

Equity and Adequacy in School Funding

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Abstract

Since 1971, most states have been subject to lawsuits seeking to reform their education funding systems. These cases are litigated on the basis of state (not federal) constitutional language and generally seek either greater equity in funding among school districts or a guaranteed level of adequate funding for education. State supreme courts have found the finance systems unconstitutional in 16 states, and many states are still actively involved in litigation. Even where litigation has not occurred or has not succeeded, the prospect of litigation has prompted revisions of state funding policies.

Despite the predominant role equity and adequacy play in litigation, there are no universally accepted definitions for either of these words in education funding. Most commonly, equity is measured in terms of the variation in per-pupil revenues among school districts in a single state. By this measure, some states have greater funding equity than others, and in most states wealthy districts have significantly higher per-pupil expenditures than do poor districts. Equity is likely to be greater when the residents of poor districts pay higher taxes. (In some states, residents in poorer areas pay twice as much of their income in local taxes as do residents of wealthier communities.) Equity is also greater in those states where the state's share of the education budget is higher and where the state consistently targets its contributions to lower-income districts.

Much of current litigation and legislative activity in education funding seeks to assure "adequacy," that is, a sufficient level of funding to deliver an adequate education to every student in the state. Most states have not explicitly addressed the questions of how much education is "adequate" or how educational standards can be converted to a finance formula. Several approaches to calculating the cost of an adequate education are described.

Ensuring equity and adequacy of education funding are two of the most complex problems facing state legislatures. Not only are the concepts of equity and adequacy difficult to measure and to implement, but every state must meet the needs of a large number of school districts, which usually vary considerably in their student characteristics and needs (such as student need for compensatory or special education), costs of doing business (for example, teacher salary schedules and benefits or building and land acquisition costs), ability and willingness to raise local tax

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revenues, and local preferences for educational services (such as vocational training requiring expensive specialized equipment or advanced placement college-preparatory courses).

This article begins by examining how the role of the state in providing education funding has evolved, including a brief summary of the major education funding mechanisms used by the states. Second, the article reviews the history of litigation concerning school finance. Third, the article discusses the degree of equity found in education funding today. Fourth, the state of the art in defining an “adequate” education and converting that definition into a budgetary formula is explored.

The State Role in Education Funding

In the colonial period, schools were organized in a variety of ways: Some were sponsored by the private trading companies that supported the colonization, while others were created through private endowments or through subscription or taxation on the part of communities.¹ As colonies became states, their legislatures permitted local communities to create schools, including “public” academies that were designed to serve the public by providing a free education, at least for indigent families, even if there were little or no public support.² Later, states gave local communities the authority to tax such things as property and “utilities,” which included services such as ferries. In the mid 1800s, states began to add provisions to their constitutions establishing universal, publicly provided education. Today, every state includes in its constitution an “education clause” establishing the state’s role in maintaining a public schooling system.³

The earliest available data show that, in 1889–90, states assumed 21% of the cost of elementary and secondary education.⁴ From then until 1933–34, the state share ranged between 16% and 23% of the total K–12 budget. In 1935–36, the state share jumped to 29%, and since 1972–73, the state share has never fallen below 40%. Today, state support provides 45% of all current operating revenues obtained by school districts. However, it is critical to remember, as illustrated in Table 1 in the article by Howell and Miller in this journal issue, that the division of fiscal responsibility between the state and local taxpayers varies widely. For example, in 1995–96, New Mexico schools received 74% of their revenue from state sources while New Hampshire schools

received only 7% of their revenue from these sources.

State Education Funding Mechanisms

Over time, the mechanisms used to allocate state aid have changed dramatically. Initially, states provided a small amount, typically on a per-school basis, as encouragement for local government to provide the main bulk of support. Among other things, policy-makers at the turn of the twentieth century were concerned about the effects of relying almost completely on local support, most of which was derived from property taxes. They recognized wide variations among school districts in their wealth, their property tax rates, the revenues they could generate, the number of children they needed to educate, and the services they could provide, including the length of the school year, the numbers of teachers employed and their qualifications, and the availability of supplies and materials.⁵ To address this problem, they began to allocate state support based on the varying needs of school districts, with need measured in terms of time and teachers.

Flat Grant

An early approach adopted in several states was the use of what is referred to today as a “flat grant”—an identical amount of aid per unit of educational resource. For example, a state that provides a fixed dollar amount per teacher would be using the flat grant approach. Using this approach, a wealthier district that was able to provide smaller classes would actually receive more state aid per student than would a poorer district with large class sizes. While the flat grant has fallen into disfavor in the past 20 years, some states continue to provide it, for example, by allocating particular revenues, such as the income from dedicated lands, as a flat grant.

Foundation Program

In the 1920s, a new approach to distributing state aid was designed specifically to ensure that all schools received adequate support, without placing a disproportionate tax burden on those districts with limited taxable resources. This approach is referred to as the “foundation program.”⁶ In its simplest form, a foundation program requires all districts to tax local property at least at a specified minimum rate and guarantees each district a minimum per-pupil revenue. If the local property taxes are insufficient to raise the guaranteed amount, the state contributes the difference.

While the foundation program has proven to be very popular among the states (more than 40 states use some version of a foundation plan today),⁷ its ability to assure equalization depends on the specific way in which the plan is implemented. For example, in most states that use a foundation approach, school districts may choose to levy tax rates above the required level. Too, some very wealthy districts, especially those with relatively few school-age children, may be able to generate the target per-pupil revenue level at a tax rate below the required level. And, in some states, the minimum guaranteed revenue level or the minimum required tax rate may be used only for calculation purposes, allowing some districts to choose per-pupil revenue levels or tax levels that are below the “foundation.” Because of its shortcomings, the foundation plan has been characterized by some analysts as an “equalization myth,” concluding that under the plan “equal opportunity in terms of balancing offering, wealth, and effort is a hoax.”⁸

In theory, a state’s foundation funding level will be an amount sufficient to guarantee an adequate education to all students; however, this cannot be taken for granted. Several courts have found state foundation levels to be inadequate. Even in a state with a strong commitment to education funding, foundation funding levels must be frequently reexamined by the legislature or risk becoming outdated, that is, the foundation revenue level may no longer reflect a realistic estimate of the cost of providing an “adequate” education.

Reward for Effort

By 1922, states were beginning to utilize various “reward-for-effort” approaches to equal-

ize the burden among the state’s taxpayers. These efforts go by various names, such as “percentage equalizing” or “guaranteed yield.” For an example of how state funds are distributed under a reward-for-effort approach, see Box 2 in the article by Howell and Miller in this journal issue.

The advantage of reward-for-effort approaches is that they allocate more state aid to poorer districts while still allowing school districts to make choices about revenue and tax levels. This provides an incentive for school districts to contribute more tax support for education, and it is consistent with the concept of local control.

Combination of Approaches

Some states have developed procedures for distributing state aid which combine these approaches. For example, Kentucky combines foundation, reward-for-effort, and unequalized local option programs. The foundation level of funding is mandatory in all districts and must be supported by local property taxes at a specified minimum rate. Above the foundation level, all districts have the option of choosing to tax their communities at a higher rate (Tier 1), and again local tax effort is rewarded. If the Tier 1 level

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of taxation is insufficient to create a specified amount of revenue per pupil, the state again contributes the difference. Finally, districts in Kentucky may choose to generate even more revenue by taxing at an even higher level (Tier 2), but local taxes at that level are not equalized by the state. Tier 2 is the maximum allowable tax rate, above which local school taxes are not permitted.

Categorical Programs

At the same time that new formulas have been developed to equalize state support for public schools, new approaches recognized that different districts face different cost pressures. For example, most people would agree that a district with a high proportion of children in poverty or with severe disabilities has a need for more resources.

Categorical programs provide funding for such specific purposes, as well as for more mundane reasons such as textbook purchases. Thirty years ago, following the passage of the federal Elementary and Secondary Education Act in 1965, states typically paid for categorical services using a flat grant (so many dollars per eligible child) or a percentage-of-expenditure approach (a specified percentage of eligible expenditures, such as a sign language interpreter for a deaf child), neither of which takes district wealth into consideration.

Pupil Weights

More recently, states have used “pupil weights” as a way to recognize need and to make the allocation of support sensitive to wealth. Using weights, pupils are counted based on the relative cost of providing services to them: a pupil who participates in a program that costs 65% more than the “regular” program is counted (or weighted) as

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1.65 pupils. Most commonly, students are weighted based on their eligibility for special education, Title I (compensatory education), or English as a second language (ESL) instruction. The weighted pupil count is used in the foundation plan or the reward-for-effort approach, which results in a distribution of funds that is sensitive to both the differing needs and the varying wealth of school districts.

Today's Systems

Today, states can select among a host of options to accomplish a variety of objectives. Yet, all sorts of issues exist in each state which have proven nearly impossible to resolve and reflect the wide variety of situations found within most states. For example, some school districts face severe problems of deferred maintenance on school buildings or difficulty in recruiting and retaining teachers. A small district may have a sudden influx of students with limited English skills or a large district may need to feed breakfast and lunch to most of

its students. One or more districts in the state may face major new expenses to meet the demands of court-ordered desegregation. Some districts may be gaining new pupils at a rate of 10% to 20% a year, forcing them to obliterate playground space with “temporary” classrooms, while other districts face declining enrollments and the expense of maintaining unused buildings. States must continually find ways to deal with these problems and many more in an equitable manner.

While some of these problems are technical in nature, many are political, reflecting the intense attitudes legislators and voters have about school finance because of its magnitude, its scope, and the difficulty of changing existing systems. Electorates resist tax increases, and wealthy school districts want to maintain existing spending levels. Virtually every time an existing funding mechanism is modified, some constituencies lose a portion of their current funding, do not share in increased revenue, or must change existing practices to qualify for funding under the new program. Satisfying a wide range of constituencies in the operation of the school funding system is an ongoing political challenge in every state.

Limited Federal Role in Equity

Although the federal government contributes to elementary and secondary education, its contribution is only about 7% of the national education budget. Federally funded education programs are entirely categorical. The largest programs are Title I (compensatory education for disadvantaged children), the Individuals with Disabilities Education Act, and the school lunch program. Because more poor children than wealthy children are eligible for these programs, to some extent, these programs aid poorer districts more than wealthier districts. However, their impact in equalizing funding among districts is dwarfed by the impacts of state and local funding.

Important Role of Local Tax Effort

The General Accounting Office (GAO), in a detailed 1997 analysis, concluded that the single most important factor in equalizing weighted per-pupil funding is the willingness of poor districts to make a strong local tax effort.⁹ Specifically, where residents in school districts in the poorest quintile paid

higher local taxes to support their schools, the size of the gap in per-pupil funding was considerably less.¹⁰ In six states (Arizona, Mississippi, Montana, Nevada, New Mexico, and Wyoming), residents of districts in the poorest quintile paid at least twice as much of their income in local taxes as did residents in the wealthiest quintile.

School Finance Litigation

Beginning in the 1960s, lawsuits brought by parents or taxpayers have argued that state funding systems violated provisions of either the federal or state constitution. The federal claims have not been successful. However, successful claims under state constitutions have not only led to reform in the states where state systems were overturned, but also stimulated states to revise their funding systems to preempt possible legal challenges. Since 1989, a new wave of litigation has opened a variety of new legal concerns, such as the definition of an “adequate” education, the state’s responsibility to ensure equity in facilities, and the extent to which individual districts must go to balance school-to-school inequities.

No Federal Remedy

School finance litigation was initiated in the 1960s when programs for special pupil populations (especially students with disabilities and disadvantaged students) were beginning to proliferate. The issue in the earliest cases was that state aid, primarily distributed through flat grants and foundation programs, was not sensitive to the varying needs of pupils and school districts. These cases were filed in federal court and did not make progress because, at the time, it proved impossible to identify special needs and to quantify the costs of serving pupils and districts with special needs.

Following the failure of these cases, a new theory was developed based on the variation in the per-pupil spending of school districts and the relationship between district wealth and spending. Under this theory, such disparities and relationships were viewed as violating the equal protection clause of the U.S. Constitution, particularly if education was considered to be a “fundamental right” (like the right to vote) guaranteed by the Constitution and district wealth a “suspect classification” (like race) under the Constitution.

In 1971 in *Serrano v. Priest*,¹¹ plaintiffs prevailed using this theory in a federal court in California, interpreting both the state and federal constitutional guarantees. The school finance system was found not to be “fiscally neutral”—that is, the resources available to educate children were a function of school-district wealth, not the wealth of the state as a whole. Ultimately, however, the federal Constitution was determined not to guarantee equality of funding among school districts. In a 1973 case involving Texas

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(*San Antonio Independent School District v. Rodriguez*),¹² the U.S. Supreme Court ruled that education was not a fundamental right, district wealth was not a suspect classification, and the Texas system of school finance was rational, passing the standard used by the court when judicial “strict scrutiny” is not required.

1971 to 1983: Intense Litigation Activity

During the 12 years between 1971 and 1983, some 17 state high courts ruled on the constitutionality of their state school finance systems. School finance systems in Arkansas, California, Connecticut, New Jersey, Washington, West Virginia, and Wyoming were found to be unconstitutional, requiring those states to change the structure of the system, in some instances more than once.¹³ However, during those same years, finance systems were upheld by the highest courts of Colorado, Georgia, Idaho, Illinois, Maryland, Michigan, New York, Ohio, Oregon, and Pennsylvania.

What did not emerge from these cases—and has not in cases brought since 1983—is any standard by which to gauge the level of equity; that is, the cases use different statistics, or, more important, different cutoff points of the same statistic, to draw conclusions. What is viewed as equitable in one state may be viewed as inequitable in another state.

These cases were based on the claims that the state's funding system violated (1) the state constitution's equal protection clause and/or (2) the state constitution's education clause, which required that elementary and secondary education be provided in an "ample," "basic," "general," "efficient," "thorough," or "uniform" manner.^{3,14} In general, state courts prefer to rule on the basis of the state's education clause rather than on the equal protection clause, partly out of concern that equal protection rulings will set broad precedents that are equally applicable to the state's other, noneducational activities.³

Litigation-Stimulated Legislative Activity

Misconceptions about the role of the courts in school finance have emerged over the years. The role of a court is generally limited to identifying standards by which to determine whether the effects of a school finance system meet the requirements of constitutional language. Courts typically defer to the

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legislature as the body that must revise the system and are usually circumspect about making recommendations. Courts have not required legislatures to raise existing taxes or to impose new taxes, although they may require that a new school finance system be fully funded.

Education is a major share of state budgets, and so state funding systems are continually revised by most legislatures. It is impossible to tell how many of these changes over the years have been motivated in whole or in part by the threat of a lawsuit. However, legislation responding to court rulings has produced two major impacts. First, when courts have overturned existing systems, both total education funding and the proportion provided by the state usually increase.¹⁵ Second, local control over how much revenue can be generated (but not over how funds may be spent) is often diminished.

1989–90: New Directions

For much of the 1980s, the nation's education efforts appeared to be directed more toward school improvement (following the *Nation at Risk* report) than toward litigation over finance issues. However, in 1989 and 1990, five state high courts ruled on the constitutionality of state funding systems. One court, in Wisconsin, upheld the existing system, but in Kentucky, Montana, New Jersey, and Texas, the court rulings upset existing systems and upheld major new legal claims.¹³

Kentucky

In *Rose v. Council for Better Education*,¹⁶ the court extended the reach of school finance litigation to the entire system of education, not just the finance system. The court declared the entire Kentucky educational system unconstitutional, leading the legislature to drastically reform the state's mechanisms of school governance, the state department of education, and state educational standards and assessment systems, and to establish a system of incentives and sanctions based on school performance. Kentucky's experience is discussed in detail by Adams in this journal issue.

Montana

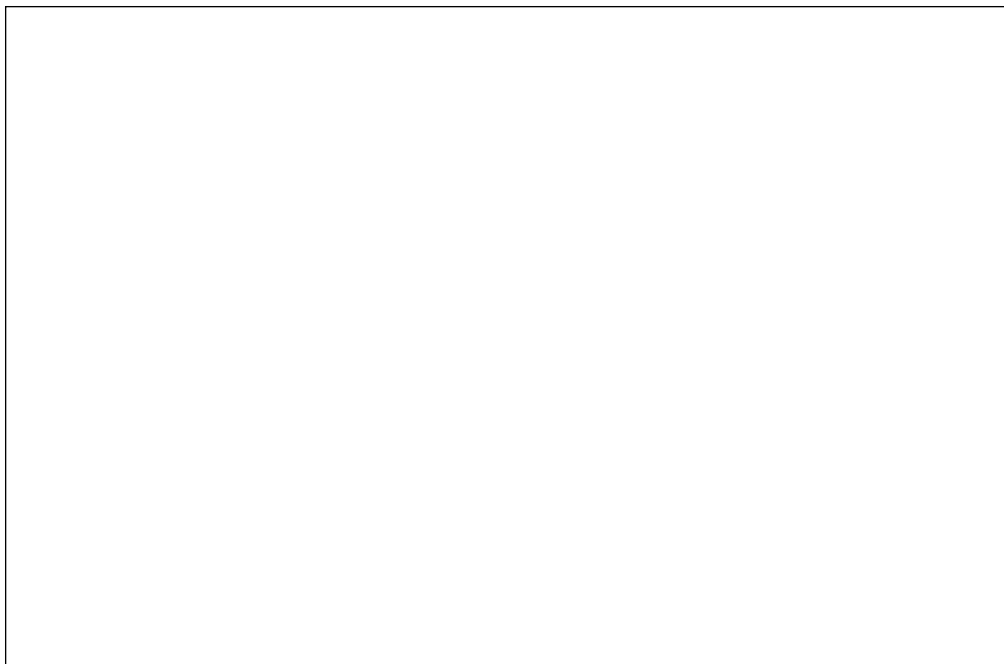
The decision in *Helena Elementary School District No. 1 v. State*¹⁸ is notable for its emphasis on universal access to a quality education, not just a minimal, basic education.

New Jersey

In *Abbott v. Burke*,¹⁷ the court held the New Jersey finance system unconstitutional only as it related to a specific class of districts. The court's order required the legislature to fund poor urban districts at a level commensurate with wealthy districts and to provide additional funding to accommodate special needs of students in poor, urban districts. (It should be noted that most state funding systems would be invalid under this standard. This issue recently has been raised in cases in Alabama, Ohio, and Tennessee.)

Texas

When the Texas legislature failed to respond in a manner acceptable to the court, the state high court invalidated the state funding system three times over the course of 28 months (*Carrollton-Farmers Branch Independent School District v. Edgewood Independent School District*).¹⁹ A particular challenge in Texas was



the difficulty in raising taxes without violating the state constitution's prohibition against either a statewide property tax or an income tax.²⁰ Eventually, the legislature was forced to take the unpopular step of "recapturing" those "excess" property tax revenues generated by the state's wealthiest districts.

Since these rulings, state supreme courts have invalidated finance plans in Arizona, Massachusetts, and Tennessee, and plaintiffs prevailed (but no decision was made on constitutionality) before the high courts of Idaho, Missouri, and New Hampshire. In addition, several lower courts have issued equally sweeping decisions favoring plaintiffs,¹³ and several cases have been resolved in favor of existing systems. Litigation is currently in progress or unsettled in at least 12 states, including Florida, Louisiana, New Hampshire, North Carolina, Pennsylvania, South Carolina, and Virginia.²¹

Current Trends and Issues

The rulings issued in 1989–90 prompted a renewed round of legal claims and legislative activity. Some important trends, rulings, and concerns since then include defining the term "adequate" and addressing facilities inequities.

Defining "Adequate"

Since the Kentucky decision in *Rose*, other state supreme courts have relied partly or completely on adequacy arguments to rule against existing school finance systems (for example,

in Alabama and Ohio). In each instance, courts stressed that public education must meet a certain substantive level of educational quality to satisfy constitutional requirements.²²

In reaching a decision on adequacy, the court must first determine whether the education clause establishes a minimum or an optimal education standard, or something in between. Wyoming, for example, held that the constitution specified only a basic education and that it was the responsibility of the legislature to determine what elements were essential to the basic "education basket."²³ On the other hand, the optimal educational standard articulated by the court in Kentucky is so high that not even the state's best-performing districts could be confident they met the court's standard.

Facilities Inequities

In *Roosevelt Elementary School District No. 66 v. Bishop*,²⁴ the Arizona high court invalidated the state's practice of leaving individual school districts with the primary or sole responsibility for building and maintaining school facilities. Virtually all states are vulnerable by this standard, as discussed in Appendix A in this journal issue.

Current Level of Equity in Education Funding

Given the enormous amount of attention that has been paid to school finance equity, it

Figure 1

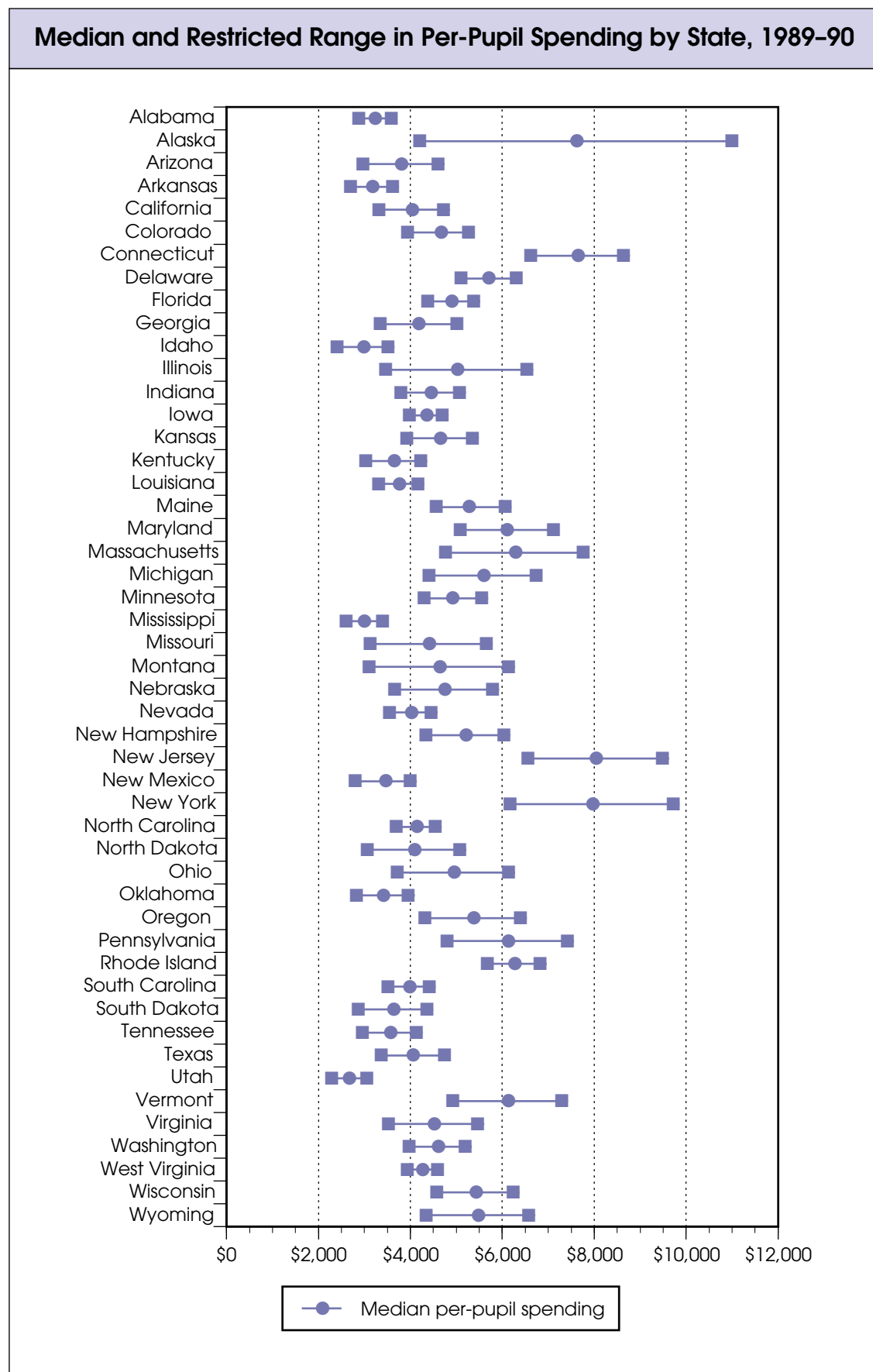


Figure 1 (continued)

Median and Restricted Range in Per-Pupil Spending by State, 1989–90

Notes: Figure 1 shows for each state the state median per-pupil spending and the approximate range in per-pupil spending which encompasses two-thirds of the state's students.^a If the state's students are ranked by per-pupil spending, the restricted range shows the students between the 17th and 83rd percentiles, or 67% of the state's students.

The restricted range shown on the chart was calculated from the state median per-pupil expenditure and the state's coefficient of variation. Analysts use the coefficient of variation to describe a state's whole distribution of pupil revenue. The coefficient of variation indicates how closely student revenue (across all percentiles) is clustered around the average amount. Two-thirds (or one standard deviation) of the state's students are located within the restricted range defined by the coefficient of variation in each state.

For example, in New Jersey, the median per-pupil expenditure in 1989–90 was \$8,139. New Jersey's coefficient of variation was 0.18. Eighteen percent of \$8,139 is \$1,465. Therefore, two-thirds of the state's students resided in districts with per-pupil expenditures between \$6,674 (\$8,139 minus \$1,465) and \$9,604 (\$8,139 plus \$1,465).

^a Hawaii does not appear in Figure 1 because it has only one school district.

Sources: For state median per-pupil expenditures: U.S. Department of Education, National Center for Education Statistics. *Digest of education statistics 1996*. Washington, DC: U.S. Government Printing Office, 1996, p. 154; for the state's coefficient of variation: Hertert, L., Busch, C., and Odden, A. School finance inequities among the states: The problem from a national perspective. *Journal of Education Finance* (1994) 19,3: 231–55.

surprising how little is known about the level of equity being achieved across the country. Few studies have been done that quantify equity in all 50 states and track how the level of equity changes over time. It is in theory possible to compare equity and spending differences among states, among districts within a state, or among individual schools within a district. Here, state-to-state equity and school-to-school equity are discussed briefly, but most analyses (and the bulk of this discussion) examine district-to-district equity.

Equity Among States

There is no federal constitutional requirement of equity in school funding among states, and there is no federal program to ensure interstate equity. Because interstate equity is not required, these comparisons are rarely done, though differences in per-pupil funding among the states are substantial. One analysis of 1992 data found that variations in per-pupil funding among states accounted for 65% of the total variance nationally in per-pupil spending.^{15,25}

The article by Howell and Miller in this journal issue includes a graph illustrating the relative tax bases and cost-adjusted per-pupil spending in each state. As reported in that article, even after adjusting for regional cost differences, per-pupil spending ranges from \$3,537 in Utah to \$7,747 in Alaska.

Equity Among Schools

Comparisons among individual schools within a district (let alone within a state) are

rarely possible because school districts do not budget or keep records on that basis. As Monk discusses in this journal issue, districts account for expenses in functional categories such as personnel, rather than by school building, a system that makes no allowance for the fact that teachers with seniority (and higher pay) are often clustered in a few schools within a district. Though studies of individual districts have shown that differences among schools in per-pupil spending may be substantial, no national or state data exist to measure the magnitude of these differences. In an unusual case, the Los Angeles Unified School District agreed to a lawsuit settlement that required the district to equalize spending among its 564 schools beginning in the 1997–98 school year.²⁶

Equity Among Districts

Studies have shown that some states have higher levels of equity than others, that there is a strong, positive relationship between resource availability and district wealth, and that the level of equity (or inequity) tends to remain constant over long periods of time.²⁷ There are, however, relatively few such national studies because of the difficulty in obtaining comparable data from 50 states. In addition to the few national studies, studies of individual states have been conducted on an ad hoc basis in many states. These single-state studies offer the most precise measurement of equity and often are prepared by professors of school administration in selected states, sometimes in association

Figure 2

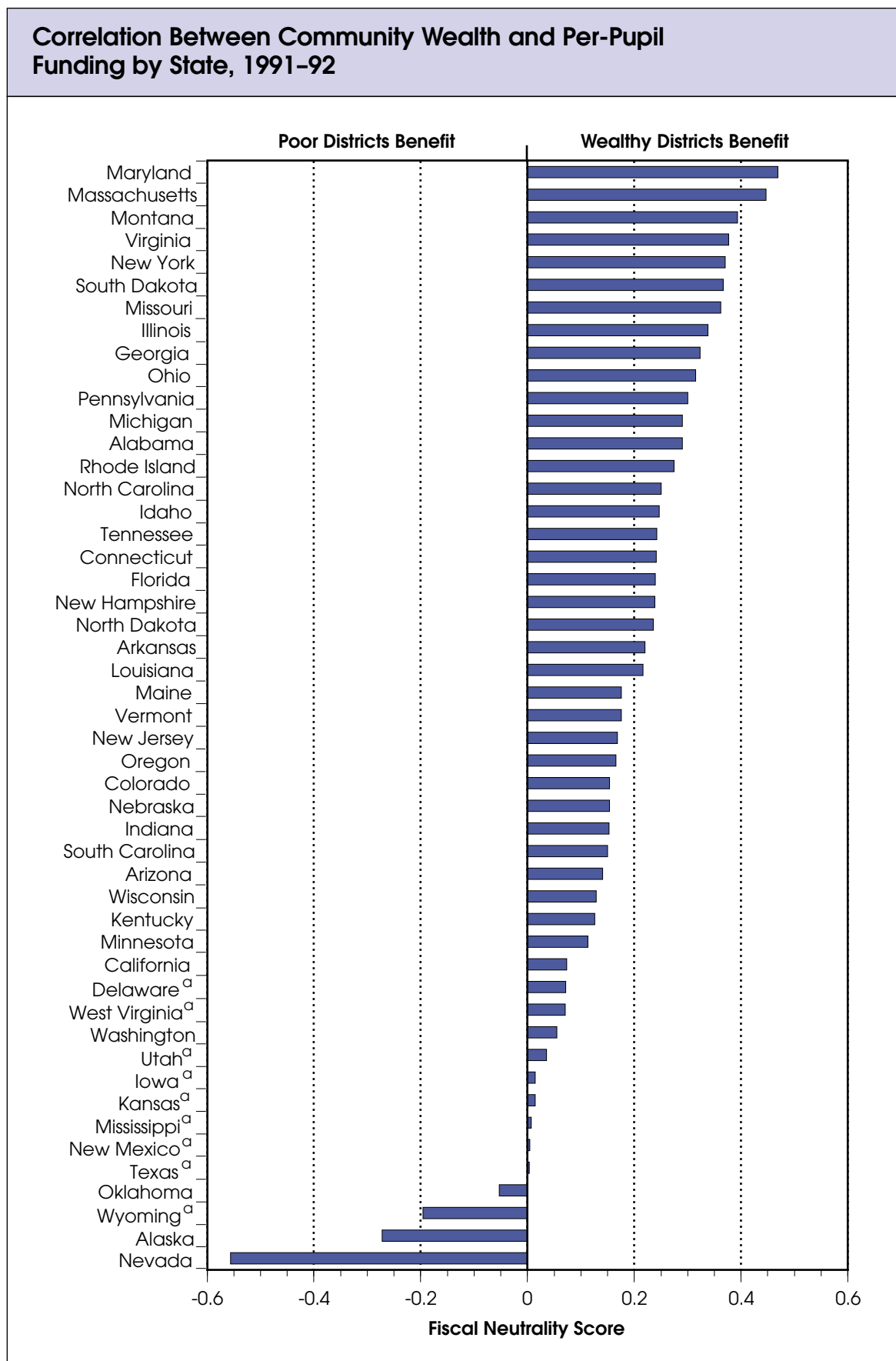


Figure 2 (continued)

Correlation Between Community Wealth and Per-Pupil Funding by State, 1991–92

Notes: Figure 2 ranks states according to the extent to which total funding of school districts in 1991–92 was linked to district income. In this figure, the center line, which equals a fiscal neutrality score of zero, represents the goal of ensuring that education funding is unrelated to differences in district income per weighted pupil. The figure shows that the total funding of districts in 37 states favored wealthier districts; that is, the total funding increased as the income of the district increased. (Another 8 states had positive fiscal neutrality scores that were not statistically significant.) In three states, the opposite occurred: The total funding decreased as district income increased. (One state had a negative fiscal neutrality score that was not statistically significant.) Hawaii does not appear in Figure 2 because it has only one school district.

Among the 37 states whose school funding favored wealthier districts, the amount of funding available as district income increased varied widely. At the high end of the 37 states, students in Maryland had about \$25 more in total funding for a \$1,000 increase in income per weighted pupil above the state average. At the low end, students in Washington had only about \$4 more for a \$1,000 increase in income per weighted pupil above the state average. (Washington had the lowest positive fiscal neutrality score that was statistically significant.)

To arrive at the weighted pupil count, students with disabilities were given a weight of 2.3, and students from poor families were given a weight of 1.2. These weights reflect average expenditures under the Individuals with Disabilities Education Act (IDEA) and Title I (the federal compensatory education program).

° The fiscal neutrality score was not statistically different from zero.

Source: U.S. General Accounting Office, *School finance: State efforts to reduce funding gaps between poor and wealthy districts*. GAO/HEHS-97-31. Washington, DC: U.S. Government Printing Office, February 1997.

with litigation.²⁸ These studies have found variations in revenue and spending, in resources, and in tax effort, as well as associations between such disparities and school district wealth similar to those that have been identified by national studies. While not typically comparable across states because of differences in definitions, years studied, and methodological issues, these studies attempt to control for a variety of factors, such as size or cost of living, that cause legitimate variations across school districts. Despite such control, the studies tend to find significant inequities across school districts which are tenacious over long periods of time.

While several approaches could be used to examine the equity of school finance systems in the states, the most common (and currently best available) methods are (1) *the coefficient of variation*, which measures the funding levels of all the districts in the state and reveals how tightly they are clustered around the statewide mean spending figure, and (2) *the fiscal neutrality score*, which reveals to what degree the differences in funding are related to the wealth of the school district.²⁹ The most recent 50-state studies using these measures are included here, in Figures 1 and 2.

The coefficient of variation in Figure 1 measures how tightly the per-pupil expenditures in all the state's school districts cluster

about the mean statewide expenditure. A tight cluster indicates greater equity, while widely dispersed expenditures indicate less equity. No absolute standards for an acceptable level of equity, or clustering, exist. Here, fiscal equity has been arbitrarily defined as being high in those states in which two-thirds of the state's students cluster within 10% of the mean per-pupil expenditure. Moderate equity has been defined as a cluster within 11% to 25% of the mean, and low equity, as a coefficient of variation in excess of 25%.³⁰ By this standard, in 1989–90, the level of fiscal equity was relatively high in 7 states,³¹ moderate in 38 states, and low in 4 states (excluding Hawaii, which has only one school district).³² If, however, low equity is defined as a coefficient of variation equal to or greater than 20%, this analysis would show an additional 11 states with low equity.³³

These figures must be interpreted with a great deal of caution for several reasons: (1) no absolute interpretation of these figures exist—the cutoff points for high and low are subjective; (2) they may be inconsistent with the results of litigation;³⁴ (3) they do not reflect changes in school finance which have taken place since 1989–90 and may not fully reflect changes which occurred prior to that year because of the way such changes are implemented; and (4) they may reflect unusual circumstances. For example, Alaska has a wide range in per-pupil spending,

partly because of the high cost of schooling among the state's many geographically remote and sparsely populated districts. Nevertheless, the figures overall do suggest that there are considerable differences in fiscal equity across the states.

A second major concern in equity is whether variations in funding are the result of the school district wealth. As Figure 2 illustrates, in 37 states, the school districts with wealthier residents have higher per-pupil revenues, at a statistically significant level. Nine states had fiscal neutrality scores which did not differ from zero, indicating that per-pupil spending was not related to the wealth of the residents in the district. Three states had statistically significant negative scores, indicating that higher per-pupil revenues were associated with *lower* wealth.

What policy factors most contribute to equity within a state? As noted earlier, the 1997 GAO analysis concluded that the most important factor contributing to district-to-district equity was the willingness of poor districts to make a major tax effort—in some states, to tax themselves at more than twice the rate of the wealthiest districts. The

As difficult as equity is, given all the philosophical and technical issues that need to be resolved, there is no generally accepted framework to guide a discussion of adequacy. The fact is, little is known about the adequacy of school funding. Some things are known about levels of spending (which Guthrie discusses in this journal issue) and some things are known about who makes spending decisions and what they typically purchase (as Monk, Pijanowski, and Hussain discuss in this journal issue). But these are different from the question: What funding formula will ensure that adequate money is available in each school to meet the state's educational goals for all students?

Because most states use some form of a foundation plan, the most important action a state can take to assure adequacy is to determine the target foundation level of per-pupil revenue on the basis of a rational analysis of educational goals and student need. In other words, the state should analyze its educational goals, the characteristics of the state's students, the methods available for meeting those goals, and the cost of implementing those methods to arrive at the foundation level of funding. This type of analysis is extremely difficult, and the state of the art for performing such calculations is still controversial and based more on theory than on firm knowledge of what expenditures and methods will result in what degree and type of student achievement.³⁵

Legislatures, by their nature, do not normally begin by setting goals, assessing needs, and calculating the cost of achieving those goals. As one observer noted, "Legislatures, after all, are accustomed to deciding how far to go in pursuing a particular policy aim on the basis of available resources, competing demands for them, and often inarticulate judgments about societal priorities."³ In other words, legislators divide the state's available tax revenues among all the state's endeavors on the basis of political negotiations. As Guthrie describes in this journal issue, most states allocate about one-third of their total tax resources to elementary and secondary education, so negotiations about the education budget may constitute a substantial share of the legislature's activity. In most states, the foundation level of funding for schools is largely determined through polit-

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GAO also found that state policies contributed to promoting equity. Most important was the state's share of overall education funding; the larger the share of the K–12 budget contributed by the state, the greater the district-to-district equity. Finally, the targeting of state funds to poor districts (for example, heavy use of categorical funding to support programs for students in poverty) contributed to greater equity within the state.⁹

Converting Adequacy to a Funding Formula

The adequacy of school finance systems is even more difficult to discuss than is equity.

ical negotiation. While it may not be possible to replace this time-honored method of allocating tax revenues completely, it can and should be improved by the careful, ongoing analysis of whether the state's foundation level of funding for schools is sufficient to deliver adequate educational services to all the state's students.

Several options are available to states in establishing an adequate revenue target. Each of these approaches has strengths and weaknesses having to do with data availability, simplicity of calculation, and level of state control. Some of these basic approaches are discussed below.³⁶

Historical Spending Approach

Under the commonly used historical spending approach, the state sets a base-cost level using the actual expenditures of school districts in a prior year. This approach is easy to calculate because it is based on actual spending data. If implemented faithfully (not modified by political considerations), the historical spending approach assures that state support keeps pace with both inflation and changes in the way educational services are provided. This approach improves the predictability of state support. A disadvantage appears if spending in previous years was not adequate; a larger increase in funds may be necessary to meet education needs than what is actually given by the state. Additionally, district spending, which influences this calculation, may be influenced by local wealth or preferences and not reflect actual need.

Expert Design Approach

The theory behind the expert design approach is that it is possible for a group of experts to postulate the needs of a model school district with precision and to associate a standard set of prices with those needs. Alaska, California, and Illinois have spent considerable time and money pursuing this approach, but in each instance, the model was abandoned because it produced costs far in excess of existing funding levels, a political consideration. However, the Wyoming legislature, responding to a supreme court ruling, used a modified "expert design" approach in 1997 to develop a new funding formula, based on the costs of providing the services contained in a basic "education basket."

The strength of this model is that it specifies in detail the resources thought to be necessary while standardizing the prices of such resources. The model's weaknesses are that it implies that there is one best way to deliver a service and increases the likelihood that the legislature will be interested in closely examining how districts actually spend state funds. It often results in a recommendation for much higher funding than is available. This approach requires large amounts of data, some of which may be difficult to obtain.

Econometric Approach

The econometric approach attempts to take into account the relationship between spending and pupil performance. For example, if first-grade students develop more fluent reading skills in classes of 18 than in classes of 22, but there is little addi-

A better approach is to examine actual expenditures in several districts that are viewed as being successful or superior, after eliminating districts with unusual characteristics.

tion in skills if class size is lowered to 14, then a class size of 18 would be the point of diminishing returns and would be the class size used in developing the funding model. This approach uses a complex statistical methodology to explain how funds, in terms of magnitude and spending patterns, influence performance while controlling for the impact of factors such as the socioeconomic characteristics of pupils.

While there is legislative interest in this approach around the country, no state has used it to develop a base cost largely because of data problems. There is a serious dearth of practical, reliable information about the point at which returns diminish for virtually any of schooling's major components. Indeed, some analysts argue that such analysis is theoretically impossible because there is no direct or reliable relationship between resource inputs and student outcomes; too many noninput factors (such as school board elections and the turnover of superintendents and principals) intervene between

the input and output stage for student outcomes to be reliably predicted based on resource levels.

Successful Schools Approach

A better approach is to examine actual expenditures in several districts that are viewed as being successful or superior, after eliminating districts with unusual characteristics such as having extremely high family incomes or being very small in size (such as a district of 300 students).

Currently, Mississippi is in the process of conducting such an analysis. Thirty successful schools have been identified, and the state has concluded that the cost of doing business in these schools is reasonable. With this foundation funding level established, the state is also preparing multiple modification factors, to adjust the foundation level in each district to local conditions such as cost of living, enrollment growth or shrinkage, size, student poverty, and other special circumstances.

Recommendations

1. *States should guarantee each school district a foundation level of per-pupil funding which is based on the objectives the state expects its schools to achieve.*
2. *States should allocate funds to districts and districts should allocate funds to schools based on their relative needs.* These analyses should recognize the fiscal implications of factors beyond the control of schools or districts, such as the number of pupils enrolled in special, high-cost programs, the presence of pupils at risk of failure, and such district and school characteristics as size and cost of doing business.
3. *Above the foundation level, states should provide incentives for districts to generate additional local support in a manner that equalizes the rewards for wealthy and poor districts.* In other words, states should reward districts that support their schools generously through local taxes, and districts that increase their tax rates by like amounts should reap comparable per-pupil revenues.
4. *States need to provide equalized support for the construction and renovation of school facilities, including charter schools.*
5. *States should give districts the broadest possible level of flexibility while holding them accountable for their performance.*
6. *States should allocate some money to schools as a reward for exceeding performance expectations.*

1. The various approaches used to create, organize, and fund the first schools are described in Cremin, L.A. *American education: The colonial experience, 1607–1783*. New York: Harper Torchbooks, 1970, pp. 167–95; see also, Bailyn, B. *Education in the forming of American society*. New York: W.W. Norton, 1960, pp. 43–44, 108–12.
2. Katz, M.B. *Class, bureaucracy, and schools*. New York: Praeger, 1971, p. 24.
3. Enrich, P. Leaving equality behind: New directions in school finance reform. *Vanderbilt Law Review* (January 1995) 48,1:101–94.
4. Snyder, T.D., ed. *120 years of American education: A statistical portrait*. NCES 93-442. Washington, DC: National Center for Education Statistics, U.S. Department of Education, January 1993, pp. 57–58.
5. It should be noted that, in the early part of this century, there were over 127,000 school districts in the country, more than eight times as many as there are now.
6. Strayer and Haig proposed the foundation plan concept in a 1923 report, *Financing of Education in the State of New York*, submitted to the Educational Finance Inquiry Commission, which operated between 1921 and 1924 under the auspices of the American Council on Education.
7. Gold, S., Smith, D., Lawton, S., and Hyary, A. *Public school finance programs of the United States and Canada, 1990–91*. Vol. 1. Albany: Center for the Study of the States, Nelson A. Rockefeller Institute of Government, State University of New York at Albany, 1992, p. 18.
8. Coons, J.G., Clune, W.H. III, and Sugarman, S.D. *Private wealth and public education*. Cambridge, MA: Harvard University Press, 1970, pp. 64–65.
9. U.S. General Accounting Office. *School finance: State efforts to reduce funding gaps between poor and wealthy districts*. GAO/HEHS-97-31. Washington, DC: U.S. Government Printing Office, 1997. In the GAO analysis, each student in special education was weighted as 2.3 students, and each student in poverty was weighted as 1.2 students.

10. In the GAO analysis, local tax effort was defined as school revenue from local taxes (per weighted pupil) for each \$1,000 in income (per weighted pupil).
11. *Serrano v. Priest*, 5 Cal. 3d 584, 487 P.2d 1241 (1971).
12. *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1 (1973).
13. Verstegen, D.A. The new wave of school finance litigation. *Phi Delta Kappan* (November 1994) 76,3:243–50.
14. For an analysis of some key words in state education articles, see, among others, Bailey, A. *School finance litigation: A renewed impulse for reforms*. Alexandria, VA: National School Boards Association, 1991; Fulton, M., and Long, D. *School finance litigation: A historical summary*. Denver, CO: Education Commission of the States, 1993; Alexander, K., Brock, J., Forgy, L., et al. Constitutional intent: “System,” “common,” and “efficient” as terms of art. *Journal of Education Finance* (Fall 1989) 15,2:142–62.
15. Murray, S.E., Evans, W.N., and Schwab, R.M. Schoolhouses, courthouses, and statehouses after *Serrano*. *Journal of Policy Analysis and Management* (1997) 16,1:10–31.
16. *Rose v. Council for Better Education*, 790 S.W.2d 186 (Ky. 1989).
17. *Abbott v. Burke*, 119 N.J. 287, 575 A.2d 359 (1990).
18. *Helena Elementary School District No. 1 v. State*, 236 Mont. 44, 769 P.2d 684 (1989).
19. *Carrollton-Farmers Branch Independent School District v. Edgewood Independent School District*, 826 S.W.2d 489 (Tex. 1992) (“*Edgewood III*”).
20. VanSlyke, D., Tan, A., and Orland, M. *School finance litigation: A review of key cases*. Washington, DC: The Finance Project, December 1994, pp. 8, 13.
21. A good source of information on current litigation activities is the Web site of the Education Commission of the States, *School Finance Litigation Activity*, at <http://www.ecs.org/ECS/24ba.htm>.
22. Underwood, J.K. School finance adequacy as vertical equity. *University of Michigan Journal of Law Reform* (Spring 1995) 28,3:493–519.
23. *Campbell County School District v. State of Wyoming*, 907 P.2d 1238 (Wy. 1995).
24. *Roosevelt Elementary School District No. 66 v. Bishop*, 179 Ariz. 233, 877 P.2d 806 (1994).
25. See, for example, Barton, P., Coley, R., and Goertz, M. *The state of inequality*. Princeton, NJ: Educational Testing Service, 1991; and Hertert, L., Busch, C., and Odden, A. School financing inequities among the states: The problem from a national perspective. *Journal of Education Finance* (Winter 1994) 19,3:231–55.
26. *Rodriguez v. Los Angeles Unified School District*. Los Angeles County Superior Court, No. C 611358, Consent Decree (1992).
27. See, for example, Schwartz, M., and Moscovitz, J. *Fiscal equity in the United States, 1984–85*. Washington, DC: Decision Resources Corporation, February 1988.
28. People such as Michael Kirst, Allan Odden, and James Guthrie (California), Alan Hickrod (Illinois), George Chambers (Iowa), David Thompson (Kansas), Margaret Goertz (New Jersey), William Hartman (Pennsylvania), and Catherine Clark (Texas) have monitored equity in particular states, in some instances over long periods of time. It should be noted that one state, Kentucky, has institutionalized the evaluation of school finance equity. Since 1991, the Kentucky Office of Education Accountability has prepared a report that tracks equity to evaluate the Education Reform Act of 1990.
29. The federal Impact Aid program (P.L. 81-874), which distributes funds to school districts with large amounts of tax-exempt federally owned property, such as military bases, rewards states that can pass stringent tests of expenditure disparity (measured by the coefficient of variation) or fiscal neutrality. Unfortunately, most states are not reviewed under this program, so comparable information about the level of equity their school finance systems achieve is not available.
30. For example, if a state had a mean per-pupil expenditure of \$6,000, a high level of fiscal equity would require that two-thirds of the state’s students attend districts with per-pupil spending between \$5,400 and \$6,600 (10% above or below the statewide mean). A moderate level of fiscal equity would mean that *at least two-thirds* of the state’s students attended districts with spending between \$4,500 and \$7,500 (25% above or below the mean). A low level of equity would mean that *fewer than two-thirds* of the state’s students attended districts with per-pupil spending levels between \$4,500 and \$7,500.

31. The 7 states with a relatively high level of fiscal equity are Alabama, Delaware, Florida, Iowa, North Carolina, Rhode Island, and West Virginia.
32. The 4 states having a relatively low level of fiscal equity are Alaska, Illinois, Missouri, and Montana.
33. The 11 additional states that would have low equity if this condition were more stringently defined are Arizona, Massachusetts, Michigan, Nebraska, New York, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, and Wyoming.
34. Even though a state has moderate or low fiscal equity, the state supreme court may have upheld the system's constitutionality, either because the court considered different data or different years, or because of the specifics of the state's constitutional language, history, and circumstances.
35. Education Commission of the States. *Clearinghouse notes: Determining the cost of a basic or core education*. Denver, CO: ECS, 1997.
36. For more detailed information and additional approaches, see Augenblick, J.G., and Myers, J.L. *Determining base cost for state school funding systems*. Denver, CO: Education Commission of the States, February 1994.