Funding Formulas, School Choice, and Inherent Incentives

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Executive Summary

An array of school choice options now exists across the U.S., including: charter schools, voucher and private schools, interdistrict and intradistrict choice, and home schooling. These options can be contrasted with local public schools, where places are allocated primarily based on residency. This paper examines how these options might be funded and the challenges associated with including them in funding formulas. The primary difficulty is that local public schools and school choice options are not easily compared. Public schools and choice options differ in terms of: (1) mission; (2) regulations; (3) resources provided (staffing and buildings, for examples); and (4) cost of resources provided. They also differ in the characteristics of their student bodies. Consequently, deciding how much funding to allocate is difficult. The result is that states have adopted varied funding approaches to educational choice and created varied incentive structures. This study offers examples of such variety across the Great Lakes states, surveying each choice form but focusing particularly on charter schools, where the evidence is greatest.

Funding formulas are complex in part because they involve funding from many agencies, are shaped by various rules, or both. Because simple absolute differences in expenditures alone cannot reveal whether funding is optimal, a full cost accounting is needed for appropriate allocation of funds.

It is recommended that policymakers and funding agencies considering school choice funding:

- Find the closest comparison schools and examine the funding they receive, taking into account student characteristics, school location, and specific services to be provided.
- Recognize that cost differences are inherent among schools in choice programs because the more flexibility a school has, the more it can lower its costs.
- Consider all revenue sources available to choice schools (grants or tuition, for example) when calculating funding.
- Hold all schools accountable and regularly monitor all choice schools to ensure that funds are spent directly on education.

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Introduction

This paper reports on funding and financing of school choice across the U.S. School choice includes a range of policy reforms, including: the promotion of private schools through vouchers and tuition tax credits; the introduction of charter schools; the liberalization of public school options within and across district boundaries; and deregulation to allow home-schooling options. These options may be contrasted with local public schools where places are allocated primarily based on residency and financing relies heavily on the local tax base. How school choice is financed will influence both its prevalence and its effectiveness in improving education as an alternative to local public schools.

This paper examines how funding formulas and financing systems encourage or discourage school choice. We begin with a brief overview of funding mechanisms and the rationale for incentives. Because school choice reforms vary, we consider each variation, but our focus is primarily on charter schools. Charters illustrate many key issues that arise in other choice forms as well, and they are the most researched option. We draw on evidence from across the U.S., although we pay particular attention to the Great Lakes states. Our discussion explores the impact of funding mechanisms on each of the school choice models.

Our task here is not to argue for or against greater incentives but simply to describe how choice incentives are structured. We adopt the position that school choice is worth exploring *a priori*, but policymakers must be aware of all funding issues before deciding whether choice is feasible or practical in a particular situation. We do not investigate whether public schools are under- or over-funded against any social criteria. We focus only on issues of *relative* funding for school choice options and current public school spending.

We note that many claims regarding incentives for school choice reflect political, ideological, or self-interested predispositions rather than a dispassionate review of evidence.[1] Opponents of school choice argue that incentives are too generous and that local public schools are being undermined. Proponents argue that school choice options need greater incentives so that they can compete with local public schools. It is a challenge, however, to give a simple, universal, and uncontested response to the question of what constitutes optimal funding and appropriate incentives for school choice. In practice, funding and incentives can vary extensively. New options are not the same as the traditional public schools

they compete with. Often they have different goals and serve different student populations, and the extent of such differences varies from state to state. Therefore, a raw comparison of per-student funding across choice schools and local public schools offers insufficient evidence to make a general determination about the strength of financial incentives. The correct incentive level for choice options depends on local circumstances.

Funding Systems for Education

Basic Principles

Much government funding for education is based on formulas tied approximately to student enrollments.[2] Student enrollment formulas start with an estimate of base foundational aid for regular instruction per child. Estimated foundation aid is then typically weighted to account for differences in educational costs using a cost-of-education index (at the national level, one such index is Taylor and Fowler, 2006).[3] Foundation aid also varies by grade level to reflect typical differences in class size and materials, such as laboratories and theaters.

The base amount is then augmented by two types of supplementary funding. One is student-driven, such as supplements for special education, at-risk status, or limited English proficiency. The other is cost-driven, reflecting the local economic conditions, particular circumstances, historical service patterns, and transportation costs. Duncombe and Yinger give a fuller account of how costs might differ according to geography, student disadvantage, and school size.[4]

In theory, such formulas seem straightforward: classify each student and decide on funding amounts per classification. These student-weighted formulas may be more equitable than allocations based simply on historical patterns. In practice, however, formulas are typically extremely complicated. Students' needs vary substantively, as do district and school organizations. As an alternative to funding based on per-student weights, categorical grants may be implemented, for special education budgets or for low-income students, for example.[5]

Funding allocated using such formulas comes from three public sources: federal, state, and local government. Of course, the tax base for each differs. In addition, each level of government emphasizes a different element of the formulas's base: student-driven, and cost-driven components. For K-12 schooling, the federal government primarily funds student-driven or cost-driven components. For example, Title I provides basic programs to help low-income or disadvantaged children meet state standards, and it also funds educational services for children with disabilities. Generally across the U.S., state governments provide approximately 45% of education funding, local governments another 45%, and the federal government 10%. These proportions, however, vary

significantly across states: in Minnesota, for example, the state provides almost three-quarters of total funding.

Formulas to raise revenues for schools may be structured through foundation programs, Guaranteed Tax Base programs, or a combination of the two.[6] And, some states have adopted legislation that significantly changes how revenues are raised for education, such as Proposal A in Michigan or Proposition 13 in California.[7] While this discussion is concerned with allocating revenue rather than raising it, it's worth noting that the structure of revenue-raising mechanisms may have some influence on school choice. Broadly, the greater the reliance on a single revenue source (the state, for example), the more likely it is that school choice options will be introduced. If there are multiple jurisdictions funding education, then these jurisdictions must all agree—or be mandated—to fund the school choice option to the same level as that for students in local public schools. The financial implications of school choice may differ across jurisdictions, however. For example, local districts incur costs when a student transfers in without extra funding, but the transfer is neutral from a state's perspective. Such was the case in Michigan. After Proposal A, schools were largely funded by a state sales tax (rather than property taxes), and the state was therefore able to unilaterally introduce more school choice options.

In principle, per-student funding need not be allocated only to students in traditional public schools. It could be allocated to any charter school directly, or to any private school student through a voucher system. It could also follow students across districts, or from school to school within a district. Even home-schooling parents might receive state funding through such mechanisms as tax breaks. If appropriate, per-student funding could be modified for each choice option using a cost-driven weight. For example, private schools might receive 75% of the funding provided for each public school student in the same district. Alternatively, contributions from each level of government might be modified: for example, charter schools might receive no local funds but more state funds.

The absolute generosity of the funding formula for various choices reflects incentives for choice options. Where funding is greater and restrictions on access are fewer, incentives for school choice are likely to be stronger, and more school choice options will be forthcoming for students.[8]

In thinking about incentives, it is important to realize that they influence choices only relatively—that is, they encourage one option in comparison with other options. Alternatives are implicit in any incentive structure, which intends to promote certain behaviors and choices. Often the alternative to the choice option is the local public school, but it need not be. For example, when we think about vouchers as an incentive to attend private school, often the assumed alternative is to attend the nearby public school. However, comparison of other alternatives may also be

relevant; in a particular instance, it might be useful to compare charter school incentives with private school incentives. Because schools are (loosely) in competition with each other for enrollees, an incentive created for one type of school may often be thought of as a disincentive to another type. Hence, it may be helpful to think of a continuum of (strong and weak) incentives to zero incentives through to (weak and strong) disincentives. So, choice schools may receive: more than a sufficient share of funding (strong incentive); some funding but less than a comparable public school (weak incentive); zero funding (no incentive); or negative funding. That is, they may actually lose resources by attracting public school students (disincentive). Incentives can be thought of in relative or symmetrical terms: a strong incentive for one type of school represents a strong disincentive for the other types.

Challenges to Setting Funding Formulas

In principle, setting a funding formula to permit greater school choice appears straightforward. The first step is to calculate how much money—for a student with a given set of characteristics—public schools spend or need to meet the state's education requirements (these are not necessarily the same). The second step is to make this amount available to any school, public or private. This would provide "equal incentives" for each type of school to serve students with a given set of characteristics, maximizing students' available choices.

However, fundamental trade-offs are often involved in implementation of funding formulas. For example, a formula may be designated "cost-plus," which requires schools to submit receipts and then reimburses their expenditures up to a fixed maximum. This case limits the possibility that a school will receive surpluses (or profits), but the school has no incentive to cut costs below the designated maximum.

Alternatively, the formula may be designed as "fixed price," which provides schools with a fixed amount of funding regardless of what they actually spend. The surplus goes as "profit" to the owner/manager of the school. In "fixed-price" cases, schools that are very efficient may reap very large profits—an economic imperative that cannot be eliminated. Once a school (or any enterprise) is allocated a fixed budget, it will seek ways to reduce costs and generate surplus (or profits). For example, Miron has described the cost-saving strategies used by Education Management Organizations.[9]

Nor are these the only potential complications. There are several practical challenges to implementing a funding formula from its first step: identifying how much is being spent or should be spent. To begin, it is necessary to find a comparable local public school against which to compare a choice school. This comparison should be based on factors that influence costs, such as location, grade level, school size, and student characteristics. However, such comparison simply may not be possible:

since one of the goals of school choice is to introduce educational options that did not previously exist, there may not be a comparable public school. In such cases, costs have to be calculated from a direct "bottom-up" assessment of a school's every need. Such assessment may be very expensive for a district to perform on a case-by-case basis.

Moreover, even if the goals of public and choice schools are the same, their costs may differ for several reasons. First, the regulations for choice schools may differ. For example, a private school may be exempt from collective bargaining rules for teachers, allowing it to pay teachers less (or hire teachers with different qualifications or skills). A looser set of regulations will give a school more freedom to make choices that may either increase efficiency or reduce costs. Second, various schools may differ substantively in teaching staff and facilities. Choice schools may be able to recruit teachers from a wider labor market than local public schools; they may be able to reduce salaries by hiring less experienced teachers or (in the case of religious schools) teachers who regard education as a vocation rather than an occupation. Local public schools, however, may have an advantage in terms of facilities, since they have access to public buildings and below-market rent; private or choice schools, on the other hand, may have to pay full market rent for any spaces they buy or lease.

Observable differences may also be evident in students. For example, choice schools may offer only elementary education, or may enroll fewer students with special educational needs. In cases where a school enrolls only students with characteristics associated with below-average cost, it is not efficient for it to be allocated average funding. When such characteristics can be observed, then the funding formula can account for them and provide each school with appropriately adjusted amounts. Ideally, choice schools should receive regular per-pupil funding for students with disabilities according to an independent cost estimate of required services for specific conditions (such as an Individualized Education Program). Some states (Pennsylvania, for example) offer extra incentives for charter schools to enroll students with disabilities, although they are typically for mild or moderate disabilities, which tend to be less costly to educate.

Students, however, may differ in ways that are hard to observe. For example, a choice school may recruit students whose families are expressly committed to the mission of the school. These students may be "easier to teach" and so require fewer resources (for such services as remedial education or school counseling). Families may be required to contribute resources to the school. Such invisible factors, though influential, cannot be incorporated into any choice funding formula.

Funding considerations also must include the effects of new options on existing enrollment patterns, which may potentially be large and with unpredicted budget consequences. For example, because they are not geographically limited, cyber-charter schools may grow to enormous

size, fast outstripping their projected budget needs. Another possibility is found in the fact that some families may be sending their children to private school because of dissatisfaction with the local public school. If a high-quality charter school opens, parents may choose to enroll their children there, so that their education becomes a public expense rather than a private one. A direct subsidy to a private school would have the same effect, so that cost for previously enrolled students would no longer be paid by their families, but by taxpayers. In short, new school choice funding formulas could create government educational obligations for millions of families who would otherwise have received no, or very limited, government funds. Creating school choice options has far-reaching ramifications for private as well as public schools, whose costs might also change significantly in the complex matrix of choice.

Finally, choice schools may have streams of revenue in addition to government subsidies. Therefore, even if an appropriate comparison with a local public school is possible and funding determined, it is not certain that public taxes should provide full funding. For example, private schools charge fees to parents and may receive donations; similarly, charter schools may obtain grants from philanthropic agencies. Even when a private school accepts vouchers, it may continue to impose fees. Although policymakers may try to prevent such "topping-up," in practice it will be very difficult to enforce any rule against it. For example, schools might claim that fees are for services over and above regular instruction. In addition, such fees may be politically sensitive because a school may use them to restrict access to certain student groups. Yet, to withhold funding from choice schools because they have access to funding from other sources would discourage these schools from diversifying their revenues.[10]

Funding Systems for Charter Schools

Funding Mechanisms

Charter schools—publicly funded schools run by independent agencies and enterprises—illustrate the many challenges associated with school choice funding. Functioning under a contract with a state or district authority, charters are often subject to similar, but slightly looser, regulations as local public schools. Some are former public or private schools which have converted to charter status; others are run by private, for-profit organizations called Educational Management Organizations (EMOs).

As is true in principle generally, devising a funding system for charter schools should be a straightforward task. It might seem that charter schools should receive the same amount of per-student funding as local public schools, from the same sources (federal, state, and local), and in the

same proportions.[11] Yet, as noted above, there are several practical challenges.

For each state in the Great Lakes region, Table 1 describes the source of funding and the financing system for charter schools and how funds are allocated to them.

Table 1: Financing system for charter schools: Great Lakes States

State	Funding from	System of financing
Illinois	School district	Negotiated with sponsor school district and specified in charter, but 75%-125% of per-capita student tuition multiplied by the number of students residing in the district enrolled in the charter school.
Indiana	State	Charter schools receive 100% of the per-pupil funding that traditional schools receive.
Michigan	Charter authorizing body	100% of state and school district operations funding follows students, based on average school district per-pupil revenue, not to exceed a certain amount that rises from year to year based on state aid formula.
Minnesota	State	State portion of operations funding follows students, based on average state per-pupil revenue. School district portion of operations funding does not follow students.
New York	School district	School districts must provide 100% of a state-specified per-pupil funding calculation, although this amount may be reduced based on an agreement between the school and the charter authorizer.
Ohio	State	A statewide base cost formula with adjustments, which includes a county-level cost of doing business factor.
Pennsylvania	School district	Funding follows students, based on average school district per-pupil budgeted expenditure of the previous year. For regional charter schools, funds come from the school district of a student's residence. Charter schools receive extra funding for special needs students.
Wisconsin	School district or state	Funding for a charter school authorized by a city, university or technical college is the sum of per pupil funding in the previous school year plus any revenue increase per pupil in the current school year. Funding for a charter school authorized by a local school board is determined by negotiation between the two parties.

Source: ECS Charter School Profiles (www.ecs.org), 2006 information.

Even within this region, funding sources vary significantly. Some charters are funded by school districts (Illinois and Minnesota, for example), while others are funded by states (Indiana and Ohio, for

example). These differences may reflect student demography. If charter schools enroll students from across school districts, it may be more appropriate to fund them at the state level rather than the district level. Generally, funding follows students, although the relationship varies across states and most states adjust their public school funding amounts. For example, in New York, there is some flexibility on charter school funds; in Wisconsin, the amounts may depend on which agency authorizes the charter school. Several key factors influence such adjustments.

First, charter schools often receive funds from non-government sources, including community groups and non-profit charities.[12] These agencies may provide in-kind funds rather than money, so that their contributions do not appear in the school's formal accounting system. Based on a study of 10 charter schools in New York City in 2000-2001, Ascher et al. found a diverse array of supports for charter schools. Schools or district agencies provided such services as workshops. Charter school organizations assisted with information, networking, technical assistance, and political consultation.[13] Charter school authorizers provided legal assistance and information on accountability and operations. Non-profit organizations provided funds for development. Finally, charter schools allied with non-profit partners to provide instructional and operational services. Collectively, these supports may be a significant supplement to the funds from government agencies.[14] The key issue for funding charter schools is whether to subtract public funding to offset this additional outside funding or to allow charters full funding despite their outside funding, thereby allowing them to spend more than the local public school. The decision is a trade-off: either charter schools are penalized for successful external fund-raising, or they are allowed greater funding than local public schools.

Second, charter schools may be regulated differently than local public schools. Any schools operating in highly regulated systems will have higher costs: they must satisfy particular accountability rules and standards, including rules that may restrict their spending decisions (as when they must hire more expensive, certified teachers). Regulations can be structured either to support charter schools or to undermine them. For example, many states require school districts to provide in-kind services to charter schools, including transportation, classroom and library materials, extracurricular activities, personnel services, and school testing.[15] Transportation, in particular, is a significant fraction of total spending in school districts. Thus, it can be argued that charter schools that do not have to provide those services should receive less funding than regular public schools; when they receive full funding, they have a clear financial advantage.

However, charter schools typically also have short-term contracts with authorizing agencies (generally three or five years). If the agency deems that the contract has not been satisfied, the charter school may be closed. This threat imposes a risk on the charter school that is typically not

imposed on public schools. In turn, risk imposes costs: teachers must be paid more to offset the higher probability of job loss; entrepreneurs will demand a higher profit or surplus to offset the possibility that the school may be prematurely closed. Yet, accountability mandates also apply to public schools: under No Child Left Behind, public schools failing to make Adequate Yearly Progress face sanctions that include possible closure. Therefore, the costs of a closure risk are similar across public and choice schools.

While external factors, such as whether the school operates in a low- or high-cost market, affect expenses, regulatory differences also can obviously produce cost differences between charter schools and local public schools.[16] Table 2 shows some regulations for charter schools in the Great Lakes states, indicating their variety.

Table 2: Charter School Regulations

	School district collective bargaining agreements	Facilities funds or other facilities assistance	Start-up or planning grants
Illinois	No	Yes, for use of school buildings	Yes, based on student enrollment
Indiana	Yes, but may seek waivers	Yes, financing from local public improvement bond bank	No
Michigan	Yes, if local school board charters	No	No
Minnesota	No	Yes, through state grants per student	Yes, for two years at $50,000 or per student enrollment
New York	Yes, if conversion charter	Yes, for use of vacant state buildings	No
Ohio	Yes, if conversion charter	Yes, through loans under the Facilities Loan Guarantee Program	Yes, at $50,000 unless school receives federal grant
Pennsylvania	No	Yes, for use of buildings approved by the state department of education	Yes
Wisconsin	Yes, if charter school is a district school	No	No

Source: ECS Charter School Profiles (www.ecs.org)

The first column of Table 2 indicates whether charters must adhere to the local school district's collective bargaining agreement and hire teachers comparable to those in the local public school. Other personnel regulations might involve charters' requirements in relation to state

retirement pension payments, or costs for in-service training or professional development. Because teacher salaries and benefits constitute a large part of the school budget, such regulations could result in significant cost differences between charters and public schools. In a number of states, no charter has to adhere to the local collective bargaining agreement (Illinois, Minnesota, and Pennsylvania, for example); in other states, only conversion charter schools must adhere to collective bargaining agreements (New York and Ohio, for example). Charter schools with greater flexibility on employment contracts might be able to save more than public schools on personnel.

The second column of Table 2 indicates which states in the Great Lakes states provide funds for facilities, another key area of cost differences.[17] Several researchers have identified shortfalls in funding for charter schools' facilities, in part because they do not have access to municipal bonds and because they cannot find facilities.[18] As Table 2 shows, state funding for charter facilities varies, and most often it is less than that available for local public schools.

A third cost differential area is charters' initial start-up costs.[19] Specifically, charter schools must secure a facility, purchase instructional materials, design a curriculum, hire educators, administrators, and possibly legal and financial experts, and advertise their services before opening.[20] For many of these services, public schools already have an operating procedure. As the final column of Table 2 shows, only a few states provide start-up grants to help charters develop their procedures.[21] Additionally, some charter schools may lack the administrative staff needed to take advantage of federal and state grants to offset development costs.[22]

Such differences in sources and regulations will lead to different organizational forms. For example, if charter schools must meet certain educational standards to satisfy their contracts, they may under-invest in resources, such as libraries, not clearly linked directly to achievement.[23] Alternatively, if charter schools must spend more on facilities and so have less money for staffing, they may hire less experienced or qualified teachers.[24] Most importantly, charter schools may be less likely to provide education for high-need populations.[25] As Miron and Nelson found, in Michigan many charter schools "specialize in low-cost, basic elementary education, with few students requiring special education services."[26] This decision is expressly motivated by incentives in the funding formula.

These issues are pertinent not only across public and charter schools, but also within the charter school sector. Perhaps the most notable feature of Table 2 is the significant variation in regulations across states. Charter schools are not uniform and so do not all incur the same costs. Using national data from 1999-2000, Bodine et al. have found significant differences among charter schools in teacher quality, student-staff ratios, length of the school day, and propensity to unionize.[27] An analysis of the 1999-2000 Schools and Staffing Survey by Fuller et al. revealed that

conversion charter schools, which are more like traditional public schools, have greater access to public funding than do start-up charter schools.[28] As a result, conversion charter schools, on average, offer higher teacher salaries and employ more credentialed teachers and fewer part-time teachers. Miron found that Education Management Organizations (EMOs) may be better prepared to access capital funds than other types of charter schools.[29]

All of these differences may be attributable to the regulations across states, the types of students served, and the charter school's origin (conversion versus start-up school). Therefore, even if a district believes that it has funded one charter school optimally, the funding amount may not apply appropriately to other charter schools.[30]

Evidence on optimal funding for charter schools

We now turn to the evidence on whether charter schools—at least on average—are funded comparably to public schools.

Nationally, studies find that charter schools are funded at levels slightly below those for local public schools.[31] These studies typically look only at public funding, however, not total funding from all sources. Moreover, this overall conclusion may mask within-state differences. For New York, Huerta and d'Entremont reported that charter schools are under-funded relative to local public schools. However, the difference is probably small: Jacobowitz and Gyurko calculated that the disparity may be only 5%-10% of total public funding.[32] For Michigan, Miron and Nelson reported that although charter schools do receive less public funding, the types of students served by Michigan charters more than compensates for the difference.[33] For Indiana, Plucker et al. found no significant differences in how charter schools allocate resources.[34] The situation appears significantly different in Dayton, Ohio, where Hassel et al. studied the 2001-02 finances of ten community or charter schools. There, after adjusting for some enrollment and district characteristics, they found that the charters received over 25% less funding than local public schools.[35] And finally, in Philadelphia, charter school costs are higher, which may perhaps be because of contracts with Educational Management Organizations.[36]

Funding and Incentives for Other Forms of School Choice

Many of the financing issues raised above in relation to charter schools are relevant to any form of school choice. Each form of school choice is different, however, and therefore this section highlights financing issues for three other choice models: private schools made available through voucher or tuition tax credits; interdistrict school choice; and home schooling.

Vouchers and Private schooling

School choice systems may promote private schooling. One such approach is to provide students with vouchers that provide funding directly to whichever school enrolls a student. As of 2007, there are four formal, publicly funded voucher programs operating across the U.S.: in Milwaukee, Wis.; Cleveland, Ohio; Florida; and Washington, D.C.

In 1990, Milwaukee introduced the nation's first voucher program: the Milwaukee Parental Choice Program. The program was initially limited to low-income families comprising no more than 1% of Milwaukee Public School students, but the cap was subsequently lifted. Initially only non-religious schools could participate in the program, but this restriction, too, was lifted in 1998. By 2004, more than 100 schools and 12,800 students were enrolled in the program. The voucher was initially $2,446 in 1990; in 2004, it had reached $5,882. In comparison, per-pupil funding for public schools across the state of Wisconsin was $8,600 (including transportation).

The Cleveland Scholarship and Tutoring Program was introduced in 1995. Children residing in the Cleveland Municipal School District received vouchers allowing them to attend any participating private school, with low-income families given preference. Again, the voucher amount was significantly below per-pupil funding in the local school district: for low-income families, the voucher amount was $2,250; for families with incomes above 200% of the poverty line, the amount was $1,875. Across Ohio, average per-student spending was $8,100.

The Florida Opportunity Scholarship Program was established in 1999: schools that receive a grade of F for two out of four years must either allow their students to move to another public school or provide them with a voucher to attend a private school. The voucher's value is up to $4,500 in comparison to public school funding of $6,300. Finally, the D.C. Opportunity Scholarship Program, introduced in 2004, was the first federal government initiative to fund K-12 education for low-income families residing in the DC public school district. The Washington voucher amount is $7,500 in comparison to public school funding of $12,100.

These voucher programs are clearly new incentives for private schools, since they provide public funds for schools that would otherwise have none. However, in each program the value of the voucher is far less than the average per-pupil expenditure in the local school district (even if transportation costs are subtracted). Therefore, it is unlikely that these programs will expand school choice options significantly. These amounts simply are not a large incentive to attract existing private schools or to generate new ones. Of course, lesser voucher amounts may nevertheless be optimal from the governmental perspective. Providing vouchers to all private school students will inevitably benefit some families who would otherwise have paid for private schooling themselves; for these families,

vouchers act as a straight subsidy and neither change behavior nor encourage an expanded set of school choice options. Thus, voucher funding requires a trade-off: without sufficient funding, schools will not accept vouchers; however, if the funding is too generous, too many families will receive windfall subsidies for going to private school. A low-value voucher may therefore expand school choice slightly, without generating a large fiscal deficit.

In some respects, funding for special education operates as a voucher system: student need is identified, and funding for it may be portable across public and private institutions. Individual evaluations determine that a student has particular needs (specified in an Individualized Education Plan); funds for services follow the child, so families may choose any institution capable of providing necessary services. The funding system in this case should be fairly straightforward. However, financial incentives do influence identification and placement rates: greater amounts of funding per child are associated with higher placement rates.[37] In most states, private institutions play only a very limited role in special education, although Florida has an explicit voucher program. Since 2001, its McKay program has been providing vouchers to children with disabilities so that they can attend private schools. In 2006-2007, total funding was $119 million across 18,900 students. But the values of the vouchers range from about $5,000 to $21,900, depending on the child's disabilities, with an average amount of $7,200. Thus, there is considerable variation in the resources a school might be allocated for each student.[38]

Tax codes offer another way to encourage private school choice. Specifically, states can provide tax exemptions either for private schools or for families' expenses for educational items. Such exemptions may be offered through taxable status, tax deductions or tax credits.[39] For example, private schools are considered not-for-profit and therefore do not have to pay taxes; they may also benefit from using church spaces, which provides a number of other tax incentives.

A tax policy that has recently grown more popular is the allowance of tuition tax credits, which permit families to subtract a portion of private school tuition costs from the amount of taxes they owe. [40] (Tax deductions work differently, allowing families to deduct some private schools costs from the amount of their taxable income.) Since 1997, six states have enacted tuition tax credits for education (Arizona, Florida, Illinois, Iowa, Minnesota, and Pennsylvania). Thus far, the credit amounts are often small (typically less than $1,000). Nevertheless, they are another way in which the government may finance alternative school choices.

Home schooling

Home schooling is growing in popularity.[41] As is true for other school options, the rate of home schooling varies significantly across

states: as of 2005, home-schooling enrollments were estimated at 1,000 in Michigan (less than 0.1% of public school enrollment); 14,600 in Minnesota (1.7%); 23,900 in Pennsylvania (1.3%); and 21,300 in Wisconsin (2.4%). Some of this variation undoubtedly reflects the incentives embedded in state and district policies.

Generally, home-schooling families receive no public funding for their children's education, so at first they may appear at a considerable financial disadvantage compared to families choosing other options. However, home schoolers are allowed to use public school resources: in fact, they are entitled to use public school resources on a part-time or temporary basis, and legally they cannot be denied access to the public school system. Although data is sparse, it is believed that many home schoolers do use public school resources, either temporarily or part-time. Such use is most probably for expensive programs, such as sciences, and for physical education (which requires large spaces). Moreover, some home schoolers enroll in cyber-charter schools, which means they receive direct support from the district or state. In additions, some states allow home-schooling families to claim increased tax credits and tax deductions. Whether these forms of support are sufficient to allow home-schooling families to offer adequate education is unknown; no research exists on the optimal resources needed for home schooling.

As with other choice forms, the incentive to home school also depends on regulations that home-schooling families must satisfy: the more regulations, the higher the cost and the less desirable the option. Home-schooling regulations vary from state to state but may include notification to districts of the intent to home school; submission of plans for educating their children; and test-taking. Still, these are far less burdensome that the regulations faced by public schools, charter schools, or private schools. Moreover, compliance with home-schooling regulations is unverified, and enforcement is often weak. In terms of regulations, then, home schooling enjoys a greater incentive than choice or traditional public schools.

Calculating the optimal amount of public funding needed for home schooling is difficult, however, because resources for home schooling are very different from those for schools. For example, one of the parents (typically the mother) instructs the children, which means that parent does not work outside the home. Hence, the full "opportunity cost" for home-schooling families includes not only the loss of public school resources but also the parent's lost income. Estimating the lost income is difficult. While the parent's predicted earnings can be reasonably calculated, it would also be necessary to calculate the intrinsic rewards of teaching one's children (as opposed to working in an office, for example). Home-schooling parents may also acquire other resources at different prices than schools pay. For example, many home-schooling families draw on community resources, such as libraries and churches, for learning

materials and curricula. As yet, no rigorous estimate of home-schooling costs to the state has been calculated.

A related form of home-based education is cyber schooling. In most states, cyber schools are funded just like charter schools, although they are perhaps closer to home schooling. Importantly, cyber schools have operating costs that are substantially different from regular schools.[42] They do not, for example, incur transportation costs, although they often allocate students a laptop computer for home use.

As for other choice options, it is important to compare costs for cyber schools against costs for local public schools. One approach to financing cyber schools is to set funding as a percentage of regular funding and then progressively manipulate the percentage. In California, for examples, the cyber charter law initially set funding at 90% of that for regular schools, then later reduced the percentage to 70%. Subsequent revisions were tied to expenditures on "certified staff salaries and benefits" as well as on "instruction-related items." Home school cyber charters were expected to progress to a point where they spent at least 50% of their revenues on certified staff and salaries; nearly half of them failed to meet this threshold.

However, an additional funding issue in cyber schools is that they may have volatile enrollments that can create an insupportable funding commitment. An illustrative case is that of Western Pennsylvania Cyber Charter School. This school expanded enrollments to more than 1,000 within a few years of opening, but local school districts were unwilling to remit the per-pupil funds based on these enrollment claims, in part because the districts could not be certain that the students were part of their populations. Such situations are exacerbated when states have weak accountability systems for cyber schools.

Interdistrict and intradistrict school choice

Finally, interdistrict and intradistrict school choice expands educational options for students while keeping them in traditional school systems. For example, in 1996 Michigan adopted an interdistrict choice program (Schools of Choice) that allows students to choose public schools outside their home district. School districts can determine whether to accept nonresident students, but they cannot prohibit their students from choosing a school in an alternative district. Approximately 80,000 students across the state are involved in the program.[43] Intradistrict, or "open enrollment," programs that allow students to choose among schools within a district are also becoming more common. For example, the Chicago Public School district offers students considerable choice.

It may be relatively easy to develop funding formulas for inter- and intradistrict choice. Every year, many thousands of students transfer across districts, with the fiscal consequences fairly easily absorbed.[44] When education is funded at the local level, however, transfers can generate a

significant strain on the local tax base if sufficient funds don't follow students from district to district. Also, the amount of funding per school within a district may vary (for magnet schools or remedial schools, for example). Such funding differences may be attributable to the factors considered above: differences in student populations, the use of particular resources, the prices of those resources, the availability of alternative funding sources (federal funding for magnet schools, for example), and services these schools might provide (transportation, for example). At the same time, intradistrict schools share the same administrative, managerial, and governance structures. Therefore, the absolute differences in costs may be smaller than for other forms of school choice.

Conclusion

Appropriate financial incentives are those that reward desirable outcomes and penalize undesirable outcomes. This is as true for education and school choice as for any other government service. Designing an incentive system, then, involves as a first essential step making decisions about which school choice reforms are desirable and which are not. Such decisions are beyond the scope of this paper. Instead, the focus here has been to highlight various issues involved in designing funding formulas and financing mechanisms, given the assumption that incentives can be created to promote school choice.

While the issues are many, the central question is: Do choice schools receive enough public resources compared to traditional public schools to give them real incentive to offer students places? Simply, if the incentives are strong enough, more types of schools will emerge to offer more places.

Based on this review of the evidence we make the following recommendations for policymakers or funding agencies. As we show below, these recommendations may not always cohere with each other, creating a set of trade-offs.

- When funding school choice options, find the closest comparison school and examine the amount of resource that school receives. These comparisons should be made based on the characteristics of the students served, the location of the school, and the specific services that are being provided by the new school choice options.
- Recognize that school choice options will have different costs relative to traditional public schools. Costs also vary among various choice options (charter schools compared to home schooling, for example). Such variation will exist even within a state. Policymakers must appreciate these differences and consider the implications for funding allocations.

The challenge is to try to fund school choice options equitably while recognizing real cost differentials. One approach is to directly investigate specific resources each school type requires and estimating their costing. Another is to examine the schools' year-end balances to see whether the choice incentives appear too strong or too weak. A third approach is to expand school choice options incrementally, progressively strengthening incentives to encourage more options and optimal choice conditions.

Other recommendations include:

- Take into account the full set of revenues that school choice options may have available.
- Consider the opportunity costs associated with school choice. Instead of simply investigating funding parity, examine the fiscal consequences of school choice.
- Mandate accountability and regularly monitor all forms of school choice (as well as traditional public schools).

A related set of recommendations are relevant for journalists, researchers and analysts who wish to compare funding across diverse forms of school choice:

- Realize that funding formulas are complex, with funding from many agencies and according to various rules.
- Do not relay on absolute differences in expenditures to determine whether choice schools are adequately funded. A full cost accounting is needed to see where choice schools may be spending more or less than regular public schools.
- Consider that choice schools will have lower unit costs if they do not offer such services as transportation and special education, but may have higher costs if they have no capital for facilities.
- Remember that schools with more flexibility will have lower unit costs.

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