

ESTIMATING A PRICE TAG FOR SCHOOL VOUCHERS



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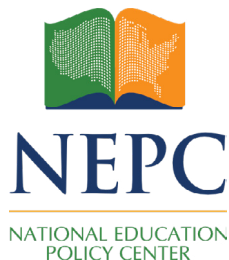
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Executive Summary

School vouchers, a school choice policy that allows students and families to use public funds to fully or partially pay the cost of attending private schools, became a major area of policy debate once again during Betsy DeVos's tenure as United States Secretary of Education. Recent evaluations have found negative impacts of vouchers on academic outcomes among students using them, particularly on academic test scores, although older research has found mixed results. However, the input side has received less research attention; we know relatively little about the costs of implementing voucher systems.

The research about such costs has mainly emphasized the size of the voucher itself; advocates argue that because vouchers typically pay an amount less than the average per-pupil expenditure in traditional public schools, they save money and are therefore more cost-effective than traditional public schools, even if they are not more effective academically. However, these studies do not generally consider the indirect costs of managing a decentralized and more complex educational system. Such costs are embedded in the design of the originator of the modern school voucher, Milton Friedman. Friedman suggested that the rationale for public investment in education was based on a common set of democratic values and behaviors, entailing a need for school eligibility standards and oversight to ensure they were promoting these values and behaviors. The exact magnitude of such indirect costs in a large-scale or universal voucher system depends upon a number of factors, including the specific policy framework and local contexts, as well as behavioral responses to policy changes by schools, families, and students.

This brief first provides an overview of the literature on the effects and costs of vouchers and applies recent empirical evidence on policy effects, behavioral responses, and contextual factors to determine administrative costs of a universal voucher system. Because there is no state that currently operates a universal voucher system, we extrapolate based on empirical evidence from a wide range of smaller-scale voucher systems, pilot programs, and experiments to estimate a range of costs. We use California as a hypothetical case study because of

its size and its range of urban, suburban, and rural contexts.

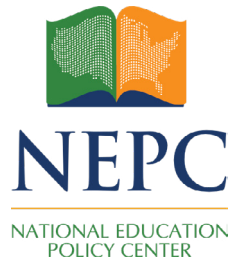
We consider five areas of potential increased costs, above what is currently spent to operate the public school system:

- Accommodating additional students in the publicly funded school system who would have attended private school even in the absence of vouchers, but who would now be subsidized by the state to do so.
- Administering the voucher system, including record-keeping, monitoring, and accrediting or assessing schools to ensure they meet effective democracy-preparation and other required standards.
- Disseminating information to parents about their options and how to apply to schools and use the voucher.
- Adjudicating disputes over provision of necessary services, especially in the case of special education, and disputes that could arise if a family moved or switched schools in the middle of the school year, or if a school shut down during the school year, and the family wanted to divide a voucher among schools.
- Transporting students, often over longer distances in a more decentralized route network.

Overall, we find that the total public costs of education would increase by between 11% and 33% with universal vouchers, depending upon both the exact design of the policy and the behavioral responses. Nationally, this would amount to from \$66.5 to \$203 billion per year. This largely corroborates a 1994 estimate made by Levin and Driver, using a different set of methods and data, of additional costs of 25% added to present costs. Current evidence suggests that vouchers are equally or less effective in raising student achievement than traditional public schools. Voucher advocates claim that even if vouchers are not more effective than traditional public schools, they are more cost-effective because they cost less. In contrast, our findings indicate that schools funded by vouchers would need to be about 20% more effective than traditional public schools to be equally cost-effective, because the 25% increase in costs represents 20% of the new total costs (125% of the original costs).

Recommendations:

- Policy proposals and future research should be more transparent about the additional costs of a voucher system, including accommodating additional students, regulation and oversight, disseminating information, adjudicating disputes, and transporting students;
- Evaluations of vouchers should include detailed data collection on these costs using an established method; and
- In their decision-making about whether to implement a given voucher policy, policymakers should weigh its total costs against evidence of its likely effectiveness or benefits.



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Introduction

School vouchers were proposed by economist Milton Friedman¹ as a means of enabling students and families to use public funds for private education. The idea has shown a recent resurgence in theoretical and policy debates.² Under Friedman’s conception, parents would receive a voucher to fund tuition at a private school of their choice among those that meet some basic eligibility criteria. Eligibility would depend on schools meeting social objectives for democracy and civic participation. As Friedman stated, “A stable and democratic society is impossible without widespread acceptance of a common set of values.”³ Friedman’s original proposal had relatively few stipulations—schools could have selective admissions, religious and for-profit schools would be allowed, and schools could charge more in tuition than the voucher, requiring parents to “top up” the voucher amount. Although as a libertarian, Friedman provided details on how states could use a market mechanism such as vouchers to provide education, he failed to specify details for how schools would meet eligibility requirements for vouchers—that is, how they would demonstrate that they met standards for assuring equitable participation and a common set of democratic values and knowledge for social, economic, and political functioning. However, he asserted that a marketplace of educational choices would address equity in educational access and outcomes, and he assumed that eligibility standards for social cohesion would be found or emerge.

Modern voucher systems were first implemented in Milwaukee in 1990 and spread to other districts in Wisconsin, a federally funded initiative in the District of Columbia, and at least 14 statewide programs with varying forms of targeting (depending on the state, available to students with disabilities, children from low-income families, and students in public schools below accountability thresholds on testing).⁴ Related policies such as tuition tax credits and education savings accounts have also been implemented in some states.⁵ Although some of the discussion here also pertains to these policies, our primary focus is on vouchers.

The voucher system requires a substantial change in governance, administration, transportation, and information in the system of education that is likely to affect the cost of that

system. Much of the discussion on voucher costs focuses on the size of the voucher itself, which is often lower than average per-pupil spending in traditional public schools, with proponents of vouchers arguing that they save money through unspecified “efficiencies.”⁶ The purpose of this policy brief is to consider the economic cost of a universal voucher system, with its attendant requirements for new systems of governance, information, school transportation, and school eligibility or accreditation. States that use vouchers and the federal application in Washington, DC, all limit their application to specific localities. Although data can be used to extrapolate the costs of potential expansions to scale, there are no universal statewide systems at this time. In order to model a more universal application of a voucher system, we will provide a state framework for California, with its large population of school-age children in a wide range of settings, to represent a more universal approach. We focus on what resources would be required to shift from existing public school systems to a large-scale voucher system.

This paper is, in many ways, an update and extension of Levin and Driver’s efforts to define and estimate the public costs of a shift to vouchers.⁷ It extends their work in a number of important ways. First, since Levin and Driver’s studies were published in the 1990s, there have been several additional, and in some cases, larger-scale, voucher experiments. These provide much more reliable empirical data that can be used to inform assumptions about policy frameworks and behavioral responses to policies. Second, the economic and policy contexts have shifted, in obvious ways such as price inflation, but also changes in the relative prices of inputs and the design of voucher systems. Third, over the past few decades we and other researchers have refined methods and tools for gathering and analyzing cost data to obtain more precise and reliable results. Finally, given the proliferation of new choice systems and policy tools, we apply a more robust theoretical framework and take into consideration additional categories of costs.

Theoretical Framework—Transaction Costs, Centralization vs. Decentralization

In its traditional public school system, the state of California legislates, funds (while authorizing local governments to augment state funds with federal funds and other sources of revenue), and directly regulates a manageable number of school districts responsible for more than 10,000 individual schools and many millions of students. California has 1,035 school districts that the state governs, funds, and regulates, while the districts in turn oversee 6.16 million students in traditional public and charter schools with some minimal oversight over private schools.⁸ The average public school (including charters) has about 582 students, while the average private school has only about 156 students. This suggests that a universal voucher plan in California would require the state to directly monitor six million families with school-age children to be sure they were in “eligible” schools with an appropriate voucher for their needs. It would also have to expand oversight activities from about 10,588 public schools to about 40,000 private schools. This is a prodigious expansion of oversight activities. The larger number of schools derives from the fact that private schools are considerably smaller than their public counterparts in California and other states. With massive decentralization of authority and responsibility for ensuring school quality and establishing

funding levels and application of vouchers, there is a huge rise in the state's transactions, with attendant "transaction costs."⁹ Transaction costs, the frictions and inconveniences that can arise from coordinating complex systems, tend to give rise to more centralized management. Some transaction costs are determining schools' eligibility for meeting the requirements of a "common set of values and knowledge for civic functioning" to which Friedman refers; ensuring that health, safety, and financial compliance requirements are met; that compulsory education laws are being followed by families in a decentralized system with many more schools and fewer intermediary organizations to assist them; and that admissions and lotteries for oversubscribed schools are fairly run and providing information to families about them. These costs are not just hypothetical—a number of these frictions and barriers were noted in 2020 by parents as obstacles to participation in the North Carolina Opportunity Scholarship program.¹⁰

Since there is no universal voucher plan in any of the states, it is not possible to measure costs directly from existing state arrangements. Accordingly, evidence on the expanded cost of a highly decentralized voucher system will be drawn from specific data on analogous partial-voucher arrangements as well as similar government functions in education and related activities.

Literature Review

Evidence of the effectiveness of vouchers has been mixed, with largely null to negative results overall, particularly in student learning outcomes as measured by test scores. Consideration of the broader impact of school vouchers should not be limited to test scores alone. A more comprehensive framework can consider not just a wider range of academic and non-academic student-level outcomes, but broader social outcomes on equity, cohesion, and choice¹¹. A number of systematic reviews document the range of findings for different outcome measures, contexts and specific voucher programs, for different populations, and over time, but we highlight some of the most significant and recent findings here.¹² After some early positive results in some academic subjects and for some populations in Milwaukee¹³ and Washington, D.C.,¹⁴ more recent studies have found strikingly negative results in Washington D.C.,¹⁵ Ohio,¹⁶ Indiana,¹⁷ and Louisiana.¹⁸ No difference in test score outcomes was found in Wisconsin after researchers accounted for the fact that test score accountability pressure changed in private, but not public, schools contemporaneously with the voucher study.¹⁹ Table 1 briefly summarizes the magnitude of the results in both effect sizes, which are a standardized unit of effectiveness, and percentile changes, which reflect changes in relative rankings from the median assuming a normal distribution. Note that four of the recent cases show negative results for vouchers.

Table 1. Summary of Recent Voucher Effects

	Math (Effect Size)	Math (Percentile)	Reading (Effect Size)	Reading (Percentile)
District of Columbia ²⁰	-0.18	-7.3	-0.12	-4.9
Indiana ²¹	-0.15	-6	Null	Null
Louisiana ²²	-0.1 - -0.5	-4 - -19.2	-0.04 - -0.2	-1.6 - -7.9
Ohio ²³	-0.45- -0.67	-17.4 - -24.5	-0.25- -0.46	-9.9 - -17.7
Wisconsin ²⁴	0.25	10	0.1	4

Recent Developments

There have been a number of recent efforts to estimate the costs, or cost savings, of vouchers. Proponents of school choice have argued that voucher systems are more efficient and result in net fiscal savings, as voucher amounts that are set by governments are typically lower than average public per-pupil expenditures. Thus, when the family of a public school student elects to use a voucher, the amount saved at the public school would seem to exceed the cost of the voucher.²⁵ Several reports by the advocacy organization EdChoice make versions of this claim, including a school voucher “audit” claiming almost \$2 billion in savings due to vouchers from 1990 through 2011.²⁶ One modeling study conducted by the New Hampshire Department of Education argues that vouchers will save the state substantial money because their value is tied to the state contribution to public education cost, which is only about 25% of the total cost. The model used in the New Hampshire study assumes that special education costs would disappear entirely as students waive Individuals with Disabilities in Education Act rights. Although the authors concede that schools will face consistent fixed costs even if they lose students and funding to the private sector, they assume that those costs would also dissipate over three years.²⁷

Cost estimation studies such as New Hampshire’s seldom carefully consider and weigh costs that are variable, which would be reduced if students left traditional public schools, and costs that are fixed, such as facilities, administration, and teacher costs driven by long-term contracts that would then be divided among fewer students, driving up per-student costs²⁸. These analyses do not account for the substantial indirect costs of operating a large or even universal school choice system, which would be substantially shifted to the states in the case of vouchers provided to families, or the cost burdens on any remaining traditional public schools or on families themselves²⁹. Some studies have paid more attention to indirect costs as well as to establishing empirical support for assumptions about behavioral responses to policy shifts.³⁰ Further, a study of school choice cost and effects in Sweden found that expanded choice increased costs, including in the remaining public schools, likely due to socioeconomic sorting and increased provision of amenities to attract students.³¹ We draw upon these studies in the next section to establish an empirical basis for updated estimates

of transaction costs as well as to corroborate our findings against existing cost studies.

Discussion and Analysis

Factors Affecting Costs

The costs of a given voucher system will certainly vary based upon the design of the system, including the amount of the voucher and the eligibility criteria (which would affect costs of students substituting from private schools into the voucher system), the regulatory framework and amount of oversight. Other factors which will affect costs include behavioral responses to the choice system by families and by both private and traditional public schools, other factors which are difficult to predict, a priori, and such local context factors as the levels of competitiveness and unionization in local labor markets, population density, and local geographic barriers that can affect placement of schools and ease of movement. We consider a range of plausible costs under different scenarios in the sections below.

Methods and Findings for Categories of Costs

Specific categories of transaction costs that could arise in such a scenario and are the subject of this brief are:

- The costs of accommodating previously independently funded, private school students in the public school funding system.
- Costs of record-keeping and monitoring, including accreditation and assessment costs.
- Costs of providing information to parents about the choices they face.
- Costs of adjudicating disputes that could arise under such a complex and decentralized system.
- The additional costs of transporting more students, often longer distances and with less centralized route networks if students are choosing from schools across an entire local area rather than their closest neighborhood school, costs which could be borne by parents or the government, depending on the design of the system.

Accommodating Additional Students

The most obvious cost of a voucher system to the government is the vouchers themselves, but we will not assume that vouchers entail higher instructional costs than those in public schools. However, considerable study has found that the shift of students from public schools to vouchers leaves public schools with high fixed costs for personnel, facilities, and equipment that cannot be readily reduced in the short to medium term. That said, there are still at least two ways in which the actual voucher amounts represent an added cost to the government: The first is the extent to which vouchers go to families and students who would have attended a private school anyway. The second is the extent to which removing students

from public schools and their associated funding streams creates additional financial strain on remaining public schools. We focus on the first point in this brief as a universal voucher scenario may render the latter point moot.

The additional fiscal costs of vouchers to state and local governments above and beyond what they would have spent on public education anyway will depend on the amount of the voucher relative to public school expenditures and the share of families who would have attended private schools even in the absence of the voucher, but who take advantage of the voucher. The extent of transfers will depend on how targeted the vouchers are. They may favor current or previous public school students in lotteries, or exclude religious schools from eligibility. That still leaves the issue of students entering kindergarten, for whom it is difficult to know whether they would have attended public school in the absence of a voucher. Further, any savings from additional restrictions aimed at avoiding subsidizing families who would have attended private schools anyway would require higher monitoring costs, which would be difficult to predict.

As an example, the District of Columbia Opportunity Scholarship program has several design features that lead to an unusually high number of participants having previously attended only public schools. It is means-tested, the size of the voucher does not cover the full cost of many of Washington, D.C.'s elite private schools, and students in failing public schools are given preferential weight in the voucher lottery. This leads to about 90% of voucher recipients being students who would have otherwise attended public schools.³² However, D.C. seems to be an outlier in this regard. Among several high-profile voucher systems, many with similar provisions to D.C.'s targeting vouchers to public school students, on average about 60% of voucher recipients were attending private schools before the voucher system began. Table 2 summarizes the share of students receiving vouchers who would have attended private schools in the absence of a voucher, and therefore would represent additional public expenditures in a voucher system. It also compares the voucher amount with average state and local spending on public schools for a number of high-profile voucher systems. That is, the voucher system would make possible increased government educational support for students whose fees were formerly paid by parental private spending, private scholarships, or a combination of the two.

Table 2. Summary of Targeting and Amounts Compared with Average Per-Pupil Public School Expenditures, Selected Voucher Systems

Voucher System	Share of Private-School Families Using Voucher	Amount of Voucher (2020 Dollars)	Voucher Amount as Share of Per-Pupil Public School Expenditures ³³
Ohio (Cleveland, special needs, and a statewide program for students in struggling schools)	61% ³⁴	K-8, \$4,650 9-12, \$6,000 Special Education, up to \$27,000 depending on disability ³⁵	38-207%
Wisconsin	73% of students when program started were already in private school 57% of first-time voucher users were already in private school ³⁶	K-8, \$8,300 9-12, \$8,946 Special Education, \$12,977 ³⁷	67.5-105%
District of Columbia	11% of control group students attended private schools ³⁸	K-8, \$9,161 9-12, \$13,742 ³⁹	40-60%
Indiana	Approximately 60% ⁴⁰	\$4,449 on average ⁴¹ (based on state funding for public school district)	43.4%

Based on voucher use by private school students in Ohio, Wisconsin, and Indiana, in our baseline estimate we assume that 60% of students already in private school will receive a voucher. Based on voucher amounts relative to average per-pupil expenditures in existing voucher systems and the fact that students receiving vouchers are, on average, somewhat less costly to educate than the overall public school average because they tend to be younger and less likely to have disabilities (unless they are in specific voucher programs targeted to students with disabilities), we assume vouchers will constitute approximately 60% of the average per-pupil expenditures in traditional public schools. Therefore, if 60% of the current 5.72 million private school students in the United States⁴² receive a voucher worth 60% of the \$12,612 average per-pupil expenditures for public schools as of 2018,⁴³ public spending on education would increase by about \$26 billion, as shown in Table 3.

In a universal system, however, it is likely that far more current private school students, or even all of them, would be eligible for vouchers. If the system were truly universal and allowed parents to pay the additional cost of tuition beyond what the voucher would cover, as Friedman proposed, even wealthy families sending their children to elite private schools would be eligible for, and in most cases probably would accept, vouchers covering a small share of the tuition. Further, the amount of the voucher would need to increase to accom-

moderate higher-needs students as more students with disabilities receive vouchers. Finally, if voucher programs were to scale up, schools would likely incur additional costs. To accommodate additional students, they would need to modify admissions policies and implement lotteries. With a much larger market share, private schools would face constraints on the availability of high-quality teachers, putting upward pressure on teacher wages and producing political pressure to increase voucher amounts. Although we are primarily focused on increased public costs, we also note that private costs would likely increase as well under a universal voucher system. Certain advantages such as subsidies from philanthropic and religious organizations, and private school teachers willing to work for below-market wages because of philosophical commitment or desirable working conditions, would no longer be as available on a wide scale with government-supported vouchers. Parents would face tuition and fees in excess of the voucher amounts if they were allowed to supplement the voucher for higher-tuition schools. Given the potential sources of increased costs, we assume at an upper bound that the voucher would need to cover 100% of the current public per-pupil expenditures. Based on these parameters, we also include an upper-bound estimate in Table 3 of \$68.5 billion. Table 3 summarizes the baseline and high estimates, including a comparison to Levin and Driver’s estimates, adjusted for inflation.

Table 3. Costs of Accommodating Additional Students

	Share of Private School Students Receiving Vouchers	Voucher as Share of Per- Pupil Expenditures	Total	Levin and Driver Estimate Adjusted for Inflation ⁴⁴
Low Estimate (based on current empirical evidence)	60	60	\$26 billion	\$34.5 billion (note: assumes 75% participation and 80% value)
High Estimate (based on extrapolated additional costs and students in scale-up)	95	100	\$68.5 billion	\$57.4 billion

Record-Keeping and Monitoring

The tasks associated with keeping records about, among other things, children’s ages throughout the state, eligibility of schools for vouchers, amounts required to address specific student needs, whether students are complying with compulsory attendance laws and where, and whether the schools themselves are complying with various regulatory requirements, would become considerably more complex and expensive under an expanded or universal voucher scheme than is presently the case. Expected increases in the number of schools with smaller enrollments would entail more costs for transactions with the state for both schools and the states. This is a classic case of rising transaction costs affecting voucher policy allocations, accountability, and implementation as the state transitions from interacting with a limited

number of school districts to dealing with individual families and schools. Taking California as an example, the state, currently responsible for monitoring approximately 1,000 school districts, would need to monitor and keep records for the approximately six million school-age children and over 10,000 schools (the latter number would almost certainly rise with voucher-fueled market incentives, in accordance with the aim of increasing competition and parental choice). Data must be collected from families and schools, particularly when students move or change schools, including the reasons for changes. Distribution of voucher funds may have to be negotiated among schools when children move during the school year. The present system achieves efficiencies by operating in a tiered system—schools and districts interface with parents, districts oversee schools, and the state oversees districts with some additional oversight and support from county-level units. Eliminating those layers and instead having the state directly maintain ongoing and recurrent contacts with parents and with schools raises transaction costs and makes the system unwieldy. As an example, Wisconsin currently performs enrollment audits at private schools participating in its voucher programs twice a year, reconciling payments with reported enrollments and checking student residency, income, and other eligibility requirements. It performs financial audits of institutions once a year.⁴⁵

Following Levin and Driver,⁴⁶ we use the Social Security system as an analogous system that keeps detailed records on millions of workers. Social Security tracks worker history and income across jobs, processes claims and determines eligibility and amounts for retirement, disability, and other benefits. The Social Security Administration (SSA) makes adjustments in benefits based on beneficiary mobility and changes to status such as the death of a beneficiary or family member. SSA reports administrative expenses of \$6.42 billion for its 64 million beneficiaries as of 2019,⁴⁷ an average administrative cost of \$100 per beneficiary. This is somewhat lower than the amounts in Levin and Driver, adjusted for inflation to 2020 dollars, of \$89.23 per retirement claim and \$160.62 per SSA beneficiary (this latter is an average of the more common and cheaper retirement claims with disability claims, which are less frequent but more costly to process). It is also likely that this is a conservative estimate of the record-keeping and monitoring costs of a voucher system, as family and student mobility across schools and homes, as well as the need to match students to schools, would add to the complexity. Given that, it is more likely a reasonable estimate of the additional costs above and beyond the record-keeping costs currently borne by state and local education agencies.

We corroborate these findings with prior evidence and research on the administrative costs of existing voucher systems. At the upper extreme, a study of the Cleveland voucher system showed direct administrative costs of \$5 million dollars for a \$28 million voucher program, or \$7.4 million in all and \$1,740 per pupil in 2020 dollars.⁴⁸ Hill estimated \$286 per pupil in 2020 dollars to run a statewide voucher office based on estimating what staff and facilities would be needed to create and enforce regulations and manage enrollment records.⁴⁹ That includes determining eligibility rules, conducting any lotteries, tracking students, and responding to complaints when schools are in violation of regulations, such as not following admissions protocols. His estimate includes a similar range of activities to those outlined above, but because how those map onto staffing requirements and associated estimated salaries and benefits is somewhat opaque, his estimate is not directly comparable. Public records on the administrative costs per pupil in existing voucher systems also largely comport

with our estimates. The Wisconsin Department of Public Instruction recently requested a full-time staff member and associated supports to administer the voucher program for 1,300 students with special needs. Factoring in the audits private schools are required to conduct at their own expense,⁵⁰ this amounts to approximately \$75 per pupil per year in administrative costs.⁵¹ Florida's voucher system is largely administered by nonprofits. The largest of these, Step Up for Students, administers approximately 99% of scholarships in the state and spends approximately 1% of its funds on administration. The Florida Department of Education also plays a role in ensuring school and student eligibility for vouchers.⁵² If we assume the state's administrative cost also equals 1% of the voucher amount, for a total of 2% of the cost of vouchers worth up to \$7,408, then administrative costs are about \$150 per pupil per year.⁵³

Assessment and Accreditation

Under a more widespread voucher system, there would be additional costs for oversight to ensure at least basic adherence to quality standards. These include following health and safety regulations, ensuring that students do not face race, gender, or other discrimination, and ensuring that students with disabilities are receiving appropriate accommodations and services (although most current voucher systems provide students with disabilities with fewer legal protections than those provided by the Individuals with Disabilities Education Act). While private schools would likely resist being heavily regulated, to protect their own independence and autonomy, it is likely that the state would establish stipulations on schools receiving vouchers to ensure some minimum standard of quality, fairness, and equity, and to avoid outright financial fraud. As noted above, even the originator of the modern idea of vouchers, Milton Friedman, argued for a minimum standard of educational content and quality to promote social and democratic values and economic development. To mitigate concerns about potential adverse equity and other effects of vouchers,⁵⁴ there would also likely be some expansion of the protections that private schools must provide to students in order to be eligible to receive vouchers. Presently, these protections are limited to private schools that receive federal funding. They cover such potential equity concerns as racial discrimination and gender discrimination under Title IX, but states would have some latitude to expand this under universal vouchers. For instance, Wisconsin requires "general compliance," meaning compliance with basic health and safety rules as well as non-discrimination laws, but Friedman's eligibility requirements would appear to require much more, including assessing the effectiveness of teachers and schools at instilling democratic values and participation.

As a guide to what would be needed to assess whether schools were meeting these minimum standards, we use qualitative review, also called school inspectorate systems, as a guide.⁵⁵ In these systems, experts in school leadership engage in two- or three-day reviews, often in teams of two or three, to assess school leadership, culture, and climate, to review curricula, and observe classrooms. We assume it would take two highly trained and experienced reviewers five days per school, including time to prepare and time to produce a written report with feedback. Based on interviews, a private vendor charges \$17,310 (adjusted to 2020 dollars) for a review. States would also need to establish a central office and a panel of experts to formulate quality standards and metrics, as well as form a team to train and

oversee reviewers. These would be in addition to whatever testing and accountability systems states would leave in place and apply to private schools. States would also incur costs to receive and investigate complaints about schools' failures to meet quality standards, to regularly revisit criteria, and to establish any additional assessments beyond current testing regimes to assess, for example, democratic values and participation. We assume that a state office in California with a staff of 10 full-time employees would oversee this process. With their average salary equivalent to that of an assistant superintendent (i.e., \$150,000⁵⁶ plus fringe benefits totaling 38.2% of total compensation⁵⁷), the total cost, including selecting and training the reviewers, would come to \$2.4 million. The other factor to consider is how frequently accreditation review would occur, because it would likely not be feasible to review every school annually. If reviews were conducted every three years, the cost would be \$5,770 per school per year, or about \$11 per pupil per year, assuming the national average of 528 students per school. If enrollments were to decline to current average private school levels of 156 students, the per-pupil costs would be substantially higher, at \$37.

Disseminating Information

In a system of universal school choice, reliable and substantive information sources would have to be available to inform families and students about the range of school options and the process for applying to and enrolling in schools. In fact, barriers to information are a major obstacle to equitable participation in a number of choice systems, including vouchers, charters, and magnet schools.⁵⁸ Receiving information about schools has been shown in experimental research to be significantly associated with families selecting higher-quality schools.⁵⁹ One useful model for considering the costs of disseminating such information is the New York City high school choice model, in which the 74,000 eighth graders rank order 12 choices from among several hundred public high schools. The New York City Department of Education engages in an extensive information campaign, including coordinated efforts by middle school and high school counselors, centralized high school fairs, websites and mobile applications, and a printed guide with detailed information about each high school. This work is coordinated by the Office of Student Enrollment Planning and Operations, which has 98 full-time equivalent employees and a budget of \$5.96 million for personnel, plus 22% for fringe benefits, plus approximately \$12 million in contractual services, including printing and IT services.⁶⁰ If we divide that \$19 million total budget by the 74,000 eighth graders, we arrive at an estimate of \$263 per pupil in information dissemination costs, but this might be an overestimate because this office handles more than just high school enrollment. The figure may also underestimate some costs since it only covers central office costs and omits important contributions from middle and high school staff and nonprofit educational agencies. To be conservative, we apply this per-pupil figure during grades when students are most likely to change schools: kindergarten, middle school in sixth grade, and high school in ninth grade.

Adjudicating Disputes

The decentralized nature and increased complexity of a voucher system create a potential for increased disputes. In the current, predominantly public system, the majority of dis-

putes within schools and districts are over the appropriate services to meet the needs of students with disabilities under the Individuals with Disabilities Education Act (IDEA). Such disputes would surely continue to arise, even if students with disabilities had fewer legal protections in private than in public schools. So also would other disputes, over such issues as: voucher eligibility and amounts, if those varied (e.g., in a means-tested or sliding-scale system); fairness and equity in school admissions; how to divide a voucher among schools if students moved during the school year; what to do in the event a school shuts down during the school year; whether a school was fulfilling its obligations as advertised and as required by regulation, etc.

Disputes involving special education are a useful analogue: Resolving them can be costly, but also relatively rare. Disputes are generally handled through one or more of three mechanisms: informal mediation sessions facilitated by a neutral third party, formal due process hearings, and complaints to the state education agency requesting a formal investigation. In 2003, the U.S. General Accounting Office reported annual national averages of five due process hearings, seven mediations, and 10 state complaints per 10,000 students, meaning that about 0.05-0.1% of students' families had a dispute each year.⁶¹ There has been a trend in special education disputes toward lower-cost methods of dispute resolution, particularly mediation.⁶² In a decentralized system with less government oversight, there is more potential for conflict. Therefore, we assume that with a voucher system, disputes will be somewhat more common but also somewhat less complex. We therefore use less costly mediation as a guide. Mediation cost an average of \$1,722 in 2020 dollars.⁶³ We assume 1% of students will have a dispute, for an average of \$17.22 per pupil in dispute resolution costs. Mediation costs reported by Levin and Driver were substantially higher. Adjusting their cost estimate for inflation results in an estimate of \$64.85.

Transportation Costs

Under a widespread choice plan, student transportation costs would almost certainly increase. Students would no longer necessarily attend their nearest neighborhood schools and thus would travel longer distances and use more decentralized route networks requiring more vehicles and drivers. Depending on the design of the system, these costs could be borne by families directly, by sponsoring government agencies, or by private schools (in which case they may put upward pressure on voucher amounts).

Several design elements of an expanded or universal voucher system would determine the exact magnitude of the increased transportation costs. The exact costs are difficult to anticipate because they would vary based on:

- The share of students who take up a voucher;
- The share of students taking advantage of school-provided transportation (yellow school buses, public transportation, and other services such as shuttle vans, taxis, or ride-shares);
- The “linear density,”⁶⁴ or the efficiency of the routing based on the number of students served, population density, the number of different schools and their geographic con-

centration, and the distance of students' homes from their schools;

- The mode share of different transportation options, depending upon density, local geography, and student age and need (with students with severe disabilities often requiring specialized transportation); and
- Local market conditions, including unionization, labor contracts and prevailing wage rates, and the extent of the public transportation network and associated subsidies.

Several studies provide suggestive evidence that is useful for framing and cross-validating the California case study. For broad context, smaller school districts with fewer than 3,000 students serving less dense areas in which students may need to travel longer distances to school spend about 38% more per pupil on transportation than large urban districts.⁶⁵

As expected, districts that experienced a large increase in school choice have tended to see increased transportation costs. When New Orleans switched to a system of near-universal charter schools, the average bus trip increased to 35 minutes and per-pupil spending on transportation increased 34%, from \$562 to \$752.⁶⁶ Transportation costs also rose in New York City when it adopted additional public school choice as part of the Bloomberg-Klein era of reforms.⁶⁷ Cities with more school choice also tend to have more complex student transportation systems and higher costs. This has been particularly the case for Washington, DC, New York City, and New Orleans, and to a lesser extent Detroit and Denver.⁶⁸ One study of the voucher system in Cleveland found that transportation costs rose from \$740 per pupil (converted from original to 2020 dollars using the Consumer Price Index) to \$1,780-\$2,670, an increase of approximately \$1,000-2,000, due to the distribution of homes and schools around the city and the need to use taxis to reach remote areas.⁶⁹ Although Cleveland seems to be an outlier, it serves as a useful upper bound, showing how high transportation costs could be in sparsely populated areas with highly decentralized networks of schools and residential sorting patterns.

Based on these studies, including empirical evidence on changes in mode shares, distances, and costs, we model one likely scenario of what transportation costs would be under a plausible voucher system in California, along with sensitivity analysis on how those costs would vary under other parameters.

Under our baseline scenario, we assume that most grade K-6 students will take yellow buses. Grade 7-12 students will take public transportation when it is available, or use yellow school buses or private transportation options (walk, bike, driven by parents, older high school students driving themselves, taxis, shuttle vans). A small number of students living in very remote areas or with disabilities will use ride-share services – HopSkipDrive, Kango, and Zum are services similar to Uber or Lyft that allow parent-monitored, on-demand rides for areas without enough population density to support regular bus routes, and have contractual arrangements with school districts to provide customized transportation.

We begin with the basic figure that national average annual per-student transportation costs were \$1,030 in 2020 dollars as of 2015-16, per the National Center for Education Statistics. We assume that the share of students riding school buses will increase from 33.2% by 30.7 percentage points as occurred in St. Paul, Minnesota, to 63.9%.⁷⁰ Costs per pupil will also

rise due to increased distances to school. We further assume a very small share of students (10% in our baseline estimate) will use commercial rideshare or taxi services, which based on Internet searches cost an average of \$10 each way per day, or \$3,600 per 180-day school year. The remaining students are evenly divided between private transportation (walk, bike, driven by parents, or drive themselves) and public transportation. For public transportation estimates, we use Bay Area Rapid Transit fares as a guide: A 10-mile ride from Daly City to downtown San Francisco has a fare of \$4, and the farebox recovery ratio for BART (meaning the share of total operating costs covered by passenger fares, with the remainder covered by various subsidies) is 60%, meaning the total cost of a ride is \$6.67 each way. The marginal cost may be lower and closer to the actual fare, but if there were a large influx of students traveling in various directions across a metropolitan area, service would likely need to be expanded to accommodate them, meaning that the average cost would be the more relevant metric. Table 4 summarizes our estimates based on these parameters.

Table 4. Estimated Costs of Transportation Under a Universal Voucher System

Mode	Share	Fiscal Cost Per Pupil Per Year	Proportional Share
School bus	63.9	1,380	881.80
Public transportation	13	2,401	312.10
Ride-share/Taxi	10.1	3,600	363
Private/other	13	-- (costs to families/students)	
Total	100		1,557

In sum, our estimate is that average per-pupil transportation costs are approximately \$1,560 per pupil, or \$530 (51%) higher than the current average across public schools. This is in line with other studies of changes in transportation costs due to school choice, slightly higher than New Orleans but substantially lower than Cleveland. Adjusted for inflation, the estimated additional costs in Levin and Driver would be approximately \$700 additional per pupil per year.

Summary of Findings

Table 5 summarizes our findings, extrapolating beyond our case of California to estimate the indirect costs of a universal voucher system for all 56.4 million K-12 students in the United States as of fall 2020 (50.7 million public school and 5.7 million private school students).⁷¹

Table 5. Summary of Additional Indirect Costs of Universal Vouchers

	Low Estimate		High Estimate		
Category of Cost	Share of Students to Which Cost Applies	Cost Per Pupil	Share of Students to Which Cost Applies	Cost Per Pupil	Subtotal
Accommodating Additional Students	60% of current private enrollment		95% of current private enrollment	\$12,612	\$68.5 billion
Recordkeeping and Monitoring	100%	\$100	100%	\$1740	\$98.1 billion
Accreditation and Assessment	100%	\$11	100%	\$37	\$2.1 billion
Disseminating Information	23% (3/13, for students entering K, 6 th , and 9 th grades)	\$263	23% (3/13, for students entering K, 6 th , and 9 th grades)	\$263	\$3.4 billion
Adjudicating Disputes	1%	1722	1%	1722	\$971 million
Transportation	100%	530	100%	530	\$29.9 billion
Total					\$203 billion

Overall, we estimate that the indirect costs of vouchers would increase system spending on education by between \$76 billion and \$203 billion per year, depending upon the design of the system and behavioral responses to it, that is between 11% and 33% over and above the \$612 billion currently spent on K-12 public schools nationwide. Of course, to make a judgment on the merits of such a plan, these costs need to be weighed against the benefits or effectiveness of a given voucher plan, including not just test scores but other outcomes for students and society. That said, when considering a large-scale voucher plan it is important to have a clear picture of the true costs of such a system, including the various indirect, hidden, and transaction costs that arise from a more complex and less centralized system. In Levin and Driver’s estimates made 26 years ago, the total cost of shifting to a voucher system was an increase in total K-12 educational spending of about 25% per pupil. Using new data and examples a quarter of a century later, the 25% figure seems robust. A legitimate consideration is whether the benefits of a voucher system would compensate for the higher costs of 25% over present spending. Data in recent studies of vouchers show either lower achievement in voucher plans or null effects. Based upon these results, it is unlikely that the additional costs are compensated for by greater educational productivity or efficiency.

Recommendations

This policy brief has highlighted what we do and do not know about school vouchers, particularly pertaining to cost, given the limited prior research in that area. We have synthesized data from prior research to arrive at a range of estimates of the costs of a universal voucher system. This research on costs has clear implications for further research and for policy:

- Policy proposals and future research should be more transparent about the additional

costs of a voucher system, including accommodating additional students, regulation and oversight, disseminating information, adjudicating disputes, and transporting students;

- Evaluations of vouchers should include detailed data collection on these costs using an established method; and
- In their decision-making about whether to implement a given voucher policy, policymakers should weigh its total costs against evidence of its likely effectiveness or benefits.

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