



# Study of Spending in Public Charter and Traditional Schools in California

NOVEMBER 2018

Drew Atchison | Jesse Levin | Iliana Brodziak de los Reyes

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## **Executive Summary**

Although much attention in the education research literature has been placed on comparing the effectiveness of charter schools to the effectiveness in traditional public schools, far less work has gone toward developing a better understanding of the differences in spending and resource allocation between the two sectors. The resulting dearth of information regarding resource usage and spending is somewhat unexpected. State policies are in place in many states to attempt to treat charter schools similar to their traditional counterparts with respect to state-provided funding. For example, the California Education Code, which governs charter schools, indicates that “each charter school shall be provided with operational funding that is equal to the total funding that would be available to a similar school district serving a similar population” (California Education Code, 2011). However, given the challenges in performing a valid comparison of spending in the two sectors, the lack of studies in this area is not altogether unsurprising.

This report aims to help address the concern of whether resources available to public charter schools are similar to those available to traditional schools in California. Specifically, our analysis attempts to provide an accurate comparison between traditional and charter school spending in two traditional districts and two charter management organizations (CMOs), as well as answer the following question: “How much would be spent on a charter school if it were treated as a traditional public school?”

Determining whether charter schools are provided equivalent fiscal resources as similar traditional schools is rather a complex task given that (a) traditional school districts and charter schools are funded and provided services through a variety of sources and (b) measures of school-level operational expenditures are not always readily available through public data sources.

The largest source of public dollars for both school districts and charter schools comes from the Local Control Funding Formula (LCFF), with an amount determined based on enrollment, grade levels served, and student needs. Charter schools and school districts also may receive additional categorical funding from state and federal sources outside the LCFF. Districts can raise money from certain local revenue sources that may not be made available to charter schools, such as sales taxes and parcel taxes. Charter schools often have additional sources of funding that are not available to or are insubstantial for traditional school districts. For example, certain federal grants are available only to charter schools under the U.S. Department

of Education’s Charter Schools Program. Also, some CMOs can receive substantial amounts of philanthropic dollars.

The method through which charter and traditional schools receive services from a central organization also can be complicated. Traditional schools regularly receive centralized services from their local district office, whereas charter schools often belong to a CMO that delivers services, which can be a nationwide organization. Indeed, in some cases, charter schools may receive services from both their local district office and their CMO.

The availability of accurate measures of operational expenditures for traditional and charter public schools provides key information that can help inform whether charter schools are appropriately funded and how charter school funding policies might be amended. However, accurate measures of school-level operational spending often are not publicly available. For example, the results of this study show that in California, the reported per-pupil spending for charter schools and traditional school districts using the Standardized Account Code Structure (SACS) data in California does not seem appropriate for comparing across the two sectors.

To facilitate accurate comparisons, the American Institutes for Research collected data from several sources, including data from SACS and more granular and comprehensive fiscal data collected directly from two large urban districts and two prominent CMOs in California. We also conducted interviews with individuals at the district offices and CMOs to better understand the fiscal arrangements between charter schools and their authorizing districts.

The focus of this study is on charter schools from two CMOs—Aspire Public Schools and Green Dot Public Schools—operating in Los Angeles Unified School District (LAUSD) and Oakland Unified School District (OUSD). We chose Aspire and Green Dot as the focus of this study because they are highly regarded charter school networks with substantial numbers of schools within the two districts of interest.

## **Research Methods**

To conduct comparisons between traditional schools in LAUSD and OUSD with Aspire and Green Dot schools within these same districts, we first developed accurate estimates of school-level spending based on school-level fiscal data collected directly from each district and CMO. We identified expenditures already attributed to individual schools within the fiscal data received from each site and allocated the remaining centralized spending to schools using appropriate allocation formulas. We used interviews from both traditional and charter schools to understand the service arrangements between traditional and charter schools to ensure we were appropriately allocating specific centralized resources to both traditional and charter

schools. We then converted school-level expenditures to spending per pupil by dividing the expenditures by school enrollment.

Because of the opaque and rather complex way special education dollars and services are provided in both traditional and charter schools, we were not confident that our method to allocate centralized special education dollars to schools was appropriate in all cases. Because of this uncertainty, for all comparisons of spending, we presented two results: including and excluding spending identified in the data as being used for special education services.

We relied on two strategies to compare charter and traditional school spending levels. First, we compared per-pupil expenditures using unconditional averages. However, such averages do not account for any differences in student needs or school grade configurations between charter and traditional schools. Charter schools often have atypical grade ranges compared with traditional school counterparts (McFarland et al., 2017), and sometimes they serve fewer students with disabilities, English learners, and students in poverty (Levin et al., 2016). Indeed, a comparison of a variety of demographics between schools in the traditional and charter sectors statewide shows significant differences, as do comparisons between traditional and charters within the two districts and CMOs that our study focuses on.

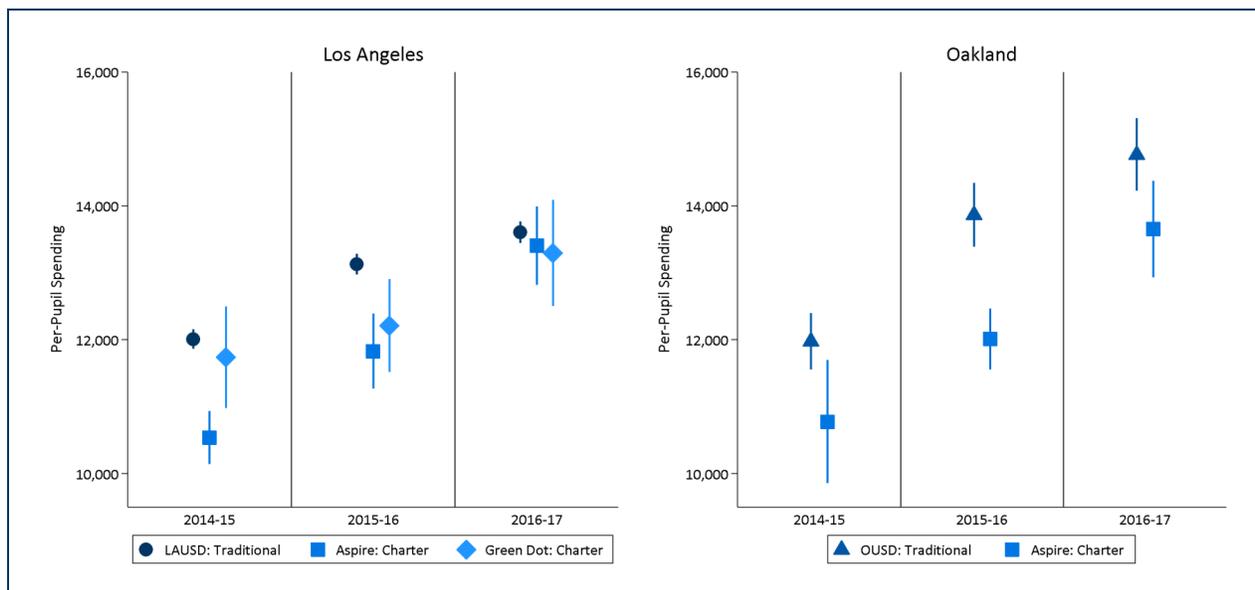
To address this issue, our second approach compared expected spending across traditional and charter schools that had similar observable characteristics (student needs and grade levels served). Specifically, our analysis used multiple regression analysis to control for various indicators of student need, including measures of poverty, English learner status, and student disability status. We also controlled for school grade configuration by using proportions of enrolled students in elementary grades (K–5), middle grades (6–8), and high school grades (9–12). Therefore, our conditional comparisons represent charter and traditional school spending levels while holding student needs and school grade configuration constant. Finally, we performed a regression containing data only for traditional schools to measure the relationships between spending, student needs, and grade configuration across schools in the traditional sector. This regression model was then used to predict spending for Aspire and Green Dot schools based on their student needs and grade configurations. We then compared the actual spending of these charter schools to their model-predicted “as-if-traditional” spending.

## **Results**

Unconditional estimates of school spending indicate that the traditional schools within our sample tend to spend more than the charter schools. Across the three school years included

(2014–15 through 2016–17), spending in LAUSD and OUSD traditional public schools was higher, on average, than spending in Aspire and Green Dot charter schools (Exhibit A). In 2016–17, LAUSD traditional schools spent only slightly more than Green Dot and Aspire schools. In Oakland, the traditional schools spent approximately \$1,000 more per student than the Aspire schools. However, when special education spending is excluded from the analysis, then the average differences decrease between traditional schools in OUSD and Aspire schools in Oakland and resulted in higher average spending calculations for Green Dot and Aspire schools in Los Angeles than LAUSD traditional schools.

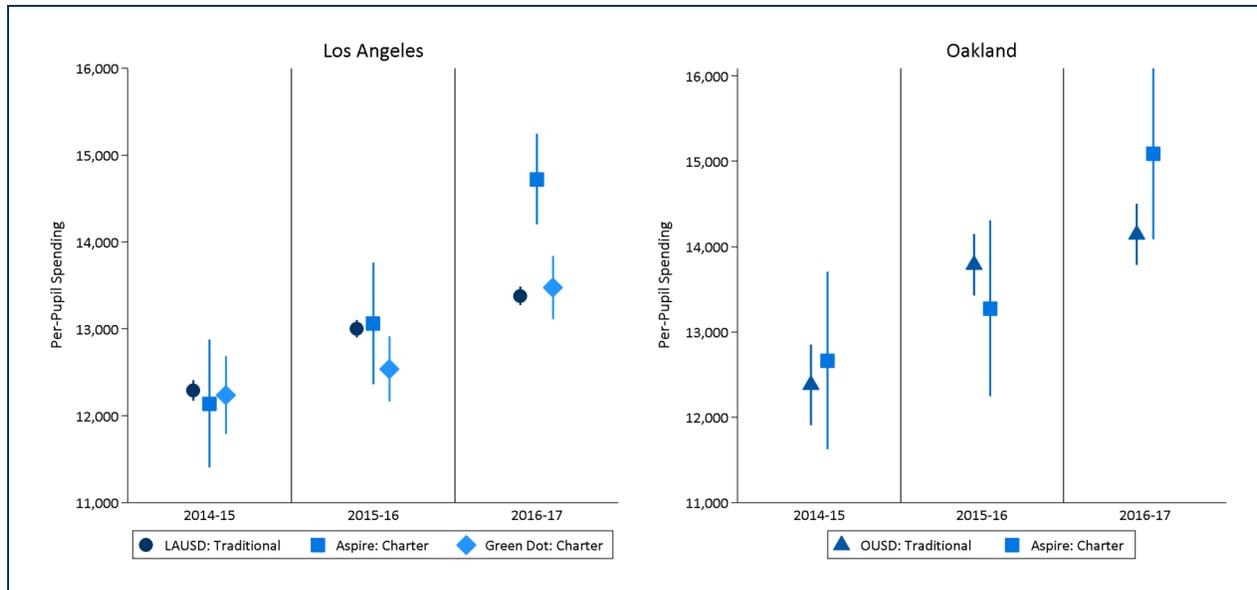
**Exhibit A. Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

The conditional analyses, accounting for student needs and grade configuration, show that average traditional and charter spending within our sample were not substantially different in 2014–15 and 2015–16. In 2016–17, Aspire schools were expected to spend \$1,000 or more than traditional schools in both LAUSD and OUSD when controlling for student needs and grade configuration (Exhibit B). When special education spending was excluded, Aspire and Green Dot schools in Los Angeles spent more than otherwise similar traditional schools in Los Angeles.

**Exhibit B. Conditional Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



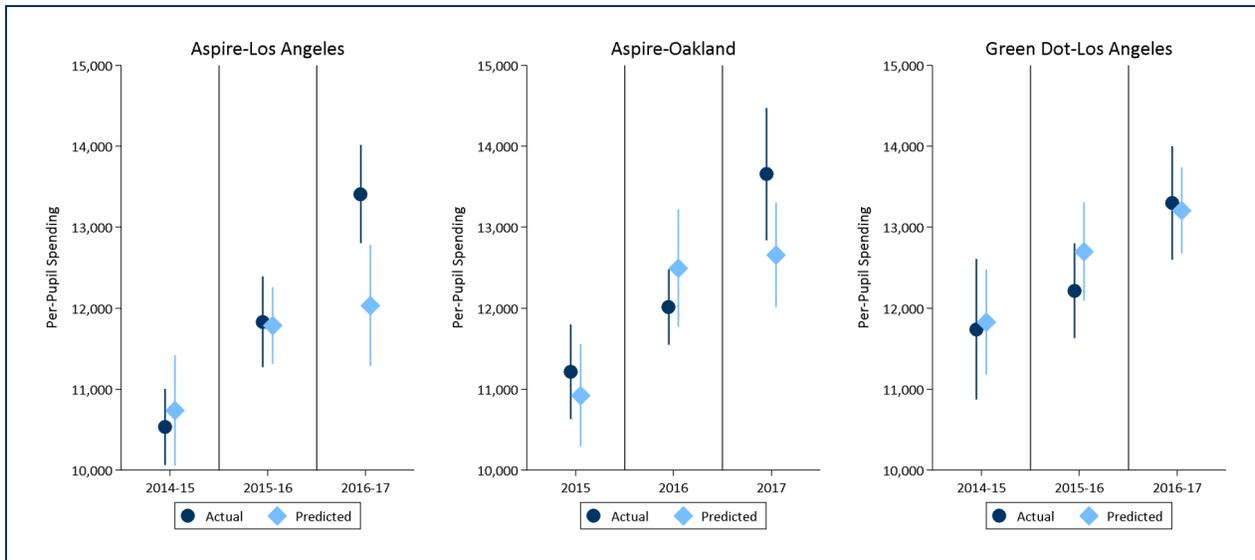
*Note.* Vertical lines represent 95% confidence intervals around the mean. Estimates are based on regressions controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

The as-if-traditional results depict the same story but in a different way. These results compare actual average charter school spending to regression-predicted average spending of charter schools based on a model using data only from traditional school within the district. The result of this analysis answers the question of how much would spending on charter schools be if they were treated as if they were traditional schools within their district. For Aspire in both Los Angeles and Oakland, the as-if-traditional average predicted spending levels were similar to actual spending levels in both 2014–15 and 2015–16 (Exhibit C). In 2016–17, the actual levels exceeded predicted levels by \$1,400 in Los Angeles and \$1,300 in Oakland. For Green Dot, the actual and predicted amounts are fairly similar across all three school years.

When taken as a whole, the results comparing traditional and charter schools across the various analyses suggests that spending on charter schools for the two selected CMOs in LAUSD and OUSD appear to be fairly comparable to spending for traditional schools in their respective districts and do not represent the population of charter schools in California. In addition, LAUSD and OUSD are certainly not representative of districts across the state of California. Because of

this, these findings should not be generalized to represent comparisons of charter school and traditional spending statewide or across the United States.

**Exhibit C. Predicted as-if-Traditional and Actual Average Spending Including Special Education for Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Predicted values are based on regressions including only traditional schools and controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Challenges**

In addition to our main findings presented earlier, we also want to highlight two challenges—issues of data quality and transparency—that we encountered in conducting this analysis. First, we found a lack of comparability between traditional district fiscal data and charter school fiscal data collected in the state’s annual financial data collection (or SACS). For the schools that we were able to compare SACS and CMO-provided charter school spending per pupil, we showed that in 2017–18, the SACS data underestimated charter spending by almost \$1,900 per pupil. The issue appears to stem from the exclusion of centralized CMO regional- or national-level spending in the SACS data, whereas expenditure data collected directly from the districts and CMOs include both school- and district-level spending.

Second, the system of special education funding is not transparent, and the myriad of special education funding arrangements that charter schools can make with Special Education Local Planning Areas (SELPA; local or otherwise) makes it incredibly difficult to accurately identify school-level spending for special education services. The requirement that all districts belong to a SELPA of their choice and the perception among charter schools that the services provided by the SELPA might not adequately serve their needs have driven many charter schools to make arrangements with SELPAs outside their authorizing district. This creates a variety of arrangements between charter schools and various SELPAs, which make the tracking of special education dollars extremely difficult (hence, our decision to perform analyses both inclusive and exclusive of special education spending).

## **Conclusion**

Across a variety of analyses comparing traditional and charter school spending, we found little consistent evidence that spending levels in charter schools are substantially different than in traditional public schools for the two CMOs (Aspire and Green Dot) in two California school districts included in this study. However, it is important that given the small number of districts and CMOs included and the unique characteristics of the selected districts and CMOs, the findings have limited generalizability. Several improvements could be made to help facilitate more accurate and more comprehensive comparisons of spending between charter and traditional public schools. Given the complexity with which special education funding and services are provided to charter schools, a database describing the SELPA to which each charter school belongs and the specific funding and service arrangements between charter schools and their SELPAs would allow for more accurate analysis. In addition, including spending from all funding sources for both charter and traditional schools (CMO-level charter spending and spending from private sources for both traditional and charter schools) in state data collections would help make comparisons of spending between charter and traditional schools not only easier but also more comprehensive and accurate.

## Introduction

Although much attention in the education research literature has been placed on comparing the effectiveness of charter schools to the effectiveness in traditional public schools, far less work has gone toward developing a better understanding of the differences in spending and resource allocation between the two sectors. The resulting dearth of information regarding resource usage and spending is somewhat unexpected. State policies are in place in many states to attempt to treat charter schools similar to their traditional counterparts with respect to state-provided funding. For example, the California Education Code, which governs charter schools, indicates that “each charter school shall be provided with operational funding that is equal to the total funding that would be available to a similar school district serving a similar population” (California Education Code, 2011). Despite this seemingly simple rule, determining whether charter schools are indeed funded equivalently to similar schools (e.g., public schools) is a complex task.

Charter schools are funded through a variety of sources. The largest source of public dollars for both school districts and charter schools comes from the Local Control Funding Formula (LCFF), with an amount determined based on enrollment, grade levels served, and student needs. Charter schools and school districts also may receive additional categorical funding from state and federal sources outside the LCFF. Districts can raise money from certain local revenue sources that may not be made available to charter schools, such as sales taxes and parcel taxes. Charter schools must negotiate with their local district to receive a share of these local funding sources and, in some cases, have sued the local district to receive their share of these funding sources (Fensterwald, 2016).

Charter schools often have additional sources of funding that are not available to or are insubstantial for traditional public school districts. Certain federal grants are available only to charter schools under the U.S. Department of Education’s Charter Schools Program. Charter schools often are part of charter management organizations (CMOs) that provide services and support to their network of charter schools. CMOs often receive substantial amounts of philanthropic dollars. As of 2011, the total philanthropic investment in CMOs was estimated to be approximately \$500 million (Hall & Lake, 2011). In 2010, the Knowledge Is Power Program was the third largest recipient of funding from the 15 largest K–12 foundation grant funders in the United States, receiving \$24 million in grant funding (Reckhow & Snyder, 2014).

In addition, the method through which charter and traditional schools receive services from a central organization also can be complicated. Traditional schools regularly receive centralized services from their local district office, whereas charter schools often belong to a CMO that

delivers services, which can be a nationwide organization. Indeed, in some cases, charter schools may receive services from both their local district office and their CMO.

With the array of funding streams available to both traditional public school districts and charter schools and the different sources from which they are provided centralized services, it is not a straightforward task to understand whether charter schools are funded equally compared with traditional schools on a per-pupil basis, as required by the state’s educational code. The availability of accurate measures of operational expenditures for traditional and charter public schools provides key information that can help inform whether charter schools are appropriately funded and how charter school funding policies might be amended. However, this information is not always readily available through public data sources. The California Department of Education’s annual collection of fiscal data using the Standardized Account Code Structure (SACS) includes all public school districts and charter schools. However, it is not clear whether the reported per-pupil spending of charter schools and traditional public school districts reported by SACS is necessarily comparable.

To facilitate more accurate comparisons, the American Institutes for Research collected data from several sources, including data from SACS and more granular and comprehensive fiscal data collected directly from two districts and two CMOs. We also conducted interviews with individuals at district offices and CMOs to better understand the fiscal arrangements between charter schools and their authorizing districts.

The focus of this study is on charter schools from two CMOs—Aspire Public Schools (hereafter called Aspire) and Green Dot Public Schools (hereafter called Green Dot)—in two large urban districts (Los Angeles Unified School District [LAUSD] and Oakland Unified School District [OUSD]). We chose Aspire and Green Dot as the foci of this study because they are highly regarded charter school networks that are well established in the Los Angeles and Bay Area regions of the state.<sup>1</sup>

To shed light on whether differences are evident in the levels of resources used by charter and traditional public schools in California, the study includes an exploratory comparative analysis of spending in the two sectors. Specifically, our analysis attempts to provide an accurate comparison between traditional and charter school spending in two traditional districts and two CMOs, as well as answer the following question: “How much would be spent on a charter school if it were treated as a traditional public school?”

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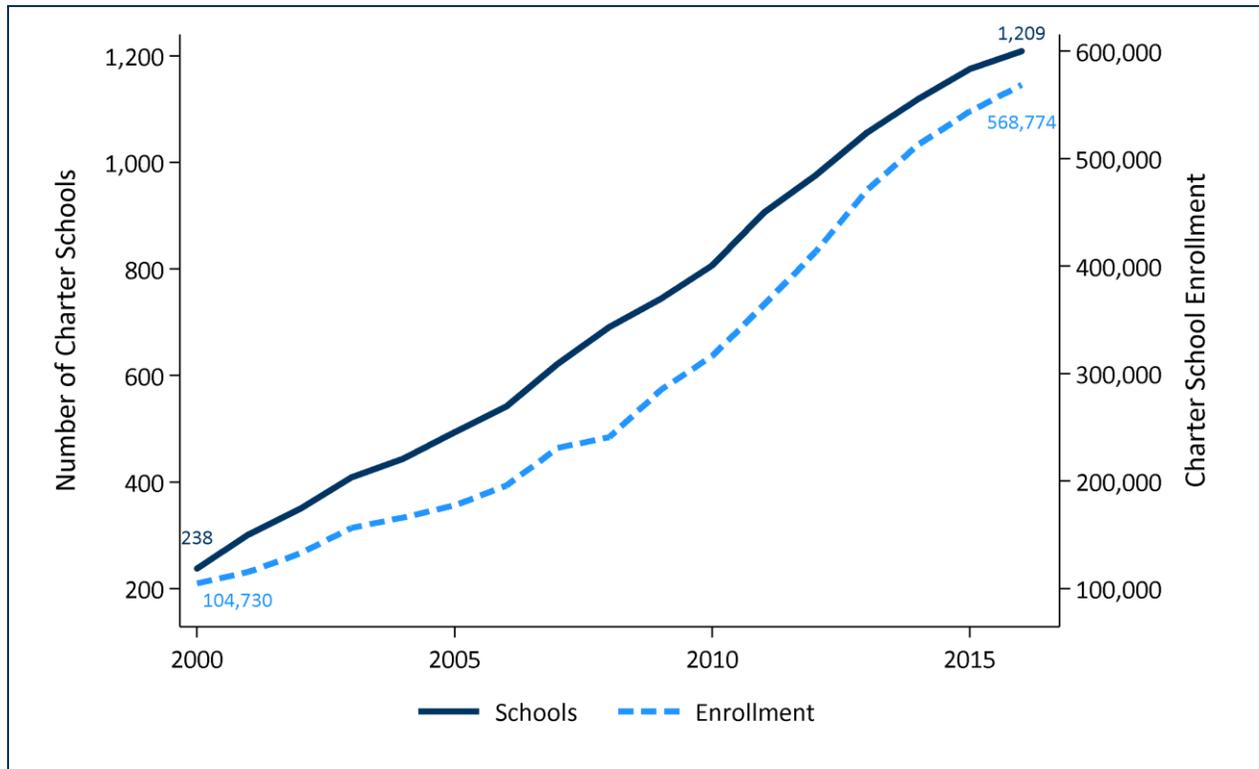
<sup>1</sup> Woodworth et al. (2017) found that Aspire and Green Dot both had positive but statistically insignificant effects on student reading and mathematics scores.

To enable our analysis, we developed accurate school-level measures of spending for traditional public schools within OUSD and LAUSD as well as the charter schools in these districts in our two selected CMOs. Using these calculations, we compared levels of spending for Aspire and Green Dot charter schools in Los Angeles and Oakland to the average traditional public schools in those districts. To facilitate more accurate comparisons, we also conducted statistical analyses that compared expected spending in traditional and charter public schools with similar observable characteristics (student needs and grade levels served). Because charter schools often have atypical grade ranges compared with traditional school counterparts (McFarland et al., 2017), and sometimes serve fewer students with disabilities, English learners, and students in poverty (Levin et al., 2016), it is necessary to account for such differences.

### **California Charter School Enrollment and Characteristics**

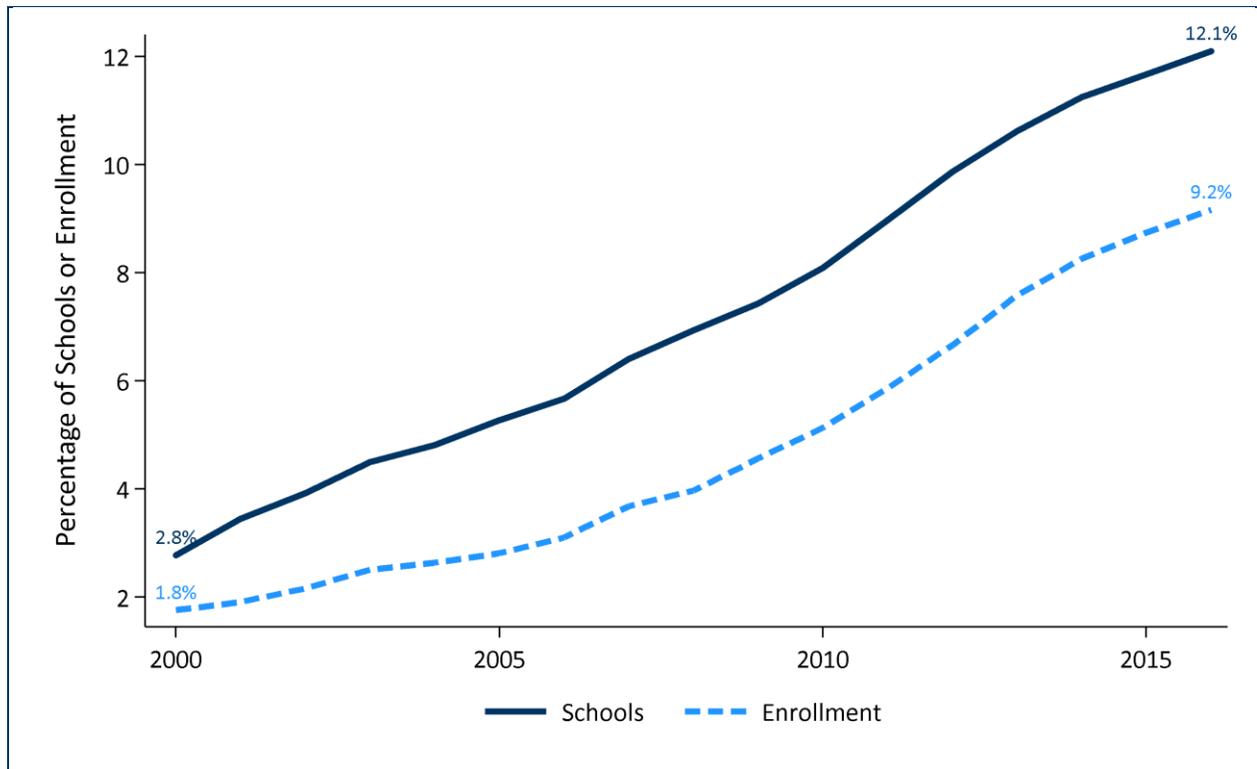
In 2016–17, California’s public elementary and secondary education system served more than six million students, in almost 10,000 schools, dispersed across more than 1,000 districts. Since 1992, when California first passed a law allowing charter schools (Center for Education Reform, 2017), such schools have dramatically expanded in number, enrolling a growing proportion of California’s public school students. In the 1999–2000 school year, 238 charter schools represented 2.8% of all public schools in California and served only 1.8% of the total state enrollment (104,730 students). By 2015–16, the number of charter schools increased to more than 1,200, representing more than 12% of all public schools and serving more than 9% of the total state enrollment (568,774 students; Exhibits 1 and 2).

**Exhibit 1. Number of Charter Schools and Charter School Enrollment in California From 1999–2000 to 2015–16**



Source: National Center for Education Statistics Common Core of Data.

**Exhibit 2. Charter Schools and Charter Enrollment as a Percentage of All Schools and Enrollment in California From 1999–2000 to 2015–16**



Source: National Center for Education Statistics Common Core of Data.

In 2016–17, all but two charter schools (99.8%) were considered regular schools, meaning that they were not stand-alone special education schools, alternative schools, adult schools, or schools serving the juvenile courts. In contrast, more than 1,000 noncharter schools were stand-alone special education schools, alternative schools, adult schools, or schools serving the juvenile courts, representing almost 13% of all schools; the remaining 87% of schools were regular schools. Because of the rarity of nonregular charter schools, for the remainder of the comparisons between charter and noncharter schools, we restrict the sample to regular schools and will call regular noncharter schools “traditional” schools.

By locale, 43% of the traditional schools were in city districts in 2016–17, 41% were in suburban districts, and 8% each were in town and rural districts. In contrast, almost 57% of the charter schools were in city districts, 29% were in suburban districts, 7% were in town districts, and 8% were in rural districts. Relative to the distribution of traditional schools, these percentages indicate that charter schools are overrepresented in city districts and underrepresented in

suburban districts. The distribution in town and rural districts is nearly equivalent between traditional and charter schools.

Charter schools in California are authorized primarily by their local districts (87% of all charter schools). If charter school applications are denied by the local district, charter schools can then appeal to their county office of education (11% of all charter schools are authorized by county offices). The California State Board of Education authorizes the remaining 2% of charter schools.

Charter schools can elect to be directly funded (otherwise known as independent)—meaning they apply individually to receive state and federal categorical dollars—whereas other charter schools are locally funded—meaning that each school works with its chartering authority, often the local district, to receive funding. Statewide, 73% of charter schools were directly funded in 2016–17, and 27% were locally funded.

### ***Charter Schools in Los Angeles***

Of the 1,238 charter schools in California in 2016–17, 279 (23%) were authorized by LAUSD. These charter schools represented 30% of all regular schools in the district (Exhibit 3). The charter schools in LAUSD disproportionately served middle and high school grades compared with traditional schools. The majority of LAUSD’s charter schools (81%) were directly funded (independent), and the rest (19%) were locally funded, which LAUSD terms affiliated or semiautonomous charter schools. In many respects, locally funded charter schools are treated in the same way as traditional public schools in LAUSD, whereas directly funded charter schools are treated as separate districts with little sharing of services with LAUSD, except for those associated with special education.

### ***Charter Schools in Oakland***

In 2016–17, OUSD authorized 37 charter schools, all of which were directly funded charter schools. Charter schools made up 32% of all regular public schools in OUSD. As with the charter schools in LAUSD, the charter schools in OUSD disproportionately serve high school grades compared with traditional schools.

### ***Aspire Public Schools***

Aspire operated 35 charter schools in California in 2016–17. Eleven of its schools were in Los Angeles County, with two authorized by the Los Angeles County Office of Education and the remaining nine authorized by LAUSD. Aspire also operated seven schools authorized by OUSD.

### ***Green Dot Public Schools***

In 2016–17, Green Dot operated 20 charter schools in California, and all were in the Los Angeles area. Seventeen were authorized by LAUSD, one was authorized by Los Angeles County, and two were authorized by nearby districts (Inglewood and Lennox).

## **Charter School Funding in California**

### ***Local Control Funding Formula***

The main source of funding for both charter and traditional schools in California is the LCFF, which was enacted in 2013–14 as a new funding distribution mechanism. The intent of the LCFF is to improve both funding equity across districts and the degree of local discretion over how funding can be used. The general principles of the LCFF work the same way for both charter schools and traditional schools. A base amount of funding is given per average daily attendance that differs somewhat by grade span (e.g., Grades K–3 versus 5–8 versus 9–12). Additional funding is provided for students with additional needs, as measured by the number of unduplicated targeted pupils (i.e., students who qualify for free or reduced-price meals, are English learners, or are foster youth). Students are counted only once for this metric, even if they satisfy more than one of these conditions. Districts with an unduplicated target pupil percentage of more than 55% receive an additional concentration grant for the number of students (measured by the average daily attendance) greater than the 55% threshold.

One key difference between LCFF for traditional schools and charter schools is a cap on concentration grant funding for charter schools (Ugo & Hill, 2017). If a charter school has a higher unduplicated pupil percentage compared with the traditional district where the charter school resides, the charter school’s unduplicated pupil percentage used to calculate concentration grant funding is capped at the percentage of the traditional district. For example, from 2014–15 to 2016–17, LAUSD had an unduplicated pupil percentage of approximately 85%. For charter schools within LAUSD that have an unduplicated pupil percentage greater than 85%, they receive concentration grant funding as if they had an unduplicated pupil percentage of 85%.

**Exhibit 3. Numbers of Traditional and Charter Schools Statewide, in Los Angeles Unified, and in Oakland Unified, Overall and by School Level (2016–17)**

	Statewide			Los Angeles Unified			Oakland Unified		
	Traditional schools	Charter schools	Charter school share of all schools	Traditional schools	Charter schools	Charter school share of all schools	Traditional schools	Charter schools	Charter school share of all schools
<b>All</b>	7,617	1,238	14%	642	279	30%	79	37	32%
<b>Elementary</b>	5,329 (70%)	544 (44%)	9%	449 (70%)	133 (48%)	23%	55 (70%)	17 (46%)	24%
<b>Middle</b>	1,205 (16%)	143 (12%)	11%	81 (13%)	61 (22%)	43%	13 (16%)	5 (14%)	28%
<b>High</b>	1,039 (14%)	273 (22%)	21%	99 (15%)	61 (22%)	38%	7 (9%)	8 (22%)	53%
<b>Other grade configurations</b>	44 (1%)	278 (22%)	86%	13 (2%)	24 (9%)	65%	4 (5%)	7 (19%)	64%

*Note.* Shares of enrollment by grade level are in parentheses. The charter school share of all schools columns show charter schools as a percentage of all schools within that grade level. Source: State enrollment data.

### **Special Education Funding**

The largest categorical source of funding not included in the LCFF is for special education (Hill, Warren, Murphy, Ugo, & Pathak, 2016). California has a unique system of funding special education. Special education funding does not flow directly to districts or charter schools but is instead allocated through Special Education Local Planning Areas (SELPA). Certain SELPAs serving large districts contain only a single district, whereas others contain multiple districts. The SELPAs serving both LAUSD and OUSD are single district SELPAs. SELPAs are funded on a census basis (according to the total number of students in each district, which assumes a constant special education incidence rate across districts) rather than on the actual number of students with disabilities served. This is intended to discourage the overidentification of students as needing special education services. However, across SELPAs, funding rates per student vary widely (Hill et al., 2016; Legislative Analyst’s Office, 2018).

Both districts and charter schools are required to be affiliated with a SELPA. Charter schools can join either the SELPA of its authorizing district or a handful of SELPAs not affiliated with the charter’s own authorizer that accept outside charter schools. The most common choice for charter schools wanting to join a SELPA outside the SELPA of their authorizer is the El Dorado County SELPA. Little information is available about how special education funding or services flow from the SELPAs to charter schools. For charter schools that choose to partner with the El Dorado County SELPA, a fee is paid to the SELPA, and the charter schools receive their remaining special education funding on an average daily attendance basis, regardless of the number of special education students served. Most charter schools in OUSD have joined the El Dorado County SELPA.

For charter schools in LAUSD, charter schools that are part of the LAUSD SELPA have three options, which correspond to varying amounts of services directly provided.<sup>2</sup> When more special education services are provided, the SELPA retains more of the special education funding. If charter schools elect to receive fewer services, they receive more special education funding in the form of direct dollars from the SELPA to provide their own services. In this way, special education funding for charter schools through the LAUSD SELPA operates similar to insurance policies but with different levels of coverage. Charter schools can elect to receive

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<sup>2</sup> In option 1, the charter school remains a “school of the District” for special education services, with LAUSD providing special education personnel and programs, as well as handling due process matters. In option 2, the charter remains a “school of the District” but retains some autonomy and responsibility for providing special education services, and the district provides supports for the school. In option 3, the charter school operates independently from the district for special education and assumes fiscal responsibility for providing special education instruction, programs, and services. See <https://achieve.lausd.net/Page/2862>.

more special education funding directly, but they then bear more risk of having to potentially pay for particularly costly special education services. If they allow the SELPA to retain more of their special education funding, they bear less risk because the SELPA agrees to provide special education services for students in charter schools.

The challenge for this study was the lack of documentation regarding which charter schools belong to which SELPAs and determining the specific agreements between individual charter schools and the SELPAs. The California Department of Education does not currently have information on which charter schools belong to which SELPAs. Furthermore, the department does not collect information on how SELPAs allocate dollars or services to their member districts and charter schools.

## **Organization of the Report**

The remainder of this report includes an analysis of the characteristics of charter schools and traditional schools. This analysis provides motivation for the need to account for possible differences in student needs and grade configurations between traditional and charter schools when comparing levels of spending. This is followed by an examination of traditional and charter school spending using the annual fiscal data collected by the state. In this examination, we demonstrate some of the limitations of using these data for comparing traditional and charter school spending. The final two sections of the report compare traditional and charter school spending collected directly from LAUSD and OUSD as well as the Aspire and Green Dot CMOs.

## **Data and Methodology**

### **Resource Allocation and Service Delivery in Public Education**

Both traditional districts and CMOs are organizations with multiple levels of operation. The schools are where the interactions with students take place, instruction occurs, and the mission of public education is carried out. Behind the scenes, however, many services need to take place to allow schools to function. These services include human resources to recruit staff, administer payroll and benefits, and manage staff information; procurement services to make sure schools have the necessary equipment, supplies, and materials; assessment and accountability to make sure that all students in the district are tested in the necessary grade levels/subjects and comply with school- and district-level reporting guidelines; plus many other services. Some of these support services are managed centrally by the district central office for traditional schools or by the CMO for charter schools.

Districts and CMOs maintain records of revenues and expenditures. Spending for personnel or nonpersonnel resources that are used at a specific school often are linked to that specific school in the expenditure data using a location or school code. This spending is attributed to schools. Spending on central services is generally not linked to individual schools and is reported as its own pot of money. However, all this spending is intended to ultimately benefit schools and students. Therefore, all central spending must be allocated to schools by some method.

Some researchers prefer to allocate all central dollars down to the school level, whereas others argue that some central spending is truly central and should not be allocated. Because decisions regarding which dollars are truly central and which are for schools can be somewhat subjective, we chose to allocate all central dollars down to schools. We did this on both the traditional side with central office spending and the CMO side with any national or regional office dollars.

## **Data Sources**

### ***Statewide Annual Financial Data***

A primary objective of this report is to identify levels of spending for both traditional and charter schools in California. One possible way to do this is to examine data sources containing information on educational expenditures statewide. California collects data on spending and revenue for traditional districts and charter schools through its SACS data collection.<sup>3</sup>

Traditional districts are required to report fiscal data using SACS. Charter schools can report fiscal data in a variety of ways. District-dependent (also known as locally funded) charter schools report as part of the traditional district. Therefore, in SACS, expenditures for these schools are indistinguishable from the remainder of district spending. Independent (or directly funded) charter schools report spending separately from spending for traditional districts. This can be done in two ways. Charter schools can report expenditures as individual schools or as a separate fund within the SACS account codes, and this seems to be largely decided by the authorizing district. All dependent charter schools in LAUSD, for example, report under a separate fund code. When this occurs, expenditures for all dependent charter schools are lumped together, so spending for any single charter school cannot be determined. In OUSD, however, all charter schools report as individual schools. Thus, expenditure data for individual schools can be examined.

Charter schools that report as individual schools can report under the SACS format or through a simplified “Alternative Form.” The Alternative Form requires fiscal reporting organized only by

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<sup>3</sup> Information on California’s annual financial data can be found at <https://www.cde.ca.gov/ds/fd/fd/>.

broad SACS object codes, which are aggregated into less granular groupings compared with those found in data reported by traditional districts. Nevertheless, for charter schools using the Alternative Form, it is possible to identify the total reported spending as well as spending by object code with a certain degree of granularity. For simplicity, we refer to both the regular SACS and the Alternative Form as SACS data in this report.

One possible concern about comparing traditional school spending and charter school spending using the SACS data is that districts and charter schools are different levels of their respective organizations. When traditional districts report spending, they are expected to report any spending that occurs at the school level or at the central district level. Because charter schools are expected to report as schools, it is not clear whether and how they report spending that might occur at a higher level within a multischool CMO. Therefore, it seems likely that reported charter school spending through SACS omits a potentially large amount of spending by the CMO to support schools within the organization.

Another concern when using such data is that charter schools might have different structural or student characteristics compared with the average characteristics of traditional schools in the same area or district. Using the SACS data, we can determine a per-pupil spending amount for traditional districts, but within the district, spending across schools is likely to vary according to the needs of the students served and structural characteristics such as grades served. With the SACS data, we cannot observe such within-district variation. Therefore, we can determine only the average per-pupil spending amount across all schools in the district. To more appropriately compare traditional and charter school spending, we need to analyze charter schools and traditional schools with similar student needs and grades served.

### ***Data From Districts and Charter Management Organizations***

In addition to the statewide annual financial data, we also collected data directly from the selected districts and CMOs. Because of the high volume of charter schools in the Los Angeles and San Francisco Bay areas, we selected two districts in those areas that had large numbers of charter schools and from which we also had prior experience collecting and analyzing school-level fiscal data (LAUSD and OUSD). We then selected two CMOs with strong reputations and a substantial number of charter schools in one or both of those districts, namely Aspire and Green Dot.

These data allow us to develop school-level estimates of spending for both traditional schools and charter schools. The estimates allow us to make more precise comparisons of school-level spending in traditional and charter schools. In addition, as we will show in a later section, the

data for charter schools in the statewide annual financial data is less comprehensive of all spending than the data provided by CMOs directly. One possible reason for this is that charter data collected by the state are defined as “school level.” This means that spending at higher levels of CMOs to support schools, such as national- or regional-level CMO spending, does not likely make it into the statewide annual financial data.

### ***Interviews With District and Charter Management Organization Officials***

We conducted semistructured interviews with district officials at LAUSD and OUSD and CMO officials at Aspire and Green Dot to make sure we understood the service arrangements between charter schools and their authorizing districts. This understanding is important to make sure that any services provided by districts to charter schools are accounted for, even though such services may not be recorded as financial transactions in fiscal data. For example, in a study of charter school spending in Maryland, charter schools often received special education services provided directly by the district (Levin et al., 2016). In this example, centralized spending for special education in these districts had to be allocated across students receiving special education services in both traditional and charter schools.

Based on our interviews with district and CMO officials for the two districts and the two CMOs in our sample, we found that charter schools in Aspire and Green Dot, as independent CMOs, receive very little in terms of services from their authorizing districts. Charter schools pay a 1% authorizing fee to their authorizers to cover the administrative costs of authorization. Charter schools also can lease vacant district facilities for a standard rate per square foot established by the district. In addition, charter schools can purchase services from their authorizing district. In these cases, a cost would be negotiated for providing services that the charter schools would pay for. However, we found no examples of in-kind services that these independent charter schools received from their authorizers.

Los Angeles has both independent charter schools and dependent (or affiliated) charter schools. Interviewees from LAUSD described affiliated charter schools as being more similar to traditional schools than independent charter schools. For example, affiliated charter schools receive food service and special education services through the district. Because of this, for the purposes of allocating funds to schools, dependent charter schools were treated in the same way as traditional schools.

## Procedures for Assigning Expenses to School Sites and Determining Actual Spending

Within the fiscal data received from both districts and the two CMOs are location codes. These location codes allow for attributing spending to individual schools or other nonschool locations, such as central office divisions on the district side or regional or national office locations on the CMO side. We started by recognizing all expenses attributed to individual schools as spending for those schools. All remaining expenditures were aggregated as central spending and were identified as general spending for all students, special education spending, or bilingual/English learner spending. For Aspire and Green Dot, we could identify central spending as either regional spending (for supporting a specific set of schools) or national spending (intended to support all schools within the organization).

We then allocated all central spending to the set of schools that would receive support from that central organization. We determined which set of schools would likely receive support from the central organization based on interviews with both district and CMO staff. In these interviews, directly funded (or independent) charter schools were consistently described as autonomous from the district, receiving few (if any) supports from their authorizing districts, except for services related to oversight and authorization, for which charter schools pay a 1% fee. For LAUSD, that meant allocating central spending to all district noncharter schools as well as the district's locally funded charter schools.<sup>4</sup> For OUSD, that meant allocating central spending to all district noncharter schools.<sup>5</sup> For each CMO, we allocated all CMO spending to all the charter schools within the CMO.<sup>6</sup>

For districts and CMOs, we allocated all central spending to schools. We used three different allocation methods, depending on whether central spending was identified as general (for all students) or specifically for special education or bilingual/English learner services.

- Central general spending was allocated according to a school's share of total district or CMO enrollment (i.e., we allocated general spending on a per-pupil basis, counting all students).<sup>7</sup>

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<sup>4</sup> In an interview with LAUSD staff, locally funded charter schools (or affiliated charter schools as LAUSD calls them) are treated more like traditional schools than charter schools.

<sup>5</sup> OUSD does not currently have any locally funded charter schools.

<sup>6</sup> For Aspire, this was a two-step process because Aspire has both regional and national offices. Regional office expenditures were allocated only to charter schools contained under the umbrella of support for that regional office. National office spending was allocated to all Aspire schools.

<sup>7</sup> For the purposes of resource allocation, we considered locally funded charter schools to be the same as traditional schools and allocated district centralized dollars across both school types.

- Central special education spending was allocated according to a school’s share of total district or CMO special education enrollment.
- Central bilingual/English learner spending was allocated according to a school’s share of total English learners in the district or CMO.

After all central spending was allocated appropriately to schools, we calculated spending per pupil by dividing the total spending by each school’s enrollment.

### **Methods for Making Comparisons**

We relied on two strategies for comparing charter and traditional schools. The first strategy was to simply use unconditional averages. Such averages do not account for any differences in student needs or school grade configurations between charter and traditional schools.

The second strategy was to compare traditional and charter school spending conditional on differences in student needs and school grade configuration. To make these comparisons, we used multiple regression analysis to statistically control for various indicators of student need, including measures of poverty, English learner status, and student disability status. We also controlled for the grade configuration of the school using proportions of enrolled students in elementary grades (K–5), middle grades (6–8), and high school grades (9–12). Therefore, our conditional comparisons represent charter and traditional school spending levels while holding student needs and school grade configuration constant.

We performed two types of conditional estimation techniques. The first used a regression model containing data for both traditional and charter schools and measured the difference in spending as the outcome using dummy variables for each CMO interacted with year dummy variables and controlling for differences in student needs and grade configuration. We call the results of this model our “conditional” estimates. The second type of conditional comparison used a regression containing data only for traditional schools to measure the relationships between spending, student needs, and grade configuration across traditional schools. This regression model was then used to predict spending for Aspire and Green Dot based on the student needs and grade configurations of those schools. We then compared the actual spending of these schools to the model predicted as-if-traditional spending. We call these estimates the “as-if-traditional” estimates.

### **Challenges to Developing Estimates of School-Level Spending**

Several key challenges emerged when developing estimates of school-level spending. The first was in accurately allocating central special education dollars to schools. As previously

mentioned, special education services are managed by SELPAs. Charter schools must belong to a SELPA, and through the SELPA, they are provided dollars to directly serve their students in special education, are provided services for students in special education from the SELPA, or some mixture of the two. Both Aspire and Green Dot indicated that they, for the most part, receive dollars for special education and provide special education services in-house. However, to accurately allocate any centralized special education dollars, we would need to know the arrangements between all charter schools and their affiliated SELPAs in LAUSD and OUSD, not just for those charter schools from the two CMOs in the study sample. If special education dollars are showing up in the books of LAUSD and OUSD to provide services to charter schools within the LAUSD and OUSD SELPAs, we may be overestimating special education services for traditional schools in LAUSD and OUSD. Because of the uncertainty surrounding the subsequent veracity of reported school-level special education dollars, we chose to present the results both including and excluding special education dollars.

The second issue in comparing school-level spending in traditional and charter schools is the unequal method in which the two sectors obtain facilities. For traditional schools and their districts, facilities' purchases and payments are largely dealt with outside the realm of operational dollars through dedicated funds used to purchase or renovate facilities. Charter schools, for the most part, have much less access to funding dedicated for facilities; therefore, they end up using their operational dollars to pay for facilities, often in the form of lease payments.<sup>8</sup> This means that operational charter school spending includes facilities, but operational traditional school spending largely excludes facilities. We did not attempt to remove facilities spending for charter schools because these costs can vary substantially depending on the choices made by charter schools in how they procure their facilities. However, in our results, we show how much facilities account for in the spending calculations for charter and traditional schools so that the reader can contextualize comparisons between schools in these two sectors with this information in mind.

Lastly, we are not certain that the collected data capture all private and philanthropic dollars provided to charter and traditional schools. We specifically asked for spending from private dollars from the two CMOs in our sample. However, there is likely private funding to traditional schools in LAUSD and OUSD that is not captured in the data from the districts. In addition, there

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<sup>8</sup> Some state and federal grant programs help charter schools with facilities funding in California, and the two CMOs included in this study had access to that funding. In addition, Aspire noted that LAUSD has a program whereby a charter operator takes over an existing public school and can use the facility at no cost. Several of Aspire's Los Angeles schools participated in this arrangement. However, these funding sources and arrangements do not cover the entire cost of facilities, and charter schools often must use operational revenue to cover the excess cost of facilities.

could be in-kind donations to both charter schools and traditional schools that represent nonnegligible investments of resources but are not captured in expenditure data.

## **Limitations**

In addition to the limitations posed by these challenges, a key limitation from our primary analyses using data from LAUSD, OUSD, Green Dot, and Aspire is the lack of generalizability of the findings. Any comparisons between traditional schools in LAUSD and OUSD to charter schools in the Green Dot and Aspire organizations are not generalizable to other districts and other charter operators. As we show in the following chapter, the districts and CMOs selected for this study are quite unique across several dimensions. As such, this study should be treated largely as exploratory.

## **Analysis of Charter and Traditional School Characteristics**

One key factor that needs to be examined to understand any observed differences in spending between charter schools and traditional schools is their characteristics with respect to student needs and grade levels served. Through the LCFF, dollars are distributed to districts and charter schools according to the number of students served (as measured by the average daily attendance) and the characteristics of those students. Under the LCFF, students in Grades K–3 and 9–12 are funded at higher rates than students in Grades 4–8. Supplemental and concentration grants provide additional funding for unduplicated target pupils (those from low-income families, English learners, or those in the foster program; Koppich & Humphrey, 2018). Because funding is directly related to student needs and the grade levels served, if charter schools systematically have different characteristics, we would expect that the average funding for charter and traditional schools will differ.

Exhibit 4 displays statewide differences between traditional and charter school characteristics in the 2016–17 school year. The left panel displays averages of actuals, unconditional on geographic location or grades served. The right panel shows conditional averages. For student needs, the conditional averages statistically control for both the geographic location (as indicated by the district) and the grade levels served (as indicated by the proportion of students in elementary, middle, and high schools). For grade-level percentages, the conditional averages control only for geographic location.

#### Exhibit 4. Statewide Comparison of Traditional and Charter School Average Characteristics (2016–17)

Characteristic	Average of actuals			Average of conditional predictions		
	Traditional	Charter	Relative difference	Traditional	Charter	Relative difference
<b>Student needs percentages</b>						
Free or reduced-price lunch	56.6	54.3	-4.1*	57.3	47.5	-17.2**
Direct certification	24.0	21.5	-10.5**	24.4	18.5	-24.2**
Homeless	3.4	1.5	-56.0**	3.4	1.5	-55.8**
English learners	22.0	16.7	-23.8**	22.0	17.0	-22.5**
Unduplicated target pupils	62.0	59.8	-3.5*	62.7	53.6	-14.5**
Students with disabilities	11.8	10.2	-13.8**	11.9	9.5	-20.4**
<b>Grade-level percentages</b>						
Elementary	47.5	41.7	-12.1**	47.9	37.4	-21.9**
Middle	23.1	24.4	5.3	23.0	25.5	10.6**
High	29.6	34.0	15.2**	29.2	36.9	26.1**

*Note.* Averages are weighted by enrollment. The relative difference is calculated as  $(\text{charter} - \text{traditional})/\text{traditional} \times 100$ . The average of conditional predictions for student needs is based on a regression of each student need percentage as the outcome and a charter school dummy variable, shares of enrollment by grade level, and district fixed effects as the predictors. The average of conditional predictions for grade-level percentages is based on a regression of the grade-level percentage as the outcome and a charter school dummy variable and district fixed effects as the predictors. Source: State school demographic data.

Asterisks denote statistically significant relative differences: \* $p < .05$ . \*\* $p < .01$ .

The comparisons indicate that charter schools served fewer students with additional educational needs. This is true across all student need measures included in the analysis—free or reduced-price lunch eligibility, direct certification,<sup>9</sup> homeless, English learners, unduplicated target pupils, and students with disabilities. Because the averages are pupil weighted, the percentage difference can be interpreted as the difference in likelihood that a given charter school student has a specific need compared with a given traditional student. When examining the average of actuals, large differences are evident in students who are homeless, English learners, students with disabilities, and students who are directly certified. A given charter

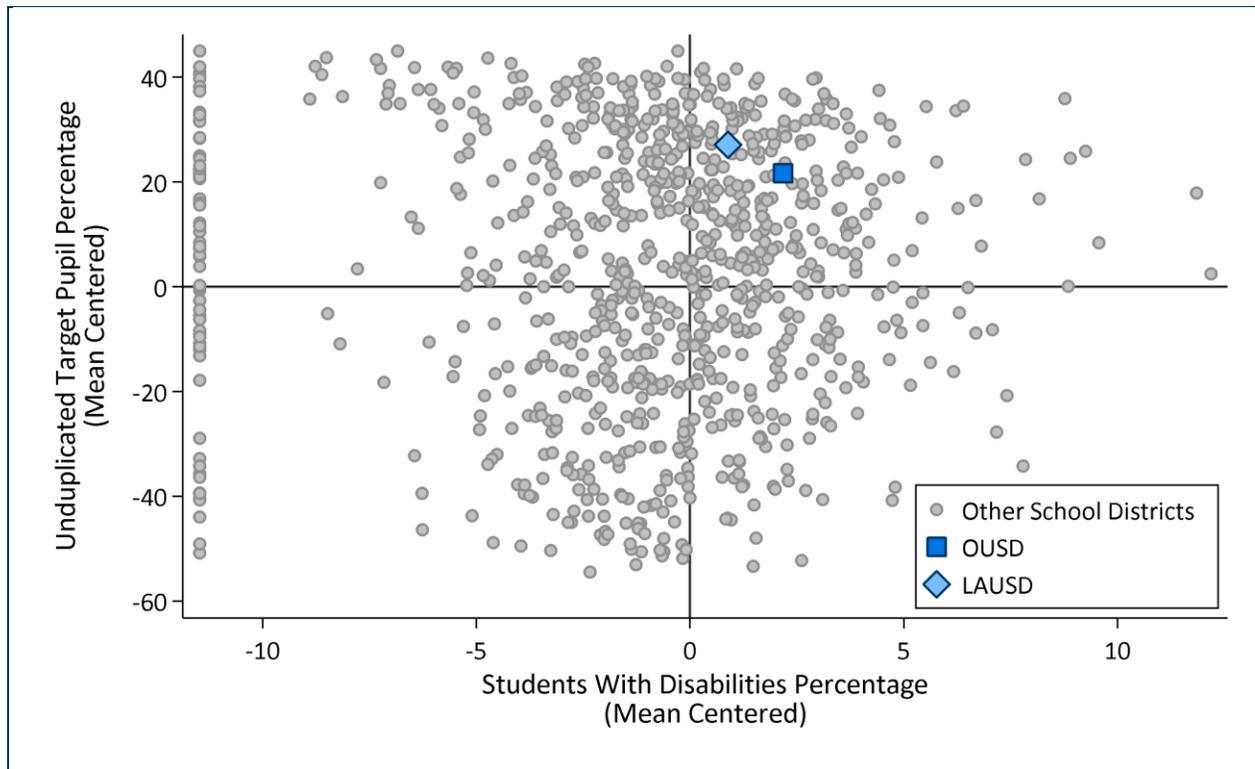
<sup>9</sup> Direct certification is a process used to determine students' eligibility for free or reduced-price meals. According to the California Department of Education, "The [direct certification] process uses information provided by state or local agencies administering assistance programs and Other Source Categorically Eligible programs. Assistance programs include the Supplemental Nutrition Assistance Program (SNAP [known as CalFresh in California]), Temporary Assistance for Needy Families (TANF [known as CalWORKs in California]), and Food Distribution Program on Indian Reservations" (California Department of Education, 2018).

school student was 56% less likely to be homeless, 24% less likely to be an English learner, 14% less likely to have a disability, and 10% less likely to be directly certified. The differences between charter and traditional schools were smaller but still significant when comparing students eligible for free or reduced-price lunch or who are unduplicated target pupils.

When comparing differences in the averages of conditional predictions, which account for geographic location and grade ranges, many of the differences were larger. Specifically, when comparing charter and traditional schools within the same district and serving students in the same grade spans, charter school students were 17% less likely to be eligible for free or reduced-price lunch, 24% less likely to be directly certified, 14% less likely to be classified as an unduplicated target pupil, and 20% less likely to have a disability. When examining the share of students across grade levels, a lower percentage of charter school students were in elementary grades and a higher percentage of charter school students were in high school grades compared with traditional schools.

The statewide comparisons mask substantial variation in needs in both the traditional and charter school sectors. Specifically, it is important to place LAUSD and OUSD traditional schools plus Aspire and Green Dot within the context of the statewide results. As seen in Exhibit 5, both LAUSD and OUSD serve high-need populations compared with the state average on both the unduplicated target pupil and students with disabilities dimensions.

### Exhibit 5. District Unduplicated Target Pupil Percentage and Students With Disabilities Percentage Centered on the State Average (2016–17)



*Note.* State averages are weighted by enrollment. The state average for unduplicated target pupil percentage in 2016–17 was 62.2%. The state average for students with disabilities in 2016–17 was 11.5%. Source: State school demographic data.

When comparing traditional schools to Aspire and Green Dot within LAUSD or OUSD, we see that the two CMOs we chose for this study served very high proportions of students with additional needs from 2014–15 through 2016–17, particularly on measures related to poverty (Exhibit 6). In LAUSD, traditional schools had an average free or reduced-price lunch eligibility rate of 81%. Both Aspire and Green Dot in Los Angeles had average free or reduced-price lunch eligibility rates of 93%. Los Angeles schools from both CMOs also served higher percentages of students who were directly certified, who were homeless, and who count as unduplicated target pupils. Aspire’s Oakland schools also served higher percentages of students eligible for free or reduced-price lunch (90%) and unduplicated target pupils (92%) compared with OUSD traditional schools (72.7% and 77.5% for free or reduced-price lunch and unduplicated target pupils, respectively). Interestingly, Aspire’s Oakland schools had lower percentages of directly certified students and students who were homeless, indicating that Aspire’s Oakland schools

have high percentages of students from low-income families, but the severity of poverty for those students might be less than for OUSD's students from low-income families.

### Exhibit 6. Comparison of Traditional School Characteristics to Aspire and Green Dot Public School Characteristics in Los Angeles and Oakland (2014–15 Through 2016–17)

Characteristic	Los Angeles averages			Oakland averages	
	Traditional	Aspire	Green Dot	Traditional	Aspire
<b>Student needs percentages</b>					
Free or reduced-price lunch	80.6	92.8**	93.0**	72.7	89.8**
Direct certification	29.0	34.1**	33.3**	33.2	24.9**
Homeless	1.7	3.4*	3.3**	1.7	1.1
English learners	28.4	34.6*	19.7**	32.2	36.3
Unduplicated target pupil	85.0	94.5**	94.5**	77.5	91.7**
Students with disabilities	12.7	8.2**	12.3	15.1	8.8**
High-incidence disabilities	9.0	6.3**	10.1**	10.9	7.5**
Low-incidence disabilities	3.7	2.0**	2.2**	4.2	1.3**
<b>Grade-level percentages</b>					
Elementary	53.0	61.7	0.0**	57.0	52.6
Middle	21.6	23.3	29.5	20.1	26.1
High	25.4	15.0*	70.5**	23.0	21.3

*Note.* Averages are weighted by enrollment. Source: State school demographic data and demographic data provided by LAUSD, OUSD, Aspire, and Green Dot.

Asterisks denote statistically significant relative differences from traditional public schools: \* $p < .05$ . \*\* $p < .01$ .

In both Los Angeles and Oakland, Aspire served higher percentages of English learners but lower percentages of students with disabilities compared with traditional schools. In contrast, Green Dot served lower percentages of English learners and similar proportions of students with disabilities. The differences in English learners between the two operators is likely a function of the grades served. Aspire largely focuses on the early grades, with 62% and 53% of the students in elementary grades in Los Angeles and Oakland, respectively. Green Dot instead focuses on higher grades, with more than 70% of the students in high school grades. In LAUSD, traditional elementary schools have an average English learner percentage of 38%, traditional middle schools have an average English learner percentage of 18%, and traditional high schools have an average English learner percentage of 15%.

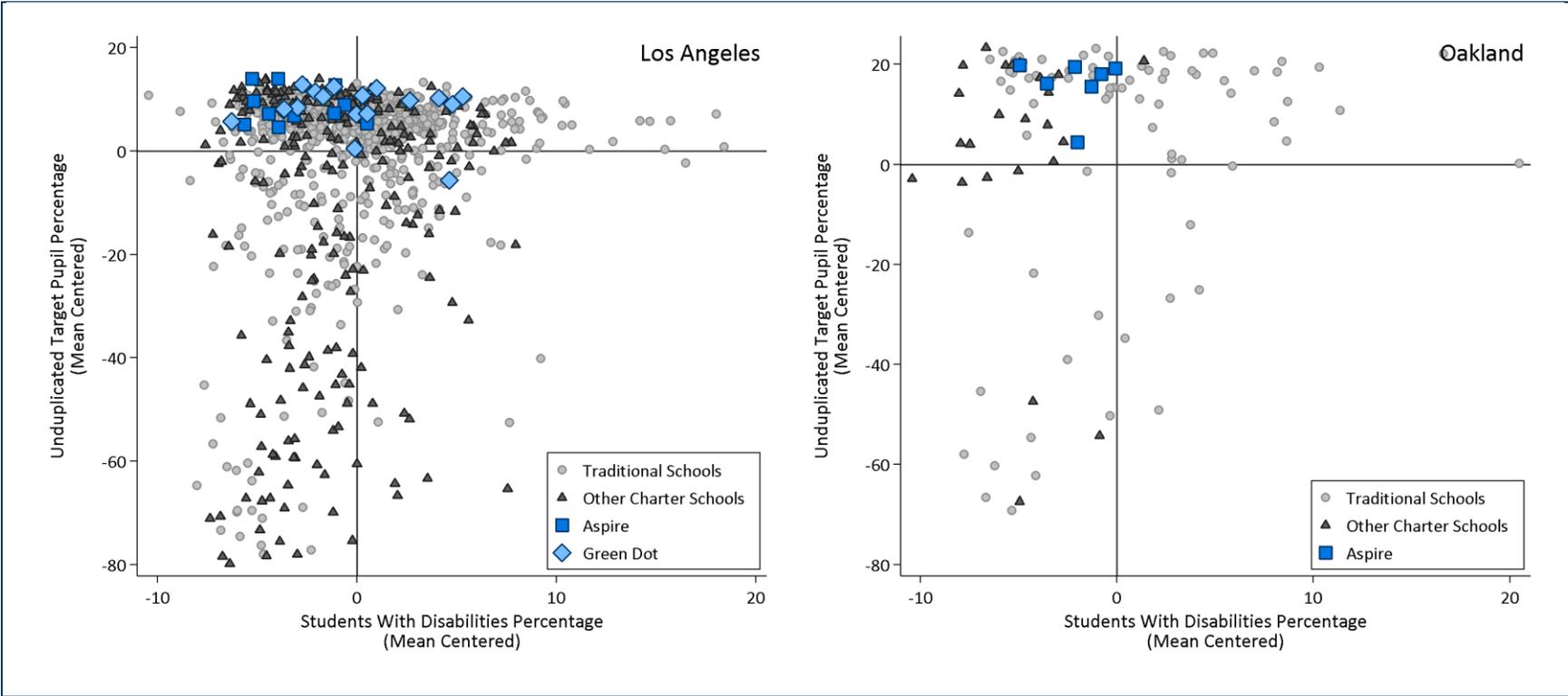
Exhibit 7 shows scatter plots of all traditional and charter schools in LAUSD and OUSD, calling attention to Aspire and Green Dot schools in each district. Aspire schools in both Oakland and

Los Angeles are largely clustered in the top left quadrant of each graph, indicating they serve a higher than average percentage of unduplicated target pupils but a lower percentage of students with disabilities compared with traditional schools. Green Dot's schools are mostly above average on the unduplicated target pupil dimension and span from well below to well above average on the students with disabilities dimension.

The scatter plots also make clear that the demographics of Aspire and Green Dot are not typical of charter schools. Many charter schools serve students with lower needs than either Aspire or Green Dot schools.

These demographic comparisons make clear that the choice of districts and charter schools for the analyses contained in this report are not typical. LAUSD and OUSD are both high-need districts compared with state average needs. In addition, although charter schools, on average, serve lower proportions of students with high needs compared with traditional schools, Aspire and Green Dot serve students with high needs across several dimensions compared with traditional schools, including the unduplicated target pupil percentage, which drives the supplemental and concentration grants under the LCFF.

**Exhibit 7. School Unduplicated Target Pupil Percentage and Students With Disabilities Percentage Centered on the District Traditional School Average for Los Angeles and Oakland Unified School Districts (2016–17)**



*Note.* District traditional school averages are weighted by enrollment. The LAUSD average for unduplicated target pupil percentage in 2016–17 was 86.0%, and for students with disabilities in 2016–17, it was 12.6%. The OUSD average for unduplicated target pupil percentage in 2016–17 was 76.6%, and for students with disabilities in 2016–17, it was 13.8%. Source: State school demographic data and demographic data provided by LAUSD, OUSD, Aspire, and Green Dot.

## **Analysis of Statewide Data on Charter and Traditional School Resources**

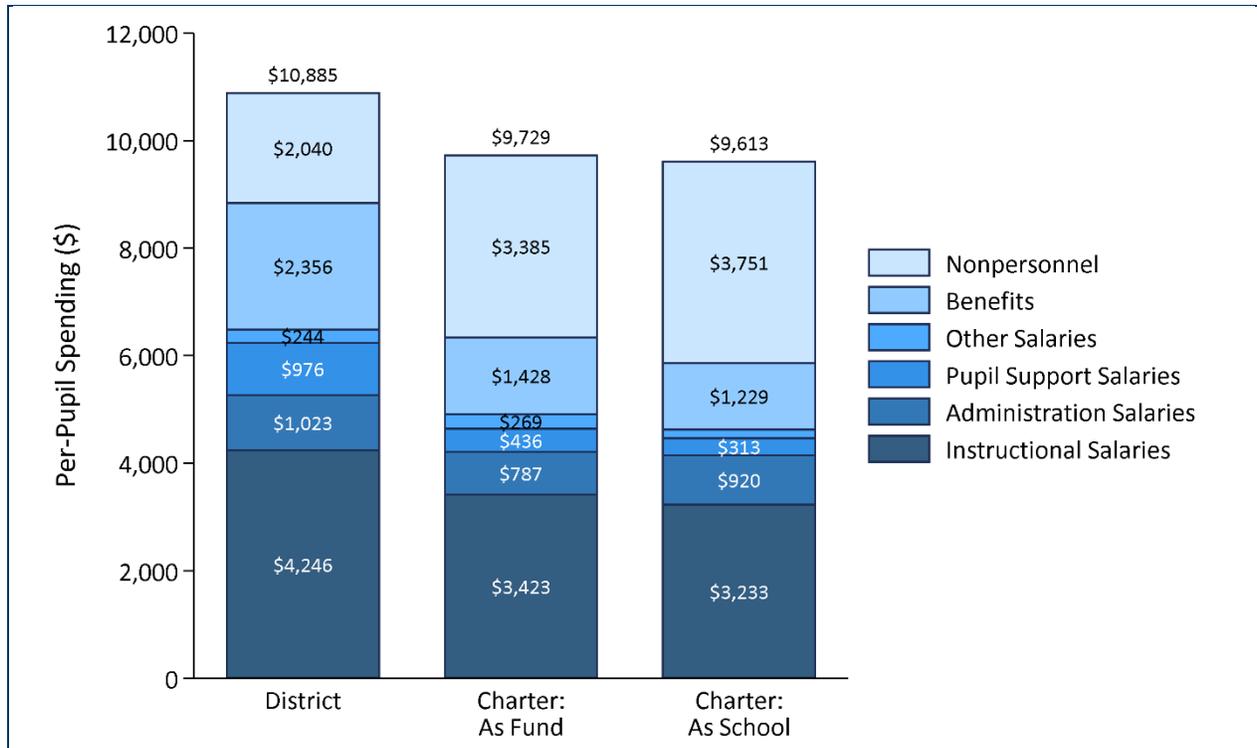
To compare traditional and charter school spending, we start by examining spending from the SACS data, consisting of district spending under SACS and charter school spending under SACS and the Alternative Form. As described previously, charter school spending can be reported on an individual school basis or as a fund under the parent district. When reported as a fund, spending for all independent charter schools within a district is aggregated, so the spending for any single charter school cannot be determined. Exhibit 8 shows that per-pupil spending for districts and charter schools differs when examined statewide. Between 2014–15 and 2016–17, the average reported spending for traditional districts was \$10,885 per student, whereas the average reported spending for charter schools was more than \$1,000 less for charter schools reporting either as a fund or as individual schools.

In addition to the overall differences, some clear differences are apparent in spending by category. On average, traditional districts reported spending \$800 to \$1,000 more per student on instructional salaries, \$500 to \$600 more on pupil support salaries, \$900 to \$1,100 more on benefits, but \$1,300 to \$1,700 less on nonpersonnel expenditures.

Because charter schools more often are found in urban districts that tend to be higher spending, the statewide averages do not tell the whole story. A more appropriate comparison would be between charter schools and the traditional district in which they are located. Exhibit 9 displays the comparison of average reported spending of charter schools within LAUSD and OUSD to the reported spending of those two districts.

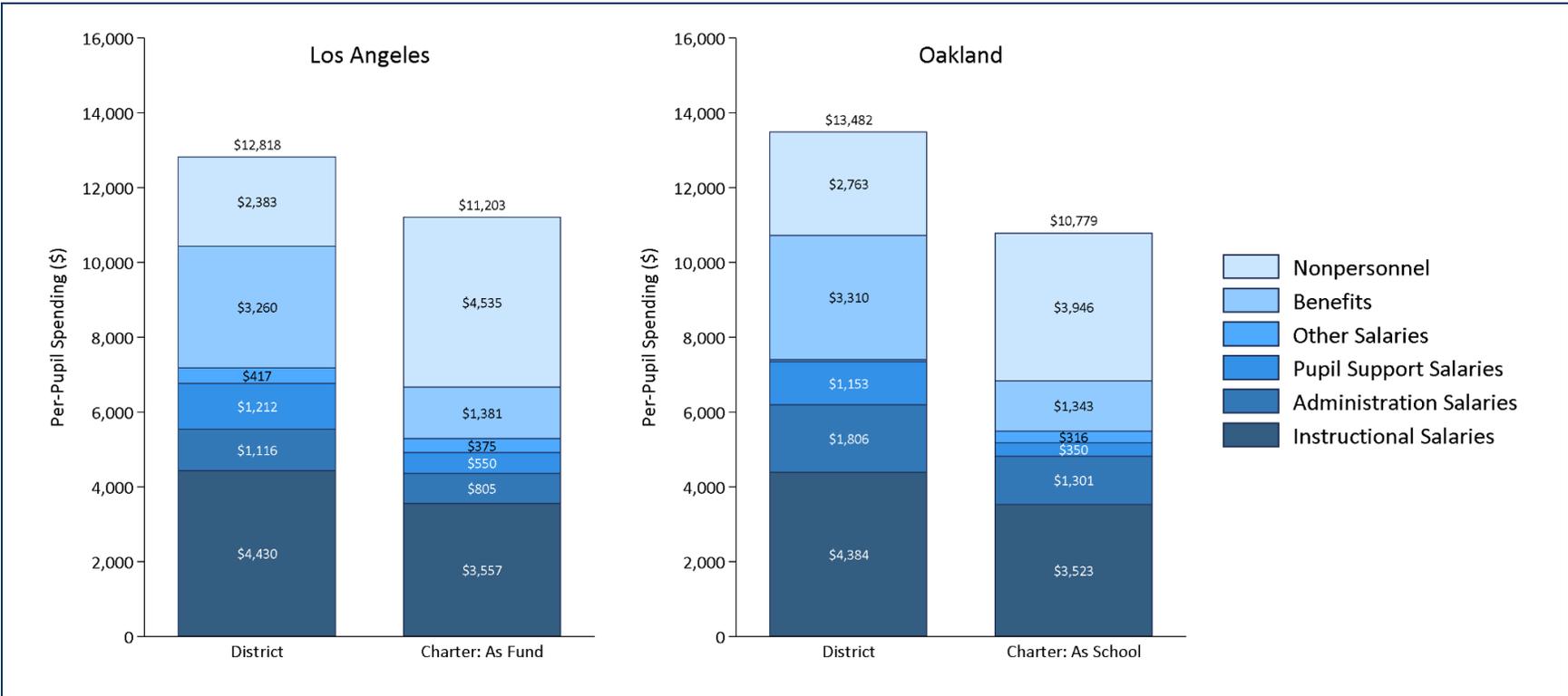
When comparing district to charter spending within LAUSD and OUSD, the reported differences in spending are somewhat larger. Reported district spending in LAUSD was approximately \$1,600 more and in OUSD was \$2,700 more than charter school spending in each district. Notably, the difference in benefits spending amounts to almost \$2,000 in each district.

**Exhibit 8. Statewide Average per-Pupil Spending in Traditional Districts, Charter Schools Reporting as a Fund, and Charter Schools Reporting as Individual Schools (2014–15 Through 2016–17)**



*Note.* Averages are weighted by enrollment. On average across the three school years included in this figure, traditional districts served 5,642,732 students, charter schools reporting as a fund served 177,014 students, and charter schools reporting as individual schools served 307,303 students. Unlabeled bar segment is less than \$200. Source: SACS data.

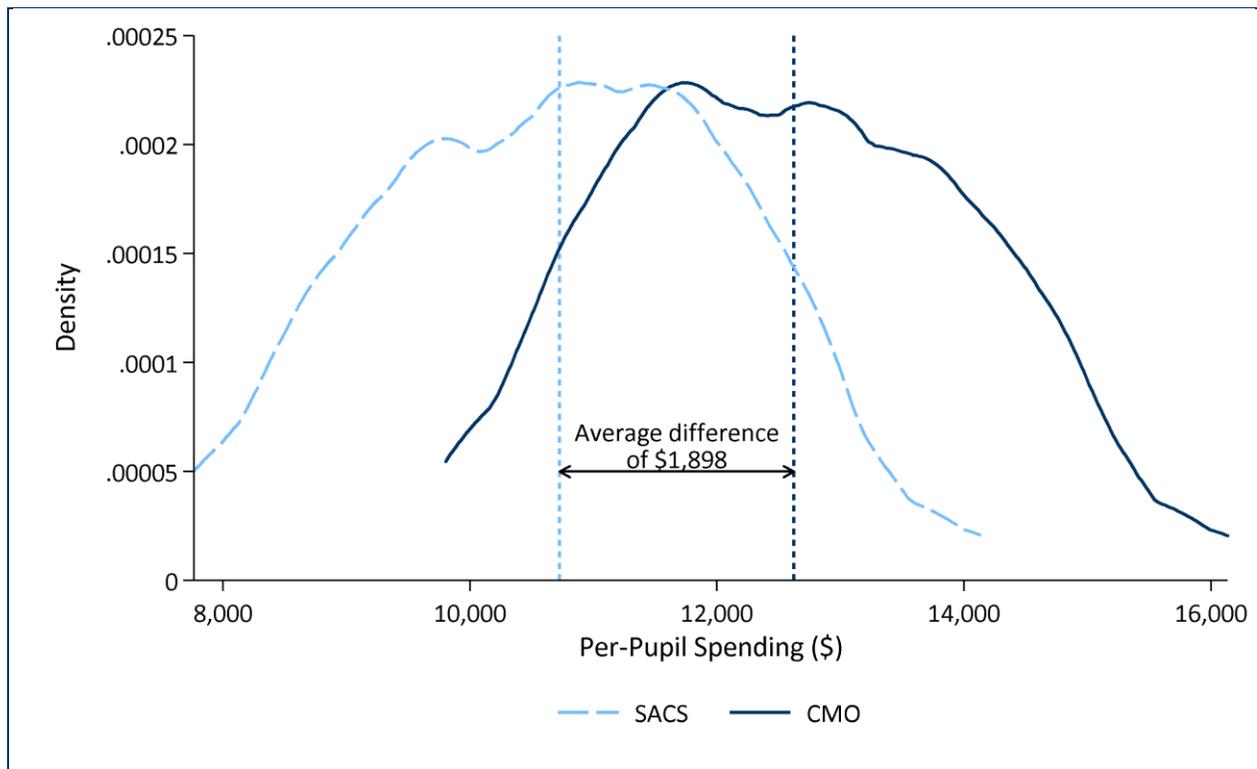
**Exhibit 9. Average per-Pupil Spending in LAUSD and OUSD to Charter Schools Within Those Districts (2014–15 Through 2016–17)**



*Note.* Averages are weighted by enrollment. On average across the three school years included in this exhibit, LAUSD as a district served 532,410 students, and the independent charter schools in LAUSD served 104,608 students; OUSD as a district served 36,993 students, and independent charter schools in OUSD served 11,946 students. Spending for all independent charter schools in LAUSD is reported in SACS as a single fund, meaning spending cannot be disaggregated for individual schools. All independent charter schools authorized by OUSD report spending individually in SACS. Unlabeled bar segment is less than \$200. Source: SACS data.

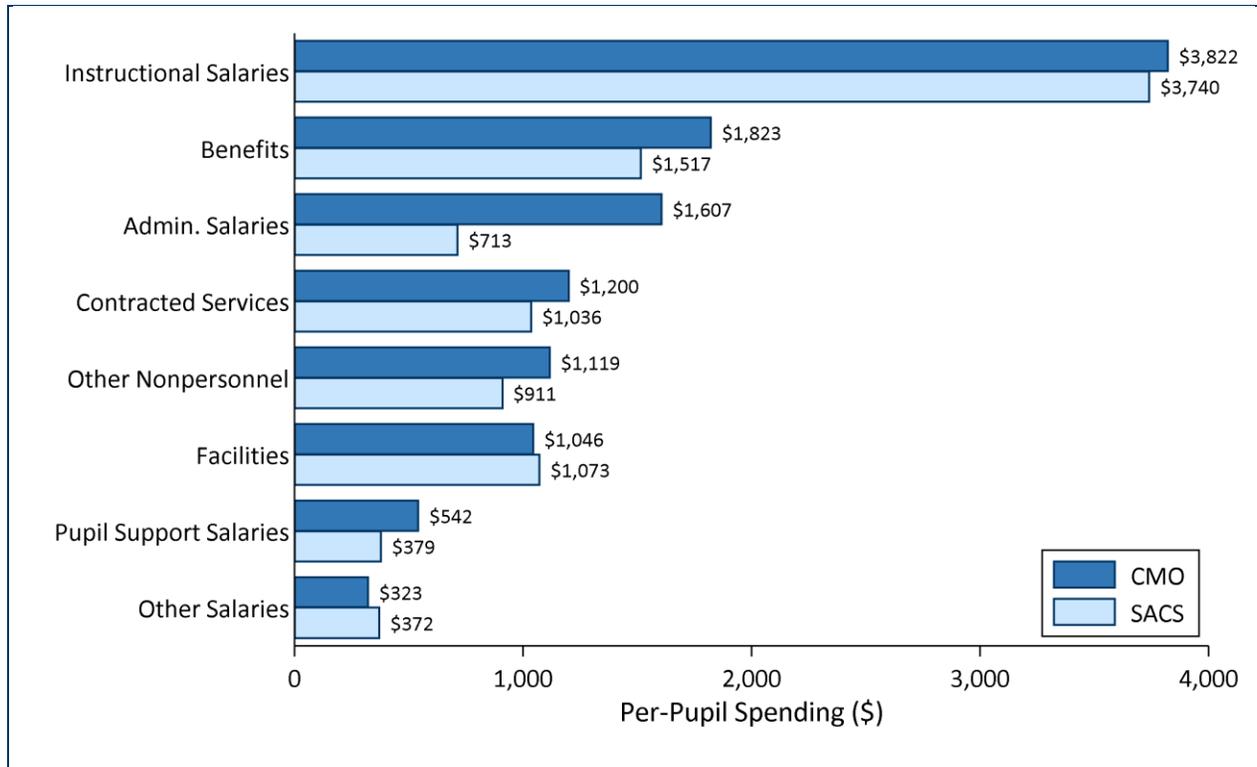
This analysis makes clear the differences in reported spending between charter schools and traditional districts using the state’s annual financial data. However, it does not shed light on why the differences might exist. To better understand what to make of the reported differences between traditional district spending and charter spending reported in the state’s annual financial data, we compared charter school spending reported in the state data to charter school spending calculated directly from fiscal data provided by Green Dot and Aspire (Exhibits 10 and 11). To conduct this analysis, we could use data only for those charter schools that reported as a school in the state data. Because all LAUSD independent charter schools report as a fund in the state data, we could not include Green Dot and Aspire schools authorized by LAUSD. We could match the state-provided and charter-provided data for the remaining 24–28 Green Dot and Aspire schools across the state in each year between 2014–15 and 2016–17. In each year, the reported spending from data provided by the CMOs was at least \$1,500 more than spending reported in SACS, on average, for the set of paired charter schools. In 2016–17, the average difference was almost \$1,900.

**Exhibit 10. Distribution of Charter School Spending as Reported in SACS (Annual Financial Data) and From Data Provided by Aspire and Green Dot CMOs in 2016–17**



*Note.* Based on 28 charter schools with SACS- and CMO-provided data. Source: SACS data and financial data provided by CMOs.

**Exhibit 11. Average Differences in Reported Charter School Spending as Reported in SACS (Annual Financial Data) and From Data Provided by Aspire and Green Dot CMOs by Category (2014–15 Through 2016–17)**



*Note.* Based on 78 charter-school-year observations with SACS- and CMO-provided data. Source: SACS data and financial data provided by CMOs.

When examining differences between state- and CMO-provided data in charter spending, we see that administrative salaries account for a difference of almost \$900 per pupil, whereas benefits and contracted services contribute, on average, \$300 each to the difference. The difference in administrative salaries suggests that much of the differences between the CMO-provided data and the SACS data are likely the result of expenditures at the CMO level that are captured in the CMO data but not captured in the SACS data. As explained in the Data and Methodology section, we allocated all CMO-level data to schools with the data provided directly by CMOs; therefore, the school-level estimates using the CMO-provided data account for national and regional CMO spending.<sup>10</sup>

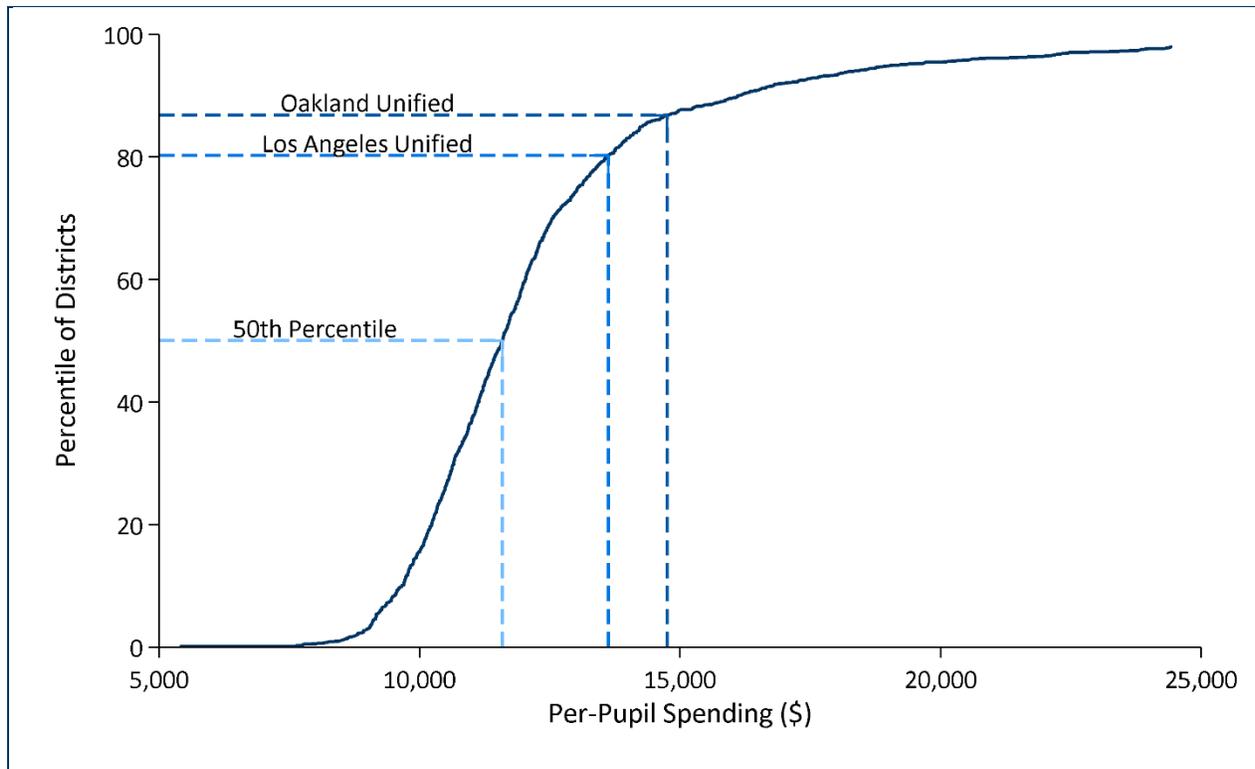
<sup>10</sup> As we will show in the subsequent chapter, national and regional CMO spending in Aspire schools amounts to almost \$1,900 per student, and national and regional CMO spending in Green Dot schools amounts to approximately \$2,400 per pupil. These amounts are in accordance with the proposed explanation of the difference in reported spending between SACS and CMO-provided data.

In addition to the likely exclusion of central CMO expenses from the charter spending data reported by the state, other possible reasons for these differences exist. As mentioned in the Data and Methodology section, one challenge in understanding charter school spending is in trying to identify special education spending for charter schools. With special education funding flowing first to SELPAs and then a mix of services and dollars flowing from SELPAs to charter schools, we cannot be confident that dollars used for special education services at charter schools are in the state-reported spending for charter schools. In later analyses, where we can identify the revenue source or the purpose of spending, we present the results in two ways: including and excluding dollars for special education services. Because charter schools can report school-level spending to the state using the SACS Alternative Form, the spending data for charter schools using this form cannot be disaggregated by revenue source or purpose. However, it seems likely that either legitimate differences in special education spending or differences caused by the inability to accurately track special education spending to schools could be another driver of reported differences using SACS data.

A third possible reason for differences in reported spending are legitimate differences resulting from LCFF funding. As shown in the section examining differences in the characteristics of traditional and charter schools, charter schools, on average, serve students with lower needs along a variety of measures, including the unduplicated target pupil percentage. In addition, the LCFF caps concentration grant funding to charter schools at the district average unduplicated target pupil percentage based on the charter school's location, meaning that charter schools serving students with high needs may not be funded at the same rate as districts with equally high needs. For this study, this means that the Aspire and Green Dot schools that we previously showed were above their districts' respective average unduplicated target pupil percentage receive concentration grant funding at the same amount per pupil as LAUSD or OUSD districts.

Another contextual factor to keep in mind is that both OUSD and LAUSD are very high-spending districts with respect to the median district in California (Exhibit 12). The LCFF adjusts funding for student needs but does not represent all funding sources for school districts. If the levels of observed spending in Oakland and Los Angeles are caused by something other than their level of student needs, we might expect that charter schools in these relatively high-spending districts to not spend as much as the traditional district. In other words, charter schools in high-spending districts might be spending less than traditional districts, whereas charter schools in low-spending districts might be spending more.

**Exhibit 12. Spending Levels and Percentiles for Los Angeles Unified, Oakland Unified, and the Median District (2016–17)**

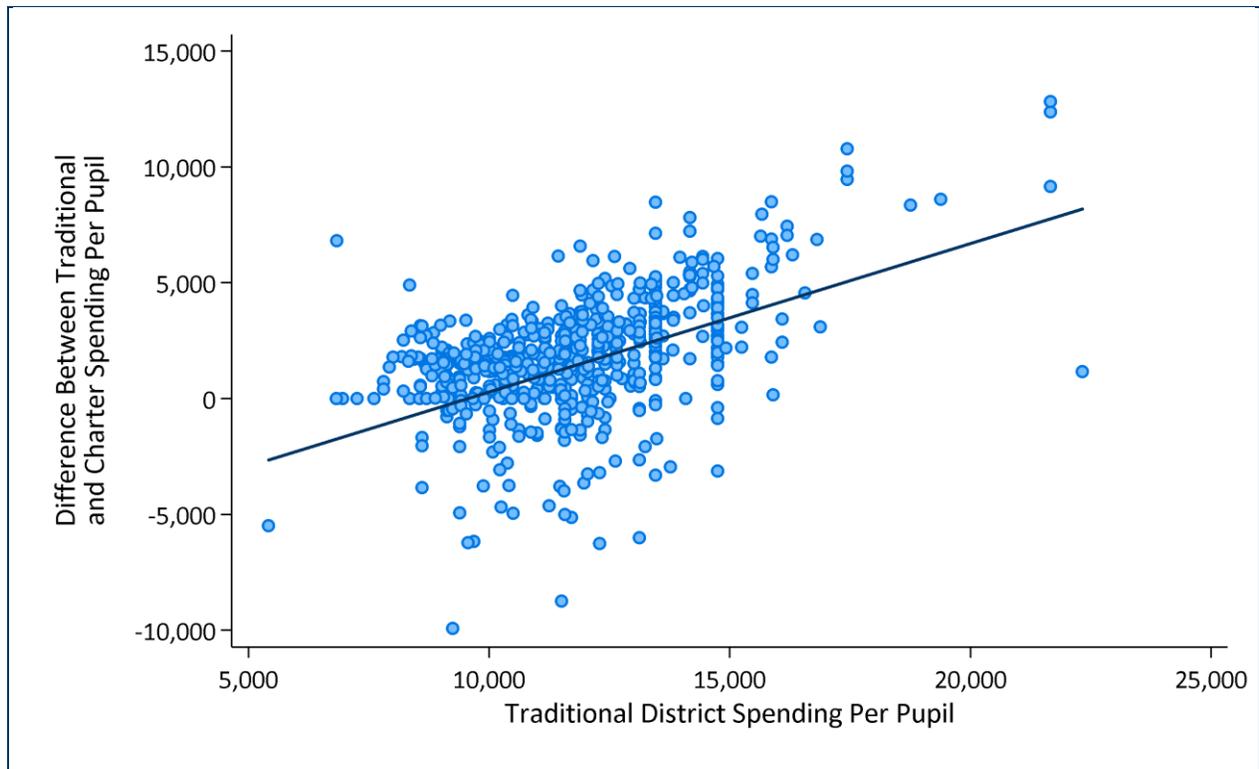


Source: SACS data.

When we plot spending differences between traditional district and charter spending per pupil using SACS data, we do, in fact, see that as traditional district spending increases, the reported difference between traditional and charter spending also increases, with traditional districts further outspending charter schools (Exhibit 13). In traditional districts spending \$10,000 per pupil, only a small predicted difference exists between traditional district and charter school spending reported in SACS (traditional districts are predicted to outspend charter schools by less than \$300). In districts spending \$15,000 per pupil, traditional districts are predicted to outspend charter schools by \$3,500.

Because of the clear inaccuracies associated with reported charter school spending using the SACS data and other differences that cannot be explored further using these data, subsequent analyses turn to more detailed and comprehensive data obtained directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 13. Reported Differences Between Traditional District and Charter Schools Spending per Pupil in Relation to Traditional District Spending per Pupil (2016–17)**



*Note.* The relationship measured by the fitted line is weighted by charter school enrollment. The difference between traditional and charter spending per pupil is measured as traditional district spending minus charter school spending. Positive differences mean that traditional districts outspend charter schools. Source: SACS data.

## **Analysis of Average School Spending and Revenues**

In this section of the report, we examine average school spending for traditional schools and Aspire and Green Dot schools in Los Angeles and Oakland. The exhibits presented in this section are unconditional averages. They do not attempt to account for any differences in student needs or school characteristics between traditional schools and charter schools from the two sampled CMOs.

Exhibit 14 displays average spending inclusive of special education by the organization level as reported in the provided data. LAUSD traditional schools spent, on average, \$12,905 per pupil (weighted by student enrollment) from 2014–15 through 2016–17. Approximately \$10,100 of the LAUSD per-pupil average was attributed to schools in the data received from LAUSD, and the remaining approximately \$2,800 was spending not attributed to any individual school and was reported as district spending. We allocated those dollars to schools using allocation formulas described in the Data and Methodology section. Oakland traditional schools are estimated to have spent \$13,540 per pupil. Less than half of this (\$6,683) was identified as school-level spending (i.e., including dollars directly attributed to schools) within the data. Almost \$6,900 of the average per-pupil spending in Oakland was maintained as district-level spending and allocated to schools using a formula.

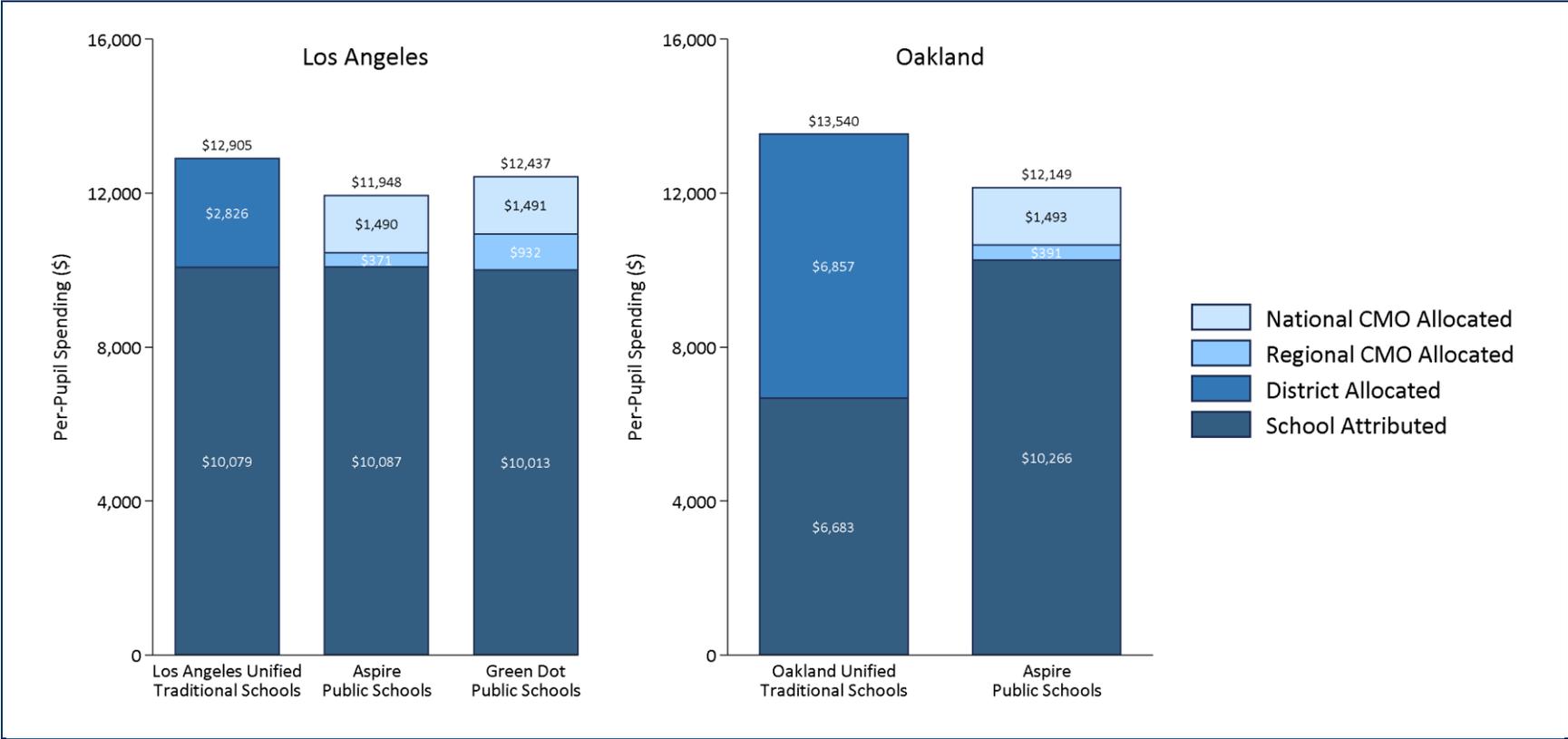
For Aspire and Green Dot schools in Los Angeles and Aspire schools in Oakland, average per-pupil spending amounted to approximately \$12,000. More than \$10,000 per pupil in each CMO and location was directly attributed to schools in the data we received from both Aspire and Green Dot. The remaining \$1,800 to \$2,400 per pupil was identified as regional- or national-level CMO spending, which we allocated out to schools. Regional dollars were allocated to schools within the identified region. Within California, Aspire has Bay Area, Los Angeles, and Central Valley regional offices; Aspire also has a regional office in Tennessee that provides services to a set of schools within its Tennessee region. Green Dot's California schools only operate in the Los Angeles area, but Green Dot also operates charter schools in Washington State and Tennessee. National dollars were allocated across all schools operated by the CMO. For both Aspire and Green Dot, regional offices were described as providing instructional support, such as professional development or curriculum development, whereas the national office was described as taking care of business functions, such as accounting and human resources.

Comparing Exhibit 14, which includes spending for special education, and Exhibit 15, which excludes spending for special education, special education spending for both LAUSD and OUSD

amounted to more than \$2,000 per pupil. In LAUSD, most special education spending was reported at the school level (\$1,922 of the \$2,694 was attributed to schools); whereas in OUSD, the bulk of special education spending was reported at the district level (\$1,776 of the \$2,067), which we allocated to schools on a per special education student basis. For the CMO schools, special education spending amounted to approximately \$1,000 per student and was largely attributed to schools.

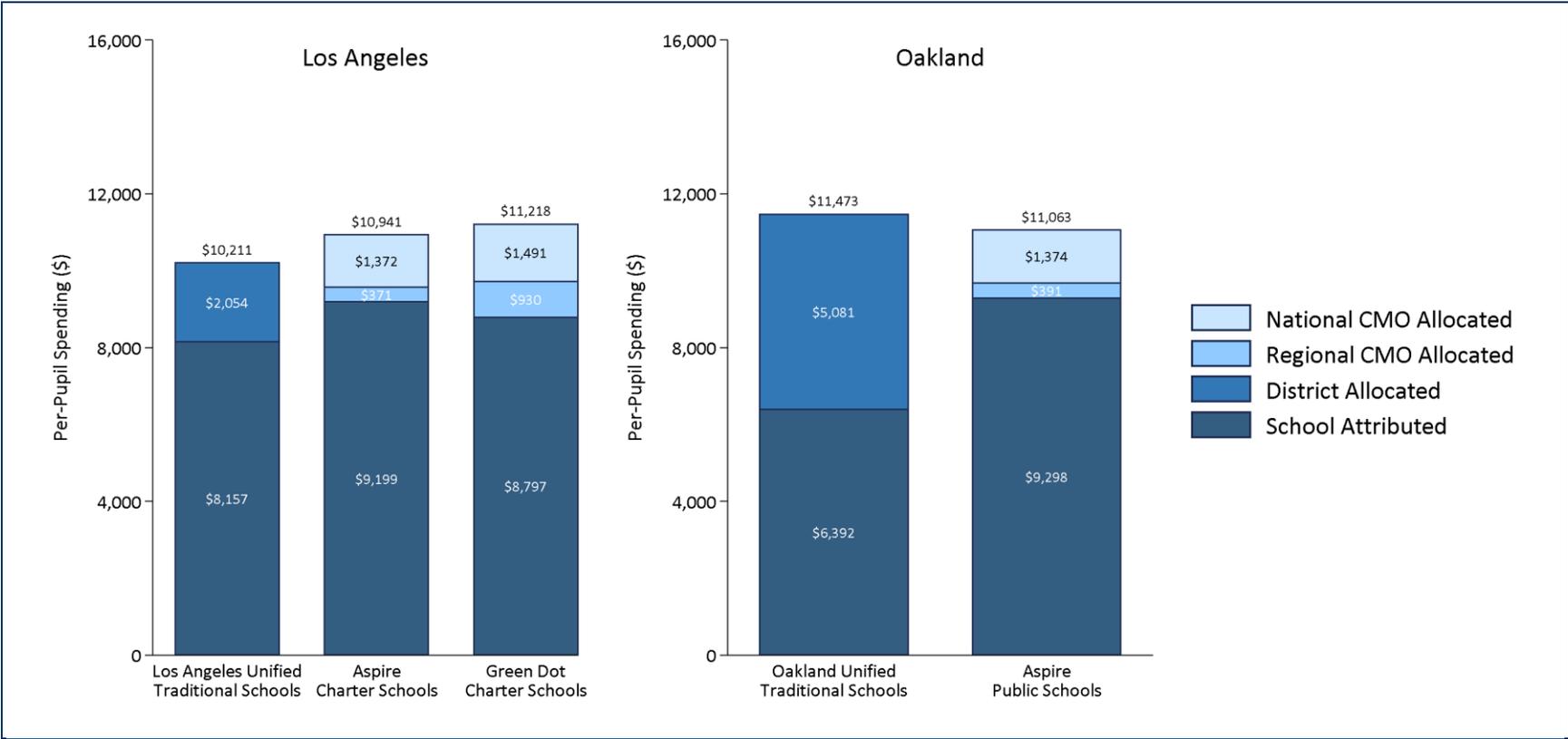
In Los Angeles, the exclusion of special education spending results in LAUSD traditional schools having a lower reported average spending per pupil (\$10,211) compared with Aspire (\$10,941) and Green Dot (\$11,218). In Oakland, OUSD traditional schools still spent more than Aspire with the exclusion of special education spending, but the difference is much smaller at approximately \$400 per pupil.

**Exhibit 14. Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Those Districts, by Organization Level (2014–15 Through 2016–17)**



Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 15. Average Spending Excluding Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Those Districts, by Organization Level (2014–15 Through 2016–17)**



Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

Exhibits 16 and 17 examine the types of resources that operational dollars were spent on rather than the organizational structure of the spending. Results in the first set of columns of each exhibit include special education spending. When comparing LAUSD traditional schools to Aspire and Green Dot in Los Angeles, several clear differences are apparent. LAUSD traditional schools spent more per pupil and as a percentage on instructional salaries compared with Los Angeles Aspire and Green Dot schools. Instructional salaries made up 35% of the spending for LAUSD traditional schools, 33% of the spending for Aspire, and 26% of the spending for Green Dot. LAUSD traditional schools also spent more than double what Aspire and Green Dot schools in Los Angeles spent on pupil support salaries. The largest difference in per-pupil dollars comes from benefits, where LAUSD spent more than \$1,400 per pupil more than Aspire schools and almost \$1,600 per pupil more than Green Dot schools. LAUSD traditional schools spent less than Aspire and Green Dot on administration per pupil and as a percentage of spending. Administrative salaries made up 9% of the LAUSD spending but 14% of both Aspire and Green Dot spending.

Another key difference is in facilities. As mentioned previously, we included spending for facilities on the charter side because this spending is largely considered operational in nature. We also included facilities spending on the traditional school side that was considered operational. However, this resulted in most facilities and capital spending being excluded on the traditional side because this spending largely comes from nonoperational funds used specifically to pay for facilities. We recognize this imbalance but do not think that the differences can be reconciled. Facilities spending for Aspire in Los Angeles amounted to \$750 per pupil (6% of operational spending), and for Green Dot, it amounted to almost \$1,400 per pupil (11% of the operational spending), whereas for LAUSD the figure was \$67 per pupil (1% of operational spending). Differences in facilities spending are likely caused at least in part by the differences in grades served. Aspire middle and high schools in Los Angeles spent almost \$1,200 per pupil on facilities; Aspire middle and high schools in Oakland spent almost \$1,800 per pupil on facilities. In contrast, Aspire elementary schools spent only approximately \$500 and \$700 per pupil on facilities in Los Angeles and Oakland, respectively.

Aspire and Green Dot appear to take different approaches when it comes to contractual services. Los Angeles Aspire schools spent slightly more than \$1,000 per pupil or 9% of their operational spending on contractual services (a similar share to LAUSD traditional schools), whereas Green Dot spent slightly more than \$2,700 or 22% of its operational spending on contractual services. In particular, large portions of Green Dot's contractual services are for food service, substitute teachers, and school security. This also explains the low level of spending on food reported by Green Dot.

**Exhibit 16. Average Spending for LAUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles, by Spending Category (2014–15 Through 2016–17).**

	Includes special education						Excludes special education					
	LAUSD		Aspire		Green Dot		LAUSD		Aspire		Green Dot	
Instructional salaries	\$4,453	35%	\$4,001	33%	\$3,231	26%	\$3,396	33%	\$3,562	33%	\$2,782	25%
Administrative salaries	\$1,120	9%	\$1,618	14%	\$1,790	14%	\$1,045	10%	\$1,558	14%	\$1,789	16%
Pupil support salaries	\$1,215	9%	\$533	4%	\$474	4%	\$1,056	10%	\$383	4%	\$473	4%
Other salaries	\$437	3%	\$462	4%	\$337	3%	\$382	4%	\$462	4%	\$221	2%
Benefits	\$3,276	25%	\$1,841	15%	\$1,684	14%	\$2,567	25%	\$1,676	15%	\$1,513	13%
Contractual services	\$1,288	10%	\$1,059	9%	\$2,719	22%	\$688	7%	\$890	8%	\$2,253	20%
Books	\$104	1%	\$136	1%	\$89	1%	\$104	1%	\$136	1%	\$88	1%
Food	\$342	3%	\$504	4%	\$4	0%	\$342	3%	\$504	5%	\$4	0%
Other nonpersonnel	\$603	5%	\$1,043	9%	\$743	6%	\$564	6%	\$1,020	9%	\$727	6%
Facilities and capital	\$67	1%	\$750	6%	\$1,367	11%	\$67	1%	\$749	7%	\$1,367	12%
<b>Total</b>	<b>\$12,905</b>		<b>\$11,948</b>		<b>\$12,437</b>		<b>\$10,211</b>		<b>\$10,941</b>		<b>\$11,218</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 17. Average Spending for OUSD Traditional Schools and Aspire Charter Schools in Oakland, by Spending Category (2014–15 Through 2016–17).**

	Includes special education				Excludes special education			
	OUSD		Aspire		OUSD		Aspire	
Instructional salaries	\$4,441	33%	\$4,048	33%	\$3,410	30%	\$3,530	32%
Administrative salaries	\$1,810	13%	\$1,715	14%	\$1,744	15%	\$1,655	15%
Pupil support salaries	\$1,171	9%	\$696	6%	\$965	8%	\$531	5%
Other salaries	\$67	0%	\$345	3%	\$64	1%	\$345	3%
Benefits	\$3,350	25%	\$1,930	16%	\$2,684	23%	\$1,727	16%
Contractual services	\$1,651	12%	\$1,027	8%	\$1,569	14%	\$904	8%
Books	\$104	1%	\$95	1%	\$104	1%	\$95	1%
Food	\$247	2%	\$385	3%	\$247	2%	\$385	3%
Other nonpersonnel	\$578	4%	\$813	7%	\$568	5%	\$796	7%
Facilities and capital	\$119	1%	\$1,095	9%	\$118	1%	\$1,095	10%
<b>Total</b>	<b>\$13,540</b>		<b>\$12,149</b>		<b>\$11,473</b>		<b>\$11,063</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

The spending patterns by category shown in Exhibit 17 are largely the same when comparing OUSD and Aspire schools in Oakland. One difference is that administrative salaries for OUSD and Aspire were largely on par, which is consistent with the finding that OUSD had higher administrative spending than LAUSD. Another difference is the higher cost of facilities for Aspire schools in Oakland compared with the Los Angeles schools. Aspire schools in Oakland spent approximately \$1,100 per pupil on facilities or 9% of their operational spending.

The exclusion of special education spending has only small effects on the distribution of spending across categories. In per-pupil terms, most special education spending went toward instructional salaries for both districts and both CMOs. In LAUSD, special education dollars also were used to purchase a large share of the district’s contractual services.

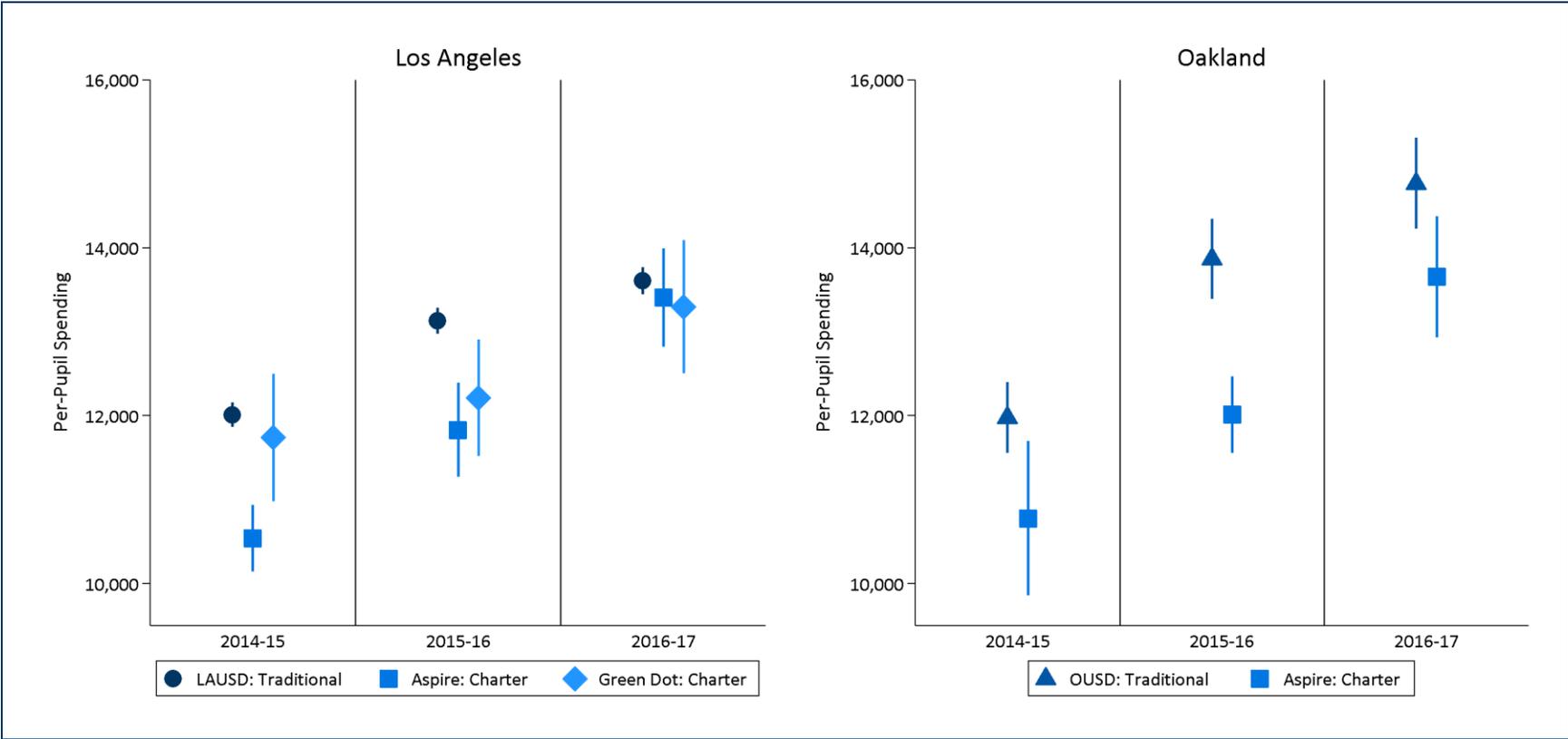
We also examined spending by category by schooling level. Because all Green Dot schools are middle and high schools and Aspire schools are largely elementary, the overall averages could potentially mask important patterns specific to schooling level. These analysis tables can be found in Appendix A. Other than the previously noted difference in facilities spending for elementary compared with middle and high schools, making comparisons within grade ranges does not appreciably change the qualitative story shown when examining overall averages.

When comparing average spending levels per pupil by year, the gap in spending between traditional schools and Aspire and Green Dot schools has fluctuated across time, with traditional schools always spending more than charter schools when including special education (Exhibits 18 and 19). In Los Angeles, the average differences between traditional school spending and charter school spending in the two selected CMOs was greatest in 2015–16, when traditional schools spent approximately \$1,000 more per pupil. In 2016–17, the average differences in spending between LAUSD traditional schools and schools from the two CMOs was quite small.

Oakland follows a similar pattern as Los Angeles, with average differences between traditional and Aspire schools being the largest in 2015–16. Although the 2016–17 gaps in Los Angeles were very small, the gap between traditional and charter spending in Oakland remained more than \$1,000 per pupil on average.

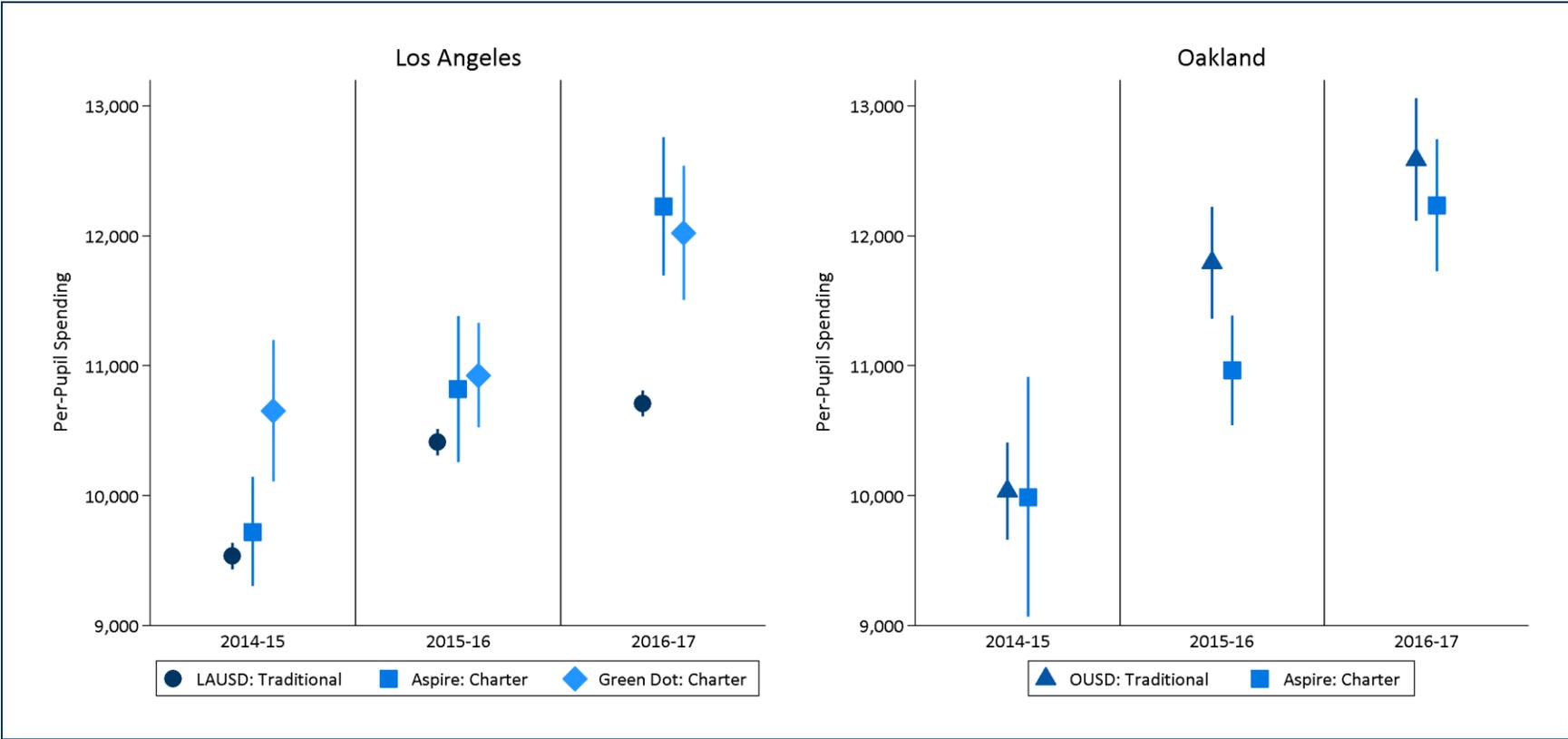
When excluding special education, the qualitative story is quite different in Los Angeles. In all years, LAUSD traditional schools spent less, on average, than Aspire and Green Dot schools when special education was excluded. In 2016–17, LAUSD traditional schools spent more than \$1,000 per pupil less, on average, than both Aspire and Green Dot schools after removing spending for special education from the equation. When excluding special education, spending in OUSD traditional schools remains higher, on average, in each year compared with Aspire schools, but the differences are substantially reduced.

**Exhibit 18. Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



Note. Vertical lines represent 95% confidence intervals around the mean. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

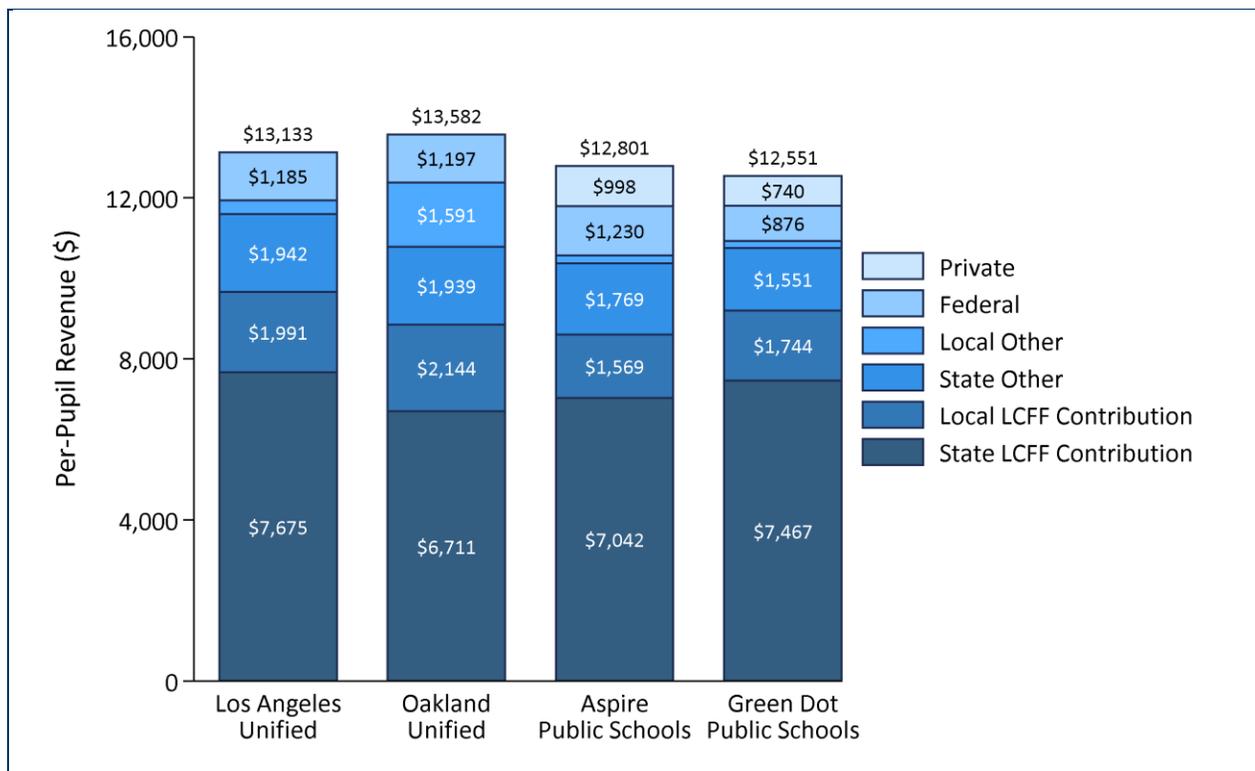
**Exhibit 19. Average Spending Excluding Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



Note. Vertical lines represent 95% confidence intervals around the mean. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

In addition to comparisons of spending, we also can compare per-pupil revenue for LAUSD, OUSD, Aspire, and Green Dot. In previous exhibits, Aspire and Green Dot spending is shown for these schools in Los Angeles and Oakland separately; however, in Exhibit 20, which depicts revenue per pupil, figures are aggregated across all schools regardless of location.

**Exhibit 20. Per-Pupil Revenue for LAUSD, OUSD, and Aspire and Green Dot Public Schools (2014–15 Through 2016–17)**



Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot. Unlabeled bar segments are less than \$400.

The two categories that make up LCFF funding are state LCFF contributions and local tax contributions to LCFF.<sup>11</sup> Combined, these categories make up almost \$9,700 of LAUSD’s total revenue per pupil, almost \$8,900 of OUSD’s total, and approximately \$8,600 and \$9,200 of the total for Aspire and Green Dot, respectively. Other state revenue, which includes state special education funding also favors LAUSD and OUSD over Aspire and Green Dot. A key difference for

<sup>11</sup> The state LCFF contribution consists of revenue from the Education Protection Account and LCFF state aid.

Oakland is the additional revenue from other local sources, which is largely from parcel tax revenues.

Aspire and Green Dot also raise nonnegligible amounts from private sources in the form of donations and foundation grants. Private revenue in both Aspire and Green Dot amounted to less than \$1,000 per pupil—approximately 8% of the revenue in Aspire and 6% of the revenue in Green Dot. Although we do not show any private dollars raised for LAUSD and OUSD, we know this is not the case. Parent teacher associations can raise revenue for their schools from parents and other donors. However, we have little reason to believe these types of private revenue would amount to substantial dollars per pupil for LAUSD and OUSD traditional public schools.<sup>12</sup>

As noted at the beginning of this section, the averages presented here are unconditional, meaning that they do not attempt to account for differences in student needs or school characteristics. Therefore, there could be legitimate reasons for the differences in spending presented thus far. For example, Green Dot serves high percentages of high school students, and high schools tend to be more expensive, as recognized by higher LCFF allocations for high school students. In the next section, we present conditional comparisons that statistically control for student needs and school grade configuration.

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<sup>12</sup> According to a report by Brown, Sargrad, and Benner (2017) on the richest parent teacher associations in the nation, the parent teacher association of Westwood Charter Elementary in LAUSD raised \$737 per pupil, and Hillcrest School in OUSD raised \$1,775 per pupil in 2013–14. No other LAUSD or OUSD schools were included on the list of the 50 richest parent teacher associations in the United States. Parent teacher association revenue for the schools ranged from \$242 to \$2,629 per pupil. Given the number of schools and students in LAUSD and OUSD and the fact that few parent teacher associations from these districts are included in this report, we do not believe private revenue in this form would make up a substantial amount within these two districts.

## Conditional Comparisons of Charter School Spending

To more appropriately compare traditional and charter school spending for our selected districts and CMOs, we conducted conditional comparisons that statistically control for differences in student needs and school grade configurations.

In the conditional comparisons, the student needs variables accounted for are the proportions of students who are directly certified (a measure of poverty), are homeless, are English learners, have high-incidence disabilities, or have low-incidence disabilities.<sup>13,14</sup> The regressions also account for the proportions in elementary, middle, and high school grade ranges (K–5, 6–8, and 9–12, respectively).

We used two approaches for the conditional comparisons. The first approach included dummy variables for the Aspire and Green Dot schools in the regressions. In this approach, which we call the “conditional” analysis, we estimated differences between traditional and charter schools directly in the regression model. The conditional estimates then show what spending would look like if all schools were traditional, Aspire, or Green Dot schools while maintaining their existing student needs and grade configurations.

The second approach used only traditional schools in the regression model. We then predicted spending for Aspire and Green Dot schools based on this traditional school regression model. We call these spending estimates the “as-if-traditional” estimates. These measures provide our best expectation of the spending levels that would be observed for the CMO schools in Los Angeles and Oakland if they were treated as if they were traditional schools in their respective districts. The regression results for these two estimation techniques are in Appendix B.

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<sup>13</sup> Direct certification and homeless proportions were used as poverty measures rather than free or reduced-price lunch eligibility because these two indicators were stronger predictors as evidenced by explaining more variation in spending levels (i.e., higher model  $R^2$  values). Direct certification and homelessness did not make much difference for the Los Angeles results because both Aspire and Green Dot had higher proportions of students who were directly certified, homeless, and free or reduced-price lunch eligible compared with LAUSD. Aspire schools in Oakland, however, had higher proportions of students eligible for free or reduced-price lunch but lower proportions of students who were directly certified and homeless. Consequently, the choice of poverty indicators makes a rather substantial difference in the results. However, this could be particularly problematic if, for some reason, homelessness and direct certification are not accurately recorded for all charter schools. Specifically, many Aspire schools in Oakland have zero reported students who were homeless. If these zeros are misreported, that would bias the results. Because the choice of variables included in the regression makes a difference in the results, we present results based on alternative regression models using free or reduced-price lunch eligibility instead of direct certification and homelessness in Appendix C.

<sup>14</sup> Specific learning disability, speech and language impairment, and other health impairments are categorized as high-incidence disabilities. All other types of disability are categorized as low-incidence disabilities.

As seen in Exhibit 21, conditional spending differences paint slightly different pictures of spending than the unconditional comparisons. In Los Angeles, the average differences in estimated spending between otherwise similar LAUSD traditional schools and charter schools from the two selected CMOs were relatively small in 2014–15 and 2015–16. In 2016–17, LAUSD traditional school estimated spending remained on par with estimated Green Dot spending, on average, whereas Aspire’s average estimated spending per pupil outpaced that of both LAUSD traditional schools and Green Dot schools.

In Oakland, differences between otherwise similar traditional and Aspire schools were not significantly different across all three school years. Although insignificant, the direction of the difference in point estimates changed across years, with Aspire being higher in both 2014–15 and 2016–17, and OUSD traditional schools being higher in 2015–16.

With the exclusion of special education, the average (conditional) spending estimates for LAUSD traditional schools are lower than the average estimated spending for Aspire and Green Dot schools in all three school years when controlling for student needs and grade configuration (Exhibit 22). However, these differences fail to be statistically different in 2014–15 and 2015–16. In 2016–17, the differences were particularly large and statistically significant. LAUSD traditional schools were estimated to have spent more than \$1,000 less than comparable Green Dot schools and more than \$2,000 less than comparable Aspire schools.

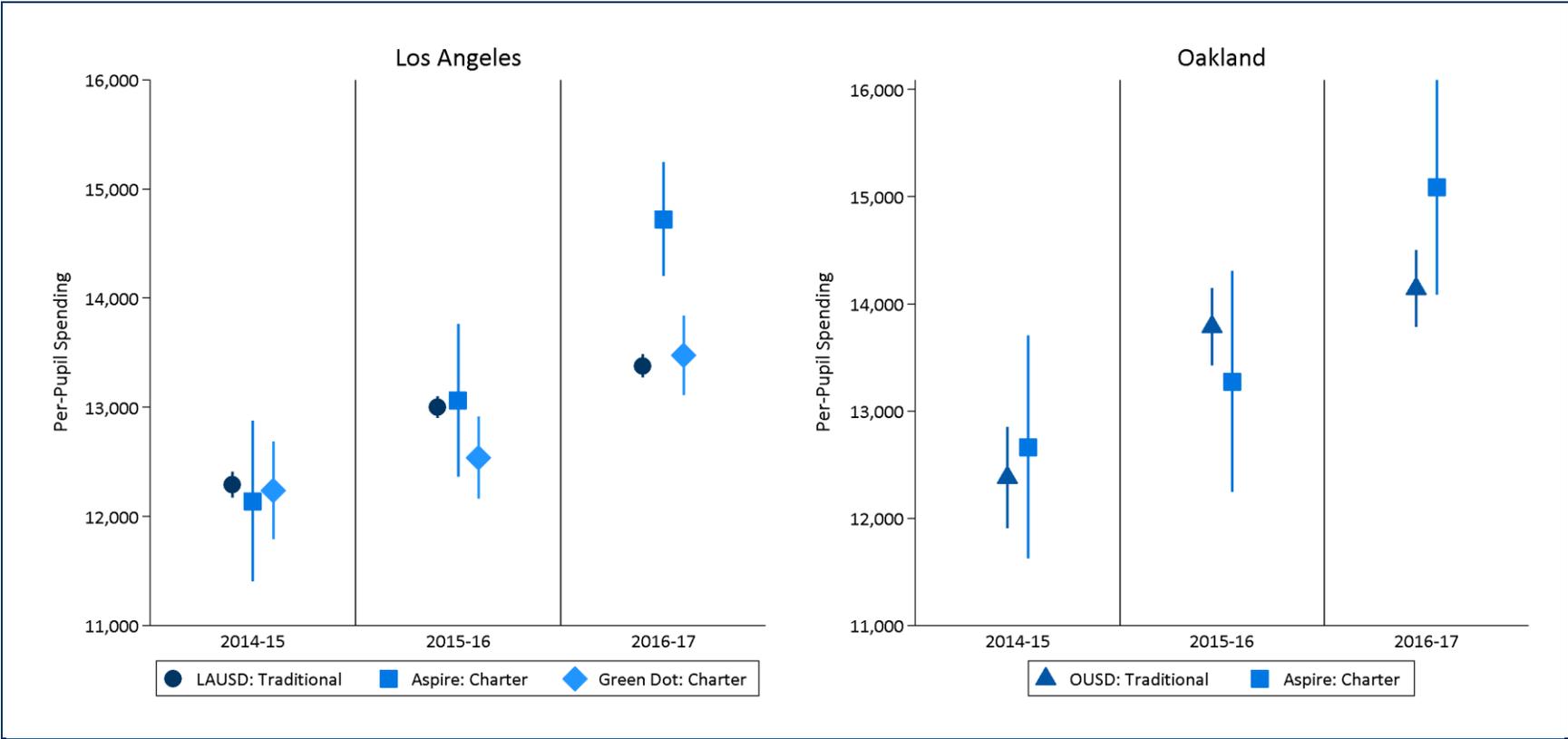
The as-if-traditional results depict the same story but in a different way. Rather than directly estimating the average differences in spending between traditional and Aspire or Green Dot schools, the as-if-traditional results compare actual charter school spending to regression predicted spending of charter schools based on a model using traditional school data. These predicted values are estimates of what the charter schools would have spent if they were treated similarly to traditional schools in LAUSD or OUSD.

For Aspire in both Los Angeles and Oakland, the as-if-traditional average predicted spending levels were similar to actual spending levels in both 2014–15 and 2015–16 (Exhibit 23). In 2016–17, the actual levels exceeded predicted levels by \$1,400 in Los Angeles and \$1,300 in Oakland. For Green Dot, the actual and predicted amounts are similar across all three school years.

When excluding special education, the average as-if-traditional predicted spending levels for Aspire and Green Dot in Los Angeles were consistently lower than actual spending levels (Exhibit 24). These differences were statistically significant for both Aspire and Green Dot in the 2016–17 school year. For Aspire schools in Oakland, the predicted and actual spending levels were similar in 2014–15 and 2015–16, whereas actual spending was found to be higher than

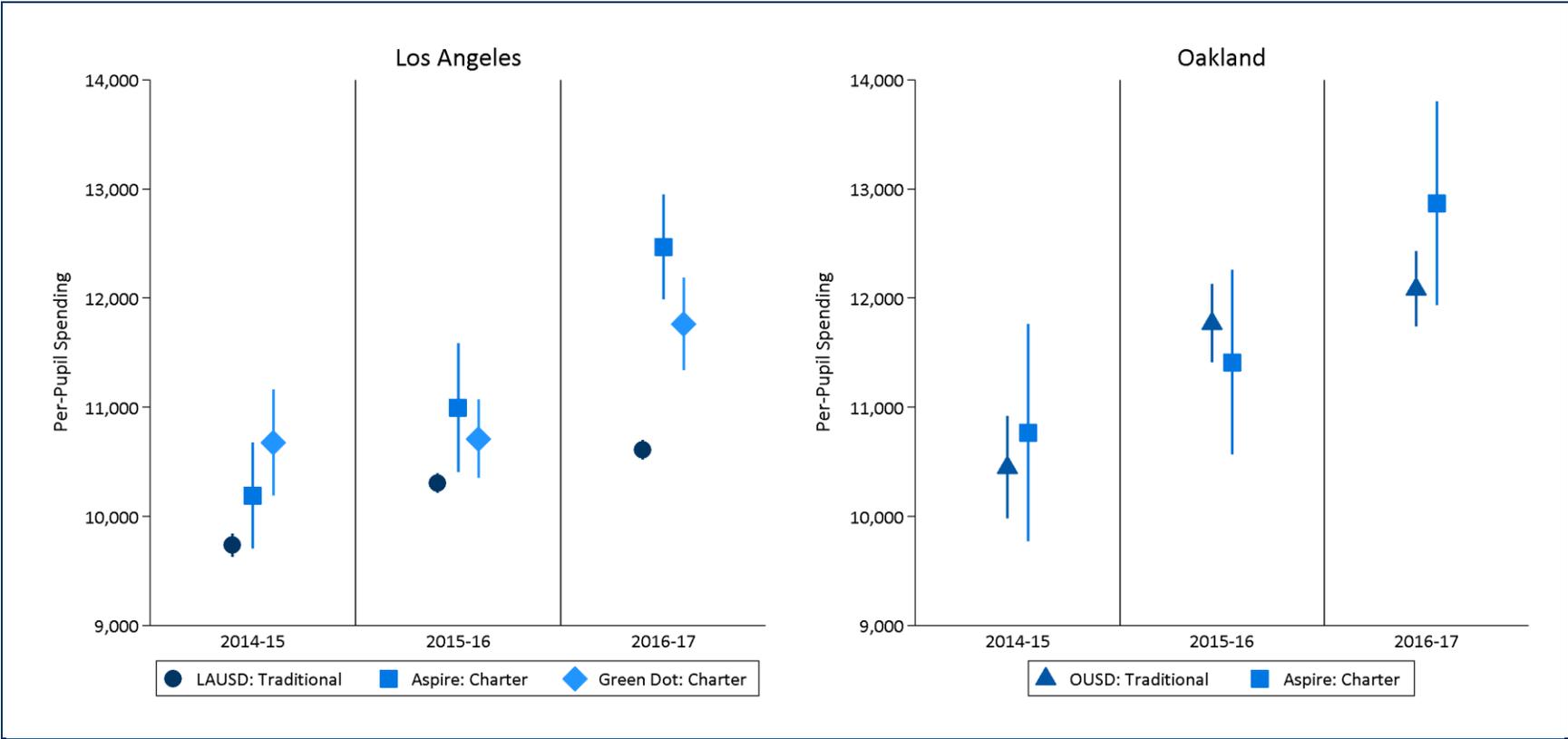
predicted in 2016–17. However, none of the actual/predicted differences for Aspire schools in Oakland proved to be statistically significant. Note that using alternative models which include free or reduced-price lunch eligibility instead of direct certification and homelessness, the results for comparisons within Los Angeles do not change substantially (see Exhibit C5 in Appendix C). For Aspire schools in Oakland, the alternative model indicates that average predicted spending was significantly higher than what was actually spent in 2015–16 and also higher in 2016–17, but the difference was not statistically significant in this latter year.

**Exhibit 21. Conditional Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



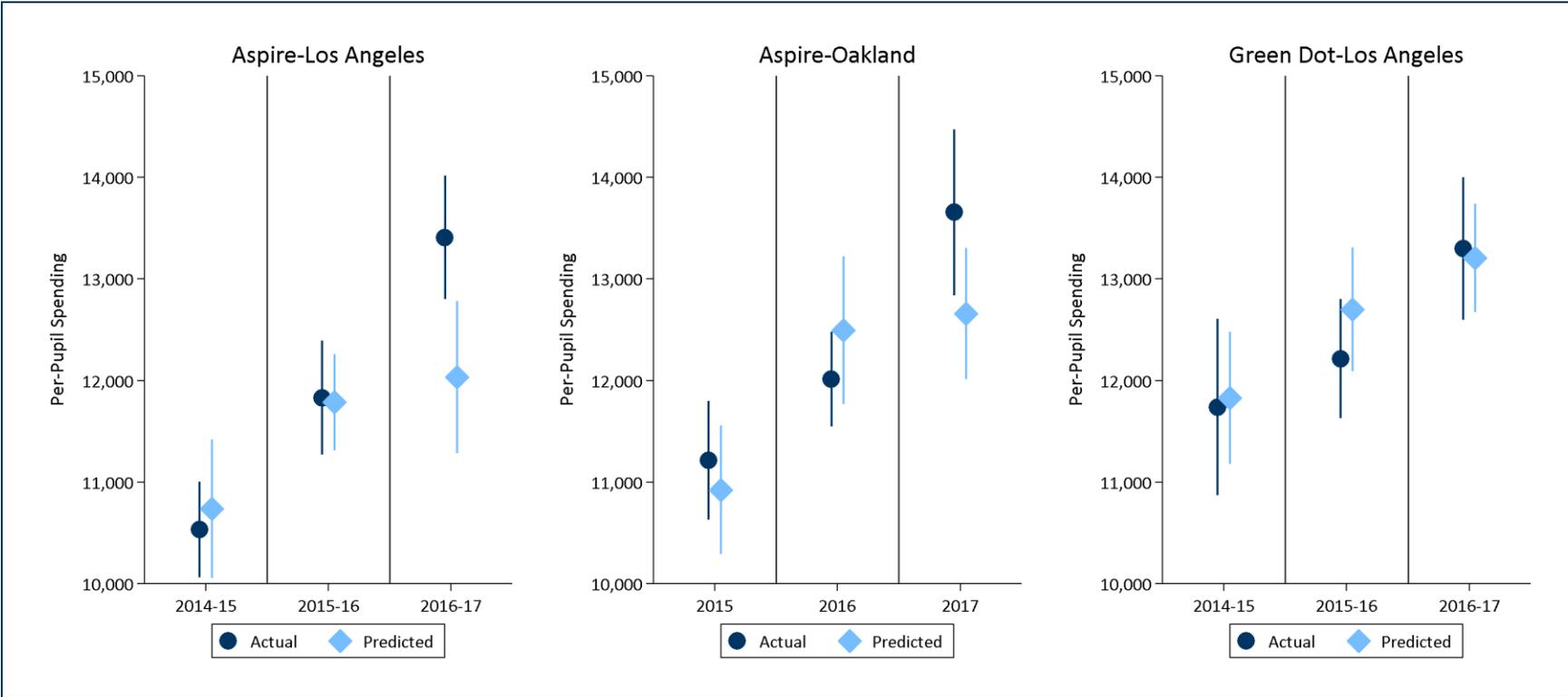
*Note.* Vertical lines represent 95% confidence intervals around the mean. Estimates are based on regressions controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 22. Conditional Average Spending Excluding Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



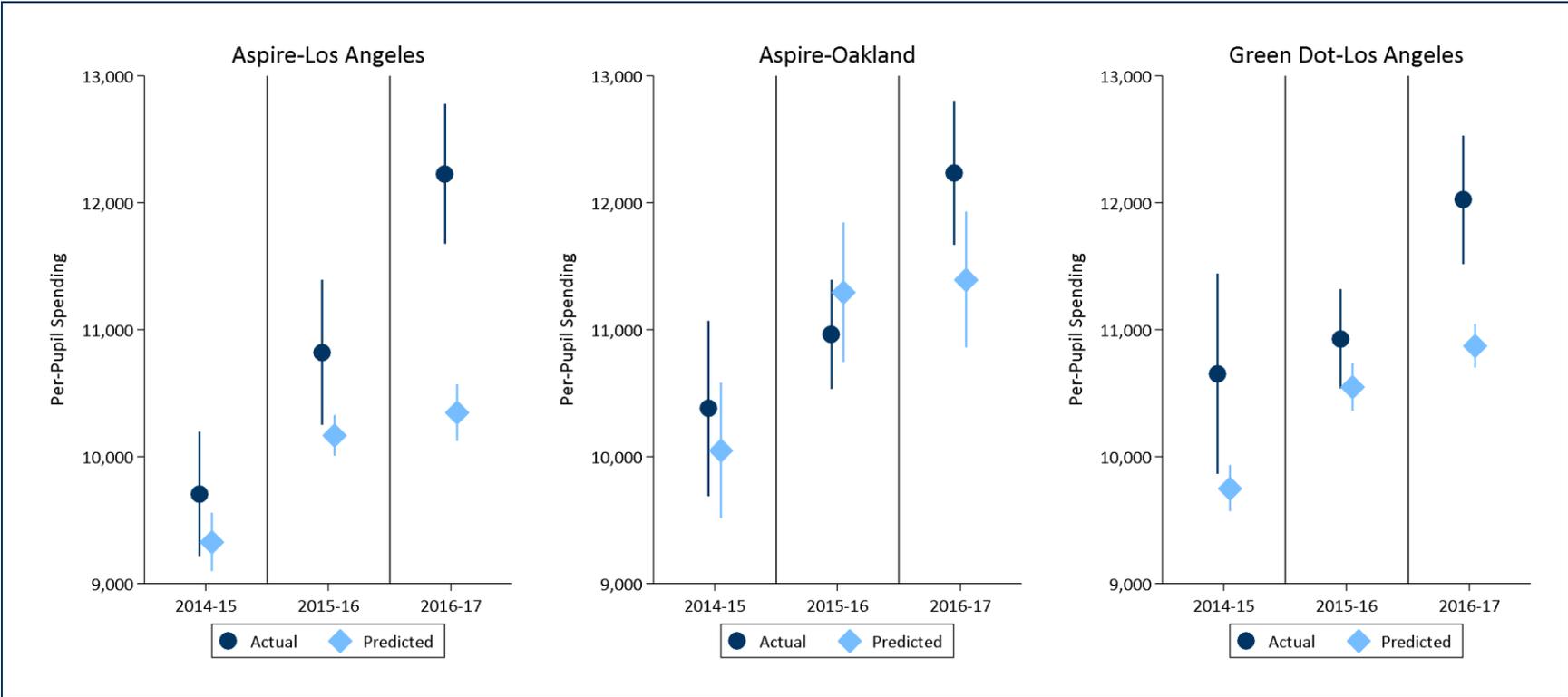
*Note.* Vertical lines represent 95% confidence intervals around the mean. Estimates are based on regressions controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 23. Predicted as-if-Traditional and Actual Average Spending Including Special Education for Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Predicted values are based on regressions including only traditional schools and controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit 24. Conditional Average Spending Excluding Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Predicted values are based on regressions including only traditional schools and controlling for the proportions of students identified as directly certified, homeless, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

## Conclusion

The goal of this study was to make accurate and appropriate comparisons of the spending per pupil in traditional and charter schools to determine whether charter schools are spending comparable amounts per pupil to traditional public schools. Because of uncertainty regarding the appropriateness of comparisons made using SACS data collected by the state, we turned to data collected directly from two districts and two CMOs. However, even with these data, certain challenges remained in making appropriate comparisons. Specifically, we were not confident that fiscal recordkeeping regarding special education spending accurately reflected the special education program expenses in both traditional and charter schools. As such, we presented analyses that both included and excluded spending earmarked for special education. In addition, we did not attempt to adjust for differences in the multiple ways that traditional schools and charter schools pay for facilities. Charter schools often must use operational revenue to cover the costs of facilities, whereas traditional schools already own the bulk of their facilities. Facilities spending for Aspire's schools amounted to an average of \$750 (6%) in Los Angeles and \$1,095 (9%) in Oakland. Green Dot spent an average of \$1,367 (11%) on facilities.

We used two methods to make comparisons between traditional and charter schools within the two districts and two CMOs included in the study. We first conducted an unconditional comparative analysis, examining straight averages of spending for traditional schools and charter schools within each CMO. These unconditional comparisons suggested that traditional schools spend moderately more than charter schools when including special education spending. The exclusion of special education diminished the average differences between traditional schools in OUSD and Aspire schools in Oakland and resulted in higher average spending calculations for Green Dot and Aspire schools in Los Angeles than LAUSD traditional schools. Assuming the underlying data accurately identifies spending used for special education, this means that either traditional schools spend much more than charter schools on special education, charter schools receive special education services for which spending is not reflected in the charter school fiscal data, or some combination of the two.

The second method for comparing traditional and charter spending was through conditional comparisons, where we accounted for differences in student needs and grade configurations. The analysis of demographics indicated that Aspire and Green Dot both served high proportions of students from low-income families, particularly as measured by free or reduced-price lunch eligibility. Aspire schools in Oakland, however, had lower reported percentages of students who were directly certified and homeless compared with OUSD traditional schools, indicating that

although Oakland Aspire schools served high percentages of students in poverty, OUSD traditional school students were more likely to be living in more severe poverty situations. In addition, Aspire schools served lower proportions of students with disabilities, whereas Green Dot schools had similar proportions of students with disabilities compared with LAUSD traditional schools.

When performing conditional analysis of spending inclusive of special education expenditures that statistically controls for demographic differences and differences in the grade configurations of schools, we found that charter school spending for the two selected CMOs was largely on par with traditional school spending. In 2016–17, spending for Aspire schools in both Los Angeles and Oakland was higher than otherwise similar traditional schools in those districts. Green Dot spending was indistinguishable from otherwise similar traditional school spending in each year. When special education spending was excluded, Aspire and Green Dot schools in Los Angeles spent more than otherwise similar traditional schools in Los Angeles.

Overall, the results indicate that spending on charter schools for the selected CMOs appears to be comparable to spending for traditional schools. Despite not finding substantial differences in spending, this study does highlight several issues. The first issue made apparent by this study is the lack of comparability between traditional district fiscal data and charter school fiscal data collected in the state’s annual financial data collection (or SACS). For the schools that we were able to compare SACS and CMO-provided charter school spending per pupil, we showed that in 2017–18, the SACS data underestimated charter spending by almost \$1,900. The issue appears to stem from excluding centralized CMO regional- or national-level spending in these data, whereas district expenditures include both school- and district-level spending. In addition, it is unclear from SACS whether and to what extent private funding sources are included. It seems likely that a substantial portion of private funding on both the traditional and charter sides may not be included in SACS. As the state works to comply with new federal requirements to report school-level spending for all schools in the state, it should think about how to appropriately account for spending on services provided by CMOs to charter schools and how to account for private funding for both traditional and charter schools.

Second, the system of special education funding is not transparent, and the myriad of special education funding arrangements that charter schools can make with SELPAs (local or otherwise) makes it incredibly difficult to accurately identify school-level spending for special education services. The requirement that all districts belong to a SELPA and the perception among charter schools that the services provided by the SELPA might not adequately serve their needs have driven many charter schools to make arrangements with SELPAs outside the SELPA of their

authorizing district, such as the El Dorado County SELPA. In these cases, the El Dorado County SELPA provides charter schools with dollars so that these schools can provide their own special education services rather than receive services through the SELPA of their authorizing district. In return, the El Dorado County SELPA retains a fee. This arrangement seems unnecessarily complex, and the charging of a fee for little or no service provision results in inefficiency.<sup>15</sup> Furthermore, the lack of information about the various arrangements of dollars and services that flow through SELPAs to districts, CMOs, and schools makes the tracking of special education dollars extremely difficult. Each SELPA can have a different system for providing dollars and services to traditional and charter schools, and the state seems to have little information about what happens to dollars after they went to the SELPA. At a more fundamental level, no statewide database currently exists that identifies to which SELPAs charter schools belong.

In short, although we found little evidence that spending levels in charter schools are substantially different than in traditional public schools, several improvements could be made to help facilitate accurate comparisons of spending between charter and traditional public schools. How special education funding is provided to both traditional and charter schools could be greatly simplified, which would enable more accurate tracking and reporting of such funding. Including spending from all funding sources for both charter and traditional schools (CMO-level charter spending and spending from private sources for both traditional and charter schools) in state data collections would help make comparisons of spending between charter and traditional schools easier, more comprehensive, and more accurate.

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<sup>15</sup> The Public Policy Institute of California has recommended funding districts directly for special education as part of a district's LCFF allocation (Hill et al., 2016). In their brief for *Getting Down to Facts*, Warren and Hill (2018) acknowledge that this recommendation has received much pushback. Currently, funding for special education in California in a transparent and equitable manner remains unresolved.

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## Appendix A. Additional Average Spending Tables

**Exhibit A1. Average Spending for LAUSD Traditional Elementary Schools and Aspire Charter Elementary Schools in Los Angeles, by Spending Category (2014–15 Through 2016–17)**

	Includes special education				Excludes special education			
	LAUSD		Aspire		LAUSD		Aspire	
Instructional salaries	\$4,691	36%	\$3,982	34%	\$3,640	35%	\$3,598	34%
Administrative salaries	\$1,112	9%	\$1,586	14%	\$1,005	10%	\$1,526	14%
Pupil support salaries	\$1,081	8%	\$510	4%	\$895	9%	\$343	3%
Other salaries	\$490	4%	\$484	4%	\$421	4%	\$484	5%
Benefits	\$3,300	25%	\$1,815	16%	\$2,569	25%	\$1,663	16%
Contractual services	\$1,250	10%	\$975	8%	\$637	6%	\$808	8%
Books	\$92	1%	\$162	1%	\$92	1%	\$161	2%
Food	\$428	3%	\$594	5%	\$428	4%	\$594	6%
Other nonpersonnel	\$571	4%	\$961	8%	\$528	5%	\$940	9%
Facilities and capital	\$51	0%	\$524	5%	\$51	0%	\$524	5%
<b>Total</b>	<b>\$13,065</b>		<b>\$11,593</b>		<b>\$10,266</b>		<b>\$10,641</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit A2. Average Spending for OUSD Traditional Elementary Schools and Aspire Charter Elementary Schools in Oakland, by Spending Category (2014–15 Through 2016–17)**

	Includes special education				Excludes special education			
	OUSD		Aspire		OUSD		Aspire	
Instructional salaries	\$4,444	33%	\$4,331	36%	\$3,457	31%	\$3,766	35%
Administrative salaries	\$1,699	13%	\$1,687	14%	\$1,634	14%	\$1,628	15%
Pupil support salaries	\$1,150	9%	\$666	6%	\$948	8%	\$471	4%
Other salaries	\$88	1%	\$347	3%	\$84	1%	\$347	3%
Benefits	\$3,317	25%	\$2,002	17%	\$2,674	24%	\$1,776	16%
Contractual services	\$1,566	12%	\$968	8%	\$1,485	13%	\$825	8%
Books	\$104	1%	\$103	1%	\$104	1%	\$103	1%
Food	\$255	2%	\$442	4%	\$255	2%	\$442	4%
Other nonpersonnel	\$543	4%	\$764	6%	\$532	5%	\$746	7%
Facilities and capital	\$104	1%	\$677	6%	\$104	1%	\$677	6%
<b>Total</b>	<b>\$13,269</b>		<b>\$11,988</b>		<b>\$11,277</b>		<b>\$10,782</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit A3. Average Spending for LAUSD Traditional Middle and High Schools and Aspire and Green Dot Middle and High Charter Schools in Los Angeles, by Spending Category (2014–15 Through 2016–17)**

	Includes special education						Excludes special education					
	LAUSD		Aspire		Green Dot		LAUSD		Aspire		Green Dot	
Instructional salaries	\$4,165	33%	\$4,037	32%	\$3,231	26%	\$3,100	31%	\$3,494	30%	\$2,782	25%
Administrative salaries	\$1,131	9%	\$1,678	13%	\$1,790	14%	\$1,093	11%	\$1,618	14%	\$1,789	16%
Pupil support salaries	\$1,378	11%	\$575	5%	\$474	4%	\$1,253	12%	\$457	4%	\$473	4%
Other salaries	\$373	3%	\$422	3%	\$337	3%	\$335	3%	\$422	4%	\$221	2%
Benefits	\$3,247	26%	\$1,887	15%	\$1,684	14%	\$2,564	25%	\$1,700	15%	\$1,513	13%
Contractual services	\$1,335	11%	\$1,215	10%	\$2,719	22%	\$749	7%	\$1,042	9%	\$2,253	20%
Books	\$118	1%	\$90	1%	\$89	1%	\$118	1%	\$90	1%	\$88	1%
Food	\$238	2%	\$339	3%	\$4	0%	\$238	2%	\$339	3%	\$4	0%
Other nonpersonnel	\$641	5%	\$1,194	9%	\$743	6%	\$608	6%	\$1,169	10%	\$727	6%
Facilities and capital	\$86	1%	\$1,167	9%	\$1,367	11%	\$86	1%	\$1,166	10%	\$1,367	12%
<b>Total</b>	<b>\$12,711</b>		<b>\$12,605</b>		<b>\$12,437</b>		<b>\$10,144</b>		<b>\$11,496</b>		<b>\$11,218</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit A4. Average Spending for OUSD Traditional Elementary Schools and Aspire Charter Elementary Schools in Oakland, by Spending Category (2014–15 Through 2016–17)**

	Includes special education				Excludes special education			
	OUSD		Aspire		OUSD		Aspire	
Instructional salaries	\$4,437	32%	\$3,599	29%	\$3,344	28%	\$3,154	27%
Administrative salaries	\$1,968	14%	\$1,758	14%	\$1,899	16%	\$1,698	15%
Pupil support salaries	\$1,202	9%	\$744	6%	\$990	8%	\$626	5%
Other salaries	\$39	0%	\$341	3%	\$35	0%	\$341	3%
Benefits	\$3,397	24%	\$1,815	15%	\$2,699	23%	\$1,649	14%
Contractual services	\$1,773	13%	\$1,120	9%	\$1,687	14%	\$1,030	9%
Books	\$104	1%	\$83	1%	\$104	1%	\$83	1%
Food	\$236	2%	\$294	2%	\$236	2%	\$294	3%
Other nonpersonnel	\$629	5%	\$892	7%	\$618	5%	\$875	8%
Facilities and capital	\$139	1%	\$1,759	14%	\$139	1%	\$1,759	15%
<b>Total</b>	<b>\$13,923</b>		<b>\$12,405</b>		<b>\$11,751</b>		<b>\$11,509</b>	

Note. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

## Appendix B. Regression Tables

### Exhibit B1. Conditional Spending Regression Results

	Los Angeles spending	Oakland spending	Los Angeles spending (special education excluded)	Oakland spending (special education excluded)
Year: 2016	706.4*** (84.28)	1,407.2*** (266.4)	570.4*** (76.60)	1,322.2*** (264.4)
Year: 2017	1,087.3*** (86.35)	1,764.4*** (348.7)	873.1*** (76.80)	1,636.3*** (342.8)
Aspire	-152.0 (380.6)	285.1 (515.0)	455.9 (252.0)	317.4 (489.1)
Green Dot	-53.79 (240.6)		940.1*** (256.6)	
Year: 2016 X Aspire	214.2 (516.8)	-795.5 (727.3)	233.3 (389.3)	-675.6 (638.9)
Year: 2016 X Green Dot	-407.8 (297.1)		-534.1 (307.5)	
Year: 2017 X Aspire	1,495.3** (470.8)	658.6 (781.5)	1,405.0*** (356.2)	467.9 (735.3)
Year: 2017 X Green Dot	150.3 (295.7)		214.1 (328.2)	
Direct certification proportion	2,367.1*** (383.6)	4,450.2** (1547.9)	2,603.3*** (345.2)	4,769.3** (1,561.1)
Homeless proportion	1,484.9 (1,315.6)	24,438.2** (8,731.8)	400.6 (1,143.6)	22,291.6* (8,868.2)
English learner proportion	-140.1 (278.6)	-1,886.9 (1,349.7)	130.5 (247.1)	-1,970.2 (1,356.5)
Middle school proportion	-427.6*** (97.39)	-87.96 (400.1)	-276.0** (86.89)	-30.97 (396.9)
High school proportion	-20.17 (100.9)	436.0 (346.6)	132.3 (93.30)	472.3 (340.3)
Students with high- incidence disabilities	25,415.1*** (1,140.9)	24,270.7*** (5,247.7)	11,040.3*** (1012.7)	11,745.8* (5,308.0)
Students with low- incidence disabilities	48,839.0*** (1,460.3)	2,845.4 (6,545.5)	7,536.6*** (1154.7)	-15,632.7* (6,472.4)
Constant	7,660.1*** (122.9)	8,351.6*** (294.5)	7,695.5*** (110.0)	8,434.6*** (292.6)
<i>N</i>	1,999	250	1,999	250
<i>R</i> <sup>2</sup>	0.633	0.458	0.320	0.348

Note. Standard errors in parentheses. Includes traditional schools and Aspire and Green Dot charter schools.

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

**Exhibit B2. As-if-Traditional Spending Regression Results**

	Los Angeles spending	Oakland spending	Los Angeles spending (special education excluded)	Oakland spending (special education excluded)
Year: 2016	698.2*** (84.57)	1,389.8*** (268.9)	562.2*** (76.81)	1,300.8*** (266.5)
Year: 2017	1,061.0*** (86.79)	1,732.3*** (358.1)	844.2*** (77.15)	1,591.1*** (352.7)
Direct certification proportion	2,362.6*** (390.0)	4,564.9** (1,677.9)	2,597.2*** (350.8)	5,025.7** (1,694.9)
Homeless proportion	2,626.4 (1,394.8)	25,915.4** (9,323.0)	1,765.3 (1,221.8)	23,467.8* (9,398.3)
English learner proportion	-148.4 (281.5)	-2,199.2 (1,458.5)	119.8 (249.7)	-2,310.2 (1,467.8)
Middle school proportion	-435.2*** (98.64)	-118.5 (422.8)	-290.3*** (88.08)	-106.6 (419.2)
High school proportion	-5.350 (102.4)	411.0 (371.1)	139.3 (94.57)	400.4 (364.4)
Students with high- incidence disabilities	25,398.7*** (1,156.9)	24,940.0*** (5,309.0)	10,741.4*** (1,021.8)	12,047.3* (5,371.4)
Students with low- incidence disabilities	49,118.4*** (1480.5)	1,922.6 (6,776.5)	7,401.2*** (1,167.7)	-16,502.4* (6,705.3)
Constant	7,644.7*** (124.6)	8,383.2*** (296.8)	7,722.4*** (111.2)	8,496.5*** (295.4)
<i>N</i>	1,911	230	1,911	230
<i>R</i> <sup>2</sup>	0.634	0.456	0.306	0.352

Note. Standard errors in parentheses. Includes only traditional schools.

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

## Appendix C. Alternative Conditional Comparison Results

This appendix contains conditional results based on alternative regression model specifications that use free or reduced-price lunch eligibility as the poverty indicator instead of direct certification and homeless proportions.

### Exhibit C1. Conditional Spending Regression Results Using the Alternative Specification

	Los Angeles spending	Oakland spending	Los Angeles spending (special education excluded)	Oakland spending (special education excluded)
Year: 2016	920.8*** (71.89)	1,767.2*** (275.8)	798.9*** (65.28)	1,683.3*** (272.4)
Year: 2017	1,312.2*** (73.00)	2,636.0*** (292.9)	1,094.1*** (64.56)	2,527.4*** (283.1)
Aspire	-173.4 (349.8)	-53.76 (535.2)	374.3 (247.0)	-137.8 (502.6)
Green Dot	-29.51 (235.7)		940.0*** (258.8)	
Year: 2016 X Aspire	268.2 (484.8)	-1,491.5* (710.4)	328.6 (380.4)	-1,287.1* (633.0)
Year: 2016 X Green Dot	-400.4 (290.9)		-516.9 (311.0)	
Year: 2017 X Aspire	1,431.1*** (434.2)	-730.2 (726.3)	1,420.9*** (342.6)	-849.4 (659.7)
Year: 2017 X Green Dot	141.7 (295.5)		232.6 (337.6)	
Free or reduced-price lunch proportion	1,139.3*** (245.0)	3,636.1** (1,183.9)	1,208.4*** (228.7)	3,876.7** (1,175.0)
English learner proportion	207.0 (275.5)	-2,854.8 (1,725.5)	512.8* (244.3)	-3,082.8 (1,717.3)
Middle school proportion	-431.1*** (106.1)	-431.0 (529.1)	-275.4** (95.29)	-427.2 (523.6)
High school proportion	-82.93 (108.4)	215.2 (469.7)	66.31 (99.83)	181.4 (453.6)
Students with high-incidence disabilities	25,760.5*** (1,159.1)	23,509.6*** (5,355.8)	11,336.7*** (1,033.3)	10,810.4* (5,405.8)

	Los Angeles spending	Oakland spending	Los Angeles spending (special education excluded)	Oakland spending (special education excluded)
Students with low-incidence disabilities	48,092.6*** (1,442.3)	4,014.8 (6,488.4)	6,753.5*** (1,172.5)	-14,758.3* (6,413.4)
Constant	7,222.9*** (160.3)	7,655.8*** (401.5)	7,245.0*** (149.2)	7,730.9*** (400.0)
<i>N</i>	1,999	250	1,999	250
<i>R</i> <sup>2</sup>	0.629	0.402	0.308	0.287

Note. Standard errors in parentheses. Includes traditional schools and Aspire and Green Dot charter schools.

\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

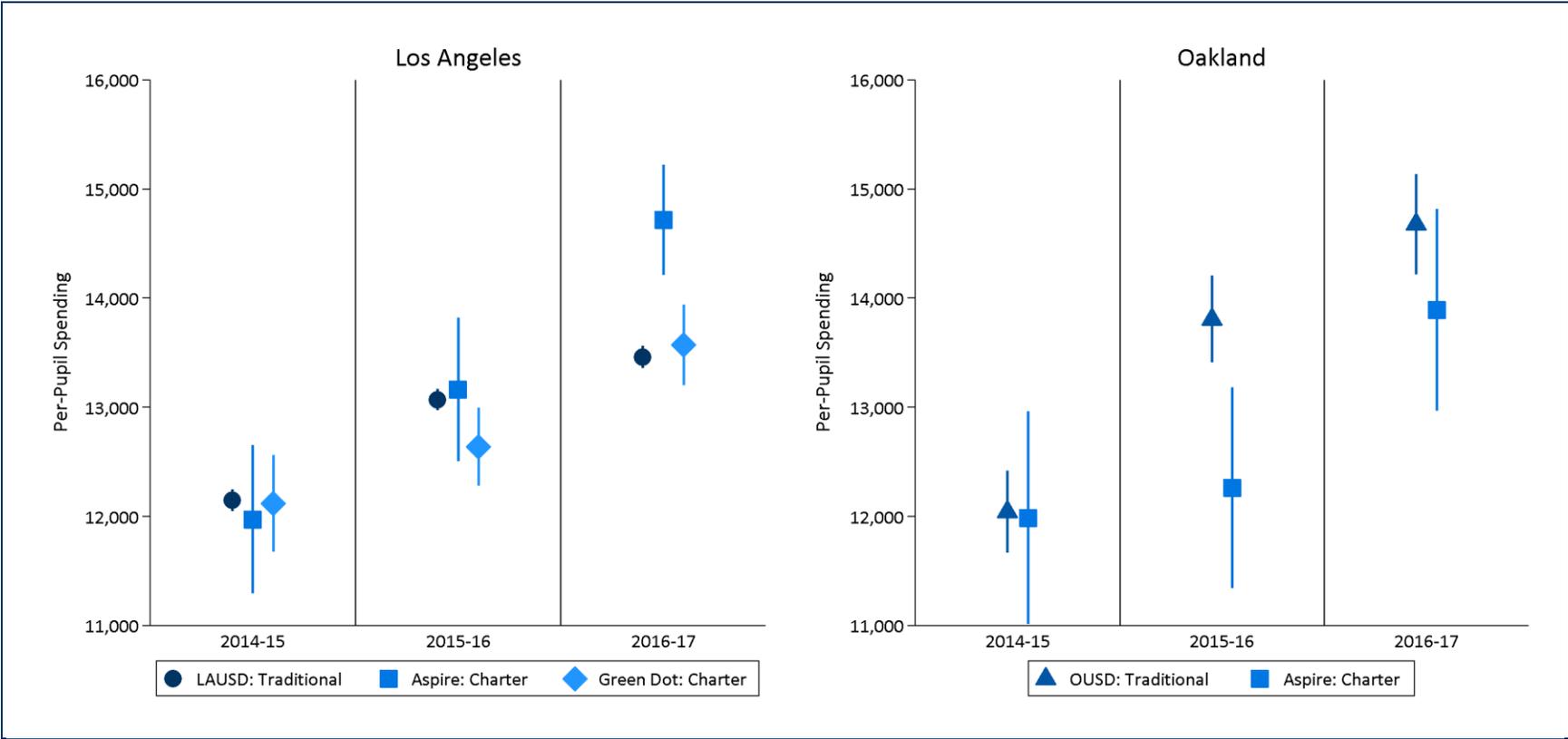
### Exhibit C2. As-if-Traditional Spending Regression Results Using the Alternative Specification

	Los Angeles spending	Oakland spending	Los Angeles spending (special education excluded)	Oakland spending (special education excluded)
Year: 2016	920.0*** (71.82)	1,763.5*** (276.8)	799.0*** (65.20)	1,680.2*** (272.3)
Year: 2017	1,311.2*** (72.91)	2,635.8*** (293.6)	1,094.6*** (64.49)	2,529.6*** (283.6)
Free or reduced-price lunch proportion	1,143.9*** (246.6)	3,818.2** (1,266.2)	1,236.2*** (229.7)	4,134.4** (1,258.7)
English learner proportion	213.9 (278.4)	-3,259.9 (1,867.1)	503.7* (246.7)	-3,531.6 (1,861.8)
Middle school proportion	-443.1*** (108.1)	-458.0 (558.3)	-298.1** (97.19)	-513.8 (552.4)
High school proportion	-65.65 (109.7)	204.1 (503.4)	72.15 (100.9)	106.3 (487.4)
Students with high-incidence disabilities	25,835.7*** (1,177.2)	24,302.3*** (5,453.5)	11,135.3*** (1,044.9)	11,199.4* (5,505.6)
Students with low-incidence disabilities	48,295.5*** (1,462.5)	2,937.1 (6,772.6)	6,525.8*** (1,178.2)	-15,770.5* (6,704.4)
Constant	7,201.8*** (160.6)	7,622.1*** (402.7)	7,254.8*** (149.1)	7,723.2*** (400.8)
<i>N</i>	1,911	230	1,911	230
<i>R</i> <sup>2</sup>	0.629	0.397	0.293	0.288

Note. Standard errors in parentheses. Includes only traditional schools.

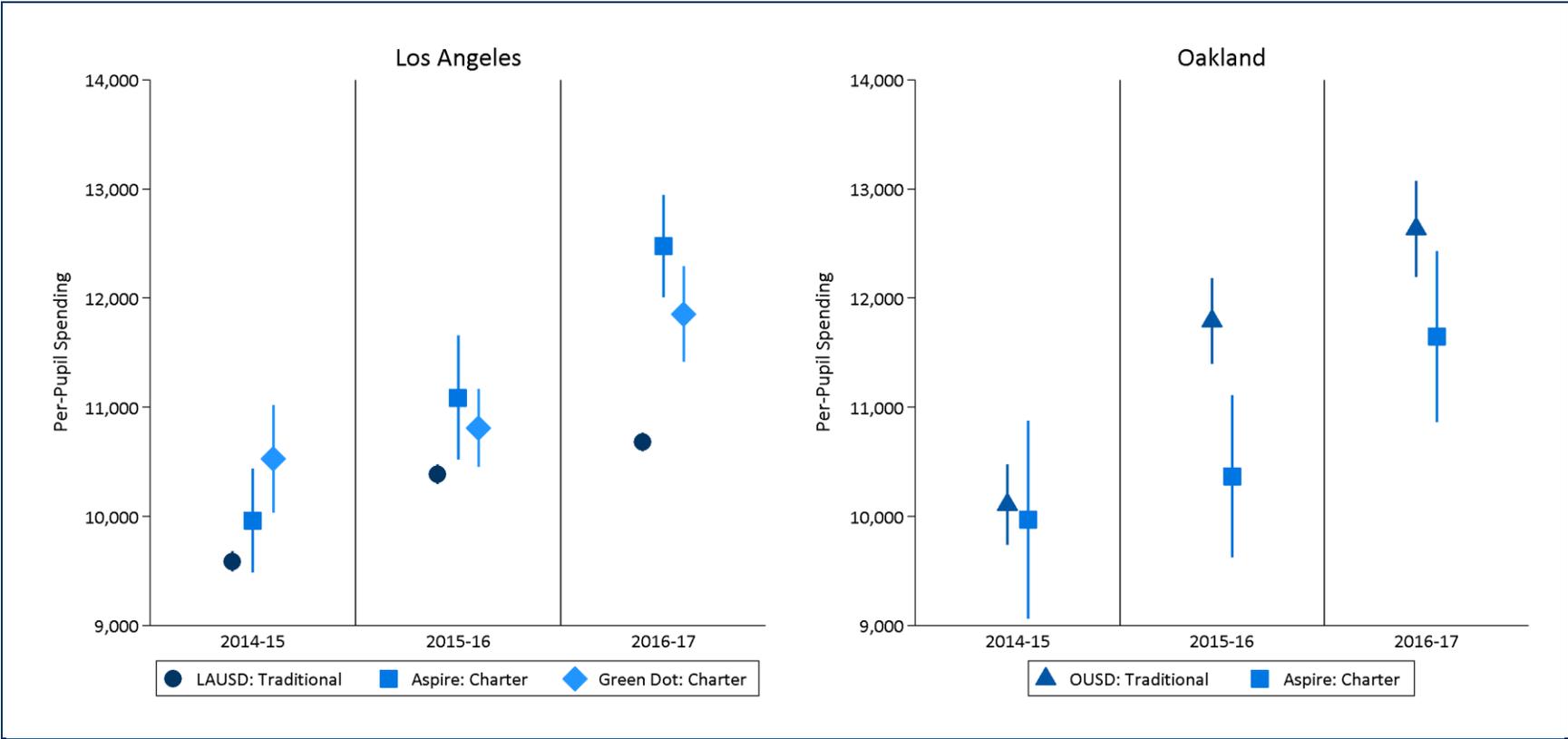
\* $p < 0.05$ . \*\* $p < 0.01$ . \*\*\* $p < 0.001$ .

**Exhibit C3. Conditional Average Spending Including Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



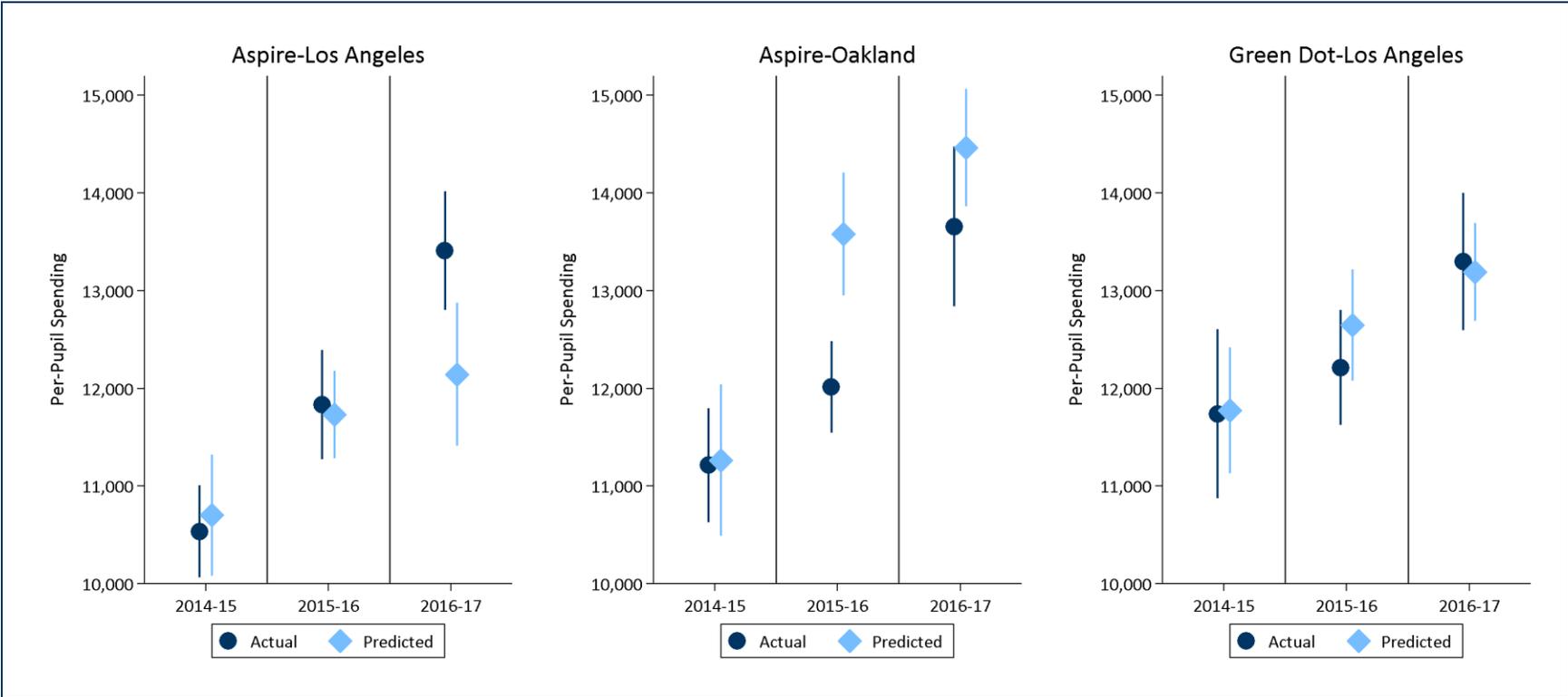
*Note.* Vertical lines represent 95% confidence intervals around the estimate. Estimates are based on regressions controlling for the proportions of students identified as eligible for free or reduced-price lunch, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit C4. Conditional Average Spending Excluding Special Education for LAUSD and OUSD Traditional Schools and Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



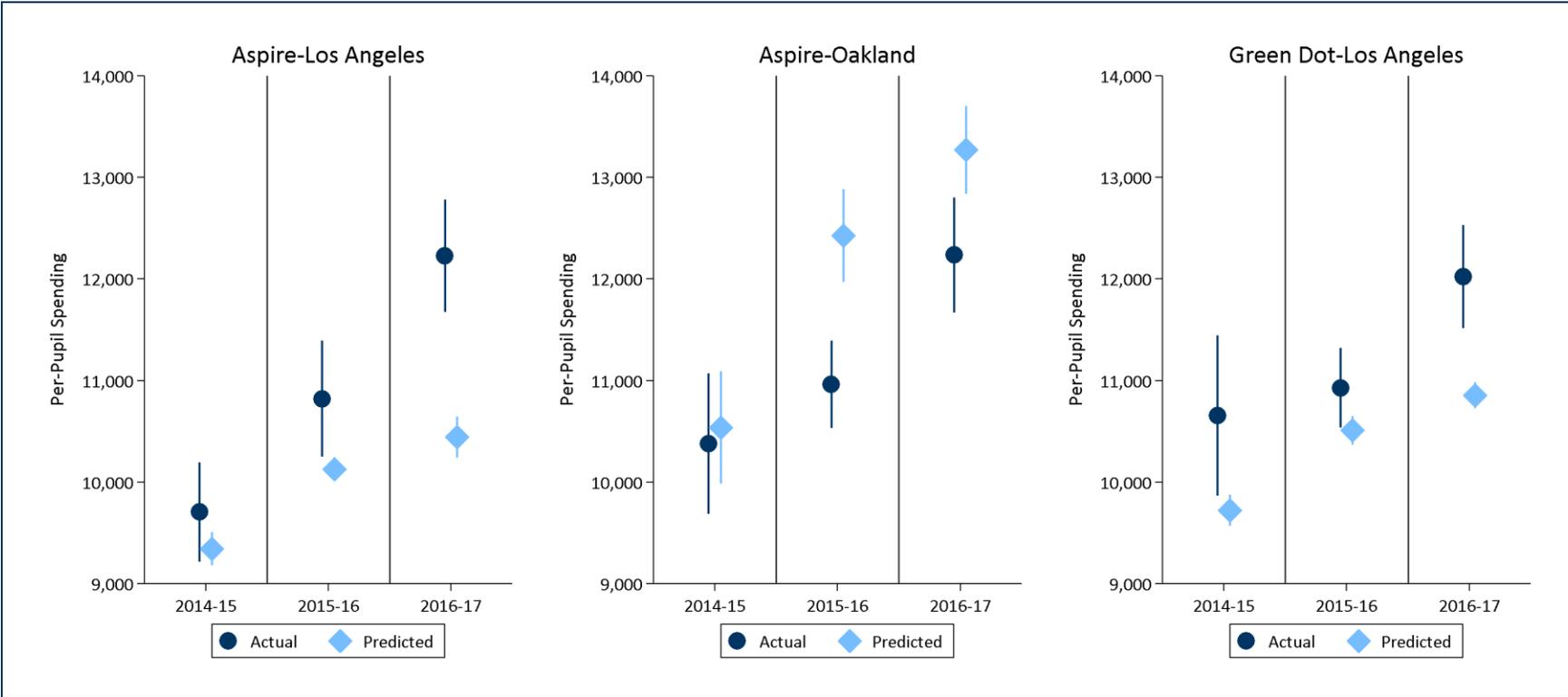
*Note.* Vertical lines represent 95% confidence intervals around the estimate. Estimates are based on regressions controlling for the proportions of students identified as eligible for free or reduced-price lunch, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit C5. Predicted as-if-Traditional and Actual Average Spending Including Special Education for Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Predicted values are based on regressions including only traditional schools and controlling for the proportions of students identified as eligible for free or reduced-price lunch, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.

**Exhibit C6. Predicted as-if-Traditional and Actual Average Spending Including Special Education for Aspire and Green Dot Charter Schools in Los Angeles and Oakland, by Year (2014–15 Through 2016–17)**



*Note.* Vertical lines represent 95% confidence intervals around the mean. Predicted values are based on regressions including only traditional schools and controlling for the proportions of students identified as eligible for free or reduced-price lunch, English learners, having high-incidence disabilities, or having low-incidence disabilities, as well as the proportion of students in Grades 6–8 and 9–12. Source: Fiscal data collected directly from LAUSD, OUSD, Aspire, and Green Dot.





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