AMERICAN INSTITUTES FOR RESEARCH®

Study of Funding Provided to Public Schools and Public Charter Schools in Maryland

Jesse Levin, Bruce Baker, Drew Atchison, Iliana Brodziak, Andrea Boyle, Adam Hall, and Jason Becker

DECEMBER 2016

Study of Funding Provided to Public Schools and Public Charter Schools in Maryland

December 2016

Jesse Levin, Bruce Baker, Drew Atchison, Iliana Brodziak, Andrea Boyle, Adam Hall, and Jason Becker

1000 Thomas Jefferson Street NW
Washington, DC 20007-3835
202.403.5000

www.air.org

7898_10/16

Contents

Exhibits

Page

Executive Summary

Charter schools have emerged in school districts across the country as an alternative choice to traditional public schools, and are operated independently from the local school districts in which they are located. Parents choose whether to send their child to a charter school, often in pursuit of a specific educational objective.

Maryland's charter school law was established in 2003 with the Maryland Public Charter School Program (Education Article §§ 9-101 et seq.). In 2015, the Maryland General Assembly amended the Maryland Public Charter School Program with Chapter 311, Acts of 2015 (Act). The Act, in addition to updating charter school policies, required a study of school funding for charter and traditional public schools.

Maryland's charter school law defines a charter school as a non-sectarian, tuition free, elementary or secondary school of choice. Charter schools in Maryland are authorized by county school boards and managed by non-profit operators with their own governing boards. The operator is responsible for meeting the goals of the school's charter and working in a manner consistent with the laws and regulations governing other public schools in the state. Further, the law specifies that the funding provided to public charter schools be commensurate with that of traditional public schools, defined for the purposes of this study as district-operated schools that are not charter schools or standalone special education schools.

In 2005, the State Board of Education issued a declaratory ruling that established a statewide funding model for determining charter schools' per-pupil funding allocation. The funding model calls for local school systems to first calculate the districtwide average per-pupil funding overall by dividing their annual operating budget by total student enrollment.[1] It permits local school systems to then adjust their average per-pupil funding amount downward by 2 percent to cover the costs of central office administrative responsibilities conducted on behalf of charter schools. Finally, local school systems multiply their total adjusted per-pupil amount by a charter school's total enrollment to determine the overall funding for that particular school. Charter schools must reimburse their local school system for personnel costs associated with the public school system employees working in the school as well as a proportionate amount of the cost of any other services or supplies requested from the district (*City Neighbors Charter School v. Baltimore Board of School Commissioners*, Revised MSBOE Op. No.05-17). Maryland charter school law makes no provision for funding charter school facilities. However, it does stipulate that school buildings not in use by the district must be made available to charter schools for occupation, according to terms set by the county board.

In 2013, the Maryland General Assembly commissioned a study to investigate several issues related to charter schools, including how the per-pupil allocation provided to public charter schools compared with that provided to traditional public schools. The study found variation in how local school systems were implementing the state's guidance on charter school funding and

[1] As shown in Chapter 5, some districts exclude from the operational budget used to calculate the per-pupil allocation specific funding sources used to provide services that are made available to the charter schools.

a lack of transparency among key stakeholders over how charter schools' per-pupil allocations were being determined (McGrath, Wyatt-Nichol, Borsher, Lovegrove, & Welsh, 2014).

Characteristics of Maryland Local School Systems

Maryland's public school system enrolled almost 855,000 students in its traditional and charter public schools during the 2014–15 school year, with 97.7% of students enrolled in traditional public schools and 2.3% enrolled in charter schools.

Maryland school districts are defined by county borders, with 23 county school districts and Baltimore City as its own district, for a total of 24 districts. The districts vary widely in terms of size, with Montgomery County enrolling almost 155,000 students and Kent County enrolling 2,048 during the 2014–15 school year. There is also substantial variation with respect to student demographic characteristics. For example, in the 2014–15 school year, the free and reduced price meals (FARMs) rate ranged from 87% in Baltimore City to 20% in Carroll County.

Over the three years that are the focus of this study (2012–13 to 2014–15), the overall number of charter schools in the state remained constant at 47, with charter school enrollment increasing from 16,409 students to 18,818. The number of school districts with charter schools decreased during that time from seven to five, as a result of the only charter school in both Baltimore County and Montgomery County closing. The five remaining districts with charter schools in 2014–15 were Anne Arundel, Baltimore City, Frederick, Prince George's, and St. Mary's.

Maryland's charter enrollment is predominantly found in Baltimore City, which contains almost twice as many students attending its charter schools as those enrolled in all of the other charter schools throughout the rest of the state. While statewide charter school enrollment only makes up 2.3% of the total enrollment statewide, charter schools in Baltimore City account for 16.4% of the enrollment in that district. In the other four districts with charter schools in 2014–15, charter enrollment makes up no more than 3.3% of the total district enrollment.

Study Purpose

Maryland's state education code requires that charter schools be funded commensurately with those traditional schools located in the same local school system. To this end, the purpose of this study is to investigate the amount of funding provided by Maryland local school systems to traditional public schools and their public charter school counterparts. At the heart of the investigation is the development of comprehensive and accurate measures of operational spending that include the following:

- Dollars spent on centralized services provided to traditional and charter schools by local school system central offices
- Direct spending by schools on their site-specific programs
- Spending supporting central office functions

Through gaining a better understanding of what is currently being spent on traditional schools, policy makers will be in a better position to develop appropriate policy regarding the commensurate funding of charter schools.

In addition, the investigation includes a review of Maryland charter school finances and resource allocation that sheds light on the arrangements made by charters to secure management services and facilities, the services provided by their local school systems, the revenue sources used to support charter schools, and various approaches that charters can use to finance their facilities. Finally, based upon the findings, we offer a series of recommendations.

Compilation of Statewide School Site Spending Database

To better understand spending levels for both traditional and charter schools, we built a statewide database distinguishing traditional school site expenditures from those of charter schools. Note that the groups of traditional and charter schools used in the key study analyses do not include alternative, vocational or standalone special education schools. These school types were excluded from analyses on the conceptual basis that allocation of resources, funding levels, and expenditure patterns for these school designations are likely to differ from traditional schools. Additionally, because no charter schools were identified in these school type designations (see Appendix E), for comparison purposes we did not want to include these schools in the set of traditional schools used for the study analyses.

To construct the database, we used fiscal data from multiple sources, including a statewide staffing file of public school employees maintained by the Maryland State Department of Education (MSDE), final end-of-year school-level fiscal data collected directly from each of the 24 local school systems (District End-of-Year Fiscal Data), and the district-level fiscal data reported to MSDE by all local school systems that make up the Statewide Annual Financial Report (AFR). In addition, we made use of school-level enrollments obtained from MSDE to develop per-pupil spending and revenue, which were calculated using end-of-year (June) enrollment counts of students in Grades Pre-K through 12. Our decision to use June rather than September enrollments was based on the assumption that end-of-year enrollments more accurately reflect the body of students served by the school over the year (i.e., we assumed that most students moving out of a school tend to do so earlier in the school year).[2]

The resulting spending data for each charter and traditional school in the state were then compiled into a database (the School Site Spending Database) and used to produce straight (unconditional) averages of actual school-level spending per pupil—both for the state as a whole and within each district—as well as more detailed (conditional) estimates of school-level spending per pupil that account for variations in school characteristics, including student needs and grade ranges served. Our estimate of actual school-level spending in this study is the sum of spending directly attributed to individual schools and central spending that we allocated to schools based on methods described in Chapter 2 of this report.

[2] When conducting simple analyses comparing September and June enrollments, average differences between the two were negligible in traditional schools. In contrast, September enrollments in charter schools were 3.4% higher on average than June enrollments (see Appendix F). This indicates that the use of September enrollments instead of June enrollments would not appreciably change our estimates of average spending per pupil for traditional schools, but would be expected to produce slightly lower estimates of average charter school spending per pupil.

Analysis of Traditional and Charter School Expenses and Revenues

Average Actual Traditional Public School Expenses

The average actual per-pupil spending on traditional public schools across the three study years (2012–13, 2013–14, and 2014–15) is $11,706. Over this three-year period, the average actual per-pupil spending on schools increased with each successive year, from $11,531 in 2012–13 to $11,857 in 2014–15. Statewide average actual per-pupil spending on traditional schools by grade configuration across all three years is as follows:

- Elementary school – $11,542
- Middle school – $12,116
- High school – $11,589
- K–8 school – $11,694
- 6–12 school – $13,377

On average, actual per-pupil spending on traditional middle schools was higher than spending on traditional elementary or high schools. Traditional schools with K–8 grade configurations had slightly higher expenses than their elementary or high school counterparts but lower expenses than traditional middle schools. Finally, actual spending on traditional schools serving Grades 6–12 was higher on average than all other traditional school grade configurations.[3]

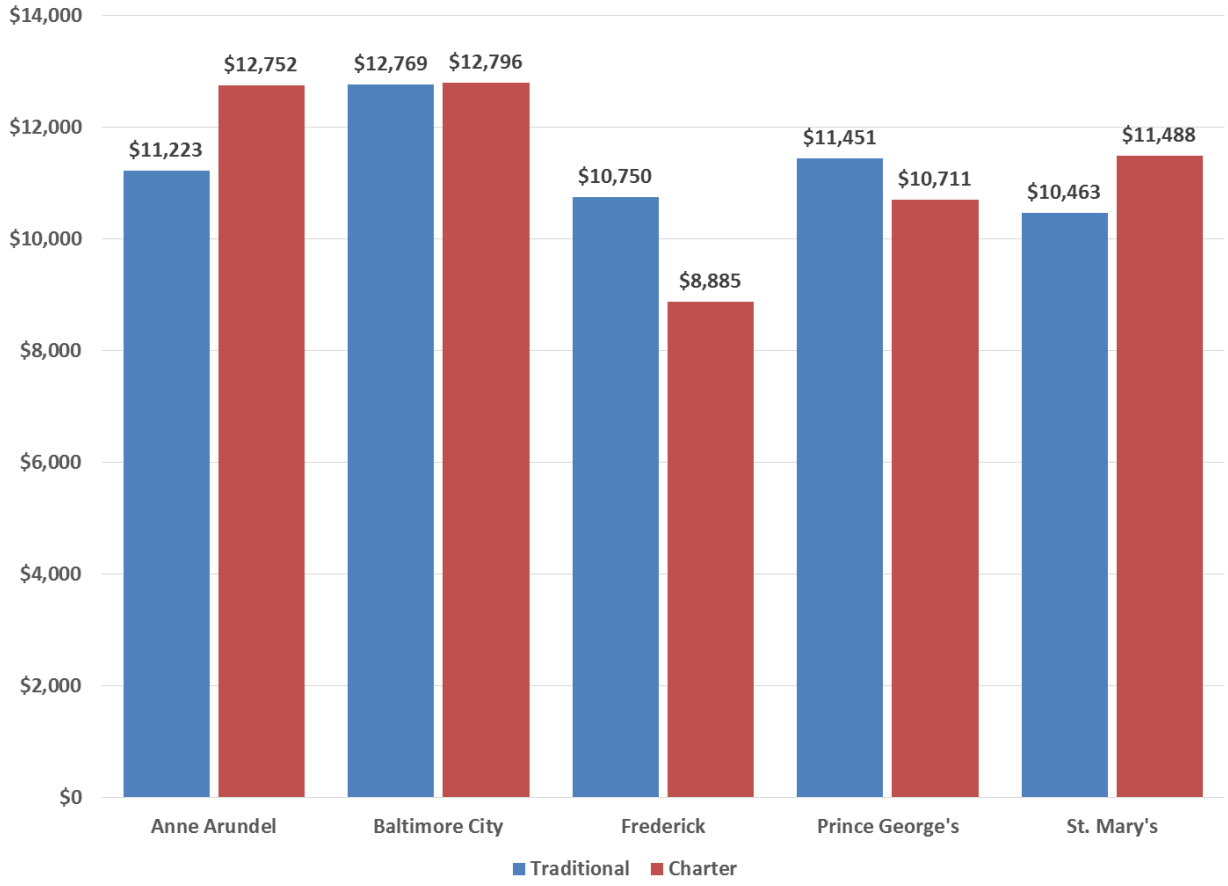
Across districts, the three-year average of actual spending per pupil on traditional schools ranged from a low of $10,386 in Queen Anne's County to a high of $13,718 in Worcester County. In addition, the five districts with active charter schools were dispersed throughout the statewide range of average actual per-pupil spending. Baltimore City ($12,769) was on the high end of the spending distribution, while St. Mary's ($10,463) and Frederick ($10,750) were on the low side. Anne Arundel ($11,223) and Prince George's ($11,451) were fairly close to the statewide average.

Average Actual Charter Public School Expenses

Across the five districts with active charter schools over the three study years, average actual charter school spending per pupil ranged from less than $9,000 per pupil in Frederick to more than $12,700 in both Anne Arundel and Baltimore City. As shown in Exhibit I, when comparing average actual charter to traditional public school spending per pupil within each of the five districts containing active charter schools, we see that (1) Prince George's and Frederick charter schools had lower expenses on average than their traditional counterparts, (2) Anne Arundel and St. Mary's charter schools had higher expenses on average than traditional schools, and (3) in Baltimore City, charter and traditional public schools' average actual expenses per pupil were approximately the same.

[3] However, it should be noted that the number of traditional schools serving Grades 6–12 are far fewer than for any other type of grade configuration and are largely concentrated in Baltimore City and Montgomery County.

Exhibit I. Average Actual Expense per Pupil for Traditional and Charter Schools by School District (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within the five districts. For school and enrollment counts for each school district, see Exhibit A7.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

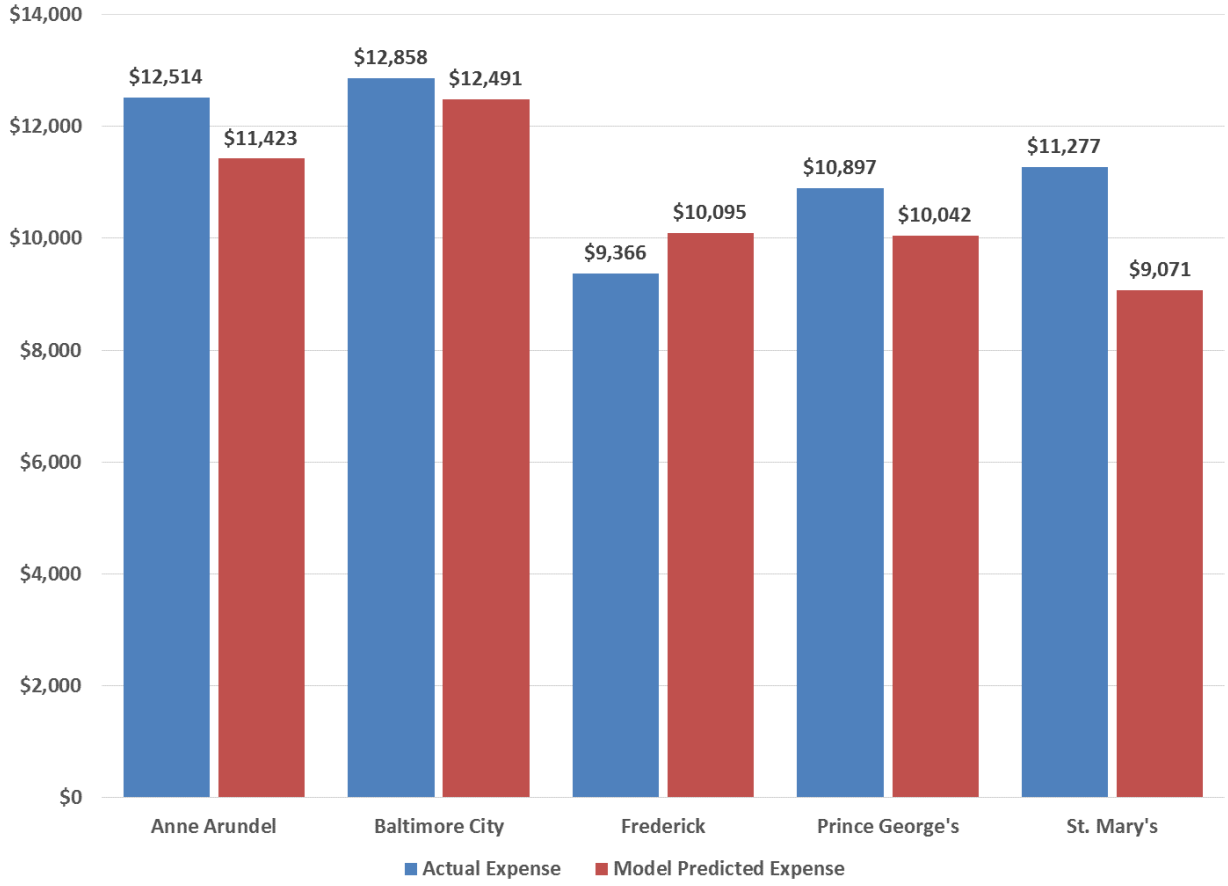
Predicted Charter School Spending for Comparative Purposes

To develop more precise comparisons between charter and traditional school spending, we used statistical analysis to examine patterns of expenditure across Maryland schools that describe how average spending varies across schools and districts with respect to student need characteristics and according to the grade ranges that are served. We then used those identified patterns to predict what spending on charter schools would be if they were treated like traditional schools within their district (i.e., experienced the same spending as a traditional school in the district with identical student demographics and grade configuration).

Exhibit II shows, for each district with active charter schools, the average actual charter school expense per pupil in 2014-15 compared to the corresponding average expense predicted by our statistical model. As shown, in all districts except Frederick, the predicted expense is less than the actual charter expense, indicating that average spending would be less for these charter schools if they followed the spending patterns of traditional schools in their district. In contrast,

the opposite is found for Frederick, where average actual spending per pupil on charter schools is lower than the corresponding average spending predicted for charter schools.

Exhibit II. Average Actual Versus Predicted Charter School Per-Pupil Expense by District (2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within the five districts. For school and enrollment counts for each school district, see Exhibit A8.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Charter School Revenue From Federal and Private Sources

Through interviews and analysis of end-of-year charter school expense reports collected from charter operators (Charter School End-of-Year Expense Reports) as well as the District End-of-Year Fiscal Data, we examined how charter schools are supported by revenue from federal programs such as Title I funding. In all districts except Baltimore City, district officials indicated that charter schools were generally not eligible for Title I funds due to the populations they serve. In Baltimore City, Title I funds are distributed to schools identified as Title I schools—both traditional and charter—based on the number of students in poverty attending those schools. In addition, while schools may not be eligible for Title I funds (i.e., designated as a Title I school), services may be provided to poor and struggling students in charter schools on an as-needed basis using Title I funds, as was reported by Prince George's. Not surprisingly, only in Baltimore City were Title I dollars identified as being assigned to charter school sites in the fiscal Charter School End-of-Year Expense Reports.

All districts indicated they provide services to charter schools—using federal dollars—to serve special education and EL students. Methods for providing these services varied. Most often this was done by providing district staff to those schools with students eligible for special education and EL services. Only in Anne Arundel were federal special education dollars provided directly to charter schools.

The amounts of revenue raised from private sources (e.g., donations and small grants) varied substantially across schools from less than $10 per student to almost $3,000 per student. Also notable is that while student fees are not a substantial amount of revenue for most charter schools, for two schools student fees accounted for more than $500 per pupil in revenue.

District Provision of Funding and Services to Charter Schools

District Funding Formulas for Charter Schools

The funding formulas upon which each district bases the financing of their charter schools are quite similar in structure across the five districts (Anne Arundel, Baltimore City, Frederick, Prince George's, and St. Mary's). In general, each district starts its calculation with a general budget that accounts for general unrestricted funds, and then applies a series of exclusions of dollar amounts to cover programs or services that either do not apply to charter schools or are directly provided to charter schools by the district. The *per-pupil allocation* is calculated by dividing the remaining amount of funding (the general unrestricted funding amount minus all exclusions) divided by the total enrollment of the district. This per-pupil allocation is then applied to the enrollment of each charter school in the district in order to calculate the funding each charter school will receive from the central office.

Despite a generally common framework, there are clear differences in the formulas used by each district. For example, Baltimore City, Frederick County, and Prince George's County exclude the full amount of funding associated with providing special education, while Anne Arundel and St. Mary's do not make special education exclusions from the general fund, (and expect their charter schools to pay for these services out of their per-pupil allocation budget). In 2014–15, the per-pupil allocation calculations ranged from around $8,825 in Frederick to $11,906 in Anne Arundel.

Service Arrangements Between Charter Schools and Host Districts

The relationship between the district and the charter operator involves the district providing not only the per-pupil allocation to the schools but also a series of services. Each district has a different model for service delivery to charter school students. In some districts, such as Anne Arundel and St. Mary's Counties, charter schools are expected to provide the vast majority of services, including special education and transportation, either in house or by buying services back from the district. In other districts, far more services are provided by the district, and the cost for those services is deducted up front through the use of exclusions when determining the per-pupil allocation. However, there are commonalities across districts in the provision of certain services. In all districts, certain administrative services, such as human resources and payroll, are provided by the district for charter schools. In addition, in all districts, charter schools are

expected to procure their own facilities and pay for maintenance and operations. Also, food services in all districts are provided centrally by the district for charter schools.

Charter Management and Overhead Costs

In addition to relationships between charter schools and their host district, several charter schools are also part of a larger network of charter schools. When involved in such management agreements, charter schools often receive various services from the management organization, such as administrative leadership and guidance, oversight and quality control, training, accounting and auditing services, marketing, curriculum development, and other services. In return, the charter schools pay a management fee. Management fees, as reported in the interviews conducted with charter operators and observed in the charter schools' reported fiscal data, range from 5% to 12% of the funding provided to the schools through the per-pupil allocation formulas.

Costs devoted to overhead (administration, management fees, and occupancy) prove to be relatively high for some charter schools.[4] Our analysis of expenditure data from Charter School End-of-Year Expense Reports shows that the presence of management fees and generally high costs devoted to administration and occupancy lead to extremely high overhead costs for many of Maryland's charter schools, with overhead costs as a percentage of total spending exceeding the statewide average overhead costs, as well as the average overhead costs in the two districts with the most charter schools (Baltimore City and Prince George's).

Charter Financing of Facilities

As mentioned in the discussion of service arrangements between charter schools and host districts, charter schools in Maryland are responsible for procuring, maintaining, and operating their own facilities. There are a variety of arrangements whereby charter schools obtain their facilities. Of the 45 charter schools for which we obtained information on facilities arrangements, 10 were owned by the charter operator, 17 were leased from the district (primarily in Baltimore City), and the remaining 18 were leased from other companies, organizations, and non-profits.

Using expenditure data from Charter School End-of-Year Expense Reports, we determined the reported occupancy expenses for each charter school. Reported occupancy costs in 2014–15 ranged from under $10 to over $3,400 per pupil, but were most commonly between $1,500 and $2,500 per pupil.

Recommendations

Create Consistent Charter School Financial Reporting

State officials should seek out ways to better synchronize charter school financial reporting with that of the district in order to generate a complete picture of charter school revenues and expenditures. Charter schools should be required to file annual financial reports consistent with

[4] Occupancy costs consist of spending associated with lease or mortgage payments, maintenance and repair, utilities, insurance, and furnishing and equipping buildings.

the statewide chart of accounts. Additional financial reporting of items specific to charter school expenditures and revenues should also be reported by charter schools to create a more detailed understanding of charter school operations in Maryland. These additional items should include administrative expenses and management fees as well as occupancy-related costs.

Prepare District Financial Data Systems for Uniform School Site Reporting

The present study benefited greatly from the fact that nearly all Maryland districts included location codes in their End-of-Year Fiscal Data that attributed expenditures to individual school sites. However, in four districts, the location codes did not attribute staffing expenses to individual school sites. With pending federal regulation regarding school site reporting of expenditures of federal, state and local revenues on individual school sites, the state should move toward a uniform school site reporting requirement. Further, in preparation for this change, the state would benefit tremendously from using the methodologies and procedures of this study as a starting point for developing an official statewide approach for collecting and reporting school-level spending. Engaging in continued annual collection and analysis of school-level spending data using the methods developed for this study is therefore recommended for facilitating development of a statewide approach.

Establish Benchmarks for Overhead Expenses

In this report, we find substantial variation both across charter schools and between charter schools and their central district offices in terms of combined spending on administrative and other overhead expenses such as occupancy. Large variation in overhead costs across charter schools necessarily results in differences in the remaining resources that are available for direct instructional use. To address this issue, state officials should set benchmarks for administrative overhead expenses for charter schools that are based on the district spending rates reported herein, with flexibility granted during start-up years. In addition, state officials should require detailed justification of charter school management fees, detailed financial reporting of services provided by management companies to charter schools, and the associated costs of those services.

Model-Predicted Expenses for Schools

We further recommend that the MSDE use as a model for both (1) guiding formula funding levels for existing and future schools, and (2) evaluating funding across schools, an approach consistent with this study's regression-based predicted expense model. With this model, actual expenses of traditional schools statewide can be compared against baseline predictions to identify schools with funding that is relatively higher or lower than would be expected given characteristics related to student needs, enrollment across grade ranges, and location. Importantly, charter school spending may also be predicted using this same model, allowing evaluation of the expected expenditure for any charter school with specific characteristics if it were treated the same as an otherwise identical traditional school in the same district. The predicted charter school spending measures stemming from the model would be instrumental in informing discussion regarding the development of coherent policy concerning funding for charter schools in the state.

Establish Policies and Practices for More Equitable Access to Facilities

As mentioned above, we find that charter school costs associated with facilities vary widely. In addition, the vast differences in occupancy-related costs necessarily lead to differences in resources available for direct instruction. In other words, the current approach to charter school facilities access may be introducing unnecessary inequities. We therefore suggest that Maryland officials establish benchmarks for occupancy costs based on the findings related to district's own occupancy expenses herein. In addition, a more comprehensive solution that might be considered would involve establishing both operational and financial guidelines for facilities-access relationships between district hosts and charter schools.

1. Introduction

Charter schools have emerged across the country as an alternative choice to traditional public schools and are operated independently from the local school districts in which they are located. Parents choose whether to send their child to a charter school, often in pursuit of a specific educational objective.

Maryland's charter school law was established in 2003 with the Maryland Public Charter School Program (Education Article §§ 9-101 et seq.). In 2015, the Maryland General Assembly amended the Maryland Public Charter School Program with Chapter 311, Acts of 2015 (Act). In addition to updating charter school policies, the Act required a study of school funding for charter and traditional public schools.

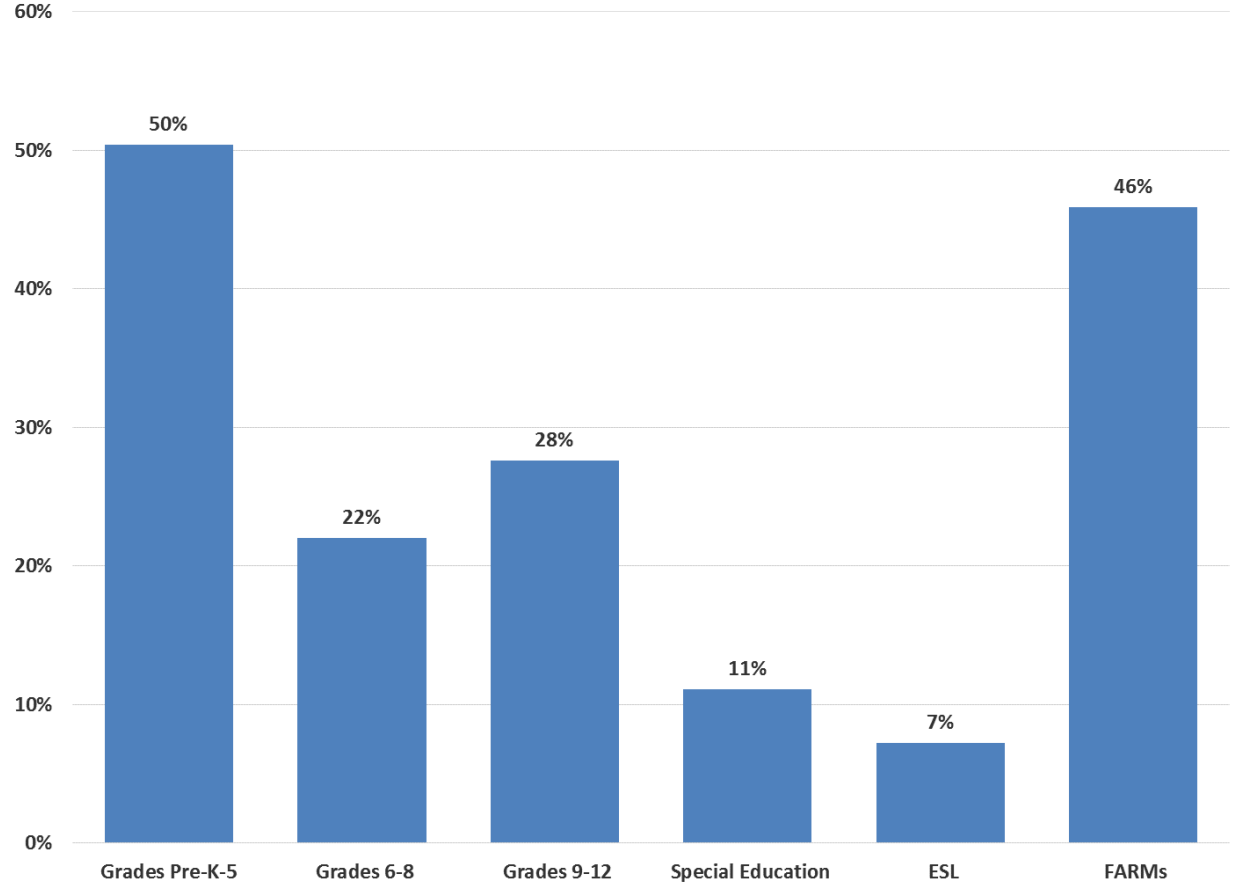
Maryland's charter school law defines a charter school as a non-sectarian, tuition free, elementary or secondary school of choice. Charter schools in Maryland are authorized by county school boards and managed by non-profit operators with their own governing boards. The operator is responsible for meeting the goals of the school's charter and working in a manner consistent with the laws and regulations governing other public schools in the state. Further, the law specifies that the funding provided to public charter schools be commensurate with that of traditional public schools, defined for the purposes of this study as district-operated schools that are not charter schools or standalone special education schools.

Characteristics of Maryland Local School Systems

Maryland's public school system enrolled almost 855,000 students in its traditional and charter public schools (for the purpose of this study excluding schools designated as alternative, vocational or standalone special education schools) during the 2014–15 school year: 97.7% of students were enrolled in traditional public schools, and 2.3% were enrolled in charter schools. As shown in Exhibit 1, 50% of students were in elementary grades (Grades Pre-K–5), 22% were in middle school grades (Grades 6–8), and 28% were in high school grades (Grades 9–12) that year. In terms of student populations that have additional needs, 11% of public school students received special education services, 7% were students with English as a second language (ESL), and 46% were eligible to receive free or reduced-price meals (FARMs).

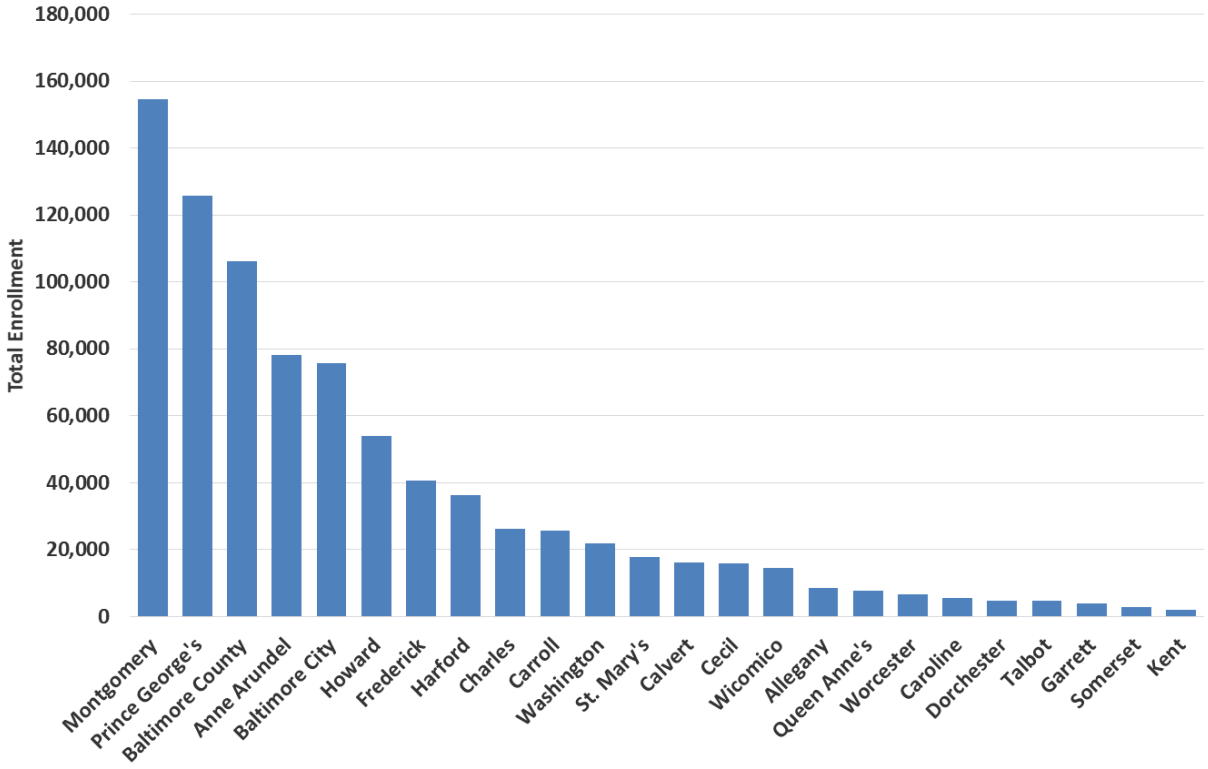
Maryland's school districts are defined by county borders. There are 24 school districts: 23 county school districts, with Baltimore City as its own district. As shown in Exhibit 2, the districts vary widely in size, with Montgomery County enrolling almost 155,000 students and Kent County enrolling 2,048 during the 2014–15 school year.

Exhibit 1. Statewide Demographics of Maryland Traditional and Charter Public School Students (2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within the state. For school and enrollment counts for the state by year, see Exhibit A1.
Source: MSDE Statewide Student Demographic Data

Exhibit 2. Total Enrollment in Traditional and Charter Public Schools by District (2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within the state.
Source: MSDE Statewide Student Demographic Data

In addition to the wide range in enrollment, there is also substantial variation with respect to student demographic characteristics. Exhibit 3 depicts demographic characteristics for each school district in Maryland for the 2014–15 school year. It shows that the FARMs rate ranged from 87% in Baltimore City to 20% in Carroll County, and that the ESL rate ranged from 16% in Prince George's and Montgomery Counties to 0.1% in Allegany and Garrett Counties. The incidence of special education ranged from 16% in Allegany to 8% in Calvert.

Over the three years that are the focus of this study (2012–13 to 2014–15), the overall number of charter schools in the state remained constant at 47, although charter school enrollment increased from 16,409 students to 18,818. The number of school districts with charter schools decreased during that time from seven to five, as a result of the only charter schools in Baltimore County and Montgomery County closing. The five remaining districts with charter schools in 2014–15 were Anne Arundel, Baltimore City, Frederick, Prince George's, and St. Mary's.

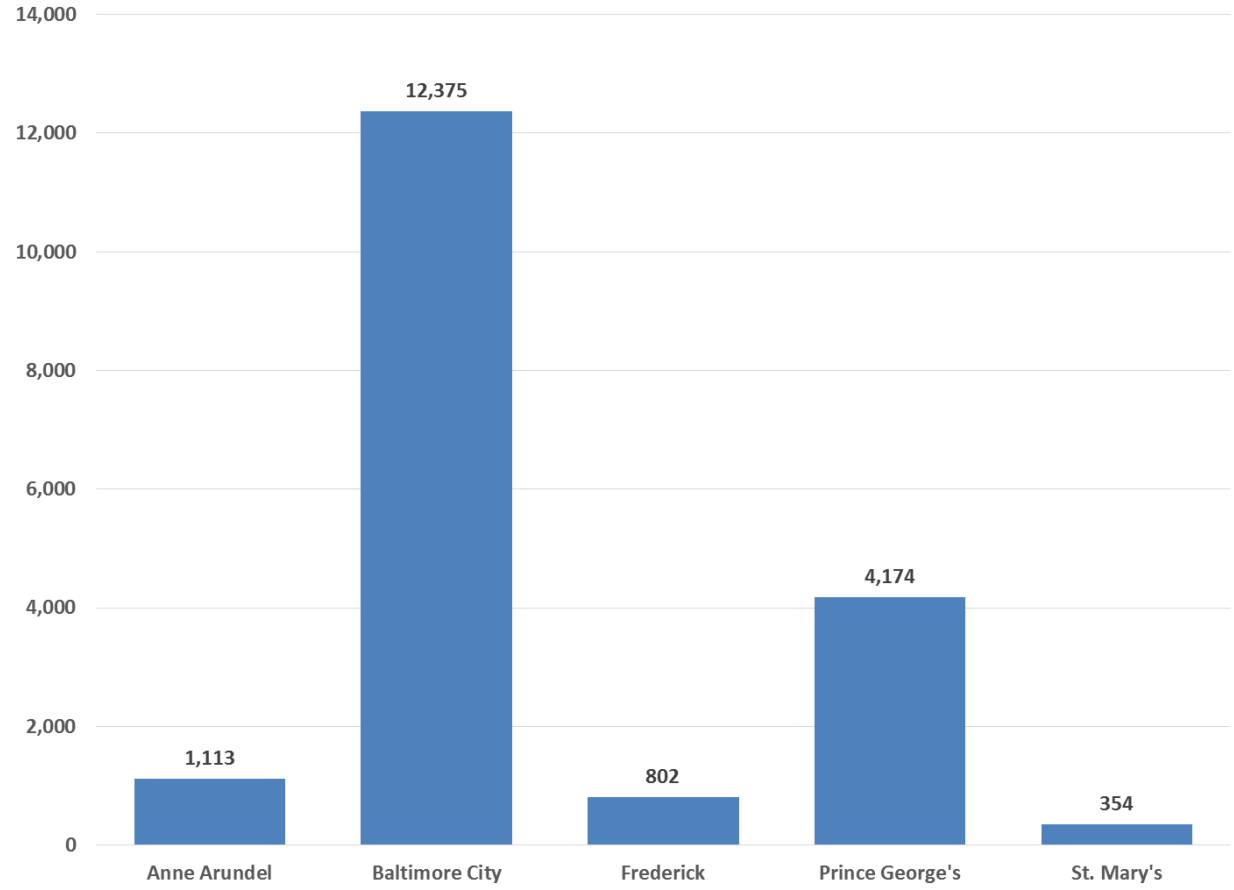
As shown in Exhibit 4, Maryland's charter enrollment is predominantly found in Baltimore City, which contains almost twice as many students attending its charter schools as those enrolled in all the other charter schools throughout the rest of the state. Although statewide charter school enrollment only accounted for 2.3% of total enrollment, charter schools in Baltimore City accounted for 16.4% of the district's enrollment. In the other four districts with charter schools in 2014–15, charter enrollment accounted for no more than 3.3% of the total.

Exhibit 3. Characteristics of Traditional and Charter Public Schools by District (2014–15)

District Name	Number of Schools	Total Enrollment	Grades Pre-K–5	Grades 6–8	Grades 9–12	FARMs	ESL	Special Education
Allegany	21	8,538	51%	22%	27%	58%	0.1%	16%
Anne Arundel	113	78,200	50%	22%	28%	34%	3.8%	9%
Baltimore City	167	75,538	60%	22%	18%	87%	3.9%	15%
Baltimore County	155	106,253	52%	22%	26%	50%	3.7%	12%
Calvert	22	16,004	44%	24%	32%	23%	0.9%	8%
Caroline	9	5,577	51%	22%	27%	58%	6.2%	11%
Carroll	40	25,670	44%	23%	32%	20%	1.1%	11%
Cecil	27	15,692	49%	22%	29%	46%	1.2%	15%
Charles	36	26,292	45%	22%	33%	37%	1.4%	10%
Dorchester	11	4,704	52%	21%	27%	68%	2.2%	10%
Frederick	62	40,491	47%	22%	30%	24%	5.2%	10%
Garrett	12	3,818	49%	22%	29%	48%	0.1%	11%
Harford	51	36,103	49%	23%	28%	32%	1.2%	12%
Howard	73	53,819	47%	23%	30%	21%	3.7%	9%
Kent	7	2,048	50%	21%	29%	54%	2.5%	13%
Montgomery	196	154,587	49%	22%	29%	36%	15.8%	11%
Prince George’s	192	125,607	51%	21%	27%	66%	15.7%	11%
Queen Anne’s	14	7,754	48%	23%	29%	27%	2.6%	12%
St. Mary’s	25	17,818	51%	22%	28%	34%	1.1%	10%
Somerset	8	2,861	54%	22%	25%	72%	4.1%	15%
Talbot	8	4,659	50%	22%	28%	44%	5.1%	10%
Washington	42	21,681	49%	23%	28%	50%	2.0%	9%
Wicomico	24	14,552	53%	21%	27%	62%	4.8%	12%
Worcester	12	6,610	48%	22%	30%	45%	2.3%	12%

Source: MSDE Statewide Student Demographic Data

Exhibit 4. Charter School Enrollment in 2014–15 by School District



Source: MSDE Statewide Student Demographic Data

Charter schools in Maryland, on average, also do not enroll students typical of the traditional public schools in their district. Exhibit 5 shows, for the five districts with active charter schools, the number of charter schools, total enrollment, and the percentages of students across various demographic characteristics. As shown in the exhibit, in all five districts, charter schools enroll a smaller percentage of students of high school age (Grades 9–12). In addition, in all five districts, charter schools enroll smaller percentages of FARMs and ESL students. In Frederick, Prince George's, and St. Mary's Counties, charter schools enroll substantially fewer special education students as a percentage of total enrollment. These factors suggest that charter schools in Maryland tend to serve students with fewer educational needs compared to traditional public schools in their same district. Appendix A contains additional tables examining the breakdown of enrollments in Maryland by grade configuration and school type.

Exhibit 5. Characteristics of Traditional and Charter Public Schools by Type for Districts With Active Charter Schools (2014–15)

District Name	School Type	Number of Schools	Total Enrollment	Grades Pre-K–5	Grades 6–8	Grades 9–12	FARMs	ESL	Special Education
Anne Arundel	Traditional	111	77,087	50%	22%	28%	34%	4%	9%
	Charter	2	1,113	39%	44%	18%	24%	0%	9%
Baltimore City	Traditional	136	63,163	60%	21%	20%	88%	4%	15%
	Charter	31	12,375	59%	28%	13%	81%	2%	14%
Frederick	Traditional	59	39,689	47%	22%	31%	24%	5%	10%
	Charter	3	802	81%	19%	0%	13%	2%	8%
Prince George's	Traditional	182	121,433	51%	21%	28%	67%	16%	11%
	Charter	10	4,174	55%	40%	5%	42%	1%	6%
St. Mary's	Traditional	24	17,464	50%	21%	28%	34%	1%	10%
	Charter	1	354	68%	32%	0%	8%	0%	5%

Source: MSDE Statewide Student Demographic Data

Funding and Support for Maryland Charter Schools

Maryland state law governing the disbursement of funds to public schools specifies that charter school funds must be allocated in a way that is commensurate with the funds allocated to traditional public schools. The law states that:

> A county board shall disburse to a public charter school an amount of county, State, and federal money for elementary, middle, and secondary students that is commensurate with the amount disbursed to other public schools in the local jurisdiction.[5]

In 2005, the State Board of Education issued a declaratory ruling that established a statewide funding model for determining charter schools' per-pupil funding allocation. The funding model calls for local school systems to first calculate the districtwide average per-pupil funding overall by dividing their annual operating budget by total student enrollment.[6] It permits local school systems to then adjust their average per-pupil funding amount downward by 2 percent to cover the costs of central office administrative responsibilities conducted on behalf of charter schools. Finally, local school systems multiply their total adjusted per-pupil amount by a charter school's total enrollment to determine the overall funding for that particular school. Charter schools must reimburse their local school system for personnel costs associated with the public school system employees working in the school as well as a proportionate amount of the cost of any other services or supplies requested from the district (*City Neighbors Charter School v. Baltimore Board of School Commissioners*, Revised MSBOE Op. No.05-17). Maryland charter school law makes no provision for funding charter school facilities. However, it does stipulate that school buildings not in use by the district must be made available to charter schools for occupation, according to terms set by the county board.

In 2013, the Maryland General Assembly commissioned a study to investigate several issues related to charter schools, including how the per-pupil allocation provided to public charter schools compared with that provided to traditional public schools. The study found variation in how local school systems were implementing the state's guidance on charter school funding and a lack of transparency among key stakeholders over how charter schools' per-pupil allocations were being determined (McGrath, Wyatt-Nichol, Borsher, Lovegrove, & Welsh, 2014).

Study Purpose

As mentioned above, Maryland's state education code requires charter schools to be funded commensurately with the traditional schools located in the same local school system. The purpose of this study is to investigate the amount of funding that Maryland local school systems provide to traditional public schools—defined as district-operated schools that are not charter schools or standalone special education schools—and their public charter school counterparts. The Maryland General Assembly mandated this study when it amended the Maryland Public Charter School Program with Chapter 311, Acts of 2015 (Act). Specifically, the Act calls for a

[5] Taken from Chapter 311, Acts of 2015, available online at http://mgaleg.maryland.gov/2015RS/chapters_noln/Ch_311_sb0595E.pdf.

[6] As shown in Chapter 5, some districts exclude from the operational budget used to calculate the per-pupil allocation specific funding sources used to provide services that are made available to the charter schools.

study that calculates the average operating expenditures for each local school system for students enrolled in public schools that are not public charter schools or standalone special education schools. At the heart of this investigation is the development of comprehensive and accurate measures of school systems' operational school-level and central spending, including the following:[7]

- Direct spending by schools on their site-specific programs
- Dollars spent on centralized services provided to traditional and charter schools by local school system central offices
- Spending supporting central office functions.

By gaining a better understanding of what is currently being spent on traditional public schools, policymakers will be in a better position to develop appropriate policies and guidance to inform how charter schools should be funded in a commensurate fashion.

In addition, this investigation includes a review of Maryland charter schools' finances and resource allocations to shed light on the arrangements made by charter schools to secure management services and facilities, the services provided by their local school systems, the revenue sources used to support charter school operations, and the various approaches that charters can use to finance their facilities. Finally, based upon the study's findings, we offer a series of recommendations related to charter school funding.

Organization of the Report

The organization of this report is as follows. Chapter 2 provides an overview of the conceptual framework of school-level funding and resource allocation that underlies this investigation, as well as a description of the data and methodology used to conduct the analysis. Chapter 3 reports the results of our financial analysis determining actual spending levels of traditional and charter schools. Chapter 4 includes an examination of simulated charter school spending, using a model to predict charter school spending based on the observed variation in spending among traditional schools. Chapter 5 reports the arrangements that exist between Maryland charter schools and providers of management services, facilities, and other services, as well as approaches to financing charter school facilities. The final chapter offers recommendations based on the findings outlined in this report.

[7] More specifically, the proposal request asked the study to examine: (1) operating expenditures made at the central office level by each county board of education; (2) operating expenditures made on behalf of individual schools by each county board of education; (3) funding provided to public charter schools and other public schools by local school systems; (4) value of services provided to public charter schools and other public schools by local school systems; and (5) funding provided by public charter schools to third parties such as charter management organizations. A detailed list of the study tasks and how we addressed the study tasks is included in the Study Scope of Work (SOW) for this project at the end of this report.

2. Conceptual Framework, Data, and Methodology

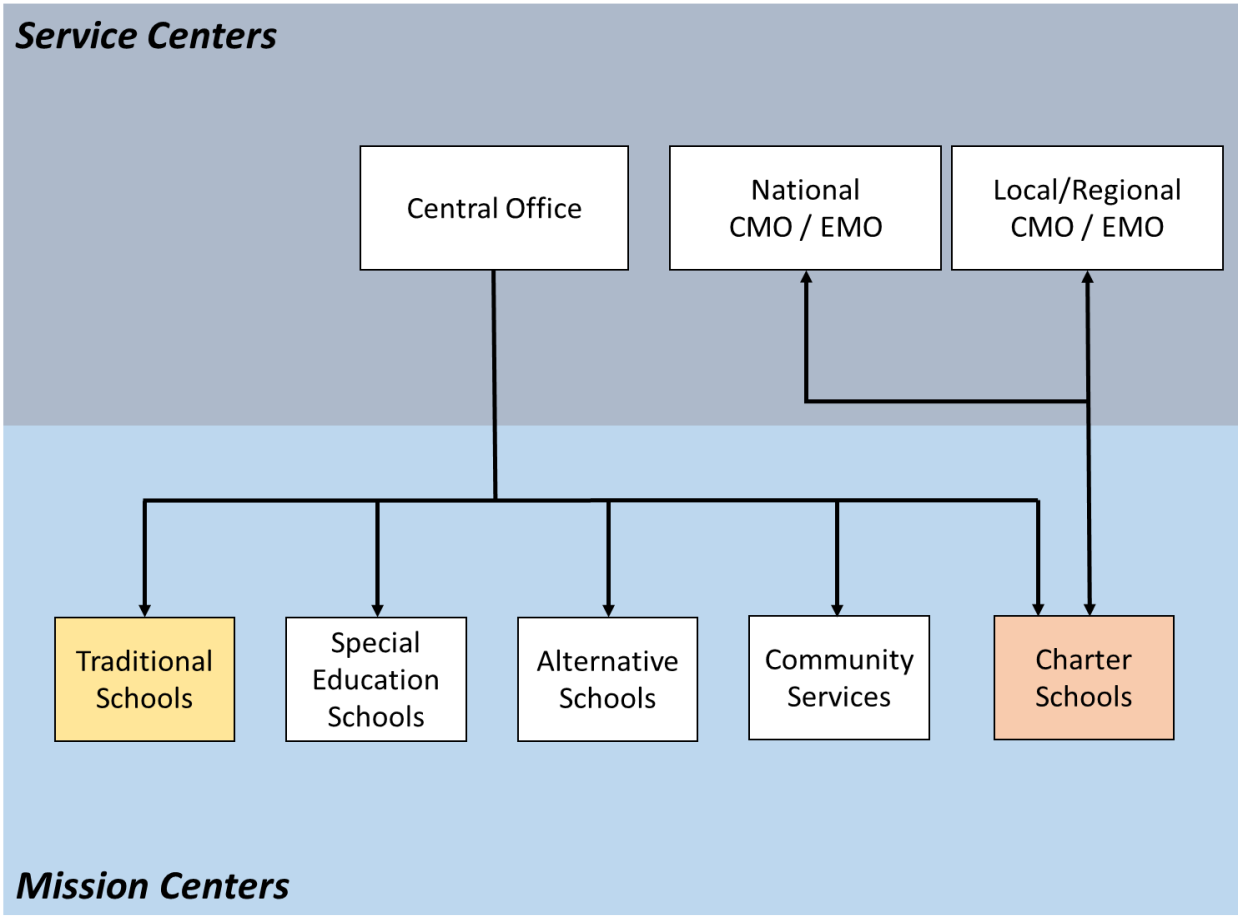
Conceptual Framework of Resource Allocation and Service Delivery Systems in Public Education

In public finance literature, it is assumed that the primary purpose of government entities such as local public school systems is the delivery of a defined set of services directly to their constituents. In the case of public schooling, this includes the provision of educational programs and services to children, as well as the potential delivery of community and other services. For definitional purposes, service delivery agencies can be organized into groups called "mission centers" and "service centers." Mission centers provide the direct services related to the overall institutional mission. In public school finance, individual school sites are usually considered the primary mission centers. Service centers support the institution—in this case, the education system—by providing operational and managerial assistance, including providing administrative services (payroll management, enrollment management, professional development, etc.), as well as managing the flow of resources (both personnel and pecuniary) to mission centers. This structural understanding of the relationship between service and mission centers guides institutional cost analysis. Presuming that the services provided by the service centers are necessary for carrying out the institutional mission, one must determine how to link the expenses associated with those services to the individual mission centers that use those services. However, it remains important to understand and to delineate the resources that are *attributed* directly to mission centers in the accounting data from those that are not attributed and therefore must be *allocated* by some method.

Exhibit 6 illustrates the study's conceptual framework of how funding and resources flow to public schools. At the top of the graphic are the service centers. The central office provides funding, resources (staff and non-personnel materials and supplies), and/or a variety of services (e.g., administration, health, human resources, information technology [IT], maintenance and operations [M&O], safety, student assessment, etc.) to the mission centers, which consist of district traditional schools, special education and alternative schools, community service centers and programs, and charter schools. Public charter schools may also be associated with service centers such as national and/or local/regional charter management organizations (CMO) or educational management organizations (EMO), which may provide a broad range of management services including administration, facilities, etc. It is important to note that the arrows between the charter schools and CMOs/EMOs run in both directions in the conceptual framework, signifying that charter schools might provide management fees to these organizations in exchange for the services they receive.

An integral part of this investigation is gaining a better understanding of the dollar values associated with the flows of funding, resources, and services between central offices and their public schools (both traditional and charter), and between charter schools and their associated management organizations.

Exhibit 6. Conceptual Framework of the Flow of Funding, Resources, and Services Between Service and Mission Centers



Compilation of Statewide School Site Spending Database

A primary objective of this report is to identify the spending levels of Maryland traditional and charter public schools in order to measure the appropriateness of current charter school spending levels, and to guide statewide charter school funding policies. For our expenditure analysis, we begin by focusing on traditional elementary, middle, secondary, and combined-grades schools (Grades K–6 and Grades 6–12) before differentiating these schools from charter schools.

To better understand what is currently being spent on traditional and charter schools, as well as how much would be spent on charter schools if they were funded similarly to traditional schools, we built a statewide database distinguishing traditional school sites' expenditures from those of charter schools. It is important to note the following points concerning development of per-pupil spending and revenue figures included in the database and the sample of schools used in the study analyses:

- The enrollment data used to calculate per-pupil measures of spending and revenues represent end-of-year student counts reported in June.

- The sample of traditional and charter public schools used for the key study analyses excludes those designated as alternative, vocational or standalone special education schools.

- The enrollment data used to calculate per-pupil measures of spending and revenues include students from Grades Pre-K to 12.

Alternative, vocational and standalone special education school types were excluded from analyses on the conceptual basis that allocation of resources, funding levels, and expenditure patterns for these school designations are likely to differ from traditional schools. Additionally, because no charter schools were identified in these school type designations, for comparison purposes we did not want to include these schools in the set of traditional schools used for the study analyses. Over the three study years, the average number of public schools excluded from the analysis sample was as follows: 22 alternative schools, 14 vocational schools, and 12 special education schools (see Appendix E).

Our decision to use June rather than September enrollments was based on the assumption that end-of-year enrollments more accurately reflect the body of students served by the school over the year (i.e., we assumed that most students moving out of a school tend to do so earlier in the school year). When conducting simple analyses comparing September and June enrollments, average differences between the two were negligible in traditional schools. In contrast, September enrollments in charter schools were 3.4% higher on average than June enrollments. This indicates that the use of September enrollments instead of June enrollments would not appreciably change our estimates of average spending per pupil for traditional schools, but would be expected to produce slightly lower estimates of average charter school spending per pupil. Appendix F shows the average differences between September and June enrollments for traditional and charter schools by district.

We used this database to calculate both unconditional average expenditures per pupil across schools (simple averages of school-level spending statewide and within districts) and conditional estimates of school spending per pupil that account for variations in characteristics, such as student needs and grade ranges served.[8] For this study, when referencing spending or expenditures, we used only operational spending (i.e., the spending used in the daily operations of schools systems). As a result, we only used spending from the Current Expense and Food Service Funds, as indicated in the state chart of accounts (COA) for local school system financial reporting.[9]

In this section, we describe our methods for assigning expenditures to school sites, with the ultimate objective of producing accurate measures of actual school-level spending per pupil and then generating predictions of school-site expenditure for Maryland schools based on their student needs and other factors. We begin this section with a review of key definitions.

[8] It is important to note that all district and state averages calculated in this report were weighted by student enrollment so that they represent averages of the school attended by the typical student, rather than that of the average school.

[9] Spending from the following funds was excluded from the analyses: School Construction, Debt Service, Student Activities, Trust/Agency, and General Fixed Assets.

Definitions and Data Sources

Throughout this document, we refer to expenditures in three categories: (a) attributed, (b) allocatable, and (c) allocated. These terms are defined as follows:

- **Attributed:** Attributed expenses are those that a district's accounting system has assigned or coded to a specific mission center, where a mission center is a specific school site.[10] For example, one type of expense that is commonly attributed to school sites is the salary of specific staff members who work in the school. In these cases, the district's data system has associated staff salary expenses with an account code that identifies the school site where those expenses occurred. Our analyses included two data sources that contain school-site-attributed spending: each district's own annual fiscal data, and the statewide personnel database containing staff and salary information provided by all districts to the MSDE.
- **Allocatable:** An allocatable expense is spending that has not been attributed to individual school sites by a district's accounting system but has been determined to be associated with the direct provision of services to school sites and therefore can be assigned to schools sites based on a series of decision rules, which we discuss in detail below. These expenses are reported at service centers (e.g., the district central office) but clearly represent spending on direct services provided at mission centers (e.g., school sites). The research team identified allocatable spending from (a) unattributed staffing positions based on the MSDE Statewide Staffing File and (b) unattributed non-salary resources based on expenditure patterns found in detailed transactional data. For the unattributed non-salary expenses, we used spending patterns in the granular transactional data collected from Baltimore City to identify allocatable proportions of the unattributed expenses that were used to allocate this category of spending to school sites across all local school systems across the state.
- **Allocated:** Allocated expenses are those expenses identified as allocatable and assigned to school sites via an allocation formula. Allocation formulas are used to provide a best approximation of school-level usage of unattributed expenses that are determined to be allocatable. Below, we discuss in detail a variety of allocation formulas used to distribute different types of spending deemed allocatable to individual school sites.

Fiscal data and documentation were collected from multiple sources for school years 2012–13 to 2014–15—the three most recent years of audited fiscal data at the time this study began. The financial data sources used for the study are listed in Exhibit 7, along with the level of precision with which they are reported (state, district, or school).

- **MSDE Statewide Annual Financial Report (AFR):** The statewide AFR data include accounts of fiscal data (expenditures and revenues) submitted to MSDE by districts. The data are reported with attribution to the district level only. That is, no specific expenditures are attributable to individual school sites using these data. Any use of these data requires *allocation* of relevant expenses to school sites.

[10] Accounting systems often refer to individual mission centers and service centers (district central offices) as "cost centers." However, cost centers can also take the form of more narrowly defined parts of an organization to which spending is attributed, such as specific departments within a district central office.

- **MSDE Statewide Staffing File:** The statewide staffing data consist of information provided by districts to MSDE on all public school employees. The data include attribution of full-time equivalents (FTEs) of certified and non-certified support staff to individual school sites (both traditional and charter), along with the corresponding salary data on those staff. These data can be used to determine the cumulative salaries attributed to any school site in any district statewide, and to determine staff salary that is not attributed to individual school sites. These data can also be used to attribute staffing expenses by various state COA codes.
- **District End-of-Year Fiscal Data:** The District End-of-Year Fiscal Data were collected from all of Maryland's school districts. These data include varying degrees of attribution of both salary and non-salary expenses to school sites across districts.[11] The information can be used to attribute both salary and non-salary expenses to school sites. However, statewide staffing data are likely to be a more consistent source for attributing salary data to school sites, given that salaries are not attributed to schools in the End-of-Year Fiscal Data in four districts. Attribution of non-salary expenses by districts in their annual financial reporting varies. Some attribute higher shares of non-salary expenses to school sites and others attribute lower shares, thereby necessitating a method for allocating the remaining allocatable portions (discussed further below).
- **Charter School End-of-Year Expense Reports:** The Charter School End-of-Year Expense Reports are for single schools and are therefore attributed to school sites by definition. However, these expense reports (a) are generally at a very high level of aggregation, often lacking precision (e.g., in the programs or activities to which staffing salaries are attributed); and (b) most often do not follow the state COA, nor are they sufficiently consistent across a significant share of charter schools to allow mapping to the COA. Fortunately, the availability of District End-of-Year Fiscal Data files and annual statewide staffing files—both of which include information on charter schools—reduces our reliance on charter school expense reports to generate charter school spending totals. However, these expense reports are useful for identifying specific items relevant to charter schools where districts' End-of-Year Fiscal Data lack the necessary detail, including the following: (a) additional revenue sources not provided districts; (b) fees paid by charter schools to management organizations; and (c) expenses associated with occupancy/lease agreements, which are not reported separately for charter schools in some districts.[12] In Appendix D, we compare school-level spending totals from the Charter School End-of-Year Expense Reports with those generated using district and state data sources to demonstrate the lack of alignment between these alternative data and to explain our preference for using district school-level data for generating charter school spending figures.

  While the sample of state charter schools included in the analysis using the Charter School End-of-Year Expense Reports is mostly complete, there are a select number of charter schools active over the three year study period that have been omitted. One school – Eudaimonia Maryland Academy of Technology and Health Sciences (MATHS) – was

[11] Personnel expenses were attributed to schools in 20 of 24 districts. Some amount of non-personnel expenses was attributed to schools in all districts.

[12] For instance, spending on occupancy/lease agreements is not reported for separate charter schools in the District End-of-Year Fiscal Data obtained from Baltimore City and Prince George's County.

omitted from the analysis given that their Charter School End-of-Year Expense Reports were potentially not representative of actual expenditure and revenue levels of this school. We were unable to schedule follow-up conversations with MATHS to further understand the data they provided due to the closure of the school. Also, we were unable to obtain Charter School End-of-Year Expense Reports for Inner Harbor East Academy because it closed prior to the start of data collection for this study. Finally, over the study period Baltimore Montessori Public Charter Middle School merged with Baltimore Montessori Public Charter School so that the data collected from Baltimore Montessori includes fiscal information for both schools, but does not distinguish between the two.[13]

- **Transactional Fiscal Data From Baltimore City Public Schools:** Finally, the research team obtained three years of individual fiscal transactions from Baltimore City's financial data system. These granular data contain descriptive information that allows one to discern the types and shares of unattributed spending that should be deemed allocatable to schools. The decision to obtain these transactional data from Baltimore City was primarily driven by the fact that the district hosted about two thirds (66%) of the state's charter schools in 2014–15. The need to examine solid patterns of allocatable versus non-allocatable spending, based on a critical mass of information for both traditional and charter schools, made this district the most logical choice. As explained below, similar collection and tagging of transactional data in each of the other 23 districts in the state were not proposed given the available budget for the present study and utility of this exercise. Importantly, obtaining and including transactional data from all districts would likely not change our findings considering the relatively small portion of overall operational spending identified as allocatable to individual school sites.

  Unfortunately, the transactions associated with personnel expenses are identified in the Baltimore City system broadly as "Import Journal Created" and thus cannot be attributed with any greater precision than with the statewide staffing files, or for that matter the attribution of salary expenses in Baltimore City's District End-of-Year Fiscal Data (which integrate school-by-school salary expenses by the state COA). As a result, analyses of transactional data focus on non-salary expenses that are not attributed to school sites in the District End-of-Year Fiscal Data files. Our goal was to determine the types and shares of those *unattributed non-salary* expenses that were "allocatable," which could then be allocated via appropriate formulas.

[13] Exhibit A13 in Appendix A includes a table listing the charter schools in each district that were open during the time of data collection for this project. The note for this exhibit lists charter schools that closed or merged with other schools between 2012-13 and 2014-15.

Exhibit 7. Data Sources, Level of Precision, and Reported Spending Types

Data Source	Level of Precision	Reported Expenses
MSDE Statewide AFR	District Office	Personnel and Non-Personnel
MSDE Statewide Staffing File	District Office and Schools	Personnel Salaries/Wages
District End-of-Year Fiscal Data	District Office and Schools	Personnel (Attributed in 20 out of 24 Districts) and Non-Personnel (Partial Attribution Across All Districts)
Charter School End-of-Year Expense Reports	Schools	Personnel and Non-Personnel
Baltimore City Transactional Data	Transactions for District Office and School Cost Centers	Non-Personnel

Our preferred estimates of school-level spending are derived from a combination of the MSDE Statewide Staffing File, District End-of-Year Fiscal Data, and the MSDE Statewide AFR. Throughout the report, we refer to this combination of data used to derive school-level spending estimates as the School Site Spending Database.

In addition, the study made use of data provided by MDSE on student and other characteristics of schools, including enrollment (both overall and by grade level); counts of FARMs students, ESL students, and students with disabilities; and the area of school buildings.

Interviews With District Central Office and Charter Operator Staff

To complement the expenditure analysis, we interviewed both district central office staff and charter operator representatives. The interviews focused on obtaining contextual information regarding the school resource allocation policies and practices. Specific protocols were developed for the interviews where we asked open-ended questions.

The district interview questions were designed to achieve a better understanding of the policies and practices used to allocate resources to public and charter schools, as well as the services provided to the charter schools. The questions asked in the charter operator interviews were related to the policies governing the allocation of resources to school(s) under their management, how dollars were attributed to individual schools, what facility arrangements were in place at their schools, what additional funding (i.e., federal grants, private grants) was available to the charter operators, what services were provided directly by the district to their schools, and what goods and services were sourced out to third parties.

We were able to conduct interviews with central office staff from each of the districts and with 29 of the 30 charter school operators in Maryland. The only operator we were unable to reach was one where the charter school had recently closed.

Procedures for Assigning Expenses to School Sites and Determining Actual Spending

One of the primary objectives of this study was to describe school-level spending of traditional and charter public schools, inclusive of central or districtwide spending made on the behalf of

schools in the form of centralized goods and/or services. In order to do this, we had to (a) determine the set of expenditures already attributed to schools in the fiscal data collected from districts; (b) determine which unattributed expenditures most likely represented goods and services that directly supported schools and their students (and therefore should be allocated to schools); and (c) allocate the portion of unattributed spending determined to be allocatable to schools, using an appropriate method. Exhibit 8 provides the general steps taken to attribute and allocate expenses to individual school sites in order to develop comprehensive measures of school spending. In-depth discussion of each of the steps follows.

Exhibit 8. Data Sources, Level of Precision, and Reported Spending Types

Step	Description
Sum Attributed Expenses	
1	Sum attributed salary expenses in MSDE Statewide Staffing File.
2	Sum attributed non-salary expenses in District End-of-Year Fiscal Data.
Identify Allocatable Expenses	
3	Sum unattributed salary expenses in MSDE Statewide Staffing File. Determine allocatable portion of unattributed salary expenses through identification of positions in MSDE Statewide Staffing File.
4	Sum unattributed/non-salary expenses in District End-of-Year Fiscal Data. Determine allocatable portion of unattributed/non-salary expenses by creating a bridge between Baltimore City Public Schools (BCPS) transactional data and state COA.
Allocation of Expenses to School Sites	
5	Allocate allocatable portion of unattributed salary expenses to schools: • Allocate unattributed general salaries using school share of districtwide enrollment. • Allocate unattributed special education salaries using school share of districtwide special education enrollment. • Allocate unattributed M&O salaries using school share of districtwide facility square footage.
6	Allocate allocatable portion of unattributed/non-salary expenses to schools: • Allocate unattributed/non-salary general expenses using school share of districtwide enrollment. • Allocate unattributed/non-salary special education expenses using school share of districtwide special education enrollment. • Allocate unattributed/non-salary M&O expenses using school share of districtwide facility square footage.
7	Allocate fixed charges using school share of districtwide salaries.

Step 1 – Attributed Certified and Non-Certified Staffing Salaries

Step 1 involves calculating the sum of the staffing salaries for all certified and non-certified staff for each individual school. As noted above, the study team had two potential data sources for identifying school-site staffing expenditures: the MSDE Statewide Staffing File and the District End-of-Year Fiscal Data. We chose the former for the following reasons. First, the Statewide

Staffing File provides school-site attributed salaries with 100% coverage across districts, while school-attributed salaries are available for only 20 of the state's 24 districts. Second, the state staffing file includes more detailed descriptions of staff positions, which proved to be necessary for determining which non-attributed positions are allocatable in Step 3. The use of the Statewide Staffing File also allowed for greater consistency in calculating staffing expenses across all districts, and greater precision when allocating unattributed staff salaries to schools.

Using the Statewide Staffing File as our preferred source for staffing expenses, we simply aggregated the staffing salaries assigned to each school as the school-attributed personnel expenses and set aside the salaries not assigned to schools for possible allocation.

Step 2 – Attributed Non-Salary Expenses

Only one data source exists for identifying non-salary expenses that are already attributed to school sites for all 24 districts: the District End-of-Year Fiscal Data. All districts attribute at least some share of non-salary expenses to individual school sites via location accounting codes, allowing us to add up all of the attributed non-salary current expenses for each school statewide.

Step 3 – Allocatable Salary Expenses

Having used the MSDE Statewide Staffing File as our basis for determining attributed salaries to school sites, we also used this file as our basis for (a) identifying staffing salaries not currently attributed to individual school sites, and (b) identifying specific staffing positions that primarily provide services that support school sites (mission centers). Positions most likely to be directly supporting school sites were determined to be allocatable to schools using a relevant formula (discussed in the next section). For example, we allocated general instructional positions based on school total enrollment, and we allocated special education-related positions based on school special education enrollment. Appendix B includes a list of positions (by spending category from the state COA) that were unattributed and specifies whether they were determined to be allocatable.

Step 4 – Allocatable Non-Salary Expenses

Having used each district's End-of-Year Fiscal Data to identify the attributed portion of non-salary expenses, we relied on those same data to determine (a) the amounts of unattributed non-salary expenses, and (b) the share of the unattributed amounts that were allocatable. Although the MSDE AFR includes total non-salary expenses for each district (which could all be allocated across schools by formula), the District End-of-Year Fiscal Data already directly attributed a significant share of those expenses to school sites, which meant that we only needed to allocate the remaining relevant share.

To determine the allocatable share of non-salary expenses for each district, we relied on an in-depth analysis of granular transactional spending data from Baltimore City.[14] Here, individual transaction descriptions of non-salary expenses in Baltimore City were categorized using identification tags for the most recent three years (2012–13, 2013–14, and 2014–15). The tags

[14] Appendix B contains an in-depth description of the transactional fiscal data analysis used to determine shares of unattributed non-personnel spending to school sites.

identified which transaction-specific expenses were associated with the provision of services from the central office service center to schools and other mission centers, allowing us to determine what was allocatable to schools. We then mapped the Baltimore City expenses organized by local COA codes on to the state COA category-program-object codes, aggregating expenses as "allocatable" and "non-allocatable" by the category-program-object code groupings. The allocatable shares of the expenses associated with each COA code grouping were then calculated and applied to the non-salary expenditures in each district to determine the amounts of spending (by COA code grouping) to be allocated to schools.

Similar transactional tagging within each of the other 23 districts in the state was beyond the scope and budget for the present study. Furthermore, delving this deeply seemed to be methodologically unnecessary, considering that this exercise involves finely parsing out a relatively small portion of operating spending. (The allocatable *non-salary* expenses accounted for around 10% to 11% of statewide operational spending as presently calculated.) It is unlikely that any variation in the share of allocatable non-personnel spending across districts would change the main results of this study. However, the state and districts might be interested in ensuring more comprehensive accounting system attribution of non-salary expenses to school sites in the future, so that post-attribution via transaction tagging is unnecessary.

Steps 5 and 6 – Allocating Salary and Non-Salary Expenses to School Sites

Once the portion of allocatable salaries and non-salaries was determined in Steps 3 and 4, we assigned (allocated) unattributed dollars to school sites using a number of appropriate allocation formulas. The allocation formula used to assign unattributed dollars depended on the category of spending. Spending on administration, mid-level administration, instruction, student support personnel, health services, transportation, and capital outlay were allocated using school shares of districtwide enrollment.[15] Special education spending was allocated using school shares of districtwide special education enrollment. Spending on plant maintenance and operations (M&O) was allocated by building square footage. The following section describes in greater detail the allocation formulas that were used.

Step 7 – Allocatable Fixed Charges

To account for fixed charges, we relied on the district-level expenditures reported in the MSDE AFR, which primarily include spending on pensions, health, and other benefits. Fixed charges typically amount to over 20% of district operational expenses. We could have used either the District End-of-Year Fiscal Data or the MSDE AFR data to identify and distribute fixed charges. However, the District End-of-Year Fiscal Data vary across districts in the extent to which they attribute (rather than allocate) fixed charges to schools. They also vary within districts in terms of the degree to which fixed charges are attributed to traditional versus charter schools. For consistency purposes, we therefore choose to allocate the district-level fixed charges based on the MSDE AFR data.

[15] Capital outlay is generally not considered part of operational spending. For this study, expenditures made from the school construction fund—largely consisting of capital outlay—were excluded. However, a few expenditures categorized as capital outlay remained as expenditures within the current expense fund, and these remain in the data.

We assumed that 100% of these salary-related benefits were allocatable based on school shares of districtwide salaries, most of which were assigned to individual schools by virtue of being directly attributed or through allocation. However, some remained as central office salaries. As a result, a portion of the fixed charges remained unattributed and unallocated to individual schools, corresponding to the share of salaries that remained as central office salaries.

Methods for Allocating Unattributed Expenses

The appropriate method for allocating spending to school sites depends on the type of expenditure. A relatively standard set of methods and "allocation factors" exists in public budgeting and finance literature, as applied to elementary and secondary schools. Again, we wanted to take specific expenses of service centers (central district offices) and distribute them to mission centers (schools), according to assumptions regarding how those resources were used. The following discussion describes the variety of allocation methods that we employed for the various types of spending that needed to be allocated to individual school sites.

- **Total Enrollment Share:** Services or expenses that vary by the number of pupils served across mission centers might be allocated to school sites according to the share of districtwide enrollment each school serves. That is, if $1 million dollars is spent districtwide on a category broadly defined as "student services" and no detail is known about which specific types or quantities of services were provided to individual schools or particular subpopulations of students, we might flatly allocate that $1 million based on each school's share of total children served. For example, if a school with 400 pupils serves 1% of the district's enrollment of 40,000 students, we would assign 1% of the $1 million to that school, equal to $10,000 in total or $25 per pupil (equal to $10,000 divided by 400). The formal allocation factor used to allocate dollars using this method is defined as follows:

$$\textit{Total Enrollment Allocation Factor} = \textit{Total School Enrollment} / \textit{Total District Enrollment}$$

- **Subpopulation Enrollment Share:** Similar to the total enrollment share, particular types of allocatable spending might be used for specific services that are only provided to a subpopulation of students (e.g., special education services). This spending can then be allocated according to each school's share of the districtwide enrollment belonging to the subpopulation receiving the services for which the spending is observed:

$$\textit{Subpopulation Enrollment Allocation Factor} = \textit{Subpopulation School Enrollment} / \textit{Subpopulation District Enrollment}$$

  This study makes use of a subpopulation allocation factor based on school shares of districtwide special education enrollment in order to allocate spending on special education services.

- **Payroll Share:** Expenses that vary by payroll (such as pension benefits paid) might be allocated by the share of districtwide payroll accounted for by each school. Spending on employee benefits is commonly allocated by such formulas. This type of allocation factor is formally expressed as follows:

$$\textit{Payroll Allocation Factor} = \textit{School Salary}\ (\textit{Attributed and Allocated}) / \textit{Total District Salary}$$

- **Area Share:** Other expenses may vary based on the features of the physical plant being used. Notably, M&O may vary by the size, structure, and age of facilities. A common factor used to allocate plant M&O expenses is the relative square foot area of facilities—that is, each school's percentage of districtwide square footage, inclusive of both school and other centrally maintained buildings—applied similarly to the factors above:

$$\textit{Area Allocation Factor} = \textit{School Square Footage} / \textit{Total District Square Footage}$$

  We make use of this area share factor to allocate unattributed plant M&O expenses to school sites.

In addition, for each state COA spending category, we determined whether expenses should be attributed to all schools inclusive of both traditional and charter schools, or whether expenses should only be attributed to traditional schools exclusive of charter schools. These determinations were based on our qualitative analysis of the charter school/host district relationships and service provisions. For services that were solely the responsibility of charter school—such as instructional personnel and school-level administration—the corresponding unattributed and allocatable expenditures were not allocated to charter schools, as they received no central support in providing those services. For services provided by the district to charter schools and their students, the corresponding unattributed and allocatable expenditures were allocated to all schools, inclusive of charter schools. Service arrangements often varied across districts, so the decisions regarding whether to allocate certain expenditure categories to all schools or only traditional schools also varied across districts in some instances. Exhibit B4 in Appendix B shows which state spending categories were allocated to all schools, and which were allocated only to traditional schools, in each of the five districts that host charter schools.

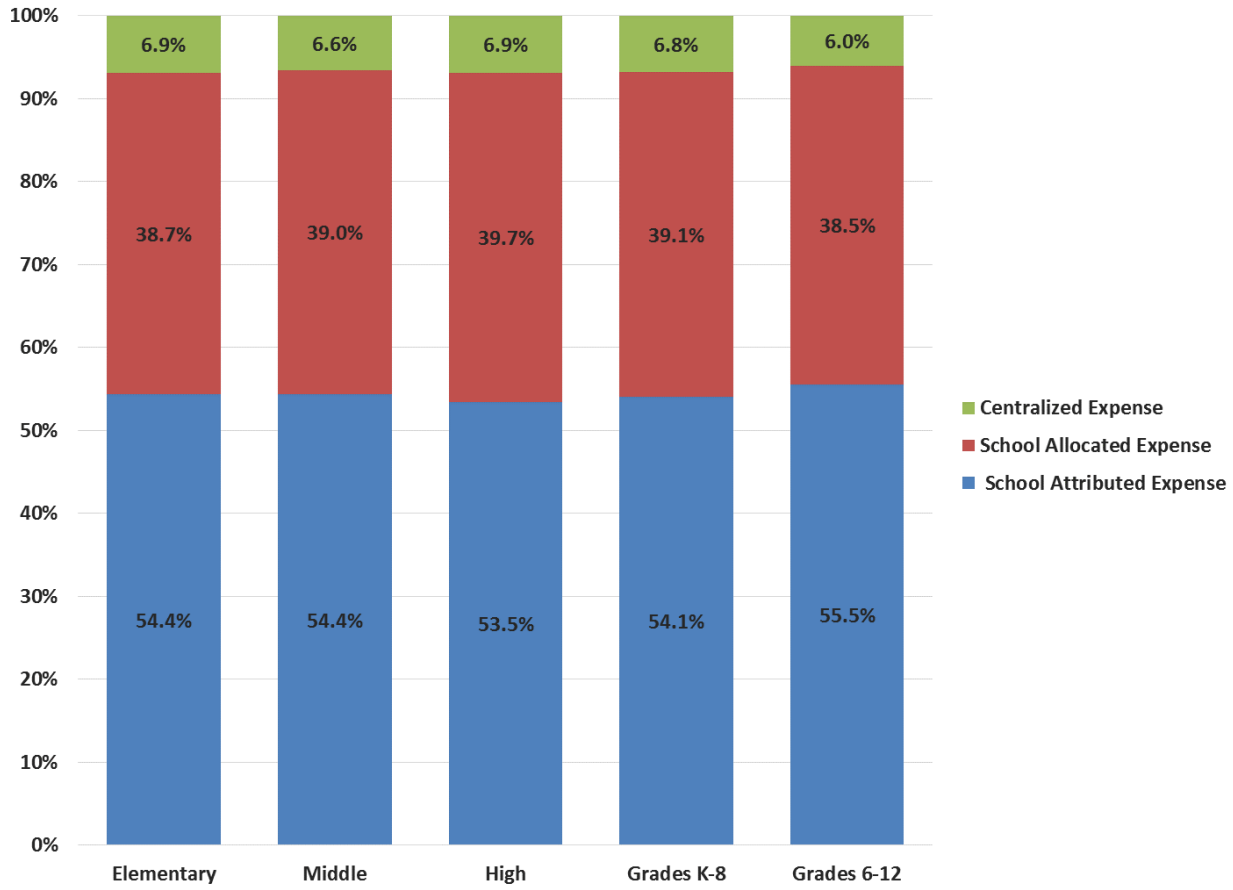
Importantly, the purpose of our allocation methods was to derive measures of school site-related expenses associated with existing levels of services provided under existing models of public schooling across Maryland. This is not to suggest that these calculations are directly applicable to determining adequate or sufficient levels of funding for public traditional or charter schools. Instead, these methods yield benchmarks for evaluating and comparing spending as it currently exists across districts and schools in the state. They do not provide a formula or spending targets for distributing expenses to individual schools based on student needs or other cost factors (e.g., the scale of operations, geographic differences in the price of staff, and other inputs).

Results of Assigning Expenses to School Sites

The end result of assigning both attributed and allocated spending to individual school sites is the School Site Spending Database, which was developed specifically for this study. Exhibits 9 and 10 use the database to provide expense share and per-pupil dollar breakouts of school-level attributed, school-level allocated, and centralized spending on operations as three-year (2012–13 to 2014–15) statewide averages by grade configuration. Exhibits 11 and 12 include more detailed breakouts of average dollars that show attributed and allocated dollars based on the groupings of expenses that were attributed or allocated in different ways.

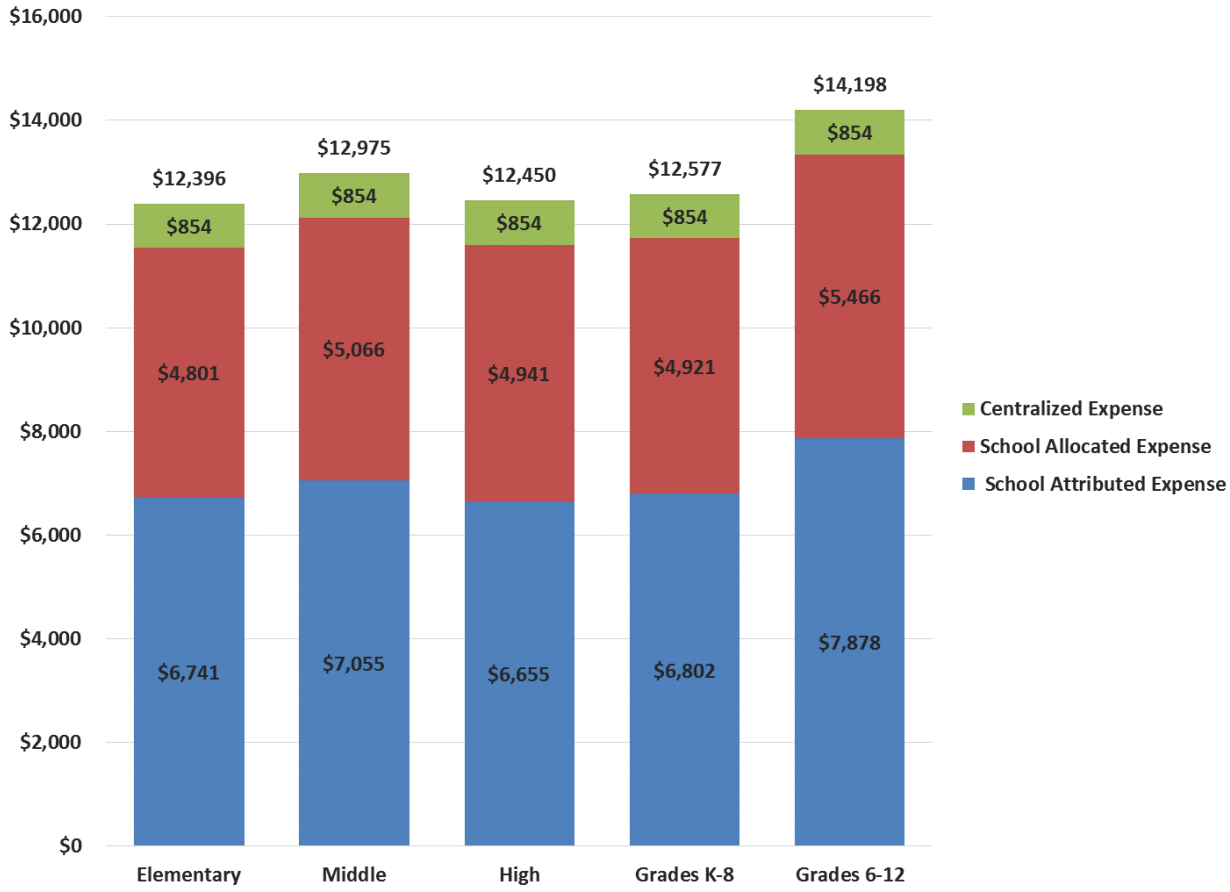
The results show that, on average, approximately 54% of operational expenses were composed of attributed salaries reported in the MSDE Statewide Staffing File and attributed non-salary expenses assigned to schools in the District End-of-Year Fiscal Data. Note that attributed spending is spending that (a) we can, with a high degree of confidence, identify as being spent at specific school sites; and (b) varies naturally across sites within districts because of their specificity to individual schools. The expenses allocated to schools accounted for an additional 39% of operational spending, the largest portion of which corresponded to fixed charges that accounted for about 20% of overall operational spending. The remaining centralized expenses accounted for approximately 7% of spending on operations districtwide and are associated with district-level spending that was neither attributed nor allocated to individual school sites.

Exhibit 9. Statewide Shares of Expense for Traditional and Charter Public Schools Broken Out by School-Level Attribution, Allocation, and Centralized Spending (2012–13 to 2014–15)



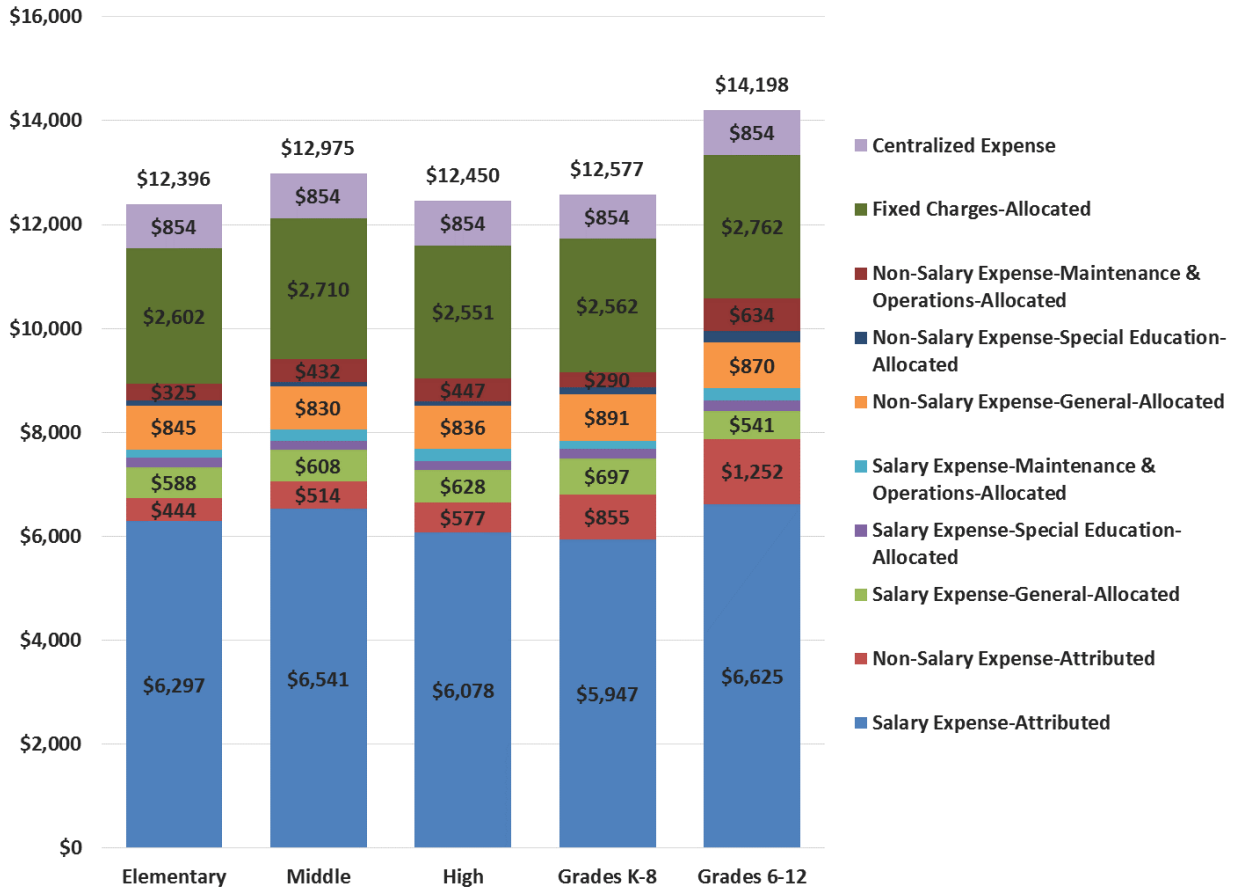
Note: The sample for this exhibit includes all traditional and charter public schools within each grade range. For school and enrollment counts by grade range, see Exhibit A2.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 10. Statewide Average Expense per Pupil for Traditional and Charter Public Schools Broken Out by School-Level Attribution, Allocation, and Centralized Spending (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within each grade range. For school and enrollment counts by grade range, see Exhibit A2.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 11. Statewide Average Expense per Pupil for Traditional and Charter Public Schools Broken Out by Attribution/Allocation Category and Grade Configuration (2012–13 to 2014–15)



Note: Figures represent average per-pupil spending from 2012–13 to 2014–15. Overall per-pupil expense is listed at the top of the columns. Labels for per-pupil spending figures less than $300 are not shown. The sample for this exhibit includes all traditional and charter public schools within each grade range. For school and enrollment counts by grade range, see Exhibit A2.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 12. Statewide Average Expense per Pupil for Traditional and Charter Public Schools Broken Out by Attribution/Allocation Category and Grade Configuration (2012–13 to 2014–15)

Attributed /Allocated	Expense Category	Grade Level/School Type				
		Elementary	Middle	High	K–8	6–12
Attributed	Salary	$6,297	$6,541	$6,078	$5,947	$6,625
	Non-Salary	$444	$514	$577	$855	$1,252
	Total Attributed	$6,741	$7,055	$6,655	$6,802	$7,878
Allocated	Salary General Expense	$588	$608	$628	$697	$541
	Salary Special Education Expense	$184	$176	$165	$177	$204
	Maintenance & Operations Salary Expense	$161	$224	$236	$166	$237
	Non-Salary General Expense	$845	$830	$836	$891	$870
	Non-Salary Special Education Expense	$97	$86	$78	$139	$218
	Maintenance & Operations Non-Salary Expense	$325	$432	$447	$290	$634
	Fixed Charges	$2,602	$2,710	$2,551	$2,562	$2,762
	Total Allocated	$4,801	$5,066	$4,941	$4,921	$5,466
Centralized Expense – Not Attributed/Not Allocated		$854				
Overall Per-Pupil Expense		$12,396	$12,975	$12,450	$12,577	$14,198
Attributed Salary Share of Overall Per-Pupil Expense		50.8%	50.4%	48.8%	47.3%	46.7%
Attributed Non-Salary Share of Overall Per-Pupil Expense		3.6%	4.0%	4.6%	6.8%	8.8%
Total Attributed Share of Overall Per-Pupil Expense		54.4%	54.4%	53.5%	54.1%	55.5%
Allocated Salaries Share of Overall Per-Pupil Expense		7.5%	7.8%	8.3%	8.3%	6.9%
Allocated Non-Salary Share of Overall Per-Pupil Expense		10.2%	10.4%	10.9%	10.5%	12.1%
Allocated Fixed Charge Share of Overall Per-Pupil Expense		21.0%	20.9%	20.5%	20.4%	19.5%
Total Allocated Share of Overall Per-Pupil Expense		38.7%	39.0%	39.7%	39.1%	38.5%
Centralized Share of Overall Per-Pupil Expense		6.9%	6.6%	6.9%	6.8%	6.0%

Note: The sample for this exhibit includes all traditional and charter public schools within each grade range. For school and enrollment counts by grade range, see Exhibit A2.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

3. Analysis of Traditional and Charter School Expenses and Revenues

In this chapter, we present analyses of traditional and charter public school spending and the revenues used to support these schools. The results in this chapter are our best estimates of *actual* spending on traditional and charter schools in the state, defined as the sum of expenditures that are directly attributed to school sites and those that are not attributed but were allocated according to the methods laid out in Chapter 2.[16] Therefore, we feel our estimates of spending levels accurately represent what was spent *on* schools, not to be confused with what was spent directly *by* schools—that is, what we are calling the *actual expense* accounts for both school-level discretionary spending and centralized spending on schools. This also means that our estimates of spending for charter schools are not the same as the dollar allocations provided by districts to charter schools, which is only representative of the school-level discretionary spending made by charter schools (we discuss the charter school per-pupil allocation formulas more in Chapter 5).

In the first section in this chapter, we present the results of actual spending on traditional schools from the School Site Spending Database, which we developed using the staff spending data from the MSDE Statewide Staffing File, school-level non-personnel spending data from the District End-of-Year Fiscal Data, and district fixed charges spending data from the MSDE AFR. The second section presents actual spending on charter schools and comparisons of actual spending on traditional and charter public schools using the School Site Spending Database. The final section presents findings related to revenues supporting school operations, including a description of revenue sources available to traditional and charter public schools in Maryland and analysis examining the extent to which federal funds are distributed to charter schools.

Average Actual Traditional Public School Expenses

Actual Spending on Traditional Public Schools

The average per-pupil spending on operations for traditional public schools across the three years for which we collected data (2012–13, 2013–14, and 2014–15) was $11,706.[17] As shown in Exhibit 13, the average operational spending per pupil on schools increased with each successive year over this period, from $11,531 in 2012–13 to $11,857 in 2014–15.[18]

[16] As stated previously, the sample of traditional and charter public schools used in the key study analyses excludes those designated as alternative, vocational or standalone special education. However, for reference purposes we present an analysis of average actual expenditures for each of these excluded school types by district and school year in Appendix E.

[17] As a reminder, state and district averages of school-level data are weighted by school enrollment. For three-year state and district averages, all school-year observations were pooled, which means that schools open in all three years are represented three times—once for each year.

[18] In what follows, all references to per-pupil spending should be considered operational spending unless otherwise noted.

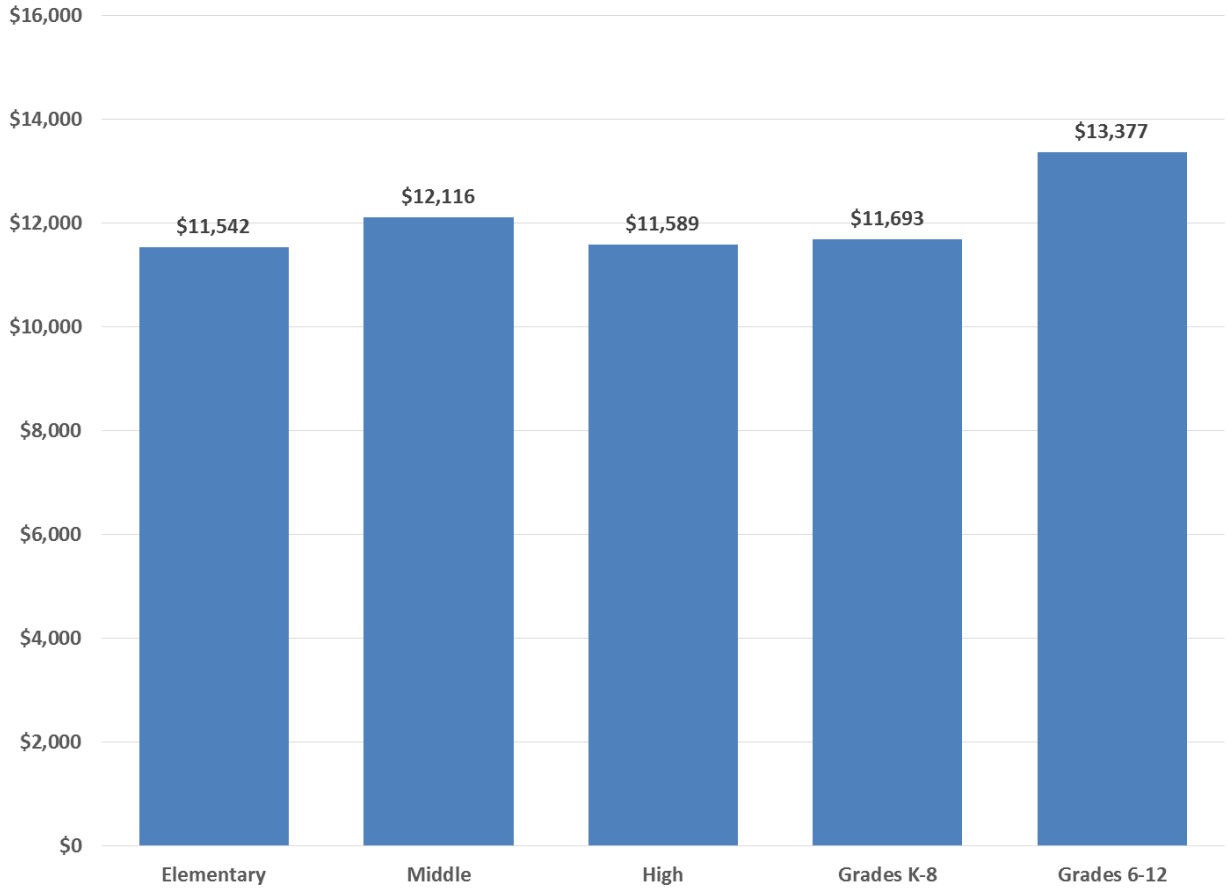
Exhibit 13. Statewide Average Expense per Pupil for Public Traditional Schools by Year (2012–13 to 2014–15)

Note: The sample for this exhibit includes all traditional public schools within the state. For school and enrollment counts, see Exhibit A3.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 14 provides statewide averages of school-level, per-pupil spending in traditional schools by school grade configuration over the three study years. The results show that, on average, spending on middle schools ($12,116) was higher on a per-pupil basis than spending on elementary or high schools ($11,542 and $11,589, respectively). Schools with K–8 grade configurations had slightly higher expenses ($11,693) than elementary or high schools but lower expenses than middle schools. Spending on schools serving Grades 6–12 ($13,377) was higher than on all other school types. However, there were far fewer schools statewide serving Grades 6–12 than any other school type, and these schools were largely concentrated in Baltimore City and Montgomery County—two relatively high-spending districts.[19] This is likely driving the relatively high average per-pupil spending calculated across schools with this grade configuration.

[19] There were 88 schools serving Grades 6–12 in total across the three study years out of 3,988 schools in total across the three years.

Exhibit 14. Statewide Average Expense per Pupil for Traditional Schools by Grade Configuration (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional public schools within each grade range. For school and enrollment counts of traditional schools by grade range, see Exhibit A4.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 15 shows average spending per pupil on traditional schools by school grade configuration within each Maryland school district. The table also presents overall districtwide per-pupil spending. The figures confirm that average actual school-level spending calculated from the School Site Spending Database was less than districtwide spending in all districts, which is exactly what we would expect. There are several reasons for this. First, we excluded certain types of schools, such as those devoted specifically to special education or alternative education, which generally spend more per pupil than traditional schools. Second, there are certain expenditures that remain as central office expenditures, even after the allocation of much of central spending to schools. Later in this section, we present the amount of spending in each district that remained as central spending.

Exhibit 15 also demonstrates the variation in school-level spending across districts. Average actual school-level expenses per pupil across all three years ranged from a low of $10,386 in Queen Anne's County to a high of $13,718 in Worcester County. The districts with active charter schools were dispersed throughout the range of school-level, per-pupil spending. Baltimore City ($12,769) was on the high side of the spending distribution, while St. Mary's

($10,463) and Frederick ($10,750) were on the low side. Anne Arundel ($11,223) and Prince George's ($11,451) were near the statewide average per-pupil spending level in the state ($11,706), shown in Exhibit 13.

When looking at spending per pupil on traditional schools by grade level, it is apparent that in a majority of districts, more was spent on middle school grades than schools with other grade configurations. This is true of all five districts that currently host charter schools. In Baltimore City, the additional spending on middle schools was particularly apparent, with $12,467 of spending per pupil on elementary schools, $15,800 of spending per pupil on middle schools, and $13,911 of spending per pupil on high schools. Schools with middle school grade configurations are quite uncommon in Baltimore City, however, where the most common grade configuration is Grades K–8. In the 2014–15 school year in Baltimore City, there were only five traditional schools with middle school grade configurations compared to 60 traditional schools serving Grades K–8. Schools serving Grades K–8 in Baltimore City had spending levels more on par with elementary schools than middle schools, with average per-pupil spending of $12,003. High per-pupil spending was evident for Grades K–8 in Somerset ($23,342) and Grades 6–12 in Washington ($18,838). However, these figures are based on a small number of schools and small enrollments. (The figures in parentheses show that on average over the three-year study period, there were only 12 students attending a single school serving Grades K–8 in Somerset and 273 students attending a single school serving Grades 6–12 in Washington.)

Exhibit 15. Average Expense per Pupil for Districts and Traditional Schools by District and School Grade Configuration From 2012–13 to 2014–15 (Average School Enrollment in Parentheses)

District Name	Districtwide Per-Pupil Expense	Average Traditional Per-Pupil Expense	Average Traditional Per-Pupil Expense by Grade Configuration				
			Elementary	Middle	High	Grades K–8	Grades 6–12
Allegany	$13,966	$12,050	$12,112 (4,363)	$12,706 (1,886)	$11,379 (2,242)	—	—
Anne Arundel	$12,712	$11,223	$11,198 (38,150)	$12,095 (16,197)	$10,572 (21,630)	—	$14,879 (241)
Baltimore City	$15,581	$12,769	$12,467 (17,176)	$15,800 (1,936)	$13,911 (10,312)	$12,003 (29,305)	$14,546 (5,608)
Baltimore County	$12,945	$10,956	$10,582 (54,050)	$11,666 (22,234)	$11,106 (27,191)	$11,367 (733)	—
Calvert	$12,936	$11,463	$11,464 (7,146)	$11,782 (3,776)	$11,234 (5,259)	—	—
Caroline	$12,231	$10,896	$10,497 (2,853)	$11,066 (1,214)	$11,524 (1,486)	—	—
Carroll	$12,630	$11,083	$11,634 (11,565)	$10,406 (5,919)	$10,774 (8,413)	$13,038 (124)	—
Cecil	$12,132	$11,020	$10,835 (7,601)	$11,418 (3,465)	$11,027 (4,609)	—	—
Charles	$12,961	$11,741	$11,543 (11,958)	$12,126 (5,807)	$11,755 (8,621)	—	—
Dorchester	$12,942	$11,066	$10,793 (2,335)	$11,115 (932)	$11,406 (1,254)	$11,919 (196)	—
Frederick	$12,278	$10,750	$10,762 (17,389)	$10,886 (6,518)	$10,707 (12,388)	$9,919 (1,417)	$11,039 (2,162)
Garrett	$14,204	$12,273	$11,398 (1,830)	$13,056 (851)	$13,035 (1,165)	$13,412 (40)	—
Harford	$12,448	$10,873	$10,714 (17,650)	$11,153 (8,413)	$10,916 (10,281)	—	—
Howard	$14,397	$12,533	$12,876 (24,716)	$12,772 (11,899)	$11,842 (16,359)	—	—
Kent	$14,520	$12,799	$12,913 (1,056)	$11,194 (440)	$13,775 (601)	—	—
Montgomery	$14,440	$12,826	$12,806 (69,306)	$13,305 (29,169)	$12,578 (44,866)	$12,300 (5,229)	$13,228 (3,187)
Prince George's	$13,978	$11,451	$10,802 (24,643)	$12,201 (18,419)	$11,644 (34,315)	$11,347 (42,771)	—
Queen Anne's	$11,479	$10,386	$10,335 (3,591)	$11,016 (1,408)	$10,040 (2,296)	$10,598 (446)	—
St. Mary's	$11,778	$10,463	$10,778 (8,736)	$10,758 (3,666)	$9,693 (4,980)	—	—
Somerset	$14,262	$12,525	$12,446 (1,551)	$13,504 (409)	—	$23,342 (12)	$12,087 (920)
Talbot	$11,485	$10,928	$10,838 (2,015)	$10,121 (788)	$10,945 (1,077)	$11,267 (324)	$12,640 (402)
Washington	$12,456	$10,989	$10,811 (10,674)	$11,116 (4,914)	$10,844 (5,939)	—	$18,838 (273)
Wicomico	$12,834	$11,509	$10,926 (7,187)	$12,810 (2,464)	$11,724 (3,477)	$12,186 (628)	$11,206 (646)
Worcester	$15,702	$13,718	$13,203 (2,433)	$12,792 (624)	$13,603 (1,961)	$15,040 (1,552)	—

— Not applicable
Note: The sample for this exhibit includes all traditional public schools in total and within each grade range. For school and enrollment counts for traditional schools in total and by grade range, see Exhibits A7 and A9.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

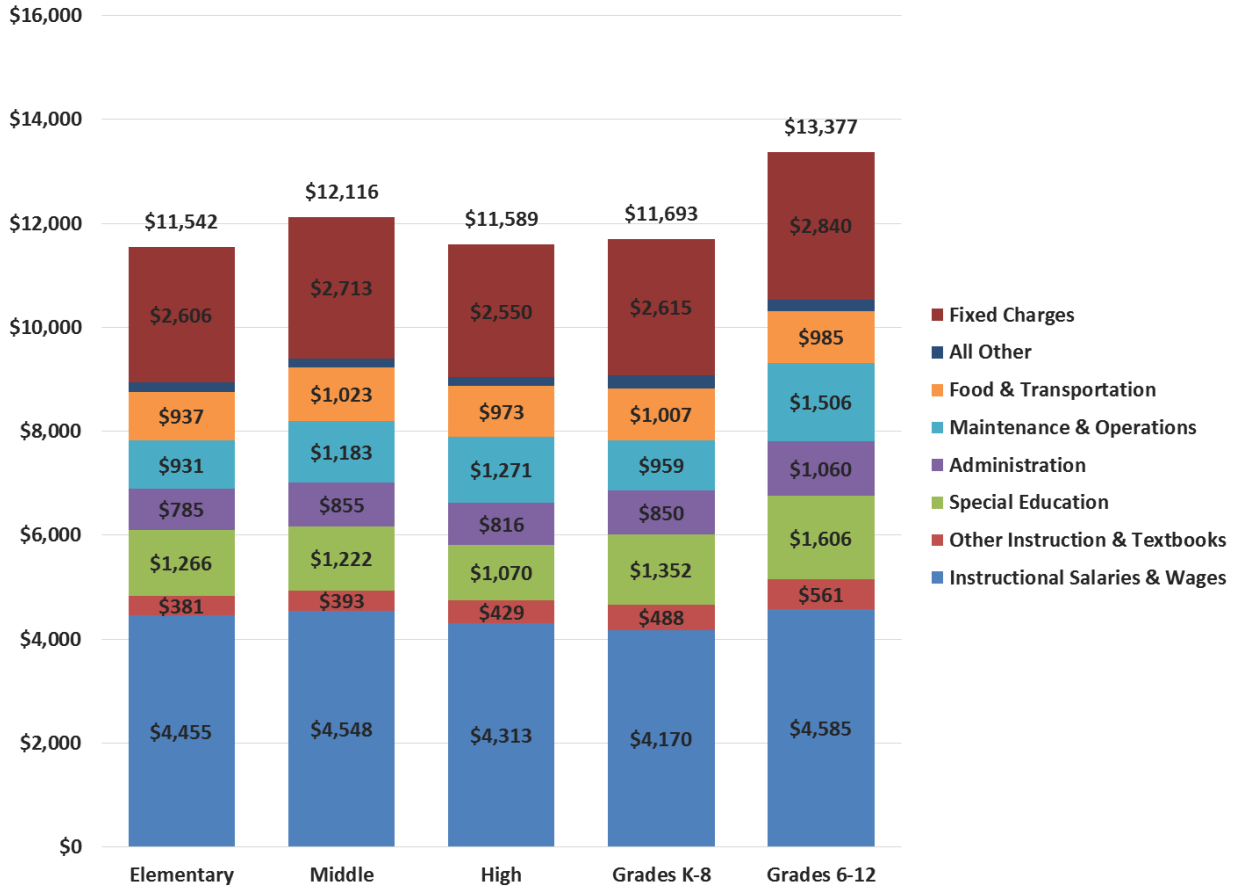
Spending on Traditional Public Schools by State Chart of Account Category

Exhibit 16 shows the statewide average actual expense per pupil at the school level, broken out by state COA category across the five school grade configurations.[20,21] There were fairly consistent spending patterns across schools of varying grade configurations, with instructional salaries and wages making up the largest share of spending, followed by fixed charges. There was some variation in special education and M&O spending across schools with different grade configurations, where special education spending was lower but M&O spending was higher for high schools compared to schools with other grade configurations. Interestingly, the results also indicate that spending on both M&O and food and transportation is less in elementary schools than in schools with other grade configurations.

[20] As opposed to being used generically, the term "category," which appears here and in the material that follows, is used in a technical sense, referring to a specific code in the state COA. In some cases, we have collapsed (aggregated) spending across COA categories (e.g., other instruction and textbooks).

[21] When comparing across grade configurations, it is important to remember that schools serving Grades K–8 and Grades 6–12 are not evenly dispersed across districts and are in fact strongly concentrated in a few districts. Schools serving Grades K–8 are predominantly concentrated in Baltimore City and Prince George's County, and schools serving Grades 6–12 are mostly found in Baltimore City and Montgomery County. See Appendix A for detailed enrollment and school counts by charter status, grade configuration, district, and year.

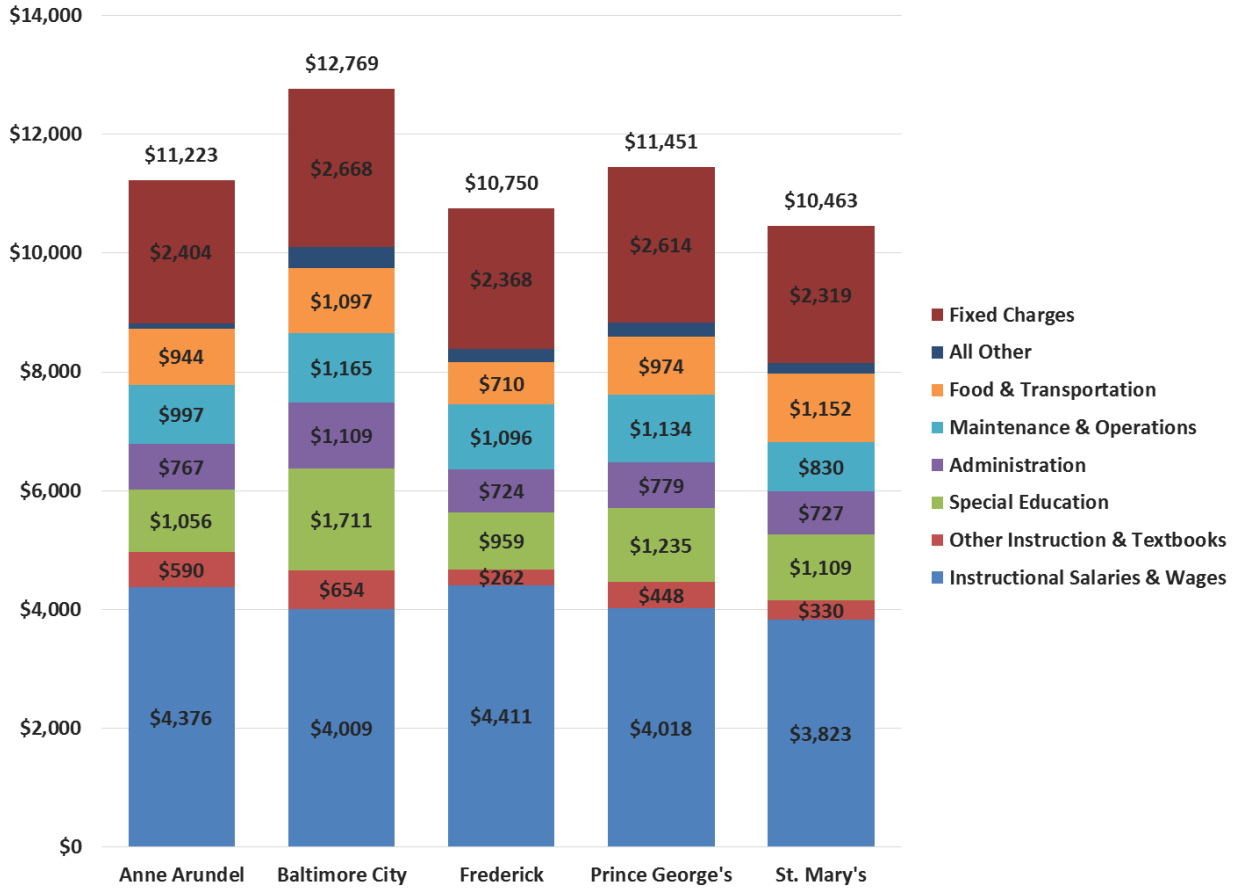
Exhibit 16. Statewide Average Expense per Pupil for Traditional Schools by State Chart of Account Category (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional public schools within each grade range. For school and enrollment counts for traditional schools by grade range, see Exhibit A4.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Although the differences across schools with different grade configurations were fairly small on average, there were some important differences in spending patterns across districts. Exhibit 17 shows the average per-pupil spending across all grade configurations, by groupings of state COA expenditure categories, in the five districts with active charter schools. Despite being the highest spending of the five districts, Baltimore City had the second lowest spending in the instructional salaries and wages category, only spending more than St. Mary's County—the lowest spender of the five districts. At an average expense of $1,711 per pupil, Baltimore City schools spent far more in the special education category compared to the other districts that had active charters—almost $500 per pupil more than the next highest special education spender, Prince George's County. Baltimore City also spent over $300 more per pupil in the administration category, compared to other districts that have charter schools.

Exhibit 17. Average Expense per Pupil for Traditional Schools Broken Out by State Chart of Account Category Across Districts With Active Charter Schools (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional public schools within the five districts. For school and enrollment counts for traditional schools within the five districts, see Exhibit A7.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Central Spending

Although this study focused on the spending that is attributed to schools, it is important to recognize that a portion of spending is typically spent at the central district office. This is the spending that is neither attributed nor allocated to school sites and remains as central spending in our data. On average across all districts, centrally maintained expenditures were $854 per pupil. As seen in Exhibit 18, the amount of central spending per pupil varied widely by district, from a high of $1,562 in Baltimore City to a low of $268 in Carroll County. The two COA categories contributing most to central spending were administration and special education, with statewide averages measuring $405 and $279 per pupil, respectively.

Exhibit 18. Average Centralized Expense per Pupil Broken Out by State Chart of Account Category Across Districts (2012–13 to 2014–15)

District Name	Total Central	Administration	Instruction	Special Education	Maintenance & Operations	Transportation & Food	All Other	Fixed Charges
Allegany	$1,038	$300	$130	$491	$30	$8	$0	$79
Anne Arundel	$784	$341	$30	$298	$13	$4	$0	$98
Baltimore City	$1,562	$741	$38	$545	$62	$4	$0	$172
Baltimore County	$998	$469	$33	$349	$17	$6	$0	$124
Calvert	$528	$306	$17	$110	$24	$0	$0	$70
Caroline	$641	$287	$36	$243	$10	$3	$0	$62
Carroll	$268	$176	$16	$8	$9	$0	$0	$59
Cecil	$567	$272	$31	$195	$5	$2	$0	$62
Charles	$571	$335	$22	$123	$16	$0	$0	$76
Dorchester	$646	$439	$52	$13	$21	$1	$0	$119
Frederick	$522	$224	$7	$219	$9	$0	$0	$62
Garrett	$545	$396	$33	$20	$7	$0	$0	$90
Harford	$596	$259	$14	$219	$17	$1	$0	$87
Howard	$867	$431	$190	$155	$20	$3	$0	$68
Kent	$866	$657	$54	$11	$4	$0	$0	$140
Montgomery	$781	$384	$8	$259	$7	$2	$0	$121
Prince George's	$1,006	$426	$46	$413	$17	$0	$0	$103
Queen Anne's	$513	$343	$21	$48	$2	$2	$0	$97
St. Mary's	$445	$320	$13	$0	$23	$3	$0	$86
Somerset	$657	$452	$60	$7	$29	$2	$0	$107
Talbot	$1,152	$237	$849	$4	$4	$1	$0	$58
Washington	$618	$345	$43	$131	$25	$6	$0	$69
Wicomico	$629	$380	$136	$28	$7	$3	$1	$75
Worcester	$453	$250	$92	$19	$28	$0	$0	$63
Statewide Average	$854	$405	$45	$279	$19	$3	$0	$104

Note: In this table, instruction expense includes all instructional categories from the state COA (instructional salaries and wages, textbooks and instructional materials, and other instruction).
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Average Actual Charter School Expenses

Actual Spending on Charter Schools

This section presents actual charter school expenses per pupil, calculated as the sum of the dollars captured in the School Site Spending Database that have been attributed and allocated to charter schools divided by enrollment. Exhibit 19 summarizes, for each district with active charter schools, the average actual charter school expense per pupil. To provide a frame of reference, the table also shows the districtwide current operating expense per pupil for each of the three study years. Of the five Maryland districts with active charter schools, Baltimore City and Prince George's County contained the most significant number of charter schools, with Baltimore City hosting between 31 and 33 in each year and Prince George's County hosting between 7 and 10 each year. No other district had more than three charter schools in any year.[22]

The exhibit shows that the average actual (summed attributed and allocated) expense per pupil for charter schools in almost all districts and study years was less than the districtwide per-pupil expense. This was also the case for traditional schools in all districts. In Baltimore City, for example, the average actual charter per-pupil expense was $12,858 in 2015, compared to a districtwide per-pupil operating expense of $15,642. As discussed in the previous section, the average spending on traditional schools in the district was also less than $15,642, as a result of the omission of special schools (e.g., standalone special education schools) and unattributed central spending from the traditional/charter school calculations. The pattern was similar for Prince George's County, which had a districtwide per-pupil expense of $14,343 in 2015 and charter school actual expense per pupil of $10,844. The one exception was Anne Arundel County in the 2012–13 school year, where charter spending was higher than the districtwide spending per pupil. This is due to the rather high spending on charter schools in Anne Arundel, which (as we show later) is substantially higher than spending on traditional schools.

When examining charter school spending by school grade configuration, it is apparent that spending on middle and high school public charter schools, as well as those serving Grades 6–12 in Baltimore City, are generally upwards of $1,000 per pupil more than spending on elementary public charter schools. In contrast, charter schools serving Grades K–8 had expenses that were more similar to elementary charter schools. Differential charter school spending across the grade configurations was not nearly as pronounced in Prince George's County.

[22] Frederick County had two charter schools in 2013 and three in both 2014 and 2015. Anne Arundel had two in all three years, and St. Mary's had one in all three years.

Exhibit 19. Average Expense per Pupil for Charter Districts and Charter Schools by District, Year, and Grade Configuration (2012–13 to 2014–15)

District	Year	Districtwide Per-Pupil Expense	Average Charter Per-Pupil Expense	Average Charter Per-Pupil Expense by Grade Configuration				
				Elementary	Middle	High	Grades K–8	Grades 6–12
Anne Arundel	2013	$12,504	$12,996	—	—	—	$13,451	$12,384
	2014	$12,784	$12,755	—	—	—	$12,515	$13,104
	2015	$12,844	$12,514	—	—	—	$12,458	$12,596
Baltimore City	2013	$15,290	$12,790	$12,043	$13,942	$13,632	$12,489	$14,438
	2014	$15,813	$12,735	$12,485	$13,898	$13,577	$12,471	$13,510
	2015	$15,642	$12,858	$12,534	$14,438	$13,633	$12,583	$13,457
Frederick	2013	$12,074	$8,708	$7,377	—	—	$9,292	—
	2014	$12,318	$8,470	$6,484	—	—	$9,127	—
	2015	$12,442	$9,366	$8,069	—	—	$9,794	—
Prince George's	2013	$13,831	$10,147	$10,861	$10,349	—	$9,874	—
	2014	$13,754	$10,938	$10,265	$10,697	—	$11,154	$10,582
	2015	$14,343	$10,897	$10,173	$10,782	—	$10,988	$11,548
St. Mary's	2013	$11,767	$11,766	—	—	—	$11,766	—
	2014	$11,860	$11,442	—	—	—	$11,442	—
	2015	$11,706	$11,277	—	—	—	$11,277	—

— Not applicable
Note: The sample for this exhibit includes all charter public schools within the five districts in total and by grade configuration. For school and enrollment counts for charter schools in the five districts, see Exhibits A8 and A12.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

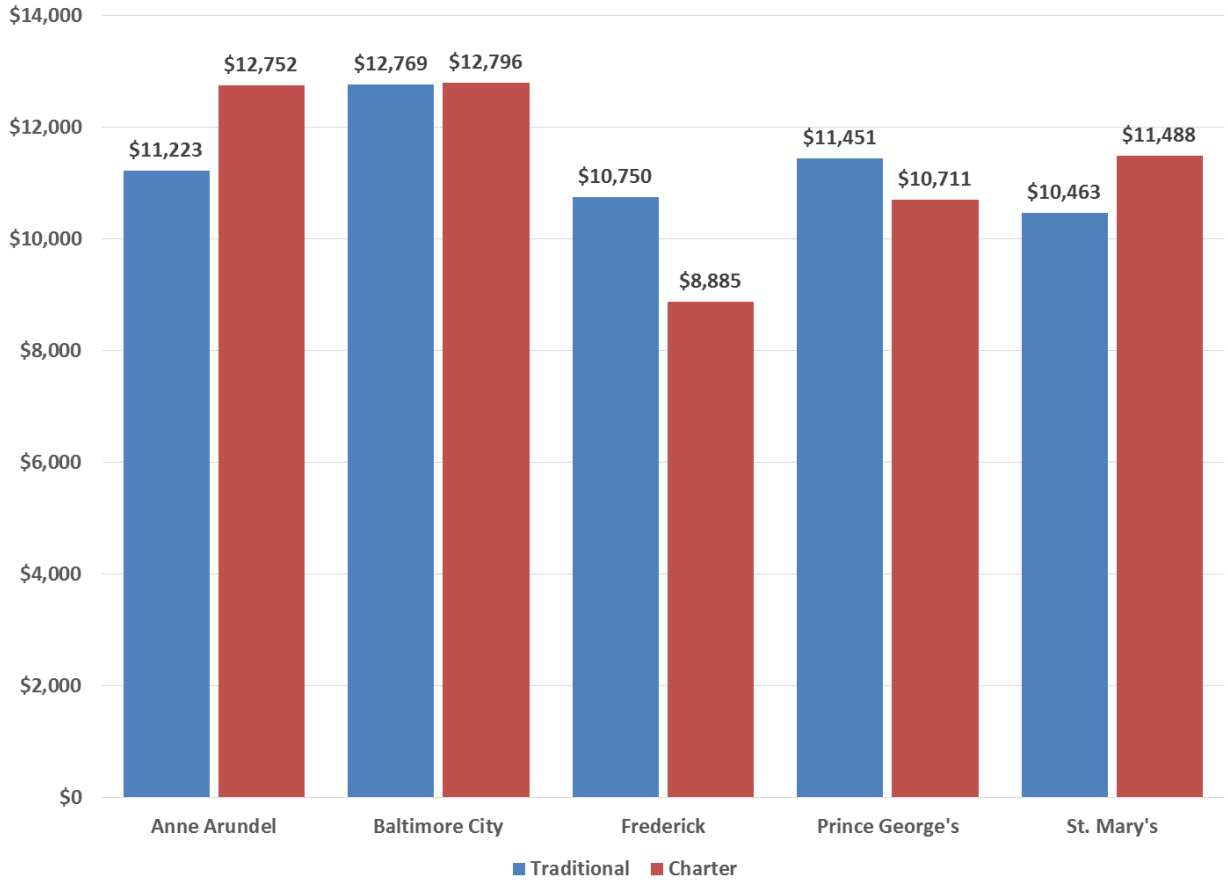
Comparison of Spending on Charter and Traditional Public Schools

Exhibit 20 presents the average actual spending per pupil on traditional and charter public schools across the five Maryland districts with active public charter schools. Unlike the table above, which lists only the districtwide charter averages, Exhibit 20 includes average actual expenses per pupil within each district on traditional schools alongside those on charter schools. When averaged across all school grade configurations for the 2012–13 through 2014–15 school years, we see that in Anne Arundel and St. Mary's Counties, more was spent on charter schools on average than their traditional public school counterparts, while in Frederick and Prince George's Counties, less was spent on charter schools. In Baltimore City, there was less than a $30 difference in average per-pupil spending on charter and traditional public schools. However, it is important to note that these averages do not account for any potential systematic differences in grade configuration or the needs of the students served in the traditional schools versus the charter schools.[23]

[23] The following analysis provides results that take into account differences with respect to grade configuration, and the following chapter offers an analysis that addresses differences with respect to student needs.

The district that had the largest difference in average spending between traditional and charter schools was Frederick, where actual spending on charter schools per pupil was $1,865 less than on traditional schools. This is due to the fact that certain charter schools in Frederick appear to have had particularly low per-pupil expenditures (e.g., actual per-pupil spending on Carroll Creek Montessori for the 2013-14 school year was $6,484). Further investigation shows that the explanation for the low figures is that two of the three charter schools in Frederick enrolled substantial numbers of Pre-K students. As shown in Exhibit A13 in Appendix A, only Baltimore City and Frederick had charter schools that are currently active with Pre-K enrollment.[24] In both of these districts, funds are only provided for K-12 students as part of the PPA.[25]

Exhibit 20. Average Expense per Pupil for Traditional and Charter Schools, by School District (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools disaggregated by school type within the five districts. For school and enrollment counts by district and school type, see Exhibit A7.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

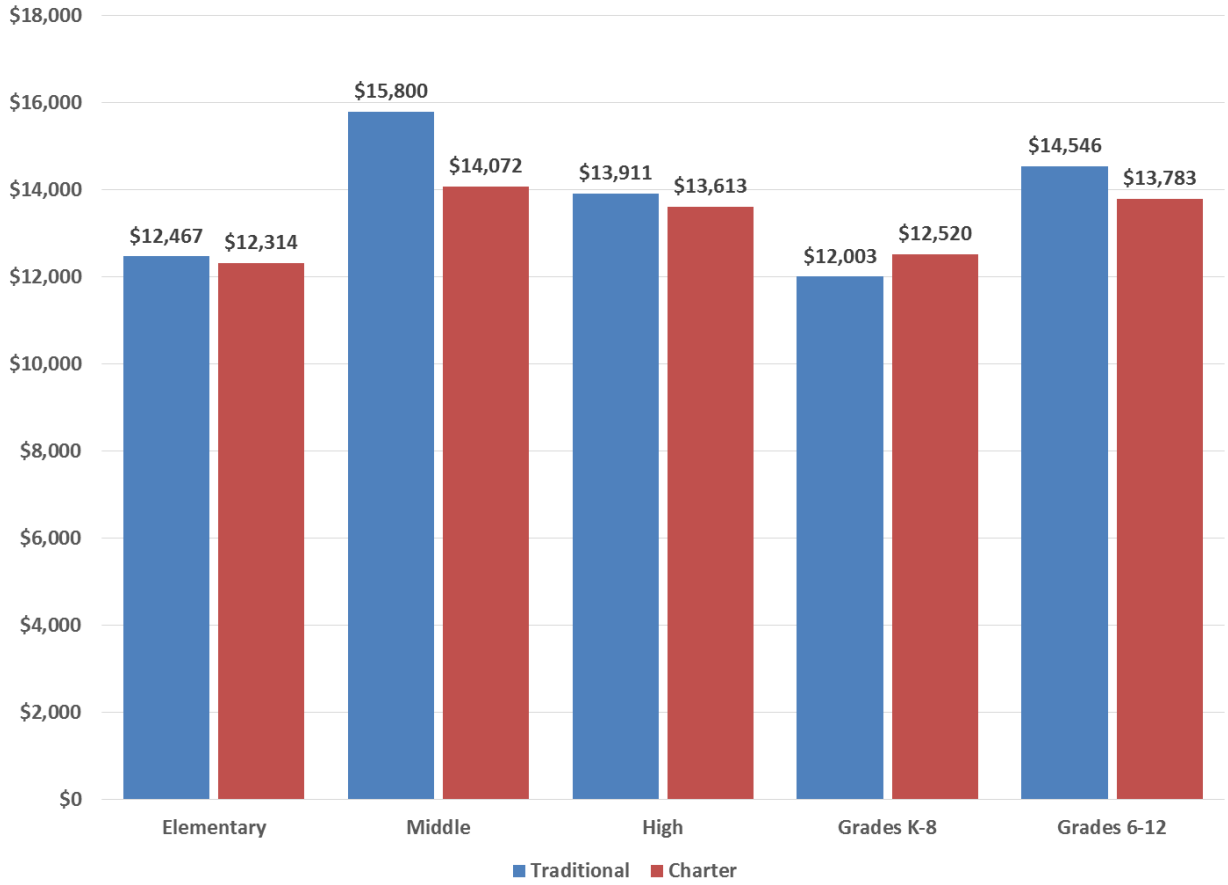
However, Baltimore City provides resources for charter school Pre-K students outside of the PPA, largely in the form of staffing allocations, the cost of which are accounted for in the results presented here. In contrast, Frederick does not provide additional services to its charter schools

[24] Community Montessori Charter School in Montgomery County also contained Pre-K enrollment. This school closed following the 2013-14 school year.
[25] Detailed descriptions of the PPA formulas used across the districts with charter schools are included in Chapter 5.

that serve Pre-K students. Therefore, we see a substantial average spending difference between charter schools and traditional schools in Frederick due to schools serving Pre-K students, but not in Baltimore City.

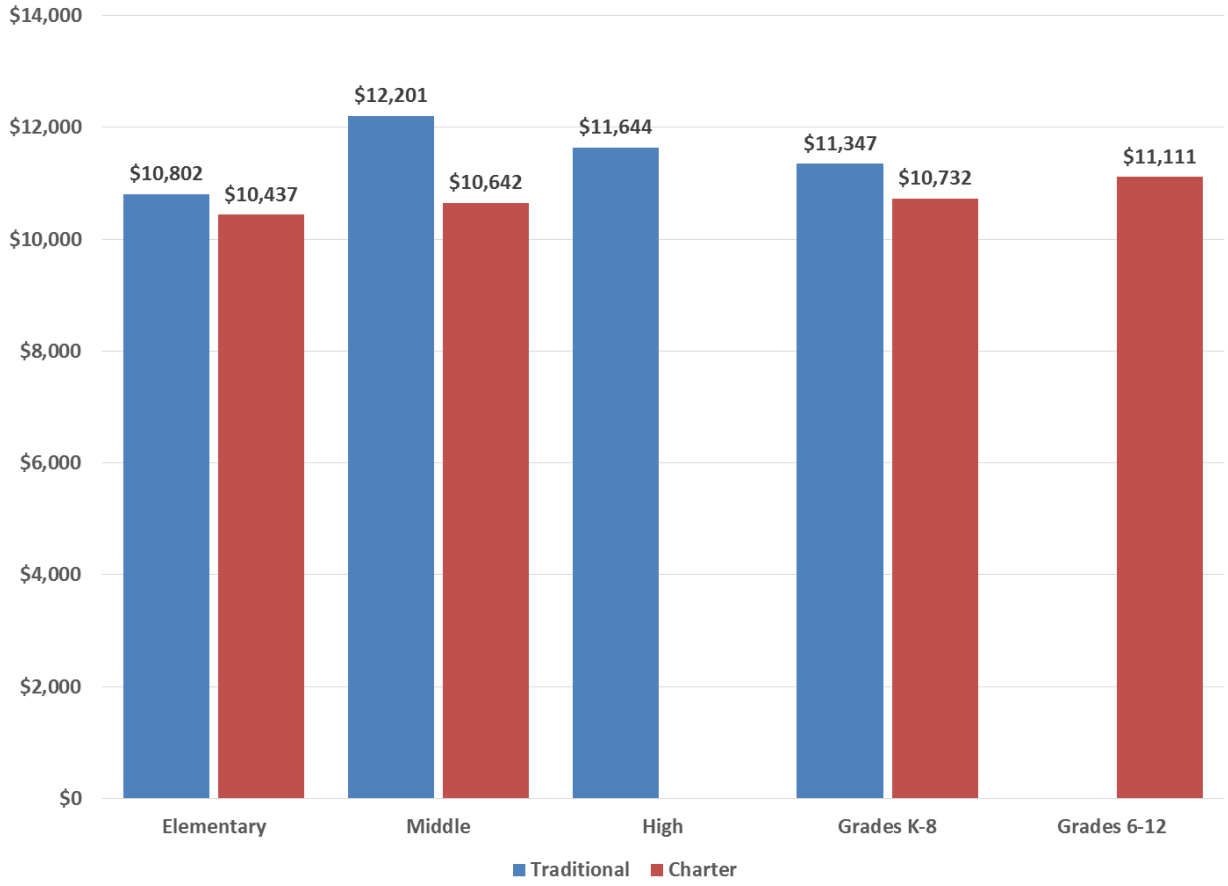
Exhibits 21 and 22 provide column charts of the average actual expense per pupil for traditional and charter schools by school grade configuration in Baltimore City and Prince George's County, respectively. Here, it appears that the average per-pupil expense for charter schools in Baltimore City was most similar to that of traditional schools at the elementary level and tended to be lower than traditional middle schools, high schools, and schools serving Grades 6–12. However, average per-pupil spending on charter schools serving Grades K–8 was higher than on traditional schools with that grade configuration. Exhibit 22 shows that in Prince George's County, spending on charter schools tended to be less than on traditional counterparts across all three grade configurations for which this comparison can be made. As with the previous comparisons of charter and traditional school spending, these are averages and do not account for differences in the needs of the students served by these two types of schools.

Exhibit 21. Average Expense per Pupil for Traditional and Charter Schools in Baltimore City, by Grade Configuration (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within each grade range disaggregated by school type. For school and enrollment counts by grade range and school type, see Exhibits A9 and A10.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 22. Average Expense per Pupil for Traditional and Charter Schools in Prince George's County, by Grade Configuration (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within each grade range disaggregated by school type. For school and enrollment counts by grade range and school type, see Exhibits A9 and A10.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

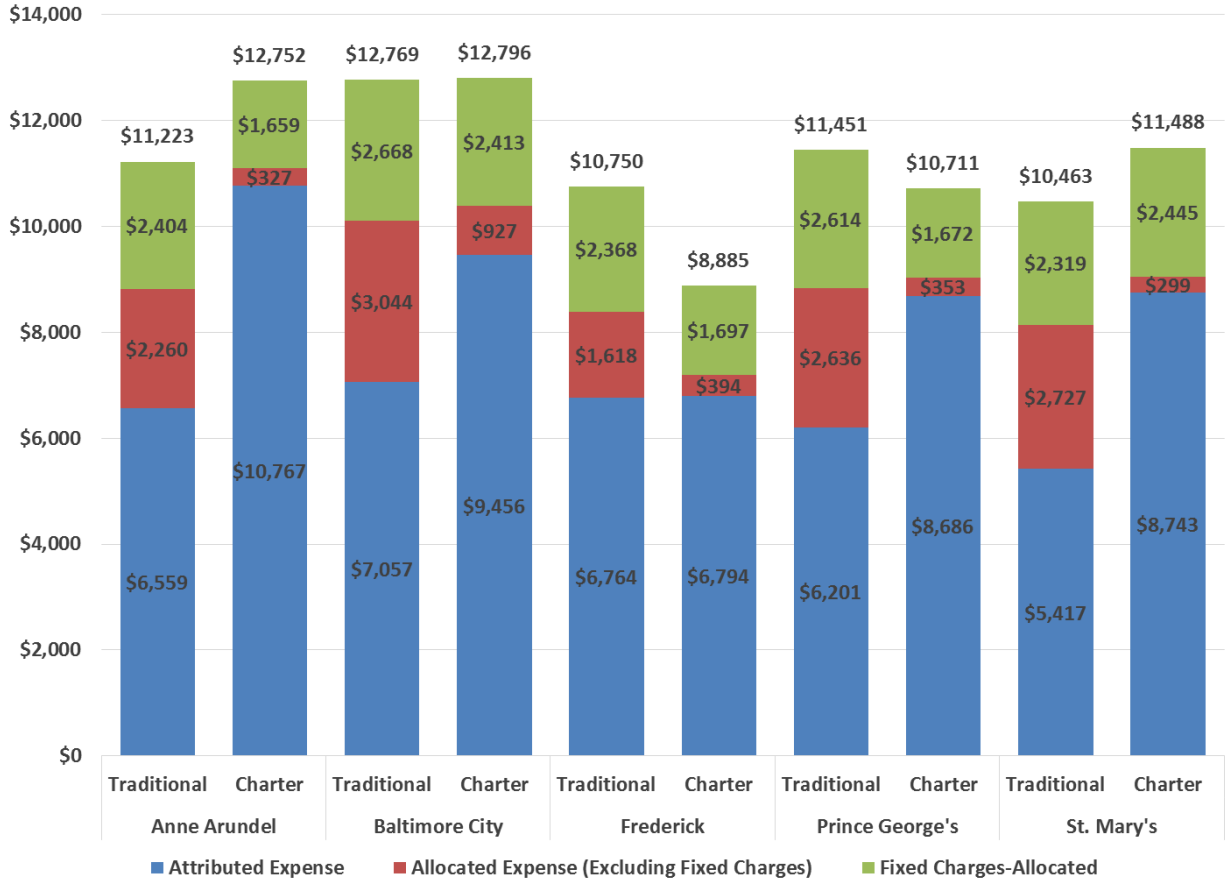
Comparison of Attributed and Allocated Spending for Charter and Traditional Public Schools

As was shown in Chapter 2, the average expenses attributed to school sites accounted for a slightly larger share of overall spending than the share of expenses allocated to schools. When we examined more deeply the patterns of spending attribution and allocation by school type (traditional versus charter), we saw that there were major differences between the two types of schools in the share of expenses attributed rather than allocated to schools. As shown in Exhibit 23, a much larger share of expenditures was attributed directly to charter schools compared to traditional public schools. Across districts with active charter schools, $5,417 to $7,057 of the total school-level per-pupil expense was attributed to schools, accounting for 52 to 63% of spending on traditional schools. In contrast, the average per-pupil expense attributed to charter schools ranged from $6,794 to $10,767, accounting for 76% to 84% of spending on charter schools.

Alternatively, allocated non-fixed charge expenses—represented by the red portion of the bars in Exhibit 23—were much larger in traditional compared to charter schools. Across districts with charter schools, the allocated non-fixed charge portion of spending for traditional schools was at least $1,618 and was as much as $3,044 of total spending. For charter schools, the allocated non-fixed charge portion of spending was less than $1,000 in all districts and was less than $400 in all districts except Baltimore City.

The difference in shares of attributed and allocated expenses between traditional and charter schools reflects differences in how services and funding are provided to these types of schools. Traditional public schools were provided a larger share of resources in the form of central support services than their charter school counterparts. The cost of these centrally managed services is represented by the portion of non-fixed charge dollars that are allocated rather than attributed to schools. In contrast, charter schools relied less on central support services, but instead received—and spent—a larger share of their resources in the form of dollars that are directly attributable to their school. This largely comes in the form of the per-pupil allocation for charter schools, which is discussed further in Chapter 5.

Exhibit 23. Expenses Attributed and Allocated to Traditional and Charter Schools (2012–13 to 2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools within the five districts disaggregated by school type. For school and enrollment counts by district and school type, see Exhibit A7.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Charter School Spending by State Chart of Account Category

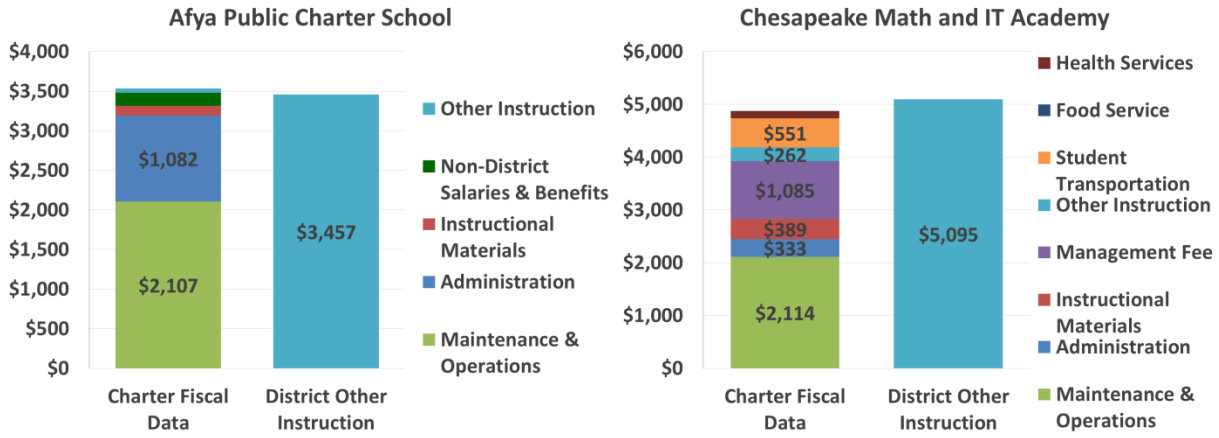
When examining charter school spending from the School Site Spending Database, broken out by state COA category (Exhibit 24), we see interesting differences across districts. For instance, in Baltimore City and Prince George's County, there was an inordinately large amount of spending categorized as "other instruction." However, this is highly misleading. In follow-up conversations conducted for this study, officials from both districts indicated that the large amount of spending categorized as "other instruction" was associated with expenditures made by charter schools using the cash payout from their per-pupil allocation. Both Baltimore City and Prince George's County categorize all costs that flow through the district but do not require charter schools to track spending from their cash payout by state COA category. Therefore, in reality, a large portion of the reported "other instruction" expense in Prince George's County and Baltimore City represented spending that was attributed to charter schools but not identified using an accurate COA category.

Exhibit 24. Average Charter School Expense by State Chart of Accounts Category (All Grade Configurations, 2012–13 to 2014–15)

Note: The sample for this exhibit includes all charter public schools within each of the five districts. For school and enrollment counts for charter schools by district, see Exhibit A7.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

For Baltimore City and Prince George's County, Charter School End-of-Year Expense Reports allowed us to look at charter school expenses in more detail. In particular, we attempted to align the expenses supported by per-pupil allocation cash payouts to charter schools that were categorized as "other instruction" in the District End-of-Year Fiscal Data (Exhibit 24) with the more detailed information on charter school spending contained in the Charter School End-of-Year Expense Reports. As shown in Exhibit 25, the results of this comparison suggest that the majority of expenses from the cash payout in both Baltimore City and Prince George's County (appearing under "other instruction" in Exhibit 24) were administration and M&O expenses. Specifically, the exhibit provides examples where we isolate spending information reported in the Afya Public Charter School (Baltimore City) and Chesapeake Math and IT Academy (Prince George's) End-of-Year Expense Reports on expenses supported by the per-pupil allocation that were not processed by the districts' procurement systems (these expenses consisted of virtually all school-level staff who were considered district employees). We compare these expenses to the "other instruction" spending supported by the per-pupil allocation identified in the District End-of-Year Fiscal Data. For both charter schools, the dollar amounts per pupil from the two data sources matched very closely. In addition, for both charter schools, M&O accounted for the largest portion of the compared expense. For Afya, administration accounted for most of the remaining expense, as indicated by the charter school fiscal data. For Chesapeake Math and IT, the remainder of the compared expense was mostly accounted for by the charter management fee—a form of administration expense—followed by student transportation, instructional materials, and administration. Although not shown here, most other charter schools in Baltimore City and Prince George's County followed similar patterns with respect to expenses devoted to administration and M&O.

Exhibit 25. Comparison of Per-Pupil Spending in Charter Expense Reports to "Other Instruction" in the District Fiscal Data for Afya and Chesapeake Math and IT Academy Charter Schools (2012–13 to 2014–15)



Source: District End-of-Year Fiscal Data and Charter School End-of-Year Expense Reports

In contrast with Baltimore City and Prince George's County, the other three counties with active charter schools reported charter school spending by state COA categories (even for the cash payouts to charters). Therefore, we can evaluate the spending by the state COA category code reported above in Exhibit 24 for Anne Arundel, Frederick, and St. Mary's Counties at face value. In all three counties, M&O costs were near or above $2,000 per pupil—about twice that of

traditional schools seen in these districts (see Exhibit 17). This is similar to the amounts seen in the Afya and Chesapeake Math and IT Academy fiscal data presented for Baltimore City and Prince George's County in Exhibit 25.

Although the categorization of cash payouts as "other instruction" in Baltimore City and Prince George's distorts (underestimates) the amount of expenditures reported in certain COA categories—such as administration and M&O—it should not have an impact on the instructional salaries and wages or special education categories, as the district is responsible for paying the costs in these categories in both Baltimore City and Prince George's County. Therefore, these expense categories should be interpreted similarly across all districts. In Anne Arundel, Frederick, and Prince George's, charter school spending in the instructional salaries and wages category was markedly lower than the levels seen in Baltimore City and St. Mary's.

In addition to comparing average charter school spending across districts, we compared charter expenses by category (shown in Exhibit 24) with those seen in traditional schools (shown in Exhibit 17). We found that for Anne Arundel, Frederick, and Prince George's, average per-pupil spending in the instructional salaries and wages category in charter schools was notably less than that seen in traditional public schools. In contrast, charter school spending in the instructional salaries and wages category in Baltimore City and St. Mary's County was higher than that seen in the traditional public schools.

There was substantial variation in average per-pupil spending on special education in charter schools across districts, from a high of $1,357 in Baltimore City to a low of $315 per pupil in St. Mary's. In all districts, average spending per pupil on special education was lower in charter schools than in traditional schools. This is not altogether unexpected, as the charter schools in most of these counties enrolled lower proportions of special education students. Furthermore, of the special education students attending charter schools, fewer had severe needs compared to special education students attending traditional public schools. The one exception to this rule is Anne Arundel, where the charter schools enrolled slightly more special education students, with similar proportions of students considered mild and severe. In spite of this, however, charter schools in Anne Arundel spent approximately $300 less per pupil on special education than traditional schools.

Revenues of Traditional and Charter Public Schools

In this section, we discuss revenues for traditional and charter schools. We start by presenting federal and state funding opportunities that can be used to support traditional and charter schools in Maryland. We then show average district-level per-pupil amounts and shares of revenue from state, federal, and local sources. Information is then presented from Maryland local school systems about how they support charter schools with the federal funding they receive. Finally, we examine variation across charter schools in the amount of revenue raised from private sources.

Revenue Sources Available to Maryland Districts and Schools

In Maryland, federal-, state-, and county-level funds each contribute to overall education spending levels for both traditional and charter schools. As a result, charter schools in Maryland

are subject to the same federal, state and local laws, policies and regulations as traditional public schools, except in cases where a charter school has received an approved waiver from the county authorizing board or State Board of Education. The following describes the main sources of federal and state program funding available to Maryland districts and schools with a focus on those federal grant opportunities designed to support charter schools.

Federal Revenue Sources

The federal government uses the Elementary and Secondary Education Act (ESEA) to provide funding to support student achievement, particularly for students that are struggling academically or with specific educational needs (e.g., students from low-income families, English learners, those with disabilities). First enacted in 1965, the ESEA was reauthorized as No Child Left Behind (NCLB) in 2002 and most recently as the Every Student Succeeds Act (ESSA) in 2015. Although each reauthorization has changed some of the elements and requirements of the law, the basic funding structure remains the same. In 2015, the state of Maryland received more than $277 million through ESEA grants. That number is expected to rise to more than $305 million by the 2017 fiscal year (U.S. Department of Education, 2016a). In addition, Maryland received more than $197 million in funding through the Individuals with Disabilities Education Act (IDEA) Part B in 2015 to be used for special education.

For many federal education funding programs, the federal government first awards a grant to state education agencies (SEAs) such as MSDE, and the SEA then distributes those funds through subgrants to local education agencies (districts) in accordance with the particular requirements of that program. Districts in turn use their subgrants to provide funding and/or services to local schools. In some states, public charter schools are considered their own district and receive federal dollars by applying directly to the state. However, in Maryland, charter schools are not considered their own district as they each fall under the auspices of a local school system. In Maryland, the 24 local school systems are responsible for applying to the state for a subgrant and then distributing those federal dollars (or federally funded services) to both charter schools and traditional schools within their jurisdiction.

Maryland charter schools are generally eligible for federal funding opportunities in the same manner as their traditional public school counterparts. Indeed, for schools that meet the federal definition of a public "charter school,"[26] ESSA requires that SEAs such as MSDE ensure charter schools receive federal funds for which they are eligible no later than five months after those schools open for the first time or significantly expand their enrollment.[27] This includes all "Federal-to-State Formula Funds" or US Department of Education (ED) programs where funds are allocated on a formula basis such as: Title I, Part A and Title II of the ESEA, Part B of IDEA, and grants under the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins) (U.S. Department of Education, 2000).

[26] For the full federal definition of a public "charter school," see Section 4310 of the ESEA, as amended by ESSA, available here: http://www2.ed.gov/documents/essa-act-of-1965.pdf.
[27] See Section 4306 of the ESEA, as amended by ESSA, available here: http://www2.ed.gov/documents/essa-act-of-1965.pdf.

The federal government offers numerous grant programs designed to support K–12 education. Some of the largest sources of federal funding available to support traditional and charter public schools in Maryland include the following:

- **Title I, Part A** funds provide assistance to school districts with high percentages of children from low-income families in an effort to support the academic achievement of disadvantaged students. Funds pass from ED to SEAs through a series of formula grant measures and then to districts with Title I eligible schools that provide a written plan for how they will use the funds to improve the academic achievement of disadvantaged students. Districts must direct their Title I, Part A funds to schools that serve the highest percentages of students from low-income families. Schools in which at least 40% of students come from low-income families can use Title I funds for schoolwide programs that are designed to improve educational outcomes for all students in the school, particularly those who are struggling academically. Schools with lower concentrations of disadvantaged students must focus their Title I funds on improving services and outcomes for students most at-risk (U.S. Department of Education, 2011). Title I funds tend to account for Maryland's largest source of federal dollars. In fiscal year 2015, Maryland received $207 million in Title I funds, which represented 40% of the state's federal funding for that year (Maryland Department of Legislative Services, 2014).
- **Title II** of the ESEA provides funds to states that apply for the associated grant opportunities to support the recruitment and development of high quality teachers and school leaders. To qualify for Title II grants, districts apply for a subgrant from the state. In its application, each district proposes evidence-based activities that are aligned with the state's goals for improving academic achievement. According to federal guidelines, charter schools can be eligible to receive Title II grant funds in two ways: either by being included in a district's grant application or, if they are their own district, applying directly to the state for funds (U.S. Department of Education, 2006). Because there are no Maryland schools that are their own district, they must therefore be included in the district's grant application.
- **Title III** of the ESEA provides funds to states to improve education for English learners (ELs)—also known in Maryland as ESL students—and immigrant youth. Title III funds are disbursed to states based on a formula that takes into account the number of EL and immigrant students in the state. States in turn issue subgrants to support districts' implementation of evidence-based language instruction educational programs that help ELs become proficient in English and meet academic achievement standards. As with Title II, federal Title III regulations allow charter schools to receive Title III funding either through their district's application to the state in cases where charter schools are considered part of a larger school district or through their own application to the state in cases where charter schools constitute their own LEA (U.S. Department of Education, 2007). Because Maryland charter schools are all considered part of their local school district, they receive Title III funding or Title III-funded services through their district's application to the state.
- **IDEA** provides funds to enable Maryland and its districts to improve and expand educational programs for students with disabilities. The state requires charter schools to serve all students, including those with disabilities, on a non-discriminatory basis, and it

therefore requires charter schools to be able to fulfill all of the responsibilities associated with educating students with disabilities.

IDEA allocates funds to states based on the number of elementary and secondary school age children with disabilities in the state. In fiscal year (FY) 2015, Maryland received approximately $190 million dollars in IDEA funds, which represented 37% of the state's federal funding for that year (Maryland Department of Management and Budget, 2016). States must pass the majority of their IDEA funding on to districts who then use the funds to support special education and related services for disabled students. Section 613(5) of IDEA requires that districts serve students with disabilities who attend public charter schools in the same manner as they serve such students in traditional public schools, which includes providing services on site at the charter school to the same extent to which traditional schools provide services on site. In addition, districts must distribute IDEA funds to public charter schools at the same time as traditional public schools, proportionally based on the relative enrollment of children with disabilities.[28]

- The **Carl D. Perkins Career and Technical Education Improvement Act of 2006** promotes the development and expansion of career and technical education programs at the secondary and postsecondary levels. It awards grants to states, which determine how to divide the funding between districts with secondary schools and postsecondary institutions. States may distribute the funds to local programs using either a needs-based formula specified in the law or an alternate formula that targets disadvantaged schools and students. Nearly $13 million dollars were granted to Maryland in FY 2014 to provide for career and technical education in the state (Maryland Department of Management and Budget, 2016).
- The **E-rate Program**, overseen by the Federal Communications Commission, provides funding and discounts to U.S. schools and libraries to reduce costs associated with telecommunications and internet access. Eligible elementary and secondary schools (including traditional public schools and public charter schools), school districts, and libraries can apply for E-rate assistance either individually or as part of a consortium, and the program gives priority to applicants that serve high-poverty communities. The program provides discounts that cover from 20% to 90% of the eligible service, depending on the school or library's level of poverty and whether it is located in an urban or rural area.

Federal Revenue Sources for Charter Schools

In addition to allowing charter schools access to the same federal funding programs as traditional public schools, the federal government has established funding opportunities that are specifically targeted to charter schools. Created in 1994 and most recently reauthorized under Title IV, Part C of ESSA, the federal Charter Schools Program (CSP) aims to increase students' access to high-quality public charter schools across the nation, particularly for students from traditionally underserved populations such as economically disadvantaged students, students with disabilities and English learners. There are seven grant opportunities available to both SEA and non-SEA

[28] See Section 613 Local Educational Agency Eligibility in the federal Title I statute, available for download at http://idea.ed.gov/explore/view/p/%2Croot%2Cstatute%2CI%2CB%2C613%2C.

actors through the CSP, the largest of which is the Charter School Program State Educational Agencies Grant.

- **Charter School Program State Educational Agencies Grant** – This grant competition allows eligible SEAs to apply for federal CSP funds and award subgrants to eligible charter school operators in their state for the purpose of (1) supporting the planning, program design, and initial implementation of new charter schools or (2) disseminating information on best practices by established charter schools with demonstrated success.[29] When the CSP was reauthorized under ESSA in 2015, the law expanded the scope of the state-level CSP competition to include opportunities for states to issue subgrants to support the replication and/or expansion of high-quality charter schools in the state.

  Maryland is currently one of 43 states plus Washington, DC that have state statutes authorizing the creation of charter schools and are therefore eligible to apply for the CSP SEA program. In 2004 and 2007, Maryland won three-year CSP grants totaling $13.5 million and $18.2 million, respectively, and the state used these funds to provide start-up support to over 30 public charter schools (McGrath et al., 2014). However, Maryland has not been awarded CSP SEA funding since its second CSP grant ended in 2011.

  One objective of the federal CSP program is to encourage states to adopt policies that federal lawmakers have deemed important for cultivating high-quality charter schools, and the program pursues this objective by identifying such policies as priorities or selection criteria for evaluating states' CSP applications. The study team explored selection criteria and priorities from recent CSP grant competitions, peer review comments on successful state applications from the FY2015 grant competition, as well as the CSP selection criteria and priorities required under ESSA to identify possible areas that could affect Maryland's competitiveness in future state-level CSP competitions. Some of those areas include:

  – *Operational flexibility and autonomy* – A key premise among charter school advocates is that by granting charter schools more autonomy over instructional and operational decisions, those schools will be able to implement more innovative and customized approaches to meeting the needs of their students. This premise has long been reflected in CSP grant applications and should continue to be held under ESSA. Specifically, ESSA explicitly identifies the amount of flexibility provided by a state's charter school laws as a selection priority for awarding CSP grants. It also requires applicant states to provide assurances that each charter school receiving funding through CSP will have a high degree of autonomy over budget and operations, including personnel decisions. Although Maryland allows charter schools to seek waivers on some state or local policies, charter schools have limited authority over personnel decisions and are bound by collective bargaining agreements unless the school and local teacher's union negotiate amendments (Education Article, § 9-108).

  – *Charter authorization authority* – The CSP application features a competitive preference for states where entities other than districts have the authority to authorize charter schools and/or have a process in place for appealing district decisions against

[29] Note that changes to the CSP program under ESSA broadened the eligibility criteria of the CSP SEA competition to include other state entities such as governors, state charter school boards, and charter school support organizations.

authorizing a particular school. In Maryland, county school boards serve as the primary authorizing body for public charter schools (Education Article, § 9-103), but the State Board of Education has the power to authorize charter schools under appeal or as part of a school restructuring process (Education Article, § 9-104). To strengthen its chances of winning a CSP grant, the state might reflect on how it can ensure that all county boards of education have in place clear and fair charter authorization policies (including charter renewal and closure policies) that support the creation of high-quality charter schools—particularly those that serve economically disadvantaged and racially/ethnically diverse student populations—and the closure of academically poor-performing charter schools.

- *Equitable funding* – ESSA requires that CSP application criteria favor states that ensure public charter and traditional schools receive equitable amounts of funding and do so in a prompt manner. As noted earlier, it also requires states to ensure that charter schools receive equitable amounts of federal formula-based grants as traditional schools. Maryland's "commensurate" funding law supports the state's competitiveness in this area, but charter advocates have raised doubts about the implementation of this law given that funding for Maryland charter schools flows through the local school systems and there has been a perceived lack of transparency around how equitable charter schools' funding shares are (Center for Education Reform, 2015). The state's commissioning of this study is an important step in providing more transparency in this area. State efforts to establish and/or clarify existing guidelines around its charter school funding requirements and to monitor the implementation of such requirements (e.g., by continuing to collect and analyze school-level expenditure data) could potentially improve Maryland's chances of winning federal CSP funding.
- *Collaboration and sharing of best practices* – An important goal behind the CSP is to identify and scale-up practices found to be effective among high-quality charter schools. Indeed, the CSP allows states to reserve up to 10% of their grants to fund efforts by high-performing charter schools to disseminate information about effective practices to other public schools. However, a 2014 study of public charter and traditional schools in Maryland raised concerns whether the state's laws and practices promoted an "atmosphere of cooperation between charter schools and traditional schools" that is important for sharing and collaborating around best practices (McGrath et al., 2014). Accordingly, the state might reflect on how it might implement a cohesive set of strategies for fostering collaboration and communication networks among charter and traditional schools so that all public schools can benefit from charter school successes.
- *Diversity of projects* – ESSA includes requirements for CSP-funded states to award CSP subgrants in a manner that—to the extent practicable—promotes the growth of charter schools in a diverse array of locales across the state, especially in rural areas. In addition, the law encourages states to award CSP funds to charter schools that represent a variety of different educational approaches. Because Maryland charter schools are concentrated in only five of the state's local school systems and located in predominantly urban areas, the state might examine how it could leverage CSP funding to support the development of charter schools in other areas of the state—

particularly areas that serve sizeable populations of economically disadvantaged students and/or students with specialized learning needs.

For years in which Maryland does not receive CSP SEA funding, the CSP allows non-profit charter school developers or operators within Maryland to apply directly to the federal government for funding through the following programs:

- **Charter Schools Program Non-State Educational Agencies Grant (Non-SEA) Planning, Program Design, And Initial Implementation Grant** – This program allows charter school developers that have applied to an authorized public chartering authority to operate a charter school to apply directly to the federal government for CSP start-up funding in cases where the state has chosen not to apply or applied and did not win a CSP grant. Grant recipients must use their funds for the post-award planning and design of the charter school's educational program, including improving the measurement of student achievement and/ or providing professional development to staff. They may also use their funds for the initial implementation of the charter school, including disseminating information about the school to the local community, acquiring any necessary curricular materials or other instructional resources, or funding initial costs that are not met by state or local funding sources. Since 2011, six charter operators have received funding through this program to support the planning, design, and implementation of charter schools in Maryland (U.S. Department of Education, 2016b).
- **Charter Schools Program Non-State Educational Agencies (Non-SEA) Dissemination Grant** – This program provides an opportunity for individual charter schools in states that choose not to participate in or were denied by the SEA grant competition to apply directly to the federal government for dissemination grants. Grant recipients must use their funds to assist other schools in adopting the charter school's program, or to disseminate information about the charter school, through activities such as providing best practice information to other charter schools in the planning and start-up phase and developing partnerships with other public schools (charter and traditional) to improve academic achievement through shared curricular materials, etc.
- **Charter Schools Program Grants for Replications and Expansion of High-Quality Charter Schools** – This grant is open to non-profit charter management organizations and other not-for-profit entities to expand enrollment in one or more existing charter schools by either increasing the number of available seats per school or through opening new charter schools based on the successful model. First priority is given to charter school managers operating more than one high-quality charter school. Second priority is given to applicants serving more than 60% low-income students.

Also worth mentioning is the CSP National Leadership Activities Grant competition that provides funding to SEAs, charter authorizing agencies, and other non-profit organizations to support efforts to improve the quality of charter schools through the provision of technical assistance and other types of support on issues of national significance. In addition to the five funding opportunities described above, the CSP includes two programs designed to support facilities financing for charter schools: the Credit Enhancement for Charter School Facilities Program and the State Charter School Facilities Incentive Grants Program. We discuss these two programs in greater detail in Chapter 5.

State Revenue Sources

State funds in Maryland are allocated to LEAs through three mechanisms: (1) general education aid, (2) targeted education aid, and (3) other aid. As noted earlier, Maryland local school systems disburse state funding to both traditional and charter schools within their jurisdiction, and they must do so in a manner that ensures their charter schools receive commensurate amounts of funding as their traditional schools. General education aid funded programs provide districts with the minimum level of funding determined by the state to be essential for providing general educational services. The funding level is determined by the number of full-time students enrolled in a district, which is then adjusted based on the wealth of a district.

Targeted aid-funded programs provide districts with funds based on their enrollments of students with special educational needs. The funds are allocated to districts based on the estimated additional cost of educating each group of at-risk students. Targeted aid is provided to districts for special education students, students eligible for free and reduced price lunch, and students with limited English proficiency.

- **Special Education** funds are allocated to districts for the "free appropriate education for students with disabilities up until age 21." Appropriate special education services are available to most students within their local public school or specialized programs within the public schools. However, when appropriate educational services are not available in the public schools, the funds can be used to provide aid for non-public school placements (Maryland Department of Legislative Services, 2014).
- **Compensatory Education** funds are allocated to districts to support students at risk of not meeting state academic achievement standards. Districts are required to develop plans that promote the improved academic performance of all students, not just those identified as at-risk. Students are identified as at risk of not meeting state standards based on their eligibility for free and reduced price lunch, an accepted indicator of poverty and a predictor of low test scores (Maryland Department of Legislative Services, 2014).
- **Limited English Proficiency** funds are allocated to LEAs with the goal of supporting and promoting improved English language instruction for students with limited English proficiency. Students are identified for services based on the English Language Proficiency assessment given at the time of enrollment.

Other funds are distributed to districts by the state for a broad variety of non-academic—but critical—school activities. These programs include supports for student transportation and paratransit (transportation outfitted for use by people with disabilities), matching funds to those provided by the federal government for school meals, and funds for adult education programs (Maryland Department of Legislative Services, 2014). Funds for each of these programs are distributed either by formulas based on student enrollments or by individual measures of eligibility.

District-Level Revenues by Source

As shown in Exhibit 26, state and local revenue reported in the MSDE AFR fiscal data make up the bulk of revenue for all districts in Maryland. Although the federal share of overall revenue per pupil ranged from 3% (Howard) to 13% (Baltimore City and Somerset County), state and

local revenue combined accounted for 90% or more of the total revenue received in all but four districts. However, within each revenue source, there was a large amount of variation, reflecting differences across districts in the needs of students served and, in the case of state revenue, the capacity of districts to raise revenue from local sources. As mentioned, the share of revenue from federal sources ranged from a low of 3% in Howard County ($461 per pupil) to a high of 13% in Baltimore City ($2,038 per pupil) and Somerset County ($1,829 per pupil). The share of revenue from state sources ranged from 18% of total revenue in Worcester ($2,893 per pupil) to 67% in Baltimore City ($10,733 per pupil) and Wicomico County ($8,618 per pupil). Local revenue was inversely related to state revenue in terms of both funding shares and levels, ranging from a low of 20% in Baltimore City ($3,199 per pupil) to a high of 74% in Worcester County ($11,599 per pupil).

Exhibit 26. Shares of Federal, State, and Local Revenue by School District (2012–13 to 2014–15)

	Federal Revenue		State Revenue		Local Revenue	
District Name	$ per Pupil	% of Total	$ per Pupil	% of Total	$ per Pupil	% of Total
Allegany	$1,468	11%	$8,637	63%	$3,544	26%
Anne Arundel	$735	6%	$4,136	33%	$7,760	61%
Baltimore City	$2,038	13%	$10,733	67%	$3,199	20%
Baltimore County	$882	7%	$5,335	41%	$6,711	52%
Calvert	$610	5%	$5,040	39%	$7,304	56%
Caroline	$1,212	10%	$8,419	69%	$2,645	22%
Carroll	$536	4%	$5,213	42%	$6,702	54%
Cecil	$881	7%	$6,316	53%	$4,805	40%
Charles	$714	5%	$6,039	46%	$6,270	48%
Dorchester	$1,482	11%	$7,376	57%	$4,119	32%
Frederick	$547	4%	$5,625	45%	$6,240	50%
Garrett	$1,330	10%	$5,476	39%	$7,158	51%
Harford	$738	6%	$5,477	44%	$6,207	50%
Howard	$461	3%	$4,197	29%	$9,688	68%
Kent	$1,464	10%	$4,786	32%	$8,488	58%
Montgomery	$703	5%	$4,008	28%	$9,688	67%
Prince George's	$1,126	8%	$7,578	54%	$5,242	38%
Queen Anne's	$724	6%	$4,291	37%	$6,489	56%
St. Mary's	$962	8%	$5,419	46%	$5,310	45%
Somerset	$1,829	13%	$9,152	64%	$3,382	24%
Talbot	$894	8%	$2,704	23%	$7,911	69%
Washington	$1,012	8%	$7,228	57%	$4,392	35%
Wicomico	$1,279	10%	$8,618	67%	$2,903	23%
Worcester	$1,201	8%	$2,893	18%	$11,599	74%

Note: Federal revenue from 2012–13 to 2014–15 included funding from Race to the Top and other federal programs from the American Recovery and Reinvestment Act.
Source: MSDE Statewide Annual Financial Report

Charter School Revenue

Our examination of the revenue sources used by Maryland charter schools focused on two types of funding on which there has not been a significant amount of research performed to date. First,

we sought to understand whether and how federal revenue is allocated to public charter schools in the state. Second, we wanted to identify the variation among charter schools in the amounts of revenue raised from private sources, such as donations, foundation grants, and student fees. The data sources relied on to identify the various federal and private revenue sources that support charter schools include interviews with district and charter staff as well as the District End-of-Year Fiscal Data and Charter School End-of-Year Expense Reports obtained from districts and charter operators.

Charter Schools and Federal Revenue

For special education and ELs, all districts indicated that they provide services using restricted dollars—including federal dollars—for those services. Districts indicated that these services were distributed, either in staff or in dollars, based on the needs of those students. Officials from Prince George's, for example, indicated that there were standard business rules for determining the number of special education staff to assign to all schools, including charter schools. Likewise, Baltimore City indicated that personnel, and in some cases funding, for both special education and ELs was distributed to charter schools in an allocation separate from the general charter school per-pupil allocation (PPA), based on the needs of students in those schools. In St. Mary's, schools are provided special education dollars from the general fund, but federal special education (IDEA) dollars are managed centrally by the district. Services for charter school special education students with more severe needs that are provided through federal dollars are agreed upon by the district and school to meet the demands of these students' Individualized Education Plans (IEPs). The only district to distribute federal special education dollars as part of the PPA for charter schools is Anne Arundel, which distributed an additional $1,874 per special education student to charter schools for the 2015–16 school year.

Only Baltimore City indicated that a specific formula was used to determine a Title I amount to distribute to charter schools. All districts except Baltimore indicated that charter schools in their district were not eligible for Title I dollars, based on the student population served. Prince George's County indicated that the schools themselves were not eligible for Title I dollars, but that Title I services were provided to poor students in charter schools as needed—for example, an itinerant reading teacher providing services to charter school students.

Title II was also not indicated as being regularly provided to charter schools. Officials from Frederick County suggested that charter schools were not eligible, based on the student populations served. In Anne Arundel and Prince George's, Title II dollars were used to provide districtwide professional development, with eligibility to participate being extended to charter staff. Officials from St. Mary's indicated that charter staff who are eligible for Title II funds can apply for professional development opportunities, such as attending conferences, and are reimbursed for their costs using program funds.

In all districts with charter schools, food services—inclusive of federal funds—are provided to charter schools by the district, in a similar manner to how food services are provided in traditional schools.

In no district were districts' E-Rate funds explicitly distributed to charter schools, although the reasons for this varied. In Prince George's, the district reported that charter schools can apply to

E-Rate directly and the grant therefore does not pass through the district. In Baltimore City, Frederick, and St. Mary's, E-Rate is a districtwide program, used to support the IT infrastructure of the entire district. As a result, district E-Rate funding is not disbursed to individual schools, nor is it possible to identify instances where E-Rate funds were used on projects for individual schools. However, in these cases, charter schools are assumed to receive the benefits of the improved IT infrastructure in the same manner as traditional schools (e.g., increased bandwidth, faster Internet, improved network capability). In Anne Arundel, E-Rate funds are used only on traditional public schools as the charter schools are expected to pay for their own utilities and provide their own hardware and software. While district officials in Baltimore City indicated the district's E-Rate funds were not explicitly allocated to charter schools, several charter operators within Baltimore City, including Afya and KIPP, reported directly applying for and being awarded E-Rate funds.

Identifying federal revenues in the charter school fiscal data was not a straightforward task. In the Charter School End-of-Year Expense Reports (which also contain information on revenue), there is very little in the way of identifiable federal revenues because most federal funds pass through the district. It is likely that most of the federal dollars that get passed along to charter schools are lumped together with other revenue provided by the district. For example, the charter schools often did not disaggregate special education funds by source, so it is unclear how much of their identified special education funds are from federal sources.

However, one exception was the Charter School End-of-Year Expense Reports for Baltimore City charter schools, which typically do include entries for Title I and Title II revenues going to charter schools. The maximum amount of revenue from federal funds reported in these data for any charter school in Baltimore City was $1,873 per pupil, or 13% of total revenue, and this was for a newly opened charter school, which received money from a federal start-up grant. Another charter school in Baltimore City showed federal revenue from Title I and Title II funds amounting to $977 per pupil, or about 7% of its overall revenue. In no other charter school did federal revenue account for more than 3% of overall revenue in any of the three years we studied. Additionally, Furman Templeton indicated that a significant portion of revenue, amounting to $2,929 per pupil, came from governmental agencies, separate from their allocation from the district. However, this revenue was not disaggregated further in the data, so we could not determine how much of this funding was from federal grants or from which grant programs these dollars might have come.

For other districts' charter schools, the reporting of federal revenue in the End-of-Year Expense Reports was even rarer. Only one charter school in Prince George's County had federal revenue identified in its expense report, and there was no description as to whether the federal revenue came from Title I, Title II, or some other federal source. In interviews, several charter operators in Prince George's County indicated that their schools were not eligible to receive Title I dollars, based on the population of students served. The demographic data on Prince George's charter schools confirmed that, on average, charter schools served a substantially lower-poverty student population than traditional schools, potentially making many of the charter schools in this district ineligible for Title I assistance.

Although the Charter School End-of-Year Expense Reports often do not break out revenues by source, we used the District End-of-Year Fiscal Data for Baltimore City and Prince George's

County to examine expenditures by revenue source. Exhibit 27 shows that the average attributed spending per pupil to charter and traditional schools over the three-year study period (2012–13 to 2014–15) in Baltimore City was supported by various restricted revenue sources, as well as the central district restricted spending that was not attributed to school sites. In contrast to our school-level data presented for the purpose of generating total amounts of school spending, central unattributed dollars in this figure represent the full amount of unattributed central expenditures before any allocation to school sites.

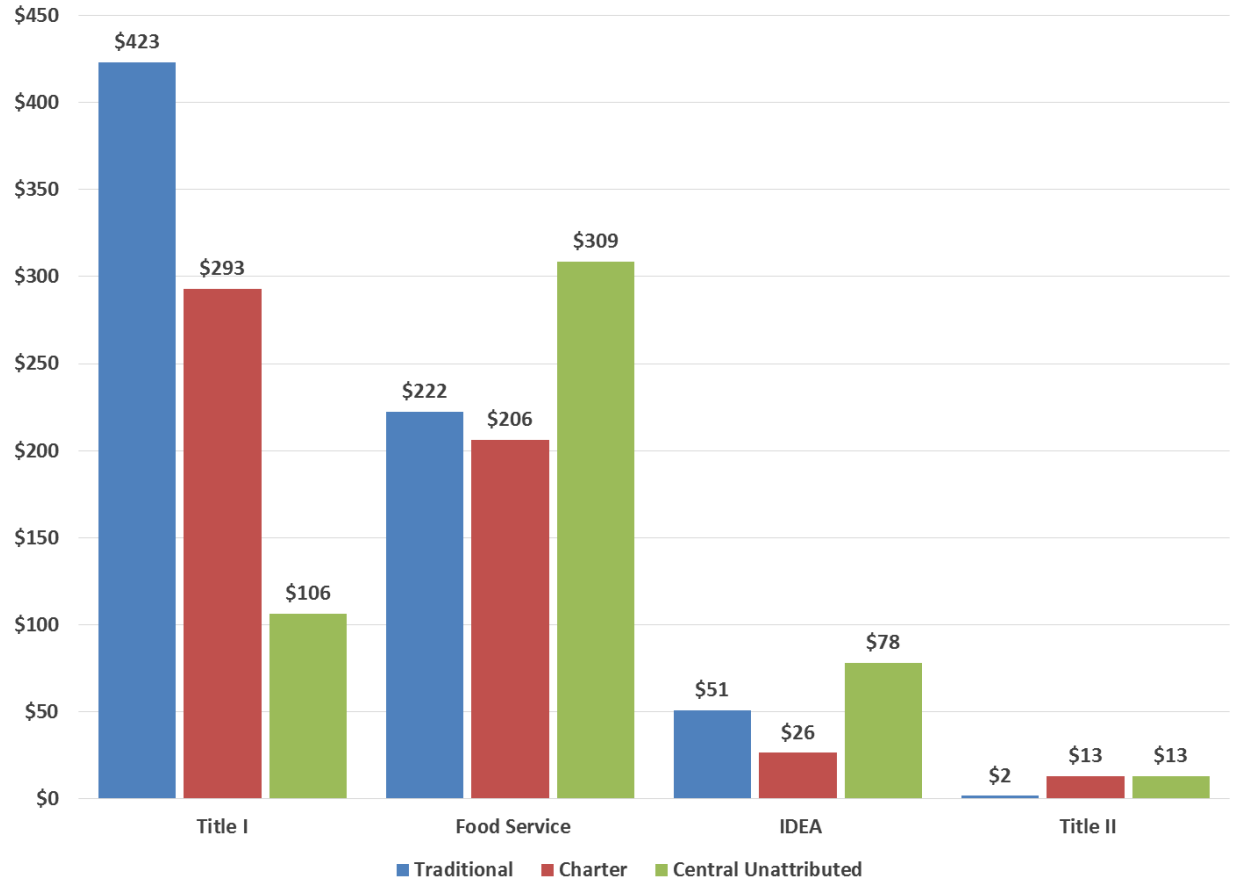
As shown, on average about $130 less per pupil from Title I sources was spent on charter schools than on their traditional school counterparts. However, it must be noted that Baltimore City charter schools enrolled lower proportions of poor students than the traditional schools in the district, so this is not altogether surprising. Charter and traditional public schools in Baltimore City had similar levels of spending from attributed food services funds, which are largely subsidized by federal dollars, with a sizable share remaining unattributed. Attributed spending from IDEA favors traditional schools, but again a sizable portion is unattributed. Title II funds make up only a small portion of funding, with about $2 per pupil being spent on traditional schools, compared to $13 per pupil on charter schools. The non-attributed amount of Title II dollars spent on charter schools is also $13 per pupil, indicating that charter schools receive an allocation of Title II dollars, while for traditional schools the goods and services purchased with Title II dollars are managed centrally. This finding was corroborated in interviews with Baltimore City officials.

The district fiscal data from Prince George's County showed that no expenditures supported by Title I funding were attributed to charter schools. Traditional schools in Prince George's County spent around $90 per pupil from Title I, and central non-attributed Title I spending was about $60 per pupil. However, as was indicated in both district and charter operator interviews, charter schools in Prince George's were generally not eligible for Title I funds, and services were provided on an as-needed basis to Title I eligible students in charter schools. The only type of spending from restricted funding sources that appeared to be attributed to charter schools in Prince George's County was for special education instruction and related services. An average of approximately $26 per pupil from this source was spent on charter schools, while an average of $55 per pupil was spent on traditional schools.[30]

According to Prince George's County End-of-Year Expense Reports, virtually all of the charter school spending (99.7%) in Prince George's County was supported by unrestricted state and local dollars, indicating that the charter schools in this county received very few restricted dollars targeted for the education of students with specific educational needs. This finding aligns with what we heard in interviews and with the demographic information on charter schools in Prince George's County—specifically, that the county's charter schools serve students with relatively low needs in terms of poverty, students learning English, and students with disabilities.

[30] Unfortunately, the end-of-year expense reports from Prince George's charter operators did not specify whether this special education funding was from federal or state sources.

Exhibit 27. Average Attributed Per-Pupil Expense From Restricted Fund Sources for Traditional and Charter Public Schools and the Central Office in Baltimore City (2012–13 to 2014–15)

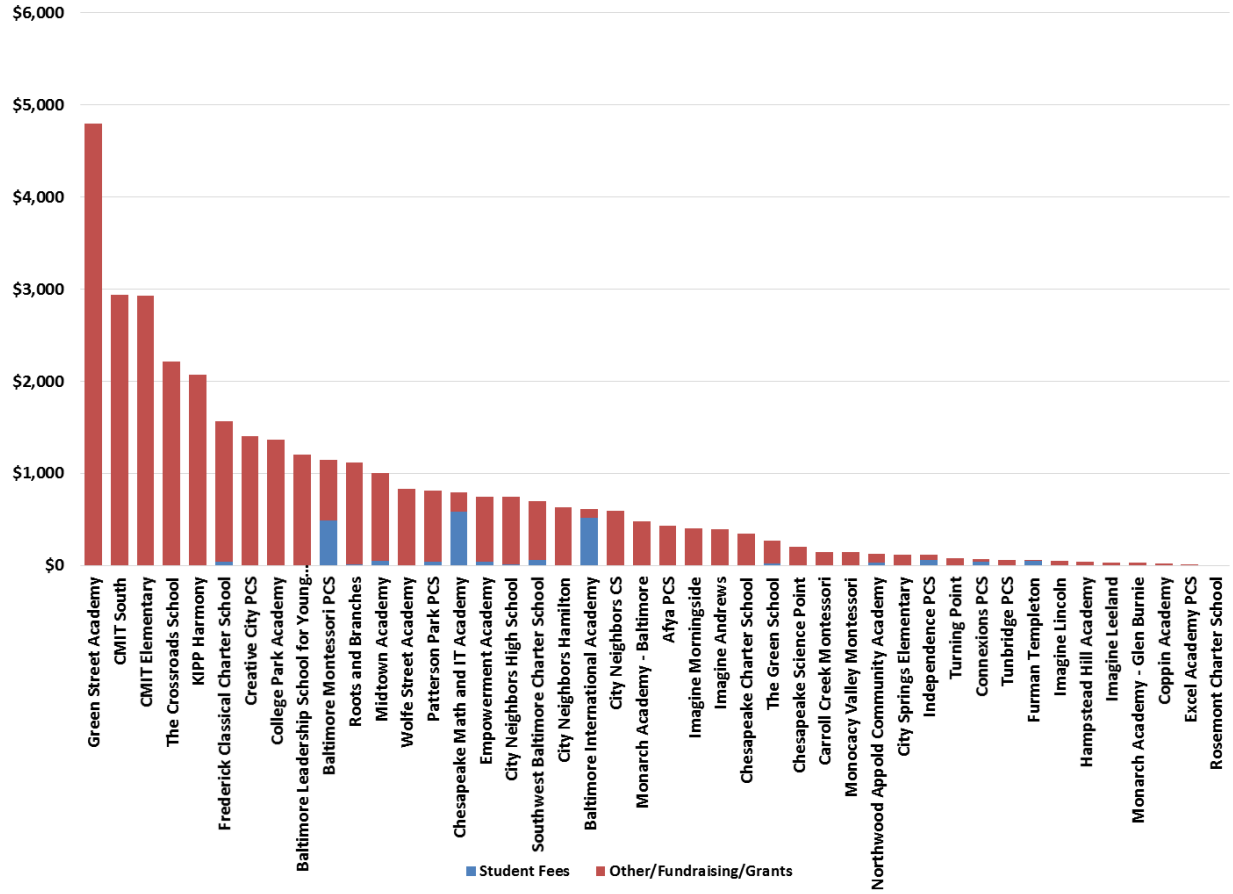


Source: Baltimore City District End-of-Year Fiscal Data

One source of revenue that is likely missing from the District End-of-Year Fiscal Data on charter schools is revenue from private sources, such as donations, fundraising, and small grants from foundations, as well as fees paid by students for supplemental activities and services. However, it is also likely that the revenue from these sources is missing for traditional schools. Although this information is unavailable in the district fiscal data, it can be found in the Charter School End-of-Year Expense Reports.

Exhibit 28 shows the reported revenue amounts per pupil from student fees and other private sources such as fundraising, donations, and grants, averaged over the three-year study period. As shown, the amount of reported revenue raised by these private revenue sources varied widely across charter schools in Maryland, from almost $5,000 per pupil (Green Street Academy) to less than $10 per pupil (Excel Academy Public Charter School and Rosemont Charter School). However, each of the three charter schools raising the most revenue from private sources – Green Street, CMIT South, and CMIT Elementary – were established in the 2014–15 school year and were therefore only open in one of the three years in which we collected data, reflecting "average" spending over only a single year and could represent revenues dedicated to initial startup of these schools.

Exhibit 28. Average Reported Revenue per Pupil From Private Sources From Charter Fiscal Data (2012–13 to 2014–15)



Note: One school – Eudaimonia Maryland Academy of Technology and Health Sciences (MATHS) – was omitted from the analysis given that their Charter School End-of-Year Expense Reports were potentially not representative of their actual expenditure and revenue levels. We were unable to schedule follow-up conversations with MATHS to further understand the data they provided due to the closure of the school. Northwood Appold Community Academy (NACA) operates two schools, only one of which is an elementary charter called Northwood Appold Community Academy Public Charter School #330 (NACA I), with the other being a Grade 6-12 transformational school called Victoria Jackson Gray Adams Freedom and Democracy School (NACA II). However, only organization-wide totals are included in the expense reports that were provided. Therefore, figures for NACA are based on the combined revenues and enrollments of NACA I and NACA II. Similarly, the fiscal data collected from Baltimore Montessori includes aggregated dollars that do not distinguish between Baltimore Montessori Public Charter School and Baltimore Montessori Public Charter Middle School. In turn, the exhibit results listed for Baltimore Montessori PCS are based on the combined revenues and enrollments of these two schools. Monocacy Montessori Communities, Inc. reported revenues from student fees and other private sources as organization-wide totals, rather than separately for Carroll Creek and Monocacy Valley Montessori Schools. Therefore, the reported per-pupil figures are the same for these two schools.
Source: Charter School End-of-Year Expense Reports

Nevertheless, even setting these three schools aside, there was wide variation in the amount of revenue the remaining charter schools raised from private sources over the study period. It is also notable that although student fees were not a substantial amount of revenue for most charter schools, they accounted for more than $500 per pupil in revenue for three schools.

4. Determining Predicted Charter School Spending for Comparative Purposes

Analysis of Actual Versus Predicted Charter School Expense

An additional objective of this study was to identify expenditure levels for public charter schools that can be compared to spending on active traditional schools within the same district. As described above, we constructed the School Site Spending Database, which includes comprehensive school site actual spending (the sum of attributed and allocated expenses) for all schools statewide, including charter schools. The dataset includes approximately 1,330 schools per year in each of the study years (2012–13 to 2014–15), of which only a small share are charter schools. These charter schools are largely concentrated in two districts: Baltimore City and Prince George's County.

The database provides us a unique opportunity to model school-level expenditures that can help us better understand how spending varies both within and across districts. Specifically, the data can be used with statistical modeling to examine patterns of spending across Maryland schools, including how average per-pupil spending varies from one district to the next, with respect to student need characteristics, and according to the grade ranges served. The value of such a model is that we can use it to estimate (predict) spending levels for a school with any given combination of characteristics, whether it is an existing traditional or charter school or a new school that has not yet been established.

For the purposes of this analysis, we defined the predicted expenditure level for a given school as a level that is consistent with the average spending of a similar school with respect to district location and student population served. The predicted spending level for a school represents a "what should be" measure of expected expense for schools with identical characteristics, if they are treated (funded) in a systematically similar fashion to one another. Predicted spending for a given school can be compared with the existing "what is" measure of actual expense to determine whether or not current spending is greater than, less than, or on par with the predicted spending level for other schools with identical characteristics. As shown below, our analysis compares the predicted and actual spending for charter schools to show how their expected spending would differ from their actual spending if they were treated as if they were traditional schools.

Regression Analysis of School Expenses

Using the per-pupil expense data from the School Site Spending Database (described in detail earlier), we conducted a regression analysis to model the relationship between spending per pupil and a host of school characteristics. This procedure generated an equation that was then used to predict spending levels based upon the model characteristics (described below) for any school in the state. These spending levels were then compared to actual spending levels.

The regression model that was estimated is as follows:

School Spending per Pupil = f(Student Needs, Grade Enrollment Shares, Years, Districts)

- Spending per Pupil: Sum of Attributed and Allocated Per-Pupil Expenses
- Student Needs: School-Level Percentages of Free or Reduced-Price Meals (FARMs), English as a Second Language (ESL), and Special Education Students[31]
- Grade Enrollment Shares: School-Level Enrollment Percentages in Grades Pre-K–5, 6–8, and 9–12
- Years: Controls for the Study Years 2012–13, 2013–14, and 2014–15
- District: Controls for Each District in the State

As opposed to calculating a simple average of per-pupil spending for a broad group of schools (e.g., all elementary schools statewide), the resulting estimated regression model provides a more precise way of measuring the expected expense for more narrowly defined groups of schools or even individual schools. For example, using the results from the estimated model, we can predict the spending in 2014–15 for a school in a given Maryland district (say Prince George's County) with 56% FARMs, 9% ESL, 11% special education, 82% enrollment in Grades Pre-K–5, and 18% enrollment in Grades 6–8. Indeed, this can be done for every school in the state.

It is important to understand that this model merely illustrates the patterns of spending that currently exist across Maryland schools and districts. It does not identify how much more or less is needed in different schools to provide equal opportunity to children with higher or lower needs to achieve some set of educational outcomes. (It should be noted that there are no controls for outcomes in the model, which would be required for such an analysis.) Therefore, the results in no way provide estimates of the cost of providing an *adequate* education to all students; rather, they illustrate the existing comparative differences in average spending for schools with different student needs characteristics, grade ranges, and locations. As shown below, the results do suggest that schools serving higher need populations in Maryland tended to spend more than schools serving lower need populations, regardless of whether spending in the schools was sufficient to promote adequate levels of outcomes.

The analysis involved the following three steps:

1. Perform regression analysis to model per-pupil expense of traditional schools to generate a model that shows how per-pupil spending varies with respect to school characteristics.

[31] The regression model included both the overall percentage of students receiving special education services in school and the percentage of special education student that had non-severe disabilities. The variable for non-severe special education percentage was missing in 22 school-year observations out of more than 3,800 total observations. In order to ensure that all schools were included in the expenditure regression analysis, we imputed the percentage of non-severe disabilities for those schools with missing values using a separate regression model designed to predict the proportion of special education students with non-severe disabilities based on other school-level characteristics.

2. Use the characteristics of charter schools in the traditional school model to generate predicted values of per-pupil spending for comparative purposes (i.e., measures that represent what expected spending on charter schools would be if they were treated like the traditional schools in their districts).
3. Compare measures of predicted charter school spending per pupil to actual charter school spending per pupil.

It is important to stress that in Step 1, the regression model only estimates the average relationships between spending and school characteristics for traditional schools by explicitly excluding charter schools from the estimation. This was intentional, as we wished to describe the spending patterns exhibited by traditional schools and then predict what charter schools would be expected to spend if they were treated in a similar fashion to the traditional schools within their districts.

Regression Results

Exhibit 29 displays the main results of the regression model. Each estimated effect represents the expected change in per-pupil spending associated with a unit change in the characteristic, where characteristics are measured in percentages (for student needs and grade-range enrollments) or an integer equal to 1 or 0 (for the district location indicators). The effects estimated for student population, grade distribution, and study year represent average relationships between these model characteristics and per-pupil spending across all schools in the state, while the district location effects provide estimates of how per-pupil spending varies according to other characteristics that are specific to each district in the state. The model estimates align well with what one might expect. Specifically, across Maryland schools, average per-pupil spending differences associated with different student needs characteristics followed logical patterns. For example, schools with higher incidences of need tended to have higher levels of spending per pupil. Specifically, the model results indicated that:

- Per-pupil spending is expected to increase by about $15 for every percentage point of enrolled students eligible for FARMS. For example, a school where children from low-income families account for 10% of the student population is expected to have spending that is about $150 more per pupil than an otherwise similar school where 0% of the student population are from low-income families.
- Per-pupil spending is expected to increase by about $3 for every percentage point of enrolled students in an ESL program. For example, a school where ESL students account for 10% of the student population is expected to have spending that is about $30 more per pupil than an otherwise similar school where 0% of students are ESL students.
- Per-pupil spending is expected to increase by $225 for every percentage point of enrolled students with a disability (with an IEP). For example, a school where students with disabilities account for 10% of the student population is expected to have spending that is $2,250 more per pupil than an otherwise similar school where 0% of students are children with disabilities.
- As the share of a school's disabled population with non-severe disabilities increases, the expected per-pupil expense declines (by about $12 for each percentage of the disabled student population categorized as non-severe).

- Per-pupil spending is expected to be higher by $9 and $6 for every percentage point of students enrolled in Grades 6–8 and 9–12, respectively, compared to each percentage point of students enrolled in Grades Pre-K–5.
- Over the three study years, the average school site per-pupil expenditure increased: by $178 per pupil from 2012–13 (the reference year) to 2013–14, and by another $89 per pupil from 2013–14 to 2014–15 (or $267 per pupil from 2012–13 to 2014–15).
- Each district has a "base" spending figure estimated by the model that represents expected spending in 2012–13 for a school with 100% enrollment in Grades K–5 and no students with special needs. Application of the adjustments described above allows for estimates of expected per-pupil spending that are tailored to the specific characteristics of any school.[32]

Exhibit 29. Estimated Effects From Regression Model of Traditional School Spending

School Characteristic	Estimated Effect on Per-Pupil Spending
Average Statewide Student Population Effects	
School-Level Percent Free or Reduced-Price Meals (FARMS)	$15
School-Level Percent English as a Second Language	$3
School-Level Percent Students With Disabilities	$225
School-Level Proportion of Disabled With Non-Severe Disabilities	-$12
Average Statewide Grade Distribution Effects (Reference Group is Percent School Enrollment in Grades Pre-K–5)	
School-Level Percent School Enrollment in Grades 6–8	$9
School-Level Percent School Enrollment in Grades 9–12	$6
Average Statewide Year Effects (Reference Year is 2012–13)	
Year = 2013–14	$178
Year = 2014–15	$267
District Location Effects	
Allegany	$8,342
Anne Arundel	$9,067
Baltimore City	$8,369
Baltimore County	$7,931
Calvert	$9,613
Caroline	$8,016
Carroll	$8,753
Cecil	$7,523
Charles	$9,376

[32] Appendix C provides a detailed example of how the estimated regression model can be used as a simple calculator of predicted per-pupil spending for existing or hypothetical schools that vary with respect to the model characteristics.

Exhibit 29. Estimated Effects From Regression Model of Traditional School Spending (continued)

School Characteristic	Estimated Effect on Per-Pupil Spending
District Location Effects	
Dorchester	$8,173
Frederick	$8,366
Garrett	$9,455
Harford	$8,011
Howard	$10,553
Kent	$9,492
Montgomery	$10,053
Prince George's	$8,311
Queen Anne's	$7,593
St. Mary's	$8,186
Somerset	$8,340
Talbot	$8,557
Washington	$8,574
Wicomico	$8,239
Worcester	$10,886

Note: All figures rounded to the nearest dollar.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Comparing Actual Versus Predicted Spending per Pupil for Charter Schools

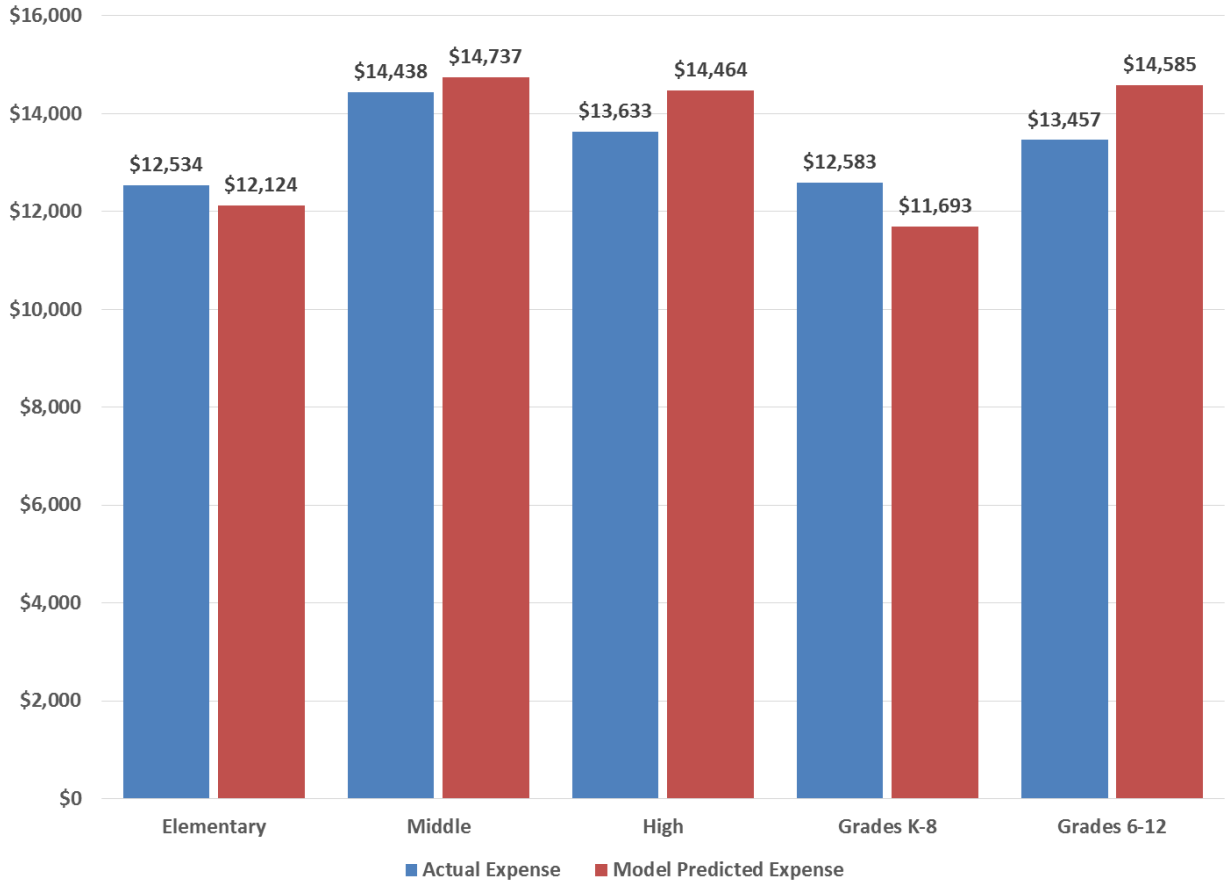
The following section provides results of a detailed comparison between average actual and predicted charter school spending per pupil across districts with active charter schools. Exhibit 30 shows the 2014-15 average actual charter school expense per pupil compared to the average predicted charter school expense per pupil for each district containing active charter schools. In all districts except Frederick, the average predicted expense was less than the average actual charter expense. This indicates that, on average, if charter schools in districts other than Frederick were treated similarly to traditional schools, they would have received less funding than they actually received. However, the amount by which predicted spending fell short of actual spending varied across the other four districts, ranging from $2,206 per pupil in St. Mary's to $367 per pupil in Baltimore City. In contrast, actual charter school spending per pupil in Frederick was, on average, lower than the predicted expense per pupil by $729.

Exhibit 30. Average Actual Versus Predicted Charter School Per-Pupil Expense by District (2014–15)

Note: The sample for this exhibit includes all charter public schools within the five districts. For school and enrollment counts for charter schools by district, see Exhibit A8.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibits 31 and 32 provide a more detailed look at the average charter school actual and predicted per-pupil expense by school grade configuration within Baltimore City and Prince George's County. Exhibit 31 shows that in Baltimore City, the average actual per-pupil expense was higher than the average predicted expense for elementary schools (by $410) and schools serving Grades K–8 (by $890). For the other grade configurations, the opposite was found. Specifically, the average predicted per-pupil expense for Baltimore City middle schools, high schools, and schools serving Grades 6–12 was higher than the corresponding actual average per-pupil expenses for these grade configurations by $299, $831, and $1,401, respectively. These findings show that results based on district-level averages do not tell the whole story. Although the averages across all charter schools in Baltimore City showed that actual charter spending per pupil tended to be higher than the average predicted expense, there was a great deal of variation in these figures with respect to school characteristics such as grade configuration.

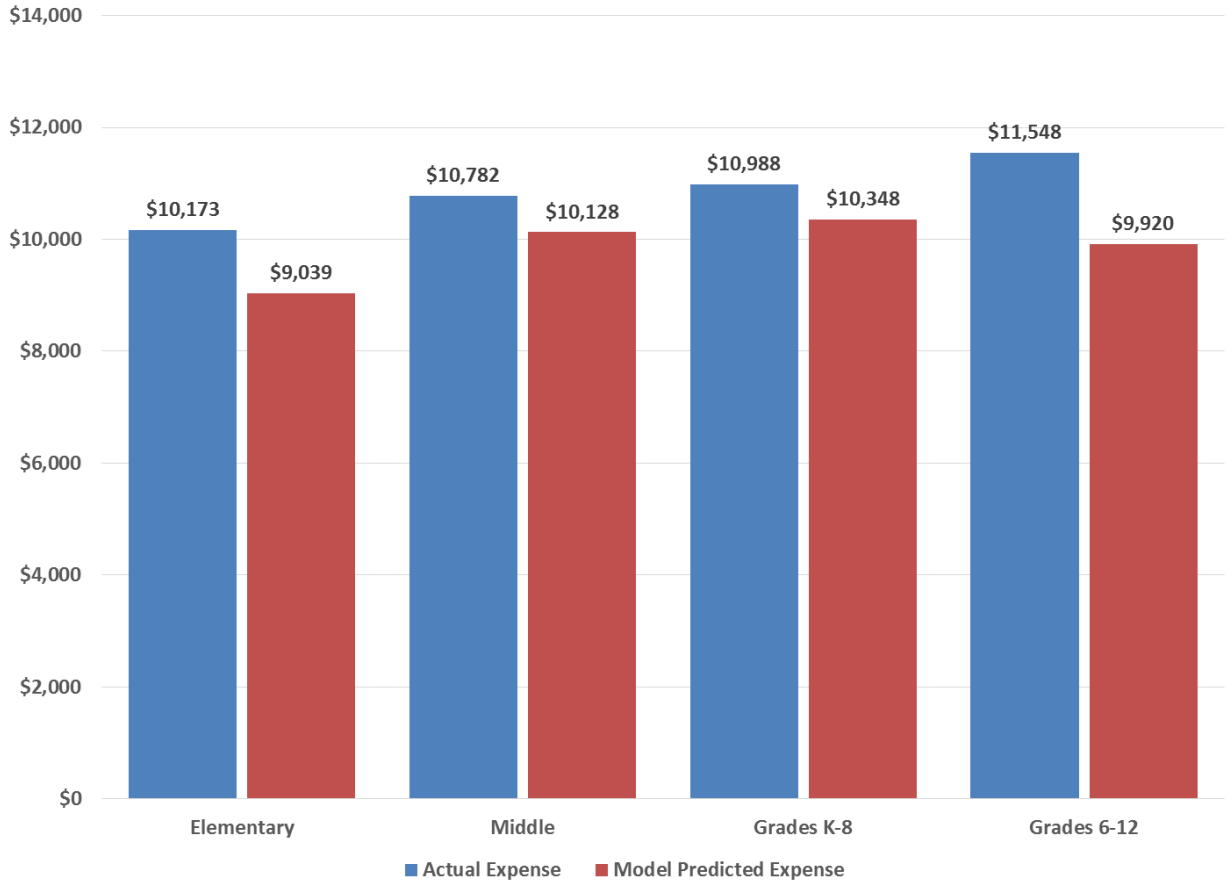
Exhibit 31. Average Actual Versus Predicted Charter School Per-Pupil Expense for Baltimore City by Grade Configuration (2014–15)



Note: The sample for this exhibit includes all charter public schools within Baltimore City by grade configuration. For school and enrollment counts of charter schools in Baltimore City by grade configuration, see Exhibit A12.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 32 provides a similar breakout by grade configuration of average actual per-pupil and predicted expense for charter schools in Prince George's. The findings show that for all configurations, actual per-pupil spending was higher than predicted. The difference between actual and predicted per-pupil expense ranged across the grade configurations from $640 for schools serving Grades K-8 to $1,628 for those serving Grades 6–12.

Exhibit 32. Average Actual Versus Predicted Charter School Per-Pupil Expense for Prince George's County (2014–15)



Note: The sample for this exhibit includes all charter public schools within Prince George's by grade configuration. For school and enrollment counts of charter schools in Prince George's by grade configuration, see Exhibit A12.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

We also analyzed how the difference between actual and predicted per-pupil expense varied with respect to school characteristics related to student need. Exhibit 33 provides a scatter plot comparison of spending predictions along the horizontal axis and actual spending for 2014–15 for traditional schools (circles) and charter schools (triangles). The diagonal line is the parity line, and schools that fall on that line have actual spending that is the same as their predicted spending. Schools falling above the line have actual spending that is higher than their predicted spending, and schools falling below the line have actual spending that is lower than their predicted spending.[33]

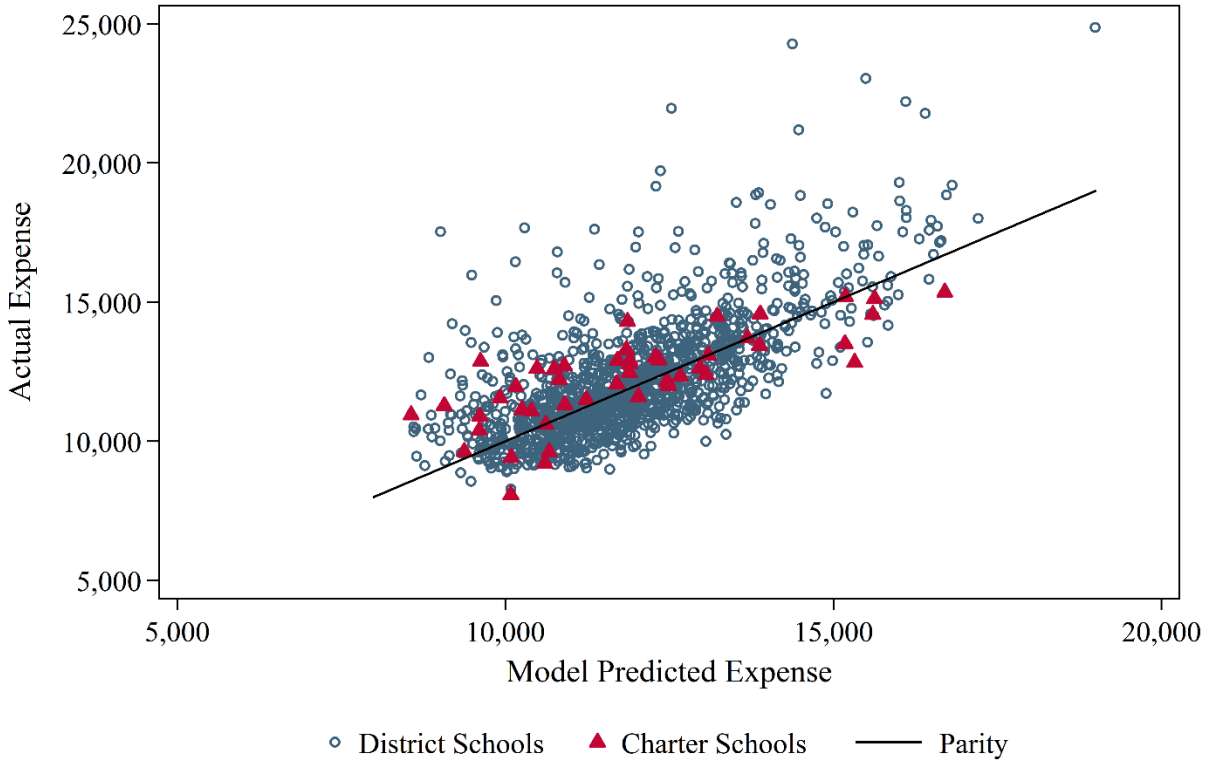
Among schools toward the left-hand side of the figure—schools with lower predicted spending, presumably due to lower needs—all but three charter schools fall above or on/near the line, suggesting that on average, the actual funding for these charter schools was higher than would be expected if they were treated similar to traditional schools with the same characteristics. Toward

[33] The vertical distance between each plotted point (school) and the parity line provides an estimate of the degree to which actual spending is higher or lower than predicted per-pupil spending.

the right-hand side of the figure, where schools generally have higher needs, charter schools increasingly tend to fall below the parity line, indicating that actual spending per pupil fell short of their predicted per-pupil spending figure (i.e., these schools tended to have less actual funding than would be expected of traditional schools with identical characteristics).

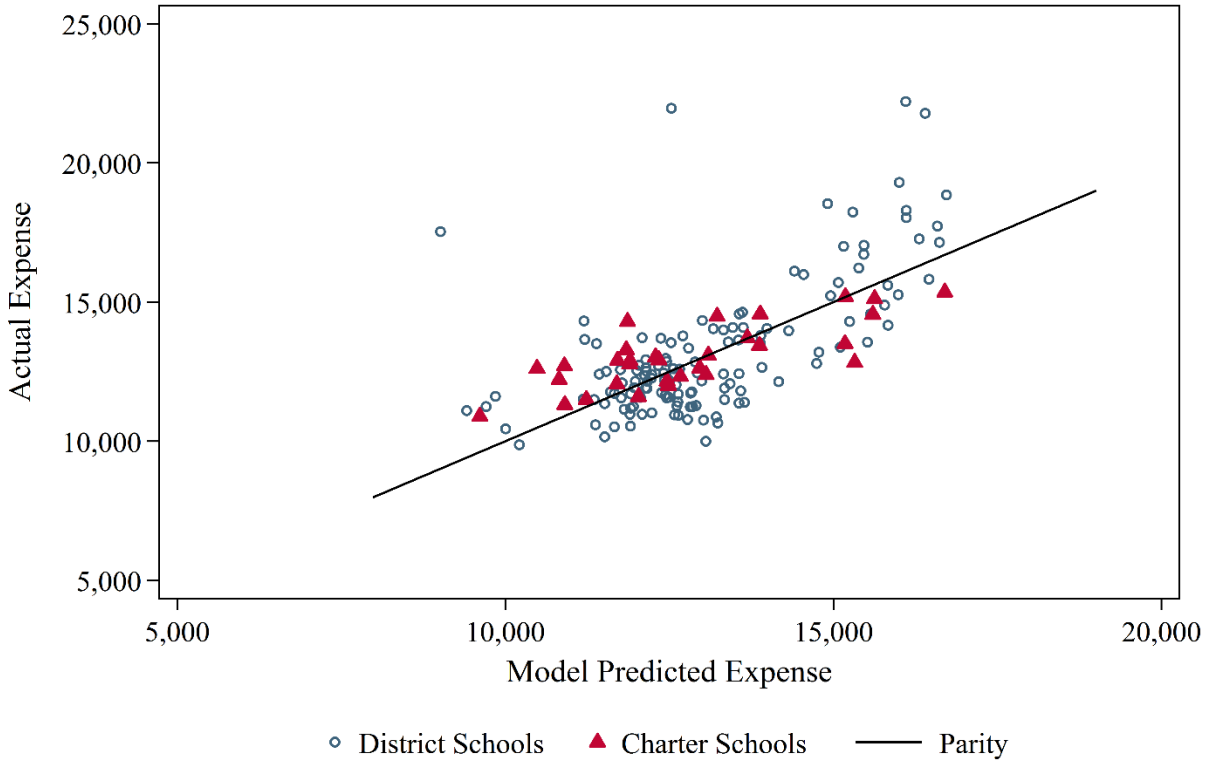
An important caveat here is that the charter school "actual spending" figures are based primarily on statewide staffing data and district reports of charter expenditures and may not include spending supported by revenues from private sources (e.g., revenue raised through private donations or fees). Therefore, the charter school spending we observe may be underestimated to a certain extent. However, it is equally likely that we have not captured a portion of traditional school site spending funded by similar alternative revenue sources, such as those that are regularly provided through the efforts of local parent organizations.

Exhibit 33. Comparing Actual and Predicted Per-Pupil Spending of Traditional and Charter Schools Statewide (2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools in the 2014-15 school year. For school and enrollment counts of traditional and charter public schools in 2014-15, see Exhibit A3.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 34. Comparing Actual and Predicted Per-Pupil Spending of Traditional and Charter Schools in Baltimore City Public Schools (2014–15)

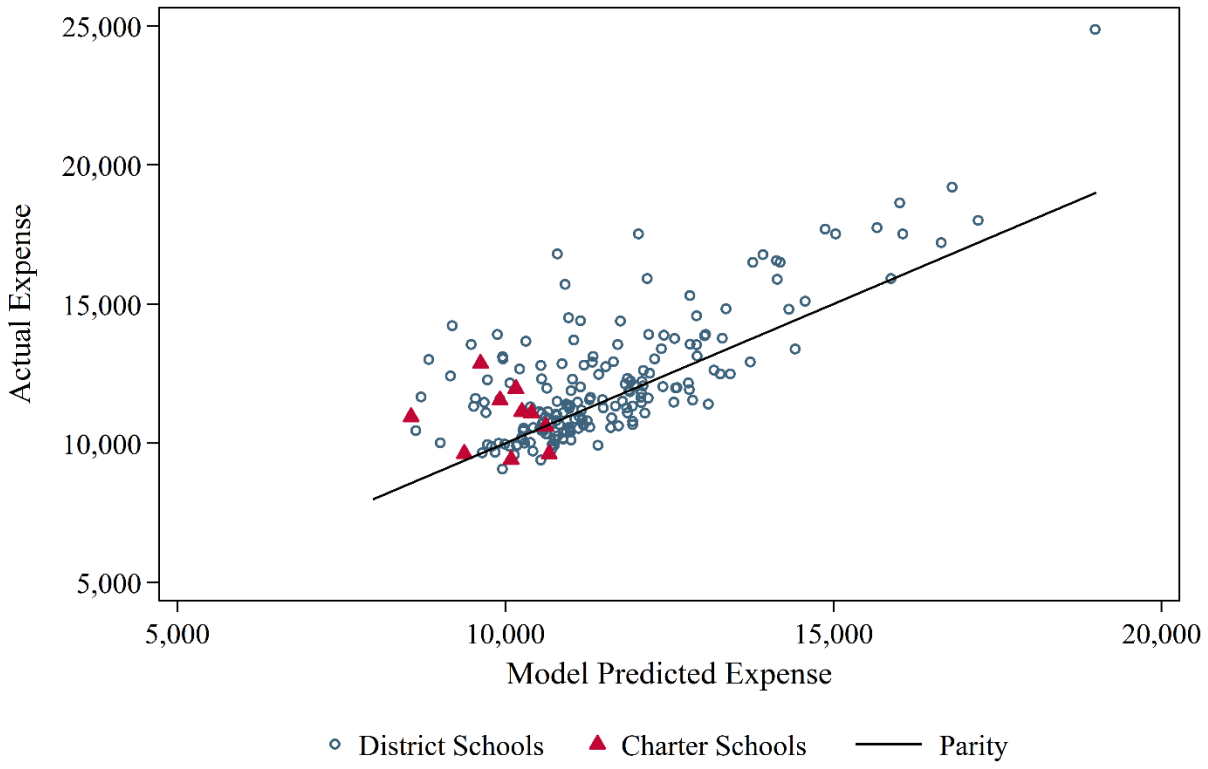


Note: The sample for this exhibit includes all traditional and charter public schools in Baltimore City in the 2014-15 school year. For school and enrollment counts of traditional and charter public schools in Baltimore City in 2014-15, see Exhibit A8.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit 34 specifically compares Baltimore charter schools' predicted and actual spending per pupil. Baltimore charter schools closely follow or, alternatively speaking, greatly influence the overall statewide pattern (given that this district contains such a large share of the state's charter schools), whereby charter schools with lower predicted per-pupil spending estimates tended to spend more than would be expected if they were treated like traditional schools in the district, and charter schools with higher predicted spending tended to spend less than expected. Although Baltimore charter schools' predicted spending spreads across the range, their actual spending was less varied.

Exhibit 35 shows the pattern of actual and predicted spending per pupil for Prince George's County traditional and charter schools. Here, virtually all charter schools had relatively low predicted spending estimates, and most had spending that was in excess of their predictions.

Exhibit 35. Comparing Actual and Predicted Per-Pupil Spending of Traditional and Charter Schools in Prince George's County (2014–15)



Note: The sample for this exhibit includes all traditional and charter public schools in Prince George's in the 2014-15 school year. For school and enrollment counts of traditional and charter public schools in Prince George's in 2014-15, see Exhibit A8.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

To better understand what is driving the findings presented above, Exhibit 36 compares three-year average (from 2012–13 to 2014–15) student population characteristics between traditional and charter schools in Baltimore City and Prince George's County. Here, we found that on average:

- Charter schools in Baltimore City served fewer children from low-income families than traditional elementary and middle schools, but more children from low-income families than traditional high schools. Notably, however, charter schools tend to focus on lower and middle grades.
- Charter and traditional schools in Baltimore City served relatively small shares of ESL children.
- Charter schools in Baltimore City served slightly smaller overall percentages of special education populations than traditional schools, and the share of special education students with non-severe disabilities was higher than for traditional schools.

- Charter schools in Prince George's County served substantially smaller shares of children from low-income families and much smaller shares of ESL children than traditional schools.
- Charter schools in Prince George's County served much smaller special education populations, with a much higher share falling into non-severe categories, than traditional schools.

Based on this information alone, one might assume that charter schools in Baltimore City would be predicted to have somewhat lower per-pupil spending, on average, than traditional schools, and that charter schools in Prince George's should have substantively lower per-pupil spending than traditional schools, if variations in spending follow traditional school statewide patterns according to student needs.

Exhibit 36. Average Characteristics of Traditional and Charter Schools in Baltimore City and Prince George's County (2012–13 to 2014–15)

District	School Characteristic	Elementary		Middle		High		Grades K–8		Grades 6–12	
		Traditional	Charter	Traditional	Charter	Traditional	Charter	Traditional	Charter	Traditional	Charter
Baltimore City	Percent Free or Reduced-Price Meals (FARMS)	94%	79%	93%	82%	73%	73%	88%	81%	85%	84%
	Percent English as a Second Language (ESL)	2%	5%	3%	1%	1%	0%	6%	3%	3%	0%
	Percent Students With Disabilities	15%	13%	22%	21%	13%	21%	15%	12%	22%	19%
	Proportion of Disabled With Non-Severe Disabilities	70%	79%	68%	71%	72%	80%	73%	83%	70%	76%
Prince George's County	Percent Free or Reduced-Price Meals (FARMS)	66%	31%	66%	28%	53%	—	73%	49%	—	22%
	Percent English as a Second Language (ESL)	21%	1%	10%	0%	8%	—	21%	2%	—	1%
	Percent Students With Disabilities	10%	5%	13%	5%	12%	—	10%	7%	—	5%
	Proportion of Disabled With Non-Severe Disabilities	72%	76%	75%	90%	72%	—	74%	85%	—	85%

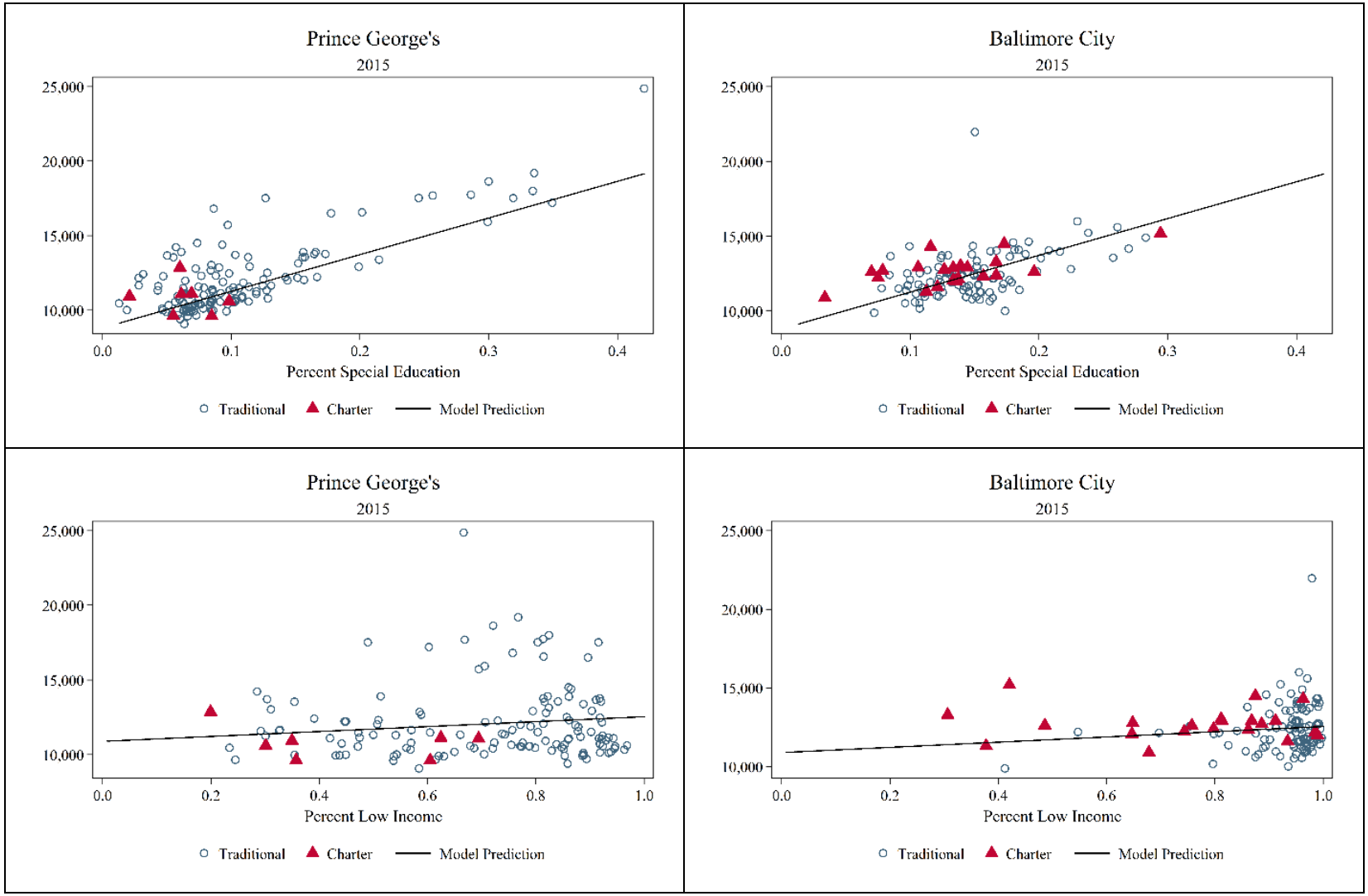
— Not applicable
Note: The sample for this exhibit includes all traditional and charter public schools within Baltimore City and Prince George's by grade configuration. For school and enrollment counts of charter schools in Baltimore City and Prince George's by grade configuration, see Exhibits A9 and A10.
Source: MSDE Statewide Student Demographic Data

Again, the regression model is designed to take into account patterns of traditional school per-pupil spending in relation to school-level student needs and other characteristics, which can be used to predict what charter schools *would be expected to spend* if they were treated the same as traditional schools with similar characteristics. With this in mind, Exhibit 37 provides further exploration of the relationship between spending and student needs in the form of a series of scatter plots that depict traditional and charter school per-pupil spending in relation to incidences of FARMs and special education students. Data are for the 2014–15 school year and include schools with more than 60% of students in Grades Pre-K–5. In the first plot (upper left corner of the exhibit), one can see that in Prince George's County, charter schools served relatively few children with disabilities and that some of these schools had spending that was substantively more than (a) traditional schools serving similar levels of students with disabilities, and (b) the model-based trend between disability shares and per-pupil spending, represented by the fitted line running through the plotted points.

In contrast, the next scatter plot (upper right corner) shows that Baltimore City charter schools were more likely to serve relatively higher shares of children with disabilities than charters in Prince George's County. However, the scatter plot shows that actual spending for many Baltimore City charter schools was still above the model-based trend line, as well as above many traditional schools with similar disability rates.

The bottom left panel shows that charter schools in Prince George's tended to serve smaller percentages of FARMs students than traditional schools. The figure also shows that schools in Prince George's with higher percentages of FARMs students generally did not have higher per-pupil spending. Similarly, in Baltimore City, several charter schools appeared to serve much smaller shares of FARMs students than traditional schools and schools with higher percentages of FARMs do not tend to have higher levels of spending than their lower need counterparts.

Exhibit 37. District and Charter Elementary Actual School Spending per Pupil by Student Need Factors (2014–15)



Note: Only schools with more than 60% of students in Grades Pre-K-5 were included in these graphs. The sample used for Prince George's included 133 traditional schools and 7 public charter schools. The sample for Baltimore City included 102 traditional schools and 21 charter schools.
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

5. Charter School Funding, Service Arrangements, and Facilities

District Funding Formulas for Charter Schools

The funding formulas used to determine a charter school's Per-Pupil Allocation (PPA)—the base level of funding provided to the school—are quite similar across the five districts (Anne Arundel, Baltimore City, Frederick, Prince George's, and St. Mary's). In our conversations with the districts, they stated that the main components of the formulas have remained constant for the last several years, with occasional small modifications.

In general, each district starts its calculation with the approved general fund budget that takes into account local, state, and federal funding, but does not include funding for school construction projects, debt services, or food services. Each district then deducts dollar amounts for programs that either do not apply to charter schools, such as payments for retiree benefits or adult education, or for programs provided separately by the district to charter schools and their students, such as special education or EL services in several of the districts. These deductions—or exclusions, as they are often referred to in the PPA formulas—should only be made in instances where spending does not apply to charter schools or when the district provides additional funding or services for students in charter schools outside of the charter PPA. In addition, each district also makes deductions for administrative services provided for charter schools by the district, usually through a 2% administrative fee, or in the case of Frederick, an additional exclusion for administration.

The PPA is calculated by dividing the total amount of district funding, after accounting for all exclusions, by district enrollment. With the exception of Baltimore City, the enrollment figures used to calculate the PPA include students enrolled in Pre-K through Grade 12. In Baltimore City, Pre-K enrollment is excluded. The PPA is then applied to the K-12 enrollment of each charter school in the district in order to calculate the funding each charter school will receive.[34]

Because exclusions are made from the total amount of district funding used to calculate the PPA in order to account for services provided to charter school students by the district outside of the PPA, the PPA represents only the school-level discretionary dollars provided by the districts to charter schools. As such, the PPA does not represent the total cost of all services supporting charter school students.

The following sections provide details of the funding formula used by each of the five districts with active charter schools. It examines the different categories included or excluded from the formula and the dollars associated with them, illustrating how the per-pupil allocations were calculated in the 2015 fiscal year (FY2015).

[34] As mentioned in Chapter 3, Baltimore City and Frederick contained the only charter schools that enrolled Pre-K students (Anne Arundel, Prince George's, and St. Mary's charter schools did not enroll any Pre-K students), but charter schools in both of these districts were provided funds only for K-12 enrollment through the PPA. However, in Baltimore City services were provided for charter school Pre-K students by the district outside of the PPA.

Anne Arundel

The starting point for the funding formula in Anne Arundel is the Board-Adopted Budget, which includes all restricted and unrestricted operating funds, as well as the food service special revenue fund. As shown in Exhibit 38, for Anne Arundel in FY2015, this amounted to about $1.02 billion. The district then excluded the funds allocated to adult education, all the restricted grants (including transportation), and food services funding, amounting to $66.3 million in total exclusions.[35] The final charter school PPA for Anne Arundel for the 2014–15 school year was $11,906 per student.

One main difference between Anne Arundel and the other four districts is that it accounts for federal aid to special education as part of its formula, identified in the formula as "Federal Aid to the Handicapped." This money—approximately $15 million in FY2015—is first deducted as part of the restricted budget exclusions. Using this pot of money, Anne Arundel calculates a separate allocation per special education student (equal to $1,844 in FY2015) based on the number of special education students enrolled in the district, which is added on top of the net per-pupil allocation.[36] In other words, the district gave $1,844 for each special education student who was enrolled in a charter school on top of the $11,906 listed as the Net Per-Pupil Allocation.

Exhibit 38. Anne Arundel Charter School Per-Pupil Allocation (FY2015)

Revenues	
Board-Adopted Budget	$1,019,987,700
Exclusions	
Restricted Budget	-$35,900,000
Adult Education	-$2,192,920
Food Services Fund	-$28,170,000
Gross Funding	$953,724,780
Enrollment (Pre-K Through Grade 12)	78,500
Per-Pupil Allocation	$12,149
Overhead	
2% Administrative Fee per Pupil	-$243
Net Per-Pupil Allocation	**$11,906**

Note: Anne Arundel's initial revenues are based on the board-adopted budget, which includes all restricted and unrestricted operating funds, as well as the food service special revenue fund, and excludes capital outlay funds. Exclusions from the restricted budget include student transportation. Anne Arundel adds back the federal aid to the handicapped on a per-special education pupil basis, which amounted to an additional $1,844 per special education student in FY2015. Enrollment figures are based on the public enrollment as of September 2013, and include Pre-K through Grade 12.
Source: Anne Arundel Charter PPA formula for FY2015

[35] The restricted funds in Anne Arundel include grant programs such as Title I, Aid to the Handicapped, Title II Innovative Education, and Race to the Top initiative revenue.
[36] The special education funds (Federal Aid to the Handicapped) was $15,042,500 in FY2015, the total number of students receiving special education services was 7,995. Therefore the per-pupil special education amount that Anne Arundel receives is $1,844 ($1,881 minus 2% to cover the administrative fee).

Baltimore City

For Baltimore City the starting revenue for calculating the charter school PPA is the Total General Fund Revenue. The food services and the capital projects funds are not included in this base amount as they represent separate funds. Restricted funds (categorical program funding intended for specific students or programs) are also excluded from the funding formula.[37] As shown in Exhibit 39, the base amount was $1.17 billion in FY2015. In addition, other revenues are initially included that account for the fund balance from the prior year, as well as non-resident school tuition, summer school tuition, revenue from renting their facilities, and investment earnings. However, these other revenues are subsequently deducted as exclusions, identified as contributions from fund balance and non-state/local revenue.

Baltimore City also excludes non-public education funding ($48.4 million in FY2015). The non-public education funding refers to payments to other districts or schools that serve Baltimore City students who have been deemed more appropriately served elsewhere. It also takes into account the funds allocated for special education to third-party providers for services required for special education students but not provided in-house by the district. Note that Baltimore City and St. Mary's are the only two districts that do not exclude transportation funding for general education from the gross funding.

Further exclusions are made for special services that are provided by the district for eligible charter school students or as additional services outside of the PPA. In FY 2015, this included funding to cover staffing and services for Pre-K students ($28.6 million), students with disabilities ($212.1 million), EL students ($13.2 million), and specialized transportation ($36.5 million).

The gross funding amount for FY2015 was $770.2 million and the net per-pupil allocation after subtracting the 2% administrative fee was $9,450 in FY2015.

[37] Restricted funds in Baltimore City refer to grants that come from federal, state, local, and private sources and must be used for specific programs including Title I for disadvantaged children, vocational education, special education, and various pilot programs.

Exhibit 39. Baltimore City Charter School Per-Pupil Allocation (FY2015)

Revenues	
Total General Fund Revenue	$1,171,499,501
Other Revenues	$35,583,293
Exclusions	
Retiree Health Benefits/Pensions	-$38,454,781
Debt Payments	-$23,972,573
Contributions From Fund Balance	-$27,526,157
Pre-K Funding	-$28,550,093
Non-State/Local Revenue	-$8,057,136
Non-Public Education Funding	-$48,446,728
Students With Disabilities Funding	-$212,066,055
English Speakers of Other Languages Funding	-$13,242,792
Specialized Transportation	-$36,533,623
Gross Funding	$770,232,856
Overhead	
2% Administrative Fee	-$15,404,657
Net Funds Available for Per-Pupil Allocation	$754,828,199
Enrollment (Kindergarten Through Grade 12)	79,878
Net Per-Pupil Allocation	**$9,450**

Note: Baltimore City's initial revenues are based on the total general fund revenue; restricted funding is excluded a priori, as well as capital projects funds, food services funds, and special revenues. Other revenue sources include non-resident school tuition, summer school tuition, revenue from special use of buildings, and investment earnings. The non-public education funding refers to the funds used to pay the local revenues to districts receiving students from BCPS due to out-of-state-living arrangements or kinship care placement, as well as funds allocated for special education to other providers because the district does not offer those services. Enrollment figures are based on the projected FY2015 public school enrollment in Kindergarten through Grade 12.
Source: Baltimore City Charter PPA formula for FY2015

Frederick

The initial revenues for Frederick are based on the General Fund Approved Budget, which excludes food services and capital project funds. As shown in Exhibit 40, the initial amount was $539.5 million in FY2015. Frederick then excludes restricted funds, which amounted to $78.4 million in FY2015.[38]

Other exclusions are made from the remaining unrestricted budget, related to services not applicable to charter schools or services provided by the district for charter schools outside of the PPA. Similar to Anne Arundel and Prince George's, Frederick excludes funds for student transportation ($19.4 million in FY2015). Like Baltimore City and Prince George's, Frederick excludes funding for students with disabilities—amounting to $44.2 million in FY2015.

One main difference from other districts is that Frederick does not subtract a 2% administrative fee from the charter allocation. Instead, Frederick makes additional exclusions for all of the administrative category funds and slightly more than a quarter of the mid-level management

[38] Restricted funds in Frederick County refer to grants that come from federal, state, local, and private sources and must be used for specific programs including Title I, Title II, Title III, Title IV, IDEA, and Race to the Top.

funds. These administrative exclusions accounted for $17.6 million in FY2015 of the "Other Exclusions identified in Exhibit 40.

The gross funding amount for Frederick was $360 million and the net per-pupil allocation was $8,825 for FY2015.

Exhibit 40. Frederick County Charter School Per-Pupil Allocation (FY2015)

Revenues	
General Fund Approved Budget	$539,524,595
Exclusions	
Restricted Budget	-$78,395,613
Other Exclusions	-$37,506,047
Students With Disabilities Funding	-$44,168,400
Transportation	-$19,406,528
Gross Funding	$360,048,007
Enrollment (Pre-K Through Grade 12)	40,797
Per-Pupil Allocation	$8,825
Overhead	
2% Administrative Fee per Pupil	N/A
Net Per-Pupil Allocation	**$8,825**

Note: Frederick initial revenues are based on the general fund approved budget. It excludes food services and capital project funds. Other exclusions for Frederick refer to services that are not applicable to charter schools, such as community services, fixed charges, and pupil support services. In addition, Frederick makes a deduction for administration (included in Other Exclusions) rather than charging a 2% administrative fee. Enrollment figures are based on the projected FY2015 public school enrollment in Pre-K through Grade 12.
Source: Frederick County Charter PPA formula for FY2015

Prince George's County

For Prince George's, the initial revenue used to calculate the PPA is the Total Approved Operating Budget, which includes the restricted and unrestricted general fund accounts, but excludes other funds such as capital projects, debt services, and food services funds. As shown in Exhibit 41, the base amount was $1.80 billion in FY2015.

In Prince George's, exclusions are applied in two stages. In FY2015, the first set of exclusions related to restricted funding ($122.1 million) that included mostly federal grants, fund balance usage ($43.0 million), and funds regarding charter school allocations ($36.7 million).[39]

The second set of exclusions related to funding for students with disabilities ($283.9 million), transportation funds ($117.5 million), and lease purchasing funds ($24.9 million).

Importantly, Prince George's applies the 2% administrative fee to the total remaining budget after making only the first set of exclusions—an amount larger than the gross funding remaining after making both sets of exclusions. Officials indicated that the reason for this is that the second

[39] Restricted Funding in Prince George's County refers to grants that are primarily composed of federal revenue and also include Medicaid reimbursement. Such federal grants include programs like Title I, Title II, Head Start, Junior ROTC, and State Pass-through Grant for Special Education.

set of exclusions—special education in particular—include administrative components that the district wants to capture in the administrative fee, as a result of calculating the administrative fee before these deductions are made.

The gross funding amount for FY2015 was $1.17 billion, and the net per-pupil allocation after subtracting the 2% administrative fee was $8,924.

Exhibit 41. Prince George's County Charter School Per-Pupil Allocation (FY2015)

Revenues	
Total Approved Operating Budget	$1,801,250,312
First Exclusions	
Restricted Funding	-$122,068,512
Charter School Allocation	-$36,749,391
Fund Balance Usage	-$43,012,173
Second Exclusion	
Students With Disabilities Funding	-$283,907,625
Transportation	-$117,548,123
Lease Purchases	-$24,949,287
Gross Funding	$1,173,015,201
Enrollment (Pre-K Through Grade 12)	127,863
Gross Per-Pupil Allocation	$9,174
Overhead	
2% Administrative Fee per Pupil (applied after first exclusion)	-$250
Net Per-Pupil Allocation	**$8,924**

Note: Prince George's initial revenues refer to the total approved operating budget, and exclude capital outlay, food services, and debt services. Other revenues or exclusions in Prince George's listed under first and second exclusion sets, above. In Prince George's the administrative fee applies to the total remaining revenue after only the first round of exclusions are made, not after the second exclusions. Enrollment figures are based on the projected FY2015 public school enrollment in Pre-K through Grade 12.
Source: Prince George's County Charter PPA formula for FY2015

St. Mary's

For St. Mary's, the initial revenue amount is the General Fund Approved Budget, which excludes all restricted funding, as well as funds for food services, capital projects, and debt services. As shown in Exhibit 42, the base amount was $194.7 million in FY2015.[40]

The exclusions that St. Mary's applies are retiree benefits and pensions, contributions from fund balance, and other revenues and non-public education funding. The other revenues or exclusions refer to funds related to county investments, summer school tuition, and the revenues related to the rental of their facilities, as well as funding for the JROTC program. St. Mary's also excludes the funding related to English learners.

[40] Restricted funds in St. Mary's County refer to grants received from state or federal agencies, as well as private grants that are used to support instructional and student services. Restricted funds include Race to the Top, Adult Education, and Title II.

In FY 2015, the gross funding amount was $186.5 million and the net per-pupil allocation after subtracting the 2% administrative fee was $10,404.

One nuance in the St. Mary's County funding formula is that, for charter school students identified as ELs, St. Mary's adds back the per-pupil cost of providing ESL education, which none of the other districts do. This does not appear in the FY2015 formula, as there were no EL students in charter schools this year. However, the additional funding for EL students has been applied in more recent years, as the county's charter school has since enrolled an EL student.

Exhibit 42. St. Mary's County Charter School Per-Pupil Allocation (FY2015)

Revenues	
General Fund Approved Budget	$194,672,688
Exclusions	
Retiree Health Benefits/Pensions	-$4,375,711
Contribution from Fund Balance	-$8,900
Other Revenues or Exclusions	-$3,091,518
English Speakers of Other Languages Funding	-$696,586
Gross Funding	$186,499,973
Enrollment (Pre-K Through Grade 12)	17,568
Per-Pupil Allocation	$10,616
Overhead	
2% Administrative Fee	-$212
Net per-Pupil Allocation	**$10,404**

Note: St. Mary's initial revenues are based on the General Fund Approved Budgeter and refer solely to unrestricted funds. The other revenues or exclusions refer to funds related to county investments, summer school tuition, and the revenues related to the rental of their facilities, as well as funding for the JROTC – AIR Force and Navy fund – program. St. Mary's is the only district that adds back the per-pupil cost of providing ESL education. Enrollment figures are based on the projected FY2015 public school enrollment in Pre-K through Grade 12.
Source: St. Mary's County Charter PPA formula for FY2015

Charter/Host District Fiscal and Service Relationships

The relationships between charter operators and districts are governed by individual charter agreements between each operator and its district. In the charter agreements, the responsibilities and rights of charter schools are explained, and arrangements for the provision of services are delineated. However, it is worth mentioning that none of the agreements specify any agreed-upon dollar values for services provided to the charter schools.

Even though the agreements are valid between three and five years, the services provided by the district can be negotiated more frequently. For example, in Anne Arundel, the charter operator negotiated to have the special education funds allocated directly to them via the per-pupil allocation. In the case of Frederick, one of the charter operators also negotiated to have the dollar amount of the technology and communications services included in its per-pupil allocation instead of buying the services from the district. St. Mary's has only one charter operator, and the district mentioned that every year district staff sit down with the principal to talk about the services needed and how to best provide them.

Charter Agreements

The research team performed an in-depth examination of the charter school agreements in each of the five districts hosting charter schools. While the agreements for schools within each district are almost identical, they differ substantially across the five districts. In general, all agreements clearly state that the funding for charter schools should be commensurate with the amount disbursed to traditional schools. The agreements also specify that the charter operators are responsible for the facilities in which their schools operate and for cleaning, maintaining, and operating these facilities. Moreover, the charter operators must provide a facility that meets all the requirements stipulated in the federal, state, and local regulations and ordinances.

The agreements that exist between charter operators and their host districts include arrangements for how special education and transportation are to be provided, but the specifics of how these services are provided differ across districts. Another commonality is that the agreements give charter operators authority over the design and implementation of the instructional programs in their schools, and state that charter schools are to impose no tuition, mandatory contribution, or attendance fee on any student who lives within the district boundaries. The agreements also specify that charter schools may pursue additional funding opportunities, whether public or private, to support their activities.

Some of the differences across districts relate to how the charter school PPA is calculated and how special services will be provided for students attending charter schools. For example, in Prince George's, the agreement explicitly states the per-pupil allocation and the calculations used in the formula for determining the funding amount. The agreements for Baltimore City and Frederick also define how health services for charter school students are to be provided.

Below we summarize the main contents of the charter agreement related to the provision of services for each of the five districts that have active charter schools:

Anne Arundel

- The charter operator is required to compensate teachers and provide substitute teachers.
- The charter operator is responsible for providing and paying for the transportation services to its students. Specifically, the charter operator must secure, manage, supervise, implement, and direct its own transportation service.
- Health staff for schools are hired, trained, and supervised by Anne Arundel County Department of Health.
- The charter operator is responsible for providing services to, and accommodations for, their students with disabilities. The charter operator hires and pays the providers to deliver the necessary services. It is also required to provide psychological services.
- Food services are provided directly by the district; however, any equipment needed is to be paid for by the charter operator.
- The district provides the necessary software to manage the student information systems.

- Charter school staff face the same state and federal requirements as traditional school staff about participating in professional development opportunities. District staff development opportunities are available to charter staff, but they are not required to attend.
- The charter agreement specifies that the 2% service fee entitles the charter school to the same administrative, technical, and other services provided by the district to its public schools, including technical support, software monitoring, and assistance in receiving records of a transfer student.

Baltimore City

- Ongoing professional development is the responsibility of the charter operator. New teacher training is the responsibility of the district; however, the school operator may provide parallel training for its teachers instead of participating in the district training.
- The district provides the software and training charter school and charter operator staff need to operate the district's student data systems and tools. However, the charter operator is responsible for providing their own hardware.
- The district provides food services and bears all of the costs associated with this service. The charter operator elects whether to accept the district services or provide them in-house.
- Special education services are provided by the district.
- Health services are provided by the district to charter schools in the same manner and level as provided to other traditional public schools in Baltimore City.
- The district provides transportation services related to students with disabilities. Transportation services are also provided by the district for those students who attend charter schools as a result of the Title I Parent Choice Transfer Option Initiative.
- Other services that are specified as being provided by the district are security, mail transportation and delivery services to the school (but no postage), and administration services such as payroll processing and direct deposit arrangements.

Frederick

- The district is responsible for assigning the staff and resources necessary to provide all identified services for special education students.
- The district is responsible for providing transportation only for (1) those students who live along an established bus route that passes the school facility, and (2) those special education students with transportation included as part of their IEP.
- Health staff for schools are hired, trained, and supervised by Frederick County Department of Health.

  The district is responsible for assigning staff and resources necessary to provide all identified services for the students with disabilities as specified in their IEPs. The district

staff confers with the charter school on the assignment of special education personnel to the charter schools.

- In the charter agreements, there is no mention of professional development or food services.

Prince George's

- The district will provide and fund services required by a student's IEP. The charter operator shall comply with the district's public school special education process guide, including initiatives and procedures in the evaluation, identification, discipline, and provision of services to students with disabilities, and will work collaboratively with the district to address the needs of the student. The district will provide additional special education funding to charters based on students enrolled in special education programs.
- The district does not provide transportation services to charter school students.
- The charter school may receive food services from the district at cost.
- The charter operator is expected to provide a level of technology at least equal to that of the schools within the Prince George's public school system.
- The charter operator is responsible for securing the start-up costs. The agreement specifies that there is no specific district or state funding available for the acquisition of educational materials, supplies, furniture, other equipment, and site costs associated with start-up of a new facility.
- The district is responsible for providing human resource services to the charter school.
- The charter operator may choose to participate in the district's purchasing contract and must comply with the district policies, regulations, and procedures established for student activity funds.
- In the charter agreements, there is no mention of professional development.

St. Mary's

- The district provides food services and bears all associated costs. The charter operator elects whether to accept the district services or to provide them in-house.
- The district is required to provide special education services; the charter school is responsible for conducting IEP meetings and must adhere to the district policies, procedures, and other requirements under IDEA. However, as indicated in interviews with both district and charter school staff, the charter operator in St. Mary's negotiated with the district to receive special education funding allowing the charter school to provide its own special education services.
- The charter operator provides transportation services for those students in the designated transportation area, for special education students needing transportation, and for field trips. Transportation must be coordinated with the district's transportation department. Transportation for students not in a designated area is the responsibility of the parent or guardian.

- The charter school is responsible for providing health services and safety protections.
- There is no mention of professional development in the agreement.

Services Provided by the District

Extending the analysis further, we interviewed staff in the five districts with active charters as well as the 30 charter operators. Our aim was to investigate whether the written charter agreements provided the full picture of the services provided by the districts and the services that the charter operators were responsible for. We discovered that the charter agreements did not capture the full scope of the services made available to the charter schools. In some cases, this was due to more recent negotiations between the charter operators and the district, and in others it was because the charter agreements did not include certain details that were obtained through staff interviews.

This section discusses the services that were provided to the charter schools as of FY2015. The services provided by the district to charter schools and their students can be classified as either in-kind or as a "buyback." In-kind services are services provided to the charter school by the district, or in the case of health services directly by the county health department, with the costs supported outside of the charter's PPA budget (for example, by district-level funding associated with the revenue exclusions discussed earlier in the descriptions of the district PPA calculations).

Buybacks are services purchased back from the district by the charter operators on an as-needed basis after the distribution of the per-pupil allocation. The services purchased with the PPA include much of the full-time staff employed at charter schools, as well as other goods and services that charter operators have discretion over how to provide, including selecting third-party providers.

The costs for in-kind services are captured in two different ways. Most types of centralized administrative support—such as payroll and central support for student record keeping—fall under the 2% administrative fee for those districts utilizing such a fee. Other services administered in-kind are accounted for as exclusions from the per-pupil allocation. For instance, in Baltimore City the cost of special education services is excluded from the calculation of the PPA, and special education services for charter school students are then paid for by the district outside of the PPA.

Districts indicated that the per-pupil cost of a buyback is calculated by dividing the total cost for the given service or program by the total number of students in the district. The charge to a charter school for the buyback is then calculated by multiplying this per-pupil cost by the number of students in each charter school making use of the service or program. Each district provides a unique set of in-kind services and buyback options.

Exhibit 43 shows the services provided by the district to the charter operators either in-kind or through buybacks, as well as those services that the charter operators are responsible for and are funded through their per-pupil allocation.

Across the five districts with active charter schools, the following services are funded in a similar way:

- Central administration services are provided to charters by the district. These services include overseeing human resources, management of the expense-operating budget of the school system, communication, employee recruitment, hiring, and employee benefits administration. Legal services are also included as part of administration; these include providing legal advice and counsel for school system staff and legislative oversight of the school system, as well as the review of procurement processes and budget reviews. These services are funded by 2% administrative fee, or in the case of Frederick by an exclusion of funds from the administration category.
- Instructional salaries, as well as school administration and leadership positions, are covered by the charter school PPA; the cost for these services falls entirely upon charter schools. Textbooks, classroom supplies, library funding, and curricular materials are also covered by the PPA.
- Food services are provided in-kind by the district.
- Transportation for special education students is also provided in-kind by the district for all charter schools, with the exception of those in Anne Arundel.
- Facilities of charter operators are covered with the PPA as specified by the charter agreements. Facilities-related expenses include maintenance, custodians, and all other services needed to operate the school facilities.

The largest differences across districts are in the provision of special education services. In Anne Arundel and St. Mary's the responsibility for providing these services lies predominantly with the charter schools, while in Baltimore City, Frederick, and Prince George's the responsibility and cost of providing special education services falls upon the district. Special education services are covered exclusively by the PPA in Anne Arundel. The charter schools in Anne Arundel are solely responsible for ensuring that the needs of special education students are met, and all associated costs for special education come out of the charter schools' PPA.

St. Mary's provides special education services through a combination of funding types. The majority of special education services are funded by the PPA. However, the cost of certain types of special education services, such as school psychologists or therapists that are only in charter schools a small fraction of their overall time, are charged to charter schools as buybacks at an hourly rate. In addition, the district provides some in-kind services for students in charter schools with more severe needs using federal special education funds.

Exhibit 43. In-Kind and Buyback Services Provided by the District and Services Funded With the Per-Pupil Allocation (PPA)

Services	Anne Arundel 2 operators, 2 schools	Baltimore City 20 operators, 29 schools	Frederick 2 operators, 3 schools	Prince George's 5 operators, 10 schools	St. Mary's 1 operator, 1 school
Administration: human resources, legal, communication service	In- kind	In-kind	In-kind	In-kind	In-kind
Instructional salaries and supplies	PPA	PPA	PPA	PPA	PPA
Facilities and operations: rent, capital improvements, custodial services, building utilities	PPA	PPA	PPA	PPA	PPA
Special education: resources and supports, non-public placement	PPA	In-kind	In-kind	In-kind	Mostly PPA, with some buyback and in-kind
Health services: health room technicians and nurses	In-kind	In-kind	In-kind	PPA	PPA
Professional Development	PPA	PPA and in-kind	PPA	PPA and in-kind	PPA and in-kind
Technology/ telecommunications: support, help desk, administrator systems	PPA, in-kind, and buyback	PPA and in-kind	Buyback and PPA	PPA and in-kind	PPA and in-kind
Food services	In-kind	In-kind	In-kind	In-kind	In-kind
Transportation: bus services for students to/from schools	PPA	PPA, buyback, and in-kind	Not included in PPA	PPA	Buyback
Transportation for IEP students	PPA	In-kind	In-kind	In-kind	In-kind

Note: PPA refers to per-pupil allocation. In-kind services are services provided to the charter school by the district, or in the case of health services directly by the county health department. Buybacks are services purchased back from the district by the charter operators after the distribution of the per-pupil allocation.
Sources: Documentation on charter school in-kind and buybacks services for FY2017 from fiscal offices in Anne Arundel, Frederick, and Prince George's, and interviews with district staff and charter operators in Baltimore City and St. Mary's.

In Baltimore City, Frederick, and Prince George's, special education services are provided in-kind by the district.[41] In these three districts, the district determines how many special education staff should be assigned to charter schools to meet the students' needs, and these staff are paid for by the district outside of the PPA. Baltimore City also indicated there are additional special education funds (in addition to staff) for charter schools outside of the PPA.

Other service areas where there are differences across districts in how services are provided include the following:

- Health services are mainly funded by the PPA except in Baltimore City and Frederick, where the district provides these services in-kind.
- Professional development is often provided both in-house by charter operators from their PPA and through districtwide professional development opportunities that charter schools are able to participate in as in-kind services.
- Telecommunications and technology services are provided through a combination of the PPA and in-kind services, except in Frederick, where the two charter operators buyback the services from the district. In the other districts, certain telecommunications or technology services, such as access to the district's network, or software for recording student records, are provided in-kind, as are IT services for addressing network issues. However, many charter schools often elect to purchase additional hardware and software and hire IT support staff out of the PPA.
- Transportation services are not provided for charter school students in Frederick or Prince George's. The families in both districts are responsible for providing transportation of their children enrolled in the charter school. In Prince George's, there is one school where the parents contracted the services of a third party to provide transportation for their children. Another school in Prince George's decided to provide transportation, and it is funded out of the PPA. In Baltimore City the charter operators reimburse the district for the cost of using the city public bus service. However, there are two additional services provided by Baltimore City. One is the corner-to-corner yellow bus, where the students take the buses to cross highways or unsafe areas. For the homeless population and injured students, the district provides taxi services. These services are provided to both charter schools and traditional schools.

[41] The charter agreements between Prince George's and the charter operators do not explicitly state that the district is required to provide special education services. However, the charter operators as well as the district staff stated that special education services were provided directly by the district. The charter agreement between St. Mary's and the charter operator specifies that the district provides the special education services. However, when we interviewed the district staff they clarified that some services are provided in-kind or though buyback, but mostly the services are funded via the PPA as a result of the charter operator negotiating to receive funding for providing special education directly.

Charter Management and the Cost of Overhead

Several charter operators in Maryland are part of either national or local charter management organizations (CMOs). Imagine Schools and KIPP are both national management organizations, while Afya Baltimore (Afya), Baltimore Curriculum Project (BCP), Baltimore Teacher Network (BTN), Chesapeake Lighthouse Foundation (CLF), City Neighbors Foundation (CNF), Imagine Schools (Imagine), Monarch-Children's Guild (Monarch), and Monocacy Montessori Communities (MMC) have established management agreements with local organizations.

When involved in such management agreements, charter schools receive various services from their management organization, such as administrative leadership and guidance, oversight and quality control, training, accounting and auditing services, marketing, curriculum development, and other services. In return for these services, the charter schools pay a management fee. Management fees, as reported in the interviews with charter operator staff as well as seen in Charter School End-of-Year Expense Reports, range from 5% to 12% of the funding provided to the schools through the PPA formulas.

Exhibit 44 lists the management fees for schools where an identifiable fee was found in the charter school fiscal data as well as the management fee percentage that the charter operators mentioned in the interviews. Afya Baltimore, Baltimore Curriculum Project, Baltimore Teacher Network, Monarch-Children's Guild (for Glen Burnie), and KIPP, which did not have identifiable management fees in their fiscal data, reported having management fees in their interviews. For those schools that did not have management fees that could be identified in their End-of-Year Expense Report data, we calculated an estimated management fee based on percentages reported in interviews with charter operator staff.

Monocacy Montessori Communities, the charter operator of Monocacy and Carroll Creek Montessori schools, first instituted a fee to cover administrative costs in the 2014-15 school year. They reported an administrative fee of up to 5% of the PPA, which is voted on each year by the Board of Trustees. Afya Baltimore, which operates two schools, indicated that there was not a management fee in the years included as part of this study but that it has since instituted a fee to support management of the organization. Prior to instituting a fee, Afya's schools directly paid for the charter organization management staff, which at the time was only a single staff member. Monarch Academy–Glen Burnie reported having an 8% management fee. KIPP indicated that they paid an annual licensing fee to be a KIPP school of $30,000. In addition, KIPP schools are able to purchase additional management services from the KIPP organization.

The presence of management fees and generally high costs for administration and occupancy lead to relatively high overhead costs for many of Maryland's charter schools. As shown in Exhibit 45, 23 of the 43 charter schools included in the analysis have overhead rates higher than 20%. In contrast, the statewide overhead rate is 17%, and Baltimore City and Prince George's County each have overhead rates of around 19%.[42]

[42] This was calculated for both the state and the two districts as the share of total spending categorized as capital outlay, maintenance and operations, administration, and non-salary mid-level administration from 2012–13 to 2014–15.

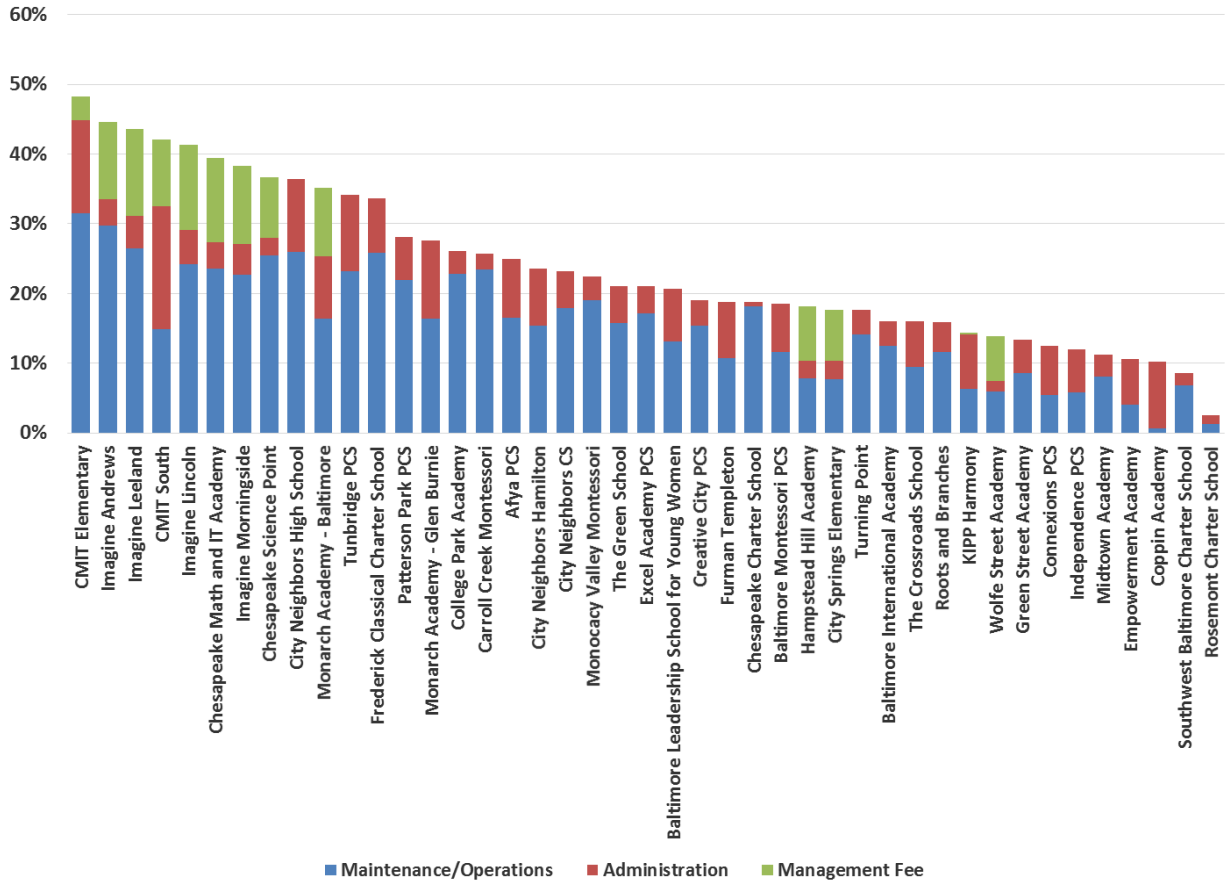
Exhibit 44. Per-Pupil Charter Management Fees and Management Fee Percentages

District/School Name (Charter Operator)	2012 – 13	2013 – 14	2014 – 15	Management Fee Percentage
Anne Arundel Schools				
Monarch Academy–Glen Burnie (Monarch)	$1,059*	$1,017*	$1,017*	8.0%
Chesapeake Science Point (CLF)	$883	$1,273	$1,236	8.0%
Baltimore City Schools				
City Neighbors Charter School (CNF)	$328	$231	$283	3.5%
City Neighbors Hamilton (CNF)	$328	$231	$283	3.5%
City Neighbors High School (CNF)	$328	$231	$381	3.5%
City Springs Elementary (BCP)	$630	$661	$662	7.5%
Connexions Public Charter School (BTN)	$565*	$576*	$507*	6.0%
Hampstead Hill Academy (BCP)	$658	$675	$668	7.5%
Independence Public Charter School (BTN)	$616*	$610*	$601*	5.0%
KIPP Harmony (KIPP)	$30	$24	$21	0.2%
Monarch Academy–Baltimore (Monarch)	$995	$1,002	$1,004	10.0%
Wolfe Street Academy (BCP)	$635	$629	$653	7.5%
Frederick				
Carroll Creek Montessori (MMC)	—	—	$71	Up to 5%
Monocacy Valley Montessori (MMC)	—	—	$239	Up to 5%
Prince George's Schools				
Chesapeake Math and IT Academy (CLF)	$778	$1,304	$1,174	8.0%
CMIT Elementary (CLF)	—	—	$376	8.0%
CMIT South (CLF)	—	—	$926	8.0%
Imagine Andrews (Imagine)	$1,184	$1,252	$1,224	12.0%
Imagine Leeland (Imagine)	$1,031	$1,097	$1,094	12.0%
Imagine Lincoln (Imagine)	$1,119	$1,093	$1,100	12.0%
Imagine Morningside (Imagine)	$1,038	$1,085	$1,098	12.0%

– Not available or not applicable
* Indicates dollar values that were estimated by multiplying the reported management fee percentage by the total district-provided revenue for the school through the PPA. All other (non-asterisked) dollar values are reported amounts per pupil indicated in the Charter End-of-Year Expense Reports.
Note: Charter operator acronyms appearing in parentheses are defined as follows: BCP = Baltimore Curriculum Project; BTN = Baltimore Teacher Network; CLF = Chesapeake Lighthouse Foundation; CNF = City Neighbors Foundation; Imagine = Imagine Schools; Monarch = Monarch-Children's Guild; MMC = Monocacy Montessori Communities. Management fee percentages were reported in the interviews with charter operators and represent the percentage of funding provided through the PPA. Afya Baltimore, which operates only two schools, indicated that there was not a management fee in the years included as part of this study but that it has since instituted a fee to support the organization. KIPP Harmony indicated that rather than paying a *management fee* that is calculated as a percentage of funding that flows through the PPA, they pay an annual flat *licensing fee* of $30,000 (equal to a per-pupil expenditure ranging from $21 to $30 over the three study years). The percentage management fee for KIPP Harmony was calculated by the research team as a three-year average rather than reported directly from interview data.
Source: Charter School End-of-Year Expense Reports and interviews with charter operator staff

The presence of large overhead rates for charter schools diminishes the share of funds available for instruction and other student-centered programs. In contrast, other charter schools have rather low overhead rates. Rosemont and Coppin Academy, for example, are able to take advantage of their affiliation with Coppin State University, which provides certain services to those schools either in-kind or at reduced cost.

Exhibit 45. Costs of Overhead Identified in Charter School Fiscal Data as a Percentage of Total Reported Spending



Note: One school – Eudaimonia Maryland Academy of Technology and Health Sciences (MATHS) – was omitted from the analysis given that their Charter School End-of-Year Expense Reports were potentially not representative of their actual expenditure and revenue levels. We were unable to schedule follow-up conversations with MATHS to further understand the data they provided due to the closure of the school. Northwood Appold Community Academy (NACA) operates two schools, only one of which is an elementary charter called Northwood Appold Community Academy Public Charter School #330 (NACA I), with the other being a Grade 6-12 transformational school called Victoria Jackson Gray Adams Freedom and Democracy School (NACA II). However, only organization-wide totals are included in the expense reports that were provided. Therefore, figures for NACA are based on the combined expenditures and enrollments of NACA I and NACA II. Similarly, the fiscal data collected from Baltimore Montessori includes aggregated dollars that do not distinguish between Baltimore Montessori Public Charter School and Baltimore Montessori Public Charter Middle School. In turn, the exhibit results listed for Baltimore Montessori PCS are based on the combined expenditures and enrollments of these two schools.
Source: Charter School End-of-Year Expense Reports

Charter Financing of Facilities

Providing for charter schools' facilities expenses presents a series of complex policy considerations for achieving both equity and efficiency in a mixed-governance education system

(charter and district schools). On the one hand, if charter operators are provided an equitable annual operating expense, perhaps inclusive of usual maintenance and operations costs but exclusive of facilities access/occupancy, and left to fend for themselves, they will no doubt have widely varied access to facilities. The secured facilities will also likely vary widely with respect to quality, affecting the ability to provide quality educational programs and services. Finally, the per-pupil expense associated with the facilities will also likely vary widely. It is ultimately state and local policymakers' responsibility to ensure access to equitable space at an equitable expense.

This section discusses the financing of school facilities and occupancy expenses of Maryland's charter schools. To better understand charter schools' facility arrangements in Maryland as well as identify how Maryland charter schools fit into the broader national charter landscape in terms of facilities arrangements, we present results from the following:

- Examination of the types of contractual agreements and lease arrangements held by Maryland charter schools
- Analysis of charter school expenses associated with occupancy
- Review of the general approaches to providing and financing charter school facilities

Maryland Charter School Occupancy Arrangements

As mentioned previously, occupancy arrangements for charter schools are the responsibility of charter operators and are expected to be covered by the PPA. Interestingly, the arrangements varied not only by operator but also in some cases across schools under the same operator. Different facilities arrangements have their own sets of advantages and challenges. For example, owning facilities potentially results in lower long-term costs, but requires substantial up-front costs, and therefore capital, which charters may not have. Buildings leased from the district have the benefit of being designed for educational settings; however, interviewees often indicated that buildings were in disrepair. While certain types of arrangements have specific advantages and disadvantages, as discussed below, particular arrangements may result in inefficient use of funding that can potentially crowd out support for instructional programming and promote inequity.

We classified the charter school facilities arrangements in five categories:

1. Owned Facilities – Charter operator has purchased the facility from the district or from a third party, or built its own facility
2. Leased From District – Charter operator leases facility directly from the district
3. Leased from a Limited Liability Corporation (LLC) – Charter operator leases the facilities that have been acquired by the charter management company under an LLC
4. Leased From Non-Profit Organization – Charter operator leases facility directly from a local church or non-profit organization
5. Leased From Private Organization – Charter operator leases facility from a private third party.

Exhibit 46 presents a summary of the charter school occupancy arrangement for the operators in the five districts. As shown, the majority of Baltimore City charter school facilities (15 out of 29 schools) are leased from the district. There are nine schools that own their facilities and four that lease their facilities from non-profit organizations such as the Archdiocese of Baltimore or Corpus Christi Roman Catholic Congregation. In the case of Frederick, one of the schools leases its facilities from MSMC, LLC, while the other two lease from private organizations such as St. John Properties for Riverside Technology Park. In Prince George's, five of the schools lease their facilities from an LLC, and the rest of them either lease from the district, from a non-profit such as Trinity Assembly of God Church, or from a private organization. One charter school in Prince George's owns its facility.

Exhibit 46. Summary of Maryland Charter School Occupancy Arrangements

Facility Type	Anne Arundel 2 operators, 2 schools	Baltimore City 20 operators, 29 schools	Frederick 2 operators, 3 schools	Prince George's 5 operators, 10 schools	St. Mary's 1 operator, 1 school
Owned	—	9	—	—	—
Leased From District	—	15	—	2	—
Leased From Limited Liability Corporation (LLC)	—	—	1	5	1
Leased From Non-Profit Organization	—	4	—	1	—
Leased From Private Organization	2	1	2	2	—

— Not applicable
Source: Interviews with the charter operators

Variation in Occupancy Expenses Across Maryland Charter Schools

Exhibit 47 shows the occupancy-related expenses for charter schools as reported in the Charter School End-of-Year Expense Reports, which varied in their level of detail. Included as part of occupancy expenses are lease or rent payments made by charter schools, mortgage payments made by charters that own their facilities, the cost of insurance required to operate a charter school, the cost of renovations and building improvements, the cost of general building maintenance and operations, and the cost of furnishing the building and purchases of equipment.

As seen in Exhibit 47, there is substantial variation in occupancy costs as reported in the Charter School End-of-Year Expense Reports provided by the charter operators, from a low of less than $10 per pupil to highs of over $3,000 per pupil in the 2014–15 school year. As reported in the interview with Coppin Academy staff, their extremely low occupancy costs reflect that they are receiving the bulk of their facilities in-kind from Coppin State University. Other occupancy costs toward the lower end of the range tend to be for facilities leased from the district; although there are also some schools with fairly substantial occupancy costs for facilities also leased from the district. Interestingly, in Baltimore City, occupancy costs tend to be lower than those found in other districts, with 12 schools having reported occupancy costs less than $1,000 per pupil in

FY2015. The lower costs in Baltimore City seem to correspond with the larger share of facilities leased from the district in Baltimore City than in other districts.

Exhibit 47. Occupancy Related Expenses of Charter Schools From Charter Fiscal Data

District/School Name	Occupancy Arrangement (FY2015)	2012–13	2013–14	2014–15
Anne Arundel Schools				
Chesapeake Science Point	Leased From Private Organization	$3,092	$3,462	$3,358
Monarch Academy–Glen Burnie	Leased From Private Organization	$2,107	$2,070	$1,915
Baltimore City Schools				
Afya Public Charter School	Owned	$2,095	$2,114	$2,114
Baltimore International Academy	Leased From Non-Profit	$1,264	$1,419	$1,288
Baltimore Leadership School for Young Women	Owned	$1,801	$1,398	$1,303
Baltimore Montessori Public Charter School	Owned	$1,292	$1,446	$1,332
City Neighbors Charter School	Leased From Non-Profit	$2,375	$2,449	$2,582
City Neighbors Hamilton	Leased From District	$2,030	$2,081	$1,587
City Neighbors High School	Leased From District	$4,207	$3,608	$2,311
City Springs Elementary	Leased From District	$588	$606	$852
Connexions Public Charter School	Leased From District	$576	$306	$632
Coppin Academy	Leased From University	$7	$188	$2
Creative City Public Charter School	Leased From District	—	$2,525	$1,875
Empowerment Academy	Leased From District	$427	$484	$444
Furman Templeton	Leased From District	$1,019	$1,205	$1,348
Green Street Academy	Owned	—	—	$1,025
Hampstead Hill Academy	Leased From District	$687	$507	$819
Independence Public Charter School	Leased From District	$463	$886	$430
KIPP Harmony	Leased From District	$751	$738	$719
Midtown Academy	Leased From Non-Profit	$1,003	$1,023	$850
Monarch Academy–Baltimore	FY13: Leased From Private Organization, FY14: Leased From District, FY15: Owned	$1,097	$1,685	$2,263
Northwood Appold Community Academy	Leased From Non-Profit	$461	$588	$446
Patterson Park Public Charter School	Owned	$2,595	$2,528	$2,501
Roots and Branches	Leased From District	$1,430	$1,513	$1,274

Exhibit 47. Occupancy Related Expenses of Charter Schools From Charter Fiscal Data (continued)

District/School Name	Occupancy Arrangement (FY2015)	2012–13	2013–14	2014–15
Baltimore City Schools				
Rosemont Charter School	Leased From District	$8	$28	$337
Southwest Baltimore Charter School	Leased From District	$739	$871	$987
The Crossroads School	Owned	$877	$1,252	$1,572
The Green School	Leased From Non-Profit	$1,760	$1,838	$1,691
Tunbridge Public Charter School	Leased From Non-Profit	$2,515	$2,343	$2,343
Wolfe Street Academy	Leased From District	$573	$576	$610
Frederick Schools				
Carroll Creek Montessori	Leased From Private Organization	$1,552	$1,288	$1,801
Frederick Classical Charter School	Leased From Private Organization	—	$2,432	$2,634
Monocacy Valley Montessori	Leased From an LLC	$1,432	$1,525	$1,537
Prince George's Schools				
Chesapeake Math and IT Academy	Leased From Private Organization	$1,759	$2,369	$2,214
CMIT Elementary	Leased From an LLC	—	—	$3,441
CMIT South	Leased From an LLC	—	—	$1,444
College Park Academy	Leased From Private Organization	—	$1,813	$2,310
Excel Academy Public Charter School	Leased From District	$1,321	$1,604	$1,632
Imagine Andrews	Leased From an LLC	$3,221	$3,571	$3,107
Imagine Leeland	Leased From an LLC	$2,334	$2,362	$2,130
Imagine Lincoln	Leased From an LLC	$2,248	$2,038	$2,254
Imagine Morningside	Leased From District	$2,426	$2,272	$1,794
Turning Point	Leased From Non-Profit	$1,156	$946	$1,838
Saint Mary's Schools				
Chesapeake Charter School	Leased From an LLC	$1,728	$1,666	$1,534

– Not applicable
Note: LLC indicates Limited Liability Corporation. One school – Eudaimonia Maryland Academy of Technology and Health Sciences (MATHS) – was omitted from the analysis given that their Charter School End-of-Year Expense Reports were potentially not representative of their actual expenditure and revenue levels. We were unable to schedule follow-up conversations with MATHS to further understand the data they provided due to the closure of the school. Northwood Appold Community Academy (NACA) operates two schools, only one of which is an elementary charter called Northwood Appold Community Academy Public Charter School #330 (NACA I), with the other being a Grade 6-12 transformational school called Victoria Jackson Gray Adams Freedom and Democracy School (NACA II). However, only organization-wide totals are included in the expense reports that were provided. Therefore, figures for NACA are based on the combined expenditures and enrollments of NACA I and NACA II. NACA II receives its facilities free of rent from Baltimore City. Similarly, the fiscal data collected from Baltimore Montessori includes aggregated dollars that do not distinguish between Baltimore Montessori Public Charter School and Baltimore Montessori Public Charter Middle School. In turn, the exhibit results listed for Baltimore Montessori Public Charter School are based on the combined expenditures and enrollments of these two schools.
Source: Charter School End-of-Year Expense Reports and interviews with the charter operators

General Strategies for Financing Facilities

Up to this point we have focused specifically on the financial arrangements and occupancy costs for Maryland's charter schools. Here, we broaden our perspective to look at what is going on nationally, to understand the larger policy issues surrounding the financing of charter school facilities. Nationally, under the varied state policy umbrellas for charter schooling, a handful of basic approaches exist for charter school operators to gain access to facility space.

Occupancy/Lease Agreement With Host District

In this case, districts provide space in which charter schools may operate. The related occupancy agreement may either involve deduction of the operating costs of that space from the charter school's per-pupil allocation, or the financial equivalent of lease payment from the school's operating allocation back to the host district.

Lease Agreement With Independent Private Entity

In many cases, charter schools will lease space from a third party such as a local church or other landlord. Under this model, the third party is assumed fully independent of the charter operator, its governing board, and/or management company. Acquisition of facilities occurs through a traditional lease payment in which the third party retains full ownership of the property/facility, with no intent to transfer the asset to the charter operator, its governing board or management company, or a related entity.

Lease-Purchase Through Affiliated Third-Party Non-Profit

Several charter operators around the country have acquired facilities under a model which involves the charter management company or local charter board establishing a separate, but closely affiliated, private non-profit entity of which the sole purpose is land and facilities acquisition. These non-profit entities will then work through state, regional, and local development authorities to access revenue bond markets, potentially also using available urban development tax credits (New Markets Tax Credits) to reduce financing costs.

The third-party entity carries the debt associated with the issued revenue bonds and the charter operator makes lease payments to this third party to make the debt payments. The repayment of debt associated with revenue bonds is contingent upon charter schools' lease payments, but the maturity dates (20 to 30 years) for those bonds are typically well beyond the reauthorization period for charter schools. Because of the risk this poses, and the fact that revenue bonds are generally higher risk than general obligation (GO) bonds, current interest rates on these revenue bonds tend to be on the order of 8.5% (BB rated on average), compared to much higher rated GO bonds (commonly AA rated) that are under 5%. The costs of these higher rates to the third party are passed along to charter operators in the form of lease payments, introducing an unnecessary and inefficient financial transaction cost and reducing funding that might otherwise be available for instructional spending. Further, in many cases, these third-party entities are purchasing former district school spaces while incurring these transaction costs, and public funds are being used (through the charter operator) to purchase the publicly held property for the private entity, creating a situation where both public assets and dollars are being used inefficiently.

Formally, this arrangement does not differ from any independent lease agreement. It is not typically assumed that the charter operator will gain control over the asset. Rather, the third party carries that debt and acquires the asset. But in many cases, these relationships operate at less than arms-length, and in some cases, charter management companies are directly affiliated with property acquisition entities.

Specifically, Imagine Schools, which operates four schools in Prince George's, also operates Schoolhouse Finance—a third-party facility acquisition entity. The fiscal records for Prince George's Imagine Schools indicated some payments to Schoolhouse Finance for the acquisition of facilities. These payments are included in the occupancy costs presented in Exhibit 47.

Lease (Purchase/Flip) Through For-Profit Real Estate Investment Trusts

Several charter operators around the country hold lease agreements with Real Estate Investment Trusts (REITs), which more commonly deal in the property management of commercial real estate such as strip malls and theater complexes. Among the major operators in this space is Entertainment Properties, Inc., of Kansas City, Missouri (EPR-KC).[43] EPR-KC has a division specifically dedicated to leasing of space to charter school operators and has maintained close relationships in the past with Imagine Schools.

Again, this relationship in theory would seem to differ little from an independent leasing agreement. But, as noted above, patterns of property acquisition, ownership, and transfer have emerged that differ substantively from truly independent lease agreements. Further when leasing from an REIT, lease agreements are beholden to investors' stakes in the REIT, which is required to pay 90% of taxable income to shareholders in the form of dividends. In turn, this model can lead to exorbitant lease expenses.

One for-profit firm specifically focused on charter school facilities support is the Turner-Agassi Charter School Facilities Fund (http://www.turneragassi.com/). The activities of Turner-Agassi were recently scrutinized in Philadelphia, where the firm made a substantial profit margin on the resale of an acquired facility back to the KIPP charter school operating in that facility (Adelman, 2016).

Options for Reducing Occupancy Expenses

As explained above, charter schools' revenue source options for supporting occupancy are rather limited. Charter operators typically use their operating funding to make lease payments, and may gain access to other grants or private contributions to support those lease payments. Other financial mechanisms and policies may reduce the costs to third-party asset-holders, with the goal, but no guarantee, of reducing the lease payments to be made by charters.

A comprehensive source of information for charter operators seeking financing solutions is the Local Initiatives Support Corporation (LISC) Educational Facilities Financing Center, which serves as a vehicle for charter operators to access: a) loans to help charter schools finance facilities acquisitions and improvements; b) grants for predevelopment expenses, planning for development (including architectural fees and environmental impact studies), and feasibility

[43] For a list of EPR school properties go to http://www.eprkc.com/portfolio-overview/public-charter-schools-list/.

studies; and, c) New Markets Tax Credits that provide charter schools with additional access to equity for financing facilities acquisition and improvement (LISC, 2016).[44] LISC operates an affiliate, the New Markets Support Company (NMSC), the nation's largest distributor of New Markets Tax Credits, which has financed 11 charter schools to date.

In recent years, the U.S. Department of Education, Office of Innovation and Improvement has made available two forms of grants to support charter school facilities:

- Charter School Facilities Incentive Grants: Under this program, grant recipients must use funds as a match program to help establish, enhance, or administer per-pupil facilities aid for charter schools. The program aims to encourage states to share in the costs of charter schools' facilities funding by decreasing the share of funds supported by the federal government each year over five years. SEAs with laws authorizing per-pupil facilities aid may apply for this grant. Due to Maryland not having such a policy, Maryland is not currently eligible for this grant program. This grant program provided funding to support charter school facilities in Indiana and California in 2009 and 2014 (U.S. Department of Education, 2016c).
- Credit-Enhancement for Charter School Facilities Program: As the name implies, this program is designed to reduce lending costs for charter schools acquiring land/buildings for operating space. Grant recipients must use their funds to assist charter schools in accessing the capital necessary to acquire, construct, or renovate appropriate facilities in which a charter school may operate. Public entities such as state or local governments and private nonprofit entities may apply for this program. Entities in Maryland are eligible for this grant program (U.S. Department of Education, 2016d).

  The credit enhancement program provides grants to investment funds which provide lending support for charter schools, toward the primary objective of making lending accessible and more affordable for charter operators. As described by the U.S. Department of Education, credit enhancement funds are to be used as follows.

  Grant recipients must deposit the grant funds they receive under this program (other than funds used for administrative costs) in a reserve account established and maintained by the grantee. Amounts deposited are to be used to assist charter schools in accessing private-sector and other non-federal capital by:

  1. Guaranteeing, insuring, and reinsuring bonds, notes, evidences of debt, loans, and interests therein
  2. Guaranteeing and insuring leases of personal and real property
  3. Facilitating financing by identifying potential lending sources, encouraging private lending, and other similar activities that directly promote lending to, or for the benefit of, charter schools
  4. Facilitating the issuance of bonds by charter schools or by other public entities for the benefit of charter schools, by providing technical, administrative, and other appropriate assistance

[44] For more information, see the LISC webpage on charter school financing: http://www.lisc.org/our-initiatives/education/charter-school-financing/.

Finally, other federal policies encourage foreign investment in charter school capital, including the EB-5 program, which allows foreign investors to trade contributions to certain economic development projects for access to green cards (Simon, 2012a; 2012b). Under this program private foundations may write off their contributions, or in the case of low interest loans, the difference between the interest rate charged and the market rate. In other words, there exists a tax incentive for foundations to contribute to charter school facilities acquisition.

Further guidance on the availability of federal funds to charter schools is available through the Department of Education's National Charter School Resource Center. The Resource Center also keeps a list of other public and private grant programs available to charter schools. In addition to private grant competitions, charter schools can also raise funds through private funders such as foundations or individual donors. Some foundations that offer funds to charter schools include the Walton Family Foundation, the Charter Growth Fund, and the New Schools Venture Fund.

6. Study Recommendations

Recommendation 1: Create Consistent Charter School Financial Reporting

Our analyses benefited from our ability to triangulate fiscal data across numerous sources. Financial analyses of charter school expenditures in other contexts have encountered numerous barriers, data inconsistencies, an inability to reconcile financial data, and in some cases an inability to even access comprehensive charter school financial data (Baker, Libby, & Wiley, 2015). Some states, including Texas, do have statewide, school site expenditure reporting systems, which capture charter school expenses. However, in most states where charter schools are fully fiscally dependent on districts, detailed reporting of charter finances is inconsistent at best and non-existent at worst.

With this in mind, Maryland is well positioned to improve upon existing practices that facilitate the reporting of comprehensive, accurate, and consistent charter school finance data. We believe that it is important that the state retain the current fiscally dependent governance structure of charter schools, and retain (while perhaps refining) the current district practices of reporting location-identified expenses to charter schools. This reporting was central to our ability to estimate district and charter school allocated and attributed spending. Furthermore, the fact that districts manage the majority of personnel expenses for charter schools in addition to their own schools made clearer the distribution of personnel expenses—direct salary/wage expenses and related fixed expenses—to charter schools.

Charter schools' own financial reporting contained relatively little detail and varied considerably across charter operators. Had we been forced to rely on these data alone (if the above-mentioned reporting did not exist), the depth of our findings would have been limited. However, charter schools' own financial reporting did provide some important insights above and beyond district reporting of charter school expenses, particularly pertaining to:

1. Additional revenues received outside of those received from the district, including gifts, grants, and fees
2. Expenses associated with management fees and other contracted services
3. Expenses associated with facilities access, including mortgage and lease payments, as well as other M&O costs.

State officials should seek ways to better synchronize district financial reporting with charter schools' financial reporting, in order to generate a complete picture of charter school revenues and expenditures. We specifically recommend that:

1. Charter schools be required to file annual financial reports according to a simplified chart of accounts consistent with the statewide chart of accounts.
    a. The chart of accounts should include data from the district regarding the direct expenses made on behalf of its charter schools, mirroring the reporting by charters of "in-kind" expenses for staffing salaries and benefits paid for directly by districts.

b. The chart of accounts should also include additional revenue categories consistent with the statewide chart of accounts for alternative, supplemental revenues received by charter schools.

c. Charter operators should also be required to provide detailed financial reporting of administrative expenses and management fees, and occupancy-related expenses, as many have already chosen to do.

2. State officials should require any management organization charging management fees to charter schools operating in the state of Maryland to release detailed annual financial reports, following a clear set of state guidelines.

Recommendation 2: Prepare District Financial Data Systems for Uniform School Site Reporting

The present study benefited greatly from the fact that nearly all Maryland districts included in their End-of-Year Fiscal Data (to a varied extent) location codes that attributed expenditures to individual school sites. However, in four districts, location coding did not attribute staffing expenses. With pending federal regulation regarding school site reporting of expenditures of state and local revenues, and of federal revenues on individual school sites, the state should move toward a uniform school site reporting requirement.

For the purposes of our study, we created a bridge between each district's location codes within their accounting systems and the statewide school identifier. Moving forward, we suggest that the statewide school identifier be used as the location code for operating school sites in each district's financial data system. We further recommend that the state identifier system be expanded to include additional district facilities that do not operate as school sites (such as warehouses, central administrative offices, and other service centers). We also recommend that the state continues the practice of collecting data on age and square footage of these spaces as this information can be used to allocate spending on facilities upkeep to individual school sites. Finally, we recommend that the collection and analysis of school-level spending data continue on an annual basis and describe the benefits and costs of doing so below.

Benefits of Annually Collecting School-Level Expenditure Data

Given that the study team has developed a method to provide accurate measures of spending on public traditional and public charter schools, it may be in the interest of policymakers to have the data collection and subsequent analysis performed on an annual basis. There are multiple benefits from doing this, both in terms of promoting equity and efficiency in school spending.

From an equity perspective, analyses of how much is being spent across districts and schools of different types (traditional versus charter), with particular student needs (e.g., economically disadvantaged students, students with disabilities, English learners), grade levels, and/or locations (e.g., rural versus urban or suburban settings, regional location within Maryland) helps policymakers better understand the alignment between funding for schools and the various cost factors they face, which would inform debates concerning state funding policy.

From an efficiency perspective, analyses of the types of personnel and non-personnel resources being purchased by districts and schools allows policy makers and practitioners to better understand patterns of resource allocation and optimize how dollars are being spent. That is, they could examine whether particular resource allocations were associated with stronger improvements in desired educational outcomes and use that information to inform decisions on where to devote school and district resources.

In addition, federal law under the Every Student Succeeds Act (ESSA), will soon require states to report out school-level expenditures as part of state report cards. To prepare for this change, the state would benefit tremendously from using the methodologies and procedures utilized in this study as a starting point for developing an official statewide approach for collecting and reporting school level spending.

Effort Associated With the Annual Collection and Analysis of School-Level Expenditure Data

This study made important contributions in (1) demonstrating the feasibility of producing school-level expenditure data for traditional and charter schools in all of Maryland's local school systems and (2) establishing a process by which to generate those data. Future data collections can leverage—and even build on these contributions—to reduce costs and promote efficiency. The following provides a brief overview of the effort involved in developing the School Site Spending Database and performing data collection and analysis updates on an annual basis.

The first step in the process involved developing formal Requests for Data and Documentation (RFD) for Maryland local school systems and then working closely with fiscal staff from each of these organizations to help them determine how they could best fulfill the request using the data, tools, and information they had available to them. It also involved gathering data that MSDE had already collected from local school systems on statewide school personnel, district-level expenditures and revenue, school-level student enrollments (Overall, FARMs, Special Education, English learners), and building square footages.

Another important step in the study's process for generating school-level expenditure data involved analyzing detailed data files on individual financial transactions obtained from Baltimore City, which provided information that informed the degree to which different types of unattributed expenditures could be allocated to individual schools. Using data processed by software developed by Allovue, Inc., the study team determined ratios of different types of unattributed non-personnel expenditures that directly support school sites programs and therefore should be allocated to schools in Baltimore City by state COA codes. These ratios were then applied to the unattributed spending in each district to determine the allocatable amounts by district. Potential future collections of Maryland school expenditure data could continue to leverage the information generated by this analysis of Baltimore City data. Or, to improve upon the process, the state could apply this process to transactional data from other local systems (particularly those with different characteristics from Baltimore City) to create even more fine-tuned information on which to base expenditure allocation decisions. As a long-term alternative to this type of analysis, the state may want to consider encouraging districts to attribute a larger portion of their unattributed expenses to school sites, reducing the share of expenditures that would have to be allocated to schools to provide accurate school-level spending measures.

Once the study team collected requested data and documentation files from local school systems and charter operators, analysts processed and cleaned that information to prepare comprehensive datasets for analysis. This work involved developing crosswalks between local school system COAs and the state COA to create a common framework for classifying revenues and expenditures. It also involved identifying the allocatable portions of unattributed personnel spending, developing methods for allocating the different types of spending to individual school sites, and assigning the allocatable portions to schools based on those methods. This allowed us to generate school-level spending figures for each traditional and charter public school in Maryland—what we refer to as "actual expense" —and organize this information into the School Site Spending Database upon which much of the study analysis is based.

The final stage of the study team's process focused on analyzing expenditures. This largely involved descriptive analyses, examining and comparing average school-level spending across districts, grade configurations, and school types (charter versus traditional). We also developed a regression model to understand how school-level spending varies with respect to school characteristics and location. We applied this regression model to create a more precise comparison between traditional and charter school spending accounting for school characteristics.

Although this study has established a replicable process that can serve as a foundation for creating school-level expenditure data, generating these data on an annual basis would still require a significant commitment of personnel and non-personnel resources. With regard to the effort involved, annual updating of the research activities described above would require a significant amount of time on the part of district and state staff to provide the various sources of data and documentation, as well as additional staff on the receiving end (from the state and/or a vendor) to collect, process and analyze the information. Our best estimate is that collection of the data from MSDE and each of the 24 districts would initially require a committed analyst to spend at least 15 days, which would include interaction with MSDE and local school system staff, administration of the RFD, transfer and review of raw data, and follow up discussions. However, by incorporating the data collection effort with other data collections already required of districts (such as submission of the AFR), the burden on local school system staff could be minimized.[45] In addition, updating or expanding the transactional data analysis to include additional districts would require a negotiated contract with Allovue, Inc.

The bulk of the effort to support this ongoing activity would fall on staff who will be responsible for processing, cleaning and analyzing the data collected from districts and the state. To complete the processing, cleaning and analysis tasks, one or more seasoned quantitative analysts with extensive experience working with fiscal data in statistical applications (this study made use of Stata) and in Microsoft Excel would be necessary to review and execute the existing procedures and perform the analysis. For example, for this study, Prof. Bruce Baker (a national expert in the field of charter school finance and seasoned quantitative researcher), collaborated with Dr. Jesse Levin (a veteran quantitative researcher in education finance) and a more junior quantitative analyst who had a background in conducting similar analyses on prior research studies. They devoted substantial time processing and cleaning the data, as well as conducting

[45] Indeed, the level of approximate effort is qualified as "initial" because it is expected that this process would become more efficient over consecutive years of implementation.

the analysis. However, assuming that districts will provide data in similar formats in the future as was provided in this study, the procedures developed for this study could be used in future years with only slight modifications when necessary. Therefore, the amount of time for future cleaning and processing, as well as performing the analyses should be lower than what we experienced for this study. We estimate that initially there would be a minimum time commitment of approximately 20 days on the part of the lead analyst and 60 days of a more junior analyst would be necessary to conduct the data processing, cleaning and analysis tasks.

Finally, non-personnel costs associated with collecting and analyzing school level expenditure data would include necessary technology for transferring, managing, analyzing, and presenting the fiscal data. This would entail hardware costs such as secure computers and servers with Internet connectivity as well as software costs such as licenses for statistical analysis programs such as Stata (unless the state chose to use a free, open source program such as R). Other software costs would include the Microsoft Office suite of products (e.g., to create pivot tables and graphs in Excel, to develop reports in Word and/or presentations in PowerPoint to share findings with stakeholders). However, it is expected that the state already have many of these resources in hand and would therefore only direct their use to the activities described above.

Recommendation 3: Establish Benchmarks for Overhead Expenses

Variation in overhead expenses across charter schools necessarily results in differences in resources remaining for direct instructional use. Furthermore, some of these overhead expenditures—such as management fees that reach up to $1,100 per pupil for schools that operate as fiscal dependents of a local school district—seem excessive and possibly redundant. This issue has been raised recently in the academic literature, in a study of fiscally dependent upstate New York charter schools (Bifulco & Reback, 2014). While our study provides some insights into the services provided by local districts to charter schools, we were unable to comprehensively examine the extent of possibly redundancy in administrative expenses to management companies. However, such arrangements are relatively rare in Maryland, and this study found only isolated examples of seemingly high management fees.

Nevertheless, to address the incidence of high charter school overhead spending, we recommend the following:

1. State officials should set benchmarks, based on reported district spending rates, for administrative overhead expenses for charter schools, with flexibility granted during start-up years.
2. State officials should require justification of management fees paid by charter operators, including detailed financial reporting of services provided by management companies to charter schools and the associated costs of those services.

Recommendation 4: Model Predicted Expenses for Schools

Our fourth recommendation is that the MSDE use an approach consistent with our regression-based predicted expense model to guide formula funding levels for current and future schools and to evaluate funding across schools. As we have explained, our expense model:

1. Relies on three years of a universe of data on all Maryland traditional public schools
2. Fits a regression model to the summed attributed and allocated expenditures of those schools that accounts for:
    a. Student needs, including students eligible for free or reduced-price meals, ELs, students with disabilities, and the proportion of students with disabilities who have a non-severe disability
    b. Grade-range enrollment distributions
    c. Years, in order to capture changes over time and project spending in subsequent years
    d. District differences in average expenditures

Although the model does not distil actual differences in the costs of achieving specific outcomes for varied student populations or grade ranges, or in different locations across the state, it does generate logical patterns of expenditure that are suggestive of comparable spending across schools and districts with respect to observed measures of student need. That is, the model results show that, on average, schools in Maryland that serve needier student populations do, in fact, spend more per pupil. Moreover, the model is capable of producing predictions that represent reasonable measures of comparable spending between traditional and charter schools, based on existing patterns of school-level expenditure within and across Maryland districts. Actual expenses of traditional schools statewide can be compared against these baseline predictions. Importantly, charter school spending may also be predicted using this same model, allowing one to evaluate the expected expenditure for any charter school with specific characteristics if it were treated the same as an otherwise identical traditional school in the same district. The predicted charter school spending measures stemming from the model would prove instrumental in informing discussion regarding the development of coherent policy concerning funding for charter schools in the state.

Recommendation 5: Establish Policies and Practices for More Equitable Access to Facilities

As mentioned above, we found that charter school facilities' costs vary widely. Prior studies of charter school facilities indicated the quality of educational spaces used by charter operators often varies considerably. In addition, the vast differences in occupancy-related costs necessarily leads to differences in resources available for direct instruction. In other words, the present approach to charter school facilities access is most likely introducing unnecessary inequities.

Current approaches to accessing facilities space may also be introducing redundancies and inefficiencies. We note that a growing body of literature reveals that when charter operators take on revenue bonds for acquiring land and buildings, they tend to pay higher than typical annual expense, partly because of the higher costs of financing revenue bonds than general obligation

bonds. These financial transaction costs should be avoided and/or reduced to the extent possible, particularly since the transactions in question involve the use of public financing to acquire assets for private entities (e.g., Imagine's Schoolhouse Finance, Inc.).

We suggest that Maryland officials establish benchmarks for occupancy costs based on the findings related to the district's own occupancy expenses. However, a larger solution may involve establishing both operational and financial guidelines for facilities access relationships between district hosts and charter schools. We note in our analysis of Baltimore City expenses that there are a number of currently non-operating educational spaces, though we do not have information on their current usability. As children move to charter schools governed by districts, districts may be able to allocate space designed for educational use to charter operators at an expense (or as an in-kind allocation) equitable to that of the district's own spending on traditional schools, preventing charters operators from being forced to use space not created for delivering educational services (e.g., churches, commercial real estate, etc.).

References

Adelman, J. (2016, April 18). Agassi's fund cashes in on N. Phila. charter-school venture. *The Philadelphia Inquirer*. Retrieved from http://www.philly.com/philly/business/20160418_Agassi_s_fund_cashes_in_on_N__Phila__charter-school_venture.html

Ash, K. (2013, October 8). Ed. Dept. Clarifies Title I Rules for Charters. *Education Week*. Retrieved from http://www.edweek.org/ew/articles/2013/10/09/07charter.h33.html

Baker, B. D., Libby, K., & Wiley, K. (2015). Charter school expansion and within-district equity: Confluence or conflict? *Education Finance and Policy,* 10(3), 423-465.

Baker, B. D., & Miron, G. (2015). *Understanding the policies that charter operators use for financial benefit.* Boulder, CO: National Education Policy Center.

Bifulco, R., & Reback, R. (2014). *Fiscal impacts of charter schools: Lessons from New York*. *Education Finance and Policy*, 9(1), 86-107.

Center for Education Reform. (2015). *Charter School Laws Across the States: 2015 Rankings and Scorecard.* Washington, DC: Author. Retrieved from https://www.charterschoolcenter.org/sites/default/files/files/field_publication_attachment/CharterLaws2015.pdf

Chism, M. (2013). *Memorandum to state Title I directors from U.S. Department of Education Office of Elementary and Secondary Education*. Retrieved from http://www.documentcloud.org/documents/801188-charter-school-allocation-hold-harmless.html#document/p1

City Neighbors Charter School v. Baltimore Board of School Commissioners, Revised MSBE Op. No. 05-17.

Crouch, E. (2011, October 30). Imagine schools' real estate deals fuel company growth. *St. Louis Post Dispatch*. Retrieved from http://www.stltoday.com/news/local/education/imagine-schools-real-estate-deals-fuel-company-growth/article_ dbf9b959-0c73-586c-97e7-6fca3a729b39.html

Justesen, T. (2007). Memorandum to state directors of career and technical education from U.S. Department of Education Office of Vocational and Adult Education. Retrieved from http://www2.ed.gov/policy/sectech/guid/cte/perkinsiv/answers.pdf

Kelley III, T. A. (2014). North Carolina Charter Schools' (Non-)Compliance with State and Federal Nonprofit Law. *NCL Rev.*, *93*, 1757.

Local Initiatives Support Corporation (LISC). (2016). Charter school financing. Retrieved from http://www.lisc.org/our-initiatives/education/charter-school-financing/

Maryland Department of Legislative Services. (2014). *Legislative handbook series—Volume IX—Education in Maryland.* Annapolis, MD: Department of Legislative Services. Retrieved from http://mgaleg.maryland.gov/Pubs/LegisLegal/2014-legislativehandbookseries-vol-9.pdf

Maryland Department of Legislative Services. (2015). *Maryland Public Charter School Expansion and Improvement Act of 2015 (HB 486): Fiscal and policy note*. Annapolis, MD: Department of Legislative Services. Retrieved from http://mgaleg.maryland.gov/2015RS/fnotes/bil_0006/hb0486.pdf

Maryland Department of Management and Budget. (2016). *Maryland state operating budget—volume 3.* Annapolis, MD: Department of Management and Budget. Retrieved from http://www.dbm.maryland.gov/budget/Documents/operbudget/2016/Volume3.pdf

Maryland State Department of Education (2009). *Financial Reporting Manual for Maryland Public Schools.* Baltimore, MD: Maryland State Department of Education. Retrieved from http://dlslibrary.state.md.us/publications/Exec/MSDE/FRMMPS_2009rev.pdf

McGrath, D., Wyatt-Nichol, H., Borsher, J., Lovegrove, M., & Welsh, E. (2014). *Charter school study prepared for the Maryland State Department of Education*. Baltimore, MD: Schaefer Center for Public Policy College of Public Affairs University of Baltimore.

Renaissance Academy for Math and Science of Missouri, Inc. v. Imagine Schools, Inc. (2014). Retrieved from http://docs.justia.com/cases/federal/district-courts/missouri/mowdce/4:2013cv00645/110158/95

Simon, S. (2012a). US charter schools: Investment magnet for visa-needy foreigners? *Christian Science Monitor*. Retrieved from http://www.csmonitor.com/The-Culture/Family/2012/1012/US-charter-schools-Investment-magnet-for-visa- needy-foreigners

Simon, S. (2012b). The new U.S. visa rush: Build a charter school, get a green card. *Reuters*. Retrieved from http://www.reuters.com/article/2012/10/12/us-usa-education-charter-visas-idUSBRE89B07K20121012

U.S. Department of Education. (2000). *Non-regulatory Guidance 34 CFR Part 76, Subpart H: How does a state or local educational agency allocate funds to charter schools that are opening for the first time or significantly expanding their enrollment?* Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education.

U.S. Department of Education. (2006). *Improving Teacher Quality State Grants ESEA Title II, Part A: Non-regulatory guidance.* Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved from http://www2.ed.gov/programs/teacherqual/guidance.doc

U.S. Department of Education. (2007). *Non-regulatory guidance on implementation of Title III State Formula Grant Program*. Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved from http://www2.ed.gov/programs/sfgp/nrgcomp.html#local

U.S. Department of Education. (2011). *Improving basic programs operated by local education agencies (Title I, Part A).* Washington, DC: U.S. Department of Education Office of Elementary and Secondary Education. Retrieved from http://www2.ed.gov/programs/titleiparta/index.html

U.S. Department of Education. (2016a). Fiscal Years 2015-2017 State Tables for the U.S. Department of Education. Washington, DC: U.S. Department of Education. Retrieved from http://www2.ed.gov/about/overview/budget/statetables/17stbystate.pdf

U.S. Department of Education. (2016b). Charter Schools Program Non-State Educational Agencies (Non-SEA) Planning, Program Design, and Initial Implementation Grant—Awards. Washington, DC: U.S. Department of Education Office of Innovation and Improvement. Retrieved from http://www2.ed.gov/programs/charternonsea/awards.html

U.S. Department of Education. (2016c). State Charter School Facilities Incentive Grants. Washington, DC: U.S. Department of Education Office of Innovation & Improvement. Retrieved from http://innovation.ed.gov/what-we-do/charter-schools/state-charter-school-facilities-incentive-grants/

U.S. Department of Education. (2016d). Credit Enhancement for Charter School Facilities Program. Washington, DC: U.S. Department of Education Office of Innovation & Improvement. Retrieved from http://innovation.ed.gov/what-we-do/charter-schools/credit-enhancement-for-charter-school-facilities-program/

Glossary of Terms

Actual Spending (Expense) – The total school-level spending figure derived from the summation of all attributed and allocated expenses.

Allocatable – Expenses that were not attributed to school sites in the fiscal and staffing data collected for this study (i.e., they were only linked to central district offices), but were determined to directly support school site programs and their students. Unattributed expenses deemed allocatable are assigned to individual schools based on an allocation factor.

Allocated Expenses – School-level expenses that were not attributed to a school site in the fiscal data collected for this study that were then assigned to schools using an allocation factor.

Allocation Method – A formula used to approximate school-level usage of a districtwide shared expense. A common allocation factor is a school share of districtwide total enrollment.

Attributed – Expenses that were assigned or linked to individual school sites in the fiscal and staffing data collected for this study.

Categorical Funds – Categorical funds are those provided by different governmental agencies to explicitly support certain activities or programs and can only be spent on behalf of those designated activities and programs. These most often come in the form of grants from federal or state governments. Also commonly referred to as restricted funds.

Charter School End-of-Year Expense Reports – The end-of-year fiscal data provided by charter operators on each charter school representing the expenditures and revenues for a given fiscal year. This information provides some relatively detailed information on individual charter school expenses and revenues. However, each charter operator has a different set of standards for recording and reporting fiscal data. Therefore, there was little consistency across charter schools in the comprehensiveness and format of fiscal data.

District End-of-Year Fiscal Data – The end-of-year fiscal data provided by each school district on their expenditures and revenues for a given fiscal year. These data include varying degrees of attribution of both salary and non-salary expenses to school sites across districts. The information can be used to ascertain both salary and non-salary expenses to school sites. Because districts report their fiscal data to MSDE using a common set of state COA codes, we were able to codify district end-of-year fiscal data similarly across all districts.

Fixed Charges – Costs of a recurring nature not readily assigned to other expenditure categories (MSDE, 2009). These costs are predominately for employee benefits (health, retirement, social security, and other payroll taxes).

MSDE Statewide Annual Financial Report (AFR) – The district-level summation of local school system end-of-year fiscal data, reported to MSDE by local school systems and organized by the state COA. These data contain spending and revenue reported at the district level only.

MSDE Statewide Staffing File – Data on salaries for all local school system employees provided to MSDE by each district. The data include attribution of fulltime equivalents (FTEs) of certified and non-certified support staff to individual school sites (both traditional and charter) along with the corresponding salary data.

Operational Spending – The spending serving the day-to-day functions of the education system. This excludes spending on school construction and debt services. In this report, we conducted our main analyses and generated school spending figures using only operational spending.

Overhead – Spending not directly related to the provision of instruction or instructional support services for schools. For the purposes of this study, we include the costs of capital outlay, central administration, building operations and maintenance, and non-personnel school administrative costs as overhead. These categories generally hold for both traditional and charter schools; however, for charter schools, management fees—a type of administrative cost unique to charter schools—are also included as overhead.

Per-Pupil Spending or Revenue – Most spending and revenue figures reported in this study are reported in per-pupil terms. This is simply the total amount of expenditures or revenue divided by the school or district enrollment.

Predicted Spending (Expense) – The predicted expense is a measure developed to determine what charter school spending would be if it followed the expenditure pattern of a traditional school in the same district with identical student needs and grade configuration characteristics. Regression analysis (see next entry) was used to understand how spending varies according to student, school, and district characteristics. Using the parameters estimated by the regression model, we predicted spending of schools given their characteristics.

Regression – A quantitative analysis technique used widely in the social sciences to identify relationships between an outcome (dependent) variable and one or more predictor (independent) variables. The identified relationships can then be used to predict the outcome variable based on the set of values for the independent variables.

Restricted Funds – Restricted funds are those provided by different governmental agencies to explicitly support certain activities or programs and can only be spent on behalf of those designated activities and programs. These most often come in the form of grants from federal or state governments. Also commonly referred to as categorical funds

School Site Spending Database – The collective set of expense data used to identify the actual amount of spending in all traditional and charter public schools in the state of Maryland. This database was derived from elements of the District End-of-Year Fiscal Data, the MSDE Statewide Staffing File, and the MSDE Statewide Annual Financial Report data.

Transactional Fiscal Data From Baltimore City Public Schools – The most granular fiscal data available from central district fiscal office accounting systems. This study used transactional data from Baltimore City to identify the types and shares of unattributed spending that directly support school site programs and their students.

Unrestricted Funds – Unrestricted funds are received from state or local sources without restriction to designated activities or purposes. As such, school districts and schools are free to use these funds as they see fit.

Study Scope of Work as Described in the Request for Proposal

Items found in the scope of work requested for this study generally fall into three categories of tasks. We grouped the study items from the request for proposal (RFP) based on how we organized the tasks rather than the original order of tasks. The following identifies how we addressed each RFP item within this report. RFP items are italicized, while our response to RFP items is not.

Collect and Analyze Fiscal Data to Determine Spending Levels in Traditional Non-Charter and Charter Public Schools

This task includes the following RFP items:

3.2.1.1 The Contractor shall review, and prepare a study based upon:

3.2.1.1.1 The operating expenditures made at the central office level by each county board of education, including: expenditures for administration, overhead, system wide planning and development, and compliance with local, State, and federal requirements including special education, nonpublic placements, separate public day schools, English language learner education, prekindergarten education, teacher pension and retiree health benefits, student transportation, and debt service;

For this study, we collected fiscal data on all operating expenditures, including school-level and centrally managed spending, for all districts and all traditional and public charter schools in Maryland. These data were used to generate the relevant findings in this report, particularly those related to school spending found in Chapters 3 and 4 of this report.

3.2.1.1.1.1 Include all sources of revenue, including federal, state, local and other (e.g. third party billing for special education services), and identify any statutory or regulatory restrictions on the uses of each source of revenue.

The fiscal data we collected included all sources of revenue, including federal, state, and local revenue. In Chapter 3 of this report in the section titled "Revenues of Traditional and Charter Public Schools," we present results from the fiscal data regarding revenues and also analyze the types of federal and state revenue available to traditional and charter public schools in the state of Maryland.

3.2.1.1.2 The aggregate operating expenditures made on behalf of individual schools by each county board of education;

In Chapter 3 of this report, we present our best estimates of actual spending on both traditional and charter schools.

3.2.1.1.2.1 The Contractor will propose a methodology for assignment of certain expenditures at the central office level to individual schools.

In Chapter 2 of this report, we present our methodology used for determining actual spending on schools. This includes our methods for allocating central unattributed spending to schools.

3.2.1.1.3 The amount of funding being provided to public charter schools and other public schools by local school systems;

In Chapter 3 of this report, we present our best estimates of actual spending on both traditional and charter schools. This includes the value of centrally managed district services aiding schools and students.

3.2.1.1.3.2 The impact of demographic differences on the allocation of state and federal revenues, e.g. low-income, English language learners, students with disabilities on how funding is provided to public charter schools and other public schools by local school systems.

In Chapter 4 of this report, we present the results from a regression model, indicating how school-level demographic characteristics impact funding levels of traditional public schools. In addition, in Chapter 3 of this report we present findings from interviews with district officials indicating how they distribute categorical funds—predominately from federal sources—to public charter schools.

3.2.1.1.4 The value of services being provided to public charter schools and other public schools by local school systems, including central office expenditures;

In Chapter 3 of this report, we compare attributed and allocated expenditure amounts in traditional and charter public schools. The amounts of allocated non-fixed charge expenditures represent the amount of centrally managed spending that is being used to provide services to schools. In addition, Chapter 5 of this report identifies the types of services that are being provided to charter schools through centrally managed spending versus the services that charters are expected to provide themselves through the discretionary spending provided to them by the district.

3.2.1.1.4.1 Develop a standard methodology for establishing the cash value of services provided to public charter schools and other public schools.

In Chapter 2 of this report, we present our methodology for determining the cash value of all spending on traditional and charter public schools in Maryland. The cash value represents the total package of services that traditional and charter public schools are able to provide to their students, including those services managed centrally by the district.

3.2.1.3 The Contractor shall identify financial data needed in order to provide a review of central office and school level expenditure as listed in Section 3.1.1, from local school systems and public charter schools. The Contractor will propose methods to collect the data from all sources including from the State, local school systems, every public charter school in the State, and a representative sample of other public schools. The Contractor will be responsible for data collection and ensuring that financial data is formatted so that it is comparable across school systems. The Contractor will propose methods by which to overcome any challenges to collecting and interpreting data that are identified by the Contractor. The Contractor remains responsible for overcoming challenges to complete the approved Scope of Work.

We have collected and analyzed an extraordinary amount of fiscal data, documentation of fiscal practices and district and charter school policies, and data collected through interviews and surveys of district and charter school officials. The data collected and subsequent analyses have led to the findings presented in this report.

3.2.1.3.1 The Contractor will identify financial data needed, in addition to publicly available data.

We identified and collected fiscal data from numerous sources.

3.2.1.3.2 The sample used in the study will include actual expenditure data from: (1) at least one traditional public school in each local school system in the State; (2) every traditional public school in at least three local school system in the State, including expenditures made on behalf of individual schools.

We collected actual expenditure data from all districts in the state of Maryland. These data included those expenditures that could be attributed to all traditional and charter public schools. In addition, we collected fiscal data from all active charter operators in Maryland.

3.2.1.3.2.1 The Contractor will propose a methodology for determining an appropriate sample size of traditional public schools from which to collect actual expenditure data, other than the schools and school systems referred to in 3.2.1.3.2, and the rationale for how the sample size will provide sufficient and representative data for the study.

Our methodology for the sample of traditional public schools in Maryland was to collect fiscal data from all districts and determine the extent to which fiscal data could be attributed to individual schools. We determined that all districts attributed some amount of actual expenditures to schools, although this amount varied across districts.

3.2.1.3.3 The Contractor will provide to the Department and the Department of Legislative Services the financial data from local school systems and from schools, both disaggregated at the school level and aggregated to the school system level, in a spreadsheet format.

As part of this project, we prepared a database that included all the elements used in the analysis of fiscal data for this study to be given to the MSDE and D LS.

3.2.1.3.4 The Contractor will provide its data collection plan to MSDE and DLS for review and approval; and will incorporate feedback from MSDE and DLS into the data collection plan described in 3.2.1.3

During the course of this study, we provided our data collection plan to MSDE and DLS for review and approval and incorporated the feedback into the plan.

3.2.1.2 The Contractor shall provide an assessment of the collection of central office and school level expenditure data on an ongoing basis, including the potential costs for the state and local school systems and the benefits of regularly collecting disaggregated expenditure data.

In Chapter 6 of this report, as part of the second recommendation, we included estimates of the amount of staff time that would be required to conduct data collection and analysis similar to what was done in this study on an ongoing basis.

Analysis of Charter School Funding Policies and Practices in Maryland

The set of RFP items related to this task include the following:

3.2.1.1.3.3 Provide the methodology that each local school system uses to calculate the per-pupil allocation for public charter schools.

In Chapter 5 of this report, we provide the charter school per-pupil allocation (PPA) formulas used in each district that has active charter schools and we describe the components of the formulas, as well as how those components relate to the provision of services in charter schools.

3.2.1.1.4.2 List and summarize agreements governing the value and provision of services to public charter schools and any other public schools for which it is applicable by the local school systems, (e.g. special education, transportation).

In Chapter 5 of this report, we describe the agreements between charter schools and districts regarding how services are to be provided for students in charter schools and whether the charter school is responsible for providing the service out of their PPA or whether the district funds the service outside of the PPA.

3.2.1.1.5 The amount of funding provided by public charter schools to any third party, including a charter management organization;

In Chapter 5, we identify the amounts that charter schools pay charter management organizations (CMOs), if they are involved with a third party management organization, such as a CMO.

3.2.1.1.3.1 Describe the amounts and methods by which federal funding is allocated to public charter schools and other public schools, e.g. Title I and II, Food Services, Federal Special Education, E-rate.

In Chapter 3, we present findings from interviews with district officials regarding whether and how federal categorical funds are distributed to charter schools. We also identify the amounts of federal funding for charter schools found in the Charter School End-of-Year Expense Reports and the District End-of-Year Fiscal Data for Baltimore City and Prince George's County.

Additional/Innovative Financing for Charter Schools

This task includes the following RFP items:

3.2.1.1.6 The availability of federal funding for public charter schools, including options for Maryland to access federal charter school program grants;

In Chapter 3, we identify the sources of federal funding that are provided to schools—inclusive of charter schools—in the state of Maryland. In addition, we describe the federal Charter School Program (CSP) grants and identify the factors that the U.S. Department of Education uses to determine the states awarded the grant. We also describe the grants available to charter schools in states not awarded the statewide CSP grant.

3.2.1.1.7 The potential availability of innovative financing for public charter school facilities that would not directly affect the State operating or capital budget;

In Chapter 5, we identify sources of federal funding for charter school facilities' financing as well as approaches charter schools have taken to financing facilities throughout the country.

3.2.1.1.7.1 Submit examples from other states, including information on long-term impacts of public funds financing charter facilities; and impacts on public charter school operations.

In Chapter 5, we describe some of the approaches charter schools and charter organizations have taken to finance their facilities, and we include the strengths and weaknesses of various approaches.

Appendix A. School Counts and Enrollment Tables

Exhibit A1. Statewide Total School Counts and Enrollment in the Analysis Sample by Year

Year	School Count	Total Enrollment
2012–13	1,332	840,428
2013–14	1,329	847,971
2014–15	1,327	854,876

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A2. Three-Year Statewide Total School Counts and Enrollment in the Analysis Sample by School Grade Configuration

School Grade Configuration	School Count	Total Enrollment
Elementary	2,141	1,059,194
Middle	637	463,353
High	553	694,501
Grades K–8	569	279,312
Grades 6–12	88	46,915

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A3. Statewide Total School Counts and Enrollment in the Analysis Sample by Year and School Type

Year	Traditional or Charter School	School Count	Total Enrollment
2012–13	Traditional	1,285	824,019
2012–13	Charter	47	16,409
2013–14	Traditional	1,282	830,701
2013–14	Charter	47	17,270
2014–15	Traditional	1,280	836,058
2014–15	Charter	47	18,818

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A4. Three-Year Statewide Total School Counts and Enrollment in the Analysis Sample by Grade Configuration and School Type

School Grade Configuration	Traditional or Charter School	School Count	Total Enrollment
Elementary	Traditional	2,107	1,049,926
Elementary	Charter	34	9,268
Middle	Traditional	623	460,042
Middle	Charter	14	3,311
High	Traditional	544	692,165
High	Charter	9	2,336
Grades K–8	Traditional	501	248,331
Grades K–8	Charter	68	30,981
Grades 6–12	Traditional	72	40,314
Grades 6–12	Charter	16	6,601

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A5. Statewide Total School Counts and Enrollment in the Analysis Sample by Year, Grade Configuration, and School Type

School Grade Configuration	Traditional or Charter School	2012–13		2013–14		2014–15	
		School Count	Total Enrollment	School Count	Total Enrollment	School Count	Total Enrollment
Elementary	Traditional	706	349,043	710	355,418	691	345,465
Elementary	Charter	13	3,669	11	2,972	10	2,627
Middle	Traditional	217	157,219	213	158,415	193	144,408
Middle	Charter	5	1,233	4	860	5	1,218
High	Traditional	183	233,135	182	229,851	179	229,179
High	Charter	3	694	3	815	3	827
Grades K–8	Traditional	162	76,975	158	78,007	181	93,349
Grades K–8	Charter	21	9,014	24	10,575	23	11,392
Grades 6–12	Traditional	17	7,647	19	9,010	36	23,657
Grades 6–12	Charter	5	1,799	5	2,048	6	2,754

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A6. District Total School Counts and Enrollment in the Analysis Sample by Year

District Name	2012–13		2013–14		2014–15	
	School Count	Enrollment	School Count	Enrollment	School Count	Enrollment
Allegany	21	8,397	21	8,540	21	8,538
Anne Arundel	112	76,549	112	77,169	113	78,200
Baltimore City	179	76,368	174	75,947	167	75,538
Baltimore County	155	102,862	154	104,593	155	106,253
Calvert	23	16,349	23	16,190	22	16,004
Caroline	9	5,533	9	5,549	9	5,577
Carroll	40	26,361	40	26,029	40	25,670
Cecil	28	15,632	28	15,701	27	15,692
Charles	35	26,481	35	26,382	36	26,292
Dorchester	11	4,678	11	4,770	11	4,704
Frederick	61	40,422	62	40,678	62	40,491
Garrett	12	4,001	12	3,839	12	3,818
Harford	51	36,517	51	36,414	51	36,103
Howard	71	52,204	72	52,900	73	53,819
Kent	7	2,121	7	2,122	7	2,048
Montgomery	196	148,898	196	151,940	196	154,587
Prince George's	188	121,609	189	123,380	192	125,607
Queen Anne's	14	7,745	14	7,725	14	7,754
St. Mary's	25	17,494	25	17,866	25	17,818
Somerset	8	2,911	8	2,904	8	2,861
Talbot	8	4,585	8	4,572	8	4,659
Washington	42	21,861	42	21,856	42	21,681
Wicomico	24	14,308	24	14,345	24	14,552
Worcester	12	6,542	12	6,560	12	6,610

Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A7. Three-Year District Total School Counts and Enrollment in the Analysis Sample by School Type

District Name	Traditional		Charter	
	School Count	Enrollment	School Count	Enrollment
Allegany	63	25,475	—	—
Anne Arundel	331	228,653	6	3,265
Baltimore City	425	193,009	95	34,844
Baltimore County	462	312,624	2	1,084
Calvert	68	48,543	—	—
Caroline	27	16,659	—	—
Carroll	120	78,060	—	—
Cecil	83	47,025	—	—
Charles	106	79,155	—	—
Dorchester	33	14,152	—	—
Frederick	177	119,621	8	1,970
Garrett	36	11,658	—	—
Harford	153	109,034	—	—
Howard	216	158,923	—	—
Kent	21	6,291	—	—
Montgomery	586	455,272	2	153
Prince George's	544	360,445	25	10,151
Queen Anne's	42	23,224	—	—
St. Mary's	72	52,148	3	1,030
Somerset	24	8,676	—	—
Talbot	24	13,816	—	—
Washington	126	65,398	—	—
Wicomico	72	43,205	—	—
Worcester	36	19,712	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A8. District Total School Counts and Enrollment in the Analysis Sample by Year and School Type

District Name	2012–13				2013–14				2014–15			
	Traditional		Charter		Traditional		Charter		Traditional		Charter	
	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll
Allegany	21	8,397	—	—	21	8,540	—	—	21	8,538	—	—
Anne Arundel	110	75,482	2	1,067	110	76,084	2	1,085	111	77,087	2	1,113
Baltimore City	146	65,073	33	11,295	143	64,773	31	11,174	136	63,163	31	12,375
Baltimore County	154	102,314	1	548	153	104,057	1	536	155	106,253	—	—
Calvert	23	16,349	—	—	23	16,190	—	—	22	16,004	—	—
Caroline	9	5,533	—	—	9	5,549	—	—	9	5,577	—	—
Carroll	40	26,361	—	—	40	26,029	—	—	40	25,670	—	—
Cecil	28	15,632	—	—	28	15,701	—	—	27	15,692	—	—
Charles	35	26,481	—	—	35	26,382	—	—	36	26,292	—	—
Dorchester	11	4,678	—	—	11	4,770	—	—	11	4,704	—	—
Frederick	59	40,002	2	420	59	39,930	3	748	59	39,689	3	802
Garrett	12	4,001	—	—	12	3,839	—	—	12	3,818	—	—
Harford	51	36,517	—	—	51	36,414	—	—	51	36,103	—	—
Howard	71	52,204	—	—	72	52,900	—	—	73	53,819	—	—
Kent	7	2,121	—	—	7	2,122	—	—	7	2,048	—	—
Montgomery	195	148,835	1	63	195	151,850	1	90	196	154,587	—	—
Prince George's	181	118,918	7	2,691	181	120,094	8	3,286	182	121,433	10	4,174
Queen Anne's	14	7,745	—	—	14	7,725	—	—	14	7,754	—	—
St. Mary's	24	17,169	1	325	24	17,515	1	351	24	17,464	1	354
Somerset	8	2,911	—	—	8	2,904	—	—	8	2,861	—	—
Talbot	8	4,585	—	—	8	4,572	—	—	8	4,659	—	—
Washington	42	21,861	—	—	42	21,856	—	—	42	21,681	—	—
Wicomico	24	14,308	—	—	24	14,345	—	—	24	14,552	—	—
Worcester	12	6,542	—	—	12	6,560	—	—	12	6,610	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A9. Three-Year District Total Traditional School Counts and Enrollment in the Analysis Sample by Grade Configuration

District	Elementary		Middle		High		Grades K–8		Grades 6–12	
	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll
Allegany	42	13,090	12	5,658	9	6,727	—	—	—	—
Anne Arundel	238	114,451	56	48,590	36	64,889	—	—	1	723
Baltimore City	139	51,528	20	5,808	51	30,935	179	87,914	36	16,824
Baltimore County	317	162,150	79	66,701	63	81,574	3	2,199	—	—
Calvert	38	21,438	18	11,327	12	15,778	—	—	—	—
Caroline	15	8,560	6	3,641	6	4,458	—	—	—	—
Carroll	69	34,694	26	17,757	24	25,238	1	371	—	—
Cecil	50	22,802	18	10,396	15	13,827	—	—	—	—
Charles	63	35,873	24	17,420	19	25,862	—	—	—	—
Dorchester	18	7,006	6	2,796	6	3,763	3	587	—	—
Frederick	102	52,167	29	19,553	30	37,165	7	4,251	9	6,485
Garrett	21	5,489	6	2,554	6	3,494	3	121	—	—
Harford	99	52,951	27	25,239	27	30,844	—	—	—	—
Howard	122	74,149	58	35,697	36	49,077	—	—	—	—
Kent	15	3,168	3	1,321	3	1,802	—	—	—	—
Montgomery	370	207,919	103	87,507	75	134,599	27	15,687	11	9,560
Prince George's	148	73,930	72	55,257	69	102,945	255	128,313	—	—
Queen Anne's	24	10,772	9	4,224	6	6,889	3	1,339	—	—
St. Mary's	51	26,209	12	10,999	9	14,940	—	—	—	—
Somerset	12	4,654	3	1,227	—	—	3	35	6	2,760
Talbot	11	6,044	3	2,363	3	3,231	4	972	3	1,206
Washington	81	32,022	21	14,741	21	17,816	—	—	3	819
Wicomico	47	21,560	9	7,393	9	10,430	4	1,885	3	1,937
Worcester	15	7,300	3	1,873	9	5,882	9	4,657	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A10. Three-Year District Total Charter School Counts and Enrollment in the Analysis Sample by Grade Configuration

District	Elementary		Middle		High		Grades K–8		Grades 6–12	
	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll
Anne Arundel	—	—	—	—	—	—	3	1,912	3	1,353
Baltimore City	24	6,984	10	2,045	9	2,336	41	19,246	11	4,233
Baltimore County	—	—	—	—	—	—	2	1,084	—	—
Frederick	3	513	—	—	—	—	5	1,457	—	—
Montgomery	2	153	—	—	—	—	—	—	—	—
Prince George's	5	1,618	4	1,266	—	—	14	6,252	2	1,015
St. Mary's	—	—	—	—	—	—	3	1,030	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12.
Source: MSDE Statewide Student Demographic Data

Exhibit A11. 2014–15 District Total Traditional School Counts and Enrollment in the Analysis Sample by Grade Configuration

District	Elementary		Middle		High		Grades K–8		Grades 6–12	
	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll
Allegany	14	4,397	4	1,868	3	2,273	—	—	—	—
Anne Arundel	80	38,706	18	15,987	12	21,671	—	—	1	723
Baltimore City	46	16,743	5	1,484	14	9,133	60	30,522	11	5,281
Baltimore County	106	55,178	26	22,522	21	27,294	2	1,259	—	—
Calvert	12	7,061	6	3,788	4	5,155	—	—	—	—
Caroline	5	2,850	2	1,222	2	1,505	—	—	—	—
Carroll	23	11,358	9	6,029	8	8,283	—	—	—	—
Cecil	16	7,632	6	3,444	5	4,616	—	—	—	—
Charles	21	11,949	8	5,798	7	8,545	—	—	—	—
Dorchester	6	2,331	2	919	2	1,255	1	199	—	—
Frederick	30	14,842	4	2,510	10	12,289	7	4,251	8	5,797
Garrett	7	1,832	2	819	2	1,122	1	45	—	—
Harford	33	17,595	9	8,382	9	10,126	—	—	—	—
Howard	41	25,224	20	12,291	12	16,304	—	—	—	—
Kent	5	1,030	1	433	1	585	—	—	—	—
Montgomery	110	62,374	27	23,759	25	45,086	23	13,808	11	9,560
Prince George's	54	27,569	24	18,749	23	34,267	81	40,848	—	—
Queen Anne's	8	3,606	3	1,428	2	2,284	1	436	—	—
St. Mary's	17	8,806	4	3,721	3	4,937	—	—	—	—
Somerset	4	1,522	1	403	—	—	1	11	2	925
Talbot	5	2,329	1	822	1	1,062	—	—	1	446
Washington	27	10,592	7	4,917	7	5,902	—	—	1	270
Wicomico	16	7,519	3	2,473	3	3,513	1	392	1	655
Worcester	5	2,420	1	640	3	1,972	3	1,578	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12. Alternative, vocational and standalone special education schools were not included in the analysis sample.
Source: MSDE Statewide Student Demographic Data

Exhibit A12. 2014–15 District Total Charter School Counts and Enrollment in the Analysis Sample by Grade Configuration

District	Elementary		Middle		High		Grades K–8		Grades 6–12	
	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll	School Count	Enroll
Anne Arundel	—	—	—	—	—	—	1	658	1	455
Baltimore City	7	1,742	3	588	3	827	14	7,475	4	1,743
Frederick	1	199	—	—	—	—	2	603	—	—
Prince George's	2	686	2	630	—	—	5	2,302	1	556
St. Mary's	—	—	—	—	—	—	1	354	—	—

— Not applicable
Note: Total enrollment includes students in Grades Pre-K through 12.
Source: MSDE Statewide Student Demographic Data

Exhibit A13. Overall Enrollment and Pre-K Enrollment For Charter Schools Open At the Time of Data Collection

Charter School	2012–13		2013–14		2014–15	
	Enrollment	Pre-K Enrollment	Enrollment	Pre-K Enrollment	Enrollment	Pre-K Enrollment
Anne Arundel						
Chesapeake Science Point	455	0	443	0	455	0
Monarch Academy - Glen Burnie	612	0	642	0	658	0
Baltimore City						
Afya Public Charter School	339	0	345	0	344	0
Baltimore International Academy	528	0	548	0	625	0
Baltimore Leadership School for Young Women	330	0	428	0	484	0
Baltimore Montessori Public Charter School	302	49	314	52	335	45
City Neighbors Charter School	213	0	212	0	214	0
City Neighbors Hamilton	152	0	183	0	214	0
City Neighbors High School	267	0	361	0	373	0
City Springs Elementary	631	56	669	54	745	54
Connexions Public Charter School	323	0	353	0	447	0
Coppin Academy	316	0	336	0	334	0
Creative City Public Charter School	—	—	122	0	168	0
Empowerment Academy	237	20	254	21	272	21
Furman Templeton	501	59	496	39	517	48
Green Street Academy	—	—	—	—	424	0
Hampstead Hill Academy	683	42	703	44	721	46
Independence Public Charter School	111	0	118	0	120	0
KIPP Harmony	1,008	0	1,230	0	1,423	0
Maryland Academy of Tech and Health Sciences	367	0	365	0	388	0
Midtown Academy	176	0	176	0	182	0
Monarch Academy - Baltimore	610	0	934	0	942	0
Northwood Appold Community Academy Public Charter School #330	240	0	229	0	225	0
Patterson Park Public Charter School	631	21	659	42	669	46
Roots and Branches	143	0	176	0	217	0
Rosemont Charter School	404	33	383	29	380	36
Southwest Baltimore Charter School	419	0	411	0	399	0
The Crossroads School	159	0	154	0	158	0
The Green School	150	0	149	0	150	0
Tunbridge Public Charter School	304	22	349	21	405	21
Wolfe Street Academy	190	22	206	22	216	23

Exhibit A13. Overall Enrollment and Pre-K Enrollment For Charter Schools Open At the Time of Data Collection (continued)

Charter School	2012–13		2013–14		2014–15	
	Enrollment	Pre-K Enrollment	Enrollment	Pre-K Enrollment	Enrollment	Pre-K Enrollment
Frederick						
Carroll Creek Montessori	128	31	186	59	199	48
Frederick Classical Charter School	—	—	273	0	305	0
Monocacy Valley Montessori	292	30	289	30	298	29
Prince George's						
Chesapeake Math and IT Academy	354	0	459	0	556	0
CMIT Elementary	—	—	—	—	286	0
CMIT South	—	—	—	—	291	0
College Park Academy	—	—	282	0	339	0
Excel Academy Public Charter School	366	0	401	0	405	0
Imagine Andrews	275	0	317	0	366	0
Imagine Leeland	444	0	463	0	478	0
Imagine Lincoln	430	0	458	0	448	0
Imagine Morningside	298	0	359	0	400	0
Turning Point	524	0	547	0	605	0
St. Mary's						
Chesapeake Charter School	325	0	351	0	354	0

— Not applicable

Note: Overall enrollment includes students in Grades Pre-K through 12. Charters not listed in the exhibit that were open over the three-year time period but have since closed or merged with other schools are as follows: Baltimore City – Baltimore Montessori Middle School (merged with Baltimore Montessori after 2015–16), Inner Harbor East Academy (closed after 2014–15), KIPP Ujima Village (merged with KIPP Harmony after 2013–14), Collington Square Elementary (closed after 2012–13), Bluford Drew Jemison STEM Academy (closed after 2012–13), Baltimore Freedom Academy (closed after 2012-13); Baltimore County – Imagine Discovery Charter School (closed after 2013–14); Montgomery – Community Montessori Charter School (closed after 2013–14). Also not reported in the exhibit is the second school operated by Northwood Appold Community Academy called Victoria Jackson Gray Adams Freedom and Democracy School (NACA II), which is a Grade 6-12 transformation school with enrollment figures over the study years as follows: 257 for 2012–13, 311 for 2013–14, and 308 for 2014–15.

Source: MSDE Statewide Student Demographic Data

Appendix B. Additional Detail Regarding Allocation of Unattributed Allocatable Personnel and Non-Personnel

Exhibit B1. MSDE Statewide Staffing File Positions by Allocatable Designation

Staffing File Position Name	Allocation Rule
Asst., Assoc., Area Superintendent	Only if Not "Administration" Category
Audiologist/Hearing Therapist	Allocate All Categories
Coordinator/Consultant	Only if Not "Administration" Category
Crafts and Trades Personnel	Allocate All Categories
Deputy Superintendent	Only if Not "Administration" Category
Director/Manager/Controller	Only if Not "Administration" Category
Guidance Counselor	Allocate All Categories
Librarian/Media Consultant	Allocate All Categories
Manual Laborer	Allocate All Categories
Nurse/Hygienist/Health Professional	Allocate All Categories
Occupational Therapist	Allocate All Categories
Other Administrator	Only if Not "Administration" Category
Other Aide	Only if Not "Administration" Category
Other Instructional Personnel	Allocate All Categories
Other Professional Personnel	Only if Not "Administration" Category
Other School-Level Administrator	Allocate All Categories
Other Therapist/Diagnostician	Allocate All Categories
Physical Therapist	Allocate All
Principal	Allocate All
Psychologist	Allocate All
School Social Worker	Allocate All
Secretary/Clerk	Only if Not "Administration" Category
Service Worker	Only if Not "Administration" Category
Speech Pathologist/Therapist	Allocate All Categories
Staff Developer/Teacher Trainer	Allocate All Categories
Student Personnel Worker	Allocate All Categories
Superintendent	Only if Not "Administration" Category
Supervisor	Only if Not "Administration" Category
Teacher Aide/Teaching Assistant	Allocate All Categories
Teacher/Instructor	Allocate All Categories
Technical Personnel	Only if Not "Administration" Category
Transportation Personnel	Only if Not "Administration" Category
Vice/Assistant Principal	Allocate All Categories

Development of Expense Ratios to Determine Allocations of Unattributed Non-Salary Expense to School Sites

Description of Baltimore City Transactional Fiscal Data

Baltimore City Public Schools (BCPS) provided three years of detailed transaction-level data from Oracle Financials for analysis. Each transaction is provided with a date, a full account code, debit or credit amounts, and most importantly, a rich description of the purpose of the transaction.

The data were then normalized and indexed to allow for comprehensive text searching and filtering to assist with categorizing each transaction as allocatable to schools or not.

The starting data set is a result of filtering out all attributed dollars based on the BCPS cost centers as well as removing all non-expenditure transactions (e.g., balance sheet transfers, asset management). Exhibit B2 provides the total non-attributed expenses identified in each of the study years.

Exhibit B2. BCPS Non-Attributed Expenditure Account Balances

Year	Non-Attributed Expense
2012–13	$439,219,448
2013–14	$465,011,462
2014–15	$379,772,384

Defining Allocatable Versus Non-Allocatable Transactions

Each transaction was tagged primarily using the description field, which contains narrative information supplied at the point of purchase in Oracle Financials. These descriptions typically refer to a line item on a purchase order and/or a rationale supplied in a requisition request that was approved and used to pay invoices. The rich information provided within these descriptions, especially related to materials, supplies, and other costs that are processed through accounts payables, allowed us to attribute each transaction to either the school level, the central office level, or both using the business rules described further below.

Tagging Categorization

Each transaction was tagged in one of five categories:

- School
- District
- Both
- Salary
- Debt, Capital, and Lease
- To Be Determined

School (Allocatable)

Transactions tagged as School are allocatable expenses. There are two main considerations that guided the decision to classify an expenditure as school-based:

1. Would these costs be borne by schools, independent of a district's supporting structure?
2. Are these expenditures for positions, goods, and services that should increase with an increase in student enrollment?

If the service centers, schools, would be expected or required to make the same or similar expenditures if the mission center, the district, was not doing so, then the transaction was considered allocatable. Generally, these are activities and goods that the district provides school sites to take advantage of economies of scale or lowered coordination costs, or to achieve other strategic purposes. By this logic, we attributed to the school level most everything that directly supported instruction, school-based operations, or school-based activities that support K–12 education.

District (Non-Allocatable)

Transactions remained at the District level as non-allocatable when they could not be deemed directly related to the work or products necessary to operate a school. These expenditures typically involve the internal management of the central office and policies and services performed as part of the management requirements of having multiple service centers under a mission center.

Both

We categorized a transaction as Both when the following conditions were met:

- The transaction description field contained enough information to understand what was purchased by that transaction.
- The positions, goods, or services purchased by the transaction were relevant and required both for schools and central office staff.

Many transactions categorized under Both fell into the categories of maintenance and repairs for buildings. Although recorded in the central office cost center "Upkeep of Grounds, Buildings, & Fixed Assets," it was rare for transactions to specify what building received repairs. We have data such as "PO 665766 Invoice 98763 Vendor Adv Fire Prot Sys," indicating that fire protection systems were repaired, but we do not know if this was in the service of maintaining school buildings or other sites. Dollars categorized as Both should use formula-based allocation methods based on their account structure.

Salary

Nearly all of the payroll data imported into Oracle Financials had little or no additional explanatory information. The Salary designation included all forms of compensation associated with employment (e.g., medical benefits, workers compensation, FICA, and retirement).

However, the most common description for these transactions was "Import Journal Created." Therefore, we were unable to provide any additional guidance on the attribution of salary and benefits of central office-cost center staff to schools beyond what was available in the account-level data that were already collected by the research team. We tagged these expenditures as Salary, and they are largely excluded from the transactions-based analysis.

Due to this lack of detail in the payroll information contained in the transactional fiscal data, the MSDE Statewide Staffing File was the primary data source used as a part of this study and the transactions tagging sample was scoped to address only non-salary data that were not attributed.

Debt, Capital, and Lease

Debt, Capital, and Lease transactions include capital outlay, debt service, and the administration of leases. While some of these transactions have detailed descriptions, it is overall unclear how to distinguish leases and purchases. These costs are not considered to be a part of the *operational* costs per student.

To Be Determined

This category is for all transactions that provide little information at the transaction level, similar to the Salary data. It is assumed that spending described by these data is non-allocatable.

Exhibit B3. Summary of Dollars by Category of Baltimore City Public School Transactions

Year	Tag	Sub Total	Count	Proportion of Dollars
2012–13	Salary	$189,381,385	69054	43.1%
	School	$103,629,679	9969	23.6%
	Both	$71,131,869	9675	16.2%
	Debt, Capital, Lease	$60,215,440	304	13.7%
	District	$8,342,218	1890	1.9%
	TBD	$6,518,857	2201	1.5%
2013–14	Salary	$198,653,481	48365	42.7%
	School	$112,960,484	9489	24.3%
	Debt, Capital, Lease	$72,196,183	151	15.5%
	Both	$69,339,813	8347	14.9%
	District	$6,452,150	1964	1.4%
	TBD	$5,409,351	1826	1.2%
2014–15	Salary	$186,127,336	50372	49.0%
	School	$97,541,598	6685	25.7%
	Both	$77,183,720	8757	20.3%
	Debt, Capital, Lease	$10,417,190	99	2.7%
	District	$4,376,617	1074	1.2%
	TBD	$4,125,923	950	1.1%

Exhibit B4. Resources Allocated Across All Schools Versus Across Only Traditional Non-Charter Schools (by State Chart of Accounts Category Code and District)

State COA Spending Category	Anne Arundel County	Baltimore City	Frederick County	Prince George's County	St. Mary's County
Administration	All Schools	All Schools	All Schools	All Schools	All Schools
Mid-Level Administration	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Instructional Salaries & Wages	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Textbooks and Instructional Materials	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Other Instruction	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Special Education	Traditional Non-Charter Schools	All Schools	All Schools	All Schools	Traditional Non-Charter Schools
Student Personnel Services	All Schools	All Schools	All Schools	All Schools	All Schools
Student Health	All Schools	All Schools	All Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Student Transportation	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Operation of Plant	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Maintenance of Plant	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools	Traditional Non-Charter Schools
Food Services	All Schools	All Schools	All Schools	All Schools	All Schools
Capital Outlay	All Schools	All Schools	All Schools	All Schools	All Schools
Fixed Charges	All Schools	All Schools	All Schools	All Schools	All Schools

Note: These determinations were based on the service arrangements for charter schools identified in Exhibit 43. In instances where services closely matching the state COA category are purchased by the charter school through the PPA, central resources are not allocated to charter schools. For those services provided by the district to charter schools outside of the PPA, any centralized expenditures within categories pertaining to those services are allocated to all schools including charter schools. Fixed charges are allocated to all schools on the basis of share of salaries.

Appendix C. Regression Model of Traditional Per-Pupil Spending

Estimated Regression Analysis Model of Traditional School Per-Pupil Spending

The estimated model depicted in Exhibit C1 was used to generate predicted values of per-pupil expenditure for all schools statewide (both traditional and charter), where we consider these predicted values to represent comparison spending levels given statewide patterns of traditional school spending associated with student needs, grade-specific enrollments, and other factors related to the school-level spending in specific districts.

Exhibit C1. Regression Model Estimates

Model Variable		Coefficient	Standard Error
Student Population			
	School-Level Percent Students with Disabilities	22,541.437***	660.515
	School-Level Proportion of Disabled With Non-Severe Disabilities	-1,172.246***	208.107
	School-Level Percent Free or Reduced-Price Meals (FARMS)	349.941	304.855
	School-Level Percent English as Second Language	1,516.955***	157.192
Grade Distribution			
	School-Level Percent School Enrollment in Grades PreK–5 (Reference Group)	N/A	
	School-Level Percent School Enrollment in Grades 6–8	863.450***	62.277
	School-Level Percent School Enrollment in Grades 9–12	579.427***	57.137
Year			
	Year = 2012–13 (Reference Group)	N/A	
	Year = 2013–14	177.779***	54.380
	Year = 2014–15	267.145***	54.381
District			
	Allegany (Reference Group)	N/A	
	Anne Arundel	724.849***	238.871
	Baltimore City	26.383	238.695
	Baltimore County	-411.809*	230.067
	Calvert	1,270.684***	276.180
	Caroline	-326.064	350.330
	Carroll	410.794	257.933
	Cecil	-819.147***	272.903
	Charles	1,033.828***	255.720

Exhibit C1. Regression Model Estimates (continued)

Model Variable		Coefficient	Standard Error
District			
	Dorchester	-169.499	374.322
	Frederick	23.408	248.247
	Garrett	1,112.883***	393.895
	Harford	-331.597	246.785
	Howard	2,210.769***	246.521
	Kent	1,149.571**	492.654
	Montgomery	1,710.227***	235.204
	Prince George's	-31.145	232.151
	Queen Anne's	-749.336**	320.363
	Saint Mary's	-156.710	271.055
	Somerset	-2.832	435.130
	Talbot	215.034	371.864
	Washington	232.037	261.879
	Wicomico	-103.187	278.004
	Worcester	2,543.529***	332.250
	Intercept – Base Per-Pupil Spending	8,342.444***	313.729
Number of observations		3,847	
R-squared		0.503	

Note: *, ** and *** denote statistical significance at the 1%, 5%, and 10% error levels, respectively.

Using the Regression Results to Calculate Comparison Per-Pupil Spending for Schools

One can also use the estimates from the model as a relatively simple comparison spending calculation formula capable of generating predictions for hypothetical schools, as shown in below in Exhibit C2. As an example, we construct a per-pupil expense estimate for a hypothetical school in Baltimore City. Starting with the base per-pupil figure of $8,342.44, we first add an adjustment of $26.38 per pupil for Baltimore City. Next, we calculate each of the student special needs adjustments, creating $2,479.56 and -$820.57 adjustments to account for the incidence of special education and the share of special education students that have non-severe disabilities, respectively, and adjustments for the incidences of low income and ESL students of $1,213.56 and $17.50. Further, the school includes 50% children in Grades Pre-K–5 and another 50% in Grades 6–8, leading to an upward adjustment of $431.72 per pupil. Finally, we extrapolate forward using the average of the prior yearly increases, to create an adjustment for 2015–16 of $401.50. Summing the base per-pupil spending all adjustments, we find that the predicted spending level for this hypothetical Baltimore City school is $12,092.10 for 2015–16.

Exhibit C2. Estimates of Expense From Regression Model

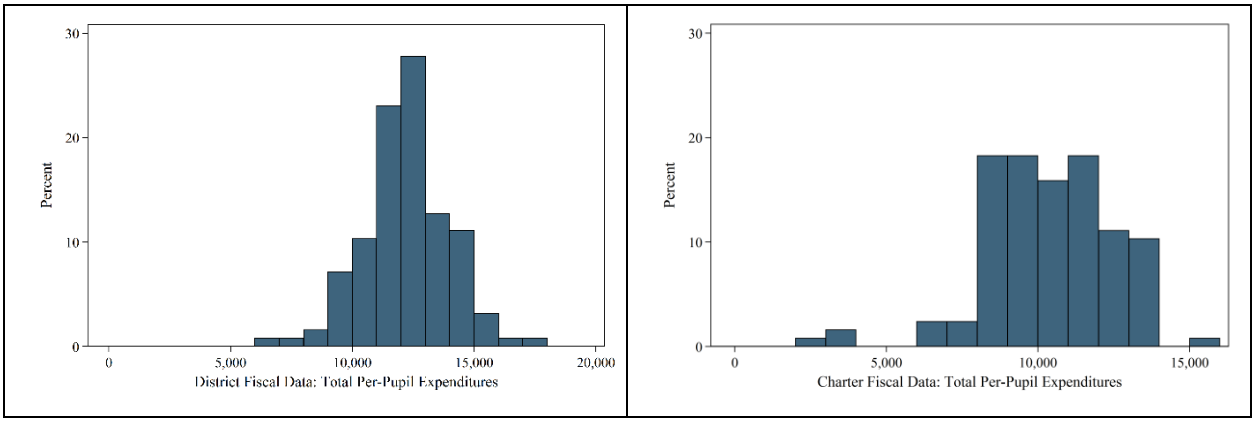
School Characteristics		Characteristic Values		Model Factor		Total
Base Per-Pupil Spending				$8,342.44		$8,342.44
District Adjustment to Base		[Baltimore City]		$26.38		$26.38
Student Population						
	Percent Students with Disabilities	11%	x	$22,541.44	=	$2,479.56
	Proportion of Disabled With Non-Severe Disabilities	70%	x	-$1,172.25	=	-$820.57
	Percent Free or Reduced-Price Meals (FARMS)	80%	x	$1,516.96	=	$1,213.56
	Percent English as Second Language	5%	x	$349.94	=	$17.50
Grade Distribution						
	Percent School Enrollment in Grades PreK–5 (Reference Group)			$0.00		
	Percent School Enrollment in Grades 6–8	50%	x	$855.81	=	$431.72
	Percent School Enrollment in Grades 9–12	0%	x	$573.45	=	$0.00
Year						
	Year = 2012–13 (Reference Group)			$0.00		
	Year = 2013–14			$177.78		
	Year = 2014–15			$267.15		
	Extrapolated Year = 2015–16	Yes		$401.50		$401.50
	Extrapolated Year = 2016–17			$535.34		
Predicted School Site Expense per Pupil						$12,092.10

Appendix D. Comparison of Actual Charter School Spending Figures Derived From District and State Data to Those From Charter School Fiscal Data

In comparison to the overall spending derived from district fiscal data, some charter schools' own expense reports appear inconsistent and potentially incomplete. Exhibit D1 shows the distributions of expenditures reported from the school-level database and charter schools' own fiscal data in histograms. Charter per-pupil spending reported from the school-level database ranges from $6,304 to $17,520 per pupil. According to this data source, less than 11% of schools have per-pupil spending under $10,000, and approximately 85% of the schools fall between $10,000 and $15,000 per pupil. In contrast, charter spending per pupil reported in the charter schools' fiscal data ranges from less than $2,164 to $15,277 per pupil, with over 40% of schools below $10,000 per pupil.

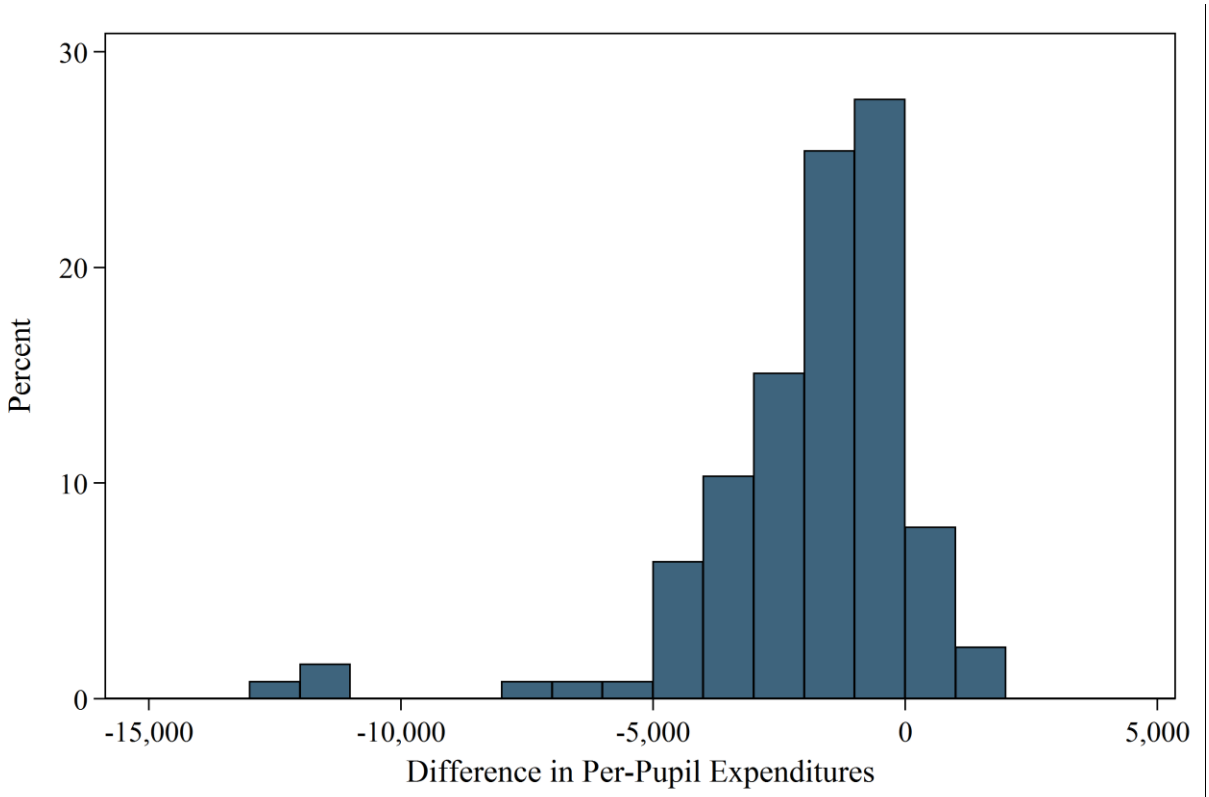
Exhibit D2 shows the difference in reported charter school spending per pupil between the district and charter data. For 90% of the charter schools, the total spending reported in the charters' fiscal data is less than that reported in the districts' data. Less than one third of charter schools' own spending totals in the fiscal data are within $1,000 of those derived from the district data.

Exhibit D1. Charter School Expense per Pupil From District End-of-Year Fiscal Data and Charter End-of-Year Expense Report (2012–13 to 2014–15)



Note: The sample for this exhibit included 126 school/year observations (an average of 42 schools in each of the three study years).
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, District End-of-Year Fiscal Data and Charter School End-of-Year Expense Reports

Exhibit D2. Difference in Charter School Expense per Pupil From District End-of-Year Fiscal Data and Charter End-of-Year Expense Report (2012–13 to 2014–15)



Note: The sample for this exhibit included 126 school/year observations (an average of 42 schools in each of the three study years).
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, District End-of-Year Fiscal Data and Charter School End-of-Year Expense Reports

While not shown in this section, charter fiscal data on revenues are similarly inconsistent. Because of the inconsistency with which charter schools report their fiscal data, we must be careful in how we use and present results from these data. In particular, throughout the study when we present findings from charter schools data, we omit those schools with reported revenue and spending that are potentially not representative of was actually spent on schools.[46] In addition, we generally avoid presenting average figures using the charter data, as just one inaccurate data point can skew the average. Instead, we show the reported expenditures or revenues for each school.

[46] One school – Eudaimonia Maryland Academy of Technology and Health Sciences (MATHS) – was omitted from the analysis given that their Charter School End-of-Year Expense Reports were potentially not representative of their actual expenditure and revenue levels. We were unable to schedule follow-up conversations with MATHS to further understand the data they provided due to the closure of the school.

Appendix E. Actual Spending on Alternative, Vocational, and Special Education Schools

Exhibit E1. Average Expense per Pupil for Alternative Schools by District and Year (2012–13 to 2014–15)

District Name	2012–13			2013–14			2014–15		
	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil
Allegany	1	94	$19,827	—	—	—	—	—	—
Anne Arundel	3	418	$14,486	2	149	$34,618	2	148	$34,917
Baltimore City	3	917	$15,416	3	913	$13,942	3	912	$17,857
Baltimore County	5	556	$37,191	4	594	$30,569	4	541	$28,705
Calvert	—	—	—	1	17	$36,904	1	12	$55,702
Carroll	3	111	$32,114	3	126	$29,881	3	125	$27,561
Charles	1	170	$30,234	1	124	$42,867	1	95	$54,013
Frederick	—	—	—	—	—	—	1	25	$149,491
Harford	1	184	$17,393	1	168	$21,277	1	152	$20,922
Howard	1	155	$45,182	1	155	$44,322	1	161	$47,658
Prince George's	4	517	$15,596	4	510	$17,575	4	471	$19,844
Washington	1	1	$100,717	—	—	—	—	—	—
Wicomico	1	46	$2,446	1	54	$2,324	—	—	—

— Not applicable
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit E2. Average Expense per Pupil for Vocational Schools by District and Year (2012–13 to 2014–15)

District Name	2012–13			2013–14			2014–15		
	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil
Allegany	1	290	$17,579	1	296	$17,525	1	290	$16,565
Baltimore City	6	6,015	$13,415	6	6,088	$14,321	6	6,129	$14,431
Baltimore County	3	2,908	$11,380	3	2,876	$11,640	3	2,869	$11,972
Harford	1	1,020	$10,816	1	1,002	$11,251	1	1,018	$10,971
Prince George's	2	255	$20,674	2	242	$24,076	2	242	$23,849
Washington	1	483	$12,084	1	516	$11,828	1	534	$11,866

Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Exhibit E3. Average Expense per Pupil for Special Education Schools by District and Year (2012–13 to 2014–15)

District Name	2012–13			2013–14			2014–15		
	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil	School Count	Total Enrollment	Average Actual Expense per Pupil
Allegany	1	24	$20,927	—	—	—	—	—	—
Anne Arundel	4	663	$30,004	4	694	$32,418	4	705	$31,822
Baltimore City	5	430	$52,866	4	353	$64,430	4	354	$74,707
Baltimore County	4	423	$55,299	4	422	$56,053	4	417	$56,862
Calvert	1	61	$50,803	1	55	$56,730	1	59	$57,402
Carroll	1	51	$76,585	1	58	$67,797	1	53	$72,236
Frederick	1	106	$52,090	1	106	$54,069	1	92	$56,636
Harford	1	131	$75,569	1	114	$96,511	1	124	$83,835
Howard	1	108	$113,945	1	98	$130,803	1	131	$65,236
Montgomery	5	465	$49,260	5	471	$49,803	5	446	$53,073
Prince George's	7	1,395	$29,275	7	1,357	$31,403	7	1,465	$30,457
Washington	2	84	$50,940	2	79	$56,227	2	82	$51,217
Worcester	1	53	$40,679	1	53	$42,870	1	54	$48,013

— Not applicable
Source: MSDE Statewide Annual Financial Report, MSDE Statewide Staffing File, and District End-of-Year Fiscal Data

Appendix F. Differences Between September and June Enrollments

Exhibit F1. Average Difference Between September and June Enrollments (2012–13 to 2014–15)

District Name	Traditional Schools		Charter Schools	
	Average Level Difference	Average Relative Difference	Average Level Difference	Average Relative Difference
Allegany	4.9	0.7%	—	—
Anne Arundel	8.3	0.4%	20.8	3.6%
Baltimore City	6.9	1.3%	12.6	2.7%
Baltimore County	1.9	-0.1%	16.5	3.0%
Calvert	-0.6	-0.4%	—	—
Caroline	3.4	0.4%	—	—
Carroll	4.6	0.3%	—	—
Cecil	3.4	0.2%	—	—
Charles	3.1	0.1%	—	—
Dorchester	5.8	0.9%	—	—
Frederick	1.1	0.0%	5.5	2.0%
Garrett	4.6	0.8%	—	—
Harford	6.8	0.5%	—	—
Howard	-4.3	-0.7%	—	—
Kent	3.0	1.0%	—	—
Montgomery	-4.3	-0.7%	6.9	8.5%
Prince George's	1.0	-0.2%	16.9	4.4%
Queen Anne's	0.9	-0.1%	—	—
St. Mary's	3.4	0.0%	5.9	1.7%
Somerset	8.1	1.7%	—	—
Talbot	-5.6	-0.6%	—	—
Washington	1.6	0.1%	—	—
Wicomico	2.4	0.2%	—	—
Worcester	3.5	0.4%	—	—
State Total	**0.0**	**-0.1%**	**11.3**	**3.4%**

— Not applicable
Note: Level differences defined as $Enrollment_{September} – Enrollment_{June}$. Relative differences defined as $(Enrollment_{September} – Enrollment_{June}) / Enrollment_{June}$. Positive values denote that September enrollments were larger than June enrollments while negative values denote the opposite. The sample for this exhibit includes all traditional and charter public schools by district. For school and enrollment counts of traditional and charter public schools by district, see Exhibit A7.
Source: MSDE Statewide Student Demographic Data

ABOUT AMERICAN INSTITUTES FOR RESEARCH

Established in 1946, with headquarters in Washington, D.C., American Institutes for Research (AIR) is an independent, nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance both domestically and internationally. As one of the largest behavioral and social science research organizations in the world, AIR is committed to empowering communities and institutions with innovative solutions to the most critical challenges in education, health, workforce, and international development.

AIR®

AMERICAN INSTITUTES FOR RESEARCH®

1000 Thomas Jefferson Street NW
Washington, DC 20007-3835
202.403.5000

www.air.org

Making Research Relevant

LOCATIONS

Domestic

Washington, D.C.
Atlanta, GA
Austin, TX
Baltimore, MD
Cayce, SC
Chapel Hill, NC
Chicago, IL
Columbus, OH
Frederick, MD
Honolulu, HI
Indianapolis, IN
Metairie, LA
Naperville, IL
New York, NY
Rockville, MD
Sacramento, CA
San Mateo, CA
Waltham, MA

International

Egypt
Honduras
Ivory Coast
Kyrgyzstan
Liberia
Tajikistan
Zambia

7898_10/16