focus on school expenditures and excuse TPS from certain expenditure categories, such as transportation, because TPS are mandated to provide it but many charter schools choose not to spend scarce educational resources on that item.†

First, we stand by the practice of using revenues, not expenditures, to inform our revenue study. Second, the discretion to spend money as school leaders see fit is definitional to public charter schools because they are expected by statute to have autonomy to be innovative. We are comparing the amount of resources that are channeled into a traditional public school system, where many specific expenditures are mandatory, with the amount devoted to public charter schools, where many specific expenditures are discretionary. If we omitted supposedly "mandatory spending" from the TPS side of our comparison, including salaries baked into teacher and administrator collective bargaining agreements, there would be almost no revenue left to compare. This point underscores the central fallacy of some researchers who compare charter and TPS funding using expenditures. They exclude various categories of expenditures on the TPS side, supposedly to create "apples-to-apples" funding comparisons, but those exclusions are mere artifice of the analysts that bring the numbers further away from the complete and true amounts of resources available to educate a child in each public school sector.

An analysis based on all revenues, in contrast, supports an innovation view of equity, consistent with state charter statutes calling for charter schools to be innovative. An analysis based on a subset of expenditures only for the functions that TPS and charter schools share is a status quo view of equity, because charters are expected to be funded only for the exact same functions that TPS already performs. A revenue-based analysis is grounded in a concept of *equal funding for equal purpose*, the purpose being public education. An adjusted expenditure-based analysis is grounded in a concept of *equal funding for equal work*. We choose a revenue-based analysis because public education is about so much more than merely equal work.

Our methodology generates a full, accurate, and transparent accounting of the per-pupil funding in both the public charter and TPS sectors (see Box 1). It tells us how much money is directed to charter schools, which have much discretion regarding how to spend it, and how much money is directed to traditional public schools, which have less discretion regarding how to spend it. If TPS receive more revenue in part because they have more things on which they are required to spend public resources, then that fact should not be obscured but should remain a part of the comparison. Mandatory spending in TPS is a discretionary policy of decision makers. If it is a cause of inefficiency in TPS operations relative to charters, then policy makers, informed by our research, could reduce it.

Our methodology generates a full, accurate, and transparent accounting of the per-pupil funding in both the public charter and TPS sectors.

† Baker, B. D. (2014). Review of "Charter school funding: Inequity expands." Boulder, CO: National Education Policy Center.

Table 1 and Figure 1 below illustrate the total funding disparities between children in traditional public schools (TPS) and charters in the 14 metropolitan areas we include in our main analysis. Only one location -- Houston, Texas -- obtained an A for charter school funding equity. Charters in Houston received only 5 percent less in per-pupil funding than the Houston TPS. Boston, Massachusetts received a C because charters got 12 percent less in per-pupil funding than the Boston TPS. Four locations – New York City, Denver, Shelby County (the Memphis region), and San Antonio – obtained a D because charters received between 19 and 23 percent less in per-pupil funding in each place.

Eight of the 14 cities in the main analysis – over half of the cities examined – received an F because per-pupil funding disparities exceeded 25 percent. Notably, charter students in Camden, NJ, obtained nearly $15,000 less in per-pupil funding per year, representing a funding gap of 36 percent. The largest disparity percentage was in Atlanta, Georgia, where charter school students received 49 percent less funding than their traditional public school peers, amounting to almost $9,000 less in educational resources per student in 2015-16. Other cities in our study that earned an F for their extreme charter funding gaps include Los Angeles, D.C., Tulsa, Indianapolis, Oakland, and Little Rock.

On average, across all locations, a student received $5,828, or 26.7 percent, less in total annual funding if they chose to attend a charter school instead of a TPS. This funding inequity result favoring TPS is only slightly smaller than the gap of 28.7 percent in our report using 2013-14 data. Students in public charter schools sacrificed over one-quarter of their educational resources by opting out of their traditional public schools. Put differently, on average, urban parents in our study sample were willing to pay the price of at least $5,828 per year in order to opt into a public schooling environment that they perceived to be superior to their residentially assigned institution. To operate at the efficiency level of the charter schools in our study, the traditional public schools would have had to forfeit $13.1 billion per year in revenue.

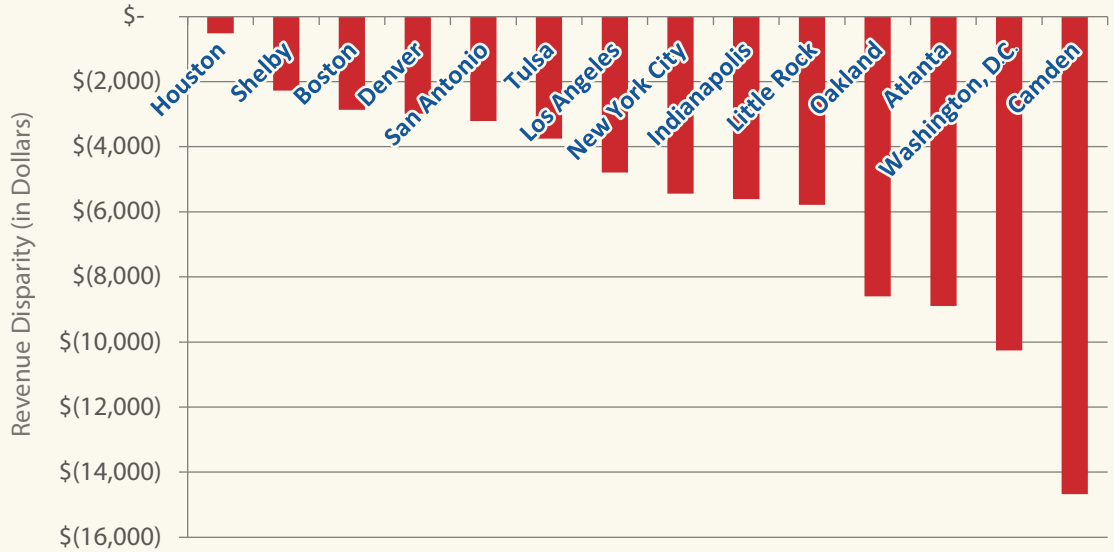
Students in public charter schools sacrificed over one-quarter of their educational resources by opting out of their traditional public schools.

Table 1: Total Revenue Disparity Per Student, 2015-16 School Year

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
A	Houston	TX	$11,557	$11,040	($517)	-5%
C	Boston	MA	$23,288	$20,423	($2,865)	-12%
D	New York City	NY	$28,141	$22,701	($5,440)	-19%
D	Denver	CO	$15,230	$12,248	($2,982)	-20%
D	Shelby	TN	$11,174	$8,902	($2,273)	-20%
D	San Antonio	TX	$14,147	$10,934	($3,214)	-23%
F	Los Angeles	CA	$17,813	$13,017	($4,797)	-27%
F	Washington, DC	DC	$35,494	$25,236	($10,258)	-29%
F	Tulsa	OK	$11,656	$7,904	($3,752)	-32%
F	Camden	NJ	$40,697	$26,027	($14,671)	-36%
F	Indianapolis	IN	$15,380	$9,769	($5,611)	-37%
F	Oakland	CA	$23,332	$14,735	($8,597)	-37%
F	Little Rock	AR	$14,917	$9,134	($5,783)	-39%
F	Atlanta	GA	$18,276	$9,382	($8,894)	-49%
Weighted Average			$21,802	$15,974	($5,828)	-27%

Note: Disparity Per Student ($) is the Charter Per Student Revenue minus the District Per Student Revenue, so negative values indicate a charter school funding disadvantage. Disparity Per Student (%) is the dollar disparity divided by District Per Student Revenue.

Figure 1: Difference in Total Revenue Per Student ($)



Some school commentators claim that any gap in per-pupil charter funding compared to TPS is because charters enroll significantly fewer students with low-incomes, English Language Learner (ELL) status, and disabilities.[18] In Table 2 we display the enrollment percentages for students with these three features of disadvantage across the two public school sectors when such data were available. In six of the metropolitan areas – Houston, New York City, Denver, Shelby County, Los Angeles, and Camden – the charter sector enrolled a higher proportion of low-income students who qualify for the federal lunch program[19] than did the TPS sector. In Oakland, the proportion of federal lunch-eligible students in the charter and TPS sectors was equal. In seven of the areas – Boston, San Antonio, D.C., Tulsa, Indianapolis, Little Rock, and Atlanta – the charter sector enrolled a lower percentage of low-income students. The differences were large across sectors, exceeding 20 percentage points, in Little Rock, Atlanta, and Camden.

English Language Learner (ELL) student enrollments were higher in public charter schools than TPS in Houston and Denver. In the remaining 12 metropolitan areas, public charter schools enrolled disproportionately fewer students with ELL designations compared to TPS. Across-sector disparities of ELL students were 5 percentage points or less in seven locations: Houston, Shelby County, Los Angeles, D.C., Camden, Oakland, and Atlanta. The across-sector disparities were 10 percentage points or lower in all areas but Boston, where the gap was 16 percentage points.

Finally, the charter school sectors in the 12 metropolitan regions with data enrolled lower percentages of students with disabilities than their local TPS in every place except Atlanta. In Houston, district-run TPS listed 22 percent of their students as qualifying for special education services, compared to 7 percent in Houston's public charter schools. In Camden, the student disability rates were 18 percent in TPS and 9 percent in charters. The charter school special education enrollment gap was 5 percentage points or less in nine of the 12 locations with data. Research from New York City, Denver, and Louisiana suggests that public charter schools enroll fewer students with disabilities than TPS mainly because (1) fewer parents choose such schools for their kindergarten children with disabilities, (2) transfers into charters in non-entry grades tend disproportionately to be general education students, and (3) charter schools declassify students as no longer requiring special education services at higher rates than TPS.[20]

The fact that the traditional public school sectors in our study tended to enroll higher percentages of students with certain disadvantages does not appear, itself, to explain the funding gaps between

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18 See, for example, Baker, B. D. (2014). Review of "charter school funding: Inequity expands." Boulder, CO: National Education Policy Center.

19 These students all come from families with incomes at or below 185 percent of the poverty line and therefore are eligible for either free or reduced-price lunches.

20 See, for example, Winters, M. A. (2013). *Why the gap? Special education and New York City charter schools.* Bothell, WA: Center for Reinventing Public Education. Winters, M. A. (2014). *Understanding the charter school gap: Evidence from Denver, CO.* Bothell, WA: Center for Reinventing Public Education. Wolf, P.J., & Lasserre-Cortez, S. (2018, January). Special education enrollment and classification in Louisiana charter schools and traditional schools (REL 2018–288). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.

TPS and public charter schools. The proportion of students eligible for the federal lunch program was as likely to be higher or equal in the charter sectors compared with the TPS sectors in our sample. The TPS sectors more consistently tended to enroll higher proportions of ELL students than the charter sectors, though Houston and Denver were exceptions. Moreover, differences in the measures of disadvantage of the student populations in TPS and charters in our areas did not align with the overall funding differences described in Table 1. Public charter schools in Denver, for example, enrolled higher proportions of low-income students and English Language Learners but received over $2,982 less in per-pupil revenues than their TPS.

The proportion of students eligible for the federal lunch program was as likely to be higher or equal in the charter sectors compared with the TPS sectors in our sample.

In many cases, it requires even greater resources to educate students with special needs than low-income or ELL students. Such students were enrolled at higher rates in TPS in all but one of these metropolitan areas. Does special education funding explain the charter school funding gaps in our study? We examine that question next.

Table 2: Levels of Student Disadvantage Across Sectors, 2015-16 School Year

Overall Disparity Grade	Ranked Regions	State	District Federal Lunch %	Charter Federal Lunch %	Difference	District ELL %	Charter ELL %	Difference	District SPED %	Charter SPED %	Difference
A	Houston	TX	76%	89%	13%	30%	34%	4%	22%	7%	-16%
C	Boston	MA	49%	45%	-4%	30%	14%	-16%	20%	17%	-3%
D	New York City	NY	71%	77%	6%	14%	6%	-8%	22%	18%	-4%
D	Denver	CO	68%	72%	4%	35%	45%	10%	11%	9%	-2%
D	Shelby	TN	57%	65%	8%	9%	4%	-5%	13%	11%	-2%
D	San Antonio	TX	92%	84%	-8%	19%	13%	-6%	10%	7%	-3%
F	Los Angeles	CA	76%	78%	2%	27%	22%	-5%	NA	NA	NA
F	Washington, D.C.	DC	47%	44%	-3%	11%	7%	-4%	14%	12%	-2%
F	Tulsa	OK	85%	83%	-2%	18%	10%	-8%	17%	11%	-6%
F	Camden	NJ	60%	91%	31%	10%	5%	-5%	18%	9%	-9%
F	Oakland	CA	73%	73%	0%	33%	31%	-2%	NA	NA	NA
F	Indianapolis	IN	72%	66%	-6%	15%	8%	-6%	17%	12%	-5%
F	Little Rock	AR	81%	52%	-29%	13%	5%	-8%	12%	8%	-4%
F	Atlanta	GA	91%	67%	-24%	5%	0%	-5%	5%	9%	4%

Note: Difference is the Charter percent minus the District percent, so negative numbers mean TPS enroll a higher percentage of such students. Differences may appear to be off by one point due to standard rounding conventions. California data for Los Angeles and Oakland do not allow us to determine special education enrollments by school sector.

Special Education (SPED) and the Charter School Funding Gap

Inequitable funding between public charter schools and TPS could be due to differences in the number of students identified as requiring special education services, as described in Table 2. To test this ubiquitous claim regarding the charter school funding gap, we depart from our normal approach of focusing exclusively on revenues and consider special education expenditures by both school sectors.

The Table 3 column labeled "SPED Expenditure Gap Per Student" presents the results from subtracting the amount of dollars spent per student in the charter sector from the amount of dollars spent per student in the TPS sector. Thirteen out of the 14 totals are positive, indicating that TPS spent more on special education expenditures per pupil than public charters in all locations except Denver. It is surprising that public charter schools in the Mile High City spent $165 more per pupil on special education services than TPS, since TPS enrolled a higher proportion of students with special needs than did public charters. This difference, however, only accounts for about 6 percent of the total overall funding disparity in Denver. The largest SPED expenditure gap was in Camden, where TPS spent $4,740 more per student on special education than charters spent. The smallest SPED expenditure gap showing that TPS spent more on special education services was in New York City, where TPS spent around $221 more per pupil on special education than charters did.

The "Disparity Net of SPED" column displays the sum after adding the "SPED Expenditure Gap Per Student" to the "Total Revenue Disparity Per Student," describing how much of the charter school funding gap remained after accounting for the differences in SPED expenditures. If the defenders of the charter school revenue gap were right, every number in the "Disparity Net of SPED" column would be either positive or zero, meaning charters were either over-funded or equitably funded relative to TPS once the extra special education burden in TPS was subtracted from the totals. That is only true for Boston. In Beantown, the charter school revenue gap flipped from a $2,865 per student advantage for TPS to a $961 per pupil advantage for charters after accounting for SPED expenditures. For the remaining 13 cities, charter schools continued to be underfunded relative to TPS even after factoring in special education expenditures. For Houston, the funding gap favoring TPS shrunk from $517 per student to $114 per pupil after accounting for SPED. The disparity diminished from $4,797 to $1,971 in Los Angeles and from $2,273 to $973 in Shelby County after accounting for SPED. In the remaining 10 metropolitan areas, the charter school funding gap favoring TPS remained unacceptably large – in excess of $2,000 per pupil – even after accounting for higher special education spending in TPS than in charters. In seven of the metropolitan areas the charter school funding disparity exceeded $4,000 per child even after accounting for differences in SPED expenditures between charters and TPS. The non-SPED revenue gap benefiting TPS exceeded $7,000 in Camden, Atlanta, and Washington, D.C.

Because public charter schools in Denver spent more on special needs services per pupil than TPS, the funding disparity favoring TPS grew by 6 percent from $2,982 to $3,147 after accounting for differences in SPED expenditures.

In seven of the metropolitan areas the charter school funding disparity exceeded $4,000 per child even after accounting for differences in SPED expenditures between charters and TPS.

The proportion of the total revenue gap explained by higher SPED expenditures is presented in the far-right column of Table 3. Again, if the defenders of higher funding for TPS were correct, every figure in the far-right column would be 100 percent or higher. This is only true in Boston. SPED expenditures explain just over three-fourths of the disparity in Houston and nearly three-fifths of the disparities in both Los Angeles and Shelby County. In the remaining 10 cities, spending by TPS on special education account for less than a third of the higher per pupil revenue received by TPS compared to public charter schools. Special education expenditures account for 20 percent or less of the funding disparities in seven of these cities. Notably, differences in SPED expenditures account for only 4 percent of the funding disparity favoring TPS in New York City. While TPS tend to enroll higher proportions of students with disabilities than charter schools, the additional spending required for students with special needs rarely explains all or even most of the inequities in the funding of public charter schools. The main sources of the charter school funding gap must lie elsewhere.

While TPS tend to enroll higher proportions of students with disabilities than charter schools, the additional spending required for students with special needs rarely explains all or even most of the inequities in the funding of public charter schools.

Table 3: SPED Expenditure Gap Per Student, 2015-16

Overall Disparity Grade	Ranked Regions	State	SPED Expenditure Gap Per Student	Total Revenue Disparity Per Student	Disparity Net of SPED	Disparity Explained by SPED (%)
A	Houston	TX	$403	($517)	($114)	78%
C	Boston	MA	$3,826	($2,865)	$961	134%
D	New York City	NY	$221	($5,440)	($5,219)	4%
D	Denver	CO	($165)	($2,982)	($3,147)	6%
D	Shelby	TN	$1,300	($2,273)	($973)	57%
D	San Antonio	TX	$848	($3,214)	($2,366)	26%
F	Los Angeles	CA	$2,826	($4,797)	($1,971)	59%
F	Washington, D.C.	DC	$1,740	($10,258)	($8,518)	17%
F	Tulsa	OK	$651	($3,752)	($3,101)	17%
F	Camden	NJ	$4,740	($14,671)	($9,931)	32%
F	Indianapolis	IN	$1,143	($5,611)	($4,468)	20%
F	Oakland	CA	$2,587	($8,597)	($6,010)	30%
F	Little Rock	AR	$997	($5,783)	($4,786)	17%
F	Atlanta	GA	$1,749	($8,894)	($7,145)	20%

Note: SPED Expenditure Gap Per Student calculated by subtracting average special education expenditures per pupil in the charter sector from average special education expenditures per pupil in the TPS sector. Total Revenue Disparity Per Student is taken from Table 1. Disparity Net of SPED is the SPED Expenditure Gap plus the Total Revenue Disparity, with negative numbers indicating an enduring gap favoring TPS. Disparity Explained by SPED (%) is the absolute value of the SPED Expenditure Gap Per Student divided by the Total Revenue Disparity Per Student. Oakland handles SPED support and reporting for charter schools differently than all other cities in our study. The Oakland Unified School District, the Alameda Office of Education, and Alameda Unified School District, all with charters located within the boundaries of Oakland, imbed financial data for the charters in each district's financial reporting to the California Department of Education, just as Los Angeles Unified does. However, the two cities differ in the level of detail captured in the reporting. Los Angeles provides the same level of detailed reporting for the charter schools as it does for the district, making it possible to determine how much is spent on special education. Oakland Unified, however, does not report charter school financial data with the same level of detail as reported for the school district. Therefore, it is not possible to determine how much has been spent on special education for students attending Oakland charter schools.

Local Public Revenue

If special education enrollments do not explain the charter school funding gap in most of the areas in our sample, what does? Most local public school funding comes through property taxes. Because public charter schools serve students living in households within specific communities, we may expect that local funding will support a community's children in whichever public schools they choose. Does this actually happen?

As the seat of the federal government, the District of Columbia lacks local taxing authority. Table 4 and Figure 2 show the 2015-16 disparities in local public revenue for public charter schools and TPS in the 13 locations with local taxes. Zero of the 13 locations had local funding disparities favoring public

charter schools. All 13 areas demonstrated extreme disparities in the local funding of the two types of public schools that disadvantaged charters. In New York City, Los Angeles, and Camden, charter school students received around half the amount of local public funding provided to those in TPS. In Atlanta and Oakland, charter students received about 80 percent less in local funding. In Denver and Shelby County, students in public charter schools received a trivial amount of local per-pupil funding. Charter school students in the six remaining locations did not receive a single dollar of local public funding. On average, students in charter schools obtained around $8,000 less in local public funding per pupil than their traditional public school counterparts, a discrepancy of 74 percent. Wide disparities in local funding explain most or the entire charter school funding gap in all of our study's locations except Los Angeles, Camden, and Washington, D.C., for which differences in other revenue sources are primarily at fault.

All 13 areas demonstrated extreme disparities in the local funding of the two types of public schools that disadvantaged charters.

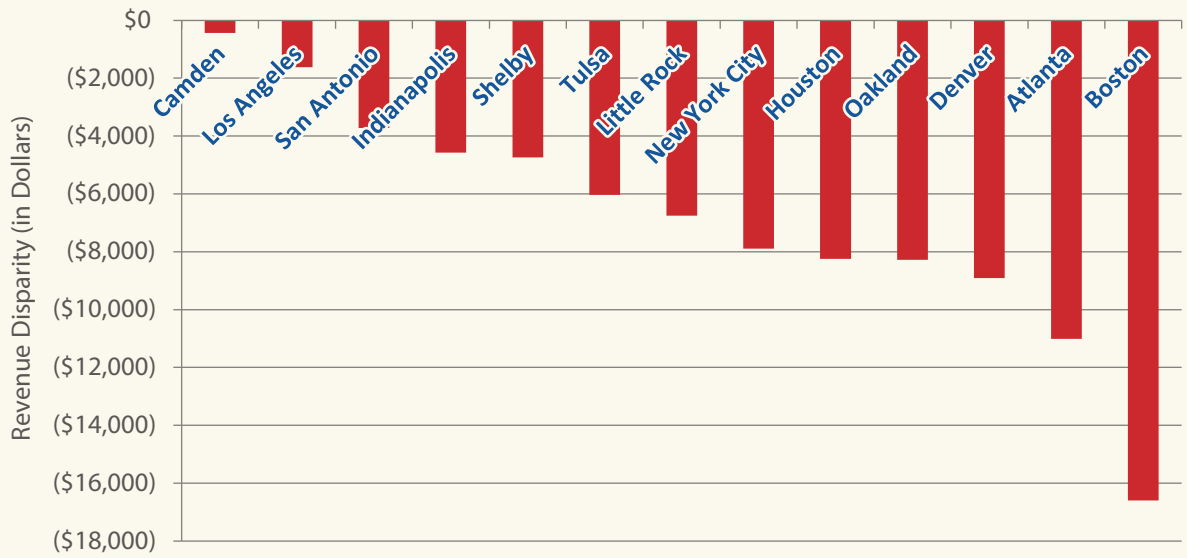
Table 4: Total Local Public Revenue Disparity Per Student, 2015-16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
D	New York City	NY	$17,173	$9,278	($7,895)	-46%
F	Los Angeles	CA	$3,498	$1,874	($1,624)	-46%
F	Camden	NJ	$838	$405	($433)	-52%
F	Atlanta	GA	$13,878	$2,866	($11,012)	-79%
F	Oakland	CA	$10,293	$2,018	($8,275)	-80%
D	Denver	CO	$9,025	$114	($8,911)	-99%
D	Shelby	TN	$4,742	$6	($4,736)	-100%
C	Boston	MA	$16,598	$0	($16,598)	-100%
A	Houston	TX	$8,246	$0	($8,246)	-100%
F	Indianapolis	IN	$4,575	$0	($4,575)	-100%
F	Little Rock	AR	$6,755	$0	($6,755)	-100%
D	San Antonio	TX	$3,722	$0	($3,722)	-100%
F	Tulsa	OK	$6,031	$0	($6,031)	-100%
		Weighted Average:	$10,817	$2,859	($7,958)	-74%

Note: Disparity Per Student ($) is the Charter Per Student Revenue minus the District Per Student Revenue, so negative values indicate a charter school funding disadvantage. Disparity Per Student (%) is the dollar disparity divided by District Per Student Revenue. Washington, D.C. does not have the capability to raise local funds for education and therefore is excluded from this table.

On average, students in charter schools obtained around $8,000 less in local public funding per pupil than their traditional public school counterparts, a discrepancy of 74 percent.

Figure 2: **Difference in Local Public Revenue Per Student ($)**



State Public Revenue

State governments typically intervene in the funding of public education in the United States. Local funding is based on property values, which tend to fluctuate substantially from one locality to the next. Thus, severe school funding inequities could arise absent state-level intervention. We should expect state funding to close the large revenue gaps between charter and TPS at the local level.

As described in Table 5 and Figure 3, state-level revenue streams in 2015-16 tended to worsen funding inequities between the public charter and TPS sectors more than they improved them. On average, TPS received $385, or about 4 percent, more state-level per-pupil funding than public charter schools in the same location. State-level education funding expanded the charter school funding gap in seven of the cities analyzed in this report. Charter school students were allocated moderately less per-pupil funding than TPS from the state in Indianapolis, Los Angeles, Washington, D.C., and New York City. Charter school students in Camden, New Jersey, received about 59 percent, or $21,413 per pupil, less in

state funding than TPS students. The relative state-level funding disparity was especially large in Shelby County, as public charters got 76 percent less per-pupil revenue from the state than TPS. The most equitable distribution of state funding was observed in Oakland, California, where the disparity was only 3 percent in favor of TPS. Equity in state funding in Oakland failed to remedy large inequities in charter school funding from other sources, however, as Oakland had the fourth-largest overall charter school funding gap in our study.

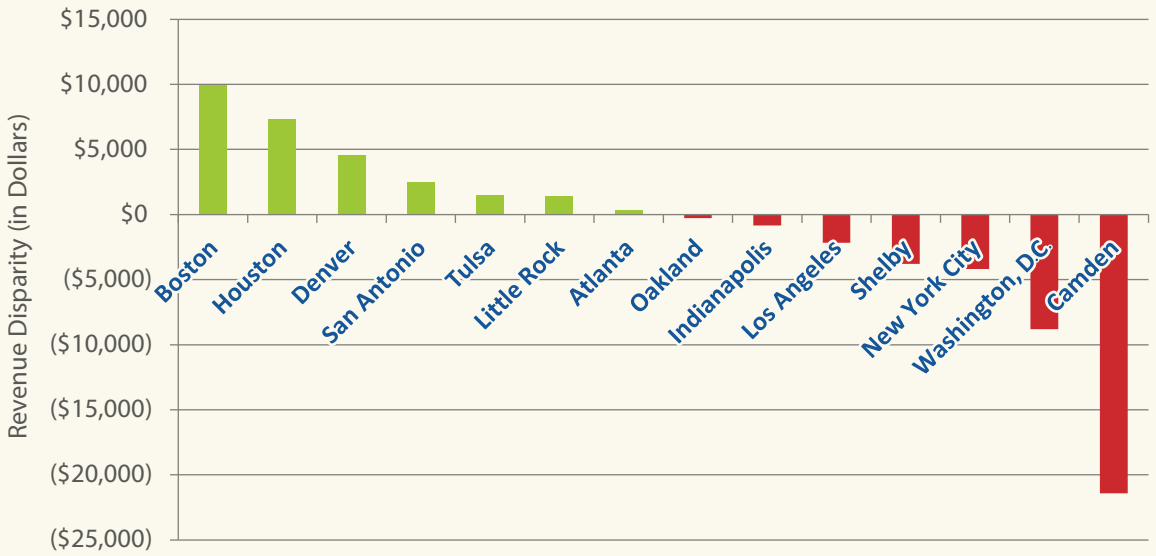
In San Antonio, Little Rock, and Tulsa, charters received moderately more per-pupil funding than TPS from state sources, reducing the charter funding gap in those locations somewhat. Funding gaps were diminished substantially, but not eliminated, by state funding in Houston, Boston, and Denver, where charters received over twice as much state funding per pupil as TPS.

Table 5: Total State Public Revenue Disparity Per Student, 2015-16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
A	Houston	TX	$1,455	$8,811	$7,356	506%
C	Boston	MA	$4,600	$14,557	$9,958	217%
D	Denver	CO	$3,094	$7,634	$4,540	147%
D	San Antonio	TX	$5,858	$8,378	$2,520	43%
F	Tulsa	OK	$3,750	$5,231	$1,481	40%
F	Little Rock	AR	$5,982	$7,390	$1,408	24%
F	Atlanta	GA	$4,403	$4,717	$314	7%
F	Oakland	CA	$9,342	$9,062	($280)	-3%
F	Indianapolis	IN	$7,728	$6,898	($830)	-11%
F	Los Angeles	CA	$10,573	$8,398	($2,175)	-21%
F	Washington, D.C.	DC	$28,102	$19,299	($8,803)	-31%
D	New York City	NY	$10,044	$5,857	($4,187)	-42%
F	Camden	NJ	$36,283	$14,870	($21,413)	-59%
D	Shelby	TN	$4,977	$1,189	($3,788)	-76%
		Weighted Average:	$8,853	$8,468	($385)	-4%

Note: Disparity Per Student ($) is the Charter Per Student Revenue minus the District Per Student Revenue, so negative values indicate a charter school funding disadvantage. Disparity Per Student (%) is the dollar disparity divided by District Per Student Revenue. State funding of charters in Shelby County might be predominantly captured in the "Public Indeterminate" totals in Appendix D, as the revenue documentation for those schools did not always permit us to identify the specific government source of public funds.

Figure 3: Difference in State Public Revenue Per Student ($)



Federal Public Revenue

Since President Bill Clinton took office in January of 1993, all U.S. presidents have been vocal supporters of public charter schools. Thus, we might expect that federal revenues shrink whatever charter school funding gaps have been created by combined state and local funding disparities.

Table 6 and Figure 4 show the funding disparities between charters and TPS based solely on federal revenue. On average, students in charter schools received $666 less per student in federal funds than students in TPS, representing a 40 percent federal public charter school funding gap. Only Boston's charter school sector received more federal funding, on a per-pupil basis, than its TPS, while Houston charters obtained only 4 percent less than Houston TPS. The federal government provided students in public charter schools in the remaining 12 areas with substantially less in federal revenue than it delivered to their TPS counterparts. Public charter school students in six locations – Oakland, Camden, Denver, Shelby County, Washington, D.C., and Atlanta – received less than half of the federal funding allocated to TPS per pupil. The federal funding inequities were especially large in Washington, D.C. and Atlanta, where public charter schools received 72 to 75 percent less in per-pupil funding from the federal government than nearby TPS.

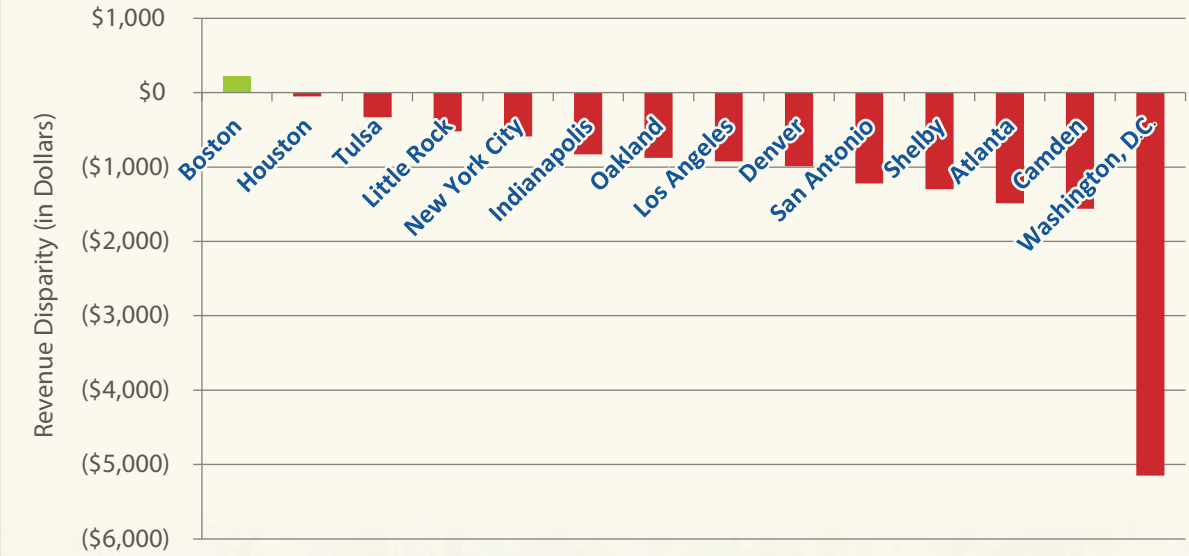
Students in charter schools received $666 less per student in federal funds than students in TPS, representing a 40 percent federal public charter school funding gap.

Table 6: Total Federal Public Revenue Disparity Per Student, 2015-16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
C	Boston	MA	$1,097	$1,322	$226	21%
A	Houston	TX	$1,396	$1,343	($53)	-4%
F	Tulsa	OK	$1,340	$1,007	($332)	-25%
F	Little Rock	AR	$1,555	$1,033	($522)	-34%
F	Indianapolis	IN	$2,039	$1,207	($832)	-41%
D	New York City	NY	$1,286	$699	($587)	-46%
D	San Antonio	TX	$2,646	$1,426	($1,220)	-46%
F	Los Angeles	CA	$1,863	$939	($924)	-50%
F	Oakland	CA	$1,754	$877	($887)	-51%
F	Camden	NJ	$3,057	$1,495	($1,562)	-51%
D	Denver	CO	$1,686	$698	($989)	-59%
D	Shelby	TN	$2,134	$837	($1,297)	-61%
F	Washington, D.C.	DC	$7,119	$1,968	($5,151)	-72%
F	Atlanta	GA	$1,978	$489	($1,488)	-75%
		Weighted Average:	$1,681	$1,016	$ (666)	-40%

Note: Disparity Per Student ($) is the Charter Per Student Revenue minus the District Per Student Revenue, so negative values indicate a charter school funding disadvantage. Disparity Per Student (%) is the dollar disparity divided by District Per Student Revenue.

Figure 4: Difference in Federal Public Revenue Per Student ($)



Nonpublic Revenue

Charter school critics often justify the presence of significant charter school funding gaps from public revenue sources, arguing that public charter schools more than make up the difference with charitable donations.[21] Both charter and traditional public schools are able to gain revenue through nonpublic sources such as food service fees, voluntary individual donations, and grants from charitable organizations. In our prior research on charter school funding equity, we determined that per-pupil revenue from nonpublic sources was nearly equal for students in the charter and TPS sectors, with TPS holding a slight advantage.[22] What was striking, however, was the fact that nonpublic revenue in the charter sector was highly skewed towards a small number of favored operators. Nearly two-thirds of public charter schools in that study received no revenue at all from nonpublic sources. What is the story regarding nonpublic revenue in the 14 locations in the primary sample for this study?

Our previous analysis of these 14 locations found that public charter schools received 40 percent more in nonpublic funds per pupil than TPS in the 2013-14 school year. It appears that the charitable funding favoring public charter schools in these cities has increased since then. As shown in Table 7 and Figure 5, charter schools received about $655 more in nonpublic funding per pupil than TPS in 2015-16, a nonpublic funding gap of 49 percent favoring charters. Twelve of the 14 locations had nonpublic revenue disparities favoring public charter schools. Where charters display a nonpublic funding advantage, these funds merely reduced the overall charter school funding gap slightly because nonpublic funding composed only 6.8 percent of all revenues in our sample of cities. The two locations with the largest public charter school nonpublic funding advantage were Washington, D.C., where TPS received $3,803 less per pupil, and Camden, New Jersey, where TPS secured $8,737 less per pupil. Little Rock and Denver had the most equity in nonpublic revenue, as public charter schools received about 8 percent more than TPS per pupil in those two cities.

Charter schools received about $655 more in nonpublic funding per pupil than TPS in 2015-16, a nonpublic funding gap of 49 percent favoring charters.

21 See for example Miron, G., Mathis, W., & Welner, K. (2015). Review of separating fact and fiction. Boulder, CO: National Education Policy Center.

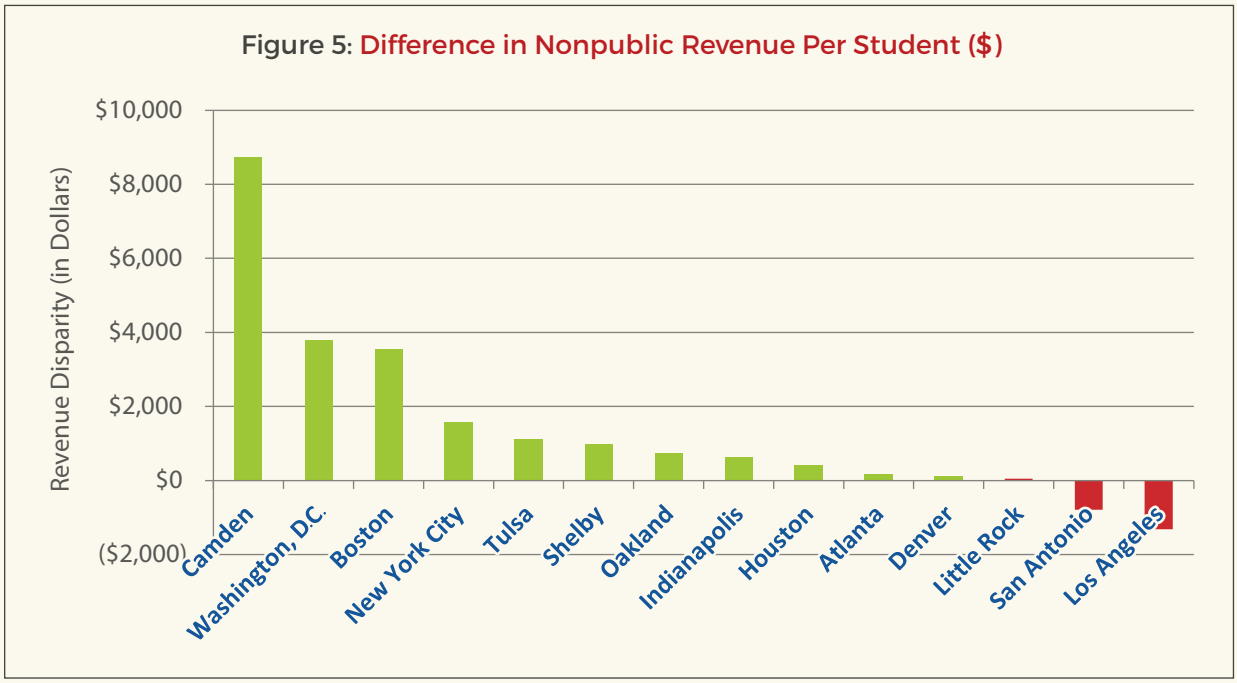
22 Batdorff, M., Cheng, A., Maloney, L., May, J. F., & Wolf, P. J. (2015). Buckets of water into the ocean: Non-public revenue in public charter and traditional public schools. Fayetteville, AR: School Choice Demonstration Project.

Table 7: Total Nonpublic Revenue Disparity Per Student, 2015-16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
F	Washington, D.C.	DC	$134	$3,938	$3,803	2836%
F	Camden	NJ	$519	$9,256	$8,737	1683%
D	Shelby	TN	$268	$1,246	$978	365%
C	Boston	MA	$994	$4,543	$3,549	357%
F	Tulsa	OK	$536	$1,666	$1,130	211%
D	New York City	NY	$1,401	$2,981	$1,580	113%
A	Houston	TX	$460	$885	$426	93%
F	Indianapolis	IN	$1,038	$1,665	$626	60%
F	Oakland	CA	$1,943	$2,690	$747	38%
F	Atlanta	GA	$461	$634	$174	38%
D	Denver	CO	$1,415	$1,534	$119	8%
F	Little Rock	AR	$625	$678	$52	8%
D	San Antonio	TX	$1,921	$1,130	($791)	-41%
F	Los Angeles	CA	$1,960	$640	($1,320)	-67%
		Weighted Average:	$1,327	$1,982	$655	49%

Note: Disparity Per Student ($) is the Charter Per Student Revenue minus the District Per Student Revenue, so negative values indicate a charter school funding disadvantage. Disparity Per Student (%) is the dollar disparity divided by District Per Student Revenue.

Figure 5: Difference in Nonpublic Revenue Per Student ($)



We are not always able to identify a revenue item's specific source. If we know that the revenue is from government, but we cannot establish conclusively which level of government provided it, we classify it as "Public Indeterminate" funding. If we cannot confirm if the revenue came from public or nonpublic sources, we classify it as "Indeterminate". All revenue received by the schools in a school sector are factored into the totals we presented in Table 1, including Public Indeterminate and Indeterminate funds. Because those categories of funds are unpredictable and nonspecific, we do not present tables of those totals in the text but, instead, display them in Appendix D by revenue type and as separate line items in the individual area profiles in Appendix C. Only 1.6 percent of the total revenues used in our analysis are "Indeterminate."

Longitudinal Results: 8 Cities

Is the condition of the charter school funding gap in 2015-16 similar to past gaps? To explore that question, we provide a longitudinal analysis for eight locations in our study for which we have data from FY03 to FY16. Since FY14, six locations decreased funding disparities while two locations widened their charter school funding gaps (Figure 6). In particular, inflation-adjusted funding gaps closed by 45 percent in Washington, D.C., 42 percent in Boston, 31 percent in Los Angeles, 25 percent in Denver, and 3 percent in both Indianapolis and New York City from 2013-2014 to 2015-16. The charter school funding gap expanded during that period by 116 percent in Houston and 285 percent in Atlanta. In per-pupil dollars, the funding gap closed in Washington, D.C. by $7,050 during that period but expanded by $5,586 in Atlanta.

Since FY14, six locations decreased funding disparities while two locations widened their charter school funding gaps (Figure 6).

Funding inequity worsened dramatically in Atlanta from FY14 to FY16 because nonpublic funds dried up and charter school enrollment growth took place primarily in virtual charter schools. Atlanta charter schools received over $4,300 in nonpublic revenues per pupil in 2013-14, while they only obtained around $600 per pupil in nonpublic revenues in 2015-16. The local funding disadvantage for public charter schools also grew over those two years in Atlanta – from 72 to 79 percent. By FY16, student enrollment in Atlanta charter schools had risen to 24,326, a 297 percent increase over the FY14 enrollment. Most of the growth was due to the opening of a virtual charter school where enrollment reached 13,916, or 57 percent of the total charter student population in FY16. The virtual charter school received $6,121 per pupil in total funding in FY16 while APS charter schools authorized by Atlanta Public Schools received $16,029 in total funding and services. With a much greater proportion of the charter school population in a virtual charter school, which received dramatically less public and non-public funding than district-authorized charter schools, the charter school funding gap grew dramatically from FY14 to FY16 in Atlanta.

Unfortunately, the funding equity improvement in Washington, D.C. also is mostly due to unpredictable nonpublic revenues. Nonpublic per pupil revenues increased from $1,300 in FY14 to over $3,900 in FY16 for public charter schools in Washington, D.C. Similarly, while public charters in Shelby County had a 20 percent funding disadvantage overall in FY16, they actually had an overall public charter school per pupil funding advantage of 9 percent due to unusually high philanthropic support back in FY14.

With a much greater proportion of the charter school population in a virtual charter school, which received dramatically less public and non-public funding than district-authorized charter schools, the charter school funding gap grew dramatically from FY14 to FY16 in Atlanta.

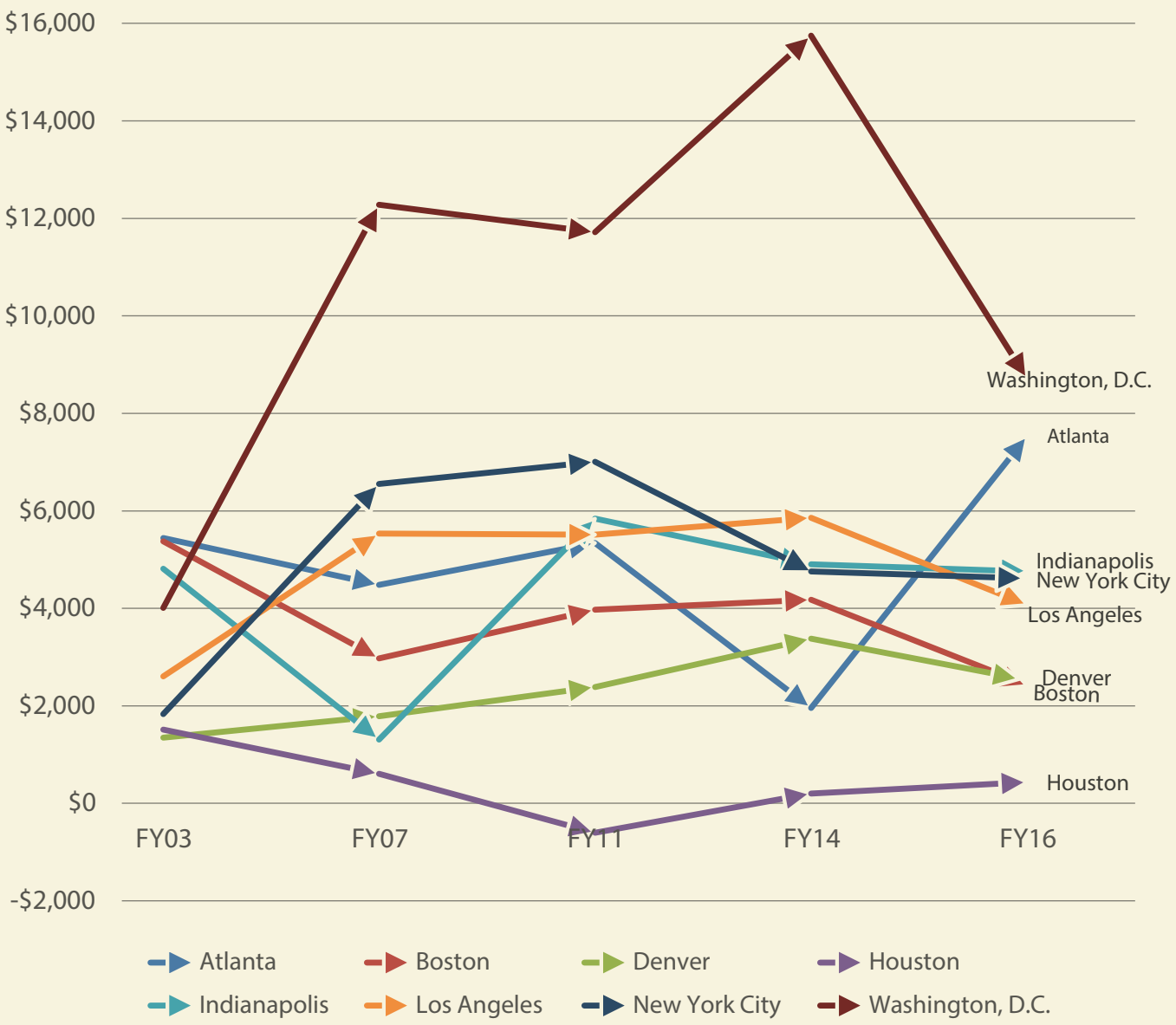
Looking back further, since FY03, the charter school funding gap declined in three metropolitan areas in our study and grew in the other five. Over the past 13 years, the funding gap dropped in Boston, Houston, and Indianapolis, but grew in Atlanta, Denver, Los Angeles, New York City, and Washington, D.C. Inflation-adjusted funding disparities favoring TPS grew by over $1,000 per student between 2002-03 and 2015-16 in all five of these locations. In New York City, the inflation-adjusted per pupil funding disparity favoring TPS increased by about $2,800 while the disparity grew by about $4,700 per pupil in Washington, D.C.

Figure 7 provides the weighted average of the charter school funding gap for these eight cities across the 13 years from FY03 to FY16. Public charter schools in these eight locations received an average of $3,316 less in real inflation-adjusted dollars per pupil than TPS in 2002-03. That funding gap grew to an average of $5,738 in 2006-07 and $6,391 in 2010-11. Between FY11 and FY14, the funding disparity favoring TPS declined by $576 per student. Between FY14 and FY16, the funding disparity shrunk again by $570 per student, a 10 percent reduction in funding inequity. Thirteen years after we first revealed that public charter schools receive less revenue than their TPS in these eight cities, the already large charter school funding gap has grown by 58 percent.

Over the past 13 years, the funding gap dropped in Boston, Houston, and Indianapolis, but grew in Atlanta, Denver, Los Angeles, New York City, and Washington, D.C.

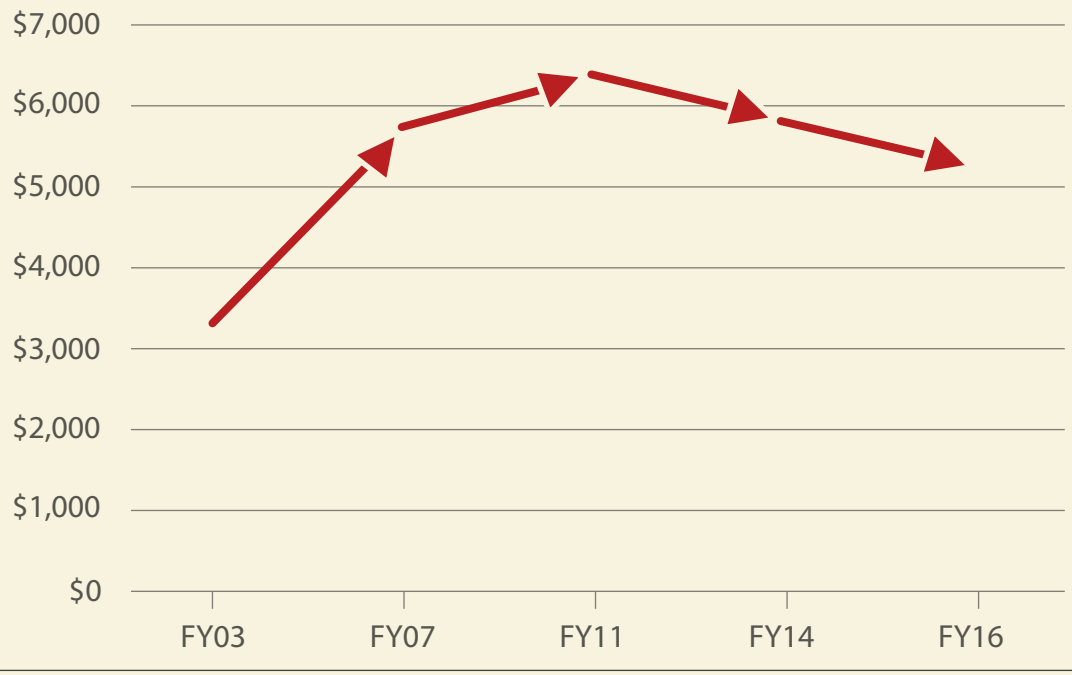
Thirteen years after we first revealed that public charter schools receive less revenue than their TPS in these eight cities, the already large charter school funding gap has grown by 58 percent.

Figure 6: Inflation-Adjusted Per Pupil Funding Gap Favoring TPS in 8 Cities, 2002-03 to 2015-16



Note: For the longitudinal analysis shown in Figures 6 and 7 adjustments were made to the current analysis data to conform to the methodology in our prior revenue studies, from which the 2003, 2007, 2011, and 2014 data are drawn. For these figures only, Adult Education and Pre-K revenues and enrollments were removed from FY2014 and FY2016 data to enhance the comparability of the numbers. Also removed for these figures only were bond and loan proceeds and any identified "in-kind" revenues.

Figure 7: Aggregate Inflation-Adjusted Per Pupil Funding Gap for 8 Cities, FY03 to FY16



Note: Weighted average of the per-pupil revenue gap in Atlanta, Boston, Washington D.C., Denver, Houston, Indianapolis, Los Angeles, and New York City.

Longitudinal Results: 14 Cities

We now have sufficient data to perform a longitudinal analysis for all 14 cities from our main evaluation. We have funding data for these locations from three time periods: FY13, FY14, and FY16. As shown in Figure 8 below, inflation-adjusted funding gaps favoring TPS widened between 2013-14 and 2015-16 in seven cities and shrunk in seven cities. Funding gaps grew in Atlanta, Houston, Little Rock, New York City, San Antonio, Shelby, and Tulsa – while they shrunk in Boston, Camden, Denver, Indianapolis, Los Angeles, Oakland, and Washington, D.C. Funding gaps have grown in more cities (9) than they have shrunk (5) since 2012-13. Funding gaps have grown since that time in Atlanta, Camden, Los Angeles, New York City, Oakland, San Antonio, Shelby County, Little Rock, and Tulsa, while they have shrunk in Boston, Denver, Houston, Indianapolis, and Washington, D.C.

Funding gaps have grown in more cities (9) than they have shrunk (5) since 2012-13.

As shown in Figure 9 below, inflation-adjusted funding gaps have slightly decreased across the 14 cities since 2012-13 but increased since 2013-14. Specifically, inflation-adjusted funding gaps – weighted by student enrollment in each location – have shrunk by about 2 percent since 2012-13 and widened by about 0.03 percent since 2013-14.

Figure 8: Inflation-Adjusted Per Pupil Funding Gap Favoring TPS in 14 Cities, FY13 to FY16

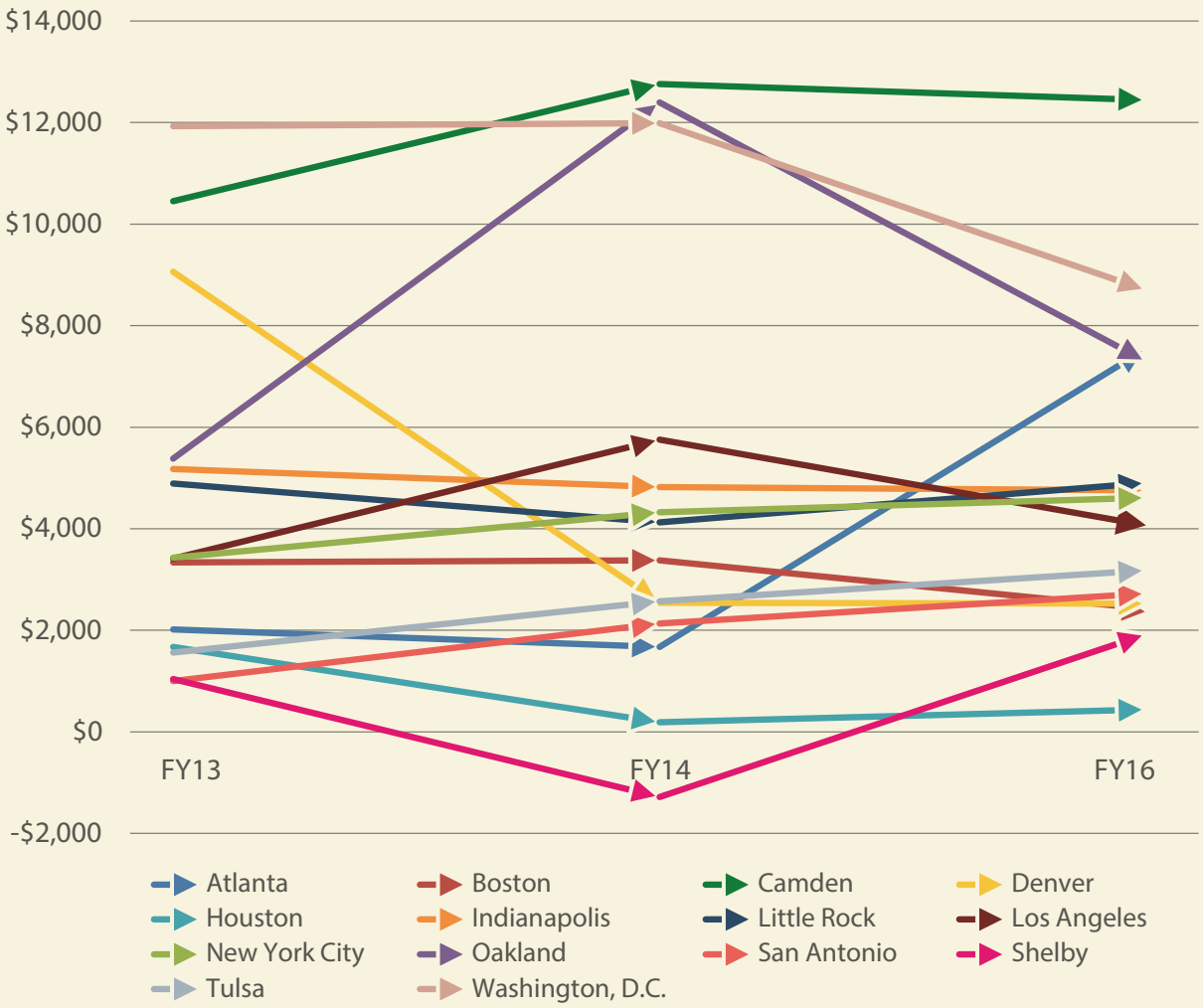
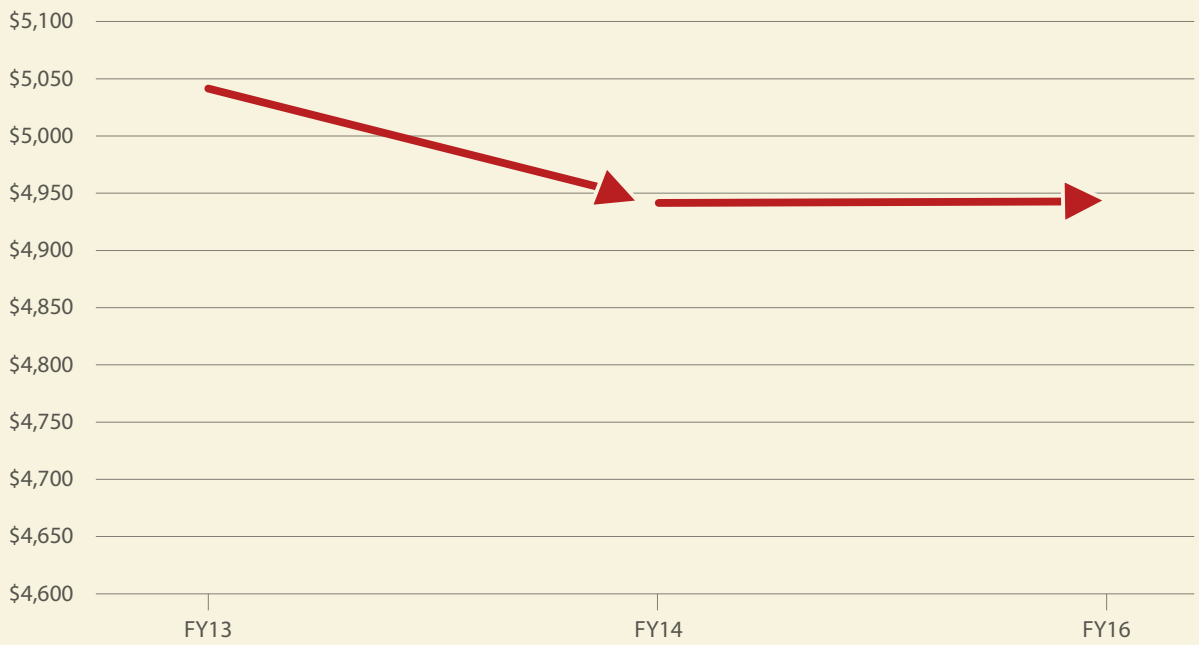


Figure 9: Aggregate Inflation-Adjusted Per Pupil Funding Gap for 14 Cities, FY13 to FY16



Note: Weighted average of the per-pupil revenue gap in Atlanta, Boston, Camden, Washington D.C., Denver, Houston, Indianapolis, Los Angeles, Oakland, Shelby, Tulsa, San Antonio, Little Rock, and New York City.

The Special Case of New Orleans

Hurricane Katrina drastically changed the public school system in New Orleans, Louisiana.[23] As the government rebuilt the system from 2005 to 2007, the state-managed Recovery School District governed an increasing proportion of New Orleans public schools as charters while maintaining a few traditional public schools. The Orleans Parish School Board continued to manage less than a dozen traditional public schools, most of which required high student test scores to enter, along with an increasing number of public charter schools that the Board itself authorized. Meanwhile, hundreds of millions of federal emergency management dollars earmarked for education flowed into New Orleans annually through the Recovery School District and Orleans Parish School Board. The subsequent funding of public schools became radically different in the Crescent City than in other cities, and the scale of federal funds supporting the rebuilding and operation of New Orleans schools has been uniquely massive, continuing even through FY16 with $71.3 million that year from the Federal Emergency Management Agency. The Orleans Parish School Board, which is the primary administrator of the "traditional public school" sector as it exists in New Orleans, clearly is passing through some of those hundreds of millions of dollars in federal support to public charter schools in the Crescent

23 See Harris, D. (2015). Good news for New Orleans: Early evidence shows reforms lifting student achievement. *Education Next* 15(4), Fall, pp. 8-15.

City. Such pass-throughs to charters, which we can account for in other metropolitan areas, are not sufficiently documented in the case of New Orleans for us to identify them reliably. Therefore, we exclude New Orleans from our aggregate analyses regarding the charter school funding gap in metropolitan areas to prevent this outlier case from drastically distorting our results. Nonetheless, we highlight the interesting findings from this outlier location in Table 8.

With these cautions in mind, we find that, overall, whether we control for special education expenditures or not, New Orleans public charter schools received about 85 percent less in per-pupil funding than New Orleans traditional public schools in 2015-16. The student funding disparity between New Orleans charters and TPS that year was almost twice the size of the last-place city (Atlanta) in our 14-location analysis. Students in public charter schools in New Orleans received over 89 percent less local public funding than TPS, consistent with the other metropolitan areas in our study, none of which demonstrated a local funding advantage for charters. New Orleans public charter schools obtained 34 percent more state public funding than TPS, 94 percent less federal public funding, and 90 percent less nonpublic funding. With the exception of state and local funding, the revenue gaps that either favor or disfavor (federal and nonpublic) public charter schools are more extreme in New Orleans than any other metropolitan area we study.

Table 8: Revenue Disparities for New Orleans, FY16

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$80,838	$12,490	$(68,348)	-85%
Total without SPED	$77,059	$11,203	$(65,856)	-86%
Local Public	$37,999	$4,179	$(33,820)	-89%
State Public	$3,799	$5,088	$1,289	34%
Federal Public	$31,402	$1,837	$(29,566)	-94%
Nonpublic	$6,335	$633	$(5,702)	-90%
Public Indeterminate	$(4,008)	$658	$4,666	-116%
Indeterminate	$5,310	$96	$(5,214)	-98%

Conclusion

Public charter schools increasingly are part of both the national conversation about education policy and the local urban scene in America. Previous studies of public charter schools have examined their achievement effects focused on both the state and metropolitan levels, and funding disparities focused on the state levels. This is the second study of funding inequities to concentrate on revenue disparities between charters and traditional public schools where charters are most common across the country: metropolitan areas. Because our 14 primary locations include at least three years of data, we include a longitudinal component to our study. Our data regarding the charter school funding gap were painstakingly collected from state financial data collections and audited reports regarding the 2016 fiscal year.

Thirteen out of 14 metropolitan areas in our study received a C or lower grade for charter school funding equity. Houston, Texas, demonstrated the greatest revenue balance between charters and traditional public schools, as charters on average received 95 percent of the per-pupil funding average of TPS. Boston public charter schools were underfunded relative to their TPS by 12 percent, and it got worse for charters from there. Public charter schools in Camden, New Jersey, received an average of $14,671, or 36 percent, less in per-pupil funding than TPS. Public charter schools in Atlanta, Georgia, received an average of $8,894 less in per-pupil funding than TPS in that city, representing a 49 percent funding inequity.

Differences in the rates of enrolling students with special educational needs fully explained the charter school funding gap in only one city: Boston. For the other 13 cities in our study, accounting for differential funding for students with special educational needs still leaves unexplained revenue gaps that favor TPS. A dearth of local education funding contributes mightily to the charter school funding gap in all locations studied here except three. Camden, New Jersey, only underfunds public charters by about $433 per student in terms of local revenues. In Los Angeles, only about one-third of the total disparity is due to differences in local revenues received per pupil. In Washington, D.C., all non-federal public funds come from the state education agency. State funding streams shrink the charter school funding gap in seven cities and widen it in seven locations. The average effect of state revenues on the charter funding gap for our 14 metropolitan areas is to increase it by about 4 percent. Federal education revenues, on average, worsen the charter school funding discrepancies as do nonpublic sources of funding, which vary dramatically across the 14 locations.

For three of the cities we have studied for 13 years – Boston, Houston, and Indianapolis – the charter school funding gap declined from 2002-03 to 2015-16. For five other cities – Atlanta, Denver, Los Angeles, New York City, and Washington, D.C. – the funding gap increased over that period. Across the eight cities, we also found that overall per-pupil disparities decreased by about 10 percent from 2013-14 to 2015-16. Taking the longer view, however, the charter school funding gap increased by 58 percent

between 2002-03 and 2015-16. Across all 14 locations in our study, in the three years from 2012-13 to 2015-16, funding gaps grew in more cities (9) than they shrank (5). Inflation-adjusted funding gaps narrowed by a mere 2 percent since 2012-13 but widened by 0.03 percent since 2013-14.

Although we originally intended to include New Orleans in the main sections of our revenue study, the unique ways that public schools are funded in that city and the massive amounts of federal emergency aid that have flowed into it continuously since 2005 make it such an outlier case that we were forced to discuss it separately.

Our careful analysis of funding for public charter schools and TPS in 15 metropolitan areas has revealed much about school funding inequities in the city. Public policies in all but one location we examined, Houston, resulted in the inequitable funding of students in public charter schools in 2015-16. Two other cities with reasonably equitable charter school funding totals in 2013-14, Shelby County and Atlanta, experienced significant charter funding gaps in 2015-16. In both locations, much of the nonpublic funding that previously brought them above or close to funding equity went away in subsequent years. In Atlanta, the launch of a large virtual charter school pulled down the per-pupil funding average for the charter sector. These two cases of approximate funding equity lost underscore our main policy recommendation that all public funds should follow every K-12 child to whichever public school they choose to attend.

State policymakers have the authority, opportunity, and responsibility to achieve equal total funding of public school students in their states. They have the authority because federal law delegates most education decisions to state governments. The ability of states to eliminate the charter school funding gap in their jurisdiction is especially strong given the accountability flexibility introduced by the recent replacement of No Child Left Behind with the Every Student Succeeds Act.

State policymakers have the opportunity to achieve equal total funding of public school students by designing a funding formula whereby they first establish a general system of needs-based funding weights – for student characteristics such as special needs, low-income, English Language Learner, and rural location – and then funnel 100% of public school funding through that formula, regardless of whether the school the student is attending is a public charter or a traditional public school. Every public school student needs to be educated in an adequate school facility, so capital funds, like operational funds, should be allocated equally to charters and TPS on a per-student basis. Any categorical aid that is designated by law to go

State policymakers have the authority, opportunity, and responsibility to achieve equal total funding of public school students in their states.

exclusively to one public school sector but not the other should be compensated for by separate state appropriations that re-balance the scales.

State policy makers should be held accountable for the degree to which they achieve equal total funding across public school sectors, using a formula that adjusts appropriately for varying student needs, because ensuring that every public school student receives the public funding that they need, regardless of sector, is simply the right thing to do. Charter school funding gaps need not and should not be a permanent part of the funding of public schools.

Only with equal total funding of students in public education can we be confident that children will not be valued less simply because they are being educated in a public charter school.

In sum, our studies of the ebbs and flows of the charter school funding gap in the U.S. continue to point towards a single conclusion. Only with equal total funding of students in public education can we be confident that children will not be valued less simply because they are being educated in a public charter school.

Appendix A. Methodology

Location Selection

The team selected 15 metropolitan areas for analysis, based on one of two criteria: the concentration of charter schools within an area or the potential for charter school growth there. Locations represent selected cities or counties used as an analysis domain for aggregating district data and geographically and demographically similar charter school data for comparative purposes. The objective of our location selection is to match district students with charter students by educational setting and student need. Locations are used as a proxy for urban/metropolitan settings. They can include a single district or multiple districts, and include geographically related multiple charter schools. The study provides district and charter revenue totals and funding disparity amounts for each location.

Fiscal Year

We gathered publicly available revenue data for the 2015-16 *fiscal year* (FY14). Because states differ in the fiscal year used for their public schools, we attempted to select the fiscal year that most closely matched the 2015-16 school year. We refer to that year throughout this report as "FY 2016."

Data Gathering

Source records were acquired directly from official state department of education records, and from independently audited financial statements when a state does not collect financial data. For New York City, we used detailed expenditure data from the New York City Education Department due to the greater level of detail available. We use the most reliable, most detailed, official records available. The same data and analysis standards for the past three revenue studies were applied for each location in the study.

Revenues and expenditures were collected from many sources, from state and federal agencies where these data are kept, as well as from audits. After the FY16 school year concluded, the team waited 18 months to begin researching this project to allow state departments of education and charter schools time to produce and submit all of their official financial records, Annual Financial Reports, independent audits, enrollment statistics, and other data. The methodology matches a state's Department of Education's (DOE) records of school district revenues to the same fiscal year of data drawn from independent audits for the charter schools. Because all data analyzed for districts and charter schools are as of the same date, FY16, all data are properly matched based on reporting time period.

The analytic team did not rely upon finance data or demographic data collected by Federal agencies, except in very rare cases where the data are not available from state and local sources. Data sourced from Federal agencies have gone through extensive aggregation and reporting processes that tend to be aggregated to the point where there is insufficient specificity to be useful for our analysis, and where we have seen reporting errors when checked against state sources. Due to lack of enrollment data for Title I and students qualifying for Free & Reduced Price Meals from some states, Federal NCES data were used for these special enrollment statistics for Table 2 in the study.

New Orleans is excluded from the national averages and disparity calculations. State funding and accounting for charter schools since Hurricane Katrina has been unusual in the Crescent City and not representative of patterns or practices in other states.

Data from Various Unique State Sources, Analyzed into Comparative Datasets

In each state, we encountered a maze of web sites, reports, audits, and other information that, while extremely challenging to piece together, ultimately provided the best sources of primary data for understanding and analysis of funding levels and comparisons. By using each state's individual accounting system, we were able to isolate revenue streams for inclusion/exclusion to accommodate our consistent methodology and to make valid comparisons across locations.

We began our research on state web sites, searching for financial data reported by local, state, federal, and other revenue categories. Though many states provided some form of revenue data, often the data existed only for school districts (not charters), or the data did not conform to the classifications used in other states. In those cases, we used additional data sources to develop conforming revenue figures. In instances where the state did not collect charter school revenue data, we used independent audits of financial data and sometimes federal Form 990.

We gathered enrollment data from state education department web sites. We also obtained funding formula guidelines for both districts and charters for FY 2015-16.

Analysis of Revenues, Expenditures, Inclusions and Exclusions, Demographic Context

We studied revenues and special education expenditures for this report. Our mission was to examine how charter schools are treated in state public finance systems, so we focused on how much money schools receive and, secondarily, how much of their revenue they spent on special education services. We looked for the following data and supporting detail:

- Revenues: We included all revenues received by districts and public charter schools. Our goal was to determine the total amount of revenue received to run all facets of a school system, regardless of source. For charter schools, we included one-time revenues associated with starting the school, such as the federal Public Charter School Program and, in some cases, state and private grants. Fund transfers are not considered revenue items, and are not included in the analysis.

  Arguably, one-time revenues could have been excluded since they are not part of a charter school's recurring revenues. However, they are a notable part of the funding story for the charter sector; when considering how much money is provided to run charter schools, these revenues cannot be and were not ignored. Furthermore, we also included onetime grants of various kinds to districts.

  Funds initially received by traditional public schools that were passed along to charters usually were flagged as pass-through funds in the documentation we used to determine charter school revenue. In some cases we were able to identify additional cases of TPS providing services to charter students, usually involving special education, through examining expenditure data. In all cases where we were able to determine that TPS funds either passed through to charters or were spent on charter school students we counted that as charter school revenue and not TPS revenue. For example, the New York City school district made $246 million in in-kind expenditures supporting the charter schools in the city in FY16. We reduced the district's revenue by $246 million and increased the charter sector total by the same amount, as that revenue supported charter students.
- Enrollment: Where more than one form of enrollment data were available, we used the figures related to the official fall count day. Depending on a state's particular method of reporting enrollment, the official count could be either Average Daily Attendance (ADA) or Average Daily Membership (ADM).
- Comparable Longitudinal Data: This analysis includes revenues and enrollments related to Adult Education and Pre-K. Also included are charter school contributions for the purpose of building schools (or other capital items), and similarly charter (if any) and district bond and loan proceeds for the purpose of building schools, excluding proceeds resulting from restructuring of debt. Our previous Revenue Study methodology for fiscal years 2003, 2007, and 2011 excluded bond and loan proceeds and Adult Education and Pre-K to enhance entire state-to-state comparability in an environment with varied educational settings. We changed our methodology for FY 2014 and FY 2016, making it more inclusive of all revenues, because it is common for all schools in urban educational settings to provide these auxiliary services and to take on debt for building construction, renovation, and maintenance. For the longitudinal analysis shown in FIG. 6 adjustments were made to the current analysis data to conform to the Revenue Study methodology. For FIG. 6 only, Adult Education and Pre-K revenues and enrollments were removed from FY2014 data. Also removed, for FIG. 6 only, were bond and loan proceeds and any identified "in-kind" revenues.
- Exclusion of Revenue: The only revenue item we excluded from our analysis was funds resulting from the restructuring of debt, as those are not "new revenues" but merely a re-packaging of existing assets and obligations.
- Selection of Schools: All charter schools in each locality were included in this study with the exception of schools for which we could not obtain valid revenue and enrollment data. If we could not obtain revenue data, the enrollments for those schools were excluded from the analysis. If we could not obtain enrollment data, the revenues for that school were excluded from the analysis.
- Demographic Data: To better understand the funding gaps in each location, we collected data on students eligible for free or reduced price lunch programs, students that were English Language Learners, and where available, special education programs. These data appear in Table 2. Because some schools choose

not to participate in the free and reduced price lunch program even though they enroll significant numbers of low-income children, these data exclude district and charter schools that reported zero free and reduced price lunch students.

Revenue Source Classifications

The revenue analysis classifies revenues by source. The six source classifications – which apply to both districts and charter schools -- include the following:

- **Federal** – Revenues whose origins are federal taxation and public usage fees. These revenues may include federal impact aid, Title I, mineral rights and access payments, federal charter school startup revenues, ARRA funds, and federal "State Fiscal Stabilization Fund" grants, and any other obviously federal revenue.
- **State** – Revenues whose origins are state taxation and public licensing and usage fees. These revenues may originate from sales taxes, property taxes, licensing fees, auto registrations, lotteries, or any other state origins.
- **Local** – Revenues whose origins are local taxation and public per capita and usage fees. The most common local source is local property taxes and may also include piggy-back sales taxes, per capital taxes, local capital bonds, and any other allowed local revenue sources.
- **Other** – Revenues from non-tax, nonpublic sources. These revenues include gate receipts, meal sales, philanthropy, fundraising, interest on bank accounts and investments, and any other non-tax revenues.
- **Public-Indeterminate** – A revenue item is classified as Public-Indeterminate if it can be determined that the item is from public taxation but due to lack of the state's accounting record specificity it cannot be determined if it is from a Federal, State, or Local source. In some cases, districts in our study will show a negative value for Public-Indeterminate. When financial files indicate that the district has received funds on behalf of charter schools, and it is unclear whether those funds originated from Local, State or Federal sources, we record the pass-through of those funds to the charter schools as Public-Indeterminate revenue for the district. If the district does not have any revenue already classified in this category, it results in a negative value.
- **Indeterminate** – If the State's financial detail lacks sufficient specificity to classify a revenue item into any of the other five source classifications, then that revenue item is classified as "Indeterminate."

Negative Revenue Amounts

If an analyst backs out revenue amounts for items that are exclusions based on the revenue study methodology, the actual line item amounts are removed, flagged to be excluded in totals, or a negative revenue item is added to the file. The method used is dependent upon the specificity of the data record available to the analyst and based on the nature of the adjustment and data structure. When any adjustment amount is added to the file it is added to the most appropriate source category and is specific to districts versus charter schools.

Negative revenue amounts can occur when one side of an accounting entry is classified into one source category and the other side of the accounting entry is classified into a different source category. Negative revenue amounts occur naturally in most financial systems for a variety of reasons. They have a small net effect on the categorical totals for Federal, State, Local, and Other revenues used in this study.

Expenditures

For the purpose of this study, we included all expenditures made by a district or a public charter school with the exceptions below:

- Identifying Special Education Expenditures: All financial accounts were evaluated to determine if the fund, program or source identified the expenditure as supporting special education programming. In the case of some charter schools where the state does not collect detailed financial data, we used the school's program designation.
- Intra-agency Transfers: Transfer payments between accounts could lead to double counting of expenditures and therefore were excluded from the analysis.
- In-Kind Payments: Where noted, we excluded any non-cash services provided by the district that supported public charter schools. Our intention is to determine how much funding supports students in each type of education setting. When the district documentation indicated In-Kind services were provided to public charter schools but the charters did not record those services on their balance sheets, we included those in-Kind services as part of the costs of operating the public charter schools.

Inflation Adjustments

Inflation-adjustments were used in the revenue study for the comparative longitudinal metrics and discussions. All inflation adjustments are made to 2007 dollars. Therefore, FY03 dollar amounts were adjusted by a factor of 1.13 to 2007 dollars, FY07 metrics remained at face amount, FY11 amounts were adjusted by a factor of 0.92, FY14 funds by 0.88, and FY16 funds by 0.85. The source for these inflation adjustment factors is the Bureau of Labor Statistics – their CPI Inflation Calculator at: http://data.bls.gov/cgi-bin/cpicalc.pl.

Rounding

Dollar values are rounded to the nearest dollar for each chart, so some totals may be off by $1 compared to the sum of the visible values on a chart. Similarly, some values may differ by $1 for the same metric depending on the analysis source for that metric. Percentages also are rounded to the nearest whole number, which may cause apparent differences by a percentage.

Tables and Charts

If no citation accompanies a table or chart, the information therein was compiled by the research team according to the process outlined above. When we relied on the data or publications of other organizations, we provide the relevant citation.

Weighted Average Calculations

The totals presented in each table are weighted averages based on enrollments in each city. We generate them by taking the revenue totals for each metropolitan area in the table, adding them up, then dividing that aggregate by the total combined student enrollment for those metropolitan areas. We do this separately for the TPS and charter sectors. The average funding gap, then, is the total charter average minus the total TPS average. This straightforward method automatically generates a per-pupil average that is a "true" mean for the aggregated set of cities, given their different enrollments. The relative contribution of each metropolitan area to our 14-city averages is presented in Table A1.

Table A1: Percent of Students from Study Locations, FY16

Overall Funding Disparity Grade	Ranked Regions	State	Percent of Total (Districts)	Percent of Total (Charters)
A	Houston	TX	9.63%	8.49%
C	Boston	MA	2.39%	3.04%
D	New York City	NY	43.76%	22.57%
D	Denver	CO	3.34%	4.31%
D	Shelby	TN	4.45%	5.55%
D	San Antonio	TX	2.37%	1.80%
F	Los Angeles	CA	23.76%	27.10%
F	Washington, D.C.	DC	2.17%	9.54%
F	Tulsa	OK	1.76%	0.72%
F	Camden	NJ	0.41%	1.75%
F	Indianapolis	IN	1.32%	4.62%
F	Oakland	CA	1.66%	3.58%
F	Little Rock	AR	1.03%	0.92%
F	Atlanta	GA	1.95%	6.01%

Appendix B. Information Sources

Arkansas

- Arkansas Department of Education

California

- California Department of Education, the California Longitudinal Pupil Achievement Data System (CALPADS)

Colorado

- Colorado Department of Education, the School Finance Unit

District of Columbia

- District of Columbia Public Charter School Board
- District of Columbia Department of Revenue

Georgia

- Georgia Department of Education, Office of Finance and Business Operations and Charter Schools Office
- Georgia Charter Schools Association
- Fulton County Schools Finance and Business
- Atlanta Public Schools Financial Services and Charter Schools Office

Indiana

- Indiana Department of Education, School Finance

Louisiana

- Louisiana Department of Education, School Finance

Massachusetts

- Massachusetts Department of Elementary and Secondary Education, School Finance
- Massachusetts Department of Elementary and Secondary Education, Charter Schools Office

NCES

- Massachusetts Department of Revenue, Division of Local Services

New Jersey

- New Jersey Department of Education, School Finance

New York

- New York State Education Department
- Audited Annual Financial Reports from school districts

Oklahoma

- Oklahoma Department of Education

Tennessee

- Tennessee Charter School Center
- Tennessee Comptroller of the Treasury
- Tennessee Department of Education

Texas

- Texas Education Agency, Division of School Finance, Information Analysis Division, and Division of Charter Schools
- Texas Resource Center for Charter Schools
- Houston Independent School District
- Dallas Independent School District

Nationwide

- The National Alliance for Public Charter Schools
- The National Institute for Early Education Research at Rutgers Graduate School of Education

Appendix C. Summary Tables for Each Location

Below are tables which summarize the data presented in the report for each location. They are ordered from the metropolitan area with the revenue disparity most favorable to charters to the area with the disparity most favorable to traditional public schools.

Table C1: Revenue Disparities for Houston, FY16 (Grade of A)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$11,557	$11,040	($517)	-5%
Total without SPED	$10,721	$10,607	($114)	-1%
Local Public	$8,246	$0	($8,246)	-100%
State Public	$1,455	$8,811	$7,356	506%
Federal Public	$1,396	$1,343	($53)	-4%
Nonpublic	$460	$885	$426	93%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$0	$0	~

Table C2: Revenue Disparities for Boston, FY16 (Grade of C)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$23,288	$20,423	($2,865)	-12%
Total without SPED	$17,900	$18,862	$962	5%
Local Public	$16,598	$0	($16,598)	-100%
State Public	$4,600	$14,557	$9,958	217%
Federal Public	$1,097	$1,322	$226	21%
Nonpublic	$994	$4,543	$3,549	357%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$0	$0	~

Table C3: Revenue Disparities for New York City, FY16 (Grade of D)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$28,141	$22,701	($5,440)	-19%
Total without SPED	$25,561	$20,342	($5,219)	-20%
Local Public	$17,173	$9,278	($7,895)	-46%
State Public	$10,044	$5,857	($4,187)	-42%
Federal Public	$1,286	$699	($587)	-46%
Nonpublic	$1,401	$2,981	$1,580	113%
Public Indeterminate	($1,762)	$3,885	$5,648	-321%
Indeterminate	($241)	$2,596	$2,837	-1176%

Table C4: Revenue Disparities for Denver, FY16 (Grade of D)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$15,230	$12,248	($2,982)	-20%
Total without SPED	$14,079	$10,932	($3,147)	-22%
Local Public	$9,025	$114	($8,911)	-99%
State Public	$3,094	$7,634	$4,540	147%
Federal Public	$1,686	$698	($989)	-59%
Nonpublic	$1,415	$1,534	$119	8%
Public Indeterminate	$10	$2,268	$2,258	23440%
Indeterminate	$0	$246	$246	~

Table C5: Revenue Disparities for Shelby County, FY16 (Grade of D)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$11,174	$8,902	($2,273)	-20%
Total without SPED	$9,764	$8,792	($972)	-10%
Local Public	$4,742	$6	($4,736)	-100%
State Public	$4,977	$1,189	($3,788)	-76%
Federal Public	$2,134	$837	($1,297)	-61%
Nonpublic	$268	$1,246	$978	365%
Public Indeterminate	($947)	$5,623	$6,570	-694%
Indeterminate	$0	$359	$359	~

Table C6: Revenue Disparities for San Antonio, FY16 (Grade of D)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$14,147	$10,934	($3,214)	-23%
Total without SPED	$12,775	$10,410	($2,365)	-19%
Local Public	$3,722	$0	($3,722)	-100%
State Public	$5,858	$8,378	$2,520	43%
Federal Public	$2,646	$1,426	($1,220)	-46%
Nonpublic	$1,921	$1,130	($791)	-41%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$0	$0	~

Table C7: Revenue Disparities for Los Angeles, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$17,813	$13,017	($4,797)	-27%
Total without SPED	$14,971	$13,001	($1,970)	-13%
Local Public	$3,498	$1,874	($1,624)	-46%
State Public	$10,573	$8,398	($2,175)	-21%
Federal Public	$1,863	$939	($924)	-50%
Nonpublic	$1,960	$640	($1,320)	-67%
Public Indeterminate	($80)	$1,166	$1,246	-1551%
Indeterminate	$1,429	$0	($1,429)	-100%

Table C8: Revenue Disparities for Washington, D.C., FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$35,494	$25,236	($10,258)	-29%
Total without SPED	$31,770	$23,252	($8,518)	-27%
Local Public	$0	$0	$0	~
State Public	$28,102	$19,299	($8,803)	-31%
Federal Public	$7,119	$1,968	($5,151)	-72%
Nonpublic	$134	$3,938	$3,803	2836%
Public Indeterminate	$139	$31	($107)	-77%
Indeterminate	$0	$1,224	$1,224	~

Table C9: Revenue Disparities for Tulsa, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$11,656	$7,904	($3,752)	-32%
Total without SPED	$10,681	$7,580	($3,101)	-29%
Local Public	$6,031	$0	($6,031)	-100%
State Public	$3,750	$5,231	$1,481	40%
Federal Public	$1,340	$1,007	($332)	-25%
Nonpublic	$536	$1,666	$1,130	211%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$141	$140	83,021%

Table C10: Revenue Disparities for Camden, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$40,697	$26,027	($14,671)	-36%
Total without SPED	$35,679	$25,749	($9,930)	-28%
Local Public	$838	$405	($433)	-52%
State Public	$36,283	$14,870	($21,413)	-59%
Federal Public	$3,057	$1,495	($1,562)	-51%
Nonpublic	$519	$9,256	$8,737	1,683%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$11	$11	~

Table C11: Revenue Disparities for Indianapolis, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$15,380	$9,769	($5,611)	-37%
Total without SPED	$13,825	$9,357	($4,468)	-32%
Local Public	$4,575	$0	($4,575)	-100%
State Public	$7,728	$6,898	($830)	-11%
Federal Public	$2,039	$1,207	($832)	-41%
Nonpublic	$1,038	$1,665	$626	60%
Public Indeterminate	$0	$0	$0	~
Indeterminate	$0	$0	$0	~

Table C12: Revenue Disparities for Oakland, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$23,332	$14,735	($8,597)	-37%
Total without SPED	$20,745	$14,735	($6,010)	-29%
Local Public	$10,293	$2,018	($8,275)	-80%
State Public	$9,342	$9,062	($280)	-3%
Federal Public	$1,754	$877	($887)	-51%
Nonpublic	$1,943	$2,690	$747	38%
Public Indeterminate	$0	$89	$90	-18,283%
Indeterminate	$1,023	$769	($253)	-25%

Oakland handles SPED support and reporting for charter schools differently than all other cities in our study. The Oakland Unified School District, the Alameda Office of Education, and Alameda Unified School District, all with charters located within the boundaries of Oakland, imbed financial data for the charters in each district's financial reporting to the California Department of Education, just as Los Angeles Unified does. However, the two cities differ in the level of detail captured in the reporting. Los Angeles provides the same level of detailed reporting for the charter schools as it does for the district, making it possible to determine how much is spent on special education. Oakland Unified, however, does not report charter school financial data with the same level of detail as reported for the school district. Therefore, it is not possible to determine how much has been spent on special education for students attending Oakland charter schools.

Table C13: Revenue Disparities for Little Rock, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$14,917	$9,134	($5,783)	-39%
Total without SPED	$13,531	$8,746	($4,785)	-35%
Local Public	$6,755	$0	($6,755)	-100%
State Public	$5,982	$7,390	$1,408	24%
Federal Public	$1,555	$1,033	($522)	-34%
Nonpublic	$625	$678	$52	8%
Public Indeterminate	$0	$34	$34	~
Indeterminate	$0	$0	$0	~

Table C14: Revenue Disparities for Atlanta, FY16 (Grade of F)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$18,276	$9,382	($8,894)	-49%
Total without SPED	$16,516	$9,371	($7,145)	-43%
Local Public	$13,878	$2,866	($11,012)	-79%
State Public	$4,403	$4,717	$314	7%
Federal Public	$1,978	$489	($1,488)	-75%
Nonpublic	$461	$634	$174	38%
Public Indeterminate	($2,444)	$675	$3,119	-128%
Indeterminate	$93	$67	($26)	-28%

Table C15: Revenue Disparities for New Orleans, FY16 (Exception Case)

Type	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)	Disparity Per Student (%)
Total	$80,838	$12,490	$(68,348)	-85%
Total without SPED	$77,059	$11,203	$(65,856)	-86%
Local Public	$37,999	$4,179	$(33,820)	-89%
State Public	$3,799	$5,088	$1,289	34%
Federal Public	$31,402	$1,837	$(29,566)	-94%
Nonpublic	$6,335	$633	$(5,702)	-90%
Public Indeterminate	$(4,008)	$658	$4,666	-116%
Indeterminate	$5,310	$96	$(5,214)	-98%

Appendix D. Indeterminate Revenue Streams

Some sources of revenue for public charter and traditional public schools are documented to vaguely for us to clearly assign them to our primary categories of Federal, State, Local, and Nonpublic funds. If it is clear that the revenue is from a public source, but we cannot determine conclusively which level of government provided it, we classify it as "Public Indeterminate." If all we can tell is that it is revenue, and cannot discern the source of the revenue, we classify it as "Indeterminate." Public Indeterminate and Indeterminate funds are included in our calculations of total per-pupil revenues by sector presented in Table 1, consistent with our approach of accounting for all revenue from all sources. We present them in an appendix here, instead of in the main text, because they are unpredictable and idiosyncratic.

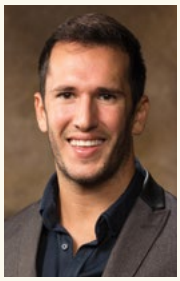
Table D1: Public Indeterminate Revenue Disparity Per Student, FY16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)
A	Houston	TX	$0	$0	$0
C	Boston	MA	$0	$0	$0
D	New York City	NY	($1,762)	$3,885	$5,648
D	Denver	CO	$10	$2,268	$2,258
D	Shelby	TN	($947)	$5,623	$6,570
D	San Antonio	TX	$0	$0	$0
F	Los Angeles	CA	($80)	$1,166	$1,246
F	Washington, D.C.	DC	$139	$31	($107)
F	Tulsa	OK	$0	$0	$0
F	Camden	NJ	$0	$0	$0
F	Indianapolis	IN	$0	$0	$0
F	Oakland	CA	$0	$89	$90
F	Little Rock	AR	$0	$34	$34
F	Atlanta	GA	($2,444)	$675	$3,119
		Weighted Average:	($877)	$1,650	$2,527

Table D2: Non-Specified Indeterminate Revenue Disparity Per Student, FY16

Overall Funding Disparity Grade	Ranked Regions	State	District Per Student Revenue	Charter Per Student Revenue	Disparity Per Student ($)
A	Houston	TX	$0	$0	$0
C	Boston	MA	$0	$0	$0
D	New York City	NY	($241)	$2,596	$2,837
D	Denver	CO	$0	$246	$246
D	Shelby	TN	$0	$359	$359
D	San Antonio	TX	$0	$0	$0
F	Los Angeles	CA	$1,429	$0	($1,429)
F	Washington, D.C.	DC	$0	$1,224	$1,224
F	Tulsa	OK	$0	$141	$141
F	Camden	NJ	$0	$11	$11
F	Indianapolis	IN	$0	$0	$0
F	Oakland	CA	$1,023	$769	($253)
F	Little Rock	AR	$0	$0	$0
F	Atlanta	GA	$93	$67	($26)
		Weighted Average:	$253	$766	$513

Research Team



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Mr. Maloney is president of Aspire Consulting and has investigated expenditure patterns of the nation's public schools on behalf of states and individual school districts since 1992. Mr. Maloney participated in the research team for the Fordham Institute revenue study in 2005, the Ball State University revenue study in 2010, and the University of Arkansas study in 2014. Recent projects include evaluations of revenues and expenditure patterns of eleven major metropolitan school districts and the charter schools located within their boundaries. Mr. Maloney co-authored a series of reports for the Fordham Institute on future retirement costs for three school districts, as well as conducting a school-by-school expenditure analysis for the Washington, D.C. region. He served as the evaluator for a U.S. Department of Education program designed to enhance the level of products and services provided by state charter associations. Additionally, he provided the financial analysis for the U.S. Government Accountability Office study of Title 1 expenditures and the U.S. Department of Education National Charter School Finance Study..

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