SCHOOL FINANCE

A Policy Perspective

SECOND EDITION

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Introduction and Overview to School Finance

School finance concerns the distribution and use of money for the purpose of providing educational services and producing student achievement. For most of the twentieth century, school finance policy has focused on equity—issues related to widely varying education expenditures per pupil across districts withiu a state and the uneven distribution of the property tax base that is used to raise local education dollars. In the 1990s, new attention began to focus on education adequacy and productivity—the linkages among level of funds, use of funds, and amounts of student achievement. As the 1990s end and the twenty-first century begins, policymakers increasingly want to know how much money is needed to educate students to high standards; how those dollars should be distributed effectively and fairly among districts, schools, programs and students; and how both level and use of dollars affect student performance. These policy demands are pushing school finance beyond its traditional emphasis on fiscal equity.

This book moves school finance in these new directions. It emphasizes the traditional equity issues and also discusses adequacy and productivity issues, including what is known about the linkages among dollars, educational strategies, and student performance. The 1980s and the 1990s were remarkable not only for the intensity of the school reform movement, but the duration of interest in educational reform. Today, standards-based reform elements from content standards to charter schools to new accountability structures seek to teach students to high levels. In most instances, the implications of these reforms on school finance have not been fully considered, though Odden and Clune (1998) argued that traditional school finance systems were "aging structures in need of renovation." During the 2000s, states and their respective school districts will need to rethink school finance systems to meet the productivity expectations and accountability requirements inspired by these reforms.

This book takes a policy approach to school finance analysis. It is important for graduate students in education, as well as educators and education policy

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makers, to understand both the finance implications of school reform policies, and equally important, to understand how decisions about the distribution of funds to local schools and school districts affect the implementation of those reforms. The book begins with a discussion of traditional school finance issues, including the legal issues surrounding school finance, analysis of general taxation systems, intergovernmental grants, and traditional school finance formulas. The analysis of school finance formulas is supplemented with a computer simulation designed to allow students the opportunity to simulate the effects of different school finance distribution decisions on a sample of school districts. By designing their own school finance formulas and simulating the effect on a sample of school districts, students will have a more realistic sense of how changes in funding formulas impact school districts across a state. The simulation will help students understand the technical and political complexities that result when one attempts to redesign school-funding programs.

The book then moves beyond this traditional approach to school finance, and in a series of chapters discusses important issues for the 2000s and how they relate to school finance. Included are chapters dealing with allocation and use of funds at the district and school levels, teacher salaries and compensation structures especially as they can be redesigned to improve productivity, site-based management, educational choice programs, fiscal incentives, and the financing of broad education programs shown by research to improve student performance. In each of these areas, current research and state activity are summarized, and the implications for school finance programs are discussed.

This introductory chapter has three sections. Section one outlines the scope of school finance within the United States; funding public schools is big business, and this section outlines its fiscal magnitude. Section two provides a quick history of school finance developments, beginning in the seventeenth century. This section shows how schools evolved from privately funded, parent- and church-run entities to the large publicly and governmentally controlled education systems of today. The last section discusses several examples of the "school finance problem" and how it has evolved from the traditional fiscal disparities across districts to the new issue of education adequacy.

1. THE SCOPE OF UNITED STATES EDUCATION FINANCING

Education is an enormous enterprise in the United States. It constitutes the largest portion of most state and local governmental budgets; engages more than 100,000 local school board members in important policy-making activities; employs millions of individuals as teachers, administrators, and support staff; and educates tens of millions of children.

Figure 1.1 provides detail on public school enrollment, including numbers of school districts and schools during most of the twentieth century. Enrollment was relatively constant during the 1930s and 1940s, but rose quickly after World

FIGURE 1.1 Historical Data on the Size of the Nation's School Systems, 1919–20 to 1994–95

Year	Public Student Enrollment (in 1,000s)	Public School Districts	Public Elementary Schools	Public Secondary Schools	Private Elementary Schools	Private Secondary Schools	Private Schools as Percent of Total
1919–20	21,578	—	—	—	—	—	—
1929–30	25,678	—	238,306	23,930	9,275	3,258	5
1939–40	25,434	117,108	—	—	11,306	3,568	—
1949–50	25,111	83,718	128,225	24,542	10,375	3,331	8
1959–60	35,182	40,520	91,853	25,784	13,574	4,061	13
1969–70	45,550	17,995[a]	65,800[a]	25,352[a]	14,372[a]	3,770[a]	17[a]
1979–80	41,651	15,912[b]	61,069[b]	24,362[b]	16,792[b]	5,678[b]	21[b]
1989–90	40,543	15,358[c,d]	61,340[d]	23,460[d]	22,223[d]	8,989[d]	21[b]
1994–95	44,111	14,881[c,e]	62,726[e]	23,379[e]	23,543[e]	10,555[e]	31[e]

Source: National Center for Educational Statistics, 1998a.

[a] Data for 1970–71.

[b] Data for 1980–81.

[c] Because of expanded survey coverage, data are not directly comparable with figures for earlier years.

[d] Data for 1990–91; for private schools, these data are from sample surveys and should not be compared directly with the data for earlier years.

[e] Data for 1993–94; for private schools, these data are from sample surveys and should not be compared directly with the data for earlier years.

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War II as tbe post-war baby boom became school-aged. After 25 years of rapid enrollment growth, public school enrollment declined during the 1970s and theu began to grow again in the mid-1980s as the children of the baby boom genera-tion began to enter scbools. In 1989–90, public school enrollment was estimated to be just over 40 million students, having peaked at slightly above that level dur-ing the 1970s.

One of the major stories of this century has been the consolidation of school districts into larger entities. In I995, there were 14,881 school districts, the lowest number during this century. In 1940, by contrast, there were 117,108 school districts. The numher of school districts dropped by almost 40,000 be-tween 1940 and 1950 (i.e., after World War II), and then dropped by another 40,000 districts between 1950 and 1960. During the 1970 school year, there were only 17,995 local school districts. The number of districts varies across the states, however, with Texas and California each having more than 1,000 districts in 1990, and Hawaii having one, statewide school district.

Interestingly, as will be discussed below, although school district cousolida-tion entails consolidation of the local property tax base, remaining inequities in local school financing after the bulk of consolidation had occurred led courts dur-ing the late 1960s and early 1970s to declare finance structures unconstitutional (see Chapter 2).

Figure 1.1 also shows that the numher of public schools has dropped over time while enrollments have risen, indicating that schools too have grown in size during the twentieth century. There were over 262,000 public schools in 1930, but that number had dropped by a factor of more than four to around 65,000 schools in 1995. On the other hand, the number of private schools has risen since 1930, from a low of about 12,500 then to aroimd 34,000 today, almost triple the number of 1930.

Funding public schools requires large amounts of dollars. In 1995, public school revenues totaled $273.1 hillion, au increase of more than $64 billion from the 1990 total of $208.5 billion (Figure 1.2). Indeed, the data show that public school revenues more than doubled during each decade from 1940 to 1990, a re-markable fiscal record.

Figure 1.2 also shows that during this century, public education consumed an increasing portion of the country's total economic activity (the gross domestic product) until 1970, then dropped a bit during the enrollment decline of the 1970s, and has recently increased almost to the 1970s' level. The same pattern is true for total pnhlic school revenues as a percent of the country's personal in-come. ln short, the country devotes approximately 4.5 percent of its personal an-nual income to public schools, a considerahle portion considering all the other items that individuals could purchase with annual income either themselves or through government tax revenues.

This comment is undergirded by the data in Figure 1.3. Column 2 shows that *real* expenditures per pupil (i.e., expenditures adjusted by the Consumer Price Index), have iucreased each decade at extraordinarily high rates: 100 per-cent between 1920 and 1930, 67 percent during the 1960s, and 36 percent during

FIGURE 1.2   Educational Revenues, GDP, and Personal Income (Billions), 1930–95

Year	Total Educational Revenues	Gross Domestic Product (GDP)	Revenues as Percent of GDP	Personal Income (PI)	Revenues as Percent of PI
1930	$ 2.1	$ 104	2.0	$ 85	2.5
1940	2.3	101	2.3	78	2.9
1950	5.4	295	1.8	230	2.3
1960	14.7	527	2.8	413	3.6
1970	40.3	1,036	3.9	837	4.8
1980	96.9	2,784	3.5	2,293	4.2
1990	208.5	5,744	3.6	4,804	4.3
1995	273.1	7,254	3.8	6,112	4.5

Source: National Center for Education Statistics, *Digest of Education Statistics, 1997.*

FIGURE 1.3   Educational Expenditures per Pupil and Revenues by Source, 1920–97

Year	Expenditures per Pupil		Total Revenues (in Millions)	Percent Revenues by Source		
	Real	Nominal		Federal	State	Local
1919–20	$ 333	$ 40	$ 970	0.3	16.5	83.2
1929–30	667	72	2,089	0.4	16.9	82.7
1939–40	868	76	2,261	1.8	30.3	68.0
1949–50	1,252	187	5,437	2.9	39.8	57.3
1959–60	1,895	350	14,747	4.4	39.1	56.5
1969–70	3,155	750	40,267	8.0	39.9	52.1
1979–80	4,275	2,089	96,881	9.8	46.8	43.4
1989–90	5,810	4,643	208,548	6.1	47.1	46.8
1994–95	5,840[a]	5,528[a]	273,138	6.8	46.8	46.4
1995–96	5,939[a]	5,774[a]	286,411[b]	7.0[b]	48.1[b]	45.0[b]
1996–97	6,060[a]	6,060[a]	299,995[b]	6.9[b]	48.9[b]	44.2[b]

Source: National Center for Education Statistics, *Digest of Education Statistics, 1997.*

[a] Data estimated.

[b] *Source:* National Education Association, *1996–97 Estimates of School Statistics.*

the 1970s. Even during the 1980s, a decade of government tax and expenditure limitations, expenditures per pupil increased by 36 percent to a total of $5,810 for current operating purposes in 1989–90. It seems that real resources for public school students have risen substantially each decade.

These facts certainly are at odds with popular perceptions that schools do not get much more money each year. Though real resources might increase only 1–3 percent each year, over a 10-year time period, that amounts to nearly a one-third increase in real resources, a substantial increase.

The last columns in Figure 1.3 show that the sources of school revenues have changed over the years. Earlier in the century, local districts provided the bulk of school revenues, and the federal role was almost nonexistent. Beginning in the 1960s, the federal government began to increase its financial role, which reached its maximum at 9.8 percent in 1980. Since then, the federal contribution has dropped by almost one-third. Today, the states are the primary providers of public school revenues, surpassing local school districts sometime in the 1970s' era of school finance reforms. During the 1996–97 school year, on average the states provided 48.9 percent of public school revenues, local districts (primarily through the local property tax) 44.2 percent, and the federal government 6.9 percent.

These national patterns, however, are very different in each of the 50 states, as shown by Figure 1.4. The national average expenditure per pupil was $5,988 in 1994–95, but expenditures ranged from a low of $3,656 in Utah to a high of $9,774 in New Jersey, a difference of almost three-to-one.

States also differ in the sources of public school revenues. In Hawaii, for example, 90 percent of revenues derive from the state, while in New Hampshire only 7.3 percent of school revenues come from state sources. States provide over 60 percent of school revenues in 11 states, while local districts provide over 60 percent of school revenues in six states. This variation reflects differences in local perceptions of appropriate state and local roles, as well as differences in school finance formula structures (Gold, Smith, and Lawton, 1995). These data document one enduring characteristic of state school finance structures: though there are some similarities, the differences are dramatic. Students of school finance need to understand both the generic similarities and the factors causing the specific differences.

2. EARLY DEVELOPMENTS IN SCHOOL FINANCE

The country has not always had a system of free, tax-supported schools. Free, public education was an idea created in the United States during the nineteenth century, and the large network of public school systems was formed in a relatively short time period, primarily during the latter part of the nineteenth and early part of the twentieth century.

American schools began as local entities, largely private and religious during the seventeenth, eighteenth, and even early nineteenth centuries. As in

FIGURE 1.4   Educational Expenditures per Pupil and Revenues by Source, by State, 1994–95

State	Expenditures per Pupil	Percent of Revenues by Source		
		Federal	State	Local
Alabama	$4,405	9.7	61.0	21.6
Alaska	8,963	10.8	67.5	19.4
Arizona	4,778	9.4	44.0	44.2
Arkansas	4,459	9.2	58.2	27.8
California	4,992	9.5	54.2	35.1
Colorado	5,443	5.3	42.9	48.6
Connecticut	8,817	4.0	39.5	53.6
Delaware	7,030	7.2	64.3	26.8
District of Columbia	9,335	9.5	0	90.0
Florida	5,718	7.6	49.1	39.6
Georgia	5,193	7.4	50.7	40.0
Hawaii	6,078	7.4	90.2	0.5
Idaho	4,210	7.7	61.2	29.3
Illinois	6,136	6.5	28.0	63.3
Indiana	5,826	4.8	53.3	38.9
Iowa	5,483	5.2	47.9	41.0
Kansas	5,817	5.3	57.4	34.8
Kentucky	5,217	9.3	65.8	24.1
Louisiana	4,761	11.9	52.1	33.4
Maine	6,428	5.7	47.9	45.4
Maryland	7,245	5.0	37.0	54.9
Massachnsetts	7,287	5.4	36.3	56.0
Michigan	6,994	6.2	67.3	24.6
Minnesota	6,000	4.4	52.4	39.4
Mississippi	4,080	14.8	56.4	25.3
Missouri	5,383	6.5	38.7	50.7
Montana	5,692	10.0	49.6	36.3
Nebraska	5,935	5.8	32.4	55.8
Nevada	5,160	4.9	30.1	61.1
New Hampshire	5,859	3.1	7.3	87.3
New Jersey	9,774	3.3	38.0	56.0
New Mexico	4,586	11.8	74.4	11.6
New York	9,623	4.8	40.7	53.6
North Carolina	5,077	7.5	65.1	24.6
North Dakota	4,775	12.4	42.1	40.2
Ohio	6,162	6.5	40.0	49.3
Oklahoma	4,845	9.4	59.4	25.8
Oregon	6,436	6.8	46.2	43.8
Pennsylvania	7,109	5.6	40.1	52.3

FIGURE 1.4   (Continued)

State	*Expenditures per Pupil*	Percent of Revenues by Source		
		Federal	*State*	*Local*
Rhode Island	7,469	5.5	40.5	52.9
South Carolina	4,797	8.7	46.3	40.6
South Dakota	4,775	10.0	26.5	60.5
Tennessee	4,388	8.9	47.5	36.9
Texas	5,222	7.7	40.2	49.4
Utah	3,656	6.9	54.3	33.3
Vermont	6,750	4.6	29.8	63.2
Virginia	5,327	5.7	31.8	59.1
Washington	5,906	6.0	68.7	22.3
West Virginia	6,107	8.1	63.6	26.8
Wisconsin	6,930	4.4	41.1	52.5
Wyoming	6,160	6.7	48.0	43.5
United States	*5,988*	*6.8*	*46.8*	*43.8*

Source: National Center for Education Statistics. *Digest of Education Statistics 1997.*

England, educating children was considered a private rather than a public matter. Providing for education was a mandate for parents and masters, not governments. Eighteenth-century leaders of the new American republic viewed education as a means to enable citizens to participate as equals in affairs of government and thus essential to ensure the liberties guaranteed by the Constitution. Even though Thomas Jefferson proposed creation of free public elementary schools, his proposal was not adopted until the mid-1800s, largely through the efforts of Horace Mann and Henry Barnard, state superintendents of public instruction. Mann spearheaded the development of public-supported "common schools" in Massachusetts, and Barnard did the same in Connecticut.

In the nineteenth century, education began to assume significance in economic terms; that also was the time when compulsory attendance laws were passed. Even when school attendance became compulsory beginning in the mid-1800s, however, government financing of schools was not uniformly required.

In 1647, the General Court of Massachusetts passed the famous Old Deluder Satan Act. The act required every town to set up a school or pay a sum of money to a larger town to support education. It required towns with at least 50 families to appoint a teacher of reading and writing, and required towns with more than 100 families to also establish a secondary school. The Act required that these schools should be supported by masters, parents, or the inhabitants in general, thereby establishing one of the first systems of financing schools through local taxation. Pulliam (1987) states that the first tax on property for local schools was levied in Dedham, Massachusetts, in 1648. By 1693, New Hampshire also required towns to support elementary schools.

Initially, one-room elementary common schools were established in local communities, often fully supported through a small local tax. Each town functioned, moreover, as an independent school district, indeed as an independent school system, since there were no state laws or regulations providing for a statewide public education system. At the same time, several large school systems evolved in the big cities of most states. Even at this early time, these different education systems reflected differences in local ability to support them. Big cities usually were quite wealthy, while the smaller, rural one-room school districts usually were quite poor, many having great difficulty financing a one-room school.

As the number of these small rural and big-city school systems grew, however, and the importance of education as a unifying force for a developing country became increasingly realized by civic and political leaders, new initiatives were undertaken to create statewide education systems. By 1820, in fact, 13 of the then 23 states had constitutional provisions, and seventeen had statutory provisions, pertaining to public education.

In the mid-eighteenth century, several states began to completely rewrite state constitutions not only calling for creation of statewide systems of public education, but also formally establishing government responsibility for financing schools. Today, all states have constitutional provisions related to free public education.

Creation of free common schools reflected the importance of education in America. It also shifted control over education from individuals and the church to the state. Control over schools was a problematic aspect in crafting statewide, education systems. The resolution to the control issue was creation of local, lay boards of education that, it was argued, would function in the place of parents and the church.

While for the first century of common schools local boards basically controlled public schools, the strength of local control has changed substantially in recent years. In the early twentieth century, much school control was given to the new breed of educational professionals, as the Progressive Era of education sought to take politics out of education (Tyack and Hansot, 1982). Beginning in the 1960s, both the states and federal government began to exert new initiative and control affecting public schools. States continued this trend by taking the lead for education policy throughout the 1980s' education reform period (Doyle and Hartle, 1985; Odden, 1995a). Local boards were for the most part uninvolved in those reforms (Odden, 1995a). In the early 1990s, the president and the nation's governors established nationwide education goals; these were codified into law in 1994 by the U.S. Congress.

The development of the state-controlled and governmentally financed "common school" also raised many fundamental issues about school finance. The key issues concerned the level of government (local or state) that would support public education and whether new constitutional phrases such as "general and uniform," "thorough and efficient," "basic," or "adequate" meant an equal amount of dollars would be spent for every student in the state, or meant just providing a basic education program for every student, with different amounts of

total dollars determined at the local level. As discussed in Chapter 2, this controversy persists today and is resolved in different ways by state legislatures and courts in the 50 states.

While major differences exist in the specific approaches taken, most states finance public schools primarily through local property taxes. Indeed, in the mid-to-late 1800s, most states required local districts to fully finance mandated public schools through local property taxation. In designing locally administered school systems, states generally gave local governments the authority to raise money for schools by levying property taxes. But when states determined school district boundaries, districts ended up with widely varying levels of property wealth per pupil, and thus large differences in the ability to raise local dollars to support public education. Districts with above-average property tax bases per pupil traditionally were able to spend at above-average levels with below-average tax rates, while districts with below-average tax bases spent at below-average levels even with above-average tax rates.

School finance policy debates throughout the twentieth century, including most school finance texts (see for example, Alexander and Salmon 1995; Guthrie, Garms, and Pierce, 1988; Odden and Picus, 1992, Chapter 1; Swanson and King, 1997) and most court cases, focused on these types of fiscal inequities. To be sure, some individuals pointed to spending differences per se, regardless of whether they were related to varying tax bases, and argued that they should be impermissible in a *state* education system (Wise, 1968). But the bulk of discussion centered on the links between spending differences and local property wealth per pupil (see also Coons, Clune, and Sugarman, 1970).

As discussed at length in Chapter 4, states began to intervene in school financing first through small per-pupil "flat grant" programs in which the state distributed an equal amount of money per pupil to each local school district. The idea was for the state to provide at least some assistance in support of a local basic education program. Over the years, these flat grants became recognized as too small.

In the early 1920s, states began to implement "minimum foundation programs," which provided a much higher level of base financial support and were financed with a combination of state and local revenues. These programs were the first in which states explicitly recognized the wide variation in the local property tax base, and designed a state aid structure to distribute larger amounts to districts with a small property tax base per pupil and smaller amounts to districts with a large property tax base per pupil.

These "equalization formulas" were designed to "equalize" differences in local fiscal capacity (i.e., the unequal ability to finance education because of the variation in the size of the local property tax base). But over time, the level of the minimum foundation programs also proved to be inadequate, and additional revenues above the foundation program were raised solely through local taxation. As a result, local educational expenditures per pupil varied widely across local districts in most states, with the differences related primarily to the size of the local property tax base.

Beginning in the late 1960s, these fiscal disparities caused by unequal distribution of the local tax base and inadequate state general equalization programs led to legal challenges to state school finance systems in which plaintiffs, usually from low-wealth and low-spending districts, argued that the disparities not only were unfair but also were unconstitutional (Coons, Clune, and Sugarman, 1970; Berke, 1974). Chapter 2 traces the course of these suits, which spawned a new political channel to improve the ways states financed public education, and which evolved in the 1990s into a strategy to link the funding structure with an education system that could teach nearly all students to high performance.

3. EVOLUTION IN THE SCHOOL FINANCE PROBLEM

This section discusses how the nature of the school finance problem has become much more complicated in the 1990s. Though many still define the core school finance problem as differences in spending across school districts caused by varying levels of property wealth per pupil, others (e.g., Odden and Clune, 1998) argue that linking finance to an adequate education is the core school finance issue today. Still others argue that educational productivity—determining how to produce higher levels of educational performance with current education resources—is the key school finance goal today (Hanushek and Associates, 1994).

Traditional Fiscal Disparities

There are many ways to depict the types of fiscal disparities among school districts created by the unequal distribution of the property tax. Figure 1.5 shows 1968–69 data that were presented in the original *Serrano* v. *Priest* court case in California; at that time, California had a typical minimum foundation program, and most districts raised additional funds to spend at a higher level. These data represent property value per child, the local school tax rate, and resulting expenditures per pupil for pairs of property-rich and property-poor districts in several counties. In each county example, the assessed valuation per pupil—the local tax base—varied substantially: by a factor of almost three-to-one in Los Angeles County and over sixteen-to-one in Alameda County. In each example, moreover, the district with the higher assessed value per child had both the higher expenditures per pupil and the lower tax rate.

These examples were selected to show that the California school finance structure produced a situation—similar to most other states at that time—in which districts with a low property tax base usually spent less than the state average even with above-average tax rates, while districts with a high property tax base usually spent above the state average with below-average tax rates. The wealthy enjoyed both the advantages of high expenditures and low tax rates, while the poor were disadvantaged by both low expenditures and high tax rates.

FIGURE 1.5   Comparison of Selected Tax Rates and Expenditure Levels in Selected California Counties, 1968–69

County	Pupils	Assessed Value per Pupil	Tax Rate	Expenditure per Pupil
Alameda				
Emery Unified	586	$100,187	$2.57	$2,223
Newark Unified	8,638	6,048	5.65	616
Fresno				
Colinga Unified	2,640	33,244	2.17	963
Clovis Unified	8,144	6,480	4.28	565
Kern				
Rio Bravo Elementary	121	136,271	1.05	1,545
Lamont Elementary	1,847	5,971	3.06	533
Los Angeles				
Beverly Hills Unified	5,542	50,885	2.38	1,232
Baldwin Park Unified	13,108	3,706	5.48	577

Source: California Supreme Court Opinion in *Serrano* v. *Priest,* August 1971.

The shortcoming of the data in Figure 1.5 is that school finance information for only a few districts is shown. While these districts statistically reflected the trends in the system, system trends should be analyzed using all of the districts in a state, not selected pairs of districts from different counties.

Another potentially misleading approach in presenting school finance data is to show the extreme cases, as indicated in Figure 1.6, which shows for Colorado the value of assessed valuation per pupil for the richest and poorest districts, districts at the 90th and 10th percentiles, and the district in the middle. These 1977 data show that the difference between the wealthiest and poorest was 77.7 to 1; at a one mill tax rate, the wealthiest district raised $326.27 per pupil, while the poorest district raised only $4.20! To raise the amount that the wealthiest district produces at one mill, the poorest district would have had to levy a 77.7 mill tax rate, which is prohibitively high. To blunt the criticism that the extreme cases might represent anomalies, the values for districts at the 90th and 10th percentiles also were presented. Those figures showed that property wealth per child still varied substantially, from a high of $57,516 to a low of $10,764, a difference of 5.3 to 1. While these differences were less than those between the very top and bottom, the data indicate that district ability to raise school funds through the local property tax varied widely.

This figure also shows the emphasis on variation in the local tax base, per se, in many early school finance analyses. What really matters, of course, is the interaction of the local tax base, state equalization aid, and local tax rates on the final per-pupil spending figure. But even in the first school finance case taken to the U.S. Supreme Court (see Chapter 2), great emphasis was given just to the

FIGURE 1.6 Assessed Valuation per Pupil in Colorado School Districts, 1977

Highest: Rio Blanco-Raugely	$326,269
90th percentile: Eagle-Eagle	57,516
Median: Mesa-Plauteau Valley	20,670
10th percentile: Montezuma-Dolores	10,764
Lowest: El Paso-Fountain	4,197
Ratio: Highest/lowest	77.7:1
Ratio: 90th/10th percentiles:	5.3:1

Source: Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

variation in the local tax base. The data in Figure 1.6 *implied* that the Colorado school finance system would have substantial fiscal disparities.

Figure 1.7 shows the magnitude of the actual disparities by displaying statistics calculated from a sample of all Colorado school districts in 1977. At that time, Colorado had a guaranteed tax base program (see Chapter 4), but had "frozen" all local expenditures and allowed only modest increases from year to year, letting lower-spending districts increase at a somewhat faster rate than higher-spending districts. This figure organizes all data into groups (in this case five groups, or quintiles), and presents averages for each quintile.[1] Note that each quintile includes approximately an equal percentage of students, not districts.[2] Interestingly, though property wealth per pupil varied substantially, both the authorized revenue base (ARB)[3] and operating expenditures per pupil varied by a much smaller magnitude. Indeed, the ratio between the ARB of the top or wealthiest quintile and that for the bottom or poorest quintile is 1.4 to 1, much less than the 5.3 to 1 ratio of wealth at the 90th to the wealth at the 10th percentile. Further, the ratio of operating expenditures per pupil of the top quintile to that of the bottom quintile is slightly higher, at 1.5 to 1. Unfortunately, the local tax rate and state aid figures were not provided, so it is not possible to determine whether the more equal revenue and expenditure figures are produced by fiscal-capacity-equalizing state aid, or high tax rates in the low-wealth districts.

New Jersey data for two time periods—1975–76 and 1978–79—are presented by septiles (seven groups) in Figure 1.8. The purpose of these two charts is to show differences in the New Jersey school finance structure three years after

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[1] Other studies categorize districts into seven groups (septiles) or 10 groups (deciles). The most common practice today is to use deciles.

[2] Several earlier studies grouped data into categories with equal numbers of districts, and that practice still is followed. However, the emerging practice is to have an equal number of students in each category, to assess the impact of the system on students. See Berne and Stiefel (1984) and Chapter 2 for discussion of the unit of analysis.

[3] The ARB was a Colorado-specific general fund revenue per-pupil limit that varied for each local school district. It included revenues for the regular education program.

FIGURE 1.7   ARB and Operating Expenditures per Pupil by Quintiles of Assessed Valuation per Pupil, Colorado, 1977

Assessed Valuation per Pupil	*Percent of Pupils*	*Number of Districts*	*Authorized Revenue Base*	*Operating Expenditures per Pupil*
$ 4,197–12,800	19	33	1,196	$1,532
12,800–15,500	20	25	1,312	1,594
15,500–17,600	14	14	1,299	1,667
17,600–24,500	27	32	1,476	1,742
24,500–326,269	20	77	1,692	2,342

Source: Education Finance Center, Education Commission of the States from official data of the Colorado Department of Education.

the courts, responding to a 1973 court decision overturning the school finance structure, shut down that state's education finance system in 1976, forcing the legislature finally to enact a major school finance reform (see Chapter 2). These tables are somewhat difficult to read because they do not include any typical univariate or relationship statistics (see Chapter 2). Nevertheless, several characteristics of the data are clear. First, in general, expenditures per pupil increased as property value per pupil increased; it seems that both before and after reform, expenditures were a function of local property wealth in New Jersey. But, expenditures-per-pupil in 1978–79 were nearly the same for the first four groups, suggesting that some expenditure-per-pupil equality had been produced for the bottom half by the 1976 reform.

Second, the range[4] increased for both expenditures per pupil and expenditures per weighted pupil between 1976 and 1979; even the range divided by the statewide average increased, suggesting that overall spending disparities increased over those three years.

Third, there seems to be wider expenditure-per-pupil disparities on a weighted pupil basis, where the weights indicate special pupil needs (see Chapter 4). Indeed, the weighted pupil count substantially reduces the expenditure-per-pupil figure for the lowest wealth districts, indicating—correctly, it turns out for New Jersey—that these districts have large numbers of special-need students.[5]

Finally, and quite interestingly, school property tax rates dropped in New Jersey over these three years, and school property tax rates were almost equal across all but the wealthiest group of districts in 1979.

It seems, therefore, that the major impact of the 1976 New Jersey reform was to equalize school tax rates for most districts, and to increase unweighted ex-

[4] The difference between the highest and lowest value.

[5] Many of these districts are large urban districts with large numbers and percentages of poor students, physically and mentally handicapped students, and low-achieving students.

FIGURE 1.8 New Jersey School Finance

Relationship between Property Wealth, Current Expenditures, and Tax Rates, **1975–76**

Equalized Valuation per Pupil	Current Expenditures per Pupil	Current Expenditures per Weighted Pupil	Current School Tax Rate
Group 1: Less than $33,599	$1,504	$1,372	$1.79
Group 2: $33,600–$45,499	1,414	1,324	2.12
Group 3: $45,450–$58,699	1,411	1,347	2.00
Group 4: $58,700–$67,199	1,460	1,401	1.99
Group 5: $67,200–$78,499	1,604	1,543	1.89
Group 6: $78,500–$95,499	1,689	1,628	1.74
Group 7: $95,500 and over	1,752	1,681	1.17
State average	1,550	1,473	1.69

Relationship between Property Wealth, Current Expenditures, and Tax Rates, **1978–79**

Equalized Valuation per Pupil	Current Expenditures per Pupil	Current Expenditures per Weighted Pupil	Current School Tax Rate
Group 1: Less than $37,000	$1,994	$1,760	$1.67
Group 2: $37,000–$54,999	1,933	1,763	1.57
Group 3: $55,000–$73,999	1,975	1,816	1.55
Group 4: $74,000–$87,999	1,994	1,882	1.58
Group 5: $88,000–$102,999	2,200	2,061	1.69
Group 6: $103,000–$125,199	2,268	2,154	1.67
Group 7: $125,200 and over	2,390	2,262	1.11
State average	2,113	1,959	1.47

penditures per pupil in the bottom half to about the same level. On a weighted pupil basis, however, spending was not equal in the bottom half, and overall spending disparities seemed to increase. This system was overturned by a 1990 state supreme court decision, in a case filed in the mid-1980s, but not fully resolved until 1998 (again, see Chapter 2).

Texas enacted a major school finance reform as part of a comprehensive education reform during 1984 (Odden and Dougherty, 1984), but that system was challenged in state court a few years later. The 1984 law provided for a minimum

foundation program with a higher expenditure-per-pupil level than before 1984, a small guaranteed yield program on top of the foundation program, weights for several different categories of pupil need, and a price adjustment to account for the varying prices Texas districts faced in purchasing education commodities. In the fall of 1987, the court ruled the school finance system unconstitutional, and the state created an Education Finance Reform Commission in early 1988.

The data in Figure 1.9 were presented to that Commission. The data are organized into groups with approximately equal numbers of children; this time, 20 different groupings are provided, thus showing the impact of the finance structure on each 5 percent of students. The numbers show that, indeed, property wealth per pupil varied substantially in Texas, from under $56,150 to over $440,987, a difference of 7.9 to 1. In fact, the difference was greater, since several districts had assessed valuation per pupil in the $800,000 and over-one-million level; moreover, these districts included several of Texas' largest cities and some very wealthy suburban districts. The bottom line in Texas was that the local property tax per pupil was distributed unequally among local school districts.

The column with local and state revenues per pupil show, however, that while there is a trend for per-pupil revenues to increase with wealth, this is a trend that exists primarily for the top 20 percent and the bottom 5 percent of the districts. For the districts in between, revenues per pupil seemed to vary by about plus or minus 10 percent from a $3,300 per-pupil figure. That was not a dramatic variation. In fact, it could be argued that such data indicate for the majority of students in the middle that revenues per pupil were basically equal, that the problem with the system was the low spending of the districts at the very bottom, and the very high spending of the districts at the top. This problem definition requires a different policy response than if disparities are spread across the entire system. Nevertheless, the Texas lower court overturned the system, and that decision moreover was upheld on appeal by a unanimous state supreme court in the fall of 1989. Thus, today (in a number of states) even modest variations in spending per pupil that are linked to local property wealth are likely to be overturned if taken to court.

We should note that at these times, the underlying school finance problem was seen as the inequity of property wealth per pupil, and many believed that the way to remedy the problem was to make the ability to raise funds for schools more equal across districts. In school finance parlance, the solution was to enact a guaranteed tax base (GTB) or "district power equalizing" program [i.e., a program that guaranteed to all or nearly all districts—rich or poor—some high level tax base (see Chapter 4)]. Such a program would allow local districts to tap the same size tax base, and, by setting a tax rate, to determine the level of spending. In this way, districts could determine for themselves the level of quality of the local education program, rather than being constrained by the circumstance of being a low-wealth district. The tax rate would be applied to the statewide GTB so the same amount of money per pupil would be raised from state and local sources for both poor and rich districts (i.e., for all districts with a local tax base

FIGURE 1.9   Selected Texas School Finance Variables, 1986–87

Number of Districts	Range of Property Wealth per Pupil	Average Property Wealth per Pupil	Local Revenue per Pupil	State Revenue per Pupil	State and Local Revenues per Pupil	Federal Revenue per Pupil
26	Under $56,150	$ 46,217	$ 508	$2,528	$3,036	$564
57	56,150–79,652	68,793	647	2,309	2,956	426
73	79,653–96,562	87,980	801	2,204	3,005	277
123	96,563–117,462	107,516	1,006	2,092	3,096	269
68	117,463–128,425	120,325	1,050	2,109	3,159	309
73	128,426–144,213	136,285	1,192	2,074	3,266	283
52	144,214–156,931	152,061	1,355	1,864	3,215	227
34	156,932–167,090	161,971	1,610	1,711	3,321	145
46	167,091–177,108	169,925	1,658	1,711	3,369	203
84	177,109–202,136	190,514	1,727	1,643	3,370	171
37	202,137–218,238	208,862	1,904	1,499	3,403	126
44	218,239–239,117	224,173	1,963	1,473	3,436	139
26	239,118–253,338	244,493	2,055	1,403	3,458	130
42	253,339–276,674	260,613	2,281	1,342	3,623	181
36	276,675–308,780	294,373	2,942	1,123	4,065	113
1	308,781–308,862	308,862	2,006	1,125	3,131	312
45	308,863–356,189	330,130	2,494	1,039	3,533	128
45	356,190–436,960	399,954	3,459	830	4,285	89
3	436,961–440,987	440,607	2,862	960	3,922	294
146	Over $440,987	799,896	4,764	418	5,182	143

Source: Texas State Board of Education.

equal to or less than the GTB). In such a program, higher spending per pupil would require a higher tax rate. Thus, differences in education spending per pupil might remain, but spending differences would result from varying tax rates, reflecting differing levels of commitment to education; these differences would not be caused by the unequal distribution of the local tax base. The expectation by many was that GTB programs would not only reduce spending differences across districts, but also would reduce the linkage between local property wealth per pupil and spending per pupil.

A Different Type of School Finance Problem

These expectations also "assumed" existence of the typical school finance problem reflected in all of the above examples—high property wealth per pupil associated with both high expenditures *and* low tax rates, together with low property wealth per pupil associated with both low expenditures *and* high tax rates. But even in the 1970s, this "typical" situation did not hold for all states. The New York school finance situation in 1978 is such an example, as the data in Figure 1.10 show. At that time, New York had a school finance system that functioned like a minimum foundation program, but was actually a low-spending level percentage equalizing formula (see Chapter 4). The data in Figure 1.10 are presented for all districts, except for New York City, divided into 10 equal groups, or deciles. Each decile has approximately an equal number of students. New York City, with an enrollment of nearly 1 million in a state with a then total of 3 million, is shown separately, since if it were included in the deciles, it alone would include over three of the deciles.

Several elements of the data should be discussed. To begin, the data are grouped by deciles of *spending* per pupil; the idea in New York was that expenditure-per-pupil disparities were the final, important variable, and analysis of correlates of that variable should be the focus of the study. Columns 1 and 8 show that revenues per pupil from local and state sources varied widely in New York during the 1977–78 school year, from a low of $1,759 in the bottom spending decile to a high of $3,443 in the highest spending decile, a difference of about 2-to-1. Note that this is a much smaller disparity than the 5.8 to 1 difference in spending between the very top ($5,752) and the very bottom ($988) spending districts.

Second, both spending per pupil and revenues per pupil from local and state sources increase with property wealth, the traditional school finance pattern. But note also that the school property tax rate also increases; in fact, the school tax rate for the top few deciles is between 50 and almost 100 percent higher than the tax rates in the lowest spending districts. This reality set New York school finance apart from the situation in most other states at that time. Indeed, one of the reasons the wealthier districts spent more per pupil was that they taxed local property at a higher rate. Yes, those districts had a larger property tax base, but they also taxed it more heavily.

It also was true that household income as measured by gross income per return on New York State income tax returns increased with property wealth, and

FIGURE 1.10   Selected New York School Finance Variables, 1977–78

Deciles of Approved Operating Expenditures per Pupil	Assessed Value per Pupil	Gross Income per Return (1977)	Property Tax Rate (mills)	Property Tax Revenue per Pupil	Other Local Revenue per Pupil	Total State Aid per Pupil	Total Local and State Revenue per Pupil	Total Federal Aid per Pupil
First decile ($988–$1,389)	$ 37,957	$12,225	13.01	$ 485	$ 54	$1,220	$1,759	$ 35
Second decile ($1,390–$1,471)	41,924	12,446	15.34	634	56	1,176	1,866	37
Third decile ($1,473–$1,542)	46,902	12,422	17.11	770	62	1,107	1,939	58
Fourth decile ($1,544–$1,640)	50,968	13,527	17.61	862	67	1,081	2,010	40
Fifth decile ($1,642–$1,789)	57,916	14,190	19.63	1,086	68	1,006	2,160	63
Sixth decile ($1,790–$1,899)	58,986	13,311	21.68	1,178	72	998	2,248	117
Seventh decile ($1,903–$2,017)	64,323	15,274	23.48	1,430	81	953	2,461	44
Eighth decile ($2,021–$2,255)	66,469	16,157	23.69	1,526	178	896	2,600	74
Ninth decile ($2,250–$2,474)	78,069	16,778	25.26	1,896	102	866	2,864	57
Tenth decile ($2,475–$5,752)	115,535	21,639	23.84	2,583	154	706	3,443	36
New York City	81,506	13,607	22.52	1,760	41	864	2,665	217
Rest of state	61,732	14,762	20.05	1,240	89	1,002	2,331	57
Statewide average	67,715	14,412	20.79	1,397	75	960	2,432	105

Source: Odden, Palaich, and Augenblick, 1979.

thus with spending and school tax rates. It turns out that higher-income families, not only in New York but generally, choose to levy higher tax rates for schools. Thus, while higher spending in New York was caused in part by higher local tax effort, that higher tax effort in part was aided by higher household income. Further, household income and property wealth per pupil were highly and positively correlated in New York at that time. Unlike the Texas data in the early 1970s that were not correlated but were taken to the U.S. Supreme Court, the New York data might have made a better case for using the Equal Protection Clause of the U.S. Constitution to find the fiscal disparities shown in this table to be unconstitutional (see Chapter 2 on litigation).

In short, the New York data showed that higher spending occurred in districts with higher property wealth, higher household income, and higher school tax rates, while lower spending occurred in property-poor and income-poor districts with low tax rates. These variations from the traditional pattern complicated the formulation of a school finance reform that could pass muster for both the courts and the legislature. When the state's highest court ruled that the system, while unfair, was not unconstitutional, the push for reform abated. School finance in New York was changed incrementally over time, and currently still displays these general characteristics.

But New York is not the only state today that exhibits these school finance patterns. Three quite different states—Illinois, Missouri, and Wisconsin—provide additional examples of this "new" type of school finance problem. All three states enacted different versions of school finance reforms over the 1975–95 time period. Illinois implemented a generous "reward for effort" GTB-type program in the late 1970s and early 1980s, but then changed it to a foundation-type program in the 1980s and early 1990s. Missouri implemented a combination foundation-GTB program, which was continuously enhanced over those 20 years so that in 1995, the GTB was set at the 95th percentile of property wealth per pupil, with a minimum tax rate that provided a minimum expenditure of just over $3,000 per pupil, and with the GTB providing aid up to the 95th percentile of spending. Wisconsin created and implemented a fully funded GTB-type program, with the largest element guaranteeing the property wealth per pupil of the district at the 93rd percentile, for spending up to about the 60th percentile of expenditure per pupil. To greater or lesser degrees, all three states deferred actual spending decisions to local districts, and their school finance structures represent the three major school finance systems—foundation, GTB, and combined foundation-GTB (see Chapter 4 for discussions of these structures).

Figures 1.11, 1.12, and 1.13 show the status of school finance in these three states in 1994–95, with the data organized by decile of spending from state and local sources per pupil, again excluding spending for special-needs students.[6] The

FIGURE 1.11   School Finance in Missouri, 1994–95, K–12 Districts

Decile	Revenues per Pupil[°]	Assessed Value per Pupil (at Market Value)	Local Property Tax Rate (Percent)
1	$2,987	$118,969	1.11
2	3,221	90,120	1.17
3	3,288	103,279	1.17
4	3,426	140,218	1.18
5	3,562	157,524	1.26
6	3,665	150,897	1.34
7	3,829	200,460	1.31
8	4,049	217,998	1.36
9	4,411	254,362	1.44
10	5,973	523,521	1.24

Source: Odden, 1999.

[°] Each district also receives an additional $648 per-pupil flat grant from a state sales tax.

Horizontal equity
    Coefficient of variation: 19.5
    McLoone index: 0.92

Fiscal neutrality
    Correlation: 0.90
    Wealth elasticity: 0.23

FIGURE 1.12   School Finance in Illinois, 1994–95, K–12 Districts

Decile	Revenues per Pupil	Assessed Value per Pupil (at Market Value)	Local Property Tax Rate (Percent)
1	$2,893	$103,238	0.60
2	3,042	126,874	0.61
3	3,130	140,313	0.63
4	3,258	157,754	0.63
5	3,400	207,211	0.67
6	3,632	220,635	0.70
7	3,922	251,595	0.83
8	4,219	280,519	0.86
9	4,687	312,488	0.89
10	5,343	386,903	1.07

Source: Odden, 1999.

Horizontal equity
    Coefficient of variation: 20.4
    McLoone index: 0.91

Fiscal neutrality
    Correlation: 0.75
    Wealth elasticity: 0.32

FIGURE 1.13   School Finance in Wisconsin, 1994–95, K–12 Districts

Decile	Revenues per Pupil	Assessed Value per Pupil (at Market Value)	Local Property Tax Rate (Percent)
1	$4.860	$164,138	1.36
2	5,188	179,004	1.45
3	5,310	147,378	1.48
4	5,350	180,601	1.50
5	5,468	172,183	1.53
6	5.569	195,932	1.55
7	5,713	196,185	1.59
8	5,962	196.601	1.73
9	6,231	222,376	1.84
10	6,82S	351,184	1.74

Source: Odden, 1999.

Horizontal equity
   Coefficient of variation: 9.87
   McLoone index: 0.95
Fiscal neutrality
   Correlation: 0.59
   Wealth elasticity: 0.14

results indicate that the school finance reforms implemented in these states did not produce the equity effects that were anticipated. There are still wide spending disparities and, even with major school finance reforms, spending per pupil is still highly associated with property wealth per pupil—the higher the wealth, the higher the spending!

Further, the linkages between spending and tax rates are similar to those in New York. In all three cases, although spending per pupil increases with property wealth per pupil, so also does the local tax rate for schools. In all three states, the higher the tax rate, the higher the spending. In all three states, higher-property-wealth-per-pupil districts have higher spending per pupil but also have the highest tax rates; conversely, lower-property-wealth-per-pupil districts still have lower spending per pupil but now also have the lowest tax rates.

What happened? First, overall spending per pupil increased in real terms in all three states (122 percent, 144 percent, and 144 percent, respectively), from 1980 to 1995, using the consumer price index as the deflator. Indeed, school finance reform generally led to higher overall spending (Murray, Evans, and Schwab, 1998). But it seems that the school finance reforms, which would have allowed lower-property-wealth-per-pupil districts to increase their spending to average or higher levels while also lowering their tax rates, were not used for that purpose. Rather, lower-wealth districts appeared to use the potential of the reform programs primarily to lower their tax rates from an above-average to a below-average level. The data show that while lower-wealth districts still tend to have below-average spending levels, they have them because they also have

below-average tax rates. Although the high-level GTBs in both Missouri and Wisconsin would allow these lower-wealth-per-pupil districts to spend at substantially higher levels with only modestly higher tax rates, the districts generally have chosen not to do so. They have chosen low tax rates, which in turn, have produced low expenditure levels. In short, many of the low-wealth districts did not behave as anticipated when provided a major school finance reform program.

The high-wealth districts also seemed to engage in unpredictable behavior. As these states implemented their school finance reforms over the past twenty years, it seems that the higher-wealth districts, which had enjoyed both a spending and tax rate advantage, decided to maintain their spending lead but could do so only by raising their local tax efforts for schools. Yes, some of the exceedingly wealthy districts still can spend at a high level because of their very high wealth, but with the state guaranteeing to all the tax base of the districts at the 93rd–95th percentiles, a wealth advantage exists only for a small percentage of districts, and most of these have a wealth advantage just above what the state will guarantee. For the bulk of the districts in the top third of property wealth per pupil, therefore, the higher spending is primarily produced by their higher tax rates for school purposes, reflecting the desire of their taxpayers to provide a high-quality and expensive education system.

Overall, spending disparities did drop in states that had court cases, and the states responded with school finance reforms (Murray, Evans, and Schwab, 1998). But the decreases were modest, averaging between 16 and 25 percent, depending on the statistical measure used.

In sum, the impact of the school finance changes did little to reduce fiscal inequities. Instead, the programs led to overall increases in education spending, and during that process, lower-wealth districts lowered their tax rates to below the average and settled for below-average-spending-per-pupil levels, while higher-wealth districts maintained their spending advantage by raising their tax rates and thus their spending advantages. The result was continued spending disparities, although this time driven more rationally by local tax rate differences rather than by the accident of the maldistribution of the local property tax base. The outcome was little or only modest change in these states' fiscal equity statistics––both those measuring spending disparities and those measuring the connection between spending and property wealth.

The School Finance Problem as Fiscal Adequacy

Of course, improving fiscal equity might not be the most pressing school finance issue in these states, as it was for states in the 1970s and 1980s. In fact, delineating what the school finance "problem" is for New York and the latter three states has become a major debate. Some argue that the continued existence of spending disparities and their relationship to local property wealth, whatever the cause, remains a problem. But if the "old" problem was the unequal ability to raise revenues to support public schools, and that problem is resolved by a high-level GTB or other kind of school finance reform program, others say that any

remaining spending differences are a matter of local taxpayer choice and reflect neither an inherent inequity nor a school funding problem. Another group may argue that since education is a state function, spending differences per se (as a proxy for education quality) are a problem regardless of whether they are caused by the unequal distribution of the property tax base or local taxpayer choice. Still others focus on the spending of the bottom half of districts, arguing it should be higher.

The problem with all three of these arguments, however, is that they deal simply with money and largely whether base funding is equal or not, and are not related to any other substantive education goal, such as education quality or student achievement. Making this connection could be the school finance challenge of today. The driving education issue today is raising the levels of student achievement [i.e., setting high and rigorous standards and teaching students to those standards (Fuhrman, 1993; Massell, Kirst, and Hoppe, 1997; Smith and O'Day, 1991)]. Research from cognitive science suggests that we know how to produce a much higher level of learning, or at least make substantial progress towards this goal (Bruer, 1993; Siegler, 1998). Given this knowledge, Linda Darling-Hammond (1997) argues that learning to high standards should be considered a right for all children. Moreover, school finance litigation in many states has begun to stress adequacy issues over equity issues (Enrich, 1995; Heise, 1995, and Chapter 2).

Reflecting this student achievement goal and the education policy and program issues, what are the curriculum, instruction, incentive, capacity development, organization, and management strategies required to produce this higher level of student performance? The related finance issue is what level of funding is required for these programmatic strategies?

As both Odden and Clune (1998) and Reschovsky and Imazeki (1998) argue, the primary school finance problem today may be to link school finance to the strategies needed to accomplish the goal of teaching students to higher standards. In new school finance parlance, the challenge is to determine an "adequate" level of spending. The task is to identify for each district/school the level of base spending needed to teach the average student to state standards, and then to identify how much more each district/school requires to teach students with special needs—the learning disabled, those from poverty and thus educationally deficient backgrounds, and those without English proficiency—to the same high and rigorous achievement standards. As Clune (1994a, 1994b) and Odden and Clune (1998) argue, this requires a shift in school finance thinking from "equity" to "adequacy."

Interestingly, in each of the three sample states discussed earlier, educators and policymakers also began to raise the issue of school finance *adequacy* in many ways. Some questioned whether the spending levels of the bottom half of all districts (i.e., those districts with just average or mostly below-average tax rates) were a "problem" (i.e., were too low), or whether those spending levels, even though below average, were "adequate" to teach their students to acceptable standards. Others attempted to calculate a state-supported spending level that can be linked to a specified level of student performance (e.g., it will cost X

dollars for 90 percent of students to meet or exceed state proficiency standards in core subjects). In a sense, this is a "back to the future" school finance objective, as many foundation programs have sought to make this linkage throughout this century. Still others explored the degree to which any "adequate" spending level should be supplemented by additional money to provide extra resources to teach students with special needs to high standards.

Chapter 4 discusses the complexities of determining an "adequate" spending level and the various methodologies that are being tapped to determine those levels. Nevertheless, for many, the focus on adequacy constitutes a shift in defining the basic school finance problem—away from the sole focus on fiscal disparities across districts and towards linking spending to what could be construed as an adequate education program (i.e., a program designed to teach students to high levels of achievement).

The School Finance Problem as Productivity

Despite disparities or any other shortcomings of current state education finance systems, many other analysts argue that the most prominent school finance problem is the low levels of system performance and student achievement produced with the relatively large levels of funding in the system (Hanushek and Associates, 1994). These analysts are convinced that, on balance, there may be a sufficient amount of revenue in the American public school system, and that the core problem is to determine how best to use those resources, particularly how to use the resources differently to support strategies that dramatically boost student performance. In one sense, the bulk of this book addresses these productivity and adequacy issues. Chapter 7 focuses solely on what is known about improving productivity in education, Chapter 8 on resource reallocation to higher performance, Chapter 9 on performance incentives for education, and Chapter 11 on restructuring teacher compensation, which consumes about 50 percent of each education dollar.