

NEPC REVIEW: CALIFORNIA CHARTER SCHOOLS: COSTS, BENEFITS, AND IMPACT ON SCHOOL DISTRICTS (CENTER ON REINVENTING PUBLIC EDUCATION, MAY 2019)



Reviewed by:

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May 2019

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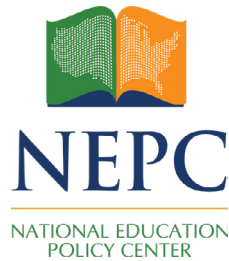
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Executive Summary

The Center on Reinventing Public Education (CRPE), based at the University of Washington, Bothell, recently released a series of three policy briefs on the financial impact of charter schools on nearby school districts in California. The briefs arrive at a time when a Task Force convened by California Gov. Gavin Newsom is deliberating on these exact matters. CRPE's founder, Paul Hill, was a key source of testimony to the task force, serving as an expert viewed as "sympathetic to charter schools."¹

The three briefs make note of the task force in their introduction and are seemingly intended to inform these ongoing debates over charter school financing and expansion in the state of California. The briefs are as follows.²

- The first brief, ***Charter Schools and District Enrollment Loss***, posits that charter school enrollment growth is not a significant factor in large district enrollment decline in California.³
- The second brief, ***Do Charter Schools Cause Fiscal Distress in School Districts?***, argues that charter school expansion is not a significant contributor to fiscal distress (fiscal stress and/or fiscal impact) in California school districts.⁴
- The final brief, ***Do the Costs of California Charter Schools Outweigh the Benefits?***, contends that there are "tangible benefits" and "few quantifiable costs" to charter schooling in California, though it does concede that a more thorough cost-benefit analysis is warranted.⁵

The first brief acknowledges that over the long run, California charter school expansion has resulted in some district enrollment decline. But the brief contends that this decline has been modest and in recent years is no longer occurring. Further, the report asserts that whether charter schools expand or not, many districts will face continuing enrollment decline and “the financial challenges it brings” (p. 10).

The second brief lays out a set of figures showing charter school enrollment shares and comparing this to county-assigned classifications of district fiscal distress. It concludes boldly that (a) there is no relationship between charter enrollment share and host district fiscal distress; (b) instead, fiscal distress is most often caused by financial mismanagement; and (c) fiscal distress is too important to get wrong.

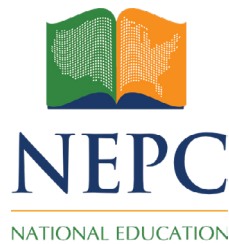
The third brief first asserts that there are benefits to, but few if any tangible costs associated with, charter schooling in California. Those benefits are illustrated by reports of differences in test score gains for children in some urban California charter schools versus matched peers in host districts. The brief also cites a handful of studies to support its contention that charter expansion also benefits, or at least does not harm, children in host district schools. Finally, it notes other potential benefits for children enrolled in charter schools, for which quantifiable values are more difficult to assign, including: “The option to choose” (p. 4).

On the potential-costs side of charter expansion, the third brief provides a short list, including, (a) lacking/losing economies of scale, (b) transfers/fiscal impact, (c) capital costs, (d) educating high-cost students, and (e) social cohesion and societal concerns. The authors then dismiss these five concerns, offering the conclusion that there are “few quantifiable costs to charter schooling” in California (p. 6). Yet they provide little analysis or reference to any valid, rigorous analysis by any other researchers.

Robin Lake, Ashley Jochim, Paul Hill, and Sivan Tuchman wrote these briefs and qualify their work with identical wording: “Given the time constraints for informing the commission’s and legislator’s questions, we were limited to data available from earlier studies and from federal, state, and local databases, as cited in the three briefs” (p. 2 of each brief).

These limitations did impair the usefulness of the briefs, but other problems are also evident. The first brief is misleading in its assertion that charter enrollment growth is not to blame for district enrollment decline. It is, and has been for some time, whether in districts with declining, stable or growing overall student enrollments. The brief also attempts to minimize the import of the considerable role played by charters in districts’ enrollment loss, offering up the non sequitur that enrollment loss can arise from other sources as well. The second brief relies on overly simplistic comparisons of charter enrollments and county-assigned “fiscal distress” classifications to conclude that there is no association between charter enrollments and fiscal distress. The contention here is that there can’t be an illness if the patient isn’t dead. In order to rely on this problematic approach, the brief erroneously dismisses a significant, more rigorous, detailed, peer-reviewed and published body of research that illustrates the fiscal impact of charter schools on host districts, and how those fiscal impacts may lead to fiscal stress. The third brief, which presents itself as an analysis of costs and benefits, merely touts the benefits of charter schooling as tangible while being entirely dismissive of numerous known and often measurable costs. Taken together, the briefs are

useful only in pointing to some important issues that policymakers should consider; their analyses of those issues are, however, generally superficial and misleading.



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Brief #1: Charter Schools and District Enrollment Loss

The first CRPE brief offers the following conclusion:

Charter schools were a significant factor in enrollment decline in a few districts for a few years early in the current decade. That is no longer the case. In the future, whether charter schools grow or not, many districts will face continuing enrollment decline and the financial challenges it brings (p. 10).

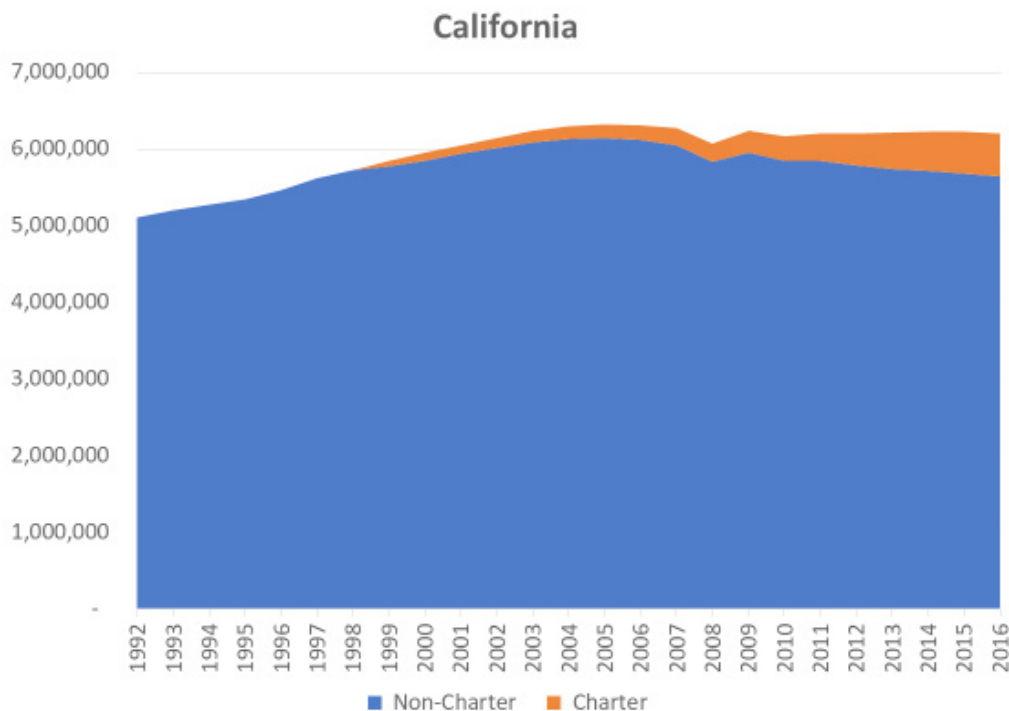
The authors use 1999-2015 data from the National Center for Education Statistics to look at enrollment trends of California's 10 largest districts (aggregated) and to assert that "Losses to Charter Schools Rarely Explain District Enrollment Loss" (p. 5). Figure 3 of the brief breaks out data for three districts: Los Angeles, Oakland and San Diego. The figure, titled "In Los Angeles, Oakland, and San Diego, Enrollment Loss Cannot Fully be Explained by Charter Schools," does in fact support the conclusion that enrollment loss is not exclusively due to charter growth. But the figure also displays that in all three districts, the majority of enrollment loss is from charter school enrollment growth (and in Oakland, 75%). The authors also use data for more recent years to illustrate additional, non-charter-related enrollment decline.

Notwithstanding the brief's stated conclusions, the clear take-aways from the graph are (a) that there is overall enrollment decline in district schools, and (b) most of the enrollment decline appears to be due to charter growth. In districts with rapidly growing enrollment, charter growth may not be problematic as long as the charter schools are not creaming more advantaged students. But periods of enrollment stability or decline are an illogical time to be considering adding new schools.

Review of Longitudinal Data on Charter School and District Enrollments in California

As part of this review, I conducted an initial analysis of data from 1993 to 2016 from the NCES Common Core of Data, Public School Universe. Figure 1 shows statewide trends, with total statewide enrollment penetration (market share) for charter schools reaching about 9 percent by 2016.

Figure 1



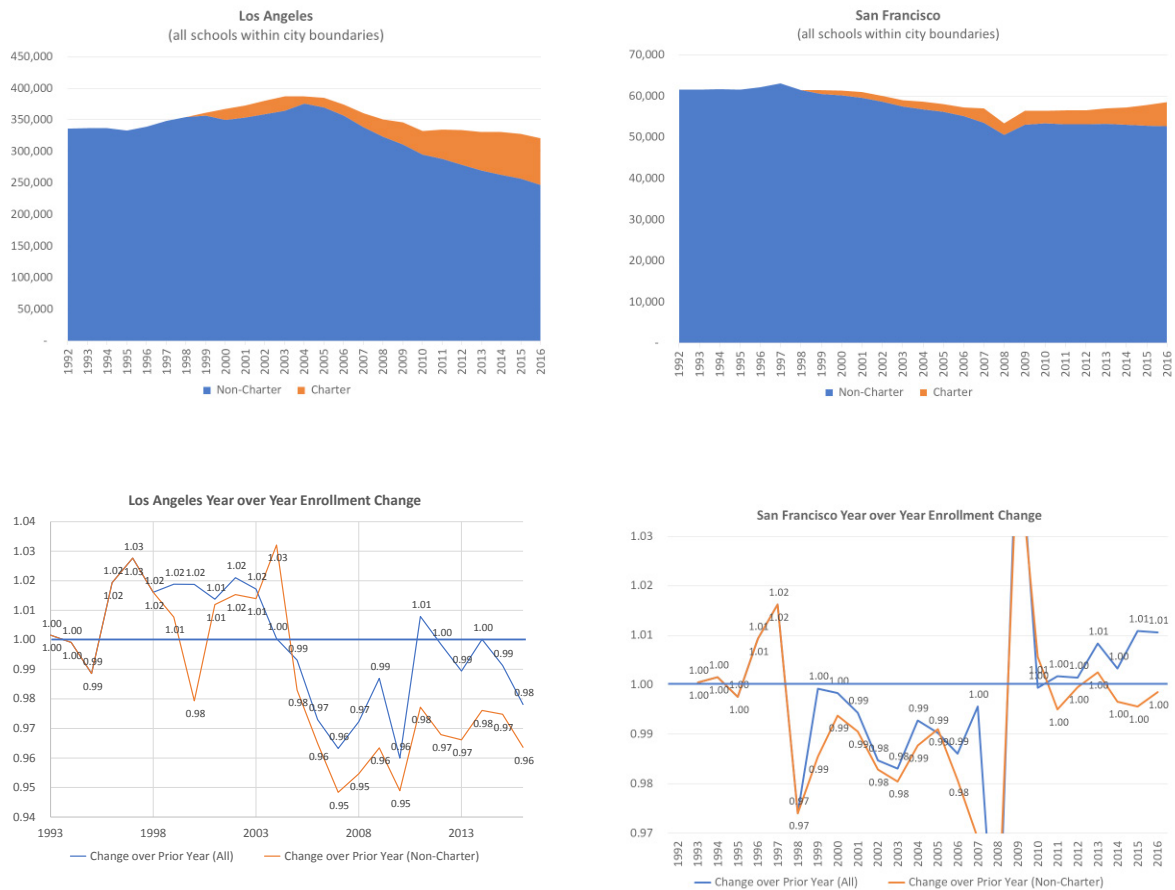
Data Source: NCES Common Core of Data, Public School Universe Survey

I then more closely examined two cities: Los Angeles and San Francisco (looking at schools within city boundaries, as opposed to school district boundaries). Figure 2 shows three versions of graphs for those two districts. By 2016, Los Angeles had reached enrollment penetration of about 23%; in San Francisco, charters enrolled about 10%. Los Angeles experienced total enrollment decline from the mid-2000s through about 2010, as well as a recent subtle dip. Most enrollment decline in Los Angeles since 2010 has been due to charter enrollment expansion, as illustrated by the second panel (the line graph). Since 2010, total (charters + district schools) enrollment has hovered around break even (blue horizontal line), but district schools' enrollment has been down 3% to 4% each year (over prior year). San Francisco's total enrollment has been slightly up (+1% each year over year) but charter transfers have brought that back to break even.

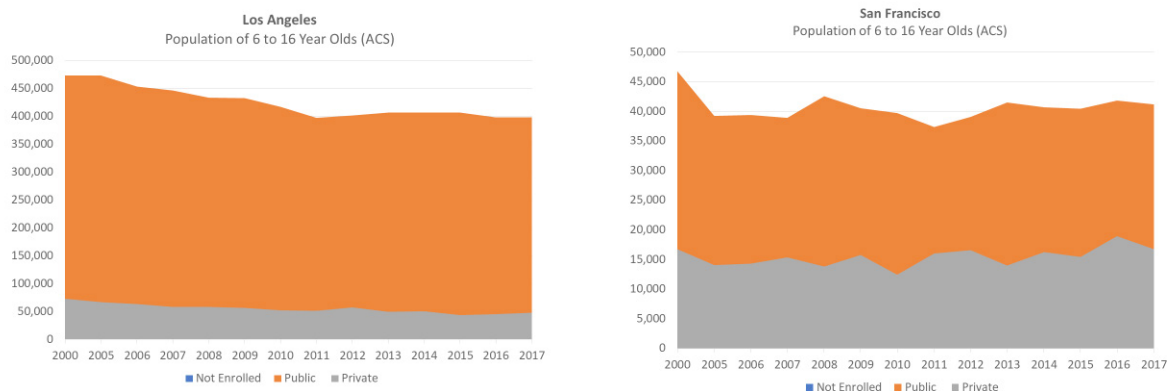
The third (bottom) panel shows that private school enrollments have remained at about 10-11% since 2010 in Los Angeles but are much higher in San Francisco, though stable over

time. The CRPE authors imply that charters are as likely to be taking children from the private school sector as from the district schools (p. 4), inferring a unique causal parochial school enrollment decline.⁶ They use this argument to further diminish claims that district schools bear the brunt of charter expansion. While this is true to an extent in some cities or regions, private school enrollments seem relatively stable in Los Angeles and San Francisco, even as charter enrollments have expanded and district enrollments have declined. Total populations of 6- to 16-year-olds mirror total enrollment patterns—relatively stable in Los Angeles since about 2010, and slightly up in San Francisco.⁷

Figure 2



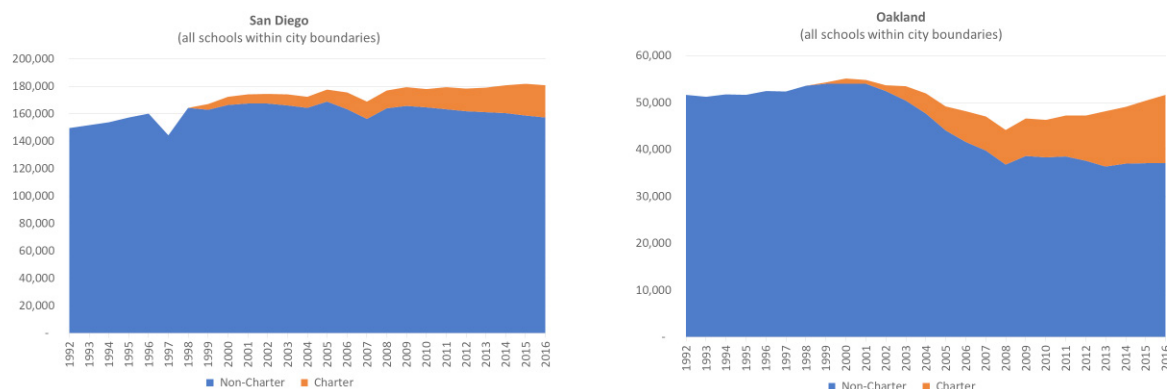
Note: 2008-09 data include unexplained anomalous fluctuation

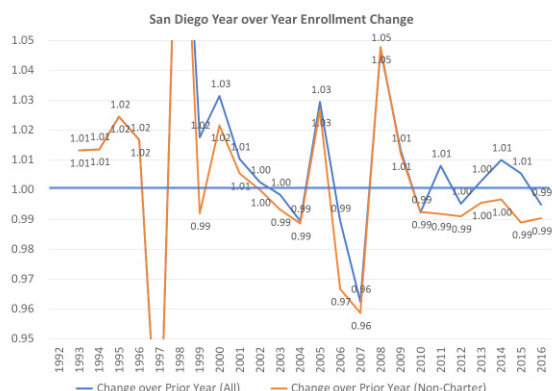


Data Source: NCES Common Core of Data, Public School Universe Survey
& Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, and Matthew Sobek.
IPUMS USA: Version 9.0 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/Do10.V9.0>

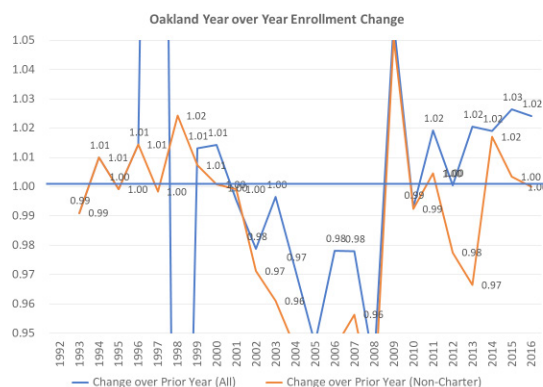
Figure 3 shows similar data for San Diego and Oakland. San Diego total enrollments are close to break even for recent years, but charter expansion has resulted in year-over-year losses of about 1% per year. In recent years, Oakland enrollments have been up 2 to 3% each year, but charter expansion has offset those increases, and some years still led to overall decreases in district school enrollment of 2 to 3%. Census data were insufficient on San Diego children, but in Oakland, private school enrollment is relatively stable at 10 to 11%, with a seemingly anomalous dip in 2016 (and rebound to 14% in 2017).

Figure 3



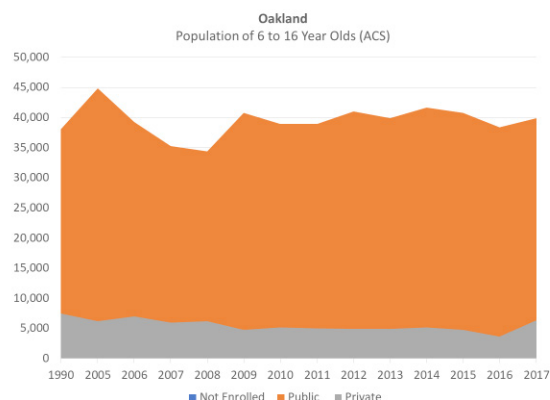


Note: 1997-99 & 2007-08 data include unexplained anomalous fluctuation



Note: 1997-99 & 2008-09 data include unexplained anomalous fluctuation

Data Source: NCES Common Core of Data, Public School Universe Survey & Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas, and Matthew Sobek. IPUMS USA: Version 9.0 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/Do10.V9.0>



Validity of the Claim

Collectively, these figures show that charter school expansion is resulting in ongoing enrollment declines for district schools, even where total enrollments are increasing (Oakland) but especially where total enrollments are in decline (Los Angeles). More extensive audits of enrollment impacts across all California districts are warranted. Small districts (<10,000 pupils) may experience greater stress even with similarly proportionate enrollment declines. The conclusion of the CRPE brief (“Charter schools were a significant factor in enrollment decline in a few districts for a few years early in the current decade. That is no longer the case.”) is not supported by the available evidence provided in the briefs and is questionable in light of the evidence reviewed here.

Brief #2: Do Charter Schools Cause Fiscal Distress in School Districts?

This brief argues that charter school expansion is not a significant contributor to fiscal distress (fiscal stress and/or fiscal impact) in California school districts. It offers limited analy-

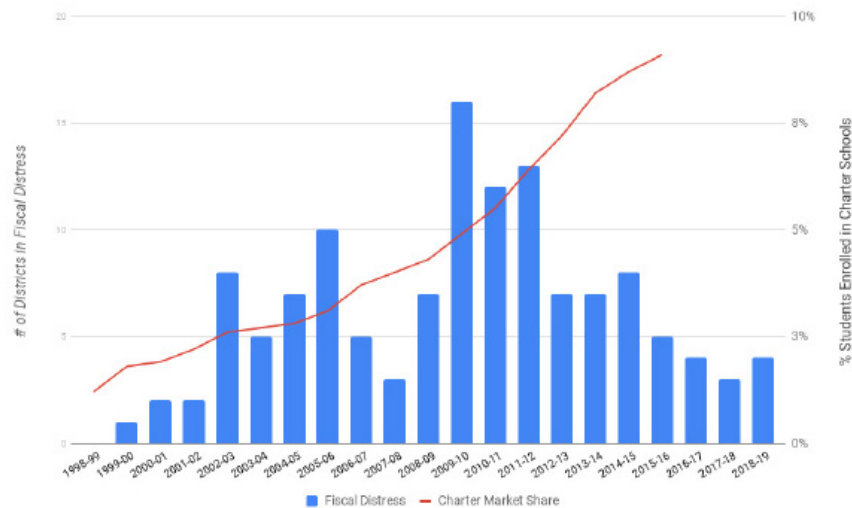
ses to support the bold conclusion that there is “No Evidence to Support the Claim that Charter Schools Are to Blame for Fiscal Distress in California School Districts” (p. 1). The main evidence is contained in two descriptive examples plus discussions of a related multivariate analysis the authors performed. For this latter analysis, the authors do not report details in their brief (or in any linked source or footnote from their brief), but the analysis purports to assess the association between charter school market share (enrollment penetration) and the likelihood that districts are identified by the county superintendents offices as being in “fiscal distress,”⁸ meaning that the district is unlikely to meet its financial obligations over the next two years. This is notably a determination of extreme fiscal stress.

Relying on county superintendent designations of “fiscal distress,” the authors assert, “we think our measure is superior to analytic approaches that require assumptions about how districts can or will adjust to students enrolling in charter schools, as is the case with several prior studies on this topic,” referring to studies I will discuss later in this section – one by Robert Bifulco and Randall Reback (2014), and one by Helen Ladd and coauthor John Singleton (2017), both published in the peer-reviewed journal *Education Finance and Policy*, which is the leading journal in the field. The authors similarly brush off alternative measures of fiscal impact and stress used in a recent policy paper (forthcoming in the peer-reviewed *Journal of Education Finance*) by Paul Bruno concerning California school districts.

The second report includes one figure (Figure 1 on p. 4) which shows the average charter school market share in districts identified at two different levels of fiscal distress (Negative or Qualified) versus those not in fiscal distress at all. It shows that the average charter enrollment shares in those not in distress is 3.2%, versus 4.2% in those assigned a “qualified” rating and only 3% in those assigned a “negative” rating.

The report’s Figure 2 (reproduced below, and originally appearing on p. 5 of the second brief) shows that as charter school enrollment share statewide has increased over time, the number of districts in fiscal distress has not increased. Of course, what Figure 2 actually shows is that the recessionary period from 2008 through about 2013 resulted in a dramatic increase in districts in fiscal distress, which has subsided during the recovery period, swamping any noticeable effects of charter growth and making it impossible to draw any conclusions regarding charter enrollment impact from this broad descriptive data.

FIGURE 2. Few California School Districts Face Fiscal Distress Despite Growing Charter School Enrollments



Source: Charter enrollment share based on district of physical residence, excluding virtual schools, as tracked by the California Charter School Association. Fiscal distress data from California Department of Education. Figure presents weighted averages for each designation in the years 1998 through 2019.

One might argue that this graph shows that since the recession, as charter enrollment shares increased, the likelihood of districts falling into fiscal distress has continued to decline; therefore, charter expansion clearly has no effect or may even be beneficial. It's also true, however, that between 1960 and 2000, the rate of cigarette smoking among women declined by about 30%, while during the same time period, the rate of death from lung cancer increased more than 50%.⁹ Should we logically conclude that stopping smoking causes lung cancer? Or might there be other factors at play? Longitudinal comparisons of this type rarely yield useful inferences regarding causal relationships, as any qualified analyst should understand.

As mentioned above, the authors also discussed their own analysis, which they describe as follows:

... we re-examined the relationship between charter schools and fiscal distress using a multivariate analysis approach. After adjusting for other factors, and consistent with the descriptive evidence, districts with larger charter school enrollment shares are no more likely to enter fiscal distress. (p. 5.)

Some methodological information is provided in a footnote:

Based on multivariate logistic and multinomial discrete time event models with year and district fixed effects and controlling for student enrollment (including enrollment for English Language learners, special education, and free or reduced-price lunch) and the change in school-age population. Results unchanged despite multiple alternative specifications. See Methodological Note for full results and details on data sources and measures. (p. 5, fn. 5.)

They provide only one other methodological detail:

Our multivariate models also use a series of enrollment-based controls, including district enrollment, change in district enrollment, change in school-age population, percent of students eligible for free or reduced-price lunch, percent of students identified as English language learners, and percent of students identified for special education services. (p. 8.)

In other words, the authors claim that they used a rigorous analysis to concluded that there is no evidence that charter school expansion causes, or that charter schools “are to blame for,” extreme fiscal stress in host districts. That said, to the extent that this description is complete, their specification still leaves out many factors included in the richer, peer-reviewed analyses which they had swiftly discounted, including other relevant financial measures. I discuss these discounted analyses in the following section.

Summary of Research on Charter School Fiscal Impact and Fiscal Stress

A number of recent studies have explored questions of whether and to what extent charter school enrollment expansion has a “fiscal impact” on the host districts from which charter schools draw their enrollments (and in some cases pass through financing) and whether charter school expansion is associated with fiscal stress on host/sending districts.

Ideally, the policy objective would be to identify, before any fiscal distress occurs, the factors that may lead to fiscal stress and eventual distress. Identifying precursors matters. If this is the goal, it’s important to use measures other than extreme fiscal stress as the dependent variable—if the researchers hope to identify and mitigate problems before they happen. Further, it is important to consider any ongoing adverse effects on students and taxpayers, and to consider as completely as possible other conditions that increase the likelihood that districts are fiscally stressed, such as the robustness of state aid formulas, and overall adequacy of school funding.

In addition to questions pertaining to fiscal impact on, and fiscal stress of, the local school district, one might ask more broadly whether expanding charter schooling alongside district schooling in a geographic space is more or less effective or efficient? Are there redundancies, additional expenses and inefficiencies that are created by operating two systems instead of one in that space? Do those redundancies or inefficiencies fade over time? Are any such harms justified by improved outcomes for all children (in which case, they aren’t inefficiencies at all)? I discuss these issues further later in this review.

With those issues as background, consider the several highly relevant studies that are dismissed as insignificant in the CRPE briefs (Brief #2 is the focus here). First, the CRPE brief mentions in passing a forthcoming journal article by Paul Bruno that explores resource allocation effects (by school districts) of charter school enrollment expansion. Broadly, Bruno’s analysis of California school districts finds that “larger charter enrollment shares are associated with lower levels of per-pupil spending and reduced fiscal health in TPSs.”¹⁰ The brief mentions (but trivializes) Bruno’s findings in passing in a footnote (#7).

Similar analyses of Michigan school districts also find charter school enrollment shares to be significant predictors of districts' fund balances over time, an important measure of fiscal stress.¹¹ Focusing on these Michigan fund balances, and using comprehensive multivariate models, Arsen and colleagues find that while enrollment decline generally has a negative impact on district fund balances, "44 percent of the enrollment effect is explained by charters and inter-district choice."¹² Further, the share of children in a district receiving special education services results in declining fund balances,¹³ and charter expansion tends to increase districts' share of children receiving special education services. Thus, charter expansion is indirectly further depressing fund balances of districts.¹⁴ Arsen and colleagues also find that in districts with higher shares of charter enrollment penetration, these effects tend to be greater.¹⁵

Detroit public schools has reached a charter market share of over 40% (by 2016) and has faced significantly declining state aid for an extended period of time, coupled with declining overall school-aged population.¹⁶ Other Michigan districts have also experienced more substantial shifts in enrollment and declining aid than have California districts. But this does not mean that California policymakers should be cavalier; rather, they might take caution to avoid the extent of problems experienced in Michigan. One way to do this is to carefully regulate future charter school growth and account for contextual variation and pressures.

Surprisingly, this study by Arsen and his colleagues is not mentioned in the CRPE briefs. But the second brief does mention—and then quickly brush off¹⁷—the findings and recommendations of two other peer-reviewed studies: Bifulco and Reback (2014)¹⁸ and Ladd and Singleton (2017).¹⁹ In their analysis of North Carolina school districts, Ladd and Singleton explain, "We find a large and negative fiscal impact from \$500-\$700 per pupil in our one urban school district and somewhat smaller, but still significant, fiscal externalities on the non-urban districts in our sample."²⁰ That is, measuring what the authors refer to as "net fiscal impact," they find under one scenario a net fiscal impact for Durham schools of \$520 per pupil, meaning that "charter schools require that Durham must reduce services for each public school student by about \$500."²¹ Ladd and Singleton relate these fiscal impacts

*In summary,
charter school
fiscal impacts
are real.*

to those found by Bifulco and Reback in Albany and Buffalo, noting, "These estimates, which are methodologically most comparable to those reported by Bifulco and Reback (2014), are smaller than their estimated fiscal impacts of charter schools in the urban school districts of Albany (\$883-\$1,070) and Buffalo (\$633-\$744)."²²

Bifulco and Reback also raise the concern that operating two systems in one space can lead to administrative redundancies. They also discuss policy remedies, which are somewhat in line with those mentioned by the CRPE authors. That is, they mention the possibility of providing some transitional support to host districts to cover carried expenses associated with enrollment loss.²³ Separately, in a recent presentation in Washington, DC (May 9, 2018), Reback proposed that these additional supports might equate to 20% of per-pupil expenditures, offering an 80/20/20 solution.²⁴ This is a substantial increase to overall expense to support the preference of operating a second system in a single space. Further, in districts where charter expansion continues for years, these transitional expenses are not short lived.²⁵

In summary, charter school fiscal impacts are real.²⁶ Over time, these fiscal impacts increase the likelihood of fiscal stress or even fiscal distress. But importantly, context and other conditions matter, including overall enrollment trends and robustness of state (and local) funding for schools, as well as the mechanics of state aid distribution formulas, including determination of charter school funding. Fiscal impacts lead to the greatest harm where three conditions exist: (a) overall enrollments are in decline, (b) overall funding is not robust and/or is declining, and (c) charter enrollments lead to sorting patterns in which higher need children (especially those with disabilities) are left behind in district schools. Where these conditions exist, problems are exacerbated by charter enrollment growth and can cause significant fiscal stress and lead to fiscal distress. State policymakers should consider carefully how to measure and mitigate these conditions in the presence of charter schooling. The evidence does not support the CRPE brief's conclusion that there is "No Evidence to Support the Claim that Charter Schools Are to Blame for Fiscal Distress in California School Districts" (p. 1).

Brief #3: Do the Costs of California Charter Schools Outweigh the Benefits?

This third brief does not claim to offer a comprehensive cost-benefit analysis, yet the authors confidently conclude: "This preliminary analysis points to tangible benefits and a few quantifiable costs to charter schooling, but a full benefit-cost analysis should be conducted to inform future state policy debates" (p. 6).

The brief begins by minimizing the import of any charter school fiscal impact on district schools, explaining:

Clearly, there are considerable pain points for school districts that face rapid enrollment losses, whether those losses are caused by demographic shifts or students leaving the district for another district, private schools, or charter schools. This is a public policy concern the legislature should address by ensuring that districts manage their resources effectively and responsibly reduce expenditures in proportion to costs. However, these pain points are not unique to charter schooling and there would be a cost to returning to a system of limited choices for families with limited means. (p. 6)

The brief does, however, accept the possibility that transition aid may be warranted, noting:

For those districts that do have a plan to win back students and can show they have reduced costs responsibly, the state might consider what some other states have done: provide short-term transition aid to qualifying districts. Transition payments may create a higher cost to the state in the short term, but could be designed to ensure they were allocated in a way that helps districts compete more effectively with charter schools and that further increases the educational benefit to students. (p. 6)

To set up their cost/benefit argument, the authors first assert that measures of differences in test score gains for children in California charter schools versus matched peers in host districts validate the benefits of charter schooling. They also cite a handful of studies to support their contention that charter expansion also benefits, or at least does not harm, children in host district schools. Finally, they note other potential benefits for children enrolled in charter schools, for which quantifiable values are more difficult to assign, including: “The option to choose” (p. 4).

The brief also presents and then quickly brushes aside a short laundry list of potential costs, including (a) lacking/losing economies of scale, (b) transfers/fiscal impact, (c) capital costs, (d) educating high-cost students, and (e) social cohesion and societal concerns. The authors dismiss these concerns with little analysis (or reference to any rigorous analysis) and then draw their conclusion that there are “few quantifiable costs to charter schooling” in California (p. 6).

Based largely on their second brief (on fiscal stress), the cost/benefit brief trivializes the risk of fiscal impact, but it does accept the potential need for short-term transition support for districts adjusting to enrollment decline. The brief fails to assign a magnitude to this cost, assuming it to be negligible and temporary (short term). The brief also acknowledges that these carried (or “legacy”) expenses may include inefficient use of capital stock and fixed costs, but it largely writes those off as insignificant or easily mitigated (by way of self-citation).²⁷ The authors present a discussion related to economies of scale and the concern that adding new small schools, or leaving behind under-enrolled schools, increases costs. But they dismiss this concern by arguing that adding charter schools to an oversized district actually helps to mitigate costs associated with “diseconomies of scale” (that is, charter expansion reduces excessive costs of districts that are too large).

Regarding student needs, the brief argues that charter schools, under the current state funding formula, are receiving less support for high-need students, but that these high-need students are still doing better in charters than in district schools.²⁸ Finally, on the cost side, the brief asserts that social cohesion concerns regarding segregation are not worsened by charter schooling in California,²⁹ since (a) students attending charter schools come from segregated neighborhoods to begin with, and (b) the district’s own magnet schools also promote uneven student sorting. After writing off each of these potential costs, one by one, the authors find it safe to conclude that there are “few quantifiable costs to charter schooling.” The merits of this conclusion are, however, undermined by the research cited above, which does indeed attach substantial price tags to charter growth. In addition, several specific elements of cost-benefit analysis are problematic.

Getting the Cost-Benefit Analysis Right

When considering policy options related to charter expansion, one must consider both the easily measurable costs and benefits, and those that are less tangible in dollar value terms.³⁰ When considering benefits, one must view the collective system (all children in charter and district schools in a given space) across a variety of out-

come measures, not merely whether one system is “winning” in the test score game. That is, are all children on average better off? This includes whether, who, and to what extent any children are being left behind. Consider the following five unexamined issues:

- The one tangible benefit measure provided by CRPE is that charter school students show more achievement growth than matched peers in district schools in several urban areas in California. Although other studies of charter school test-score outcomes are less positive, let’s assume that charters do generate a statistically significant test-score benefit. Are we therefore to assume that if we put more children in charter schools, even more will perform better? Given access and stratification issues, such as the underserving of students with more severe special needs, that’s not necessarily the case. And, this framing ignores the extent to which charter school students “win” in this type of analysis based on the degree to which others “lose.” The appropriate question for broader policy consideration would be whether children as a whole (systemwide) are doing better where charter expansion is greater. Further, how do any gains compare to gains that might have been achieved under alternative policies with similar costs?
- On the cost side, one must identify completely (at least) four key expenditure implications: (a) redundant administrative structures, (b) increased transportation expenses, (c) inefficient allocation of capital space/assets (land/building) in transition, and (d) additional overhead and management costs associated with operating and managing a complex choice enrollment system and associated services. This set of questions is largely ignored in the CRPE briefs.
- Additionally, one must consider the loss of capital at public expense, when public dollars (charter school operating revenues) are used to acquire capital assets for private ownership, and the relatively high transaction expenses associated with typical financing mechanisms (high risk/interest revenue bonds).³¹ Some of these costs can be mitigated with better policies and regulation, which should be in place prior to any further charter expansion.
- On the less tangible side, one must consider whether the uneven sorting of children, by their needs and associated educational programming costs, exacerbates inequalities across schools within cities and towns.³² Some of these costs can be estimated. But, beyond that which is easily measured, inequity matters and should be considered a cost, though not easily inserted into a cost-benefit calculation. Certainly these types of costs can be included as easily as the purported benefit of the option to choose.
- Acknowledging historical debates over the intersection and resulting tension between liberty and equality goals in American society, we might be tempted to consider it a wash (if liberty preferences are of equal value to equity preferences, and the option to choose leads to inequality, then the two cancel each other out in the cost-benefit analysis). However, access to equitable schooling is a right guaranteed under the California Constitution,³³ whereas the option to have government-financed school choice is not. As such, the intangible equality costs of eroding equity outweigh, as a legal matter, the intangible liberty benefit of providing publicly financed choice.

One must also consider other immeasurable factors such as differences in legal protections available to children, taxpayers and employees, plus quality-of-life factors, including transportation time and school/neighborhood walkability.

Economies of Scale or Duplicated Expenses?

As I explain in my 2016 policy brief for the *Economic Policy Institute*, adding charter schools to a district and thus shifting enrollments from district to charter schools can lead to additional expenses associated with operating inefficiently small districts, or inefficiently small schools.³⁴ In a comprehensive review of studies on economies of scale, Andrews, Duncombe and Yinger (2002) point out that optimal elementary school size is likely somewhere between 300 and 500 students, while optimal high school size is likely between 600 and 900 students.³⁵ District per-pupil costs are minimized for districts with enrollments somewhere between 2,000 and 4,000 students. Operating smaller schools or smaller districts in areas where population density and geography permit operating districts of efficient scale would be an illogical policy decision – or at the very least – a conscious choice to spend more than necessary to achieve a given set of outcomes. These “scale”-related costs are different from the transitional expenses associated with declining enrollment. But, when enrollment decline is coupled with overall enrollment levels falling below these thresholds, costs and carried per-pupil expenses increase more rapidly.

When it comes to charter enrollment expansion, concerns about economies of scale arise in a few ways. First, new startups have a period within which they operate at inefficient scale, and they may require additional support or may operate at inefficiently high spending (per pupil) levels during start up years. Second, to the extent that charter expansion does lead to district enrollments falling below 2,000, charter expansion may lead to overall cost increases (unnecessary cost increases) for host districts. Clearly, this is not an issue for California’s 10 largest districts, but it may be an issue for other districts in the state affected by charter enrollment growth (including online charters). Third, coupled with transition issues, districts experiencing localized (within district) dramatic charter enrollment shifts may find themselves with larger shares of children attending district schools below optimal enrollment levels. All three of these measures should be considered when evaluating whether and to what extent charter school expansion is leading to additional costs associated with losing economies of scale.

The CRPE cost-benefit brief does not address these issues. In fact, it instead argues that expanding charter schooling in California’s large districts actually helps in solving the (somewhat mythical³⁶) problem of costs associated with “diseconomies of scale.” If, in fact, diseconomies of scale do exist in schooling – that is, very large districts face higher costs of achieving common outcomes – one might consider other policy alternatives to mitigating these costs, such as reorganizing the district itself into districts within the district. This could be done without adding the additional expenses of redundant central administrative structures, inefficient transportation routes and patterns, inefficiently financing new capital development, or developing and managing complex choice/enrollment assignment systems.

Below, I quickly address several other issues raised in the CRPE briefs.

High-Need Students in the California Context & Charter Schools

Regarding sorting by student needs, the brief asserts that mechanical features of California's new Local Control Funding Formula deprive charter schools of their rightful share of funding for low-income students in particular. But the best available analyses comparing expenditures of California district and charter schools in LAUSD and Oakland show that major charter operators in those cities spent about the same per pupil as district schools serving otherwise similar students; and when excluding special education spending, major charter operators (Aspire and Green Dot) spent more than otherwise similar district schools.³⁷ More comprehensive statewide analyses of this type are required for determining appropriateness of funding levels for charter schools.

Capital Expenses

Understanding the additional capital-related costs in a dual system setting is especially complex, and the CRPE reports do little justice to these issues. One issue is the carried expense by school districts that is associated with inefficient use of existing district facilities, and under-enrollment due to enrollment decline. A second issue is that, under current policies and standard practices in most states and cities, charter schools are using publicly financed operating revenues to make often-exorbitant lease payments that are used by related parties to pay off revenue bond debt to acquire land and buildings.³⁸ That is, public dollars are being used to acquire assets to be owned by private entities, rather than invested in public school capital stock. Further, these transactions come at very high financing expense (high-risk, high-interest revenue bonds and complex financing mechanisms and relationships). Notably, these are not a necessary feature of the dual system approach, but they are a common if not standard feature.

Transportation Expenses

Oddly, the CRPE briefs do not address the possibility that per-pupil transportation costs will increase if more children exercise choice to attend charter schools that may be further from their place of residence. These expenses may be justifiable if the benefits warrant. But they cannot be simply ignored in the cost/benefit equation, as they are both tangible and significant. In New Orleans, following the shift to a majority charter, citywide choice system, transportation expenses increased by 34%.³⁹

Redundant Administrative Expenses

The CRPE brief also does not address the fact that running multiple systems – district schools alongside several different networks of charter operators and independently operated charters – can lead to administrative redundancies as discussed by Bifulco and Reback, among others. Further, creating the tools to manage a complex system for choice assignment and enrollment adds expenses that would otherwise not exist. And managing the complexi-

ties of a transportation system in the presence of a complex choice/assignment model may require additional administrative support and related expense. Again, these expenses may be justifiable if the benefits warrant. But they cannot be simply ignored in the cost/benefit equation, as they are also both tangible and significant.

Soft Costs

The CRPE report similarly dismisses (or ignores entirely) some “soft costs.” Specifically, the report ignores any possible downside to student sorting and stratifying, as noted above. But more broadly, the CRPE report ignores the possibility that charter expansion results in inequity and the possibility that the inequities that inevitably result from the exercise of individual liberties should be considered a “cost” (or at least a potential downside).⁴⁰

Finally, an issue I and colleagues have raised over time is that charter schools under most existing state laws, including California, are not obligated to uphold student, parent, taxpayer and employee rights to an equal extent as local public school districts (or state-operated schools). This is particularly problematic when, as is the case in California, the students and communities who are most subjected to this loss of rights tend to be disproportionately low income and minority.⁴¹ These issues, like many above, are resolvable, but this would require amending the state’s charter school laws.

Conclusion

While charter school expansion has been a long-run cause of enrollment decline in California’s large city school districts, penetration has achieved only modest levels statewide (<10% by 2016). In larger urban areas, the concentration of charter schools varies, with some districts—notably Oakland—experiencing a much larger impact than others. Many smaller and mid-sized districts may have been more significantly affected, but the CRPE briefs do not explore beyond the 10 largest districts (mostly in their aggregate).

The briefs assert that enrollments are generally stagnant or declining in these 10 districts in recent years and that future enrollment loss is inevitable whether charter enrollments expand or not. The core assumption in this CRPE argument is baffling. By analogy, a pail may be reasonably functional with a couple holes in the bottom, but it is still unwise to drill more holes. Moreover, as I explain in a 2016 policy brief on charter school expansion, one of the least rational conditions under which to promote the addition of new schools to a geographic context is when there is declining student population.⁴²

A reasonable policy implication to draw from the findings presented in the first CRPE brief is in fact that California should approach further charter expansion with caution. The current level of market/enrollment penetration may be at a reasonable equilibrium, if total enrollments stay constant (rather than decline). Therefore, trying to encourage, stimulate and/or incentivize further charter expansion would be illogical, and may result in the sorts of more serious problems experienced in other states (like Michigan) that California has thus far largely avoided.

The second, related brief asserts that charter expansion has not led to greater numbers of fiscally distressed school districts, and/or that charter expansion is not a causal factor in district fiscal distress. The finding (presuming it to be valid) that charter expansion has not yet mortally wounded some or many districts financially is used by the brief's authors to suggest that charter expansion is not particularly harmful. But the finding might also suggest that the state should approach any further expansion with caution and should manage and control charter enrollment growth at reasonable levels.

A growing, but already considerable, body of research explains the fiscal impact of charter school expansion on host district budgets and resource allocation to students remaining behind in host district schools. These impacts are not trivial and should not be overlooked.

Existing literature also reveals that many factors together contribute to a longer-term result of these fiscal impacts – the result being “fiscal stress” and eventually “fiscal distress.” Those factors include the robustness and adequacy of school funding overall and state aid in particular, declining enrollments in general and increased student needs. Among the contributors is enrollment decline due to charter enrollment growth, with more significant effects as market share (penetration) approaches higher levels (>20%). The California districts discussed in these briefs may not presently face the “perfect storm” scenario seen, for example, in Detroit City Schools—with long-run population decline, declining state aid, and rapid, under-regulated charter expansion.⁴³ But this is not to suggest they are all doing fine or will be unharmed by further charter expansion.

While California has begun to increase and equalize state aid to schools under its new Local Control Funding Formula (LCFF), it remains well behind other states in funding, and well below estimates of needed funding to achieve desired outcome levels, with the largest funding gaps falling in high-poverty districts, including districts affected by significant charter expansion.⁴⁴ Further, operating two systems, with mobility between them, in a common geo-

When considering benefits, one must view the collective system across a variety of outcome measures.

graphic space is more expensive than operating one. These additional expenses may be especially problematic in a system where spending is 46% to 47% below needed spending levels, according to recent estimates.⁴⁵

Finally, when evaluating policy preferences related to charter expansion, one must consider both the easily measurable costs and benefits and those that are less tangible in dollar terms. When considering benefits, one must view the collective system (all children in charter and district schools in a given space) across a variety of outcome measures, not merely whether one system is “winning” in the test score game. That is, are all children better off on average? Are some being left behind, and (if so) who are they and to what extent?

On the cost side, one must identify completely the various expenditure implications of (a) redundant administrative structures, (b) increased transportation expenses, (c) inefficient allocation of capital space/assets (land/building) in transition, and (d) additional overhead and management costs associated with operating and managing a complex choice enrollment system and associated services. Further, one must consider the loss of capital (land

and buildings) at public expense, when public dollars (charter school operating revenues) are used to acquire capital assets for private ownership, and the relatively high transaction expenses associated with typical financing mechanisms (high risk/interest revenue bonds). Some of these costs can be mitigated with better policies and regulation, which should be in place prior to any further charter expansion. These costs should not be trivialized as “few quantifiable costs.”

On the less tangible side, one must consider whether the uneven sorting of children, by their needs and associated educational programming costs, exacerbates inequalities across schools within cities and towns. Some of these costs can be estimated. But, beyond that which is easily measured, inequity matters, and it should be considered a cost even if not easily inserted into a cost-benefit calculation. One must also consider other immeasurable factors such as differences in legal protections available to children, taxpayers and employees, and quality of life factors including transportation time and school/neighborhood walkability. While less tangible (though no less tangible than the benefit of “the option to choose”), these costs are not trivial.

All three briefs qualify their work with identical wording: “Given the time constraints for informing the commission’s and legislator’s questions, we were limited to data available from earlier studies and from federal, state, and local databases, as cited in the three briefs” (p. 2 of each brief). These limitations did impair the usefulness of the briefs, but other problems are also evident.

The first brief is misleading in its assertion that charter enrollment growth is not to blame for district enrollment decline. It is, and has been for some time, whether in districts with declining, stable or growing overall student enrollments. The brief also attempts to minimize the import of the considerable role played by charters in districts’ enrollment loss, offering up the non sequitur that enrollment loss can arise from other sources as well. The second brief relies on overly simplistic comparisons of charter enrollments and county-assigned “fiscal distress” classifications to conclude that there is no association between charter enrollments and fiscal distress. The contention here is that there can’t be an illness if the patient isn’t dead. In order to rely on this problematic approach, the brief erroneously dismisses a significant, more rigorous, detailed, peer-reviewed and published body of research that illustrates the fiscal impact of charter schools on host districts, and how those fiscal impacts may lead to fiscal stress. The third brief, which presents itself as an analysis of costs and benefits, merely touts the benefits of charter schooling as tangible while being entirely dismissive of numerous known and often measurable costs. Taken together, the briefs are useful only in pointing to some important issues that policymakers should consider; its analyses of those issues are, however, generally superficial and misleading.

Notes and References

- 1 Freedberg, L. (2019). *Outside public view, panel faces tight deadline to recommend reforms of California's charter school law*. Oakland, CA: Ed Source. Retrieved May 14, 2019, from <https://edsource.org/2019/outside-public-view-panel-faces-tight-deadline-to-recommend-reforms-of-californias-charter-school-law/611330>
- 2 A blog from CRPE's director, Robin Lake, summarizes the three briefs here:

Lake, R. (2019). *We must understand the real impact of charter schools on California's school districts*. Seattle, WA: Center on Reinventing Public Education. Retrieved May 14, 2019, from <https://www.crpe.org/thelens/understanding-real-impact-of-charters-on-CA-districts>
- 3 Lake, R., Jochim, A., Hill, P., & Tuchman, S. (2019, May). *Charter schools and district enrollment loss*. Seattle, WA: Center on Reinventing Public Education. Retrieved May 14, 2019, from https://www.crpe.org/sites/default/files/charter_schools_and_district_enrollment_loss_o.pdf
- 4 Lake, R., Jochim, A., Hill, P., & Tuchman, S. (2019, May). *Do charter schools cause fiscal distress in school districts?* Seattle, WA: Center on Reinventing Public Education. Retrieved May 14, 2019, from https://www.crpe.org/sites/default/files/do_charter_schools_cause_fiscal_distress.pdf
- 5 Lake, R., Jochim, A., Hill, P., & Tuchman, S. (2019, May). *Do the costs of California charter schools outweigh the benefits?* Seattle, WA: Center on Reinventing Public Education. Retrieved May 14, 2019, from https://www.crpe.org/sites/default/files/do_costs_of_ca_charter_schools_outweigh_benefits_o.pdf
- 6 Feinberg, B. (2017). *Enrollment in private schools is also shrinking*. School Data Nerd Blog. Retrieved May 14, 2019, from <https://www.schoolatanerd.com/2017/05/21/enrollment-in-private-schools-is-also-shrinking/>
- 7 In CRPE's own cited source, while parochial school enrollments are down over the long run, they too are relatively stable from 2010 forward, with most of their decline occurring from 2005-06 through 2010, while much of the charter impact on district school enrollments occurred after 2010.
- 8 California Department of Education (2018). *Criteria and standards for fiscal solvency*. Retrieved May 14, 2019, from <https://www.cde.ca.gov/fg/fi/ss/csoverview.asp>
- 9 Example drawn from Jackson, K., Johnson, R., Persico, C. (2015). *Does money matter after all?* Cambridge, MA: Education Next. Retrieved May 14, 2019, from <https://www.educationnext.org/money-matter/>
- 10 Bruno, P. (2019, May). *Charter competition and district finances: Evidence from California*. Retrieved May 14, 2019, from <https://www.edpolicyinca.org/publications/charter-competition-and-district-finances-evidence-california>
- 11 Arsen, D., DeLuca, T., Ni, Y., & Bates, M. (2016). Which districts get into financial trouble and why: Michigan's story. *Journal of Education Finance*, 42(2), 100-126.
- 12 Arsen, D., DeLuca, T., Ni, Y., & Bates, M. (2016). Which districts get into financial trouble and Why: Michigan's story. *Journal of Education Finance*, 42(2), 100-126 (p. 114).
- 13 "A one percentage increase in a district's students receiving special education services in Model 5 generates roughly a \$43 decline in district fund balance per student" (p. 115).
- 14 Arsen, et al. write that "a one percentage increase in charter school enrollment has an indirect effect of decreasing district fund balance by \$4.9 (-52.627 + 47.684 = -4.9) through increasing the share of special education students in district schools" (p. 119). While a seemingly small per-pupil dollar amount, this is approximately a 10% reduction to per-pupil fund balances.
- 15 "Table 5 displays the results for our full model in which %Charter is replaced by variables that count the

number of consecutive years that a district has reached alternative thresholds (5%, 10%, 15%, 20% and 25%) of charter penetration. Under this specification, the loss of resident students to charter schools has a strong negative impact on district fund balances. Moreover, the adverse impact on district finances increases progressively as the charter threshold increases from 5% to 25% of resident students. The results indicate that in the relatively small number of Michigan districts in which charter penetration reaches very high and sustained levels, the loss of students to charters causes district fund balances to sharply deteriorate” (p. 118).

- 16 Baker, B.D. (2016). *Exploring the consequences of charter school expansion in US cities*. Washington, DC: Economic Policy Institute. Retrieved May 14, 2019, from <https://files.eric.ed.gov/fulltext/ED588750.pdf> (p. 22).
- 17 The entirety of the mention is as follows: “Despite these limitations, we think our measure is superior to analytic approaches that require assumptions about how districts can or will adjust to students enrolling in charter schools, as is the case with several prior studies on this topic” (p. 7).
- 18 Bifulco, R., & Reback, R. (2014). Fiscal impacts of charter schools: lessons from New York. *Education Finance and Policy*, 9(1), 86-107.
- 19 Ladd, H.F., & Singleton, J.D. (2017). The fiscal externalities of charter schools: Evidence from North Carolina. *Education Finance and Policy*, 1-34.
- 20 Ladd, H.F., & Singleton, J.D. (2017). The fiscal externalities of charter schools: Evidence from North Carolina. *Education Finance and Policy*, 1-34 (p. 1).
- 21 Ladd, H.F., & Singleton, J.D. (2017). The fiscal externalities of charter schools: Evidence from North Carolina. *Education Finance and Policy*, 1-34 (p. 19).
- 22 Ladd, H.F., & Singleton, J.D. (2017). The fiscal externalities of charter schools: Evidence from North Carolina. *Education Finance and Policy*, 1-34 (p. 19).
- 23 This is the legislative approach used in Massachusetts. See Ridley, M. & Terrier, C. (2018). *Fiscal and education spillovers from charter school expansion*. Cambridge, MA: Massachusetts Institute of Technology, School Effectiveness and Inequality Initiative. Retrieved May 14, 2019, from <http://seii.mit.edu/wp-content/uploads/2018/07/SEII-Discussion-Paper-2018.02-Ridley-Terrier.pdf>
- 24 That is, an 80% pass through transfer from the district to the charter schools, plus a 20% subsidy start up for the charter schools, AND a 20% subsidy to the district for carried, transitional expenses (total = 120% of existing expense), as explained by Dr. Reback in this presentation: <https://www.youtube.com/watch?v=7bN-5fYgeRv4&t=95s>
- 25 In a very recent article, Buerger and Bifulco (2019) attempt to explore more nuanced influences of charter school enrollment expansion on district schools’ costs and efficiency over time (though relatively short run). The article suggests that as districts adjust to larger charter penetration shares, they are more able to achieve balance between increased costs (due largely to higher need children being left behind in district schools) and efficiency gains. This finding, however, does not consider equity concerns of sorting students more significantly by needs, between district and charter schools operating in the same geographic space, or whether resources can be sufficiently distributed to and across district schools to meet the needs of their higher cost populations (rather, that they are more efficiently achieving whatever outcomes they happen to be achieving).

Buerger, C., & Bifulco, R. (2019). The effect of charter schools on districts’ student composition, costs, and efficiency: The case of New York state. *Economics of Education Review*, 69, 61-72.
- 26 The 3-4 studies discussed here are just a subset of the research into this question. Others include:

Arsen, D. & Ni, Y. (2012). The effects of charter school competition on school district resource allocation. *Educational Administration Quarterly*, 48(1), 3-38;

Lafer, G. (2018). *Breaking Point: The cost of charter schools for public school districts*. Oakland, CA: In the Public Interest. Retrieved May 14, 2019, from https://www.inthepublicinterest.org/wp-content/uploads/ITPI_Breaking_Point_May2018FINAL.pdf;

Lapp, David, et al. (2017). *The fiscal impact of charter school expansion: Calculations in six Pennsylvania school districts*. Philadelphia, PA; Research for Action. Retrieved May 14, 2019, from <https://www.researchforaction.org/publications/fiscal-impact-charter-school-expansion-calculations-six-pennsylvania-school-districts/>

- 27 Lake, R., Cobb, T., Sharma, R., Opalka, A. (2018) *The slowdown in Bay Area charter growth: Causes and solutions*. Seattle, WA: Center on Reinventing Public Education. Retrieved May 14, 2019, from <https://www.crpe.org/publications/slowdown-bay-area-charter-school-growth-causes-solutions>

- 28 Ugo, I., & Hill, L. (2017). *Charter schools and California's local control funding formula*. San Francisco, CA: Public Policy Institute of California. Retrieved May 14, 2019, from <https://www.ppic.org/publication/charter-schools-and-californias-local-control-funding-formula/>

The brief further argues that uneven distribution of children with disabilities is not problematic and that in general, charter schools are doing better than district schools at “inclusion” of children with disabilities, citing:

Rhim, L.M., Kothari, S. (2018). *Key trends in special education in charter schools: A secondary analysis of the civil rights data collection*. New York, NY: National Center for Special Education in Charter Schools. Retrieved May 14, 2019, from https://static1.squarespace.com/static/52feb326e4b069fc72abb-oc8/t/5a9558358165f588f486acbd/1519736886129/280272+NCSECS+Exec+Summary_PRINT_V2pdf.pdf

- 29 Gill, B. (2018). *Charter schools and segregation: What the research says*. Washington, DC: FutureEd. Retrieved May 14, 2019, from <https://www.future-ed.org/work/school-choice-social-justice-what-the-research-shows/>

- 30 Levin, H.M., McEwan, P.J., Belfield, C., Bowden, A.B., & Shand, R. (2017). *Economic evaluation in education: Cost-effectiveness and benefit-cost analysis*. Thousand Oaks, CA: SAGE Publications.

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

- 32 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.

- 33 *Serrano v. Priest*, 487 P.2d 1241, 5 Cal. 3d 584, 96 Cal. Rptr. 601 (1971).

- 34 Baker, B.D. (2016). *Exploring the consequences of charter school expansion in US cities*. Economic Policy Institute.

- 35 Andrews, M., Duncombe, W., & Yinger, J. (2002). Revisiting economies of size in American education: are we any closer to a consensus? *Economics of education review*, 21(3), 245-262.

- 36 Early studies of school district expenditures often found a reverse “J” shaped curve of spending by enrollment size. That is, rapidly increasing per-pupil spending for very small districts but also an uptick in spending per pupil in very large districts. These spending patterns, however, are not the same as “cost” differentials. “Cost” refers to the amount that must be spent to achieve any given level of outcomes at a given level of efficiency in producing those outcomes. There exists no theoretical basis for assuming that the “costs” of achieving constant outcomes rise as district enrollment rises above certain levels, because once scale economies have been achieved, underlying resources can be organized to deliver programs and services to continue to achieve constant outcomes at similar per-pupil cost.

- 37 Atchison, D., Levin, J., & de los Reyes, I.B. (2018). *Study of spending in public charter and traditional schools in California*. Retrieved May 14, 2019, from https://aefpweb.org/sites/default/files/webform/44/18-6018_

- 38 Baker, B., & Miron, G. (2015). *The business of charter schooling: Understanding the policies that charter operators use for financial benefit*. National Education Policy Center.
- 39 Buerger, C., & Harris, D. N. (2017). *How did the New Orleans school reforms influence school spending?* Retrieved May 14, 2019, from <https://educationresearchalliancenola.org/files/publications/020717-Buerger-Harris-How-Did-the-New-Orleans-School-Reforms-Influence-School-Spending.pdf>
- 40 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.
- 41 Oluwole, J., & Green, P. (2018). Are California's charter schools the new separate-but-equal 'schools of excellence,' or are they worse than Plessy? *Journal of Transformative Leadership and Policy Studies (Forthcoming)*.
- 42 Baker, B.D. (2016). *Exploring the consequences of charter school expansion in US cities*. Washington, DC: Economic Policy Institute.
- 43 Baker, B.D. (2016). *Exploring the consequences of charter school expansion in US cities*. Washington, DC: Economic Policy Institute.
- 44 Baker, B.D., Di Carlo, M., & Weber, M. (2019). *The adequacy and fairness of state school finance systems*. Retrieved May 14, 2019, from http://schoolfinancedata.org/wp-content/uploads/2019/03/SFID_AnnualReport_2019.pdf
- 45 Levin, J., de los Reyes, I.B., Atchison, D., Manship, K., Arellanes, M., & Hu, L. (2018). *What does it cost to educate California's students? A professional judgment approach report appendices*. Estimates produced by Baker and colleagues regarding California district funding gaps are similar: Baker, B.D., Weber, M., Srikanth, A., Kim, R., & Atzbi, M. (2018). *The real shame of the nation: The causes and consequences of interstate inequity in public school investments*. Newark and New Brunswick, NJ: Education Law Center of New Jersey & Rutgers GSE.