

WISCONSIN'S School Finance

A POLICY PRIMER

During the 2001-02 school year, public schools in Wisconsin educated more than 872,000 students in pre-kindergarten through grade 12. In Wisconsin, as in the rest of the United States, the primary responsibility for providing public education rests with independent local school districts.¹ Some of the state's 426 school districts are coterminous with municipal boundaries, but most include at least parts of multiple municipalities. Subject to state guidelines and regulations, decisions on spending and taxation as well as on education policy rest with each school district's elected school board.

School districts vary tremendously in size and scope. The Milwaukee School District educates nearly 100,000 students, and Madison Metropolitan School District has more than 25,000 students. Both of these school districts provide a wide selection of courses for students from pre-kindergarten through grade 12. At the other extreme, during the 2001-02 school year, Wisconsin had 86 school districts that served fewer than 500 students each. Of these mainly rural districts, 57 provided classes in all grades, 28 were kindergarten through grade eight districts, while one was a district with only a high school.

Although local school districts operate public schools, the funding of public education is shared among all three levels of government—federal, state, and local. As illustrated in Table 1, public schools in Wisconsin received about 53 percent of their revenue from the state government, 40 percent from local sources, less than 5 percent from the federal government, and 2 percent from gifts and other private sector sources.² Compared with other states, the state government in Wisconsin provides

an above average share of funding for public schools, while the federal contribution is below average.³

Federal Government Funding

The small federal contribution to the financing of elementary and secondary education comes primarily from two programs. First,

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the federal government provides partial funding for the extra costs involved in funding students with mental and physical disabilities.

In fact, federal legislation mandates that all local school districts provide disabled children with public education in the least restrictive environment possible, regardless of the type or severity of their disability. As I will discuss in more detail below, it appears that federal aid is entirely inadequate to meet the extra costs associated with educating students with disabilities. The state's Department of Public Instruction reported that special education spending by local school districts for the 2000-01 school year was a little over \$1 billion. Of this amount, approximately \$100 million, or 10 percent, came from federal government funds.

The second major federal grant program provides federal aid to finance extra educational services for children from low-income families. This program, known as "Title I," requires that federal grants be targeted to school districts and to schools within districts that have high concentrations of children from low-income families. For the 2002-03 school year, Wisconsin



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TABLE 1

**Comparison of Sources of Revenue for Public Elementary and Secondary Schools
1998-99**

Source of Funds	Wisconsin		United States	
	Amount (in millions)	Percent of Total	Amount (in millions)	Percent of Total
Federal Government	\$339.4	4.6	\$24,521.9	7.1
State Government	3,955.9	53.4	169,298.2	48.7
Local School Districts	2,951.3	39.8	144,790.4	41.7
Private (gifts, tuition, and fees)	163.0	2.2	8,719.2	2.5
Total Revenue	\$7,409.5	100.0	\$347,329.7	100.0

Source: U.S. Department of Education, National Center for Education Statistics, 2001.

school districts have been allocated approximately \$144 million in Title I grants.

Local Funding: The Property Tax

Nearly all revenue raised by local school districts comes from the property tax. In fact, state law prohibits school districts from levying any tax other than the property tax. On average, the property tax provides 94 percent of all revenue raised by local school districts. Other sources of local revenue are activity fees and charges for food and special services.

As is true nearly everywhere, the value of property per student is very unevenly distributed across governmental jurisdictions. In general, property values are higher in urban and suburban areas than in rural areas. Also, school districts that have substantial amounts of business activity within their boundaries generally have higher per pupil property values than districts that are primarily residential. A consequence of this spatial variation in property tax base is that school districts with relatively high per pupil property values will be able to raise substantially more revenue with any given tax rate than school districts with relatively low property values. Thus, in states that rely heavily on the property tax for the financing of schools, per

pupil spending on education is positively correlated with per pupil property wealth. In other words, in property-wealthy school districts, we tend to observe higher spending per pupil than in property-poor districts.

Table 2 demonstrates that property wealth per student does in fact vary substantially across K-12 school districts in Wisconsin. The average property value per student among K-12 school districts was about \$325,000 in 2000.⁴ The data in Table 2 show that nearly 20 percent of students live in 56 districts with a property tax base per student of less than \$200,000, while about the same number of students live in 69 districts with property values in excess of \$400,000. Only six districts, with a combined total of about 3,600 students, have property tax bases larger than \$1 million per student.

The State's Role in School Finance

Since 1949, state policy in Wisconsin has explicitly attempted to reduce the impact of low per pupil wealth on education spending by providing state funds to school districts using formulas that directed more aid per pupil to districts with low per pupil property values. The formulas used by the state to equalize the fiscal capacity of school districts have been revised

Since 1996-97, K-12 education has had first call on state revenues.

several times, with the last revision effective in 1996. In establishing a state aid policy, the legislature is responding to a state constitutional mandate calling for “the establishment of district schools, which shall be as nearly uniform as practicable...”

Although it is possible to interpret the phrase “as nearly uniform as practicable” in a number of different ways, over the past 25 years the legislature has interpreted this phrase as a requirement for fiscal neutrality. That is, if two districts choose the same property tax rate, an attempt is made to ensure that insofar as “practicable” the allocation of state aid will compensate for interdistrict differences in tax base so that expenditures per student will also be equal. Under this type of funding system, school districts that choose higher property tax rates are able to spend more, while school districts that choose low tax rates have less money available.

Although the achievement of fiscal neutrality has been an important legislative goal, there is no question that the legislature’s school finance policies have also had three additional goals:

- Providing Wisconsin taxpayers with school property tax relief.
- Assisting school districts in meeting the extra costs of educating “at risk” students and students with disabilities.
- Equalizing per pupil spending across school districts by discouraging spending in high-spending districts.

To address all four of these policy goals, the legislature has established an extremely complex system of state government involvement in school finance. This system has six major elements: state equalization aid; a “two-thirds” commitment; a school levy credit; revenue limits; the “qualified economic offer (QEO)”; and state categorical aid.

State Equalization Aid

For the 2000-01 school year, the state provided school districts with

\$4.1 billion in equalization aid through the use of a complex three-part formula. The formula, which will be described in detail below, is designed both to achieve fiscal neutrality among school districts by in effect equalizing per pupil property tax bases and to discourage per pupil spending by school districts above a spending level specified by the legislature.

The “Two-Thirds” Commitment

Beginning in the 1996-97 school year, the legislature committed itself to finance “two-thirds” of elementary and secondary school spending in the state. In effect, since 1996-97, K-12 education has had first call on state revenues. It is important to note that the “two-thirds” refers to the state’s aggregate share of school revenues. State aid is a larger fraction of education spending in some districts and a smaller fraction in other districts. In calculating the two-thirds, the state includes a property tax credit paid directly to property owners as part of its contribution and excludes some sources of school district revenue. As a result, the state’s direct contribution to school district spending, al-

TABLE 2

Distribution of the Equalized Value of Property per Student Among K-12 School Districts, 2000

Equalized Value per Student	Number of Districts	Number of Students	Percentage of Total Students
Less than \$200,000	56	154,142	18.5
\$200,001 to \$300,000	162	291,753	34.9
\$300,001 to \$400,000	81	235,840	28.2
\$400,001 to \$500,000	37	100,054	12.0
\$500,001 to \$1,000,000	26	49,821	6.0
\$1,000,001 to \$2,000,000	5	2,958	0.4
Greater than \$2,000,000	1	676	0.1
Total	368	835,244	100.0

By reducing school property tax rates paid by taxpayers, the credit may have the unintended effect of encouraging school districts to increase spending.

though substantially higher than it was prior to the two-thirds commitment, equaled 55 percent of total school district revenues for the 2001-02 school year, not 66.6 percent.

The School Levy Credit

The state uses the school levy credit as a mechanism for financing property tax reductions. Levy credit payments are allocated to each municipality in proportion to its share of statewide school property tax levies. The credit provides property tax rate reductions to all taxpayers—homeowners, landlords, business owners, and out-of-state property owners—in proportion to the assessed value of their property. Although the amount of school property tax levies are used to calculate the credit, state payments are made to municipal governments (in their role as the administrators of the property tax system) and are in turn distributed to all overlying units of governments, including county governments and special purpose districts. By reducing school property tax rates paid by taxpayers, the credit may have the unintended effect of encouraging school districts to increase spending.

Revenue Limits

In the decade following 1983, the state's financial contribution to public schools doubled. For many members of the Wisconsin legislature, the primary motivation for increasing state aid was to finance reductions of school property taxes. Despite the wishes of many state legislators, school districts in Wisconsin chose to use substantial portions of the new state aid to increase spending on education. In fact, during the decade between 1983 and 1993, school property tax rates rose by an average of about 50 percent. Frustrated by their inability to reduce school property tax rates, in 1993, the legislature imposed a revenue cap on school districts. The legislation placed a fixed dollar limit on the amount by which school district revenue per pupil could increase from one year to the next. For 2000-01, the allowable increase in revenue per pupil was \$220.29. The legislation specified that the revenue limit be raised each year by the rate of inflation; for the 2002-03 school year, the limit is approximately \$230. Although some minor sources of revenue were excluded, most school district revenue, specifi-

cally, revenues from state equalization aid and from property taxes, were included in the revenue limit. School districts are free to override the limits if a majority of voters approve an override in a referendum. As I discuss below, for some districts, the equalization aid formula penalizes extra spending, a fact that discourages the passage of override referenda. The immediate consequence of the revenue limit is to force school districts to lower their property tax rates if the sum of property tax revenues (at current rates) and state aid exceed the annual revenue cap. In fact, in 1996-97, when state aid increased by \$1.2 billion following the enactment of the two-thirds commitment, school property taxes were reduced by more than 20 percent.

Qualified Economic Offer (QEO)

Prior to 1993, salary disputes between teachers and school boards were resolved through mediation, and if that process was unsuccessful, through binding arbitration. Many members of the legislature were critical of the binding arbitration requirement, claiming that the way the process worked favored teachers and was one important reason for the rapid increases in public school spending that occurred in the late 1980s and early 1990s. To address this perceived problem, the legislature repealed the existing mediation and arbitration procedures and replaced them with legislation that mandated that only in cases when school boards failed to offer teachers a "qualified economic offer" could economic issues be decided by binding arbitration. Although the details are complicated, in essence a qualified economic offer is defined as a fringe benefit increase of at least 1.7 percent per year and wage increase of at least 2.1 percent for an annual total increase of 3.8 percent. If, however, the cost of existing fringe benefits increases by more than 1.7 percent a year, that excess can be counted against any wage increase. As a result, in periods of rapidly rising fringe benefit costs, a qualified economic offer may be made that includes no increases in wages.

State Categorical Aid

Whereas school districts are free to spend state equalization aid on any educational program, by their very nature, categorical grants are funds designated for a specific program or

use. For the 2001-02 school year, the state distributed \$554 million in categorical grants, about 12 percent of total state aid in that year. About two-thirds of categorical grants are designated for “special education” programs that serve students with various physical and mental disabilities. The remainder of the money was divided among a large number of separate categorical grants designated for purposes such as pupil transportation and bilingual education. Most categorical grants are allocated among school districts on the basis of some appropriate measure of need (for example, the number of students eligible to receive special education services or the number of students from poor families).

Has State School Finance Policy Achieved Its Goals?

How well has the system of school finance outlined above done in achieving its goals? Because it is difficult to make comparisons across different types of school districts, the analysis that follows will focus on Wisconsin's 368 K-12 school districts—those providing education from kindergarten (or in some cases, pre-kindergarten) through high school.⁵

Achieving Fiscal Neutrality

Wisconsin's equalization aid formula is designed to address the fiscal impacts of the large differences in tax base per pupil among school districts (see Table 2). Because of other goals of the state aid system, such as property tax relief or helping students with disabilities, the aid system is not expected to achieve complete fiscal neutrality. It is intended, however, to weaken the link between school district property wealth and the ability of individual school districts to fund public education.

An analysis of the data shows that despite continuing criticisms, the equalization formula has been quite successful in moving Wisconsin school districts toward fiscal neutrality. Complete fiscal neutrality would exist if districts with equal school property tax rates were able to spend equal amounts of money per student.

Thus a simple way to measure the effectiveness of the equalization aid formula in moving toward fiscal neutrality is to calculate the ratio of each district's per pupil spending to its school property tax rate (measured in mills).⁶ By comparing the distribution across school districts of these spending-effort ratios to the distribution of per pupil property tax bases, it is possible to evaluate how successful Wisconsin has been in achieving fiscal neutrality.⁷ The smaller the variation in spending-effort ratios across districts, the greater the degree of fiscal neutrality.

The data in column 1 of Table 3 provide several measures of the distribution of per pupil tax base across all K-12 school districts. To avoid placing too much emphasis on the small number of districts with extremely low and extremely high tax bases, I follow common practice and also display the range of values after excluding the 10 percent of school districts with the largest per pupil tax bases and the 10 percent of districts with the smallest per pupil tax bases. In the table, these are referred to as the 10th and 90th percentile amounts. As a summary measure of the variation in tax bases across districts, I calculate the coefficient of variation.⁸ Column 2 displays these same statistics for spending-effort ratios.

TABLE 3

The Role of State Aid in Achieving Fiscal Neutrality The Distribution of Property Values and Spending-Effort Ratios Among K-12 School Districts

	Equalized Value of Property per Student	Spending-Effort Ratios
Average Value	\$330,131	\$789
Minimum Value	128,938	419
Maximum Value	3,152,224	3,383
10th Percentile Value	183,543	619
90th Percentile Value	488,737	884
Coefficient of Variation	0.70	0.29

Note: Equalized values per student are for the year 2000 and spending-effort ratios are for the 2000-01 academic year.

The strategy of lowering tax rates is a very inefficient means of reducing property taxes for those facing particularly high tax burdens.

The data in column 1 confirm the substantial inequality across districts in the distribution of per pupil property tax bases that was illustrated in Table 2. Even if we ignore districts with the highest and lowest values, tax bases would range from \$184,000 to \$489,000 per pupil. The data imply that if there were no state aid, every mill of property tax would generate nearly 2.7 times more money in the school district at the 90th percentile relative to the district at the 10th percentile.

The spending-effort ratios allow us to account for the impact of state aid. The ratios are clearly much more evenly distributed across districts than property tax base. This provides strong evidence of the effectiveness of equalization aid in moving the state toward fiscal neutrality. The coefficient of variation is reduced from 0.70 to 0.29, indicating much more equality relative to the distribution of per pupil tax bases. Ninety-one percent of all students in K-12 districts in Wisconsin are educated in districts with spending-effort ratios that range from \$619 to \$884 (those within the 10th and 90th percentile).⁹ This means that while the amount of spending possible for each mill of property tax differs across districts, the differences are relatively small. This is particularly true given the multiple goals of the state's school finance system. Although I am not aware of comparable analyses for other states, the fact that Wisconsin's equalization aid formula employs a high guaranteed tax base suggests that few other states achieve a higher level of fiscal neutrality than does Wisconsin.¹⁰

Equalizing Per Pupil Expenditures

The state equalization aid formula is designed to encourage most low-spending school districts to increase their levels of per pupil spending and to discourage many modest- to high-spending districts from increasing their spending. In addition, as the revenue limits are a fixed dollar amount, they allow a smaller annual percentage increase in spending in higher-spending districts. The combined impact of both the equalization aid formula and the revenue limits is to equalize per pupil spending across districts.

Table 4 presents summary data on the distribution of per pupil spending among K-12 dis-

tricts for the 2001-02 school year. Average per pupil spending in that year was \$8,080, and the coefficient of variation was 0.10. School finance experts generally argue that a coefficient of variation of 0.10 or less is a sign of an equitable system of school finance, and is in fact a standard that very few states meet.¹¹ The data in Table 4 also show that only about \$1,800 per pupil separate the 10th and 90th percentile districts ranked by per pupil spending. This amount almost certainly overstates the differences among districts in educational resources available to students, as many of the relatively low-spending districts are in rural areas of the state where the cost of living (and of hiring teachers) is lower than in more urbanized parts of the state.

A comparison with the distribution of per pupil spending during the 1994-95 school year (see column 2 of Table 4) indicates that equality in spending per pupil has increased over time. The coefficient of variation of per pupil spending in 1994-95 was 0.12 and the difference between the 10th and 90th percentile amount of spending per pupil was considerably larger than in 2001-02. Because of the revenue limits, the current differences across districts in per pupil spending to a large degree reflect spending decisions by local school districts that were made prior to 1993, the year the revenue limits were first imposed.

Providing Property Tax Relief

In 1994 the legislature decided to increase state aid to education substantially and, on a continuing basis, to finance two-thirds of the cost of public education. To guarantee that a large portion of this increase in state aid would be used by local school districts to reduce property taxes, the legislature placed a dollar limit on the annual amount of money by which revenue per pupil in school districts could increase. As illustrated in Figure 1, this policy has been very successful in reducing school property tax rates. Between 1992-93 and 2001-02, the average school mill rate has been cut in half—from 18.1 mills to 9.7 mills. The largest single decline in school property tax rates coincided with the implementation of the two-thirds funding commitment. Between 1995-96 and 1996-97, the average school property tax rate fell by 23.4

percent. Annual rate decreases continue, with the average school mill rate falling by 4.3 percent between 2000-01 and 2001-02.

Although the falling property tax rates reflect in part rising property values, actual property tax levies in a substantial number of districts are lower today than they were in the early 1990s. In fact, among K-12 districts, total property tax levies grew by only 1.5 percent over the six-year period between 1993-94 and 2000-01. After being adjusted for inflation during that period, total property tax levies actually fell by 17.1 percent.

Property taxes are a political issue in Wisconsin primarily because they create hardships for certain taxpayers whose property tax bills are high relative to their current income. Although data on property tax burdens are limited, it appears that three groups of people—the elderly, low- and moderate-income households, and farmers are most likely to face high property tax burdens. While the expansion of state aid to education coupled with the revenue limits has resulted in large reductions in school property tax rates, the strategy of lowering tax rates is a very inefficient means of reducing property taxes for those facing particularly high tax burdens. The basic problem is that while rate reductions result in lower property taxes, these rate reductions apply equally to all taxpayers, including landlords, corporate owners of commercial and industrial property, nonresident owners of vacation homes, and homeowners. By failing to target property tax relief to those Wisconsin residents facing high tax burdens, scarce state dollars have been used ineffectively. As a result, many state residents are still in need of property tax relief.¹²

TABLE 4

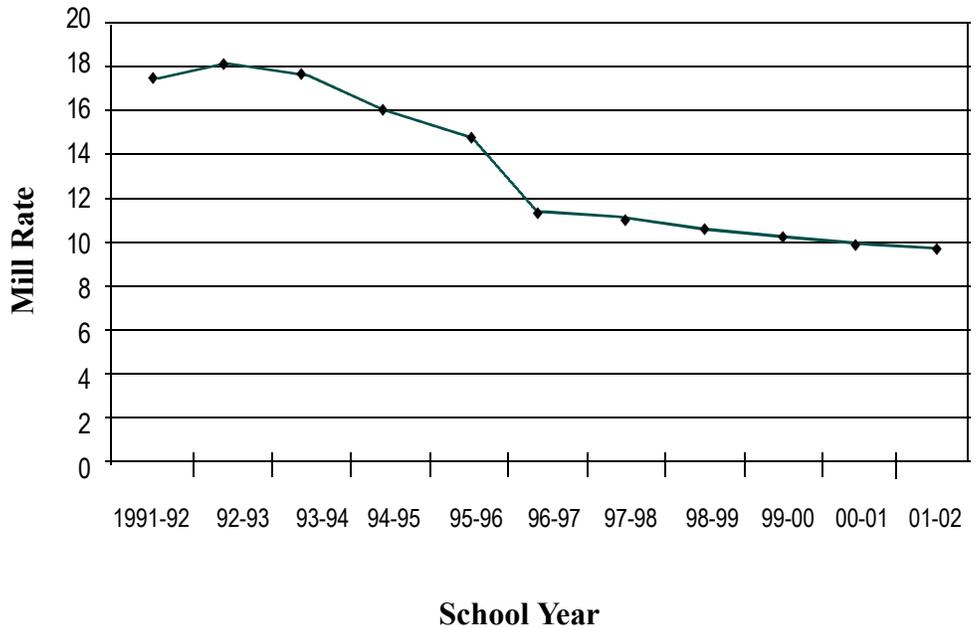
Equality in Expenditures Per Pupil
The Distribution of Per Pupil Spending
Among K-12 School Districts in 2001-02 and 1994-95

	Expenditure Per Pupil 2001-02	Expenditure Per Pupil, 1994-95
Average Value	\$8,080	\$6,331
Minimum Value	6,294	4,690
Maximum Value	14,252	9,053
10th Percentile Value	7,228	5,499
90th Percentile Value	9,040	7,450
Coefficient of Variation	0.10	0.12

Note: The expenditure data are “current educational costs” as reported by the Wisconsin Department of Public Instruction.

FIGURE 1

Average School Property Tax Rates
1991-92 to 2001-02



The School Finance Crisis in Wisconsin

In the previous paragraphs, I have argued that the system of school finance in Wisconsin has done quite a good job of achieving the three goals of fiscal neutrality, equity in per pupil spending, and property tax relief. Despite these successes, however, the current system of school finance is broken. Even without the prospect of cuts in state aid to education, the existing system is not sustainable. Major reforms are essential.

Focusing on the Quality of Public Education

To understand the roots of the growing crisis in school finance, it is necessary to focus directly on the education Wisconsin students are receiving. In the past, the goals of school finance policy were directed toward the equal treatment of taxpayers and equality in per pupil spending. Although Wisconsin students have consistently scored well on standardized tests compared with students from most other states, there is a growing concern that the public school system in Wisconsin is failing to provide a sound basic education to all its students.

Evidence from the February 2002 Wisconsin Knowledge and Concepts Test justifies these concerns. Figures 2 and 3 display the results from the reading and math exam administered to 10th graders. The test scores indicate that students of all races from economically disadvantaged families perform more poorly on the exams than students who are not economically disadvantaged. Figure 2 illustrates the large differences in reading performance between non-Hispanic white students and black and Hispanic students. While 68 percent of non-economically disadvantaged white students scored at the “proficient” or “advanced” level on the 10th grade reading test, only 45 percent of non-disadvantaged Hispanic students and 26 percent of non-disadvantaged black students performed at these levels. Among all racial and ethnic groups, test performance was weaker among students from economically disadvantaged families.

The results for the 10th grade math test, shown in Figure 3, indicate not only large achievement gaps between students from different racial/ethnic and economic backgrounds,

but also the relatively poor performance on the math exam by all students. The results show that even among non-economically disadvantaged non-Hispanic white and Asian students, no more than half the students were classified as proficient or advanced in math.

Another measure of the performance of public schools in Wisconsin is provided by data on dropout rates. The Department of Public Instruction reports that in 2001, the statewide dropout rate was 2.1 percent. Although this number indicates that nearly all students are graduating from high school, a look at the pattern of dropout rates across individual high schools and districts shows disturbingly high dropout rates in a relatively small number of schools. The problem of high school dropouts is particularly severe in Milwaukee, where the overall dropout rate exceeds 10 percent. High dropout rates can also be found in some high schools in the state’s other large cities and in the Menominee Indian school district.

Rising Federal and State Student Performance Standards

In 2001 Congress passed the No Child Left Behind Act. The new legislation mandates annual testing of all students in grades three through eight, and requires that schools make annual progress in meeting student performance goals for all students and for separate groups of students characterized by race, ethnicity, poverty, disability, and limited English proficiency. The underlying premise of the legislation is that schools must be held accountable for the academic performance of their students. The legislation rewards schools that succeed in meeting state-imposed achievement goals and penalizes schools that fail. In addition, Wisconsin has recently augmented its own student performance standards. Among other things, students will be required for the first time to pass a state-administered high school graduation test.

In a July 2000 decision, *Vincent v. Voight*, the Wisconsin State Supreme Court asserted that all students are entitled to “an equal opportunity for a sound basic education” that will equip them “for their roles as citizens and enable them to succeed economically and personally.” In the past decade, courts in a number of other states have declared the systems of

There is a growing concern that the public school system in Wisconsin is failing to provide a sound basic education to all its students.

school finance in their states unconstitutional because the public schools failed to guarantee that all students had an opportunity to receive what has come to be called an *adequate* education. The question that the Wisconsin court left unanswered was whether the funding system currently in place in Wisconsin enables school districts to provide the kind of education described by the court and required by new federal and state legislation.

In recent years, a number of studies conducted in Wisconsin and elsewhere have provided strong evidence that the amount of money necessary to meet student performance standards will vary across school districts. Economists refer to the minimum amount of money necessary to produce a good or a service, in this case an adequate public education, as the *cost* of that good or service. Costs are not the same as spending; variations in costs across school districts result primarily from factors over which local school officials have little control. For example, a school district with a high concentration of students from poor families or from families where English is not spoken in the home may have to use additional resources (in the form of smaller classes or specialized programs) in order to reach specified achievement goals. Also, some districts, given their location and the composition of their student bodies, will have to pay higher salaries than other districts in order to attract high-quality teachers. Actual spending, however, reflects not only cost differences, but differences in local preferences for education and inefficiencies that may exist in the operation of schools.¹³

In a recent study, Jennifer Imazeki and I used statistical techniques to identify a set of character-

FIGURE 2

Percent of Students with “Proficient” or “Advanced” Scores on 10th Grade Reading Exam
February 2002 Wisconsin Knowledge and Concepts Test

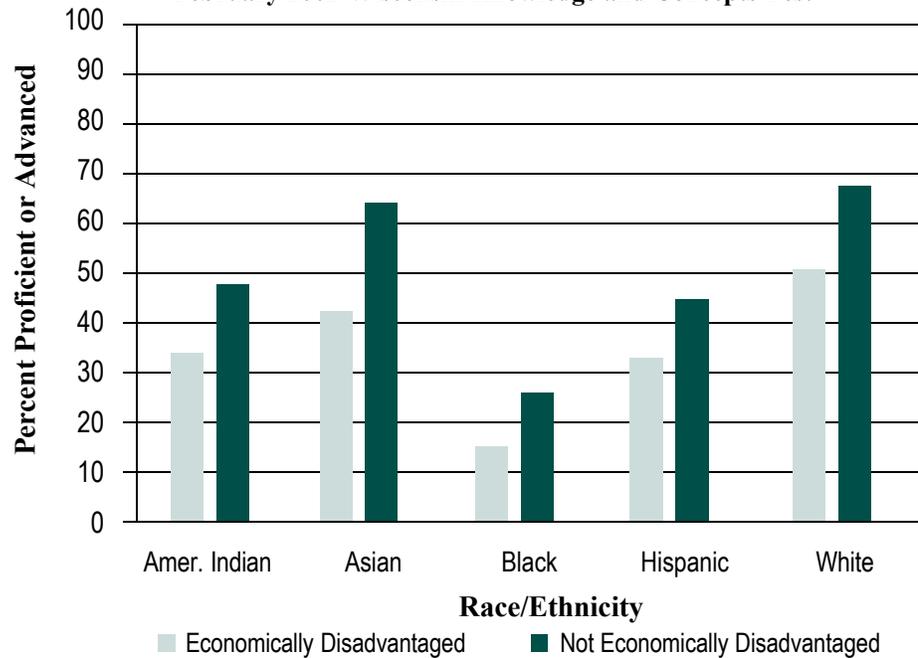
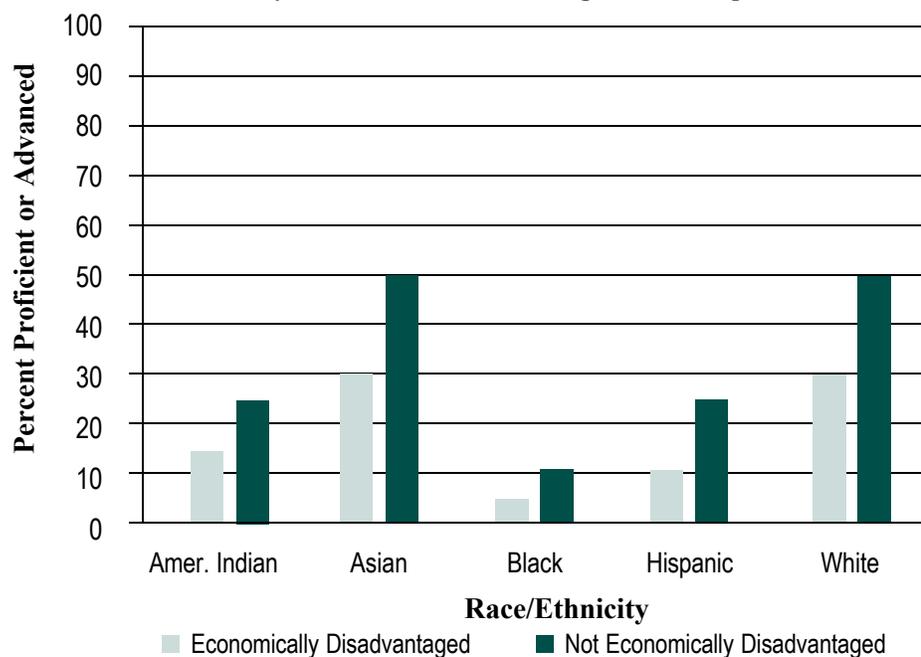


FIGURE 3

Percent of Students with “Proficient” or “Advanced” Scores on 10th Grade Math Exam
February 2002 Wisconsin Knowledge and Concepts Test



The current school finance system in Wisconsin is not capable of guaranteeing that all school districts have sufficient resources to provide an adequate education for their students.

istics of school districts that influence the costs of education.¹⁴ We then summarized all the information about costs into a single number for each school district. This cost index indicates, for any given district, how much that district must spend, relative to the district with average costs, in order for its students to meet the state's student performance standards. Our results, based on 1994-95 data for the state's K-12 districts, demonstrate that the costs of education vary tremendously across school districts. Costs (remember, not spending) tend to be higher in school districts with a heavy concentration of children from poor families or children with severe disabilities, in high-cost-of-living regions of the states, and in very small school districts.¹⁵

Requiring that all schools increase the academic performance of their students is an important step toward improving the quality of education. If cost differences among school districts are substantial, however, then imposing statewide student performance standards without simultaneously allocating more state financial aid to school districts with high costs may result in a situation where school districts with above-average costs will not have enough resources to educate their students to meet the new standards. This problem is exacerbated in Wisconsin because state-imposed limits on

school district revenues are calibrated in nominal dollars and take no account of differences in costs across districts.

The current school finance system in Wisconsin is not capable of guaranteeing that all school districts have sufficient resources to provide an adequate education for their students. As will be explained below, the interaction of the existing school funding formulas with the revenue limits and the QEO have created an environment that makes it very difficult for many school districts to provide their students with an adequate education.

The Mechanics of State Equalization Aid

Equalization aid is allocated to all school districts using a very complex three-tier guaranteed tax base formula. Although it appears at first blush that all districts face the same formula, schools districts in effect face different formulas depending on both the size of their per pupil property tax base and their level of per pupil spending. Table 5 describes the district characteristics that are used to divide K-12 districts into one of four groups.¹⁶

The 11 school districts in the first group have very large per pupil property tax bases. Equalization aid for these school districts is determined using formula 1 (see Figure 4) where A_i is the per pupil equalization aid allocated to

TABLE 5

Grouping of K-12 School Districts for Purposes of Distributing Equalization Aid School Year 2001-02

Group	Group Description	Number of Districts	Percent of Total Pupils
1	Tax base per pupil (EQV) \geq \$903,569	11	0.7
2	\$325,154 < EQV < \$903,569 and spending per pupil* > \$6,848	107	32.9
3	EQV \leq \$325,154 and spending per pupil > \$6,848	233	63.2
4	Spending per pupil \leq \$6,848	17	3.2

* The measure of per pupil spending in the aid formulas is shared costs. This concept includes most spending financed by property taxes and general state aid, but excludes spending financed through federal grants.

school district_i, and EQV_i is its per pupil equalized property tax base.

In 2001-02, only one K-12 district, Gibraltar, had an EQV per student greater than \$2 million, and thus received no equalization aid. For the other school districts in group 1, per pupil aid is equal to the difference between \$1,000 per pupil and the amount of property tax revenue the district can raise by levying a one-half mill property tax rate. Note that the amount of state aid received by districts in group 1 is not affected by any decisions by these districts to increase or decrease their spending per pupil or their school mill rate.

The school districts in group 2 have per pupil property tax bases smaller than those in group 1, but larger than the state average property tax base, that is, \$325,000 in 2001-02. Also, per pupil spending for the 2000-01 year was greater than \$6,848.¹⁷ Equalization aid for these 107 districts is allocated using a two-part formula, where SC_i refers to per pupil spending (shared cost) in the previous year.

The first part of formula 2 provides each district in group 2 with a block grant equal to the difference between \$6,848 per pupil and the amount of property tax revenue each district can raise by levying a property tax rate of a little under seven mills. For every district in group 2, the second part of the formula (the part within the square brackets) actually generates a negative amount of money and thus reduces the equalization aid allocated through the first part of the formula. The second part of the formula in effect penalizes school districts for every extra dollar of spending above \$6,848.

To see how the second part of the formula works, let us take an example of a district with a tax base of twice the average—\$650,308 per pupil. The value of the terms within the braces ($\{...\}$) is $1 - (2)$, or -1 . This implies that total per pupil aid is reduced by one dollar for each dollar that shared costs exceeded \$6,848. Thus, if this district had per pupil spending in 2000-01 of \$7,803—the average among all K-12 districts in that year—its \$2,314 of per pupil aid as calculated by the first part of the formula would be reduced by \$955 ($\$7,803 - \$6,848$). It should be noted that although extra spending reduces aid allocations, every district in group 2 is guaranteed a minimum amount of aid, with the mini-

FIGURE 4

Wisconsin School Equalization Aid Formulas K-12 School Districts

- (1) $A_i = \$1,000 - 0.5 \text{ mills} * EQV_i$, if $EQV_i < \$2 \text{ million}$
and
 $A_i = \$0$, if $EQV_i \geq \$2 \text{ million}$
- (2) $A_i = (\$6,848 - 6.972 \text{ mills} * EQV_i) + \{ [1 - (EQV_i / \$325,154)] * (SC_i - \$6,848) \}$
- (3) $A_i = (\$1,000 - 0.5 \text{ mills} * EQV_i) + \{ [1 - (EQV_i / \$903,569)] * (SC_i - \$1,000) \}$

um equal to the amount of aid it would receive using formula 1.

Group 3 includes all districts with below average per pupil tax bases but per pupil spending in excess of \$6,848. Equalization aid to this group, which includes nearly two-thirds of all K-12 districts, is allocated using formula 2, the same formula used to calculate equalization aid for group 2 districts. For this group, however, EQV_i is by definition always less than \$325,154, the average tax base among all K-12 districts. This fact implies that the second part of the formula always generates an additional amount of aid for each dollar of per pupil spending in excess of \$6,848. Thus, for example, a school district with a per pupil tax base equal to 75 percent of the statewide average would be allocated an extra 25 cents per pupil of aid for each dollar by which the previous year's spending exceeded \$6,848.¹⁸ By linking increased aid to increased spending, the formula provides school districts in Group 3 with an incentive to increase their level of spending.

The 17 districts in Group 4 are all low-spending districts. Their equalization aid is calculated using formula 3, a two-part formula.

To illustrate how this formula works, let us consider a school district with per pupil property wealth equal to the K-12 average of \$325,154, and average per pupil spending of \$7,803, the state average among K-12 districts. As a half mill property tax generates about \$163 in property tax revenue, the first part of formula 3 provides a per pupil grant of \$837, that is, $\$1,000 - \163 . Because the school district's EQV is approximately 36 percent of \$903,569, the second part of the formula generates 64 cents ($\$1 - \0.36) of additional aid per pupil for each dollar of spending in excess of \$1,000. This implies that the second part of the formula provides a

grant of \$4,355 per pupil. The total equalization grant for this district equals \$5,192, an amount that is equal to 66.5 percent of district expenditures in the previous year.

Problems with the Equalization Aid Formula

Despite claims to the contrary, the equalization aid formula is quite effective in equalizing per pupil spending and achieving fiscal neutrality. The formula does a poor job, however, of guaranteeing that all districts have sufficient resources to provide their students with an adequate education.

Enabling school districts to provide an adequate education for their students requires that the distribution of state aid reflects differences in the cost of education across districts, where costs are measured as the minimum amount of money a school district must spend in order to reach any specified student performance goal. The existing equalization aid formula accounts only for differences across districts in property tax base and in spending. If all property-poor districts also had high costs, then the current formulas might be quite effective in achieving educational adequacy. The fact is, however, that the size of a district's per pupil tax base is not closely related to its costs. Among K-12 districts, costs actually tend to be somewhat higher in property wealthy than in property poor districts.¹⁹

As explained earlier, for about two-thirds of school districts (those in groups 3 and 4), the equalization aid formula encourages spending by promising increased aid in future years in return for increases in spending now. Although the formula provides an incentive for these districts to increase spending on education, school districts are free to ignore the incentive and maintain low levels of spending and property taxation.

The data suggest that the majority of K-12 districts with below-average expenditures per pupil are spending at modest levels not because of a lack of resources (tax base and state aid), but because of a preference on the part of local school boards and, presumably, local residents for low spending and low property tax rates. Among K-12 districts with below-average spending, over two-thirds have property tax rates that are also below the state average. This suggests

that in those school districts, despite generous state aid, local residents have made an explicit decision to keep both per pupil spending and school property tax rates relatively low. The important point is that there is nothing in the current system of school finance that requires any minimum level of spending for school districts. Whether these low-spending districts are providing their students with an adequate education—one that will enable students in those districts to meet the increasingly stringent state and federal student performance standards—is an open question, a question that clearly requires additional research.

For more than 100 school districts (those in group 2), any attempts to increase the quality of education that involves additional per pupil spending will result in a reduction in equalization aid in future years. The only way for a group 2 school district to increase spending by, for example, \$10 per student, would be for that district to increase local property taxes by more than \$10 per student in order to compensate for the loss of equalization aid associated with any increases in local spending. For example, the Menomonee Falls school district would have to raise school property taxes by \$18 per pupil in order to increase spending by \$10 per pupil. Although local residents are free in principle to increase spending by any amount in excess of the revenue limits by approving an appropriate referendum, the prospect of facing an expenditure penalty will probably doom most override attempts. Again, the equalization aid formula, especially when combined with the revenue limits, may force some group 2 school districts to spend at levels that are insufficient to allow them to provide their students with an adequate education.

The combination of a school aid formula that provides the majority of school districts with an incentive to increase spending with a commitment by the state to finance two-thirds of all public school spending is a recipe for state fiscal disaster. To limit its fiscal liability the state was forced to limit school spending. A two-thirds commitment combined with an equalization formula that did nothing to encourage spending would greatly reduce the need to impose revenue or spending restrictions on local school districts.

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Problems Created by Revenue Limits and the QEO

The mechanics of the revenue limit and the QEO requirements further reduce the ability of many of the state's school districts to provide an adequate education. In any given year, the revenue limit is a nominal dollar amount of money per student, with the limit this year set at \$230.67. This implies that high spending districts are limited to smaller percentage increases in revenues than are low spending districts. To the extent that higher levels of per pupil spending are attributable to factors outside the control of local school boards, such as high concentrations of children from poor families or of students with disabilities, the revenue limit is systematically more restrictive for districts with higher costs.²⁰

There are widespread reports, based primarily on surveys of school administrators, that the revenue limits have forced school districts to cut programs, increase class sizes, and defer maintenance and capital investments. Although to date no systematic analysis has occurred, it appears that school districts characterized by higher than average costs are being forced to make the largest cuts in school programs.

In a recent statistical study, economist Jennifer Imazeki has found evidence that the revenue limits and the QEO requirements have resulted in real (inflation-adjusted) reductions in teacher salaries.²¹ The impacts on salaries have varied, with the salaries of beginning teachers more adversely affected than the salaries of experienced teachers. Professor Imazeki's research also showed that the revenue limit and the QEO resulted in the largest salary reductions in Milwaukee and in other districts with high proportions of low-income students. By reducing the beginning salaries that these districts are able to offer, the limits are making it more difficult for these districts to attract high quality teachers. One unintended consequence of the limits may be a reduction in the quality of the teachers being hired to teach in districts with heavy concentrations of disadvantaged students. This may well exacerbate the already large achievement gaps that exist between white and minority and economically advantaged and disadvantaged students.

In recent years, Milwaukee Public Schools have experienced teacher shortages. Recent experience in New York City has shown that big city school districts can overcome difficulties in hiring quality teachers if they are willing and able to increase the salaries and benefits offered to new teachers.²² The New York experience suggests that the restraints created by the revenue limits and the QEO on the ability of the Milwaukee Public Schools to increase teacher compensation are the major reason for Milwaukee's recurring teacher shortages.

The Crisis in Special Education Funding

Federal legislation, the Individuals with Disabilities Act, first enacted in 1975, mandates that school districts provide "appropriate" education to all children with disabilities regardless of the type or severity of the disability. Current regulations also require that children with disabilities be educated in regular classrooms whenever possible. In Wisconsin, as in most other states, both the number of students classified as disabled and the costs of providing the required "special education" services have risen rapidly in recent years. Between 1993-94 and 2000-01, special education spending has grown by 50 percent in real (inflation-adjusted) dollars. This increase reflects both the rising costs of providing special education services and a 25 percent increase in the number of eligible students. During this period, total public school enrollment increased by only 5.8 percent.

As mentioned previously, both the federal government and the state provide categorical grants for special education. These grants, however, have been growing much more slowly than special education spending. Because the revenue caps limit the annual growth of the sum of property tax revenue and equalization aid, the total revenue available to school districts grew by only 9 percent in real terms between 1993-94 and 2000-01. This implies that during this period, special education spending increased at a rate about five times faster than the growth in available revenues. Thus, in order to meet their legal obligations to provide education for disabled students, school districts are being forced to reallocate their revenues away from spending on regular education. While this "crowding out" of regular education occurs in

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nearly all school districts, small districts are particularly vulnerable. For example, it is not uncommon for school districts to spend \$80,000 per year to provide educational services for a severely disabled student. Meeting this obligation may force districts to hire up to two fewer regular education teachers. While the loss of teachers creates hardships for any district, the loss of teachers is particularly devastating for small districts.

Educating Students from Economically Disadvantaged Families

There is substantial evidence, based on research in Wisconsin as well as in other states, that more resources are needed to provide equal educational opportunities to children who come from economically disadvantaged families. A recent study suggests that school districts may need to spend more than twice the average spending per pupil for each child from a poor family in order to raise their academic performance to the statewide average.²³

In recent years, Wisconsin has taken some initial steps toward recognizing the extra costs involved in educating children from economically disadvantaged families. Although it would be preferable to provide additional unrestricted funds to school districts with heavy concentrations of poor children, the Wisconsin legislature chose instead to subsidize small class sizes in the early grades. It established a new categorical aid program, called the SAGE program, which provides funding to school districts that contain schools with high concentrations of poor children and that agree to lower class sizes in kindergarten through grade three to 15 students.

Even if the smaller class sizes funded by SAGE prove to be an effective mechanism for improving the academic performance of poor children, the state provides little in the way of extra funding for poor students in the higher grades. Given the revenue limits, the only way for school districts to devote extra funds to programs aimed at improving the academic achievement of children from poor families is to reduce the funding of education for the majority of Wisconsin students who are not economically disadvantaged.

Solving the Crisis in Funding Education in Wisconsin

It is now widely recognized that the Wisconsin state government will begin 2003 facing a multi-billion dollar structural deficit.²⁴ There is no question that addressing the deficit will require major reductions in some of the public services that Wisconsin residents have been accustomed to receiving. The fact that 40 percent of the annual appropriations from the state's General Fund are used to finance grants to elementary and secondary schools means that it is highly unlikely that the state's budget deficit will be filled without cuts in state support for public education.

Although a reduction in state support may be inevitable, it is important that any reduced funding be combined with a major reform of the system of school finance that addresses the issues summarized in the previous section. The easiest way for the legislature to reduce state education aid would be to lower its commitment to fund two-thirds of education spending. For example, the legislature could from now on promise to finance 63 percent of school district spending. Without changing the equalization aid formula, any reduction in the share of state support would result in smaller aid allocations (relative to the allocations that would have occurred if the two-thirds commitment remained in force) for most school districts.²⁵ These reductions would make it more difficult for school districts to provide their students with an adequate education, would result in property tax increases, and would do nothing to address the growing problems of financing special education and the education needs of students from poor families.

It is beyond the scope of this paper to propose a specific school finance reform plan. However, I conclude by suggesting several elements that I believe should be included in any comprehensive reform proposal.

State financial support for education should be distributed to school districts using a formula that guarantees that all school districts levying a minimum property tax rate will have at their disposal a sufficient amount of money to provide their students with an adequate education. It is the responsibility of the state to articulate a set of student "competencies" and student performance standards that together define an ade-

quate education. Determining the amount of money each school district needs to provide an adequate education should depend on a number of characteristics of each district and its student body that lie outside the control of local school districts.

In order to create an incentive for each school district to provide education as effectively and efficiently as possible, local taxpayers should bear the full burden of financing school spending above some specified level. This level could be set at the cost for each school district of providing an adequate education, or at some multiple, say 125 percent, of that level.

The state government should play a major role in financing the education of students with severe disabilities, such as autism or blindness. In providing funding for other disabilities, care should be taken not to provide local districts with an incentive to over-classify students as disabled.

The perfect system of school finance would not by itself guarantee that all students in Wisconsin receive a high quality adequate education. Financial resources provided to school districts must be accompanied with strict accountability standards. While fiscal resources from the state are important, it is essential that school districts be provided with appropriate incentives to utilize funds as efficiently and effectively as possible.

Notes

1. The one exception is the state of Hawaii, which has a single statewide school district.

2. In producing these statistics, the National Center for Education Statistics (2002) uses a different method of calculating state government contributions to total revenue than is used in Wisconsin to calculate the state's "two-thirds commitment" of state funding.

3. These data are for the 1998-99 school year, the latest year for which these data are available. Excluding Hawaii, New Hampshire had the lowest state share (8.9 percent) and Vermont the highest state share (74.4 percent). The contribution of local school districts ranged from 11.9 percent in New Mexico to a whopping 84.7 percent in New Hampshire.

4. The coefficient of variation, a common measure of dispersion, equaled 0.70.

5. We drop the school district of Norris from our analysis, because although formally classified as a school district, it is in fact a boys' reform school with a current enrollment of 82 students and almost no tax base.

6. As a measure of spending we use "current education costs" as calculated by the Department of Public Instruction. This spending concept provides a comprehensive measure of instructional and instructional support expenditures. It does not include spending on pupil transportation, food and community services, or capital projects.

7. If there were no state aid and all school spending was financed by the property tax, then the distribution of the spending-effort ratios would be identical to the distribution of the per pupil tax base.

8. This statistic is calculated by dividing the standard deviation by the mean.

9. Even if we include all K-12 districts in the analysis, state aid substantially reduces spending-effort ratios. Note that the district with the highest per pupil tax base has property wealth over 24 times higher than the district with the lowest per pupil wealth, but the highest spending-effort ratio is only eight times as high as the lowest ratio. In fact, if we ignore the three districts with the highest ratios and the district with the lowest ratio, among the remaining 364 districts, the highest ratio is only three times the lowest ratio.

10. The guaranteed tax base in 2001-02 (the so-called secondary guarantee) was about \$904,000. Only 11 K-12 school districts (with 0.7 percent of the state's K-12 enrollment) had per pupil tax bases in excess of the tax base guarantee.

11. For a very clear discussion of equity standard in school finance, see the widely cited textbook *School Finance: A Policy Perspective* by University of Wisconsin-Madison professor Allan Odden and co-author Lawrence Picus.

12. Efforts to target property tax relief are limited by the uniformity clause in the state constitution. Additional tax relief, however, could be targeted to homeowners by raising income-eligibility for the homestead credit to the state's individual income tax.

13. Drawing a distinction between costs and spending is particularly difficult in Wisconsin

because within the education community in Wisconsin and in state education legislation, the word “costs” is generally used to mean spending.

14. See Andrew Reschovsky and Jennifer Imazeki, “Achieving Educational Adequacy through School Finance Reform,” *Journal of Education Finance* 26 (Spring 2001): 373–96.

15. Using a different methodology, the Institute for Wisconsin’s Future recently released a report that provided a detailed estimate of the cost of achieving an adequate education in Wisconsin. See Institute for Wisconsin’s Future, “Funding Our Future; An Adequacy Model for Wisconsin School Finance,” Milwaukee: IWF, 2002. The report is available at the IWF web site: <http://www.wisconsinsfuture.org>.

16. Both K-8 and union high school districts can be divided into four parallel groups, but different values of per pupil tax base and per pupil spending levels are used to characterize the districts.

17. This level of spending is referred to as the secondary cost ceiling. It includes expenditures classified as shared costs. The definition of shared costs is provided in the note to Table 4.

18. This result follows because the term in the braces has a value $1 - (.75)$, which is obviously equal to 0.25.

19. The simple correlation between the property tax base per pupil (EQV) and an index of costs is + 0.14.

20. The simple correlation between an index of district “costs” and the allowable percentage increase in spending under the revenue limits is equal to – 0.41.

21. The full results of her study are reported in a paper, “School Revenue Limits and Teacher Salaries: Evidence from Wisconsin,” which can be found at http://www-rohan.sdsu.edu/~jimazeki/papers/RevLim_301.pdf.

22. For more detail, see Richard Rothstein, “Teacher Shortages Vanish When the Price is Right,” *New York Times*, September 25, 2002.

23. See Andrew Reschovsky and Jennifer Imazeki, “The Development of School Finance Formulas to Guarantee the Provision of Adequate Education to Low-Income Students,” *Developments in School Finance, 1997*, Washington, D.C.: National Center on Education Statistics, U.S. Department of Education, 1998: 121–48.

24. For a detailed discussion of Wisconsin’s structural deficit, see the paper by Andrew Reschovsky, “Wisconsin’s Structural Deficit: Our Fiscal Future at the Crossroads,” available at www.lafollette.wisc.edu/research/publications/structural_deficit.pdf.

25. Although equalization aid allocations to the high-property wealth districts included in Group 1 become smaller as their tax base grows, reducing the share of state support will have no direct impact these districts. By requiring an increase in the required mill rate (in the first part of formula 2), a reduced state share will result in aid reductions to school districts in Groups 2 and 3. For the small number of districts in Group 4, a reduced state share results in a lower “secondary guarantee” and consequently a reduction in the rate by which per pupil spending above \$1,000 is matched by additional state support (see formula 3).



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