



Beyond the Special Education Gap: Differences in Special Education Expenditures Between Charter Schools and Traditional Public Schools

David E. DeMatthews

University of Texas at Austin

Jinseok Shin

University of Texas at Austin

Pedro Reyes

University of Texas at Austin

Researchers and policymakers have long noted differences in disability enrollment and placement between charter schools and traditional public schools (TPSs), yet little is known about whether these differences correspond to special education expenditures. Using Texas administrative and financial data from 2019-20 to 2024-25, we compare special education expenditures, disability composition, and educational placement across charter local education agencies (LEAs) and TPS districts. Charter LEAs spent less per student with a disability, enrolled lower proportions of students with disabilities, and served fewer students in restrictive placements. These differences persisted after adjusting for LEA characteristics, disability composition, and placement. In fully adjusted models, charter LEAs spent \$2,329 less per student with a disability than TPS districts, expanding evidence on sectoral differences.

VERSION: October 2026

Suggested citation: DeMatthews, David E., Jinseok Shin, and Pedro Reyes. (2026). Beyond the Special Education Gap: Differences in Special Education Expenditures Between Charter Schools and Traditional Public Schools. (EdWorkingPaper: 26-1606). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/ksgt-bn48>

Beyond the Special Education Gap: Differences in Special Education Expenditures Between Charter Schools and Traditional Public Schools

David E. DeMatthews
Jinseok Shin
Pedro Reyes

University of Texas at Austin

October 2, 2026

Abstract

Researchers and policymakers have long noted differences in disability enrollment and placement between charter schools and traditional public schools (TPSs), yet little is known about whether these differences correspond to special education expenditures. Using Texas administrative and financial data from 2019-20 to 2024-25, we compare special education expenditures, disability composition, and educational placement across charter local education agencies (LEAs) and TPS districts. Charter LEAs spent less per student with a disability, enrolled lower proportions of students with disabilities, and served fewer students in restrictive placements. These differences persisted after adjusting for LEA characteristics, disability composition, and placement. In fully adjusted models, charter LEAs spent \$2,329 less per student with a disability than TPS districts, expanding evidence on sectoral differences.

Keywords: Economics of Education; Finance; Special Education; Policy

Corresponding Author: ddemattthews@austin.utexas.edu

Beyond the Special Education Gap: Differences in Special Education Expenditures Between Charter Schools and Traditional Public Schools

Introduction

The Individuals with Disabilities Education Act (IDEA, 2004) guarantees that all traditional public school (TPS) and charter school local education agencies (LEAs) proactively identify, evaluate, and provide a free appropriate public education (FAPE) in the least restrictive environment (LRE) to all eligible students with disabilities. FAPE is delivered through an Individualized Education Program (IEP), developed by a group of educators and the child's family, that outlines the specific services, supports, goals, and placement decisions necessary for the student to make meaningful progress in light of their unique circumstances (Endrew F. v. Douglas County School, 2017). Although charter school LEAs have more flexibility in governance, staffing, budgeting, and curriculum than TPS LEAs, they remain fully subject to IDEA and other federal laws (e.g., Section 504 of the Rehabilitation Act, the Americans with Disabilities Act) (U.S. Department of Education [ED], 2014, 2016).¹ As the ED (2016) noted, “children with disabilities who attend charter schools and their parents retain all rights and protections under Part B of IDEA just as they would at other public schools” (p. 2).

Researchers and government agencies have at times raised concerns about charter school LEA policies and practices related to enrolling and serving students with disabilities (Drame, 2011; GAO, 2012; Jessen, 2013; Waitoller, 2020; Waitoller et al., 2019). For example, the Government Accountability Office (2012) raised serious concern following site visits, noting that “anecdotal accounts also suggest that some charter schools may be discouraging students with

¹ In Texas, both traditional public school districts and open-enrollment charter school systems function as local education agencies (LEAs). Throughout the paper, we refer to these organizational units as TPS districts and charter LEAs, respectively.

disabilities from enrolling and denying admission to students with more severe disabilities because services are too costly” (p. 12). A small but growing body of research consistently finds that charters enroll fewer students with disabilities than their neighboring TPSs as well as a smaller share of students with more intensive needs (e.g., autism, intellectual disability) (Blackwell, 2013; Garcy, 2011; Gilmour et al., 2023; Jessen, 2013; Knight et al., 2022; Ni, 2012; Senese & Winters, 2025; Waitoller et al., 2017). Related literature suggests that enrollment differences can stem from exclusionary practices (e.g., Waitoller et al., 2019) or from a combination of family application patterns, student mobility, and special education identification and declassification practices (Gilmour et al., 2023; Winters, 2015). While this research is important, Senese and Winters (2025) called for future research to look beyond simplistic comparisons of TPS versus charter school enrollment patterns to broader organizational conditions and outcomes.

In line with Senese and Winters’ (2025) recommendation, we found a need to better understand special education expenditures across sectors given that IDEA does not simply guarantee access to TPS and charter school LEAs, but guarantees FAPE. Meeting these individualized obligations can require investments in special education teachers, related service providers, assistive technologies, and a continuum of educational placements. In recognition of these varying resource needs, policymakers have designed special education finance systems around observable indicators of expected cost, including disability classification, disability type, and educational placement (Baker et al., 2018; Kolbe, 2019, 2021). However, researchers have not thoroughly investigated whether charter and TPS LEAs differ in special education expenditures or the extent to which student demographics explain those differences. This gap matters not only because strong evidence shows that spending can improve student outcomes

(Jackson & Mackevicius, 2024) but also given that some studies suggest that charters may not implement well-resourced special education programs for several sector-related reasons (Drame, 2011; Jessen, 2013).

This study examines differences in special education expenditures across Texas TPS and charter LEAs. Specifically, we compare special education enrollment, disability composition, educational placement, and special education spending patterns to assess how much observed charter-TPS differences explain spending differences. We also examine whether the adjusted spending differences between sectors change over the study period. We find that special education expenditures are lower among charter than TPS LEAs. Importantly, the observed differences in student composition and educational placements do not fully account for those differences. These findings broaden the literature by detailing how resources are allocated across sectors with important implications for policy and future research. In what follows, we review relevant research, describe our data and methods, present our findings, and conclude with a discussion of policy and future research implications.

Literature Review

Charter Schools and Special Education Enrollment

Researchers have long examined charter school access, enrollment patterns, identification processes, service provisions, and student outcomes related to IDEA implementation (Gilmour et al., 2023; Setren, 2021; Winters et al., 2017). Early research and non-empirical work in the 2000s raised concerns that charter schools might struggle to provide a continuum of services to students with disabilities given their smaller sizes, limited economies of scale, and their ability to

engage in cream-skimming behaviors that can go unnoticed or unregulated in choice environments (Drame, 2011; Estes, 2004; Jessen, 2013; Lacireno-Paquet et al., 2002; West et al., 2006). Research using enrollment data also began to document lower rates of special education enrollment in charter schools than in TPSs (Cowen & Winters, 2013; Waitoller et al., 2017). In some instances, researchers have relied on administrative data, lottery-based designs, and longitudinal data analysis to examine more nuanced questions, such as how parental preferences, disability identification rates, student mobility, and service delivery contribute to the well-documented special education gap previously identified in early research (Setren, 2021; Winters et al., 2017; Gilmour et al., 2023).

Collectively, this scholarship suggests that charter and TPS LEAs differ in consequential ways. First, charters tend to enroll lower proportions of students with disabilities than neighboring TPSs (Estes, 2004; Senese & Winters, 2025; Waitoller et al., 2017). Second, charter schools also tend to enroll disproportionately more students with certain disabilities (e.g., specific learning disabilities, speech and language impairments) while serving smaller proportions of other disability categories (e.g., autism, intellectual disabilities, multiple disabilities) that often require far more intensive and costly special education and related services (Blackwell, 2013; Garcy, 2011; Gilmour et al., 2023; Waitoller et al., 2017). Third, special education enrollment gaps vary across grade levels and district locales (e.g., urban, suburban), which may obscure important differences between the two sectors (Heilig et al., 2016; Waitoller et al., 2017). Fourth, special education enrollment gaps tend to emerge in kindergarten and widen as students make progress through grade levels because of student mobility and varying special education identification and declassification processes (Gilmour et al., 2023; Winters, 2015).

Research focused on why special education enrollment gaps persist has led to a variety of conclusions, partly because researchers have employed different theoretical frameworks, units of analysis, and research designs. Some researchers, for example, have documented how charters engage in discriminatory practices, such as counseling families out, signaling limited-service capacity during admissions or special education identification processes, and using exclusionary discipline and expulsions (Estes, 2004; Decker et al., 2015; Stern et al., 2015; Waitoller et al., 2017). Related scholarship has examined charter schools' staffing models, resource levels, and accountability environments, raising concerns about whether charter schools are willing or able to adequately fund programs for students with disabilities who have intensive and costly needs (Garcy, 2011; Garda, 2011; Malhotra, 2025). Yet other researchers report little evidence that charter schools push students out after enrollment or engage in discriminatory practices. Instead, several studies conclude that special enrollment differences emerge from a combination of factors including parent preferences and special education identification, disability classification (e.g., disability type), and deidentification practices (Winters, 2015; Gilmour et al., 2023; Imberman et al., 2026; Setren, 2021; Winters et al., 2017; Zimmer & Guarino, 2013).

Special Education Finance

While researchers have generated important insights into special education enrollment differences and potential mechanisms contributing to them, less attention has been paid to the organizational and financial conditions in which those mechanisms operate. Importantly, some research and analysis suggest that charter schools and TPSs differ not only in the types of students with disabilities they serve but also in the services they provide and the organizational structures in which they operate (Garcy, 2011; Malhotra, 2025). Yet researchers have stopped

short of investigating whether those differences translate into consistent variation across sectors in special education expenditures. Consequently, the literature offers several plausible explanations for why charters and TPSs might show different expenditure patterns but provides limited insight into when those differences are associated with corresponding differences in how resources are allocated to support students with disabilities. Examining special education finance therefore logically extends the special education enrollment gap literature.

School finance systems are designed to distribute resources so schools can promote educational opportunity while accounting for differences in local conditions and student needs. In any school finance system, the educational supports and services required to achieve a desired set of outcomes (e.g., graduation, grade-level performance, strong attendance) will vary because no two districts or schools are alike. Finance systems use formula adjustments and student weights to approximate differences in resource needs across districts (Baker, 2021; Baker & Duncombe, 2004; Rice et al., 2020). Special education finance is part of a broader school finance system, but it is particularly complicated because LEAs remain responsible for providing the services necessary to ensure FAPE even when available funding does not fully cover the associated costs.

The resources needed to provide meaningful educational benefit to each student with disabilities will vary because no two students are alike. To be responsive to local context and variation in the prevalence and composition of students with disabilities and specific disability types, federal and state special education finance systems rely on observable administrative indicators that serve as proxies for special education need and cost. States differ in their approaches, but these indicators often include disability classification and type, student enrollment counts, staffing formulas, educational placements, and/or prior expenditures (Baker et

al., 2018; Kolbe, 2021; Verstegen, 2011). An important underlying assumption is that these indicators capture meaningful differences in service intensity and therefore provide a reasonable basis for distributing funds. Yet the individualized nature of disability and the requirement of FAPE for each child make this assumption difficult to verify (Baker et al., 2018; Kolbe, 2021).

Researchers have long questioned whether these measures accurately and consistently capture underlying service requirements. Some researchers have highlighted concerns about substantial variation in identification rates across states, districts, and schools, as well as how disability classifications are understood and applied in practice (Cullen, 2003; Kwak, 2010; Morgan et al., 2025). This variation may suggest the important role of local identification practices and administrative decision-making in shaping how students with disabilities are served. Relatedly, researchers have found that placement decisions are shaped not only by decisions about an individual student's needs but also by organizational conditions tied to predetermined service-delivery models, staffing capacity, and programmatic designs (Bray & Russell, 2016; Dhuey & Lipscomb, 2011). District wealth, intergovernmental funding structures, and special education service delivery models have also been found to influence special education expenditures (Conlin & Jalilevand, 2018; Knight & Toenjes, 2020). Thus, disability classifications and educational placements can function not only as indicators of individual student needs but also as organizational decisions that are unobserved in special education finance systems.

Recent evidence from Texas suggests that many commonly used special education finance indicators explain only a modest share of overall spending variation. Specifically, Authors (2026) found that TPS LEAs serving larger proportions of students with autism and those educating students in more restrictive settings generally spent more per student with a

disability. However, disability composition, placement, and other observable characteristics explained only a small share of the overall expenditure variation across districts. These findings provide some support for placement- and disability-based finance models but also suggest that variation in special education expenditures may be affected by other unobserved factors, such as organizational, fiscal, and contextual indicators not captured in administrative data. Importantly, in our review of the aforementioned literature, we did not identify any empirical studies published in peer-reviewed journals that examine special education finance in charter schools.

Given that disability classifications and placements are imperfect proxies that account for only a modest share of observed special education expenditures, comparing special education expenditures across Texas charter schools and TPSs offers an important opportunity to examine whether differences between educational sectors explain expenditure patterns that commonly used funding indicators leave largely unexplained. This comparison can offer insight into whether organizational arrangements associated with charter and TPSs are linked to differences in special education spending beyond those attributed to student disability classifications and placements.

Methods

This study examines differences in special education spending between Texas traditional public school (TPS) districts and charter local education agencies (LEAs), with particular attention to whether differences in student composition and educational placement are associated with observed sector spending gaps. Specifically, we address the following research questions:

1. How do special education spending, enrollment, disability composition, and educational placement differ between TPS districts and charter LEAs?

2. What is the adjusted difference in special education spending per student between charter and TPS LEAs after accounting for LEA characteristics, disability composition, and educational placement?
3. Did the adjusted difference in special education spending between charter and TPS LEAs change over the study period?

To answer these questions, we construct a district-year panel dataset using student-level administrative records from the Texas Education Research Center (ERC) and publicly available district financial information from the Texas Education Agency (TEA). The ERC data are used to identify students receiving special education services and to construct district-level measures of special education enrollment, disability composition, educational placement, and student characteristics. We merge these measures with annual district special education expenditure data reported by TEA. As in our companion analysis of traditional public-school districts, the expenditure measure includes special education expenditures from state, local, and federal funding sources.

The study covers the 2019–20 through 2024–25 school years. We begin in 2019–20 to maintain a consistent measure of special education expenditures following changes in Texas reporting of dyslexia-related funding and expenditures. The final analytic sample consists of 7,210 district-year observations from TPS districts and charter LEAs. The primary unit of analysis is the district-year, and each district-year observation receives equal weight in the main regression analyses. Thus, the regression estimates reflect average differences across LEAs rather than differences weighted by LEA size.

The analysis proceeds in three stages. First, we compare spending, enrollment, student composition, and educational placement between TPS districts and charter LEAs using

descriptive statistics and graphical analyses. Second, we estimate a series of multivariate regression models to assess the association between charter status and special education spending per student and to evaluate how the estimated sector difference changes after accounting for LEA characteristics, disability composition, and educational placement. Third, we examine whether the adjusted charter–TPS spending difference varies over time using pooled models that allow the relationships between observed LEA characteristics and spending to vary across years.

Sample

Table 1 presents descriptive statistics for the analytic sample, separately for TPS districts and charter LEAs. Statistics are unweighted means and standard deviations across district-year observations, consistent with the district-year unit of analysis used in the primary regression models. TPS districts spent an average of \$11,317 per student with a disability, compared with \$10,065 per student with a disability in charter LEAs. TPS districts also served substantially larger special education populations, averaging 610 students with disabilities, compared with 194 students in charter LEAs. The average special education enrollment rate was slightly higher in TPS districts (14%) than in charter LEAs (12%).

The two sectors also differed in student demographics and geographic composition. Charter LEAs enrolled larger shares of economically disadvantaged students (66% compared with 59%) and English learners (22% compared with 11%). TPS districts were substantially more likely to be in rural areas, whereas charter LEAs were much more heavily concentrated in urban areas. Approximately 65% of TPS district-year observations were rural, compared with 7% of charter observations, while 70% of charter observations were urban, compared with 7% of TPS observations.

Average disability composition varied less across sectors. Students with learning disabilities were the largest disability category in both TPS districts and charter LEAs, accounting for approximately 40% and 39% of students with disabilities, respectively. Shares for speech impairment, other health impairment, and autism were also relatively similar on average. Larger differences were observed for intellectual disability, which represented 10% of students with disabilities in TPS districts compared with 6% in charter LEAs, and for emotional disturbance, which represented 5% in TPS districts and 8% in charter LEAs.

Educational placement patterns showed more pronounced sector differences. Charter LEAs served somewhat larger shares of students with disabilities educated 100% of the instructional day in the general education classroom (Setting 40) and in resource room/services for less than 21% of the instructional day (Setting 41). By contrast, TPS districts served larger shares in Setting 42 and the more restrictive Setting 44. Setting 44 accounted for approximately 8% of students with disabilities in TPS districts but only 3% in charter LEAs. Because Table 1 characterizes the average district-year observation, these statistics are unweighted. By contrast, Figures 3 and 4 weight sector-year disability and placement shares by the number of students with disabilities in each LEA. These figures therefore describe the composition of students with disabilities across each sector rather than the composition of the average LEA.

<Insert Table 1 About Here>

Analytical Strategy

To examine differences in special education spending between TPS districts and charter LEAs, we estimate ordinary least squares models at the district-year level. The primary specification is:

$$Y_{dt} = \alpha + \beta Charter_d + X'_{dt}\gamma + D'_{dt}\delta + P'_{dt}\theta + \lambda_t + \varepsilon_{dt}, \quad (1)$$

where Y_{dt} is average special education spending per student receiving special education services in district d and year t ; $Charter_d$ is an indicator equal to one for charter LEAs and zero for TPS districts; X_{dt} is a vector of LEA characteristics; D_{dt} represents disability composition; P_{dt} represents educational placement composition; λ_t represents year fixed effects; and ε_{dt} is the error term. The primary coefficient of interest, β , represents the adjusted difference in special education spending per student between charter and TPS LEAs.

The vector of LEA characteristics includes the natural logarithm of special education enrollment, the proportion of district students receiving special education services, the economically disadvantaged student share, the English learner share, and district urbanicity. Urban districts serve as the omitted urbanicity category. Disability composition is measured using the shares of students receiving special education services whose primary disability classifications are speech impairment, other health impairment, intellectual disability, emotional disturbance, or autism. Learning disability, the most prevalent primary disability category, serves as the omitted disability category. We also include the proportion of students with a recorded secondary disability.

Educational placement composition includes the proportions of students receiving special education services in Settings 00, 41, 42, 43, 44, and other settings. Setting 40, which represents spending 100% of the instructional day in the general education classroom, serves as the omitted educational placement category. Because the disability and placement shares sum to approximately one within their respective classifications, coefficients on individual categories are interpreted relative to their omitted categories. All share and rate variables used in the

regression models are measured on a 0-to-1 scale. For example, a coefficient of 10,000 on a composition variable corresponds to an estimated \$1,000 difference associated with a 10-percentage-point shift toward that category relative to the omitted category.

Table 2 presents five specifications designed to distinguish the contributions of different sets of observed characteristics. Model 1 includes charter status and year fixed effects. Model 2 adds LEA enrollment, special education enrollment rate, student demographics, and urbanicity. Models 3 and 4 are parallel specifications that build on Model 2: Model 3 adds disability composition, while Model 4 adds educational placement composition. Model 5 includes both disability and educational placement composition. This structure allows us to assess separately whether differences in disability composition and educational placement are associated with the observed charter–TPS spending gap, rather than treating the models as a strictly sequential progression. Given that educational placement may itself reflect organizational and service-delivery decisions, models that adjust for placement should be interpreted as describing conditional sector differences rather than as holding underlying student need constant. Since districts are observed repeatedly across school years, we cluster standard errors at the district level to account for within-district correlation over time. We include year fixed effects in all specifications to control for statewide changes in expenditures and other time-specific factors common across LEAs.

Changes in the Charter–TPS Spending Difference over Time

We also examine whether the adjusted charter–TPS spending difference varies over the study period. For this analysis, we estimate a pooled model in which charter status is interacted

with year, and the associations between all observed covariates and spending are allowed to vary by year:

$$Y_{dt} = \alpha + \lambda_t + \sum_t \beta_t (Charter_d \times Year_t) + X'_{dt}\gamma_t + D'_{dt}\delta_t + P'_{dt}\theta_t + \varepsilon_{dt}. \quad (2)$$

The year-specific coefficients, β_t , capture the adjusted charter–TPS spending difference for each school year. Allowing the coefficients on the covariates to vary by year avoids imposing the restriction that, for example, the relationships between special education enrollment rate or educational placement and spending remained constant throughout the six-year period. The pooled structure also allows standard errors to remain clustered at the district level.

As a complementary analysis, we estimate a more parsimonious specification that replaces the unrestricted charter-by-year interactions with a charter-specific linear time trend. The trend variable equals zero in 2019–20 and increases by one each subsequent year. The coefficient on the interaction between charter status and this linear trend indicates whether the charter–TPS spending difference changed systematically over the study period. These analyses are descriptive and intended to characterize changes in the adjusted sector difference rather than identify causal effects.

Results

Descriptive Results

Figure 1 compares the distribution of per-student special education spending between TPS districts and charter LEAs in the 2024–25 school year. TPS districts' spending distribution is centered at a higher level than that of charter LEAs. TPS districts also show greater dispersion and a substantially longer upper tail, with several districts reporting per-student spending above

\$30,000 and a small number with expenditures approaching or exceeding \$50,000. Charter LEAs display a narrower distribution, though several high-spending charter observations remain. Overall, the figure provides initial descriptive evidence of lower special education spending among charter LEAs while illustrating considerable within-sector variation.

<Insert Figure 1 About Here>

Figure 2 further illustrates the relationship between special education enrollment and per-student spending in 2024–25. Charter LEAs are concentrated among LEAs serving relatively small numbers of students receiving special education services, whereas TPS districts span a substantially wider range of enrollments. In both sectors, per-student spending varies most among smaller LEAs. As special education enrollment increases, expenditures become more concentrated, and extreme high-spending observations become less common. The logarithmic enrollment scale makes this pattern particularly visible while preserving the substantial size differences between the two sectors. These patterns suggest that LEA size is an important contextual difference between the sectors and motivate its inclusion in the regression models.

<Insert Figure 2 About Here>

Figure 3 shows trends in the disability composition of students with disabilities in TPS districts and charter LEAs from 2019–20 through 2024–25. At the beginning of the study period, several sector differences were evident. Charter LEAs served larger shares of students with learning disabilities and speech impairments, whereas TPS districts served larger shares of students with autism and intellectual disabilities. These differences narrowed substantially over time. By 2024–25, the weighted disability composition of students receiving special education services was remarkably similar across TPS and charter sectors for most of the major disability categories.

The convergence coincided with broader changes in disability composition across both sectors. The share of students identified with learning disabilities increased, while the share with speech impairments declined. Autism also increased in both sectors. Other health impairment and emotional disturbance showed smaller sector differences throughout much of the study period. Overall, Figure 3 indicates that differences in disability composition between TPS and charter LEAs became substantially smaller over the six-year period.

Unlike the convergence in disability composition shown in Figure 3, Figure 4 shows more persistent differences in educational placement between TPS districts and charter LEAs. Charter LEAs consistently served a larger share of students in Setting 41, which represents resource room or related services for less than 21% of the instructional day. This gap widened over the study period as the Setting 41 proportion grew in both sectors, but it increased more rapidly among charter LEAs. TPS districts, by contrast, consistently served larger shares of students in Setting 44, the more restrictive self-contained placement for more than 60% of the instructional day.

Some placement differences narrowed over time. The gap in Setting 44 narrowed as the TPS share declined modestly and the charter share increased. TPS districts also served larger shares of students in Setting 42 throughout the period, whereas charter LEAs generally had higher shares in Setting 00. Setting 43 remained uncommon and broadly similar across sectors. Overall, the figure indicates that meaningful differences in educational placement persisted even as some placement patterns converged over time. These descriptive differences motivate the regression analysis examining whether placement composition is associated with the observed sector spending gap.

<Insert Figure 3 About Here>

<Insert Figure 4 About Here>

Regression Analysis

Table 2 presents the estimates of the association between charter status and average special education spending per student. Model 1 includes only charter status and year fixed effects. Charter LEAs spend about \$1,253 less per student receiving special education services than TPS districts, and the difference is statistically significant at the 1% level. The estimated sector difference increases substantially after accounting for basic LEA characteristics.

In Model 2, which controls for special education enrollment, special education enrollment rate, student demographics, and urbanicity, the estimated charter coefficient increases in magnitude to approximately $-\$2,544$. This pattern suggests that observable differences in LEA characteristics partially mask rather than explain the baseline charter–TPS spending difference. Among these characteristics, special education enrollment rate is negatively associated with per-student spending, while rural LEAs spend significantly less than otherwise similar urban LEAs. Models 3 and 4 separately examine disability and educational placement composition. Adding disability composition in Model 3 further increases the magnitude of the charter coefficient to approximately $-\$2,911$. Thus, differences in the types of disabilities served do not account for the lower spending observed among charter LEAs. Several disability categories are positively associated with spending relative to learning disability. Larger shares of students with intellectual disabilities, emotional disturbance, and autism are associated with higher per-student expenditures in Model 3.

Educational placement has a different relationship with the sector gap. Adding placement composition to the Model 2 controls reduces the charter coefficient from approximately $-\$2,544$ to $-\$2,039$ in Model 4, an attenuation of about 20% in magnitude. The largest placement

coefficient is observed for Setting 44. A 10-percentage-point higher share of students in Setting 44 rather than in the omitted Setting 40 category is associated with approximately \$2,075 higher spending per special education student. Other settings are also positively associated with spending, whereas the estimated coefficients for Settings 00, 41, 42, and 43 are not statistically distinguishable from zero.

Model 5 simultaneously accounts for LEA characteristics, disability composition, and educational placement. The charter coefficient remains negative and statistically significant at approximately $-\$2,329$, indicating that a substantial sector spending difference persists even after accounting for the observed characteristics. In the full model, a 10-percentage-point higher share of students with autism relative to those with learning disabilities is associated with approximately \$912 higher spending per student, while the corresponding estimate for emotional disturbance is approximately \$822. Educational placement remains strongly associated with expenditures: a 10-percentage-point higher share in Setting 44 relative to Setting 40 is associated with approximately \$1,621 higher spending per student, and a 10-percentage-point shift toward other settings is associated with approximately \$692 higher spending.

The models also indicate that the special education enrollment rate is consistently negatively associated with per-student spending after additional student composition controls are introduced. The R-squared increases from .01 in Model 1 to .07 in Models 4 and 5. Taken together, the results show that observed LEA characteristics, disability composition, and educational placement are associated with spending and the estimated sector difference, but a substantial adjusted charter–TPS spending gap remains.

<Insert Table 2 About Here>

Changes in the Charter–TPS Spending Difference over Time

Figure 5 assesses whether the adjusted charter–TPS spending difference changed over the study period. The estimates are based on the fully specified pooled model and allow associations between all observed covariates and spending to vary across years. Charter LEAs have significantly lower adjusted special education spending in every year of the study period. The estimated difference is largest in 2019–20, when charter LEAs spend about \$3,224 less per student than comparable TPS districts. The magnitude of the gap generally declines thereafter, reaching about \$1,987 in 2022–23 and \$1,676 in 2024–25, although the pattern is not strictly monotonic because the gap increases modestly in 2023–24.

The year-specific point estimates therefore suggest that the adjusted spending gap became smaller over the study period. However, statistical evidence of systematic change is less conclusive. A joint test of the unrestricted charter-by-year interactions does not reject equality of the charter effect across years ($p = .483$). A complementary model imposing a linear trend on the charter differential estimates that the charter–TPS gap narrows by approximately \$275 per student per year. The estimated trend is marginally significant ($p = .097$). Taken together, these estimates provide suggestive, rather than conclusive, evidence of a gradual narrowing in the adjusted charter–TPS special education spending gap.

<Insert Figure 5 About Here>

To better understand this pattern, we examined whether changes in special education enrollment, disability composition, and educational placement were associated with the apparent narrowing of the charter–TPS spending gap. Accounting for the share of students with disabilities modestly reduced the estimated annual narrowing, while adding disability composition did not reduce it. Educational placement was more closely associated with the

change over time. When we added placement composition to the basic model, the estimated annual narrowing decreased from about \$393 to \$277 per student; allowing the relationship between placement and spending to vary across years further reduced the estimate. Taken together, these results suggest that changes in educational placement may be more closely related to the narrowing of the charter–TPS spending gap than changes in disability composition or special education enrollment rates. However, since these comparisons are descriptive, they should not be interpreted as identifying the mechanism responsible for the change over time.²

Discussion and Implications

Consistent with prior research, the findings of our study show that charter LEAs in Texas served lower proportions of students with disabilities, students with different disability types, and smaller proportions of students with disabilities in more restrictive educational placements relative to TPS LEAs (Blackwell, 2013; Garcy, 2011; Waitoller et al., 2017). We also found that charter LEAs spent substantially less per student with disabilities than TPS LEAs, with those differences persisting after accounting for special education enrollment, disability composition, educational placement, and other observable LEA characteristics. While prior research has largely focused on access, enrollment, and identification (Gilmour et al., 2023; Senese & Winters, 2025; Winters, 2015), our findings add to the literature by documenting how resources are allocated across sectors. However, our results do not identify the mechanisms producing these spending differences, nor do they establish whether lower spending is associated with the

² AI Use Disclosure: We used Microsoft Co-Pilot and Grammarly to support copy editing and to improve writing clarity. All conceptualizations, methodological decisions, analyses, and interpretations were conducted by the authors. We reviewed, revised, and approved all manuscript content and assume full responsibility for the work.

actual provision of FAPE or better, worse, or equal levels of educational opportunity for students with disabilities.

In considering our findings, we believe it is important to do so through a framework that considers evidence from both qualitative and quantitative research, as well as government investigations and policy documents, because inquiry into charter schools and special education has produced competing conclusions that rely on different sources of evidence, units of analysis, and research questions. Whereas one body of research asks whether exclusionary practices are sufficiently widespread to produce sector-level patterns detected in longitudinal datasets (e.g., Gilmour et al., 2023; Winters, 2015), another body relies on qualitative and more descriptive methods to examine whether such practices occur, how they operate, and which families might experience them (Blackwell, 2013; GAO, 2012; Waitoller, 2017). These bodies of evidence need not be viewed as competing explanations because they often address different questions and mechanisms.

We do not interpret our findings as supporting one explanation over another; rather, we view our results as new evidence about how special education resources may be allocated across sectors. Our analysis cannot determine which mechanisms produce the observed spending differences or how prevalent any particular mechanisms may be. Yet the persistence of lower special education expenditures among charter LEAs raises important questions about organizational capacity and service provision. Lower spending itself does not provide evidence of inadequate services or a denial of FAPE, but these patterns warrant closer examination because IDEA requires schools to respond to students' individualized needs, which vary considerably in intensity and cost. The observed difference could reflect greater efficiency, alternative service-delivery models, differences in service intensity, unmeasured differences in

student needs, or other organizational and fiscal factors not captured in our data. To be clear, special education and related services for students requiring more intensive supports and services will require sustained financial investments in professional development, specialized personnel, related services, small class sizes or pull-out models, and specific learning materials and infrastructure (e.g., Alexander et al., 2015; Fuchs et al., 2015; Smith & Iadarola, 2015; Wang et al., 2024). Thus, not surprisingly, research on special education finance indicates that more restrictive placements for students with more intensive needs are associated with substantially higher costs (Baker et al., 2018; Kolbe, 2021).

Descriptive research can be particularly valuable for identifying consequential patterns that warrant further explanation, especially when underlying root causes cannot yet be fully observed or tested (Loeb et al., 2017). The patterns documented in our study reflect this. We cannot determine whether lower spending reflects greater efficiency, different service delivery models, lower service intensity, or the cumulative impact of serving somewhat different populations. However, the coexistence of lower special education expenditures, lower rates of the most restrictive placements, and modest but persistent differences in student composition suggests that these questions deserve far more scholarly and policy-related attention – especially if both charters and TPS LEAs are going to be held to the same legal standards, including the provision of FAPE.

Another notable finding is that disability composition became increasingly similar across sectors over the study period. Specifically, Charter LEAs and TPS districts appeared more alike in 2024-25 than they did in 2019-20 with respect to the distribution of students with disabilities and many disability categories. This finding contributes to the literature, which has primarily documented persistent differences in enrollment and disability composition between charters and

TPSs (e.g., Blackwell, 2013; Waitoller et al., 2017). This convergence suggests that at least some sector differences are changing over time. However, we found differences in educational placement remained as pronounced even as disability composition moved closer across sectors. Thus, the convergence in disability composition should not be interpreted as evidence that charter schools and TPSs serve identical populations or have similar levels of service obligations.

Limitations

This study also had several limitations worth noting. First, the study was descriptive and observational. We accounted for a broad range of district characteristics, disability categories, and placement patterns, but unobserved differences likely remain. Second, special education expenditures are not proxies for service quality. We do not observe staffing configurations, service intensity, IEP quality, implementation, or student outcomes. Thus, we cannot conclude whether lower spending reflects greater efficiency, lower service levels, or the efficacy of alternative service delivery models. Third, the disability and placement measures we used are similar to widely used indicators in special education finance systems, which researchers have found to be imperfect proxies for underlying costs and needs (Author, 2026; Baker et al., 2018; Kolbe, 2021). Finally, our analysis focuses exclusively on Texas, which has a unique special education finance system (that has now changed effective the 2026-27 school year), a special education policy environment that has suffered from significant IDEA violations in both charter and TPS LEAs (Author, 2018), and a charter-specific environment. Thus, the findings may not generalize to other states operating under different special education finance systems, charter laws, and state accountability and monitoring structures.

Implications for Policy and Future Research

These findings have important implications for policy and future research. First, consistent with prior research, our findings underscore the need to move beyond simple enrollment metrics when monitoring IDEA implementation across sectors. On average, charter schools disproportionately under-enroll students with disabilities, yet questions about resource allocation warrant at least equal attention (Kolbe et al., 2022; Kolbe et al., 2023). Second, federal and state agencies should invest more in developing robust, longitudinal administrative data systems that link expenditures, staffing, disability classifications, educational placement, and service delivery models. In our study, we merged administrative data with publicly available data but still lacked insight into certain aspects of placement and service delivery. More robust datasets can provide greater insight into why differences emerge across or within sectors and whether they correspond to differences in the services and staffing provided. Finally, our findings have important implications for future efforts to reauthorize IDEA, which was last reauthorized in 2004, when charter schools educated far fewer students and played a much more limited role in most states. Since charter schools now educate a far larger proportion of students, especially in some urban contexts, policymakers would be wise to consider expanding existing reporting requirements, accountability mechanisms and indicators, and data infrastructures to ensure all students with disabilities receive equitable access and FAPE regardless of school sector.

This study's findings also have important implications for future research. Perhaps the most important implication is that research on charter schools and students with disabilities remains exceptionally difficult because mechanisms that can produce sector differences are often

hard to observe directly in administrative data. While some longitudinal studies have provided important evidence that parental preferences, student mobility, and disability identification and declassification practices contribute to the special education enrollment gap (e.g., Gilmour et al., 2023; Winters, 2015), such analyses necessarily depend on what administrative records and other data sources can accurately capture. Qualitative studies, government investigations, and other descriptive evidence on counseling out, limiting service capacity, and exclusionary discipline and enrollment experiences can complement these analyses by examining processes that may be difficult to detect quantitatively. Accordingly, future research would benefit from more systematic qualitative, quantitative, and mixed-methods studies that center the experiences of families, educators, administrators, and students to better understand how decisions about enrollment, identification, placement, and service delivery are actually made across contexts.

Our findings also reinforce the importance of continued research into special education finance. A broad consensus suggests that educational resources matter for student outcomes (Jackson & Mackevicius, 2024). From our perspective, such a consensus produces a moral and scholarly imperative to examine how funding and expenditures are distributed among vulnerable student populations, including students with disabilities who are also disproportionately represented in economically disadvantaged and otherwise marginalized communities (Annamma et al., 2018; Ferri & Connor, 2014; Tefera et al., 2023).

Finally, future research should avoid treating either sector as monolithic. The patterns documented in our study are sector-level within a large state and likely conceal substantial variation across both sectors, as other studies have also shown (Anderson, 2017; Knight et al., 2022). Some charter schools have been designed to serve students with disabilities, including those with more severe disabilities, and may offer innovative and effective approaches. At the

same time, TPS LEAs operating magnet schools in competitive choice environments may not provide equitable access or adequate resources for students with disabilities. The challenge for researchers is therefore not simply to determine which sector performs better or to rely only on the datasets and theoretical frameworks they feel most comfortable with, but to identify the organizational, financial, and policy-related conditions that lead to improved IDEA implementation for all students with disabilities.

References

- Alexander, J. L., Ayres, K. M., & Smith, K. A. (2015). Training teachers in evidence-based practice for individuals with autism spectrum disorder: A review of the literature. *Teacher Education and Special Education*, 38(1), 13-27.
- Anderson, K. P. (2017). Evidence on charter school practices related to student enrollment and retention. *Journal of School Choice*, 11(4), 527-545.
- Annamma, S. A., Ferri, B. A., & Connor, D. J. (2018). Disability critical race theory: Exploring the intersectional lineage, emergence, and potential futures of DisCrit in education. *Review of Research in Education*, 42(1), 46-71.
- Baker, B. D. (2021). *Educational inequality and school finance: Why money matters for America's students*. Harvard Education Press.
- Baker, B., & Duncombe, W. (2004). Balancing district needs and student needs: The role of economies of scale adjustments and pupil need weights in school finance formulas. *Journal of Education Finance*, 29(3), 195-221.
- Baker, B. D., Green, P. C., & Ramsey, M. J. (2018). Financing education for children with special needs. In J. B. Crockett, B. Billingsley, & M. L. Boscardin (Eds.), *Handbook of Leadership and Administration for Special Education* (2nd ed., pp. 116–133). Routledge. <https://doi.org/10.4324/9781315226378-8>
- Blackwell, W. H. (2013). An era of charter school expansion: An examination of special education in Massachusetts' charter schools. *Journal of Disability Policy Studies*, 24(2), 75-87.
- Bray, L. E., & Russell, J. L. (2016). Going off script: Structure and agency in individualized education program meetings. *American Journal of Education*, 122(3), 367-398.
- Conlin, M., & Jalilevand, M. (2018). Equity and unrestricted funds in special education. *Journal of Education Finance*, 44(2), 218-234.
- Cowen, J. M., & Winters, M. A. (2013). Choosing charters: Who leaves public school as an alternative sector expands?. *Journal of Education Finance*, 38(3), 210-229.
- Cullen, J. B. (2003). The impact of fiscal incentives on student disability rates. *Journal of Public Economics*, 87(7–8), 1557–1589. [https://doi.org/10.1016/S0047-2727\(01\)00203-1](https://doi.org/10.1016/S0047-2727(01)00203-1)
- Decker, J. R., Seitz, K., & Kulwicki, B. (2015). Autism charter schools: Legally vulnerable or viable. *Ind. JL & Soc. Equal.*, 3, i.
- Dhuey, E., & Lipscomb, S. (2011). Funding special education by capitation: Evidence from state finance reforms. *Education Finance and Policy*, 6(2), 168-201.

Drame, E. R. (2011). An analysis of the capacity of charter schools to address the needs of students with disabilities in Wisconsin. *Remedial and Special Education, 32*(1), 55-63.

Endrew F. v. Douglas County School District RE-1, 580 U.S. 386 (2017).

Estes, M. B. (2004). Choice for all? Charter schools and students with special needs. *The Journal of Special Education, 37*(4), 257-267.

Ferri, B. A., & Connor, D. J. (2014). Talking (and not talking) about race, social class and dis/ability: Working margin to margin. *Race Ethnicity and Education, 17*(4), 471-493.

Fuchs, L. S., Fuchs, D., Compton, D. L., Wehby, J., Schumacher, R. F., Gersten, R., & Jordan, N. C. (2015). Inclusion versus specialized intervention for very-low-performing students: What does access mean in an era of academic challenge?. *Exceptional Children, 81*(2), 134-157.

Garcy, A. M. (2011). High expense: Disability severity and charter school attendance in Arizona. *Education Policy Analysis Archives, 19*(6).

Garda Jr, R. A. (2011). Culture clash: Special education in charter schools. *NCL Rev., 90*, 655.

Gilmour, A. F., Shanks, C., & Winters, M. A. (2023). Choice, mobility, and classification: Disaggregating the charter school special education gap. *Remedial and Special Education, 44*(4), 272-282.

Government Accountability Office. (2012). *Charter schools: Additional federal attention needed to help protect access for students with disabilities* (GAO-12-543). U.S. Government Accountability Office. <https://www.gao.gov/products/gao-12-543>

Heilig, J. V., Holme, J. J., LeClair, A. V., Redd, L. D., & Ward, D. (2016). Separate and unequal: The problematic segregation of special populations in charter schools relative to traditional public schools. *Stan. L. & Pol'y Rev., 27*, 251.

Imberman, S. A., & Johnson, A. S. (2026). The effect of charter schools on identification, service provision, and achievement of students with disabilities. *Education Finance and Policy, 1*-34.

Jackson, C. K., & Mackevicius, C. L. (2024). What impacts can we expect from school spending policy? Evidence from evaluations in the United States. *American Economic Journal: Applied Economics, 16*(1), 412-446.

Jessen, S. B. (2013). Special education & school choice: The complex effects of small schools, school choice and public high school policy in New York City. *Educational Policy, 27*(3), 427-466.

Kolbe, T. (2019). *Funding special education: Charting a path that confronts complexity and crafts coherence*. National Education Policy Center.

Kolbe, T. (2021). State funding for special education: Aligning policy with priorities. *Journal of Special Education Leadership*, 34(1), 19.

Kolbe, T., Dhuey, E., & Dautre, S. M. (2022). More money is not enough: (Re)considering policy proposals to increase federal funding for special education. *American Journal of Education*, 129(1), 79–108.

Kolbe, T., Dhuey, E., & Dautre, S. M. (2023). Unequal and increasingly unfair: How federal policy creates disparities in special education funding. *Exceptional Children*, 90(1), 57–75.

Knight, D. S., Shin, J., & McMorris, C. (2022). Student mobility between charter and traditional public school sectors: Assessing enrollment patterns among major charter management organizations in Texas. *Education Sciences*, 12(12), 915.

Knight, D. S., & Toenjes, L. A. (2020). Do charter schools receive their fair share of funding? School finance equity for charter and traditional public schools. *Education Policy Analysis Archives*, 28.

Kwak, S. (2010). The impact of intergovernmental incentives on student disability rates. *Public Finance Review*, 38(1), 41–73. <https://doi.org/10.1177/1091142109358707>

Lacireno-Paquet, N., Holyoke, T. T., Moser, M., & Henig, J. R. (2002). Creaming versus cropping: Charter school enrollment practices in response to market incentives. *Educational Evaluation and Policy Analysis*, 24(2), 145-158.

Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017). Descriptive Analysis in Education: A Guide for Researchers. NCEE 2017-4023. *National Center for Education Evaluation and Regional Assistance*.

Malhotra, K. P. (2025). Charter schools and special education: Systemic challenges and opportunities for innovation. *Journal of School Choice*, 19(1), 142-162.

Morgan, P. L., Hu, E. H., & Oh, Y. (2025). Racial and ethnic disparities in school-based disability identification. *Educational Researcher*, 54(7), 437-441.

Ni, Y. (2012). The sorting effect of charter schools on student composition in traditional public schools. *Educational Policy*, 26(2), 215-242.

Senese, J., & Winters, M. A. (2025). School choice and students with disabilities: Evidence from administrative data. *Remedial and Special Education*, 46(2), 147-159.

Setren, E. (2021). Targeted vs. general education investments: Evidence from special education and English language learners in Boston charter schools. *Journal of Human Resources*, 56(4), 1073-1112.

Smith, T., & Iadarola, S. (2015). Evidence base update for autism spectrum disorder. *Journal of Clinical Child & Adolescent Psychology*, 44(6), 897-922.

Stern, M., Clonan, S., Jaffee, L., & Lee, A. (2015). The normative limits of choice: Charter schools, disability studies, and questions of inclusion. *Educational Policy*, 29(3), 448-477.

Tefera, A. A., Artiles, A. J., Kramarczuk Voulgarides, C., Aylward, A., & Alvarado, S. (2023). The aftermath of disproportionality citations: Situating disability-race intersections in historical, spatial, and sociocultural contexts. *American Educational Research Journal*, 60(2), 367-404

Verstegen, D. A. (2011). Public education finance systems in the United States and funding policies for populations with special educational needs. *Education Policy Analysis Archives*, 19(21), 1–30.

Waitoller, F. R. (2020). *Excluded by choice: Urban students with disabilities in the education marketplace*. Teachers College Press.

Waitoller, F. R., Maggin, D. M., & Trzaska, A. (2017). A longitudinal comparison of enrollment patterns of students receiving special education in urban neighborhood and charter schools. *Journal of Disability Policy Studies*, 28(1), 3-12.

Waitoller, F. R., Nguyen, N., & Super, G. (2019). The irony of rigor: ‘No-excuses’ charter schools at the intersections of race and disability. *International Journal of Qualitative Studies in Education*, 32(3), 282-298.

Wang, H. T., Chen, P. J., Lin, F. Y., Chen, M. C., & Hu, S. T. (2024). Systematic review of effects and key components of in-service special education teacher training in evidence-based practices for students with autism and developmental disabilities. *Education and Training in Autism and Developmental Disabilities*, 59(1), 97-112.

West, A., Ingram, D., & Hind, A. (2006). “Skimming the cream” admissions to charter schools in the United States and to autonomous schools in England. *Educational Policy*, 20(4), 615-639.

Winters, M. A. (2015). Understanding the gap in special education enrollments between charter and traditional public schools: Evidence from Denver, Colorado. *Educational Researcher*, 44(4), 228-236.

Winters, M. A., Carpenter, D. M., & Clayton, G. (2017). Does attending a charter school reduce the likelihood of being placed into special education? Evidence from Denver, Colorado. *Educational Evaluation and Policy Analysis*, 39(3), 448-463.

U.S. Department of Education, Office for Civil Rights. (2014, May 14). *Dear colleague letter: Charter schools*. U.S. Department of Education.

U.S. Department of Education, Office for Civil Rights, & Office of Special Education and Rehabilitative Services. (2016, December 28). *Dear colleague letter: Rights of students with disabilities in public charter schools*. U.S. Department of Education.

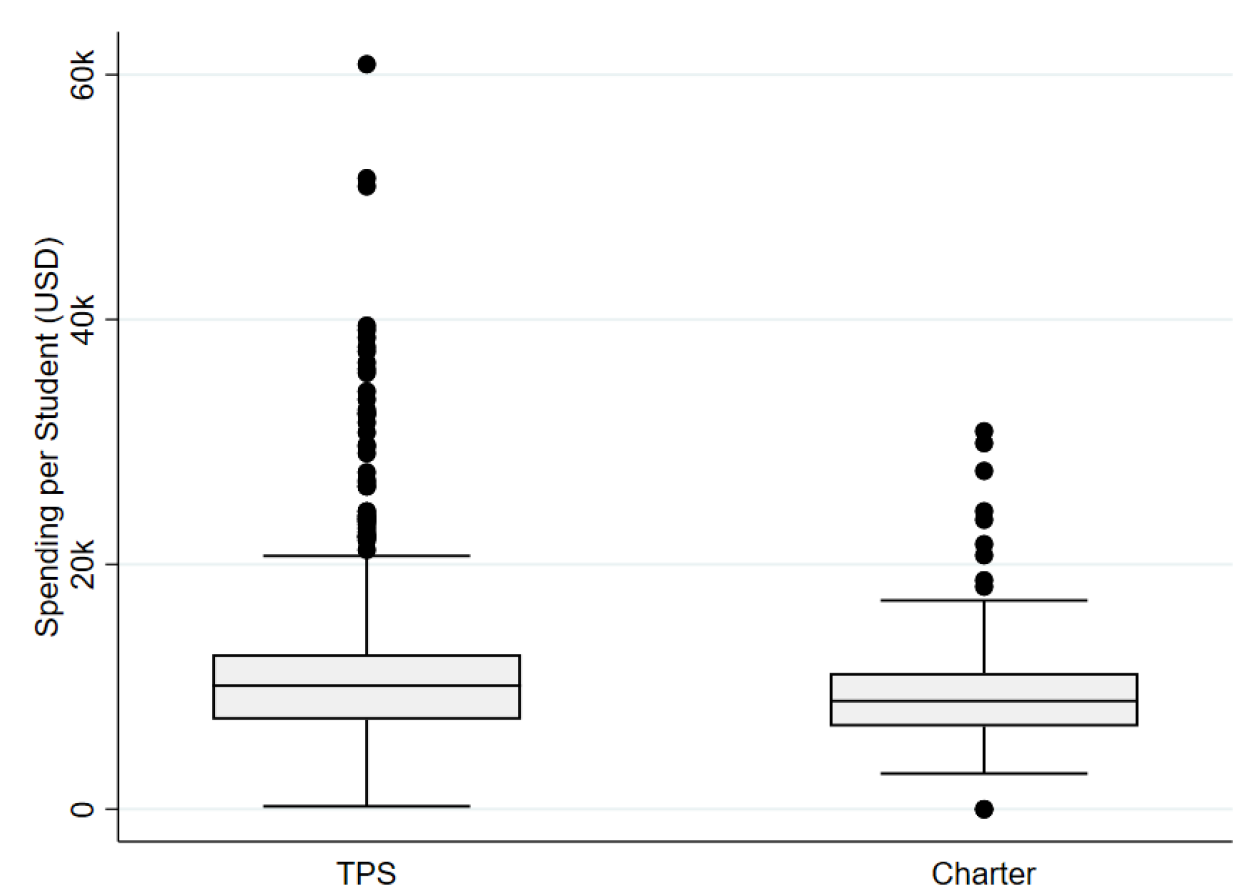
Zimmer, R. W., & Guarino, C. M. (2013). Is there empirical evidence that charter schools “push out” low-performing students?. *Educational Evaluation and Policy Analysis*, 35(4), 461-480.

Table 1. Descriptive Statistics by Sector, 2019–20 to 2024–25

	TPS		Charter	
	Mean	SD	Mean	SD
Panel A. Spending and LEA Characteristics				
Special Education Spending per Student (\$)	11,317	6,765	10,065	6,490
Special Education Enrollment	610	1,545	194	571
Special Education Enrollment Rate (%)	14	4	12	9
Economically Disadvantaged Student Share (%)	59	19	66	29
English Learner Share (%)	11	12	22	23
Urban (%)	7	26	70	46
Suburban (%)	10	30	18	38
Town (%)	18	38	4	20
Rural (%)	65	48	7	26
Panel B. Disability Composition				
Learning Disability Share (%)	40	12	39	16
Speech Impairment Share (%)	19	9	21	17
Other Health Impairment Share (%)	13	6	13	9
Intellectual Disability Share (%)	10	6	6	6
Autism Share (%)	10	6	11	10
Emotional Disturbance Share (%)	5	4	8	11
Secondary Disability Share (%)	31	9	31	13
Panel C. Educational Placement Composition				
No Instructional Setting (00)	18	9	20	17
Mainstream (40)	30	15	34	28
Resource Room/Services <21% (41)	28	14	31	22
Resource Room/Services 21≤50% (42)	11	9	6	8
Self-Contained 50–60% (43)	2	3	1	2
Self-Contained >60% (44)	8	6	3	7
Other Settings	3	5	5	20

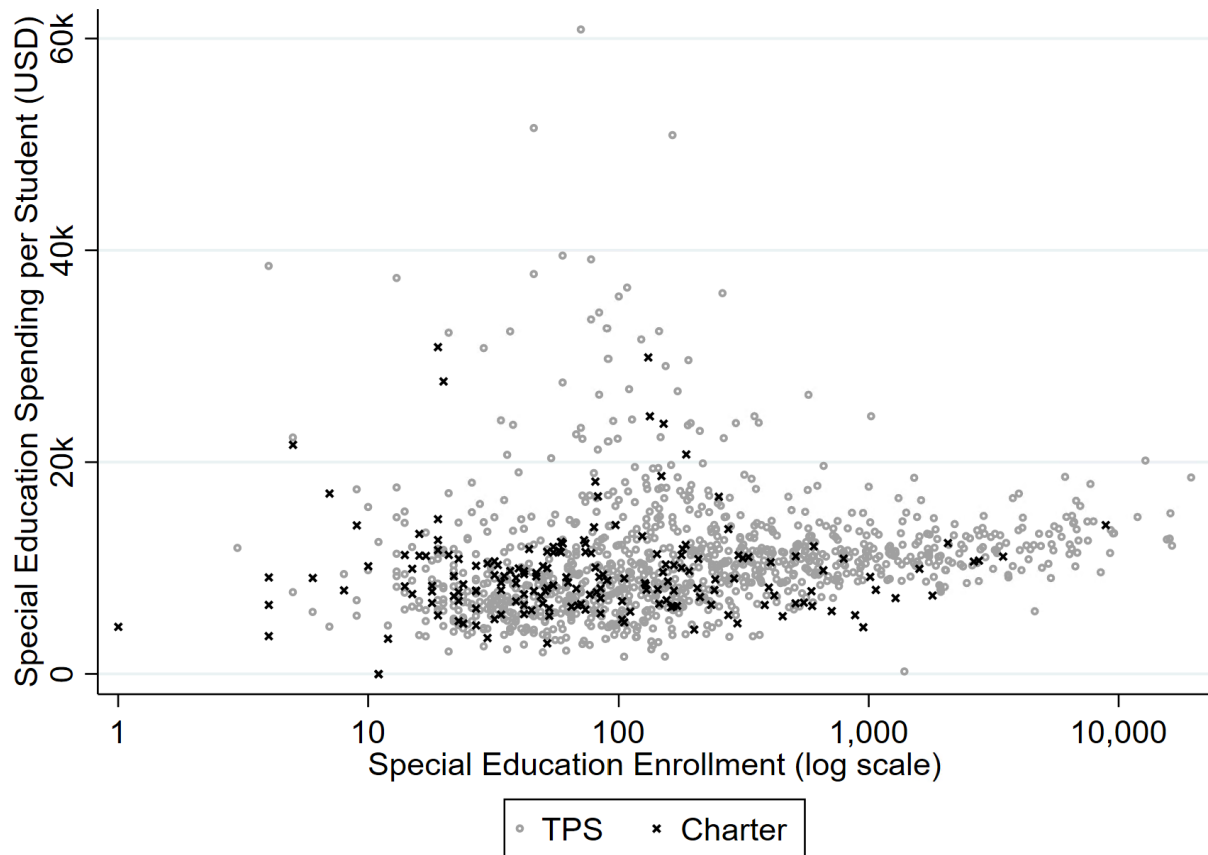
Notes. The analytic sample consists of 7,210 district-year observations from Texas traditional public school districts and charter LEAs during the 2019–20 through 2024–25 school years. Statistics are unweighted means and standard deviations across district-year observations. Disability and educational placement measures represent the share of students receiving special education services in each category. Disability categories are based on students' primary disability classifications. Secondary Disability Share represents the proportion of students receiving special education services who have a secondary disability recorded in addition to their primary disability. Setting 00 represents no instructional setting (e.g., speech therapy); Setting 40 represents mainstream placement; Settings 41 and 42 represent resource room/services for less than 21% and 21% to less than 50% of the instructional day, respectively; and Settings 43 and 44 represent self-contained placements on a regular campus for 50%–60% and more than 60% of the instructional day, respectively. Special education enrollment rate, economically disadvantaged student share, and English learner share are calculated relative to total district enrollment. The sample corresponds to the estimation sample used in Table 2.

Figure 1. Distribution of Special Education Spending per Student by Sector, 2024-25



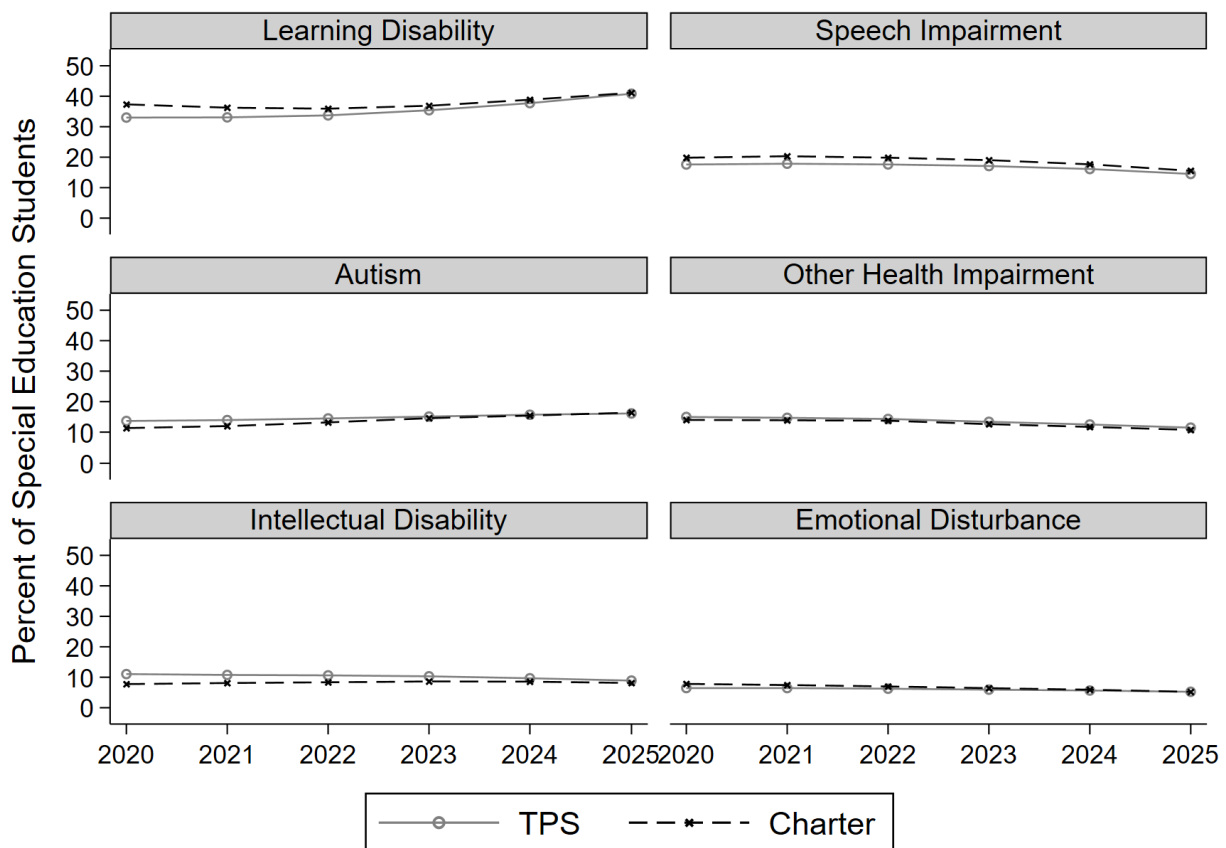
Notes. Box plots present the distribution of special education spending per student receiving special education services among traditional public school (TPS) districts and charter LEAs in the 2024–25 school year. Boxes represent the interquartile range, horizontal lines indicate medians, and points beyond the whiskers represent outlying observations.

Figure 2 Special Education Spending per Student and Enrollment by Sector, 2024–25



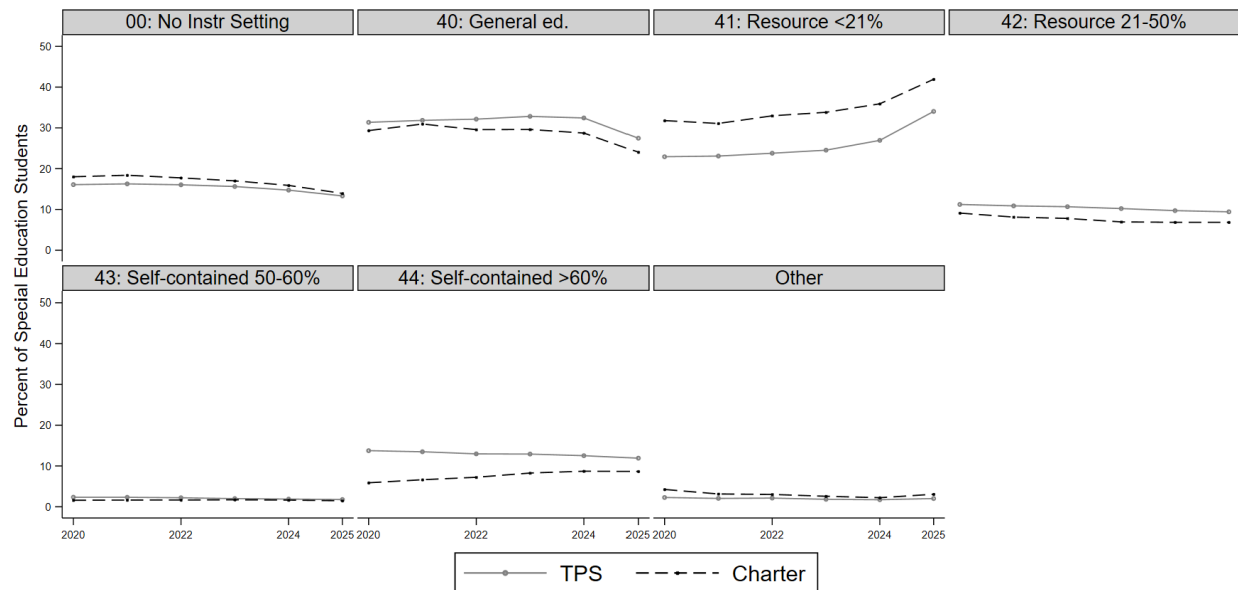
Notes. Each point represents one LEA in the 2024–25 school year. The horizontal axis reports the number of students receiving special education services on a logarithmic scale, with the labels expressed as student counts. TPS denotes traditional public school districts.

Figure 3. Trends in Disability Composition by Sector, 2019–20 to 2024–25



Notes. Figures report the composition of students receiving special education services by primary disability category in each sector and school year. Sector-year estimates are weighted by LEA special education enrollment so that the values represent the composition of students receiving special education services across each sector. TPS denotes traditional public school districts. The figure displays the six largest primary disability categories included in the analysis.

Figure 4. Trends in Educational Placement Composition by Sector, 2019–20 to 2024–25



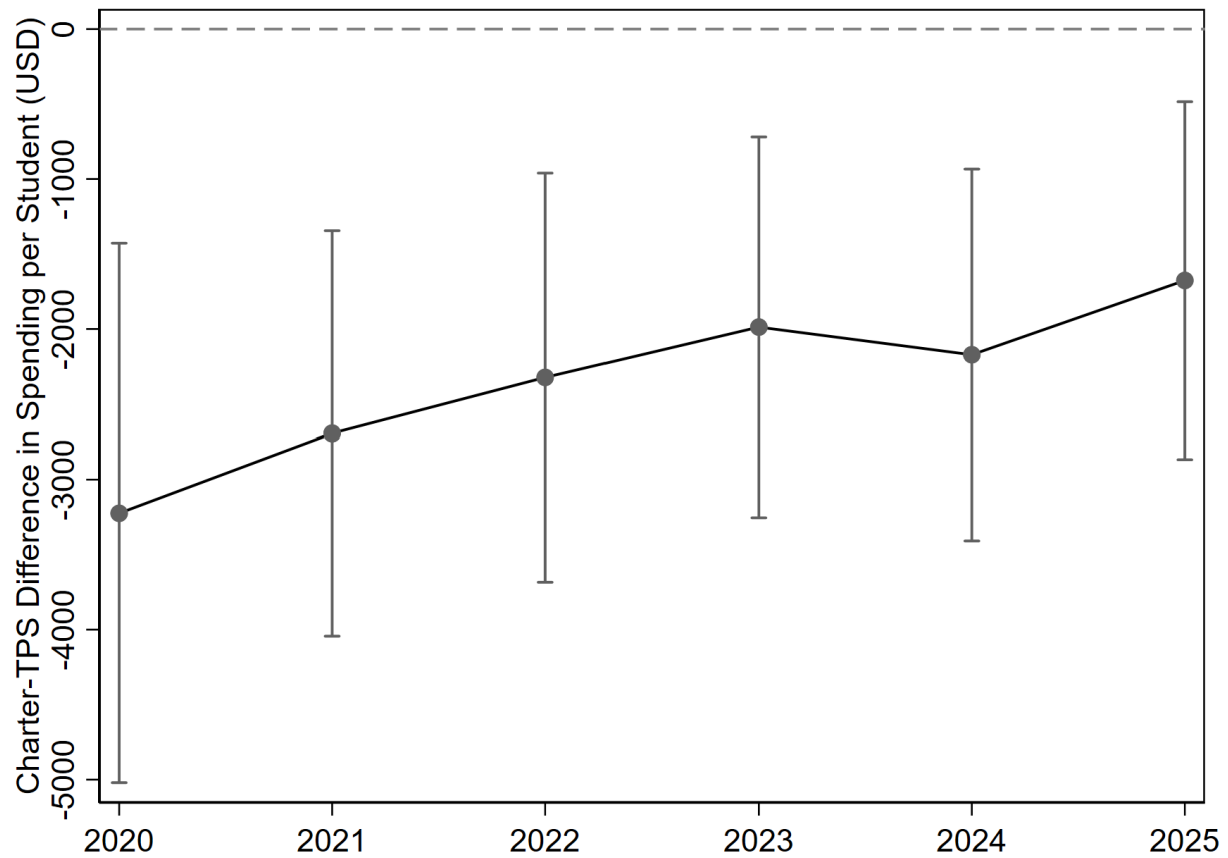
Notes. Sector-year placement shares are weighted by LEA special education enrollment and represent the percentage of students receiving special education services in each educational placement category. Setting 00 indicates no instructional setting; Setting 40 indicates mainstream placement; Settings 41 and 42 represent resource room/services for less than 21% and 21% to less than 50% of the instructional day, respectively; and Settings 43 and 44 represent self-contained placements on a regular campus for 50%–60% and more than 60% of the instructional day, respectively. TPS denotes traditional public school districts.

Table 2. Differences in Special Education Spending per Student Between Traditional Public School Districts and Charter LEAs

	(1)	(2)	(3)	(4)	(5)
Charter	-1,252.60*** (375.79)	-2,544.10*** (639.67)	-2,911.32*** (564.67)	-2,038.86*** (554.48)	-2,328.75*** (547.15)
Special Education Enrollment (ln)		90.23 (150.86)	-152.74 (143.38)	-303.65** (149.21)	-358.17** (144.64)
Special Education Enrollment Rate		-9,564.38* (5,618.78)	-12,481.02*** (4,765.61)	-16,553.64*** (4,118.46)	-16,192.03*** (4,084.81)
Economically Disadvantaged Student Share		-74.84 (1,018.53)	-511.95 (1,021.54)	-1,505.52 (961.36)	-1,384.68 (1,026.08)
English Learner Share		898.48 (1,311.94)	1,502.82 (1,261.01)	1,365.61 (1,190.69)	1,663.42 (1,230.66)
Suburban		-321.86 (413.37)	-625.65 (391.99)	-373.64 (392.24)	-557.98 (388.41)
Town		-206.46 (548.32)	-221.87 (514.24)	-371.51 (512.32)	-308.42 (505.24)
Rural		-1,906.71*** (643.37)	-1,723.15*** (600.02)	-1,737.08*** (595.13)	-1,614.02*** (584.16)
Disability Composition					
Speech Impairment Share			3,606.57* (2,070.25)		-1,993.94 (3,291.97)
Other Health Impairment Share			4,635.01 (3,818.68)		3,652.75 (3,865.39)
Intellectual Disability Share			9,252.18*** (3,463.71)		5,265.37 (3,765.32)
Emotional Disturbance Share			13,340.79*** (3,330.41)		8,223.85*** (2,998.02)
Autism Share			12,830.22*** (2,758.89)		9,118.57*** (2,443.73)
Secondary Disability Share			1,275.50 (1,661.54)		243.39 (1,668.73)
Educational Placement Composition					
No Instructional Setting (00)				1,534.99 (1,907.61)	5,432.16 (3,493.20)
Resource Room/Services <21% (41)				-671.38 (1,122.09)	-623.83 (1,107.69)
Resource Room/Services 21<50% (42)				244.24 (1,679.44)	52.33 (1,734.24)
Self-Contained 50-60% (43)				6,861.73 (4,666.27)	4,381.34 (4,507.70)
Self-Contained >60% (44)				20,752.60*** (2,918.63)	16,209.68*** (3,224.21)
Other Settings				9,675.26*** (2,658.17)	6,915.06** (2,736.58)
Constant	11,265.82*** (238.75)	13,172.15*** (1,513.50)	10,193.61*** (1,606.69)	14,349.61*** (1,442.14)	12,159.82*** (1,626.16)
Observations	7,210	7,210	7,210	7,210	7,210
R-squared	0.01	0.03	0.06	0.07	0.07

Notes. The dependent variable is average special education expenditure per student receiving special education services. Model 1 includes charter status and year fixed effects. Model 2 adds special education enrollment, special education enrollment rate, economically disadvantaged student share, English learner share, and urbanicity. Model 3 adds disability composition to Model 2, while Model 4 instead adds educational placement composition to Model 2. Model 5 includes both disability and educational placement composition. Traditional public school districts are the reference sector. Setting 40 is the omitted educational placement category, learning disability is the omitted primary disability category, and urban districts are the omitted urbanicity category. All share and rate variables are measured on a 0-to-1 scale. Year fixed effects are included in all models. Standard errors are clustered at the district level and reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure 5. Adjusted Charter–TPS Differences in Special Education Spending per Student, 2019–20 to 2024–25



Notes. Points report the estimated marginal difference in special education spending per student between charter LEAs and traditional public school districts in each year. Vertical bars represent 95% confidence intervals. Estimates are derived from a pooled model that includes LEA characteristics, disability composition, and educational placement controls and allows the associations between these covariates and spending to vary across years. Standard errors are clustered at the district level. Negative values indicate lower spending among charter LEAs relative to traditional public school districts.