High Expectations, Modest Means: The Challenge Facing California's Public Schools

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Foreword

California has recently adopted some of the toughest standards in the nation for its students in K–12 schools. That move reflects a deep concern that has made residents continually rank schools and education at the top of critical issues facing the state. Despite that concern, over the last two decades, California has consistently fallen below the national average in resources invested per student in its schools. Also despite that concern, in recent years, voters have passed more statewide initiatives to limit taxes and fees than to increase spending for schools or other public services. What explains these inconsistencies, are they irreconcilable, and will they put the standards hopelessly out of reach? More pragmatically, given the current economic downturn and state budget crisis, is there any way that the state could find the resources necessary to bring its students up to those rigorous standards?

The assumption behind that last question begs a larger one: Is there truly—not just intuitively—a causal relationship between school resources and student outcomes? That is certainly the assumption behind all the angst over California's relative rank in spending among the states. It was the basic assumption behind *Serrano* and other school finance reforms. But is it necessarily true that if we would just spend more, or that if every school had the same higher level and kinds of resources, no child would be left behind?

Suppose we stopped assuming that more is necessarily magical and could establish what schools actually need to provide the education that could bring their students up to the standards. In *High Expectations, Modest Means: The Challenge Facing California's Public Schools,* authors Heather Rose, Jon Sonstelie, Ray Reinhard, and Sharmaine Heng present the first of three studies aimed at helping the state develop prototypes that would specify what it would take and what it would cost for the schools to do that.

This first study provides an overview of the K–12 finance system, analyzing the policies to increase available funds as well as those constraining how the money can be used. In simple terms, California lags the national average in per student spending, and efforts to lock in more spending have tended to set a floor rather than provide real increases. Even the massive investment in class size reduction caused only a minor increase in overall per pupil spending—and most of the additional revenue went to the primary grades, leaving other programs below the pre-recession levels of the early 1990s.

The information these three studies provide will be especially useful for the state's Quality Education Commission, which is scheduled to begin its work in late 2003. The commission's purpose is to specify the school resources that would allow the vast majority of California's students to meet the state's academic performance standards. The commission is required to present the legislature with a cost estimate of meeting the standards adopted by the State Board of Education. To inform that estimate, the PPIC research team has developed a bottom-up approach that is based upon actual school costs instead of an extrapolation of past revenue levels. Given the state's scarce school resources, it is our hope that the itemized school budgets will illuminate potential trade-offs between existing (mostly uncoordinated) spending programs.

PPIC is grateful to the William and Flora Hewlett Foundation for providing a grant to make this three-volume study possible.

David W. Lyon
President and CEO
Public Policy Institute of California

Summary

California has some of the highest academic standards in the nation for its K–12 students. Yet, over the last two decades, it has consistently ranked well below the national average in resources per student. This report is the first in a series of three studies, funded by the William and Flora Hewlett Foundation, designed to examine the links among school costs, resources, and student outcomes in California. This first report provides background information on the state's academic standards, resources, and funding mechanisms. Subsequent reports will present the findings of interviews and site visits at representative schools throughout the state as well as the results of school budget simulations conducted with the principals of those schools. Together, these studies will provide conceptual tools that would allow state policymakers to determine how much revenue schools might need to educate students to meet state standards.

California has high expectations for its public schools. Between 1995 and 1998, the state developed academic content standards for those schools, specifying what students should learn in every grade. The Fordham Foundation, one of the nation's leading proponents of rigorous academic standards, has rated California's standards as the best in the nation.

The state also expects its students to perform well on standardized tests. Every year since 1999, the state has assigned an Academic Performance Index (API) to individual schools based on the performance of their students on a battery of tests. The index ranges from 200 to 1000. For all schools, the goal is an API of 800, a high level of performance. An 800 API is equivalent to 70 percent of a school's student body exceeding the median performance of students throughout the country.

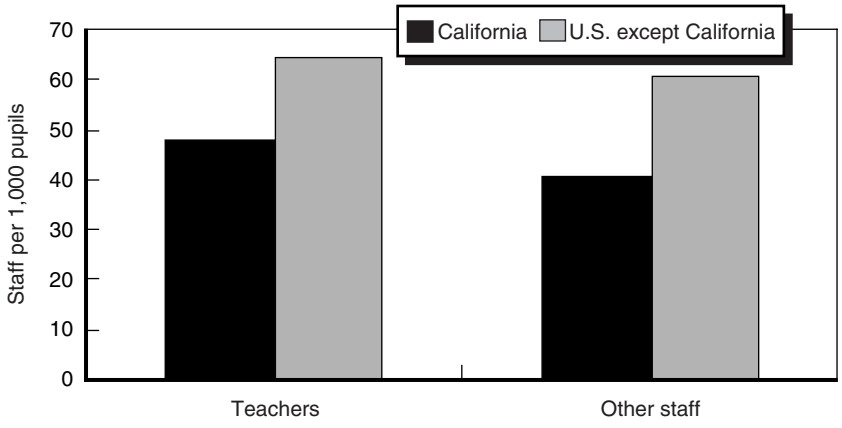
Most California schools have improved their APIs since 1999. Yet, few schools at any level exceed the 800 goal. Elementary schools have

done the best, but only 20 percent of those schools exceeded 800 in 2002.

Despite the high expectations for them, California schools have relatively modest resources. Figure S.1 compares the number of teachers per pupil in California to the aggregate number of all other states. California has 25 percent fewer teachers per pupil. As the figure also shows, the same pattern holds for other public school staff.

Public schools also purchase a variety of supplies and services. California public schools spend less per pupil in this area than do schools in other states. For 1999–2000, California schools spent 14 percent less per pupil than schools in the rest of the country.

The modest resources of California schools are due to two primary factors: high salaries and low budgets. Most staff positions in public schools require a college degree. In occupations requiring a college degree, employees in California earned a salary in 2000 that was 14 percent higher on average than that of similar employees in the rest of the country. This premium is reflected in the salaries for teachers. In 2000, California teachers earned an average annual salary that was 16 percent higher than the average for teachers in other states.



NOTE: See Table 3.3 for more details.

Figure S.1—Public School Staffing per 1,000 Pupils, 1999–2000

Although California schools face higher salaries for their employees, their budgets are lower than those of schools in other states. In 1999–2000, California schools spent about 9 percent less per pupil than schools in other states. The combination of lower budgets and higher salaries implies fewer resources for California schools.

California's low public school spending is not the byproduct of generally low government spending in the state. Despite Proposition 13 and other limitations, state and local government spending in California is in line with spending in other states. In 1999–2000, state and local government spending per capita in California exceeded the average of all other states by 9 percent. As a fraction of personal income, California spending was approximately equal to the spending of other states.

How did a relatively high level of total government spending per capita become a relatively low level of public school spending per pupil? There are two reasons. First, public school spending was a lower share of total government spending in California than in other states. In California that share was 22 percent; in the rest of the country the share was 25 percent. As a result, while California governments spent 9 percent more per capita than did governments in other states, California schools spent 2 percent less per capita. Second, California had 8 percent more pupils per capita than other states. With 2 percent less spending per capita and 8 percent more pupils per capita, California schools had 9 percent less spending per pupil.

California's relatively low spending per pupil is surprising in light of Proposition 98, the 1988 constitutional amendment establishing a minimum guarantee for public school revenue. Since the proposition was enacted, however, spending per pupil has fallen in California relative to that in other states. Observing that trend, some have concluded that Proposition 98 has tended to act as a ceiling for public school revenue instead of a floor. Although that is certainly possible, California's growth in public school revenue was affected by two other factors. The first was the recession of the early 1990s, which had a larger effect on state and local revenue in California than in other states. In real terms, state and local revenue per capita declined about 10 percent in California from 1989–1990 to 1993–1994. In contrast, this revenue in other states

declined slightly from 1989–1990 to 1990–1991 but then resumed its positive growth. The second factor is the rise in the number of pupils per capita in California. During the 1990s, other states experienced a less significant increase than did California.

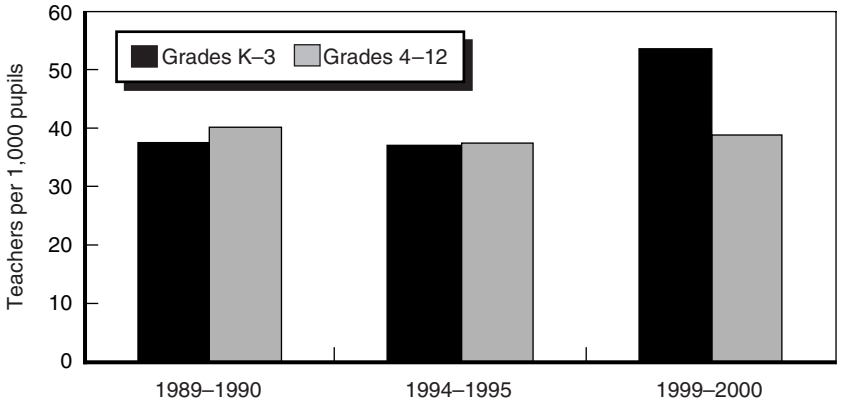
Because of these two factors, it is not clear that Proposition 98 acted as a ceiling on public school revenue during the 1990s. Yes, revenue of California schools did not rise significantly over the minimum required by Proposition 98, and California schools lost ground to schools in other states. However, unlike other states, California experienced a decline in real tax revenue per capita in the first half of the 1990s and a rise in the number of pupils per capita in the second half of the decade. Both factors worked to dampen the demand for public school spending. It is doubtful that California schools would have fared any better without Proposition 98.

The proposition has had an unfortunate consequence, however. It has focused the attention of the Legislature on providing enough revenue to satisfy the Proposition 98 guarantee, which is essentially the 1986–1987 funding level adjusted for the growth in personal income per capita. Proposition 98 has created an artificial goal for school revenue. As a result, attention has been diverted from a much more important and fundamental question: How much funding do schools need to ensure that students are able to master the state's academic content and performance standards?

The funding problems of California schools are aggravated by restrictions on the use of funds, which may diminish the effectiveness of the revenue schools do receive. An example is K–3 Class Size Reduction (CSR), the 1996 initiative to reduce class sizes to 20 students in kindergarten through third grade. CSR came just as California public schools were beginning to recover from the recession of the early 1990s. In the first half of the 1990s, real revenue per pupil fell by 10 percent, and school districts reduced real spending per pupil in almost every category. In the second half of the decade, real spending per pupil rose just over 20 percent, but CSR directed much of that additional revenue to the primary grades.

As Figure S.2 shows, teacher-pupil ratios declined in all grade levels in the first half of the 1990s.[1] In the second half of the 1990s, the overall teacher-pupil ratio rose, but the rise resulted almost entirely from the dramatic increase in the K–3 ratio. Other grades saw little change. In grades 4 through 12, the 1999–2000 ratios were lower than in 1989–1990. Real spending per pupil on pupil service personnel, maintenance and operations, and transportation was also lower in 1999–2000 than in 1989–1990. In that sense, despite the increase in public school revenue in the latter half of the 1990s, California schools have not yet recovered from the recession of the early 1990s. Additional revenue has been channeled into the primary grades, leaving other areas below pre-recession levels.

CSR raises the issue of the efficient allocation of public revenue. Would schools have produced better overall results if they could have allocated more resources to upper grades and less to lower grades? A similar issue arises concerning the allocation of revenue across school districts. As Figure S.3 illustrates, there is a strong, negative relationship between an elementary school's API and the percentage of its students



NOTE: See Table 6.4 for more details.

Figure S.2—Public School Teachers per 1,000 Pupils

[1]Figure S.2 excludes special education teachers.

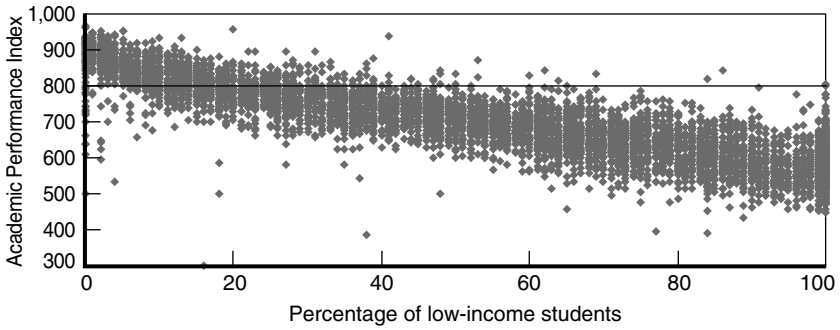


Figure S.3—Elementary Schools, 2002

from low-income families. Middle and high schools demonstrate a similar pattern. Almost all low-income schools failed to achieve the state's goal of an 800 API.

This outcome suggests that additional revenue may be more beneficial if allocated to districts with high percentages of low-income students. In fact, the state and federal governments do allocate additional funds to such districts. In 2001–2002, unified districts (districts with students from kindergarten to grade 12) received an average of about 17 percent more for low-income students than for other students. Are even larger supplements necessary for high-poverty schools to meet the state's standards?

These issues will be addressed by California's Quality Education Commission, which was created by Assembly Bill 2217 enacted during the 2001–2002 legislative session. The information in this report, and the two to follow, will support the commission's work. The commission is charged with developing a quality education model, consisting of prototypes for elementary, middle, and high schools, that would have enough resources "so that the vast majority of pupils can meet academic performance standards established by the state." The prototypes would specify school resources in detail—resources such as the numbers of teachers, administrators, textbooks, and so on. The commission would estimate the cost of those resources, providing a benchmark for the Legislature as it determines the annual budget for public schools.

The commission's prototypes will provide a much needed bridge between the State Board of Education and the Legislature. In California, the State Board of Education sets standards for public schools, and the Legislature allocates revenue to those schools. The board does not report to the Legislature and is under no obligation to consider the resource requirements of its decisions. The board may set "world-class standards," as it claims to have done, without asking what resources would be necessary to achieve those standards. The commission will answer that question, presenting the Legislature with an estimate of the cost of meeting the board's standards. Judging those costs and the benefits of achieving these standards, the Legislature may decide that the taxpayers of California cannot afford them. In that event, California would move beyond the initial stage of standards and accountability to a more mature stage involving serious discussions of what the state can expect students to learn given the resources it is willing to provide to its public schools.

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1. Introduction

California has positioned its public schools on the leading edge of the accountability movement. In 1997, the State Board of Education adopted academic content standards in English-language arts and in mathematics, specifying in detail the skills and knowledge in these two areas that California students should master at every grade level. Those standards were soon followed by content standards in history-social science, science, and visual and performing arts. Taken together, the standards in these five areas chart an ambitious course of learning—a course that has been warmly embraced by accountability proponents.

California is also developing a comprehensive program to hold schools accountable for teaching this academic content to their students. Every March since 1997, the state has tested students in grades 2 through 11. Student test scores determine a school's Academic Performance Index (API), and schools with lagging performance are assigned targets for improvement. Schools exceeding their target are eligible for financial rewards; schools falling short face a variety of sanctions.

As Kirst (2002) describes, California has followed a circuitous path to arrive at its present system, and questions still remain about whether the system will receive the political support it needs to be fully implemented. Initially the annual state tests were not well aligned with the state's new standards. New exams are being introduced that are aligned. Also, because of the budget shortfalls in 2002–2003, the state suspended financial awards for schools exceeding their growth targets. Furthermore, it is still not clear how the state will sanction schools that have consistently failed to achieve their growth targets. Despite this imperfect implementation, even the harshest critics of California's public schools concede that the state is well on its way to establishing a credible accountability system (Izumi and Evers, 2002).

California's new standards lead naturally to the question of whether its public schools are up to the task. Is the school year long enough to

cover the entire academic content dictated by the new standards? Are there enough counselors to deal with the personal crises that divide students' attention? Is the current teacher corps capable of teaching the rigorous new standards, and are the conditions in California schools likely to attract the intelligent and committed young teachers that will be needed in the future? In short, do California schools have the resources to do the job required by their new standards?

An honest appraisal of education research leads to the unsettling conclusion that there is no clear answer to that important question. There is no magic formula that tells us what resources any one school must have to reach a satisfactory performance level. This conclusion is particularly unsettling given the vast sum that California now spends on public education. In fiscal year 1999–2000, the state spent more than $40 billion on its public schools—a sum that amounts to nearly $3,500 per household.

Magic formulas notwithstanding, there is still much we can say about whether the resources of California schools are adequate for the task the State Board of Education has set for them. Chapters 2 and 3 begin this discussion by comparing California with other states. How do California's standards compare with those in other states? Do California schools have the resources that schools in other states have? The conclusion from those two chapters is that California expects more from its schools, yet provides them fewer resources.

This seeming mismatch between expectations and means turns the spotlight on the institutions of school finance, which determine the revenue public schools receive. Chapter 4 explores these institutions, revealing a complex web of revenue streams that tends to obscure lines of authority. With such a system, it is understandable that some school needs may not be adequately addressed.

Although the complexity of California's system may obscure the link between general revenue and overall school needs, the voters of California did address those overall needs in Proposition 98 of 1988, which set a constitutional floor for public school spending. Soon thereafter, however, spending per pupil declined in California relative to that in other states. Chapter 5 examines Proposition 98 and the factors affecting school spending since its passage.

The volume of revenue allocated to public schools is one thing; the way revenue is spent by public schools is another. Schools may spend money unwisely, diminishing its effectiveness. Likewise, the state may place unwise restrictions on the use of public revenue, also diminishing its effectiveness. A good example of this general issue is K–3 Class Size Reduction (CSR), the $1.5 billion state program to reduce class sizes to 20 students from kindergarten through third grade. Chapter 6 outlines the effects of that program, not only on the resources allocated to lower grades, but also on other important areas.

The central question about CSR is the efficient allocation of public funds. Another important efficiency question concerns the allocation of state revenue across school districts. Is the state allocating its revenue to the districts that most need it? Need is a difficult question, but a common set of expectations for all schools makes it easier to address. If all schools are expected to achieve the same standard, schools facing greater challenges should receive more revenue. Are they? Chapter 7 examines that question.

The final chapter examines the role that California's new Quality Education Commission can play in confronting many of these issues. The commission was created by Assembly Bill (AB) 2217 enacted during the 2001–2002 legislative session. Its charge is to develop a quality education model, consisting of prototypes for elementary, middle, and high schools that would have enough resources "so that the vast majority of pupils can meet academic performance standards established by the state." In the process of carrying out that charge, the commission will address the seeming mismatch between the expectations the state has for its schools and the resources schools have to meet those expectations. The commission's findings are likely to lead to a thorough reexamination of the state's school finance system.

2. Standards and Assessment

Academic content standards specify what students should learn in every grade. Good standards must balance high expectations against school capacity. If standards demand too little, schools are unlikely to work to full capacity. On the other hand, if standards are impossible for most schools to achieve, genuine effort may not be properly recognized and rewarded. Errors in either direction reduce incentives for teaching and learning.

Once a state has established standards, it must assess whether students are meeting them—a task commonly accomplished with a standardized test. In practice, standardized tests become an instrument for refining standards. Standards consist of a number of specific elements. The frequency with which elements are covered in test questions implicitly define a priority ranking among elements. The threshold for passing an exam determines how thoroughly students must know the elements that are emphasized. A narrow test with a low threshold can undermine high standards. Alternatively, if standards are very high, a well-designed test can establish a more reasonable bar.

How high has California set the bar for its schools? This chapter reviews the state's academic content standards and its instruments for assessing student achievement.

California's Academic Content Standards

Considering the magnitude of the task, California constructed its current standards in a remarkably short time. The process was initiated by AB 265, enacted in 1995. The bill created the Commission for the Establishment of Academic Content and Performance Standards, with the charge of drafting content standards in the core areas of reading, writing, mathematics, history-social science, and science. The bill required that the commission submit draft standards to the State Board of Education for approval. The board approved the English-language

arts standards in November 1997, the mathematics standards in December 1997, and the science and history-social science standards in October 1998.

As a result of Senate Bill (SB) 1398, content standards in visual and performing arts were added in 2001. The arts standards have a different status than those in other areas, however. Although AB 265 required that the Superintendent of Public Instruction test students in core areas, SB 1398 explicitly rejects statewide testing in the arts.

The process of drafting academic standards exposed many differences in educational philosophy. In the view of the State Board of Education, the commission's draft of the mathematics standard emphasized conceptual learning over basic skills. The board rejected that approach and adopted standards with a greater emphasis on basic skills. A similar controversy arose over the science standards. In contrast, the English and history-social science standards were developed with little controversy. McDonnell and Weatherford (1999) provide a full account of California's standard-setting process.

The standards that emerged from this process are impressive in many ways. Most notably, they are clear, specific, and detailed. Box 2.1 displays examples for sixth grade, one standard from each of the five areas. Sixth grade has many more standards, as do all other grades. The standards listed in Box 2.1 are representative, however, in one important respect: There is little ambiguity about what students are expected to learn.

California's standards are also extensive, including much material that was not part of the conventional curriculum 20 years ago. For example, the mathematics standards include a thorough introduction to probability and statistics. In first grade, students collect data and represent it graphically. In fourth grade, they identify modes, medians, and outliers. In seventh grade, they represent two numerical values on a scatter-plot and discuss the relationship between the variables. Students follow a similar progression with probabilities; by sixth grade, they are required to know the theoretical probabilities of compound events and to understand the difference between independent and dependent events.

The history-social science standards outline a rich array of topics. Students begin with California history in fourth grade. Fifth grade

Box 2.1

Examples of Academic Content Standards for Sixth Grade

English-language arts. Writing.

2.3 Write research reports:

a. Pose relevant questions with a scope narrow enough to be thoroughly covered.

b. Support the main idea or ideas with facts, details, examples, and explanations from multiple authoritative sources (e.g., speakers, periodicals, online information searches).

c. Include a bibliography.

Mathematics. Measurement and geometry

1.2 Know common estimates of π (3.14; 22/7) and use these values to estimate and calculate the circumference and the area of circles; compare with actual measurements.

History-social science. World history and geography: ancient civilizations.

6.2.3 Understand the relationship between religion and the social and political order in Mesopotamia and Egypt.

Science. Ecology (life science).

5.a *Students know* energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis and then from organism to organism through food webs.

Visual and performing arts. Music.

1.2 Read, write, and perform rhythmic and melodic notation, using standard symbols for pitch, meter, rhythm, dynamics, and tempo in duple and triple meters.

covers U.S. history up to the Civil War. Grades six and seven focus on world history and geography, particularly ancient and medieval times. In eighth grade, students return to U.S. history, including the Constitution, the Civil War, and the Industrial Revolution. High school focuses on

the twentieth century. In their senior year, students study principles of economics and government.

Each topic is treated in considerable detail. For example, in sixth grade, students study six ancient civilizations: Mesopotamia, the ancient Hebrews, Greece, India, China, and Rome. For each, students analyze geographic, political, economic, religious, and social structures. The topics of these analyses are specified in detail. In analyzing ancient Rome, for instance, students trace the migration of Jews around the Mediterranean and their conflict with the Romans over the right to live in Jerusalem. In studying China, they learn about the life of Confucius and the teachings of Confucianism and Taoism.

The science standards are equally extensive. Each year in grades 1 through 5, students study topics from physical, life, and earth sciences. In sixth grade, they focus on earth sciences; in seventh, on life sciences; and in eighth, on physical sciences. High school comprises traditional courses in physics, chemistry, biology, and geology. The high school courses are quite advanced. However, reflecting concerns about the extent of the standards, several high school science standards are designated as optional.

The Fordham Foundation is a leading proponent of high academic standards. In 2000, the foundation evaluated the standards of 48 states and the District of Columbia (Finn and Petrilli, 2000). Evaluations focused on five areas: English, history, geography, mathematics, and science. For each area, the foundation selected one or two experts to be evaluators. Evaluators developed explicit criteria for their areas. Box 2.2 lists the history criteria, as an example. Evaluators scored each criterion numerically and added scores across criteria to yield an overall score. Using this overall score, evaluators assigned letter grades to each state.

The criteria varied across areas, but a few general themes were present in all five areas. All evaluators looked for clear, specific, and measurable standards. A major concern in all areas was whether the standards were appropriately comprehensive. In science, for example, standards were scored on whether they "comprehensively cover basic knowledge, the importance of which is generally agreed upon by the scientific community." Evaluators also scored standards on whether they

Box 2.2

Fordham Criteria for Evaluating History Standards

A. Clarity: How well are the standards written?
   1. Standards are clear and measurable.
   2. Standards describe what is to be taught and learned.
   3. Standards are coherent and demanding.
   4. Students are expected to learn important and specific facts, events, individuals, and issues.

B. Organization: How are standards organized and linked to state assessments?
   5. Standards are presented on a grade-by-grade basis.
   6. State history tests are (or could be) based on the standards.
   7. History is based on chronology.
   8. Standards reflect solid, warranted historical knowledge.
   9. History is kept in context and standards avoid presentism.
   10. Students are encouraged to develop and apply historical skills.
   11. Students are encouraged to understand and use primary and secondary sources.

D. Historical content: Are specific studies of U.S., European, and world history found in the standards?
   12. Standards include specific studies in U.S. history.
   13. Standards include specific studies in European and world history.

E. Absence of manipulation: Do standards avoid manipulation, bias, indoctrination, and inappropriate applications of history?
   14. Standards avoid promoting political and social dogma.
   15. Standards avoid manipulating student feelings or attitudes.

were sufficiently demanding. A final general criterion was the lack of negative qualities. In English and history, for example, states were judged on whether their standards were free of social dogma. In mathematics, standards were given low scores if they embraced "the fashionable notion that a mathematical question may have a multitude of different valid answers."

The Fordham evaluators rated California's standards as the best in the nation. California received perfect scores in history, mathematics, and science and was the only state to receive a perfect score in any of those three areas. California was tied for first with Massachusetts in English. Only in geography were California's ratings anything less than superb. In that area, California ranked eighteenth and received a letter grade of C. Its grade point average for all five areas was a 3.6, the highest in the nation. Table 2.1 summarizes these grades.

Evaluators identified several specific deficiencies in California's English and geography standards. Although the English evaluator generally praised California's standards, she gave them less than perfect marks because they fail to identify a few core authors or titles that all students should read and because they do not clearly specify the desired reading level for the secondary grades. The geography evaluators gave California low scores because its standards do not have specific geography benchmarks and because they lack content in physical geography. The evaluators found the geography standards in elementary and middle school to be of high quality, but faulted the secondary standards. They particularly criticized the senior year standards in economics and government because they contain no explicit geographical content.

The American Federation of Teachers (AFT) has also evaluated state standards (American Federation of Teachers, 2001). The AFT review focused on clarity and specificity. It also assessed whether state standards were grounded in appropriate academic content, but it did not attempt

Table 2.1

Fordham Foundation Evaluation of California Standards

	California Score	Maximum Possible Score	Median Score	California Rank	California Grade	No. of States Ranked
English	94	108	61	1[a]	A	49
History	60	60	25	1	A	49
Geography	66	90	62	18	C	46
Mathematics	16	16	8	1	A	49
Science	75	75	64	1	A	46
Overall GPA	3.6	4.0	1.6	1	A–	47

[a]Tied with Massachusetts for first.

to evaluate the rigor or overall quality of each state's standards. Although more limited in scope, the AFT evaluations are consistent with the more general evaluations of the Fordham Foundation. AFT evaluated standards at the elementary, middle, and high school levels in each of four areas: English, mathematics, science, and social studies. It found California's standards to be clear, specific, and well grounded in all four subjects at all three levels. Only five other states were rated as highly.

The Academic Performance Index

The comprehensiveness of California's standards raises the issue of depth. To cover the many topics in those standards, teachers may find it difficult to explore every topic in sufficient detail. How deeply does California expect its students to know its standards? How well does the state expect students to perform on its standardized tests?

Answers to those questions are provided by the state's Academic Performance Index. An API value is assigned to each school on the basis of the performance of its students on a battery of tests. The index ranges from 200 to 1000. For all schools, the goal is an API of 800. Schools with an API less than 800 are expected to improve and may face a variety of sanctions if they repeatedly fail to do so.

The API was first instituted in 1999. In that year, the index was based solely on the Stanford Achievement Test, Ninth Edition (Stanford 9). Subsequently, other tests have been added to the index, but 1999 provided a good starting point for understanding the state's expectations for student performance. Students were tested in grades 2 through 11. In grades 2 through 8, they took tests in reading, language, spelling, and mathematics. In grades 9 through 11, they took tests in reading, language, mathematics, social studies, and science.

A student's performance on the Stanford 9 can be compared with the performance of other students throughout the country. In 1995, the test was administered to approximately 450,000 students, who were selected to be representative of the nation in geographical region, ethnic and racial background, and socioeconomic status. Student scores from this national sample established norms for subsequent test-takers. For example, a student with a certain test outcome is said to be in the 73rd

national percentile rank (NPR) if 73 percent of the students in the national sample had a lower outcome.

To compute the Academic Performance Index, numerical scores are assigned to each NPR. Students between the first and 20th NPR receive a score of 200, students between the 20th and 40th receive a score of 500, and so on. For each test, the numerical scores of all students in a school are averaged, and the average for each test is then averaged across tests to arrive at the school's API. In averaging across tests, different weights are applied to different tests. For 1999, in grades 2 through 8, the mathematics score had a weight of 40 percent, the reading score a weight of 30 percent, and language and spelling scores both had weights of 15 percent.

Under this scoring system, an API of 800 is a high level of performance. To illustrate, suppose that a school performed exactly as the national sample; that is, 50 percent of students score below the 50th NPR, 75 percent score below the 75th NPR, and so on. Under those circumstances, the school would have an API of 655, far below the 800 goal. How much must it improve to achieve an API of 800? There are many possible scenarios, but one simple scenario illustrates the required improvement. Suppose that every student below the 80th NPR moved up by 20 percentile points, and all students above the 80th NPR continued their excellent performance. Seventy percent of the school's students would then be above the 50th NPR, and 45 percent would be above the 75th NPR. With this improvement, the school would have an API of 815.

These hypothetical examples provide a context for API scores, but the actual experiences of schools give a clearer picture of what is necessary to achieve an 800 API. Rogosa (2000) examined all California schools with an API near 800 in 1999. Specifically, he examined elementary schools with APIs between 799 and 801 and middle and high schools with APIs between 795 and 805. For those schools, he then estimated the percentage of students above the 50th NPR. For elementary schools, this estimate was 72 percent; for middle schools, 73 percent; for high schools, 74 percent. These results are consistent with the hypothetical example presented above. Roughly speaking, an 800 API requires that about 70 percent of a school's students exceed the national median.

In short, California expects its students to perform much better than those in the rest of the country. This expectation is particularly high in light of the large number of California students whose native language is not English. In the 1999 administration of the Stanford 9, 21 percent of California students were classified as limited English proficient (LEP). In contrast, in the Stanford 9 national sample less than 2 percent of students were LEP.

Students with limited English proficiency tend to score lower on standardized achievement tests than do other students. In the 1999 Stanford 9 reading test, less than 20 percent of LEP students in California exceeded 50th NPR. LEP students scored somewhat higher in the mathematics test, but for most grades the percentage exceeding the national median was still less than 20 percent.

To understand how these patterns may affect API scores, consider a modification of the hypothetical example presented above. Suppose 20 percent of a school's students have limited English proficiency. Further suppose that 20 percent of these students exceed the 50th NPR and that 50 percent of other students exceed the 50th NPR. Considering all students together, 44 percent exceed the national median. Rogosa (2000) found that the percentage of a school's students exceeding the 50th NPR is an excellent predictor of the school's API. According to Rogosa's predicting equation, this hypothetical school would have an API of 612. How much improvement would be required to reach an API of 800? Suppose the percentage of LEP students exceeding the national median rose from 20 percent to 48 percent and the percentage of non-LEP students exceeding the national median increased from 50 percent to 78 percent. Then, according to Rogosa's equation, the school's API would rise to 800.

The Stanford 9 predates California's standards and is not perfectly aligned with those standards. Over the last three years, the state has introduced new tests that are aligned and included those tests in the Academic Performance Index. The 2001 API includes the California Standards Test in English-language arts. The index was further expanded in 2002 to include the California Standards Tests in mathematics and in social science and the California High School Exit Exam. For these new tests, the State Board of Education first approved a

blueprint specifying the standards to be tested and the percentage of test questions from each group of standards. Test questions were then written based on those designs. For each exam, the board also approved five performance benchmarks: far below basic, below basic, basic, proficient, and advanced. In the judgment of the State Board of Education, students achieving or surpassing the proficient benchmark have demonstrated sufficient mastery of state standards.

The introduction of these new tests has changed the calculation of the Academic Performance Index. The California Standards Tests are scored in a manner similar to the Stanford 9. Each performance band is assigned a numerical score. If a student's exam is graded proficient, the exam receives a numerical score of 875. An exam graded basic receives a score of 700. As in 1999, scores of individual students on a particular test are averaged to form a school's score on that test, and those scores are averaged across tests to yield the school's API. Also as in 1999, the various tests are weighted differently in this average. To accommodate the new tests, the weights on the Stanford 9 tests are much lower than they were in 1999.

The new tests and weights raise the question of whether California's performance standard has changed. Is an API of 800 still the high level of performance that it was in 1999? Figure 2.1 illustrates the issue. The solid line shows a hypothetical statewide average for the API calculated with weights from an initial year, Year 1. In Year 2, a new test is added to the API, and new weights are adopted. The dashed line is the statewide average API for Years 2 and 3 calculated with these new weights. The new weights show an average API for Year 2 that is higher than the average API calculated with the Year 1 weights. This discontinuity can be caused by the scoring of the new test or simply by the different weights placed on different tests. In any event, because the same student performance is being measured by the two indexes, the two indexes should have the same value.

In response to this measurement problem, the State Board of Education has adopted a simple procedure. Whenever it introduces a new test and thus adopts a new weighting scheme, it adds a constant term to the calculation of the new API. The term, referred to as the scale

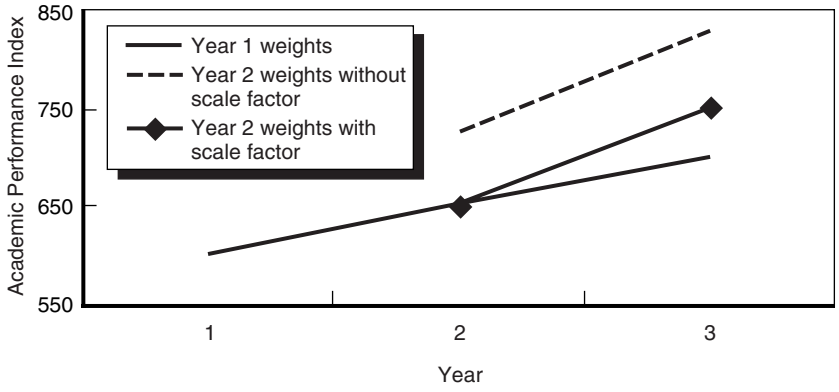


Figure 2.1—API Scale Factor

calibration factor, is selected to make the statewide average API under the previous weighting scheme equal to the statewide average API with the new test and new weighting scheme. In the figure, the line marked by two diamonds represents the API with the new weights and scale calibration factor. The factor merely shifts the API down in this year and all subsequent years to make the two different weighting schemes consistent for the year in which the new test was introduced.

Although the scale calibration factor can paper over inconsistencies in the year new tests are introduced, it does not necessarily guarantee that the API represents the same performance levels over time. Figure 2.1 demonstrates the point. In Year 3, the API with the old weights is lower than the API with the new weights even after the scale calibration factor has been applied.

In the end, consistency in the API over time requires consistency in grading among different tests. In the API calculation, proficiency on the California Standards Test has a numerical score of 875. In the Stanford 9, performance between the 60th and 80th NPR has a numerical score of 875. Over time, more weight is given to the standards test and less weight is given to the Stanford 9. If an 800 API is to represent the same performance level as the weights change over time, a proficient score on the California Standards Test must represent approximately the same performance level as the 60th to 80th NPR on the Stanford 9.

To address consistency in scoring between the Stanford 9 and the California Standards Tests, we compare student achievement on those two tests in 2002. Although results varied by grade and test, 29 to 38 percent of students were judged to be either proficient or advanced on the California Standards Tests in language arts and in mathematics. In comparison, on the Stanford 9 tests, 21 to 35 percent of students exceeded the 75th percentile in language and 28 to 38 percent exceeded the 75th percentile in mathematics. Table 2.2 presents the percentages for each grade and test.

Assuming a correlation between performance on the California Standards Tests and the Stanford 9, these percentages imply that proficiency on the Standards Test is a somewhat lower threshold than the 75th NPR on the Stanford 9. That is, more students are judged proficient than exceed the 75th NPR. On the other hand, the table also implies that proficiency is a much higher standard than the 50th NPR. On both Stanford 9 tests and in all grades except grade 10, more than 50 percent of students exceeded the national median. We conclude that the board's definition of proficiency falls somewhere between the 50th and 75th NPR and that the introduction of new standards tests has not substantially changed the performance level associated with an 800 API.

California schools have made progress towards the 800 goal. Table 2.3 shows API percentiles for 1999 and 2002. For example, the 25th percentile for elementary schools in 1999 was 522, meaning that 25 percent of elementary schools had an API less than 522. As the table shows, these percentiles have increased between 1999 and 2002 for elementary, middle, and high schools. The increase in the 25th percentile is particularly noteworthy, indicating that schools with very low APIs in 1999 have made significant gains.

Despite this progress, few schools at any level exceed the 800 goal. As Table 2.4 shows, elementary schools have done the best, but only 20 percent of those schools exceeded 800 in 2002. California has high expectations for its schools, but so far few have met them.

The state does not expect schools to achieve the 800 goal overnight. Each year schools are expected to increase their API by at least 5 percent of the difference between 800 and their current API. When their API

Table 2.2

Comparison of California Standards Tests with Stanford 9

Grade	% Above 50th NPR on Stanford 9	% Above 75th NPR on Stanford 9	% Proficient or Advanced on California Standards Tests
		Language	
2	55	31	32
3	53	27	34
4	57	27	36
5	55	29	31
6	56	33	30
7	57	35	33
8	52	27	32
9	53	25	32
10	42	21	33
11	50	23	31
		Mathematics	
2	62	37	33
3	62	36	38
4	58	35	37
5	57	32	29
6	60	38	32
7	52	28	30
8			
9			
10			
11			

Table 2.3

API Percentiles

	1999	2002
Elementary schools		
25th percentile	522	625
Median	629	700
75th percentile	739	781
Middle schools		
25th percentile	536	594
Median	633	667
75th percentile	725	750
High schools		
25th percentile	544	575
Median	621	640
75th percentile	698	702

Table 2.4

Percentage of Schools Exceeding 800 API

	1999	2002
Elementary schools	13	20
Middle schools	11	13
High schools	5	4

reaches 780, schools are expected to increase by one point a year. Figure 2.2 shows various API trajectories that exactly meet these minimum requirements. Schools with low APIs in 1999 have many years to reach 800. For example, if a school with an initial API of 650 made just the minimum progress required each year, it would not reach 800 until 2060.

Unwittingly, perhaps, California's ambitious accountability program is in danger of being undermined by a new federal law, the No Child Left Behind Act of 2001 (NCLB). NCLB has many provisions, but one in particular requires that all students achieve full proficiency in reading and mathematics by 2014. Each state is free to define proficiency in its own way; California has chosen a rigorous definition. Even under the most conservative interpretation of that definition, the NCLB requirement implies that all California students must exceed the national median in reading and mathematics by 2014.

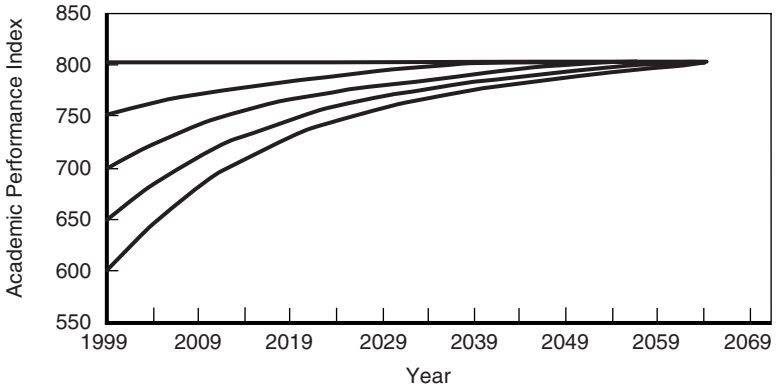


Figure 2.2—API Trajectories Meeting Minimum Requirements

Some states have responded to NCLB by lowering their threshold for proficiency (Dillon, 2003). So far, California has not followed this course. In any event, lowering the threshold is only delaying the inevitable. No matter how low the threshold, there will inevitably be some students who fail to cross it. California's Academic Performance Index accounts for this reality by allowing outstanding performance by some students to offset poor performance by others. Eventually, federal regulations must also come to grips with this reality.

Conclusion

There are many other aspects to California's evolving system of public school standards and accountability. The Immediate Intervention/Underperforming Schools Program and the High Priority Schools Grant Program assist struggling schools, the Governor's Performance Awards reward schools making exceptional progress, and a host of possible sanctions awaits schools that fail to make progress. The California High School Exit Exam will give students added incentive to master state standards. All of these programs are important parts of California's new system, and each deserves attention.

Nevertheless, we have focused on a single issue: What does California expect from its schools? Those expectations are partly laid out in California's academic content standards, which outline an ambitious elementary and secondary curriculum. The Fordham Foundation considers California's standards to be the best in the nation. Moreover, as revealed by the performance standards embedded in the Academic Performance Index, California expects its students to know this curriculum very well. On standardized tests, California expects its students to do much better than students in other states.

These high expectations contrast sharply with current performance. Few California schools are currently achieving the state's goals.

3. School Resources

A typical school district spends about 80 percent of its operating budget on salaries and benefits. Teachers are a key resource, but the functioning of a school also depends on many other people. A school must have a principal, a school secretary, and a janitor. Schools may also employ librarians, counselors, nurses, and instructional aides.

This chapter compares the staffing of California public schools with that of public schools in other states. It also compares non-personnel expenditures. Motivating these comparisons are the high expectations California has for its schools. The state expects its students to learn more and to perform better on standardized tests than students in other states. Do its schools have more resources to help students perform better?

Our answer uses data from a number of different sources, including the 2000 Census, the survey of state and local government finances by the Census Bureau, and various surveys by the National Center for Education Statistics (NCES). The latest year for which all these data are available is 1999–2000, so we focus on that year. Throughout, we compare California with the three other largest states—New York, Texas, and Florida—and with the aggregate of all states except California.

Student Background

California's high expectations for student achievement are part of the context for our analysis. Another part is the background of students. As countless studies have shown, family income and native language are highly correlated with student performance on standardized tests. Reaching a given level of student achievement is more challenging if a school has many low-income students or many students from families whose primary language is not English.

Compared with students in other states, California students are more likely to live in poverty. As Table 3.1 shows, in 1999 about 19

Table 3.1

Student Poverty, 1999–2000

	% of Children Living in Poverty	% of Students Eligible for Subsidized Lunch
New York	19.6	43.0
Texas	19.8	44.7
Florida	17.2	44.3
California	19.1	47.2
U.S. except California	15.5	36.6

percent of California children ages 5 to 17 lived in households below the poverty line. This percentage is slightly below that in New York and Texas but higher than the percentage for the aggregate of all states except California. Another indicator of poverty is eligibility for free or reduced-price lunch under the National School Lunch Act. To be eligible, the income of a student's family must fall below a certain threshold. In California, at least 47 percent of students were eligible—a percentage higher than that in New York, Texas, and Florida and much higher than the eligibility rate in all states except California. California's rate may actually understate eligibility because it reports participation in the school lunch program instead of eligibility.

Another factor affecting student performance is language use and English proficiency. According to the 2000 Census over 40 percent of California children ages 5 to 17 speak a language other than English at home—a percentage much higher than in other states (Table 3.2). The second column of Table 3.2, the percentage of public school students with limited English proficiency, is from an NCES survey of schools. Although the definition of limited English proficiency surely varies from state to state, the trend in the NCES data is consistent with that in the Census data. Twenty-four percent of California students have limited English proficiency, a much higher percentage than that of other states.

Table 3.2

Language Use and English Proficiency, 1999–2000

	% of Children Speaking Language Other Than English at Home	% of Students with Limited English Proficiency
New York	26.9	2.8
Texas	32.4	13.9
Florida	23.6	7.0
California	42.6	24.2
U.S. except California	18.4	5.3

Resource Comparisons

Despite the background of their students, California schools had fewer staff than did schools in other states. These comparisons are summarized in Table 3.3, which lists staffing ratios for seven job categories. Ratios are measured by staff per 1000 pupils. In all but one job category, staffing ratios were lower in California. For example, California had 48 teachers per 1000 pupils. In comparison, New York had 70 teachers per 1000 pupils; Texas, 67; and Florida, 55. The average ratio for all states except California was 64. The teacher-pupil ratio for California was 74 percent of this average.

The six other categories cover a wide range of jobs. The first three (instructional aides, counselors, and librarians) are self-explanatory. Administrators include district administrators as well as school administrators. Administrative support staff are clerical positions. Other support staff include attendance officers, health providers, speech pathologists, social workers, bus drivers, maintenance workers, security personnel, and cafeteria workers.

For five of these six categories, staffing ratios were also lower in California than in other states. California was 24 percent below the rest of the country for instructional aides per pupil, 54 percent below for

Table 3.3

Staff per 1,000 Pupils, 1999–2000

	Teachers	Instructional Aides	Counselors	Librarians	Administrators	Administrative Support	Other Support	Total Staff
New York	70.0	13.2	2.0	1.7	4.1	10.8	39.8	141.6
Texas	67.1	13.5	2.3	2.8	4.3	5.6	35.7	131.3
Florida	54.7	13.0	2.2	1.6	3.6	11.1	27.7	113.9
California	47.6	10.4	1.0	0.9	3.5	8.7	16.2	88.2
U.S. except California	64.3	13.7	2.2	2.3	5.2	8.2	29.1	124.9
California as a % of U.S. except California	74	76	46	38	68	106	56	71

counselors, 62 percent below for librarians, 32 percent below for administrators, and 44 percent below for other support staff. The only exception to this pattern is for administrative support staff, in which California was 6 percent above the ratio for other states. Overall, total staff per pupil in California was 29 percent below the ratio of other states. As Appendix Table B.1 shows, this pattern holds for more recent years. In 2001–2002, California's total staff-to-pupil ratio was 28 percent below the ratio of other states.

Public schools also purchase a variety of supplies and services, such as books, office supplies, and utilities. As Table 3.4 shows, California public schools spent less per pupil in this area than did schools in other states. For 1999–2000, California schools spent $985 per pupil on these expenses. The average for public schools in the rest of the country was $1,145.

Another key resource for schools is time, specifically the time students spend in school. As in most states, the school year in California is 180 days. However, as Table 3.5 shows, California schools tend to have a shorter school day than do schools in other states. In a survey of schools by the NCES, California schools reported an average school day for students of 6 hours and 20 minutes; the average for schools in the rest of the nation was 6 hours and 40 minutes. Texas schools reported an average exceeding 7 hours. As a point of reference, a 20-minute extension

Table 3.4

Supplies, Services, and Other Expenses, 1999–2000

	Expenses per Pupil ($)
New York	1,477
Texas	1,082
Florida	1,030
California	985
U.S. except California	1,145
California as a % of U.S. except California	86

Table 3.5

Average Length of School Day, 1999–2000

	Length (hours)
New York	6.47
Texas	7.16
Florida	6.47
California	6.32
U.S. except California	6.66
California as a % of U.S. except California	95

of the school day amounts to 3,600 minutes per year, which is more than 9 days at 6 hours and 20 minutes per day.

Salaries and Budgets

The modest resources of California schools are due to two primary factors: high salaries for college-educated employees and low public school budgets. Most staff positions in public schools require a college degree. To attract college-educated employees, school districts must compete with other districts and also with other types of employers. In fact, these other employers dominate the market, determining the competitive salary for college graduates. As the first column of Table 3.6 demonstrates, this salary is higher in California than in other states. In occupations other than teaching that require a college degree, employees earned an average annual salary of $50,506 in California as opposed to $44,239 in the rest of the United States—a California premium of 14 percent.

This premium is reflected in the salaries for teachers. In 2000, California teachers earned an average annual salary of $47,680, which was 16 percent higher than the average for teachers in other states. Consistent with the operation of a competitive labor market, the California premium for teachers was approximately equal to the premium for non-teachers.

Table 3.6

Average Annual Salaries of Occupations Requiring a College Degree, 2000

	Salaries in Occupations Other Than Teaching ($)	Teaching Salaries ($)
New York	52,059	50,173
Texas	43,707	37,567
Florida	41,407	36,722
California	50,506	47,680
U.S. except California	44,239	41,065
California as a % of U.S. except California	114	116

A back-of-the-envelope calculation suggests the effect that salary differences can have on school costs. Suppose California schools paid the 14 percent salary premium for their staff that all California employers paid for college-educated employees, but it had the same resources as schools in the rest of the country. By the same resources, we mean the same staffing ratios in all job categories and the same expenses per pupil for supplies and services. Assume that benefits were the same percentage of salaries in all states and that salaries and benefits constitute 80 percent of the operating budgets of schools in the rest of the country—two assumptions consistent with data from the NCES finance survey. Under those assumptions, California would have spent 11 percent more per pupil than schools in the rest of the country.

In fact, as Table 3.7 shows, California schools actually spent about 9 percent less per pupil than schools in other states. The table reports current expenditures from a survey of state education agencies by the NCES. Current expenditures include all expenditures for ongoing operations such as salaries, benefits, textbooks, utilities, maintenance, and so on. Excluded are major capital expenditures, such as buildings, and the expenditures of school cafeterias and other enterprise activities financed through user fees. California schools spent more than schools in Florida and Texas, although salaries in those two states were

Table 3.7

Current Expenditures per Pupil, 1999–2000

	Expenditures ($)
New York	9,581
Texas	5,971
Florida	5,542
California	6,069
U.S. except California	6,698
California as a % of U.S. except California	91

SOURCE: Expenditure data are from the National Center for Education Statistics.

considerably lower than in California. In general, however, California schools spent less than schools in the aggregate of all states except California, even though its salaries were higher.

With its higher salaries, how much more would California schools have had to spend to achieve the same resource levels as schools in other states? By the back-of-the-envelope calculation detailed above, California schools would have had to spend about 11 percent more than schools in other states. In fact, however, California schools actually spent 9 percent less than schools in other states. Overall, therefore, California schools would have had to increase operating expenditures by 20 percent of the average of other states—a sum of $1,340 per pupil. This sum is 22 percent of public school expenditures in California.

School Expenditures in the Context of Other Government Expenditures

California's low public school spending is not the byproduct of generally low government spending. Despite Proposition 13 and other limitations, state and local government spending in California is in line with that of other states. State and local government spending in California exceeded the level of all other states by $500 per capita—a difference of 9 percent (Table 3.8). As a fraction of personal income,

Table 3.8

Direct General Expenditures of State and Local Governments

	Expenditures per Capita ($)	Expenditures as a % of Personal Income
New York	7,379	21.0
Texas	4,592	16.3
Florida	4,711	16.5
California	5,780	17.8
U.S. except California	5,280	17.9
California as a % of U.S. except California	109	99

NOTE: General expenditures include the expenditures of all non-federal governments except state liquor stores, public utilities, and insurance trust funds. Unlike the NCES data reported in Table 3.7, capital outlays are included. Direct expenditures exclude transfers from one government to another.

California spending was approximately equal to the spending of other states.

However, California spent a lower share of total spending on K–12 education than did other states. In California, that share was 22 percent; in the rest of the country, the share was 24.6 percent (Table 3.9). As a result, although California governments spent 9 percent more per capita than did governments in other states, California schools spent 2.1 percent less per capita. Furthermore, as the fourth column of Table 3.9 shows, California had 8 percent more pupils per capita than other states. California had 17.8 pupils per 100 residents; other states had 16.5—a difference of 8 percent. With 2.1 percent less spending per capita and 8 percent more pupils per capita, California schools had 9 percent less spending per pupil.

The contrast with Texas is instructive. Texas's governments spent 20 percent less per capita than did California governments, and Texas had 7 percent more pupils per capita than California. But, Texas

Table 3.9

Direct General Expenditures, 1999–2000

	Total Government Expenditures per Capita ($)	Public School Share, %	Public School Expenditures per Capita ($)	Pupils per Capita	Public School Expenditures per Pupil ($)
New York	7,379	23.7	1,752	0.152	11,510
Texas	4,592	29.7	1,362	0.191	7,116
Florida	4,711	22.3	1,052	0.149	7,058
California	5,780	22.0	1,273	0.178	7,143
U.S. except California	5,280	24.6	1,301	0.165	7,890
California as a % of U.S. except California	109	89	98	108	91

allocated a much larger share of total government spending to its schools—30 percent compared with California's 22 percent. As a result, spending per pupil was roughly the same in Texas and California. Because salaries were much lower in Texas, Texas schools had more resources per pupil than California schools.

With that background, let us return to our back-of-the-envelope calculation. To attain the resource levels of other states, California schools would have had to increase spending by $1,340 per pupil, which translates into $240 per capita. In the context of total spending, an increase of $240 per capita in public school spending is not particularly large. It is less than half of the $500 by which total state and local spending per capita in California exceeded the average of other states.

This $500 balance was spread across a number of areas. Relative to the rest of the country, California spent more per capita on social services, public safety, and environment and housing. Figure 3.1 illustrates these differences. Social services expenditures are mostly public welfare payments; public hospitals and health are also significant expenditures in that category. The bulk of public safety expenditures are for police protection and corrections, with fire protection a relatively small portion. Expenditures on environment and housing are in the areas of natural resources, parks and recreation, housing and community

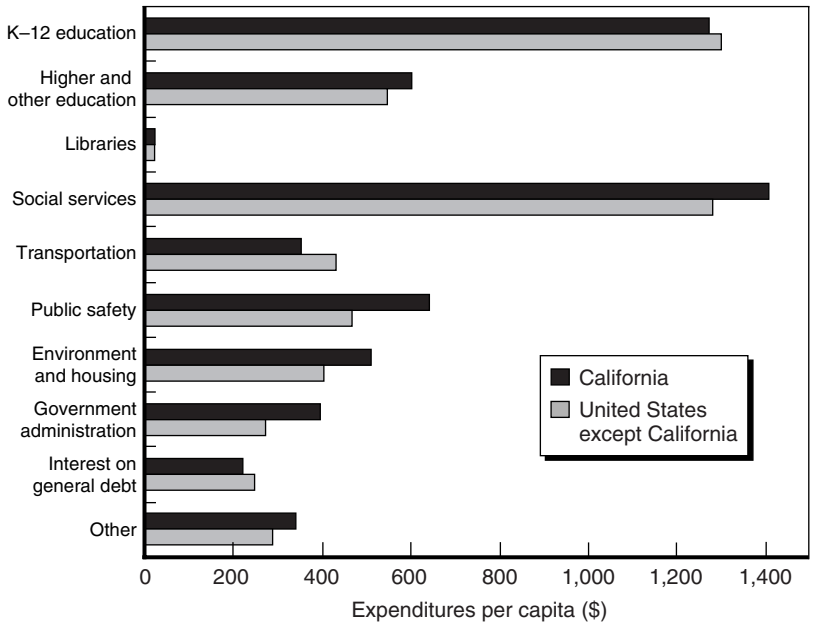


Figure 3.1—Direct General Expenditures per Capita, 1999–2000

development, sewerage, and solid waste management. California also spent more on higher education and government administration.

California residents seem to prefer government spending patterns that more closely resemble the patterns in other states. In particular, they seem to prefer higher spending on public education. The February 2003 PPIC statewide survey asked California adults to express their first priority for public spending in the state budget (Baldassare, 2003). Fifty-two percent listed public schools as their top priority. When asked whether the state government should spend more money than it now does in a number of areas, 65 percent responded that the state should spend more on public schools. No other area of government spending received as much support—an outcome consistent with previous PPIC surveys. For example, in the February 2000 PPIC survey, 74 percent of respondents replied that they would vote in favor of an initiative to raise per pupil spending in California to the national average.

Conclusion

California schools face many challenges. Compared with other states, a larger portion of their students live in poverty and speak a language other than English at home. California also has high expectations for student achievement.

Despite these challenges, California schools have fewer resources than schools in other states. In 1999–2000, California schools had 48 teachers per 1000 students compared to 64 teachers per 1000 students in the rest of the country. In California, the ratio of total staff to pupils was 71 percent of the ratio for all other states. California schools also spent less per pupil on supplies and services than did schools in other states and had a shorter school day.

The modest resources of California schools are due to high salaries for college-educated employees and to low public school budgets. Employees with college degrees earned 14 percent more in California than those in other states, and California schools spent about 9 percent less per pupil than did schools in other states. To reach the resource levels of schools in other states, California schools would have had to increase spending per pupil by about 22 percent.

Although California schools spent less per pupil than schools in other states, all state and local governments in California spent about 9 percent more per capita than governments in other states. California's lower public school spending resulted from a lower share of all spending for public schools and from more pupils per capita.

More school resources do not guarantee higher student performance. To be effective, resources must be appropriately applied, an objective of California's new accountability system. On the other hand, there is no guarantee that the appropriate application of existing resources will be sufficient to meet California's high expectations for its schools.

4. The Institutions of School Finance

The modest resources of California schools draw attention to the institutions that determine school budgets. This chapter describes those institutions, explaining how tax revenue flows to school districts and how school districts spend that revenue. That system is the product of two events—the 1972 decision of the California Supreme Court in *Serrano v. Priest* and the 1978 passage of Proposition 13. In reaction to those events, the Legislature centralized the financing of California public schools, leading to the current system.[1]

The shape of the new system was established by the mid-1980s. During the 1990s, the state consolidated its authority and refined the system in various ways. This consolidation was symbolized by Proposition 98 of 1988 and K–3 Class Size Reduction of 1996. Proposition 98 established a constitutional floor for public school spending. It also formally recognized what had become the new state of affairs: Responsibility for school revenue now rested solely with the Legislature. K–3 Class Size Reduction exemplified the state's growing influence over how school districts allocated their revenue. Chapters 5 and 6 discuss these two events and analyze their effects on school resources. The present chapter sets a background for that analysis by describing the present operation of California's school finance system. To maintain consistency with the previous chapter, the chapter focuses on 1999–2000. Appendix Table C.1 provides revenue data for 2000–2001 and 2001–2002.

[1]The transformation from local to state finance is traced in Sonstelie, Brunner, and Ardon (2000).

The Universe of Public School Spending

As with all government enterprises, school districts practice fund accounting. Each district has a general fund into which most of its revenue is deposited and from which most of its expenses are paid. In addition, districts typically have several other funds, which exist to draw clear boundaries between revenues used to meet general expenses and revenues directed to more specific uses. For example, districts maintain cafeteria funds to separate general funds from the revenue used to operate their school lunch programs. Districts also maintain building funds to finance the construction of new school buildings, deferred maintenance funds to meet the costs of major maintenance projects, and special reserve funds to set aside revenue for other future uses. There are also funds for adult education, child development, and a number of other purposes. Table 4.1 lists the major funds of California school districts and the expenditures from those funds in 1999–2000. The general fund is by far the most important, accounting for nearly 81 percent of all school district expenditures.

Table 4.1

School District Expenditures by Fund Type, 1999–2000

Fund Type	Expenditures ($ millions)	% of Total
General	33,866	80.6
Capital projects		
Building	1,676	4.0
All other	2,453	5.8
Special revenue		
Cafeteria	1,375	3.3
Adult education	604	1.4
Child development	446	1.1
Deferred maintenance	260	0.6
All other	10	0.0
Proprietary		
Self-insurance	1,175	2.8
All other	88	0.2
Fiduciary	57	0.1
Total expenditures	42,010	100.0

NOTE: The second column does not sum to 100 because of rounding.

A number of other government entities directly support the mission of public schools. One example is Joint Powers Agencies (JPAs). School districts may band together as a JPA to provide common services such as pupil transportation, food service, or insurance. In those cases, the JPA provides services that would otherwise be provided by the districts themselves, but the JPA expenditures are not included in the school districts' expenditures. County offices of education may also act in this capacity, providing services that school districts would ordinarily provide. In addition, county offices assist districts in a number of areas and monitor their fiscal affairs. Table 4.2 lists the expenditures of these agencies.

In addition to the revenue it transfers directly to districts, the state also supports school districts in a number of indirect ways. One example involves the California State Teachers' Retirement System (CalSTRS). In 1999–2000, teachers contributed 8 percent of their salary to the system, districts supplemented that with a contribution of 8.25 percent, and the state added another 3.1 percent. State school construction bonds are another example. The state subsidizes school construction and

Table 4.2

Expenditures of K–12 Education, 1999–2000

Source	Expenditures ($ millions)	% of Total
School districts		
General fund	33,866	71.8
All other funds	8,144	17.3
Joint Powers Agencies	202	0.4
County offices of education	2,950	6.3
State		
State contributions to CalSTRS	937	2.0
Interest on state bonds for school construction	906	1.9
State Department of Education	104	0.2
California Commission on Teacher Credentialing	26	0.1
Office of the Secretary of Education	7	0.0
Total expenditures	47,142	100.0

modernization by supplementing district expenditures on qualifying construction projects. The state typically funds those subsidies by general obligation bonds on which it must then pay interest. The interest payments are a cost of school construction that does not show up in district expenditures. (The principal does show up, however.) Table 4.2 lists these expenditures in 1999–2000.

Last, the state assists school districts through the services of three agencies. The California Department of Education assists and monitors school districts. The California Commission on Teacher Credentialing performs a similar role, as does the Office for the Secretary of Education. Table 4.2 also lists the expenditures of these three agencies.

California School Districts

Table 4.2 lists the many government activities that support public schools. Nevertheless, the ultimate delivery of educational services rests with school districts, which are the subject of the remainder of this chapter. In 1999–2000, California had 982 school districts. There were 330 unified districts, enrolling students from kindergarten through grade 12.[2] There were also 565 elementary districts and 87 high school districts. The unified districts enrolled 72 percent of students, with an average enrollment of 12,772. In contrast, the average enrollment of elementary districts was only 2,063. For high school districts, the average was 5,749. These averages mask significant variation. More than half of school districts had less than 2,000 students, yet they account for only 5 percent of students. One district, Los Angeles Unified, had 12 percent of the state's nearly 6 million students.

General Fund Revenues

Because the bulk of a district's day-to-day operations is financed by its general fund, the rest of this chapter focuses on that fund. Revenue flows into the general fund from four main sources: revenue limit funds, state categorical programs, federal categorical programs, and local revenue. Revenue limit funds combine local property taxes and state aid

[2]We include commonly administrated districts with unified districts.

into a pool a district can tap to meet any legitimate expense. Local revenue is revenue from local sources other than the property tax. It includes interest and rent and is typically unrestricted. In contrast, state and federal categorical programs generally restrict revenue for specific purposes. Table 4.3 lists the amounts of these four revenue sources. In 1999–2000, revenue limit funds constituted 66 percent of all general fund revenue.

Table 4.3

School District General Fund Revenue, 1999–2000

Source	Revenue ($ millions)	Revenue per Pupil ($)	% of Total
Revenue limit funds	23,140	3,935	66.1
State categorical programs	8,569	1,457	24.5
Federal categorical programs	2,121	361	6.1
Local revenue	1,163	198	3.3
Total general fund revenue	34,993	5,951	100.0

Revenue Limit Funds

Revenue limits stem from *Serrano v. Priest*, the 1972 decision of the California Supreme Court. Before that ruling, local school districts set their own property tax rates. The state also transferred revenue directly to local districts. The transfers were a simple function of a district's assessed value per pupil and enrollment and were unaffected by its property tax revenue. In that sense, state aid provided a foundation that local districts supplemented with their own revenue.

Assessed value per pupil varied widely across school districts, and thus the same property tax rate could produce very different tax revenue per pupil in different districts. In *Serrano,* the court ruled that these differences violated the state constitution. In response to that decision, the Legislature established a school finance system designed to reduce those revenue differences. Each district was assigned a limit on the sum of its property tax revenue and state aid. The revenue limit for each district was based on the district's sum of those two revenue sources in 1972–1973. From that base, each district's limit was adjusted annually for growth in enrollment and to account for differences in initial revenue

per pupil. Districts with low revenue per pupil experienced a faster growth rate in their revenue limits than did districts with high revenue per pupil.

Because state aid was determined by formula, revenue limits were initially a cap on property tax revenue. This changed in 1978 with the passage of Proposition 13. The proposition set the property tax rate at 1 percent statewide and authorized the Legislature to allocate property tax revenue among local governments, including school districts. The Legislature exercised that authority in AB 8, passed in 1979. Relative to the property tax shares before Proposition 13, AB 8 shifted some property tax revenue from school districts to other local governments. Because of this shift and because Proposition 13 reduced property tax revenue by over 50 percent statewide, most school districts ended up with far less property tax revenue than their revenue limits. The state then increased aid to each district to fill in the difference between its revenue limit and its property tax revenue. In essence, each district was assigned some property tax revenue by the state, and the state supplemented that revenue with enough aid to reach the district's revenue limit.

The mechanics of the revenue limit system are straightforward. Revenue limits are expressed in dollars per student. Each year, a district's limit is equal to its limit in the prior year plus an inflation adjustment, also referred to as a cost-of-living adjustment or COLA. Since 1983, the basis for computing the COLA has been specified in statute, although the Legislature has not always provided sufficient amounts to fund this entire increase. Periodically, the Legislature may also make discretionary adjustments to revenue limits, usually to further increase the limits of districts with relatively low limits—an increase referred to as equalization aid.

A district's revenue limit, which is expressed in dollars per pupil, is the basis for its entitlement to state aid. The revenue limit is multiplied by average daily attendance (ADA) to yield its total entitlement to revenue limit funds. This entitlement minus its property tax revenue is the district's state aid. For a few districts, property tax revenue exceeds the revenue limit. These districts retain the revenue in excess of their limit and also receive $120 per pupil in state basic aid. The number of

these "basic aid districts" changes from year to year as property tax receipts change. In 1999–2000, there were 58 such districts, enrolling less than 3 percent of California students.

During the 1980s, disparities in school district revenue limits were greatly reduced. In 1974, a Los Angeles Superior Court ruled that $100 per pupil constituted an allowable difference in revenue limits. In a 1983 decision, the court concluded that this band could be adjusted for inflation. The state now applies the band to six different types of districts: large and small elementary districts, large and small high school districts, and large and small unified districts. By 1991–1992, the band was $288 per pupil and over 95 percent of the state's students attended school districts with limits within that band. In 1996–1997, 98 percent were within the band.

From the state's perspective, revenue limits are an obligation that can be fulfilled through either property tax revenue or state general funds. As a result, the property tax is now essentially a revenue source for the state government—a reality clearly demonstrated by the state's response to revenue shortfalls in the early 1990s. In crafting the 1992–1993 and 1993–1994 state budgets, the Legislature shared its shortfall with cities, counties, and special districts by shifting property tax revenues from those jurisdictions to school districts. In 1992–1993, the Legislature transferred $1.4 billion of local governments' property taxes into a new Education Revenue Augmentation Fund (ERAF), from which these monies were then distributed to school districts. The 1993–1994 state budget shifted an additional $2.6 billion in property taxes from other local governments to the ERAF, bringing the total ongoing shift to some $3.7 billion. For purposes of the school finance system, these funds were treated as any other property taxes, offsetting entitlements to state aid. Because the state was not obligated to return this money to other local governments, it realized $1.4 billion in savings in 1992–1993 and $3.7 billion in savings in 1993–1994 and thereafter, while schools received no net increase in funding from the ERAF shift.

Although statutes specify annual COLAs for revenue limits, the state does not always fund those increases. Another good example of the elasticity of a district's revenue limit entitlement concerns district contributions to the Public Employee Retirement System (PERS) on

behalf of their classified employees. When PERS cut the employer contribution rate starting in 1982, the state captured the savings that school districts would have received. It counted each district's savings from this rate reduction as a reduction to its revenue limit, thus reducing the actual aid the state transferred to the district.

Despite the property tax shifts and the PERS transfer, state aid constitutes the bulk of revenue limit funds. As Table 4.4 shows, in 1999–2000 state aid constituted 56 percent of revenue limit funds. Property tax revenues allocated to districts by AB 8 were 28 percent of funds, and the augmentation of those revenues by ERAF constituted another 14 percent. The last component in Table 4.4, revenue limit transfers, consists almost entirely of the PERS reduction transfer. It shows up as revenue for the district, although it is really a reduction in the amount of actual state aid a district receives.

Table 4.4

Revenue Limit Funds, 1999–2000

Source	Revenue ($ millions)	Revenue per Pupil ($)	% of Total
State aid	12,925	2,198	55.9
Property taxes	6,460	1,099	27.9
ERAF	3,201	544	13.8
Revenue limit transfers	554	94	2.4
Total revenue limit funds	23,140	3,935	100.0

State Categorical Programs

Revenue limit funds are unrestricted in the sense that a district can use these funds for any legitimate expense. The state has also created numerous programs for particular purposes. For example, in 1999–2000, the state provided more than $1.5 billion to school districts for special education. Under the state's new funding formula, the funds were allocated to regional governance entities known as Special Education Local Plan Areas (SELPAs) in proportion to the ADA of school districts within each SELPA. These funds were then distributed to their constituent districts based on specific allocation methods developed by each SELPA, with funds restricted to services for special

education students. A different example is K–3 Class Size Reduction. Created in 1996, the program provides districts with a specific amount of money for every K–3 student in a classroom with 20 students or fewer. In 1999–2000, that amount was $844 per pupil. Unlike special education, districts can choose not to participate. Also unlike special education, CSR funds are unrestricted, although as a practical matter the funds help to cover the costs of hiring the additional teachers needed to reduce class sizes. The CSR was also accompanied by a facilities program to help defray the costs of additional facilities necessary to house the new classes spawned by CSR.

Special education and CSR are the two largest state categorical programs. The nine largest programs in 1999–2000 are listed in Table 4.5. The third largest program, mandated cost reimbursements, comprises payments to districts for costs they incur complying with various state or court mandates. Sixty-five percent of these payments reimburse a handful of districts for the costs of complying with court-ordered desegregation plans. State lottery revenue is also listed as a categorical program, although it has few restrictions. It is allocated in proportion to ADA and can be used for any purpose except for acquiring real property, constructing facilities, or financing research. Instructional materials revenue is also allocated by ADA but is restricted to the

Table 4.5

State Categorical Programs, 1999–2000

Program	Revenue ($ millions)	Revenue per Pupil ($)	% of Total
Special education	1,582	269	18.5
K–3 CSR	1,504	256	17.6
Mandated cost reimbursements	772	131	9.0
State lottery	744	127	8.7
CSR facilities	466	79	5.4
Instructional materials	413	70	4.8
Home-to-school transportation	375	64	4.4
Economic impact aid	349	59	4.1
School improvement program	343	58	4.0
All other state programs	2,022	344	23.6
Total state categorical revenue	8,569	1,457	100.0

NOTE: The last column does not sum to 100 because of rounding.

purchase of textbooks and other instructional material. Home-to-school transportation revenue is allocated on the basis of the lesser of historical pupil transportation funding or the prior year's actual costs. Economic impact aid is allocated in proportion to the number of students living in poverty or learning English as a second language. School improvement funds are allocated to individual schools to spend according to the decisions of their site councils. In addition, in 1999–2000, there were over 50 other state categorical programs. Each program averaged less than $60 per pupil, but the sum of these programs exceeded $300 per pupil, which is 24 percent of state categorical funds.

Federal Categorical Programs

Federal categorical programs are as diverse as the state programs. However, in 1999–2000 nearly half of federal revenue was distributed through one program, Improving America's Schools Act, Title I. Title I funds are allocated to schools according to the number of low-income students, as defined by eligibility for free or reduced-price lunch or by participation in the California Work Opportunity and Responsibility to Kids (CalWORKs) program. Schools must target their Title I funds to assisting low-income students most at risk of failing to meet state academic standards. However, if more than 40 percent of a school's students are eligible for assistance, the school may use Title I funds for schoolwide programs benefiting all students. The major federal categorical programs are listed Table 4.6.

Table 4.6

Major Federal Categorical Programs, 1999–2000

Program	Revenue ($ millions)	Revenue per Pupil ($)	% of Total
Improving America's Schools Act, Title I	1,023	174	48.2
Special education	386	66	18.2
All other federal programs	712	121	33.6
Total federal categorical revenue	2,121	361	100.0

Local Revenue

In addition to revenue limit funds and state and federal categorical funds, school districts may also receive revenue through a number of local sources. The three most important sources are listed in Table 4.7.

Table 4.7

Local Revenue, 1999–2000

Source	Revenue ($ millions)	Revenue per Pupil ($)	% of Total
Interest	438	74	37.7
Leases and rentals	79	13	6.8
Parcel taxes	63	11	5.4
All other sources	583	99	50.1
Total local revenue	1,163	198	100.0

School districts earn interest income on their general fund balances and may also receive income from renting school property. Parcel taxes are their only significant source of discretionary tax revenue. Proposition 13 limited levies on the value of real property, but subsequent legislation permitted local governments to levy taxes on parcels of real property. A typical parcel tax is a dollar amount per parcel, regardless of the value of the parcel, although some parcel taxes levy different taxes on commercial and residential property. A parcel tax must be put to a popular vote and requires a two-thirds plurality to pass. In 1999–2000, 46 districts received parcel tax revenue. For those districts, parcel tax revenue averaged $284 per pupil.

General Fund Expenditures

Districts spend their revenue on a range of goods and services. In some years, they may spend less than they receive in revenue. In 1999–2000, for example, districts received revenue of $35 billion and spent $33.8 billion. About $1 billion of this difference was transferred to other school district funds. The remainder was left in the general fund, increasing general fund balances from $3.7 billion to $3.9 billion.

Most of the $33.8 billion in general fund expenditures was spent on personnel. The salaries of school district employees were 67 percent

of general fund expenditures. Employee benefits were another 15 percent. General fund expenditures in 1999–2000 are summarized in Table 4.8.

Table 4.8

Objects of General Fund Expenditure, 1999–2000

	Expenditures per Pupil ($)	% of Total
Salaries		
Teachers	2,540	43.3
School administrators	173	3.0
Counselors	105	1.8
Other certificated staff	186	3.2
Instructional aides	190	3.2
Clerical	272	4.6
Maintenance and operations	237	4.0
Other classified staff	206	3.5
Employee benefits	848	14.5
Books and supplies		
Textbooks	60	1.0
Other books	35	0.6
Instructional materials	108	1.8
Other supplies	111	1.9
Services and operating expenses		
Instructional consultants	28	0.5
Travel and conferences	26	0.4
Dues and memberships	2	0.0
Insurance	20	0.3
Utilities and housekeeping	137	2.3
Rentals, leases, and repairs	70	1.2
Other services	237	4.0
Tuitions and transfers	144	2.5
Equipment	129	2.2
Total expenditures[a]	5,864	100.0

[a]Expenditure data are from the California Department of Education and do not include deferred maintenance.

The Intergovernmental Flow of Funds

The various state and federal programs assisting school districts create a complex relationship between districts and other governments. Table 4.9 summarizes this relationship. In 1999–2000, the state raised nearly $90 billion in revenue. It transferred more than 70 percent of this sum to local governments. Twenty-five billion dollars went to school

Table 4.9

Revenues and Intergovernmental Transfers, 1999–2000

Level of Government	Amount ($ millions)
State government	
Own revenue	87,536
Transfers to K–12 education	25,156
Transfers to all other local governments	34,914
Net state revenue	27,466
K–12 education	
Property tax revenue	10,726
Other own revenue	7,363
Transfers from state government	25,156
Total state and local revenue	43,245
All other local governments	
Property tax revenue	12,139
Other own revenue	47,336
Transfers from state government	34,914
Total state and local revenue	94,389

districts, and $35 billion went to other local governments. School districts and other local governments combined these state transfers with their own revenue to finance their expenditures.

This flow highlights the pivotal nature of state government. Because the state allocates property tax revenue among local governments, and because it transfers so much of its own revenue to local governments, it controls the fiscal destiny of all local governments. As it did with the creation of ERAF, it may move property tax revenue from one local government to another. It may also change the complexion of local government revenue by substituting property tax revenue for direct transfers, as it also did with ERAF. School districts are particularly vulnerable to these shifts because they have fewer independent sources of revenue than do other local governments.

Conclusion

The complexities of California's current school finance system would make anyone nostalgic for the system it replaced. Before *Serrano* and Proposition 13, the system was less centralized, more flexible, and more

responsive to the needs of local school districts. The state provided a revenue foundation, but school districts looked to the local taxpayers to supplement those funds. In that system, the needs of school districts were constantly measured against the willingness of taxpayers to address those needs.

In contrast, California's current system is centralized, inflexible, and unresponsive to the needs of local school districts. Most school district revenue is allocated through the revenue limit system, which often seems to operate on automatic pilot. Categorical programs address particular needs, but it is a challenge to design a categorical program that fairly addresses the many different needs of the wide variety of California school districts. In fact, given the many separate programs, it is difficult to see how the overall needs of schools are addressed in a comprehensive manner.

On the other hand, the lines of authority are now clearer than they were before *Serrano.* Before *Serrano*, the state shared the responsibility for financing schools with local school districts. Now, though revenue flows to school districts through many streams, more than 90 percent of that revenue originates from one source, the Legislature. It has never been clearer who is responsible for the resources of California's public schools. Furthermore, the centralization of school finance is consistent with the state's rigorous new academic content standards. The state now dictates what students should learn in every grade, implying that it should also provide schools the resources necessary to achieve this outcome.

5. Proposition 98

California voters directly addressed the state's school finance system with Proposition 98 of 1988. The backdrop for this proposition was California's relative decline in school spending. Before Proposition 13 in 1977, spending per pupil was about 10 percent higher in California than in other states. After Proposition 13, real spending per pupil declined, reaching the average level of other states by 1982–1983. It remained at the level of other states for the rest of the decade.

The decline became a statewide issue in 1988. The spark was provided by Proposition 4 of 1979, which established spending limits for state and local governments. The limits were not a constraint until the spring of 1987, when strong economic growth yielded more tax revenue than the state government was permitted to spend within its limit. The governor proposed to rebate the excess revenue to taxpayers. Another option was to transfer it to school districts, whose spending was below their limits. In the end, the excess revenue was rebated to taxpayers.

In reaction, public school advocates drafted a constitutional amendment that would establish a minimum guarantee for public school revenue. The amendment, Proposition 98, qualified for the November 1988 ballot and passed by a slim majority. Nevertheless, spending per pupil continued to decline in California relative to other states. As Chapter 3 demonstrates, by 1999–2000, spending per pupil in California was 9 percent below the level of other states. Why did California's relative position deteriorate after Proposition 98? This chapter reviews the key factors affecting school spending since 1988.

The Proposition 98 Growth Rate

The key provision of Proposition 98 is a guarantee for state and local revenue allocated to public schools and community colleges. Each year schools and colleges are to receive at least the funds they received in the previous year adjusted for the growth in enrollment and in per capita

personal income. For example, if enrollment were to grow by 2 percent in a year and per capita personal income were to grow by 3 percent in that year, state and local revenue for schools and colleges must be at least 5 percent higher than it was in the previous year.

The provision has a number of qualifications. First, in addition to the guarantee on state and local revenue, Proposition 98 also contains a floor on the percentage of state revenue allocated to schools and colleges. The floor can increase revenue to schools and colleges if state revenue grows very rapidly. Also, because of amendments enacted in Proposition 111 of 1990, the guarantee on state and local revenue can be suspended temporarily when the growth in state revenue lags. Finally, the guarantee excludes some state and local revenue, such as the state's contribution to the State Teachers' Retirement Fund, lottery funds, and all local revenue except the property tax.

From the perspective of public schools, an essential part of the Proposition 98 guarantee is the growth of per capita personal income. If that growth exceeds the inflation rate, public schools are guaranteed an increase in real purchasing power per pupil. In fact, since 1988, the growth rate in per capita personal income in California has outstripped the inflation rate. Figure 5.1 shows personal income adjusted for inflation, that is, real personal income. In the first half of the 1990s, real personal income per capita fell slightly, a decline caused by the recession of the early 1990s. It grew in the second half, however, eclipsing the 1990 level in 1996. By 2002, real personal income per capita was 9 percent higher than in 1988.

As required by the Proposition 98 guarantee, the trend in personal income per capita has been mirrored by the trend in public school spending per pupil. The public school spending depicted in Figure 5.2 includes all current spending, not just spending from revenue included in the Proposition 98 guarantee. However, about 90 percent of current spending is due to revenue included in the guarantee—a percentage that has changed very little since Proposition 98. The line labeled Proposition 98 growth is real public spending in 1988–1989 adjusted each year by the growth rate in real personal income per capita. As the figure shows, this Proposition 98 reference line is very close to actual public school spending throughout the 1990s.

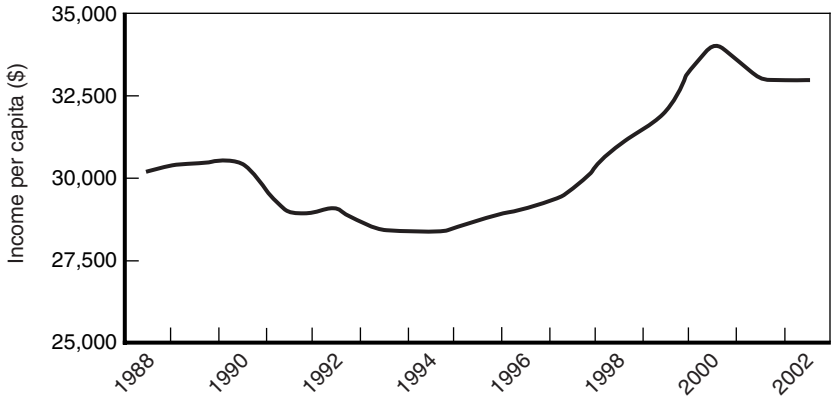
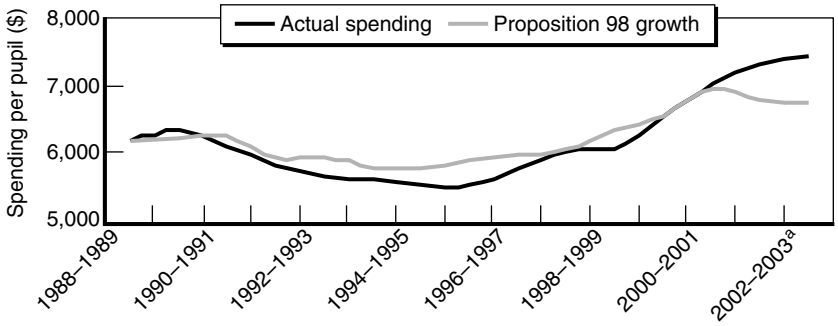


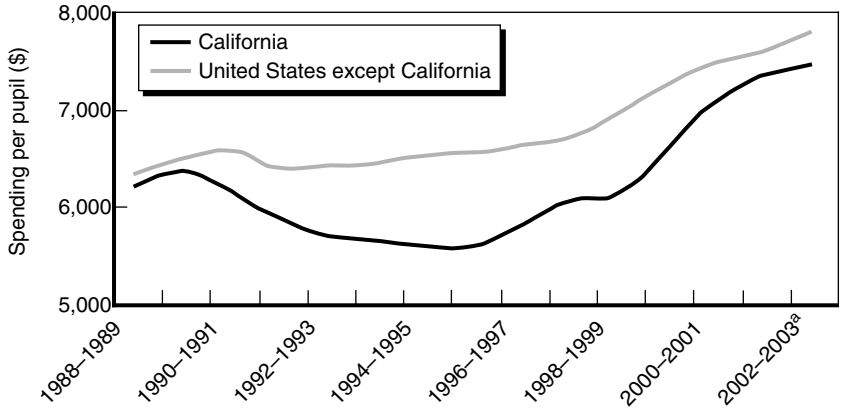
Figure 5.1—California Personal Income, 1988–2002 (2002 dollars)



[a] Expenditures for 2002–2003 are estimates from the National Education Association.

Figure 5.2—California Public School Spending, 1988–2003 (2002 dollars)

Although spending per pupil in California closely tracked personal income per capita, it did not keep pace with spending per pupil in other states. As Figure 5.3 shows, real spending per pupil declined slightly in other states during the recession of the early 1990s but not nearly as much as in California. In 1988–1989, spending per pupil in California was about 2 percent less than the average level of other states. By 1994–1995, it was 15 percent lower than the level in other states. In the last half of the 1990s, spending per pupil in California rose more rapidly than in the rest of the country. According to estimates of the National



[a] Expenditures for 2002–2003 are estimates from the National Education Association.

Figure 5.3—Public School Spending, 1988–2003 (2002 dollars)

Education Association, in 2002–2003 it was about 4 percent less than the average of other states. Thus, since Proposition 98, spending per pupil in California has fallen slightly relative to spending in other states.

A Ceiling on Public School Spending?

The school spending patterns portrayed in Figures 5.2 and 5.3 have led some to conclude that Proposition 98 has acted as a ceiling on public school spending. During the 1990s, the growth in per pupil spending in California matched the growth in per capita personal income, the minimum growth required by Proposition 98. In other states, schools fared considerably better. Indeed, the provisions of Proposition 98 would make any legislator think twice about appropriating more money to schools than required by Proposition 98. Appropriations in excess of the Proposition 98 guarantee in any one year are built into the base for calculating that guarantee in the following year. In that way, excess appropriations in any one year ratchet up the guarantee for all subsequent years.

Although the Proposition 98 guarantee may have acted as a ceiling on public school spending in California, the growth in spending was affected by two other factors. The first was the recession of the 1990s,

which had a larger effect on state and local revenue in California than in other states. From 1990 to 1994, real personal income per capita fell about 6 percent in California. In contrast, in the rest of the nation, real personal income per capita fell by about 2 percent between 1990 and 1991 and then recovered to its 1990 level by 1992. These different income trends are reflected in state and local revenue. Figure 5.4 depicts the revenue of state and local governments from their own sources, which is revenue from a government's taxes and fees and excludes transfers from higher levels of government. In real terms, own source revenue per capita declined about 10 percent in California from 1989–1990 to 1993–1994. In contrast, in other states this revenue declined slightly from 1989–1990 to 1990–1991, but then resumed its positive growth. In 1989–1990, own source revenue per capita was 17 percent higher in California than in other states. By 1993–1994, it was only 4 percent higher, reflecting the recession in California in the early 1990s. Revenue recovered as the California economy recovered, however. By 1999–2000, the last year for which we have state and local government revenue, revenue per capita was 15 percent higher in California than in the rest of the country.

In the aggregate, the own source revenue of state and local governments is the revenue pool available to meet the needs of all governments in a state. Because the state transfers so much of its own

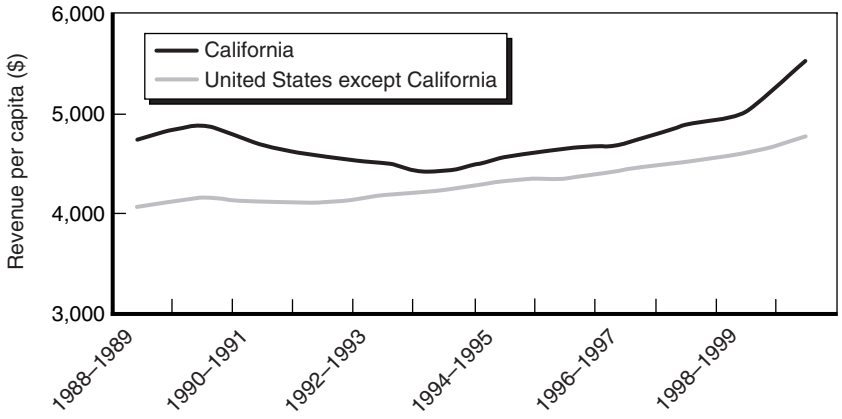
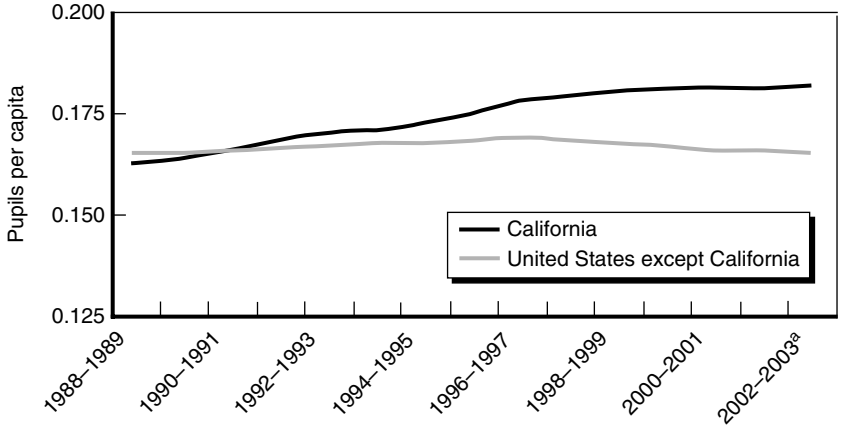


Figure 5.4—State and Local Own Source Revenue, 1988–2000 (2002 dollars)

revenue to local governments, the allocation of this pool is largely determined by state actions. This is particularly true in California where the state also allocates property tax revenue among local governments. As a consequence, a decline in aggregate revenue inevitably squeezes all state and local governments, including public schools. California's relatively steeper decline in real own source revenue per capita partly explains its decline in real spending per pupil in the early 1990s.

The second factor is the rise in the number of pupils per capita in California. More pupils per capita implies a higher cost of maintaining any given level of spending per pupil—a cost incurred by taxpayers and other state and local governments. As Figure 5.5 shows, other states experienced a less significant increase in number of pupils per capita than did California. At the beginning of the 1990s, California had approximately the same number of pupils per capita as other states. By the end of the decade, California had 8 percent more pupils per capita than other states.

Because of these two factors, it is not clear that Proposition 98 acted as a ceiling on public school spending during the 1990s. Yes, spending per pupil by California schools did not rise significantly over the minimum required by Proposition 98, and California schools lost



[a] Data for 2002–2003 are estimates from the National Education Association.

Figure 5.5—Pupils per Capita, 1988–2003

ground to schools in other states. However, unlike other states, California experienced a decline in real tax revenue per capita in the first half of the 1990s and a rise in the number of pupils per capita in the second half of the decade. Both factors worked to dampen the demand for public school spending. It is doubtful that California schools would have fared any better without Proposition 98.

Implementing Proposition 98

Through the broad lens applied thus far, Proposition 98 seems relatively simple. Nothing could be further from the truth. Implementing Proposition 98 has proven to be very difficult. The proof is in the long and complicated history of the proposition, which we provide in Appendix D. In this section, we summarize one small part of that history as a short introduction to the broader issues.

As originally enacted, Proposition 98 could have had undesirable consequences during a recession. A severe recession could reduce state and local tax revenues more than per capita personal income, implying that the share of state and local revenue targeted for public schools and community colleges could increase even as the total pool of such revenue decreased. In that case, other state and local governments would receive a reduced share of a smaller pool of revenue.

To mitigate these negative aspects of Proposition 98, the Legislature did have the option of suspending the Proposition 98 guarantee with a two-thirds vote. However, a suspension would establish a new, lower base for determining the following year's guarantee. This issue was addressed in Proposition 111 of 1990, which established procedures for a temporary suspension of the guarantee. Under these procedures, the guarantee can be suspended whenever the growth rate in state general fund revenue lags the growth rate in per capita personal income by 0.5 percent. In that case, the Proposition 98 funds allocated to schools and colleges must be as high as they were in the prior year after adjustments for enrollment growth and the growth in the state's general fund revenue per capita plus 0.5 percent. In essence, when the growth rate in general fund revenue per capita falls short of the growth rate in per capita personal income, the former replaces the latter in determining the funding guarantee for the following year.

This suspension is only temporary, however. Whenever the guarantee is suspended, the state is required to calculate a maintenance factor, which is the difference between what schools and colleges would have received if the guarantee had not been suspended and the amount they actually receive. In subsequent years, this maintenance factor is adjusted for the growth in enrollment and per capita personal income. If the state appropriates more funds than are required by the Proposition 98 guarantee based on the previous year's actual allocation, the maintenance factor is reduced by the amount of the excess appropriation. Furthermore, the state is required to reduce the maintenance factor if the growth in state revenue exceeds a certain threshold. This maintenance factor operated throughout the early 1990s as the state worked its way through the recession.

At first blush, the procedures for a temporary suspension seem unnecessarily complicated. However, those procedures provide more flexibility than the original provisions of Proposition 98. In general, it seems, complexity is a natural byproduct of attempts to replace discretion with rules. To respond appropriately to the many fiscal situations the state is likely to encounter in the future, the rules must have many conditions and qualifications. Just as the recession of the early 1990s generated procedures to deal with slow growth in state revenue, a future set of circumstances is likely to generate a new and different set of procedures.

Conclusion

The purpose of Proposition 98 was to provide more stable, and arguably more generous, funding for California public schools. Yet immediately after the proposition was passed, spending per pupil in California declined further relative to spending in other states. Some have argued that Proposition 98 has acted as a ceiling on public school spending in California. Certainly, appropriations to public schools in excess of the Proposition 98 guarantee now reduce the fiscal flexibility of the Legislature in future years. However, other factors explain at least part of the relative decline in California schools during the 1990s. The first factor was the decline in real state and local revenue per pupil in California during the first half of the 1990s, and the second was the rise

in the number of pupils per capita in the second half of the 1990s. Other states did not experience as large a decline in revenue or as large a rise in the number of pupils per capita. It is not clear that California schools would have done any better without Proposition 98.

The proposition has had an unfortunate consequence, however. It has focused the attention of legislators on providing enough revenue to satisfy the Proposition 98 guarantee, which is essentially the 1986–1987 funding level adjusted by the growth in real income per capita. Proposition 98 has created an artificial goal for school spending. As a result, attention has been diverted from a much more important and fundamental question: How much funding do schools need to ensure that students are able to master the state's academic content and performance standards?

6. Class Size Reduction and the Distribution of Expenditures

Proposition 98 was a response to widespread concern about the adequacy of public school revenue in California. School administrators have also expressed concerns about restrictions on the use of revenue, arguing that such restrictions reduce the effectiveness of the modest revenues they do receive. In 1999–2000, state and federal categorical programs constituted 30 percent of the general fund revenue of school districts.

Some categorical programs involve few restrictions. State lottery funds are virtually unrestricted, for example. In other cases, however, categorical programs can significantly affect the way districts spend their funds. A good example is K–3 Class Size Reduction, the state program to reduce class sizes to 20 students in kindergarten through third grade. The program was instituted in 1996–1997 just as California school districts were recovering from the recession of the early 1990s. Over the next five years, districts received a large increase in funding, but CSR directed much of that funding to expanding the numbers of teachers in primary grades.

Categorical programs such as CSR raise the issue of centralized versus decentralized decisionmaking. Is it better to give school and district managers wide latitude to respond to local variations in the conditions they face, or should central authorities maintain tight control on the use of funds to ensure that key programs are maintained and protected? The state's new emphasis on student outcomes has strengthened the argument for decentralized decisionmaking. If the state has clearly specified the objectives for schools and has provided incentives for schools to achieve those objectives, why must it also dictate how schools allocate funds to achieve those objectives? Nevertheless, the

Legislature continues to have a legitimate interest in the how school districts use the funds allocated to them.

This chapter does not attempt to resolve this long-standing argument about state versus local control. It focuses instead on how one large categorical program, CSR, has changed the allocation of funds by California school districts, thus providing a context for the larger question of the appropriate delegation of fiscal authority.

The Origins of K–3 Class Size Reduction

In the spring of 1996, it was becoming apparent that the growing state economy would provide a major increase in the Proposition 98 guarantee, most likely as much as $2 billion. The Legislature allocated $700 million for a 3.2 percent COLA to revenue limits—an increase mandated by statute. Another $300 million was required to adjust revenue limits for ADA growth. The Legislature also dedicated about $200 million for equalizing revenue limits and for pupil transportation, leaving about $800 million.

At the time, revenue limits were 10.1 percent lower than they would have been if statutory COLAs had been enacted every year. Eliminating the entire deficit would have cost the state $2.2 billion; $800 million toward that end would have significantly reduced the deficit. However, the Legislature had already funded a 3.2 percent COLA for revenue limits—a significant increase in unrestricted state aid. School districts were targeting much of this for salary increases, making up in part for the slow increase in salaries during the early 1990s. Some feared that additional unrestricted aid would end up in even larger salary increases and that little would be used to increase classroom resources or to increase California's low teacher-pupil ratio. These concerns were particularly pressing because of the poor performance of California students on the 1994 National Assessment of Educational Progress (NAEP). Among the 39 states participating in the fourth grade reading assessment, California tied with Louisiana for lowest average score. Fifty-six percent of California fourth graders scored below basic in reading ability.

In light of these concerns, Governor Pete Wilson proposed to allocate the remaining $800 million to a multiyear initiative to reduce class sizes in the primary grades—a proposal enacted by the Legislature.

In the first year, 1996–1997, school districts received $650 for every student in a classroom that did not exceed 20.4 students on average over the school year. In that first year, schools could choose to reduce class sizes in up to three grades, in the following order: (1) first grade only, (2) first and second grades, (3) first, second, and either kindergarten or third grade.

Participation in the program was voluntary, and districts had three main reservations about participating. First, the program was introduced with an incredibly short timeline. It was enacted in the spring of 1996, and school districts were encouraged to participate in fall of the following school year. Second, for some districts, the $650 per pupil funding rate may not have been sufficient to cover fully the program's actual costs. Suppose, for example, that the salary and benefits of a teacher amount to $50,000 per year. If a first grade class has 30 students, the cost of the teacher is $1,667 per pupil. If the class is reduced to 20 students, the cost rises to $2,500 per pupil, an increase considerably in excess of $650 per pupil. Third, many districts did not have the spare classrooms to accommodate the extra classes needed to reduce class size.

On the other hand, school superintendents surely felt strong pressure from parents and others to participate in the new program. As a result, in 1996–1997, all but 56 districts participated in CSR—a participation rate of 94 percent. In 1997–1998, the funding rate was increased to $800 per pupil, and all but 20 districts participated. For subsequent years, growth in the funding rate was tied to the statutory COLA for revenue limits. By 1999–2000, the payment was $844 per pupil, and 99 percent of eligible districts participated in CSR to some extent.

These payments amount to a considerable sum. In 1999–2000, school districts received $1.5 billion for CSR, which was $256 per pupil. Over the decade, real state categorical revenue increased by $614 per pupil. CSR funds represent 42 percent of that increase targeted to only four of the 13 grades.

Class size reduction significantly expanded the state's teaching staff; statewide, approximately 25,000 teachers were hired to reduce class sizes. This large expansion brought many inexperienced teachers into California schools. Schools serving low-income and minority students often got more than their share of these teachers, making class size

reduction a mixed blessing for them (Jepsen and Rivkin, 2002; and Bohrnstedt and Stecher, 2002). Furthermore, the state has not yet faced the true cost of reducing class sizes. Inexperienced teachers start at the bottom of the salary schedule. As they gain experience, they will move up the schedule, putting additional pressure on school district budgets.

Decomposing Spending per Pupil

CSR was just one of many factors affecting school budgets during the 1990s. Most important were the decline in real revenue per pupil in the early 1990s and its rise in the late 1990s. This section examines the effect of all of these factors on the spending patterns of California school districts. For that purpose, expenditures are divided into categories, and spending in each category is calculated for each of three years. The first year is the baseline of 1989–1990. The second is 1994–1995, the low point for revenue per pupil. The third is 1999–2000, the last year of the decade. Comparing the second year with the first shows the effect of the recession on spending patterns. Comparing the third with the second shows the effect of the recovery and CSR. Expenditures in each category are measured in 1999–2000 dollars.

Our focus is on the daily operating expenses of school districts. Accordingly, we include only expenditures from school district general and deferred maintenance funds. School district expenditures are divided into the following 11 categories based on the state's standard codes for objects of expenditure:

- teachers,
- instructional aides,
- pupil service personnel,
- administrative personnel,
- instructional materials,
- maintenance and operations,
- transportation,
- tuition and transfers,
- other personnel,
- other services, and
- other supplies.

Total statewide spending in each of the 11 categories is divided by statewide enrollment to arrive at spending per pupil.

The first four categories are personnel expenditures. Spending on teachers includes teachers' salaries and benefits, including the district's contribution to CalSTRS. This category also includes stipends for additional duties and pay for substitute teachers. The instructional aide category includes spending on the salaries and benefits of instructional aides. The category of pupil service personnel includes salaries and benefits for librarians, counselors (guidance, welfare, and attendance), and physical and mental health providers. It also includes expenditures for the services of instructional consultants and lecturers. The fourth category, administrative personnel, includes salaries and benefits for district and school administrators such as superintendents, principals, and clerical support staff.

The next four categories are a mixture of expenditures on personnel, supplies, and services. The category of instructional materials includes textbooks, other books, general instructional materials and supplies, and books and media for new and expanded libraries. Maintenance and operations includes the salaries and benefits for maintenance and operations workers and expenditures on supplies, utilities, rentals, leases, repairs, and insurance. It also includes short-term capital expenditures and all expenditures from the deferred maintenance fund. The third category, transportation, includes salaries and benefits of transportation workers and expenditures on transportation-related supplies. The category of tuition and transfers includes special education tuition paid to county offices of education and transfers to Joint Powers Agencies.

The last three categories group expenditures that did not fall into any of the preceding eight categories. The category of other personnel includes expenditures on the salaries and benefits of classified employees who were not instructional aides, administrative personnel, maintenance workers, or transportation staff. The category of other services includes expenditures on services not included in other categories. Travel, conferences, dues, and memberships make up about 10 percent of this category. The category of other supplies includes expenditures on all supplies not included in other categories.

Educating students is personnel-intensive. As Table 6.1 shows, over three-quarters of spending in 1989–1990 was devoted to personnel such as teachers, their aides, principals, and counselors. Spending on teachers accounted for nearly 53 percent of the $5,451 spent per student.

In the first half of the 1990s, real revenue per pupil fell, and school districts reduced real spending per pupil in almost every category. The cutbacks were not distributed evenly across categories, however. Total spending per pupil declined by 10.3 percent, but spending per pupil on teachers declined only 8.9 percent. Spending on instructional aides declined only 6.1 percent. To balance the budget, other resources had to be cut by substantially more than 10.3 percent.

Where did the bulk of the remaining cuts take place? Spending cuts on administrative personnel and maintenance, the second- and third-largest categories, contributed a large portion of the non-teaching spending cuts. Spending on administrative personnel fell 12 percent and spending on maintenance fell a more substantial 16 percent. Spending on pupil service personnel, instructional materials, and transportation also experienced severe cuts—16 percent, 21 percent, and 21 percent, respectively.

The second half of the decade was a time of economic recovery. As school districts shared in the state's expanding revenue, real spending per

Table 6.1

Expenditures per Pupil

	Expenditures (1999–2000 dollars)		
	1989–1990	1994–1995	1999–2000
Teachers	2,868	2,613	3,091
Instructional aides	210	197	233
Pupil service personnel	218	182	207
Administrative personnel	828	726	832
Instructional materials	145	114	203
Maintenance and operations	720	605	693
Transportation	112	88	93
Tuition and transfers	27	28	60
Other personnel	83	86	114
Other services	161	183	266
Other supplies	79	67	98
Total expenditures[a]	5,451	4,890	5,891

[a]Total expenditures includes deferred maintenance.

pupil rose just over 20 percent. Although districts increased real spending per pupil in all categories, some categories experienced larger increases than others did. Between 1994–1995 and 1999–2000, spending on teachers increased 18 percent. Although this increase is substantial, it is surprising that it wasn't larger, given that CSR caused a dramatic increase in the teacher-pupil ratio in the primary grades. We return to this topic below.

There were also large increases in other categories. The second- and third-largest resource categories, administrative personnel and maintenance and operations, each grew by 15 percent. Spending on instructional materials increased 78 percent, the greatest increase of any category excluding tuition and transfers. This sizable increase resulted primarily from a large increase in categorical funding earmarked for instructional materials. Although instructional materials made up less than 3 percent of expenditures in 1994–1995, the increase in spending on instructional material accounted for 9 percent of the overall increase in total spending.

The rise in total expenditures per pupil during the second half of the decade more than made up for the decline during the first half, leading to an 8.1 percent increase in real spending per pupil over the entire decade. Whereas spending on teachers took less than its proportional share of the budget cutbacks in the first half of the decade, it also received less than its proportional share of the increase in the second half of decade. Over the entire decade, spending on teachers grew 7.8 percent, just shy of the 8.1 percent growth rate in total expenditures per pupil. In contrast, spending on instructional aides ended the decade 11 percent higher than in 1989–1990. Combined spending on teachers and instructional aides increased 8.0 percent over the entire decade, almost exactly the same amount as total spending.

The 78 percent increase in spending on instructional materials during the second half of the decade far outweighed its 21 percent decline during the first half, yielding a net increase of 40 percent over the decade. The categories of other personnel, other services, and other supplies also increased substantially over the decade.

The rapid growth in some of these areas was counterbalanced by slow growth and even decline in other areas. Spending on administrative

personnel did not keep pace with the 8.1 percent increase in total expenditures. Although the 15 percent increase in spending on administrative personnel during the second half of the decade more than made up for the 12 percent loss during the first half, the net increase over the entire decade was under 1 percent. Spending on pupil service personnel, maintenance and operations, and transportation fared even worse, declining 5 percent, 4 percent, and 17 percent, respectively.

Understanding the Change in Spending on Teachers

Because teacher salaries and benefits make up such a large portion of the total expenditures of a school district, it is not surprising that the percentage change in spending per pupil on teachers was approximately equal to the percentage change in total spending. On the other hand, given the large increase in California's teaching staff because of CSR, it is surprising that spending on teachers did not increase faster than total spending. As with most puzzles, the answer lies in the details. Teacher spending per pupil depends on a number of elements. The two main components are cost per teacher and the teacher-pupil ratio. Beneath each of these components are a number of subcomponents. Because of K–3 CSR, school districts increased the teacher-pupil ratio in some grades but may have decreased it in others. Furthermore, cost per teacher is affected not only by district salary schedules but also by the placement of teachers on those schedules, which is determined largely by experience.

In fact, all of these elements came into play. Because of CSR, the teacher-pupil ratio did increase in the lower grades, but these increases were partly offset by decreases in higher grades. Teacher salary schedules did increase, but this increase was offset by a significant decline in the average experience of teachers—a decline also due to CSR. This section combines information on changes in teacher-pupil ratios with changes in salary schedules and experience levels to show how each element contributed to the overall change in per pupil spending on teachers. First, changes in spending on teachers are decomposed into changes in the teacher-pupil ratio and in cost per teacher. Then, the focus turns to subcomponents of these two main components.

In this decomposition, cost per teacher has a particular definition. Cost per teacher is the total spending on teachers divided by the total

number of teachers. It is higher than average teachers' salary, because it includes pension benefits, health and welfare benefits, and stipends for additional duties. Furthermore, it includes pay for substitute teachers, although the number of substitute teachers is not included in the denominator of cost per teacher. Pay for substitutes is treated as a normal cost associated with regular teachers.

Over the 1990s, cost per teacher actually fell by 2.4 percent, a decline that has partially mitigated the cost of the 10.5 percent rise in the teacher-pupil ratio. These changes are shown in Table 6.2. From 1989–1990 to 1994–1995, the teacher-pupil ratio and cost per teacher fell by approximately equal percentages. The teacher-pupil ratio fell 4.4 percent, from 42.9 teachers per 1000 students to 41.0. During this same period, cost per teacher declined 4.7 percent, falling over $3,100 in 1999–2000 dollars. In the second half of the decade, the effects of CSR are apparent. Between 1994–1995 and 1999–2000, the teacher-pupil ratio increased 15.6 percent, from 41.0 teachers per 1000 students to 47.4. Cost per teacher also rose slightly during the second half of the decade, but not enough to erase entirely the decline in the first half. Over the decade, cost per teacher declined by 2.4 percent. In contrast, the teacher-pupil ratio rose by 10.5 percent.

As a consequence, the 7.8 percent rise in real teacher spending per pupil was almost entirely due to the increase in the teacher-pupil ratio. As Table 6.3 shows, had cost per teacher remained constant, the rise in the teacher-pupil ratio would have cost the state $288 per pupil. In fact, teacher spending per pupil increased by $223 per pupil. The difference of $65 per pupil is due to the fall in cost per teacher.

These two general trends hide important details. During the late 1990s, the teacher-pupil ratio rose in the lower grades because of CSR. Did it also rise in other grades, or were increases in the lower grades at

Table 6.2

Components of Expenditures on Teachers

	1989–1990	1994–1995	1999–2000
Teachers per 1,000 pupils	42.9	41.0	47.4
Cost per teacher (1999–2000 dollars)	66,883	63,764	65,261

Table 6.3

Decomposition of Changes in Expenditures on Teachers

	Expenditures (1999–2000 dollars)			
	1989–1990	1994–1995	1999–2000	Change from 1989–1990 to 1999–2000
Spending per pupil when teacher-pupil ratio changes but cost per teacher is constant	2,868	2,743	3,156	288
Spending per pupil when cost per teacher changes but teacher-pupil ratio is constant	2,868	2,737	2,803	–65
Actual spending per pupil on teachers	2,868	2,613	3,091	223

the expense of decreases in the teacher-pupil ratio in higher grades? Also, was the fall in cost per teacher due to a decline in real salary schedules or in the average experience of teachers? We address these subcomponents in more detail below.

In the first half of the 1990s, the teacher-pupil ratio declined in all grade levels. Table 6.4 tracks the teacher-pupil ratio in grades K–3, 4–6, 7–8, and 9–12. These grade level ratios are the number of general education teachers in a particular grade level divided by all students in the grade level, both general and special education. It also shows the ratio of special education teachers to all students. The overall teacher-pupil ratio for all grades includes all general and special education teachers and students. Between 1989–1990 and 1994–1995, the overall teacher-pupil ratio in California dropped 4.4 percent. Although the teacher-pupil ratio declined in all grades, the magnitudes varied substantially by grade. The decline was the greatest in grades 7–8 and 9–12, where the teacher-pupil ratio dropped over 9 percent. The decline was much more modest in the lower grade levels, falling less than 3 percent. By mid-decade, the teacher-pupil ratio was much more similar across grade levels than it was at the beginning of the decade.

In the second half of the 1990s, the overall teacher-pupil ratio rose, but the rise resulted almost entirely from the dramatic increase in the K–3 ratio. Other grades saw little change. The teacher-pupil ratio in

Table 6.4

Number of Teachers per 1,000 Pupils

	1989–1990	1994–1995	1999–2000
All grades	42.9	41.0	47.4
Grades K–3	37.6	36.8	53.7
Grades 4–6	37.0	35.9	37.3
Grades 7–8	42.5	38.6	39.4
Grades 9–12	41.5	37.7	39.0
Special education	3.7	3.9	3.9

grades K–3 rose by 46 percent. Relative to this increase, the teacher-pupil ratio in the higher grades changed only minimally.

The dramatic increase in the K–3 teacher-pupil ratio defines the decade. The budget cuts in the early part of the decade led to more equal teacher-pupil ratios across grade levels. However, CSR brought smaller classes in grades K–3 at the expense of students in the higher grades.

In contrast to the rising teacher-pupil ratio, cost per teacher actually fell during the 1990s. Teachers are paid on the basis of their education level and experience. Salary schedules are a grid in which each column represents a different education level and each row, often referred to as a step, represents the years of experience the teacher has within the district. The education levels refer to the teacher's highest degree plus the number of semester units earned beyond that degree. Each cell in the grid corresponds to the salary for the given combination of experience and education.

Salary schedules change over time, usually as the outcome of collective bargaining. To represent these changes in a simple way, we consolidated the information contained in each district's salary schedule into two key variables—a base compensation and an experience premium. The base compensation is the annual salary and benefits of a beginning teacher. The experience premium is the average annual increase in compensation as a teacher gains experience and increases education.

The base compensation and the experience premium were used to calculate the average teacher compensation for each district. The average compensation is the base salary plus the product of the experience

premium and the average years of experience teachers have in the district. The second row of Table 6.5 shows the statewide average of this compensation per teacher. The first row is cost per teacher from Table 6.2. It is the teacher-related expenditures of a district divided by the total number of teachers, excluding substitutes. The difference between cost per teacher and compensation per teacher is all the teacher-related expenditures not represented in a district's salary schedule. These expenditures include stipends for additional duties and substitute pay. These expenditures are labeled other cost per teacher in Table 6.5. Note that this measure increased by about 6 percent over the decade.

In contrast, the average compensation per teacher declined by almost 4 percent over the decade. The last row of Table 6.5 suggests the explanation for this decline. During the 1990s, the average experience of teachers declined by 13 percent. The decline in experience offset any increase in salary schedules, yielding a net decrease in compensation per teacher. Table 6.6 explores this explanation in more detail.

Table 6.5

Components of Cost per Teacher

	1989–1990	1994–1995	1999–2000
Cost per teacher (1999–2000 dollars)	66,883	63,764	65,261
Compensation per teacher	58,053	54,764	55,891
Other cost per teacher	8,830	9,001	9,370
Experience (years)	12.0	12.1	10.5

Table 6.6

Decomposition of Changes in Compensation per Teacher

	Compensation (1999–2000 dollars)			
	1989–1990	1994–1995	1999–2000	Change from 1989–1990 to 1999–2000
Salary schedule changes but experience held constant	58,053	54,637	57,970	–83
Experience changes but salary schedule held constant	58,053	58,180	55,975	–2,079
Actual compensation per teacher	58,053	54,764	55,891	–2,162

From 1989–1990 to 1994–1995, average teacher compensation fell by $3,290. Had experience stayed constant between those two years, changes in district salary schedules would have caused an even larger decline of $3,416. This larger decline was partially offset by a small increase in average experience, but the predominant effect was the decline in salary schedules—a predictable result of the budget cutbacks of the early 1990s.

As school budgets improved in the second half of the 1990s, the decline in teacher compensation was promptly reversed. Had experience remained constant during the latter half of the 1990s, changes in salary schedules would have increased average compensation by $3,333. However, because of the fall in experience, average compensation increased by only $1,128.

The rise in salary schedules in the last half of the decade almost exactly offset the decline in the first half. Had average experience remained constant over the decade, average teacher compensation would have fallen by $83 as a result of changes in salary schedules. In fact, however, average compensation fell by $2,162—a decline resulting from the 13 percent drop in average experience, a byproduct of CSR.

The decline in average teacher experience has disguised the ultimate cost of CSR. As the young teachers hired to reduce class sizes move up the salary schedule, districts will experience those ultimate costs.

Conclusion

The recession and recovery of the 1990s changed the makeup of California's public schools. They received a winter pruning in the first half of the decade and were encouraged to grow back in only a few key areas when spring returned. Over the decade, the teacher-pupil ratio increased by a remarkable 43 percent in kindergarten through grade 3—an increase resulting from CSR. On the other hand, the teacher-pupil ratio decreased by 7 percent for middle schools and 6 percent for high schools. From 1989–1990 to 1999–2000, real expenditures per pupil on instructional materials increased by 40 percent; but real expenditures per pupil on counselors, librarians, and health providers decreased by nearly 5 percent. Two other important areas also saw significant decreases. Expenditures on maintenance and operations decreased by 4 percent, and

expenditures on pupil transportation decreased by 17 percent. In general, California school districts have channeled a good portion of their additional resources into reducing class sizes in the lower grades. Higher grades and several other resource categories have seen little improvement in real resources per pupil.

The wisdom of focusing resources on the primary grades remains to be seen. In many areas, California schools have not really recovered from the recession of the early 1990s. As the state enters a new era of budget cutbacks, school officials will be looking for further reductions in these areas. Small class sizes for primary grades are politically popular; funds for maintenance and administration are not. Yet the smooth operation of a school depends critically on these core functions. Did the Legislature properly weigh the benefits of lower class sizes against the costs of diverting funds from core functions? Given the haste with which CSR was enacted, it seems unlikely.

7. Poverty and Revenue

The preceding discussion of K–3 Class Size Reduction raised the issue of whether tax revenue is efficiently allocated. Did the program channel revenue into areas where it had the greatest value? Would CSR funds have been more productive if spread more evenly across grades? A similar issue arises in the distribution of revenue across school districts. Does California's school finance system allocate tax revenue to the districts in which additional revenue has the highest value?

School districts have many objectives, making it difficult to assess the value of additional revenue. California's academic standards make those assessments easier, however. The state's goal for every school is an API of 800. By that standard, additional funds have relatively low value in districts in which most schools are already surpassing 800. By symmetric argument, the value of additional funds is relatively high in districts in which most schools have APIs short of 800. Underlying this argument is the assumption that additional revenue will be used by school districts to increase student achievement, an assumption we return to in the next chapter.

Regardless of this assumption, however, there is an obvious problem with a policy that allocates more revenue to districts with lower student achievement. Under such a policy, districts that increase student achievement would lose revenue, lessening the incentive for districts to improve. A better approach is to consider factors that are related to student achievement but are outside a district's control. The best example is family income. As countless studies have shown, students from low-income families tend to do less well on standardized tests, yet districts have no direct effect on family income.[1]

[1]Betts, Rueben, and Danenberg (2000) thoroughly examine the link between family income and student achievement in California schools.

This chapter examines the link between poverty and student achievement and then describes the relationship between the revenue of California school districts and the percentage of their students who live in poverty. Does California's school finance system allocate more revenue to districts with higher percentages of low-income students?

Student Poverty and the Academic Performance Index

Our measure of poverty is student participation in the National School Lunch Program—a federally subsidized program operating in each school. Students are eligible for free lunches if they are from families at or below 130 percent of the poverty level. Students from families between 130 percent and 185 percent of the poverty level are eligible for reduced-price lunches, for which they cannot be charged more than 40 cents. For a family of four in the 2002–2003 school year, 130 percent of the poverty level was an income of $23,530; 185 percent of the poverty level was $33,485.

Poverty is negatively related to student achievement. As Figure 7.1 shows, the API of schools tends to decline with increases in the percentage of students participating in the school lunch program. In 2002, 5,263 California elementary schools reported API scores. Among those, 1,154 had 20 percent or less of their students participating in the school lunch program. Seventy-five percent of these high-income schools had an API of 800 or more. During the same year, 1,345

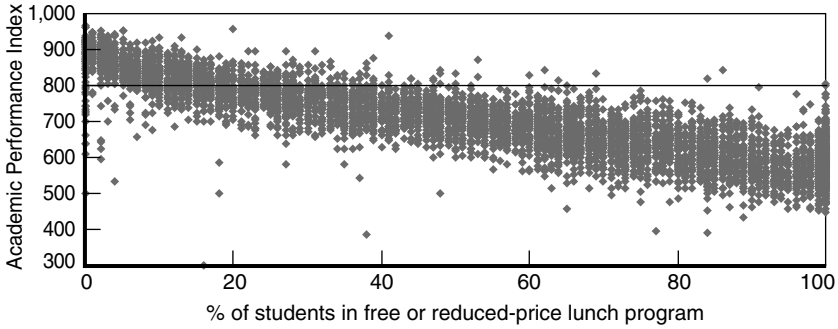


Figure 7.1—Elementary Schools, 2002

elementary schools had at least 80 percent of their students participating in the school lunch program. Only three of these low-income schools had an API exceeding 800.

The systematically low scores of high-poverty schools draws attention to the few such schools with relatively high student achievement. Izumi, Coburn, and Cox (2002) visited eight of those schools to learn the key strategies underlying their success. Those strategies include direct instruction methods such as Open Court, strong discipline, and frequent assessment. In addition, instruction and professional development in these schools is geared to the state's standards. Izumi and his co-authors concluded that "excuses such as low income . . . are invalid and should be ignored" (p. vi). Their message is that all schools can succeed if they focus on proven strategies.

Although the schools identified by Izumi and his co-authors are successful compared to other high-poverty schools, they do not generally meet the state's standard of success, and they are not particularly successful compared to low-poverty schools. Table 7.1 shows the API scores of the eight schools in the Izumi study. In 2002, only one of the eight had an API greater than 800, although two others were very close to 800 in 2002. We conclude that, among high-poverty schools, even the most outstanding struggle to meet the state's expectations. On the other hand, most low-poverty schools meet those standards.

A similar relationship between poverty and student achievement exists for middle schools (Figure 7.2). In 2002, 1,175 middle schools

Table 7.1

High-Poverty, High-Performance Elementary Schools

		Academic Performance Index			
District	School	1999	2000	2001	2002
El Centro	Hedrick	775	783	787	768
Inglewood	Kelso	824	808	810	803
Inglewood	Hudnall	718	781	731	778
Inglewood	Bennett/Kew	776	775	806	775
Inglewood	Payne	706	748	744	749
Los Angeles	Solano Avenue	711	721	728	799
Los Angeles	Lane	737	749	750	797
Los Angeles	Vanalden Avenue	633	702	728	753

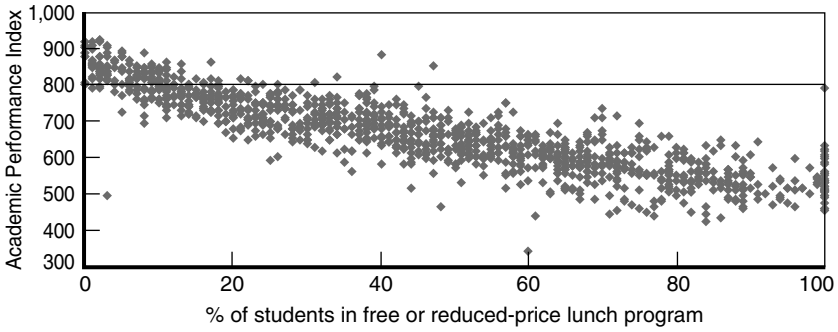


Figure 7.2—Middle Schools, 2002

reported an API score. Among those, 287 had 20 percent or less of their students participating in the free or reduced-price lunch program. Nearly half of these high-income schools had an API of 800 or more. In contrast, 160 schools had 80 percent or more of their students in the free or reduced-price lunch program. None of these schools had an API exceeding 800. The highest API among these low-income schools was Preuss Model School, which had an API of 790. Located on the UC San Diego campus, Preuss is a charter school that selects low-income students with academic promise.

High schools display the same pattern, although the percentage of high schools exceeding 800 is much smaller than for middle or elementary schools (Figure 7.3). Among high schools with 20 percent or less of students participating in the free or reduced-price lunch program, 9 percent had API scores of 800 or greater. Among high schools with 80 percent or more students participating in the program, none exceeded 800.

Student Poverty and School District Revenue

Both the federal and state governments have long had categorical programs that direct more revenue to school districts with high percentages of poor students. The federal program began with the Elementary and Secondary Education Act of 1965 and is generally referred to as Title I. The state program had its origins in the Education for Disadvantaged Youth program, which grew out of the Legislature's

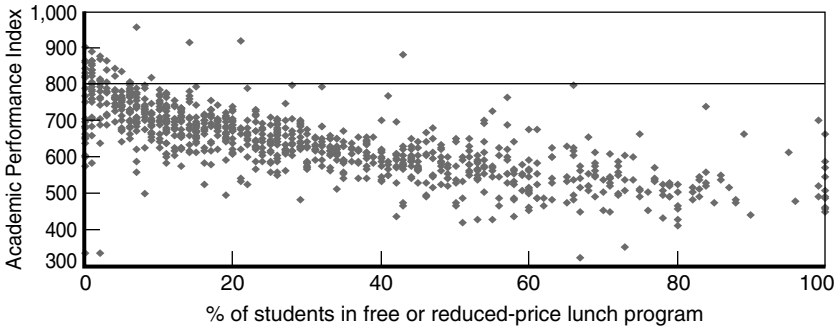


Figure 7.3—High Schools, 2002

response to the initial ruling of the California Supreme Court in *Serrano v. Priest* (see Sonstelie, Brunner, and Ardon, 2000, p. 44). The program is now referred to as Economic Impact Aid. This section examines how these programs distribute revenue across school districts and puts that revenue in the context of revenue from other sources.

Throughout the section, we examine unified districts during the 2001–2002 school year. Although only one-third of districts are unified, those districts enrolled 70 percent of all students. Appendix E summarizes revenue data for elementary and high school districts. At the end of this section, we also summarize the distribution of revenue among elementary and high school districts.

Our focus is the distribution of revenue per pupil. We exclude special education revenue because it provides a distorted picture of that distribution. Special education revenue is allocated through SELPAs, which act to coordinate special education services across school districts and county offices of education. Although special education revenue is allocated to SELPAs in proportion to the average daily attendance of their districts, a SELPA may direct proportionally more revenue to one district, which then may serve special education students in other districts in the SELPA. Also, in some counties, the county office of education provides most of the special education services, so districts receive very little special education revenue. As a consequence of these arrangements, there is wide variation in the special education revenue per pupil actually received by districts, even though the underlying allocation

of revenue for special education is strictly proportional to average daily attendance.

Compensatory revenue is the general term used to describe categorical programs that allocate funds according to the percentage of low-income students in a district. Figure 7.4 shows the relationship between state and federal compensatory revenue per pupil and the percentage of students participating in the school lunch program. As the figure makes clear, there is a positive relationship between these two variables. At the extremes, districts without low-income students received no compensatory revenue, and districts in which every student is poor received approximately $600 per pupil on average. In Figure 7.4, compensatory revenue is the sum of state Economic Impact Aid and federal Title I funds.

The figure makes a distinction between small and large districts. Small districts, represented by the smaller, lighter marks in the figure, are districts with enrollments of fewer than 5,000 students. Although about half of unified districts fall in this classification, the enrollment of those districts is 7 percent of the total enrollment of all unified districts. As Figure 7.4 demonstrates, it is relatively easy to point to large differences in the revenue per pupil among small districts with similar student populations. However, these differences are not particularly significant in the overall allocation of revenue. In the case of compensatory revenue, for example, two districts—Desert Center and Geyserville—receive more

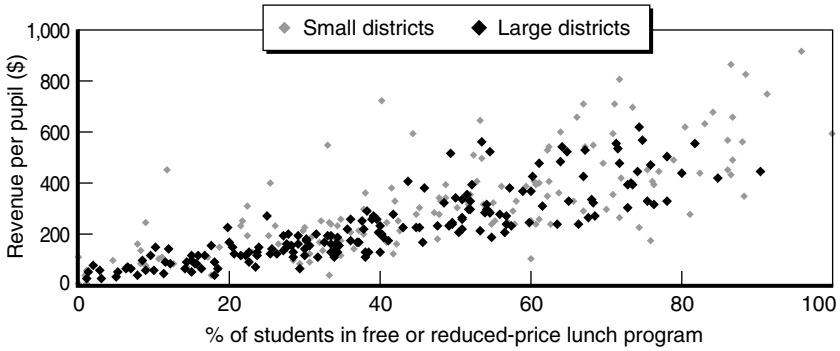


Figure 7.4—Compensatory Revenue in Unified Districts, 2001–2002

than $1,000 per pupil in compensatory revenue, amounts beyond the upper limit of Figure 7.4. Desert Center had 47 students, and Geyserville had 324.

As Figure 7.5 shows, other state and federal categorical revenue also tends to increase with the percentage of students participating in the free or reduced-price lunch program.[2] Included among these other categorical programs are a number of programs that are not explicitly tied to student poverty but which tend to allocate disproportionately more revenue to districts with high percentages of low-income students. A good example is state revenue allocated to a small number of urban districts to reimburse them for the costs of their desegregation programs. However, as the figure also shows, even districts with few low-income students receive significant categorical revenue. In fact, most large categorical programs such as CSR, instructional materials, and lottery funds are tied specifically to the total number of students in a district, not just to the number of low-income students.

In contrast to state and federal categorical revenue, other local revenue per pupil tends to decline as the percentage of low-income students rises. Figure 7.6 shows this relationship. Other local revenue includes revenue from the parcel tax, which has thus far been enacted

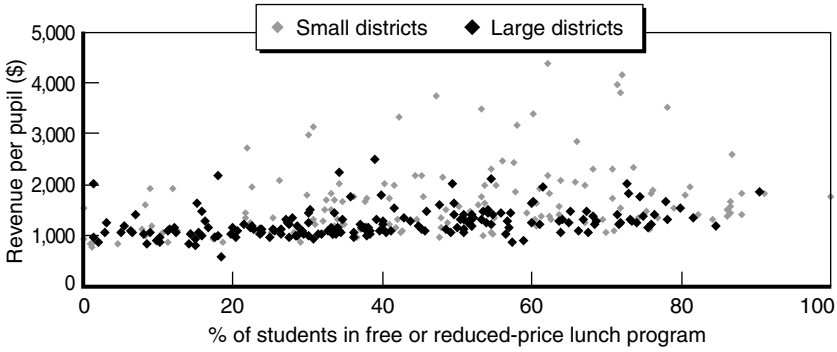


Figure 7.5—Other Federal and State Categorical Revenue in Unified Districts, 2001–2002

[2]Six small unified districts, excluded from the figure, had other federal and state categorical revenue in excess of $5,000 per pupil.

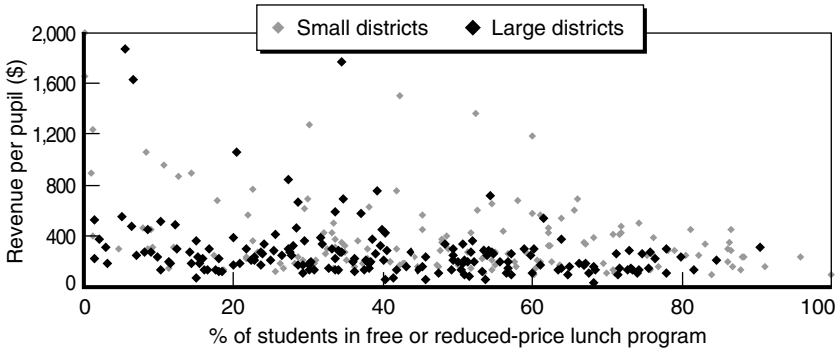


Figure 7.6—Other Local Revenue in Unified Districts, 2001–2002

only in higher-income school districts. As the figure also demonstrates, other local revenue varied widely across districts, particularly smaller districts. In fact, three small unified districts reported other local revenue per pupil exceeding the upper limit of Figure 7.6. Tulelake Basin Joint Unified, with 583 students, reported other local revenue in excess of $4,000 per pupil. Desert Center, 47 students, and Death Valley, 82 students, reported other local revenue between $3,000 and $4,000 per pupil. The large districts with other local revenue between $1,600 and $2,000 per pupil were Beverly Hills, Berkeley, and Palo Alto. No large district had other local revenue in excess of $2,000 per pupil.

As intended, revenue limit funds are very equally distributed across school districts (see Figure 7.7). Those funds also constitute more than 65 percent of all general fund revenue. As described in Chapter 4, revenue limits were the Legislature's main response to *Serrano v. Priest.* Each district's revenue limit was based on revenue per pupil in 1972–1973. Per pupil limits were then equalized over time. For large districts, revenue limits are very equal, as reflected in the diagram. Four large districts—Newport-Mesa, Palo Alto, San Luis Coastal, and Santa Clara—are basic aid districts, whose revenue limit funds exceed their limits. Most basic aid districts are small, however. In addition, the revenue limits of some small districts are still much higher than the average limit. As a consequence of both factors (revenues exceeding the

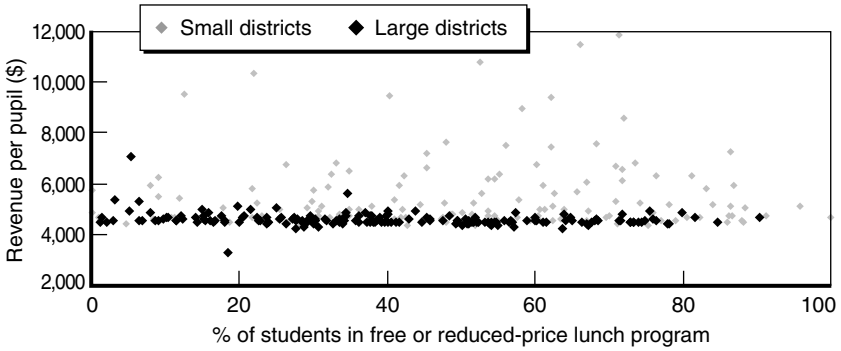


Figure 7.7—Revenue Limit Funds in Unified Districts, 2001–2002

revenue limits and high variation in the limits), revenue limit funds per pupil are still quite unequal for small districts.[3]

Total revenue captures the net effect of the opposing trends in categorical revenue and in other local revenue. As Figure 7.8 reveals, total revenue per pupil tends to rise with the percentage of students in the free or reduced-price lunch program. The solid line in the figure indicates the average relationship between revenue per pupil and student

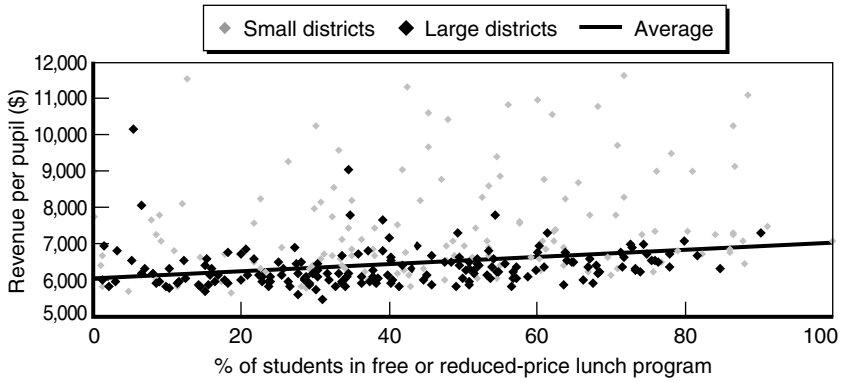


Figure 7.8—Total Revenue in Unified Districts, 2001–2002

[3]Three small unified districts, excluded from the figure, had revenue limit funds in excess of $12,000 per pupil.

poverty.[4] At one extreme, a district in which no students participated in the free or reduced-price lunch program, the average revenue per pupil was $6,039. At the other extreme, in districts in which all students participated, the average was $7,037. Thus, considering all revenue sources in total, California's school finance system allocated a base revenue per pupil of $6,019 in 2001–2002 (excluding special education revenue). This base was augmented by an average of $1,018 ($7,037–$6,039) for every student who was from a low-income family. On average, therefore, districts receive about 17 percent more revenue for low-income students than for other students. As the figure shows, however, there was much variation around these average figures.[5]

This pattern was similar for elementary school districts, although not for high school districts. Table 7.2 shows the average base revenue and low-income augmentations for elementary school and high school districts. For elementary school districts, districts received about 7 percent more for low-income students than for other students. For high school districts, total revenue per pupil actually decreased as the percentage of low-income students rose. For both types of districts, however, revenue per pupil varied widely across districts.

Table 7.2

All Revenue Except Special Education, 2001–2002

	Average Base Revenue per Pupil ($)	Average Augmentation per Low-Income Student ($)
Unified districts	6,019	1,018
Elementary school districts	6,108	451
High school districts	7,093	–301

[4]The average relationship was estimated by least squares with observations weighted by enrollment.

[5]Fifteen of the 332 unified districts had revenue per pupil in excess of $12,000 and are thus not shown in the figure. None of these 15 districts had 2001–2002 enrollment exceeding 800 students.

Conclusion

Both the state and federal governments have categorical programs specifically designed to channel more revenue to districts with high percentages of low-income students. Some other categorical programs may also tend to favor such districts. On average, therefore, low-income districts tend to receive slightly more revenue, although this augmentation is relatively small for unified districts, smaller still for elementary districts, and non-existent for high school districts. Furthermore, there is much variation around this average.

Despite the additional funds low-income districts tend to receive, low-income students score significantly lower on the state's tests of academic achievement. Apparently, the educational disadvantages associated with poverty are too severe to be overcome with the relatively modest compensatory programs now in place. Miller (1995) reviews the extensive research from throughout the country on poverty, test scores, and school resources. In the end, he concludes that the differences between low- and high-income families in "education-relevant family resources" are too large for schools as currently configured to overcome (p. 337). We return to this point in the next chapter.

8. California's Quality Education Commission

This report has raised five general issues concerning California's school finance system. The first is the seeming mismatch between the outcomes California expects from its schools and the resources it provides them. California expects its students to learn more than students in other states but provides its schools with fewer resources. The second issue is Proposition 98, which has focused the Legislature's attention on an artificial standard for the adequacy of public school revenue. Third, the funds the Legislature provides to schools are often tied to specific uses, such as reducing class sizes in primary grades. As a consequence, other important needs are not adequately addressed. A fourth issue is the distribution of revenue across school districts. Schools with high percentages of low-income students are much less likely to meet the state's academic performance standards, yet districts with many such students receive only marginally more revenue than do other districts. Finally and most fundamentally, the complexity of California's system encourages a piecemeal approach to funding schools—an approach that tends to crowd out a broader assessment of school needs.

These issues will be addressed by California's Quality Education Commission, which was created by Assembly Bill 2217 enacted during the 2001–2002 legislative session. The commission is charged with developing a quality education model, consisting of prototypes for elementary, middle, and high schools that would have enough resources "so that the vast majority of pupils can meet academic performance standards established by the state." The prototypes would specify school resources in detail—resources such as the number of teachers, the number of administrators, the number of textbooks, and so on. The commission would estimate the cost of those resources, providing a benchmark for the Legislature as it determines the annual budget for

public schools. This chapter discusses how a quality education model would address the issues listed above.

Addressing Key Issues

In California, the State Board of Education sets standards for public schools, and the Legislature allocates revenue to those schools. The board does not report to the Legislature and is under no obligation to consider the resource requirements of its decisions. The board may set "world-class standards," as it claims to have done, without asking what resources would be necessary to achieve those standards or whether taxpayers would be willing to provide those resources.

Although setting standards without considering costs would be deemed irrational in other areas of public policy, it follows logically from the philosophy underlying the accountability movement. The movement is typically traced to *A Nation at Risk,* the 1983 report of the National Commission on Excellence in Education. The commission warned that the economic and scientific pre-eminence of the United States was being challenged by such competitors as Japan, Germany, and Korea and saw the "rising tide of mediocrity" in American schools and colleges as a primary cause of the country's deteriorating status. Although the commission's warning about America's decline has proven to be a false alarm, its indictment of American public schools and colleges tapped a growing public concern. From 1970 onward, the United States has poured more and more resources into its public schools, but the graduates of those schools seem less well educated than graduates were in the 1960s (Hanushek and Raymond, 2002). This observation leads naturally to the conclusion that our public schools are squandering their resources and that they should be provided with clearer objectives for student achievement and stronger incentives to pursue those objectives. In that context, it is understandable that California could set higher goals for its schools without thinking seriously about the cost of achieving those goals. If it sets higher goals and provides incentives, schools will use their resources more efficiently and can achieve the state's goals without more resources.

But, how much improvement can California expect from wringing the inefficiencies out of its public schools? Will increased efficiency

propel schools all the way to the new higher standards or just halfway there? The Quality Education Commission must confront this issue, which will begin the process of closing the loop between the board and the Legislature. It will present the Legislature with an estimate of the cost of meeting the board's standards. Judging those costs and the benefits of achieving the board's standards, the Legislature may decide that the taxpayers of California cannot afford those standards. In that event, California would move beyond the initial stage of standards and accountability to a more mature stage involving serious discussions of what the state can expect students to learn given the resources it is willing to devote to its public schools.

If the Quality Education Commission can develop consensus around a quality education model, it would provide the Legislature with an alternative benchmark to the Proposition 98 guarantee. Some have argued that the guarantee has implicitly become a measure of whether the Legislature is adequately funding the state's public schools. According to that argument, if the Legislature is meeting the guarantee, it can rightfully claim that it is satisfying its constitutional obligation to fund public schools. However, the guarantee is merely an extrapolation from the funding schools had in 1986–1987; it is not based on a current assessment of the resources schools need or the prices of those resources. In contrast, the quality education model would be explicitly based on resources and current prices. It would also be a more flexible benchmark than the Proposition 98 guarantee. For example, it could incorporate technological innovations that lower costs. It could also reflect changes in salaries and other resource prices. A quality education model could provide a more compelling benchmark than the Proposition 98 guarantee.

Once the benchmark is in place, it could also forestall proposals such as CSR that focus resources in one area while ignoring others. In constructing a quality education model, the Quality Education Commission must consider all the needs of schools and the willingness of taxpayers to address those needs. In that process, all school resources are on the table at once. Class sizes in the primary grades must be explicitly weighed against class sizes in the secondary grades; counselors must be weighed against administrators, and so on. The outcome of this process

is a model against which other proposals must be judged. In proposing a reduction in class sizes in the primary grades, for example, proponents would be forced to translate their proposal into an amendment to the quality education model. Would the proposal merely add more teachers in the lower grades, keeping other resources constant? In that case, proponents would have to argue why the higher cost to taxpayers of their proposal is justified by the additional benefits to students. Or, would class sizes be decreased in the lower grades with cutbacks in other areas to keep the cost to taxpayers the same? In that case, proponents would be forced to argue why the benefits to schools and students of lower class sizes in the primary grades offset the costs to schools and students of the cutbacks. In other words, a quality education model would tend to force the Legislature and others to think of schools as an integrated unit rather than as a series of unrelated programs.

A quality education model is not intended to be a prescription for how every school should spend its budgets. It is only a tangible example of what, say, $7,000 per pupil could produce—a device to aid the Legislature as it balances the benefits and costs of school spending. School districts should, of course, be encouraged to incorporate local conditions into their budget decisions and to spend their funds wisely given those conditions. That may mean that some schools look quite different from the prototypes.

Intentions to encourage local decisionmaking notwithstanding, prototypes for elementary, middle, and high schools could have a chilling effect on local discretion. Districts that chose resource allocations differing from the prototypes would subject themselves to additional scrutiny, particularly if those schools failed to achieve the state's performance standards.

The commission also has the opportunity to provide a clear basis for compensatory education. Under the current system, the federal and state governments determine the total revenue for Title I and Economic Impact Aid, and those funds are then allocated to districts according to a number of criteria, the most important of which is the number of low-income students in the district. In contrast, in addition to prototypes for the average California school, the Quality Education Commission might also develop prototypes for schools serving primarily low-income

students. What additional resources do those schools need? More tutorial help for students? More professional development for teachers? Additional resources for community outreach to involve parents in the activities of the school? The commission's prototypes could provide the method for determining how a district's revenue ought to be related to the percentage of low-income students.

Last, a quality education model could be the catalyst for reforming California's complex school finance system. The model would describe the resources schools should have, and the finance system could then be designed to deliver those resources. That system need not be complex. If schools are receiving adequate funding, as defined by the commission, is it really necessary to create scores of categorical programs to channel funds into one area or another?

The Tenuous Link Between School Resources and Student Achievement

In the report thus far, we have dodged the most difficult issue the commission will face: the lack of solid research showing which resources are most effective in enhancing student achievement.[1] Since the Coleman report (Coleman et al., 1966), many studies have attempted to quantify the relationship between school resources and student achievement. In a number of papers, Eric Hanushek (1986, 1997, 2003a) has summarized this research, concluding that researchers have not found a consistent link between school resources and student achievement. For example, some studies find that a higher teacher-pupil ratio is associated with higher student achievement, many others find that there is no significant relationship, and some even find that higher teacher-pupil ratios are associated with lower student achievement.

Hanushek's conclusion has been challenged by another prominent economist, Alan Krueger (2003). Krueger argues that Hanushek's system for representing empirical results gives an inaccurate summary of research. Some studies included in Hanushek's summary use flawed statistical methods; others receive too much weight. After what he

[1]For a review of this research, see Betts and Danenberg (2001).

considers to be a proper weighting of the evidence, Krueger concludes that "resources are systematically related to student achievement."

This dispute is unlikely to be resolved any time soon. In the meantime, legislatures and school boards must make decisions about how much revenue to allocate to public schools, and California's Quality Education Commission must determine the resources schools need to meet the state's standards. Rather than taking a side in this dispute, we explore the implications of the two positions. We begin with Hanushek's position, which some have interpreted to imply that "money doesn't matter," that additional resources provided to schools will not lead to higher student achievement. Hanushek himself rejects that interpretation. In his expert testimony in the case of *Williams v. California*, he presents the evidence described above and then writes,

> None of this discussion should be interpreted as suggesting that resources and inputs never matter. While perhaps counter-intuitive, the results of existing research simply suggest that there is little systematic relationship between specific resources—of the kind highlighted by plaintiffs—and student performance. The most plausible interpretation of this is that prior policies, which provide few incentives for schools to improve student performance, are not ones that systematically lead to improvements. Nonetheless, if incentives were changed—say, to be more in line with improved student performance—it is likely that resources could have a more systematic impact (Hanushek, 2003b, p. 10).

Hanushek's last point is certainly relevant for California because the state has made significant strides over the last few years in establishing incentives for improving student performance. The first step was the state's academic content standards. California has also established a system for assessing whether students have mastered those standards—a system it continues to refine. Each school's Academic Performance Index is openly reported and often widely publicized. Parents and others are becoming more familiar with the use of that index as a measure of school quality. Schools have received cash awards for improved performance, and schools with lagging performance face state sanctions.

There is much work left to be done. The awards for high-performing schools have been suspended because of the state's budget difficulties, and no low-performing school has yet been sanctioned. Teachers are still paid according to education and experience, with no

role for actual classroom performance, and it is still very difficult for school districts to release veteran teachers whose performance is inadequate. Nonetheless, California is moving toward a system in which school districts have clear incentives to use resources to enhance student performance—a situation in which Hanushek believes resources are more likely to have a positive influence on student achievement.

The difficulty is that we have little experience with this new accountability environment, certainly not enough to make any research-based judgments about the link between resources and student achievement. This state of affairs suggests two approaches. First, the state might encourage some experimentation to reveal more about the relationship between resources and achievement in this new environment. One idea is to select a small number of high-poverty schools with consistently high API scores and to provide them with substantially more resources over a sustained period of time. With more resources, could such schools move from APIs in the 700s to APIs over 800? For example, in 2002, 19 elementary schools had all of their students in the free or reduced-price lunch program and also had APIs exceeding 700. One exceeded 800. These schools have done very well relative to other high-poverty schools, indicating that they have used their existing resources relatively well. Would additional resources propel them to a higher level?

A second approach is more directly related to the work of the Quality Education Commission. In attempting to determine the resources that schools need, the commission might turn for advice to the principals and staff of schools that have already attained APIs higher than those of schools with similar students. These are the schools that have evidently used their existing resources in closest alignment with the state's standards and thus may also be the best judges of how additional funds should be spent.

The implications of Krueger's position seem more direct, at least at first. If research has established a close link between resources and student achievement, the commission may simply calculate the resources necessary to reach any given level of performance. A closer look at the research reveals a different picture. In terms of costs, the most important issue is class size. Reducing class size is an expensive proposition.

Krueger believes that the most convincing evidence on the relationship between class size and achievement comes from Project STAR in Tennessee, an experiment in which 11,600 students and their teachers were randomly assigned to classes of two different sizes for the first four years of school. The small classes averaged about 12 students and the large classes averaged about 22 students. On average, students in the smaller classes performed better on standardized tests. The average difference was about 20 percent of a standard deviation in test scores. According to that estimate, it would be reasonable to assume that a reduction in K–3 class sizes in California could eventually yield a similar increase in API scores. But are class sizes as small as 12 required? Are there similar differences between classes of 20 and classes of 26? Can the K–3 estimates be confidently applied to class size reduction in middle schools and high schools? Is there any research that quantifies the benefit of counselors, administrative staff, security officers, librarians, nurses, and so on? We believe the answer to all of these questions is no. Does that mean that class sizes in middle and high schools or personnel other than teachers are not valuable to schools? Of course not. The reality is that, even if one believes that existing research shows a significant relationship between resources and achievement, the research is too thin to provide a dependable guide to what specific resources are adequate for schools to achieve any given level of academic performance. In our opinion, this lack of scientific evidence means that we must rely on the opinions of experts, those with experience working in high-performing schools, to provide a reasonable picture of the resources well-functioning schools require.

The Importance of Good Teachers

Educators and researchers do seem to agree on the importance of high-quality teachers. In unpublished work, Rivkin, Hanushek, and Kain (2002) have attempted to quantify this element. In their study, the quality of a teacher is not measured by education, training, or experience but rather by the increase in academic achievement of a teacher's students. According to this quality measure, a student with five successive years of high-quality teachers is estimated to score significantly higher on standardized tests than a student with five successive years of

average teachers. In fact, a low-income student with five successive years of high-quality teaching scores at the same level as an average-income student with five successive years of average-quality teaching. That is, good teaching over a sustained period can overcome the disadvantages of poverty.

These results are preliminary, but they deserve serious attention, if for no other reason than they confirm what teachers, education administrators, and parents believe to be true from their own experiences. In a January 2000 survey, EdSource asked California superintendents what they believed to be the most important components for an adequate education system in California. According to survey respondents, the most important component is "a qualified, effective teaching staff"(EdSource, 2000).

The implication for the Quality Education Commission is that it ought to view its recommendations from the perspective of top teachers and top prospects for the teaching profession. What conditions will keep excellent teachers in the profession, and what conditions will attract bright young people to the teaching profession? When seen through that lens, class size may be more about creating a productive environment for teachers than about increasing achievement among the students of any given teacher. The smooth functioning of a school in its day-to-day operations becomes important, not so much as that functioning contributes directly to student achievement, but rather as it makes the school a productive environment for teachers.

This focus on attracting and retaining high-quality teachers has three immediate implications. First, the resources schools need depend on the competitiveness of the job market for college graduates. If alternatives to teaching become more attractive, then schools may also have to improve their attractiveness to potential teachers. Salaries are relevant, of course, but other working conditions may be just as important. Second, an improvement in school resources may not lead quickly to an improvement in student achievement. If the primary avenue through which schools improve is by attracting high-quality individuals to the teaching profession, it will take some time for an improvement in working conditions to lead to an improvement in student achievement. Staff turnover is gradual by nature, and an improvement in school

working conditions will increase the retention rate of poor teachers as well as good teachers. Third, good professional development programs are vital. Good professional development programs not only ingrain successful teaching techniques, but they also convey expectations about the performance schools expect from their teachers.

This perspective on what it takes to attract good teachers might best be applied to the issue of what additional resources are needed in schools serving low-income students. What would it take to attract some of our best teachers to our neediest schools? Higher salaries are surely part of the answer, but good working conditions may be just as important. An excellent after-school tutorial program in a low-income school may be an important attraction for quality teachers, because they know that the lessons imparted during the school day will be reinforced after school. Productive people in any profession are attracted to positions where their labors are likely to bear fruit.

Facing Up to Uncertainty

The foregoing discussion should make it clear that we do not believe that there is clear scientific evidence that any one bundle of school resources is sufficient for a school's students to achieve the state's performance standard. This does not mean that we believe that the commission's job is frivolous, irrelevant, or unnecessary. Quite to the contrary, we believe that the very uncertainty about the relationship between resources and achievement makes the commission's job all the more important. The commission will perform its role best if it is honest about the uncertainties inherent in its task and clear about the need to balance benefits and costs.

We suggest a two-step process. In the first step, the commission might ask, for example, what resources would maximize student achievement subject to the budget constraint of $6,000 per student. Then, given those resources, what chance would a school have of obtaining an 800 API? How would those answers change if the school had a budget of $8,000 per student? In the second step, the commission might recommend a desired spending level, which it could justify by an explicit reference to the benefits and costs. For an increase from $6,000 per pupil to $8,000 per pupil, the probability of success in our schools

would rise from, say, 30 percent to 60 percent. Commission members might judge this increase in expected success as justifying the added cost, but others could come to a different conclusion. In the end, this is a value judgment made by the Legislature in setting the budget for public education.

A quality education model that squarely faced these issues could clarify legislative decisionmaking by refocusing attention on the school as the primary unit in education. What resources does a typical school need to be successful? What do those resources cost, and thus how much should we be spending on a typical school? There may be honest disagreement about the answers to these questions, but at least legislators and voters would be asking the concrete questions that could lead to a constructive dialogue about what resources a quality school should have.

Appendix A

Data Sources

This appendix describes data used throughout the body of the report.

Chapter 2

Test Scores

The test scores reported in Table 2.2 are from the website of the STAR testing system of the California Department of Education, available at http://star.cde.ca.gov/star2002.

Chapter 3

Poverty

The first column in Table 3.1 is the percentage of children ages 5 to 17 living in poverty from Table P87 of Census 2000, Summary File 3. The percentage of students eligible for subsidized lunch is from the NCES Common Core of Data, Public Elementary/Secondary Universe Study, 1999–2000.

Language

The first column in Table 3.2 is the percentage of children ages 5 to 17 who speak a language other than English at home from Table P19, Census 2000, Summary File 3. The percentage of students with limited English proficiency is from the NCES Common Core of Data, Local Education Agency Survey, 1999–2000.

Pupils

Throughout the tables and figures of Chapter 3, resources and expenditures are expressed in per pupil terms. The number of pupils in a state is enrollment (membership) on October 1 from the NCES,

Common Core of Data, National Public Education Financial Survey, 1999–2000.

Staff

Staff ratios in Tables 3.3 and B.1 are from the NCES Common Core of Data, State Nonfiscal Survey of Public Elementary and Secondary Education, 1999–2000 and 2001–2002. Librarians are combined with library and media support staff. Administrators includes LEA administrators, school administrators, and instructional coordinators and supervisors. Administrative support is school administrative support staff and LEA administrative support staff. Other support is other support staff and student support services staff.

Current Expenditures

Expenditures in Tables 3.4 and 3.7 are from the NCES Common Core of Data, National Public Education Financial Survey, 1999–2000. Supplies, services, and other expenses in Table 3.4 combines expenditures for instruction and support services in the following four categories: purchased services, supplies, other, and tuition. Current expenditures in Table 3.7 are the NCES current expenditures less food service and enterprise operations.

Length of School Day

The average length of the school day in Table 3.5 is from Question 10 of the NCES Schools and Staffing Survey, 1999–2000.

Salaries

In Table 3.6, salaries in occupations other than teaching are from the 2000 Occupational Employment Survey of the Bureau of Labor Statistics. Establishments were asked to report annual salaries in more than 700 occupations. Occupations requiring a college degree were determined from the job zone classification in the Occupational Information Network. Occupations with a job zone of three or higher were assumed to require a college degree. The average salary of teachers is from Table 78 of the *NCES Digest of Education Statistics*, 2001.

Direct General Expenditures

Expenditures in Tables 3.8 and 3.9 and Figure 3.1 are from the U.S. Census Bureau, State and Local Government Finances, 1999–2000. State population is also from that source.

Personal Income

Personal income in Table 3.8 is from the Bureau of Economic Analysis, Annual State Personal Income, SA1-3, 2000.

Chapter 4

Revenues and Expenditures of School Districts, County Offices, and JPAs

Revenues and expenditures of school districts, county offices, and JPAs are from the school district revenue and expenditure data maintained on the California Department of Education's website at http://www.cde.ca.gov/fiscal/financial/financialdata.htm. Local revenue excludes transfers from other districts or agencies.

Expenditures of State Agencies

Expenditures of state agencies reported in Table 4.2 are from Schedule 9, Comparative Statement of Expenditures by Organization Unit, Character, Function and Fund, in the appendix of the *Governor's Budget Summary, 2000–2001.*

Intergovernmental Flow of Funds

State government own revenue is from Schedule 6, *Governor's Budget Summary 2002–2003*. K–12 education revenue is the revenue of school districts, county offices of education, and Joint Powers Agencies from the school district revenue and expenditure data maintained on the California Department of Education's website at http://www.cde.ca.gov/fiscal/financial/financialdata.htm. The revenues and transfers of other local governments are determined by subtracting K–12 education revenues, transfers from local government revenues, and transfers reported in U.S. Census Bureau, State and Local Government Finances: 1999–2000.

Chapter 5

Personal Income and Population

Personal income and population information is from the Regional Economic Accounts of the Bureau of Economic Analysis, Department of Commerce.

Expenditures and Enrollment

Public school spending and enrollment data are from the NCES, Common Core of Data, National Public Education Finance Survey. Public school spending is measured by current expenditures less non-instructional expenditures. NCES data for 2000–2001 were updated for 2001–2002 and 2002–2003 using rankings and estimate, from the National Education Association.

Own Source Revenue

State and local revenue data are from State and Local Government Finances, U. S. Census Bureau.

Chapter 6

Expenditure Categories

Expenditures in Table 6.1 are from the School District Revenue and Expenditure Report (J-200) maintained on the California Department of Education's website at http://www.cde.ca.gov/fiscal/financial/financialdata.htm.

Teachers by Grade Level, Enrollment by Grade Level, and Teacher Experience

Enrollment by grade level is from the California Basic Educational Data System (CBEDS) maintained on the California Department of Education's website at http://www.cde.ca.gov/demographics/files/cbedshome.htm. Teachers by grade level and teacher experience are from the Professional Assignment Information Form of CBEDS.

Salary Schedules

Salary schedules for 1994–1995 and 1999–2000 are reported on the salary and benefits schedule for the certificated bargaining unit (J-90) maintained on the California Department of Education's website at ftp://ftp.cde.ca.gov/fiscal/j90_data/. Salary schedules for 1989–1990 were estimated from 1990–1991 salary schedules available from School Services of California, Inc.

Chapter 7

Academic Performance Index and Students in Free or Reduced-Price Lunch Program

School APIs and the percentage of students participating in the free or reduced-price lunch program are maintained on the California Department of Education's website at http://www.cde.ca.gov/psaa/api.

Revenue Categories

School district revenue categories for 2001–2002 are from the School District Revenue and Expenditure Report (J-200) maintained on the California Department of Education's website at http://www.cde.ca.gov/fiscal/financial/financialdata.htm.

Appendix B

Appendix to Chapter 3

Table B.1

Staff per 1,000 Pupils, 2001–2002

	Teachers	Instructional Aides	Counselors	Librarians	Administrators	Administrative Support	Other Support	Total Staff
New York	72.8	14.5	2.2	1.7	4.5	11.3	40.4	147.3
Texas	67.9	14.0	2.3	2.6	9.2	8.5	35.4	139.9
Florida	53.9	12.5	2.2	1.5	3.6	11.4	27.9	113.1
California	48.7	11.6	1.0	0.9	3.6	8.9	17.3	91.9
U.S. except California	65.0	14.5	2.3	2.3	6.0	8.6	29.9	128.6
California as a % of U.S. except California	75	80	46	38	60	103	58	72

Appendix C

Appendix to Chapter 4

Table C.1

Real General Fund Revenue per Pupil
(1999–2000 dollars)

Source	1999–2000	2000–2001	2001–2002
Revenue limit funds	3,935	4,246	4,407
State categorical programs	1,457	1,643	1,535
Federal categorical programs	361	368	439
Local revenue	198	209	194
Total	5,951	6,466	6,576

Appendix D

Appendix to Chapter 5

Gann Limits and the Genesis of Proposition 98

Proposition 98 is best understood as one of a long series of voter-approved initiatives limiting the fiscal latitude of California's state and local governments. The series has unfolded like a chain reaction with the unforeseen consequences of one initiative providing the spark for the next. In the case of Proposition 98, the spark was provided by Proposition 4 of 1979. Sponsored by Paul Gann, one of the co-authors of Proposition 13, this measure established an appropriations limit for each government in the state: cities, counties, special districts, school districts, and the state itself. These Gann limits were based on the simple concept that governments should spend no more than they had spent in 1978–1979, as adjusted for population and inflation. To implement this concept, each government was assigned a limit based on its actual appropriations in 1978–1979. The limit was then adjusted each year for population and inflation. From 1980–1981 onward, a government could not appropriate more revenue in a year than its limit for that year. If a government collected more revenues than it could appropriate, Proposition 4 required it to return the excess to its taxpayers.

The inflation rate specified by Proposition 4 was the lesser of two rates. The first was the standard inflation rate, the change in the consumer price index (CPI). The second was the change in California's personal income per capita. The Gann inflation rate was thus the standard rate, except in years when the growth in personal income per capita lagged that rate. Because of those exceptions, the Gann inflation rate would limit the per capita government expenditures to a growth rate that was less than the inflation rate as measured by the CPI.

The proposition established ground rules for transferring revenues between governments. A transfer of tax revenue from the state to a local government, a state subvention, does not change the appropriations limit

of either the state or the local government. The transfer itself is excluded from appropriations subject to the state's limit but included in appropriations subject to the local government's limit. Thus, if the state were to collect tax revenue that would exceed its limit if appropriated, it could transfer that revenue to a local government through a subvention, avoiding a rebate to state taxpayers. This subvention could push the local government over its limit, however, requiring it to rebate revenue to its taxpayers. On the other hand, if the local government's appropriations including the subvention were less than the limit, creating unused limit capacity, it could appropriate the subvention without a rebate to its taxpayers.

This general concept had two major exceptions. Unlike subventions, appropriations limits change when one government transfers financial responsibility to another. In that case, the limits of each are adjusted to reflect the new responsibilities. For example, in 1991, the state transferred responsibility for certain health and social service programs to counties. The state reduced its Gann limit by the fiscal burden it had transferred to counties, and the counties increased their limits by the same amount. The state also increased the sales tax and the vehicle license fee and transferred those revenues to counties, providing counties with the means to meet their new responsibilities. Appropriations from these revenues are subject to the counties' Gann limits, not to the state's limit.

The second exception concerned mandated costs. If state actions impose costs on local governments, the state is required to reimburse local governments for these mandated costs. Unlike a transfer of financial responsibility, however, the state and local Gann limits do not change. And, unlike a subvention, the reimbursement is counted against the state's appropriation limit, instead of the local government's limit.

These rules were relatively clear for cities, counties, and special districts. For school districts, Proposition 4 could be interpreted in various ways. The proposition clearly specified how population was to be interpreted. For the purposes of the Gann limit, a district's population is its average daily attendance. This specification is important because the number of K–12 students grew 9 percent faster than the general population during the 1990s.

The proposition did not specify how state aid to school districts should be interpreted, however. One possibility was to count state aid as a state subvention subject to the districts' Gann limits. With this interpretation, state and local revenue for school districts would have been limited to its level in 1978–1979, adjusted for ADA growth and inflation. The other extreme would have been to treat all state revenue as reimbursement for state mandates, an interpretation consistent with the extensive list of state regulations about the length of the school year, the qualifications of teachers, the curriculum to be covered, and so on. Under that interpretation, state aid would have been charged to the state's appropriation limit, essentially sparing school districts from a specific appropriations limit. In that case, however, state aid to school districts would reduce capacity under the state limit to meet other state expenses. In the end, the Legislature chose a compromise between these two extremes.

Under this compromise, school district Gann limits had two components. The first was derived from a formula used to disburse state aid to school districts in the years before Proposition 13. Each district had a foundation program amount, which was a minimum amount per ADA to be met through a combination of local property taxes and state aid. The Legislature defined the first component of a district's Gann limit as its 1978–1979 foundation multiplied by its ADA that year and adjusted in subsequent years by changes in ADA and the Gann limit inflation rate. Appropriations from a district's property tax revenue were subject to this component of the district's limit. For most districts, these appropriations were less than this foundation component. The difference was attributed to unrestricted state aid and treated as a state subvention, subject to the district's limit. As a result, districts automatically used all the capacity in the foundation component of their limits.

The second component was a collection of loose ends, although it was to provide the catalyst for Proposition 98. It was based on the sum of three elements: the beginning balances in school district funds in 1978–1979, interest proceeds in 1978–1979, and 50 percent of miscellaneous funds received during that fiscal year. As with the

foundation component, the second component was increased each year by the change in district ADA and the Gann inflation factor.

In many districts, appropriations subject to this second component grew less rapidly than the component itself. By 1986–1987, the Department of Education was estimating that school districts had between $500 million and $800 million of unused Gann limit capacity.

This unused capacity did not become an issue until 1986–1987, because the state also had unused capacity through the early 1980s. Table D.1 presents the state's limit and the appropriations subject to the limit for 1978–1979 through 1986–1987. From 1980–1981 through 1982–1983, the limit was growing more rapidly than appropriations. As a result, unused capacity grew from $702 million in 1980–1981 to $3.4 billion in 1982–1983. From 1983–1984 through 1986–1987, however, the reverse was true, and unused capacity fell precipitously.

In the spring of 1987, it had become clear that the state's revenue subject to its Gann limit in 1986–1987 would exceed the limit by $1.1 billion. Proposition 4 required that the state rebate this excess to taxpayers. However, since the early 1970s, spending per pupil on California's public schools had fallen relative to that in other states, and advocates for education argued that the excess revenue would be better spent on schools. That also seemed permissible under Proposition 4.

Table D.1

State Appropriations Limit

	Appropriations ($ millions)		
Fiscal Year[a]	State Appropriations Limit	Appropriations Subject to Limit	Amount Under (Over) Limit
1978–1979	12,564	—	—
1979–1980	14,195	—	—
1980–1981	16,237	15,535	702
1981–1982	18,030	16,872	1,158
1982–1983	19,593	16,154	3,439
1983–1984	20,369	17,737	2,632
1984–1985	21,740	20,822	918
1985–1986	22,962	22,467	495
1986–1987	24,311	25,449	(1,138)

[a]1978–1979 is the base year. Nominal dollars.

School districts had $500 million to $800 million of unused capacity, so a state subvention to them of this amount would not push districts above their limits. The subvention would not be included in the state's appropriations subject to its limit, and thus the excess revenue would not be rebated to its taxpayers. Governor George Deukmejian rejected this proposal, however, and these funds were distributed to taxpayers in rebate checks that ranged from $32 to $118 per taxpayer.

In response, public school advocates ran their own initiative to amend the constitution to protect and enhance school funding. Thus was born Proposition 98, the Classroom Instructional Accountability and Improvement Act of 1988.

The Original Provisions of Proposition 98

Approved in November 1988 by a slim majority of voters, Proposition 98 was intended to provide K–12 schools and community colleges with stable funding, while also ensuring that they would share in any future revenue windfalls that the state might reap. The proposition established a funding requirement for school districts, county offices of education, and community colleges, referred to collectively as K–14 education. The proposition does not appropriate funds to satisfy that requirement, nor does it create a separate fund reserved for K–14 education. It is nevertheless convenient to define Proposition 98 funds as amounts appropriated from the state general fund and local property taxes that count toward meeting the Proposition 98 funding requirement.

The formula for determining the funding requirement was relatively simple. In any year, Proposition 98 funds must pass two so-called tests:

> **Test 1—Percentage of General Fund Revenues.** The percentage of the state's general fund revenue appropriated to K–14 education must be at least as high as it was in 1986–1987, which was roughly 41 percent.
>
> **Test 2—Maintenance of Prior-Year Service Levels.** Proposition 98 funds must be at least as high as they were in the prior year, after adjustments for ADA growth and the Gann inflation rate.

Whereas Test 1 can yield an increase in the guarantee when state revenue rises, Test 2 guarantees a stable funding base for K–14 education. The Test 2 guarantee starts with a base equal to Proposition 98 funds from the previous year. That base is then adjusted for changes in inflation and ADA to yield the present year's Test 2 guarantee. The Test 2 guarantee less the property tax revenue of K–14 education is the aid the state must provide under Test 2. If state aid under Test 2 exceeds the percentage of the state's general fund required under Test 1, Test 2 sets the minimum funding requirement. If the contrary is true, Test 1 sets the minimum, and the state must allocate even more revenue to schools and colleges.

In general, Test 1 sets the guarantee in years in which state general fund revenue is growing rapidly. To illustrate, suppose that ADA increases by 5 percent and the Gann inflation rate is 3 percent, yielding an 8 percent increase in the Test 2 guarantee (ignoring the compounding of the two rates). If property tax revenue also increases by 8 percent, Test 2 would require an 8 percent increase in state aid. If state general fund revenue increased by less than 8 percent, state aid under Test 2 would be a larger share of state general fund revenue than in the previous year, so Test 2 would set the guarantee. If state revenue increased by more than 8 percent, however, state aid under Test 2 would be a smaller share of state revenue than in the previous year. If the share fell below the share required by Test 1, Test 1 would determine the Proposition 98 guarantee. In other words, there is a critical rate for state general fund revenue growth. If state revenue growth falls below that critical rate, Test 2 determines the Proposition 98 guarantee, and the guarantee equals Proposition 98 funds per pupil in the previous year, adjusted by the Gann inflation rate. If state revenue growth exceeds the critical rate, Test 1 determines the guarantee, and Proposition 98 funds per pupil must be higher than they were in the previous year as adjusted for inflation.

The critical rate depends on the growth in ADA, the Gann inflation rate, and the growth in property tax revenue. An increase in the ADA growth rate or the Gann inflation rate increases the critical rate. An increase in the growth rate of property tax revenue decreases the critical rate. Unlike the ADA growth rate and the Gann inflation rate, the growth rate in property tax revenue for schools can be affected by the

Legislature. In 1992–1993 and 1993–1994, the Legislature shifted property tax revenue from cities and counties to school districts. This shift did not change the growth rate in Proposition 98 funds because the property tax revenue merely replaced a reduction in state aid to schools. However, because state aid to schools was now lower, a given growth rate in state revenue was now more likely to move the Proposition 98 guarantee from Test 2 to Test 1. In that sense, the shift in property tax revenue changed the critical rate of state revenue growth. In addition, in years when the guarantee was determined by Test 1, the total amount of the guarantee (from state aid and local property taxes) would have been higher than it would have been had the property tax shift not occurred. Foreseeing these possibilities, the Legislature changed the Test 1 share of general fund revenue that must be spent on K–14 education from 40.7 percent to 34.6 percent. Although this change may violate the constitutional language of Proposition 98, it has never been challenged.

In addition to Test 1, Proposition 98 contained another provision that could potentially increase the guarantee. In any year in which the state took in more revenues than it could appropriate under the Gann limit, a portion of the excess would go to K–14 education, rather than being returned to taxpayers. These funds would then become a part of the Proposition 98 base for the next year's calculation and thus for the calculation in all future years. Proposition 98 capped the excess that could go to schools and colleges at 4 percent of the amount the state was required to allocate to K–14 education by Tests 1 and 2. In 1988–1989, this cap was about $500 million.

Although Tests 1 and 2 set the tone, several other aspects of Proposition 98 can have important consequences. For example, the definition of state tax revenue for Test 1 gives the state considerable leeway. Test 1 is based on general fund revenue subject to the state's Gann limit. The state can therefore increase a special fund tax without changing its revenue total subject to Test 1. This possibility is important because the distinction between general fund taxes and special fund taxes is somewhat elastic. A good example is Proposition 172 of 1993. The proposition increased the state sales tax by one-half percent. The sales tax was a general fund tax, but the Proposition designated the increase to be a special tax, the proceeds of which were transferred to cities and

counties and designated for police, fire protection, and other public safety. The proponents of the proposition argued that the tax increase and transfer were necessary to replace the property tax revenue the state had shifted from cities and counties to schools in the previous year—a shift the Legislature had engineered because of a decline in state general fund revenue. From that perspective, the sales tax increase was essentially an increase in a general fund tax needed to replace a decline in state general fund revenue. If the state had taken this direct approach, however, the increased tax revenues might have triggered a Test 1 increase in state aid to schools. By taking the less direct route, the revenues from the sales tax increase were counted as special fund revenue and thus not subject to Test 1.

The second issue concerns the revenue included in the guarantee. Once the Proposition 98 guarantee is determined, the Legislature appropriates funds sufficient to satisfy it. As clarified by statutes that implemented Proposition 98, funding counting toward the guarantee includes virtually all state aid provided to school districts, county offices of education, or community colleges. Excluded are the state's contributions to CalSTRS, state school facilities aid, lottery funds, and support for the Department of Education. In addition, local revenues under Test 2 are the property tax revenues that count toward the revenue limits of school districts, county offices of education, and community college districts. This excludes property tax revenues used to pay off local school bonds, parcel taxes, and any other local revenue sources. It also excludes property tax revenue received by basic aid districts in excess of their revenue limits. In terms of Test 2, therefore, school district revenue subject to the guarantee is the revenue the district receives in its general fund less lottery revenue, federal aid, and local revenue not included in the district's revenue limit. In 1999–2000, approximately 88 percent of the general fund revenue of school districts was subject to the Test 2 guarantee.

Revenue to school districts constitutes the bulk of the Proposition 98 guarantee. The Legislature has specified a formula for determining the split of Proposition 98 funds between K–12 education and community colleges, with K–12 education generally receiving about 90 percent of the

total. School districts receive about 94 percent of the total for K–12 education; county offices of education receive the remainder.

A final issue concerns the timing of state appropriations to school districts. Before it knows the various factors determining the Proposition 98 guarantee, the Legislature must appropriate funds for schools and start sending them apportionment checks. Yet, the guarantee is based on actual values of these factors, which are not known until after the end of the fiscal year. As a result, it is inevitable that Proposition 98 funds in any given year fall short of or exceed the actual guarantee. This aspect of Proposition 98 caused considerable problems for the state during the early 1990s, as we shall see.

At the time that Proposition 98 was enacted, most projections indicated that the combined rate of ADA growth and inflation would outpace the growth rate of state general fund revenue. Given modest projections for the growth in property tax revenue, it appeared that the guarantee would be determined by Test 2 rather than Test 1. From the perspective of K–14 education, this scenario meant stable funding. From the perspective of other state programs, however, the scenario implied that state aid to schools and colleges would take up an ever-larger share of state general fund revenue.

In addition to these long-run implications, the Proposition 98 funding formula could have undesirable consequences over a normal business cycle. A strong economic expansion could cause a one-time surge in state tax revenues, which could lead to a permanent increase in the state's funding obligation for K–14 education. The surge in state tax revenue in a particular year could force the state over its Gann limit, requiring that it spend excess revenue on K–14 education. The higher spending per pupil in that year would become the base for Test 2 in the subsequent year and thus become permanent. In other words, a one-time surge in state revenue could ratchet the state up to a new, higher level of K–14 spending—a level difficult to sustain when economic growth slows.

The Proposition 98 funding formula could also have undesirable consequences during a recession. A recession would decrease state tax revenue but have no effect on the Test 2 guarantee. In fact, even though the state's tax revenue decreased, ADA growth and inflation could

increase the state's required appropriations for K–14 education, forcing cuts in other areas of the budget, such as health, welfare, and the universities.

These undesirable consequences could be avoided through another provision of Proposition 98. Its guarantee could be suspended by a two-thirds vote of the Legislature. Suspension could have unfavorable consequences for K–14 education, however. A one-time suspension would result in a permanent reduction in the Proposition 98 base. The following year's Test 2 computation would be based on the reduced level of funding that schools and community colleges had actually received.

Proposition 111 and Modifications to Proposition 98

Many of Proposition 98's undesirable consequences were addressed by Proposition 111, the Traffic Congestion Relief and Spending Limitation Act of 1990. As its title suggests, the proposition combined several disparate elements. It increased taxes, relaxed Gann limits, and modified Proposition 98.

The centerpiece of Proposition 111 was an increase in the gasoline tax and in truck weight fees. The proceeds of these tax and fee increases were to be used to build streets, highways, and mass transit facilities. The proposition explicitly excluded these revenues from the state's appropriation limit and thus from the calculation of Test 1. As a consequence, these new revenues could not trigger a Test 1 increase in Proposition 98 funds.

Proposition 111 also amended the formula for calculating the Gann inflation rate. The original Gann inflation rate was the lesser of the standard inflation rate based on the CPI and the growth rate of per capita personal income. Proposition 111 dropped the standard CPI-based inflation rate from this calculation. The Gann inflation rate became the growth rate of per capita personal income, which generally grows faster than the CPI. Because Test 2 relies on the Gann inflation rate, this modification had an immediate implication for Proposition 98. After Proposition 111, Test 2 meant that revenue per pupil in K–14 education must grow at least as rapidly as personal income per capita, which generally implies an increase over time in revenue per pupil adjusted for inflation.

Although this modification of Test 2 was favorable for K–14 education, Proposition 111 also circumscribed Proposition 98 in a number of ways. Under its original provisions, state general fund revenue in excess of its Gann limit went to K–14 education, with a cap equal to 4 percent of the state aid required by Tests 1 and 2. Proposition 111 modified this provision in three ways. First, state revenue in excess of the Gann limit could be carried over to the next year. The carryover would be distributed to K–14 education only if the state could not appropriate it under its Gann limit in the second year. Second, if the state was not able to appropriate the carryover, it would distribute only half to K–14 education. The remainder would be rebated to taxpayers. Third, the distribution to schools would not count in the Proposition 98 base for the following year's calculation of Test 2. A one-time surge in state revenue would no longer lead to a permanent increase in the Proposition 98 guarantee.

Along these same lines, Proposition 111 also added another provision: In years when the guarantee is determined by Test 1, and the Test 1 funding level exceeds the Test 2 level by more than 1.5 percent of general fund tax revenues, the excess amount would not be counted in the Proposition 98 base for the following year's calculation of Test 2. As with the change in the treatment of revenues in excess of the state's Gann limit, this provision was intended to limit the extent to which a one-time surge in state revenues would result in a permanent increase in the Proposition 98 guarantee.

Proposition 111 also relaxed the Test 2 constraint in years of slow growth in state revenue. In those years, Test 2 would be replaced by a less restrictive test. Specifically, if the growth in general fund revenue per capita lagged the growth in per capita personal income by more than 0.5 percent, Test 2 would be replaced by Test 3 defined as follows:

> **Test 3—Adjustment Based on Available Revenue.** Proposition 98 funds must be at least as high as they were in the prior year, after adjustments for ADA growth and the growth in the state's general fund revenue per capita plus 0.5 percent.

When growth of state revenue is slow enough for Test 3 to replace Test 2, Proposition 98 funds must still pass Test 1. This is not generally a

problem, however, because Test 1 is more likely to be a binding constraint in years of rapid state revenue growth.

Figure D.1 illustrates the general relationship between the state's general fund revenue and the Proposition 98 guarantee. The horizontal axis measures that revenue and the vertical axis the guarantee. The bold line represents the relationship between these two variables. Held constant are a number of other factors, including the previous year's general fund revenue. If this year's revenue is low, the growth rate in revenue per capita is also low, so the guarantee is determined by Test 3, which is based on that growth rate. Increases in general fund revenue increase the growth rate and thus the guarantee. Thus, in the region where Test 3 applies, the relationship between revenue and the guarantee has a positive slope as represented in the figure. The steepness of the slope depends on a number of factors; for 1990–1991, every additional dollar of general fund revenue implied a 56 cent increase in the Proposition 98 guarantee.[1]

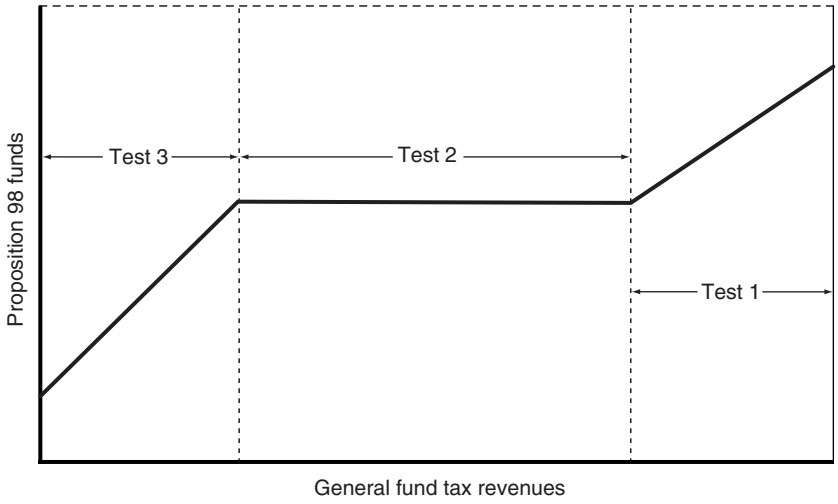


Figure D.1—General Fund Tax Revenue and the Proposition 98 Guarantee

[1]The actual percentage reflects the prior year's ratio of total spending for Proposition 98 purposes from state and local sources to total general fund revenues; in 1990–1991, it was 56 percent.

If the present year's general fund revenue is high enough, the growth rate in revenue per capita will be large enough for Test 2 to supersede Test 3. Under Test 2, the Proposition 98 guarantee is determined by the growth rate in per capita personal income. In the region where Test 2 applies, increases in state revenue do not affect the Proposition 98 guarantee. As the figure shows, the relationship between revenue and the guarantee is flat in this region.

If revenue, and thus revenue growth, is even higher, Test 1 will determine the guarantee instead of Test 2. In this region, the binding constraint is the share of the state's revenue allocated to K–14 education. From 1988 to 1992, this share needed to be at least 40.7 percent. After the property tax shifts of 1992–1993 and 1993–1994, the required share was lowered to 34.6 percent. Thus, at present, when Test 1 is operative, every additional dollar of general fund revenue increases the Proposition 98 guarantee by 35 cents. The figure shows this positive relationship between revenue and the guarantee in this region.

Test 3 is essentially a suspension of Test 2 during lean years for state revenue. The suspension was not intended to have a permanent effect on the Proposition 98 guarantee, however. In years following a Test 3 reduction, Proposition 111 requires that the state restore Proposition 98 funds to the level that would have obtained without the reduction. The pace of restoration is tied to the growth rate in state revenue. Specifically, the pace is based on the difference between the growth rates in per capita state general fund revenue and in per capita personal income. If revenue grows less rapidly than income, no restoration is required. If the reverse is true, the state must restore some of the Test 3 reduction. The larger the difference between revenue and income growth, the larger the restoration must be. The same rules apply when the Legislature votes to suspend the Proposition 98 guarantee.

The state keeps track of the restoration target through a maintenance factor. The maintenance factor equals the difference between what K–14 education would have been entitled to under Test 2 versus the amount actually appropriated under Test 3. Once a maintenance factor is created, it is adjusted each year for growth in ADA and per capita personal income, just as in Test 2. In addition to that adjustment, the factor may be increased or decreased by state appropriations. If the state

appropriates funds for K–14 education that exceed the Test 2 requirement, the maintenance factor is correspondingly reduced; if funding falls short of Test 2 requirements, the maintenance factor is increased. The maintenance factor is finally eliminated only when Proposition 98 funds have been restored to their pre-reduction level, as adjusted for ADA growth and the change in per capita personal income. Significantly, Proposition 111 only required that funding for K–14 education be *restored*; it did not require that reductions below the basic Test 2 requirement in the intervening years be *repaid*.

Figure D.2 illustrates the operation of the maintenance factor and the process of restoration. Year 0 is a base year in which Proposition 98 funds pass Tests 1 and 2. The height of the bar for that year represents the volume of those funds. For Years 1, 2, 3, and 4, the total height of the bar represents what the Test 2 requirement for each year would have been based on the Proposition 98 funds in Year 0.

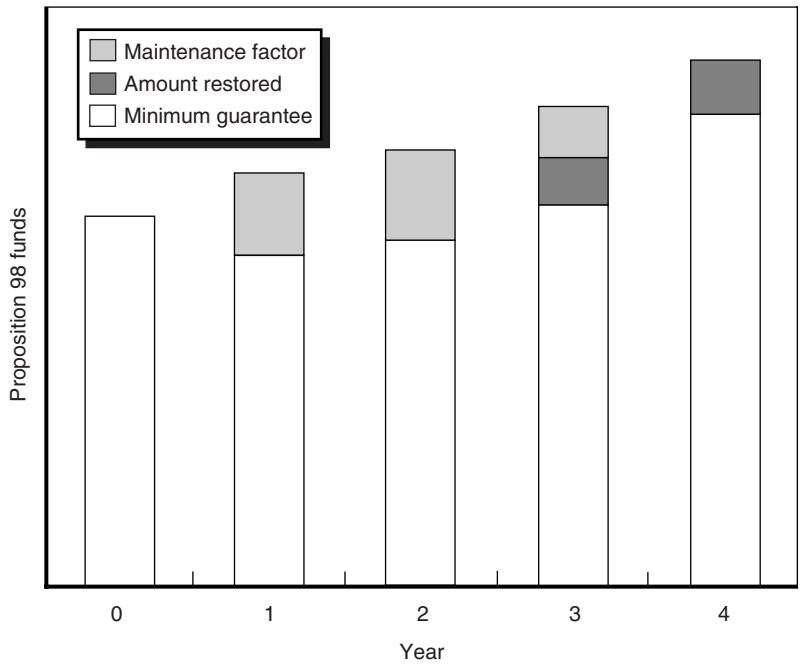


Figure D.2—Proposition 98 Maintenance Factor and Restoration

From Year 0 to Year 1, state general fund revenue declines, so the Proposition 98 guarantee is set by Test 3 instead of Test 2. The actual guarantee is represented by the white portion of the bar for Year 1. The remainder of the bar is the maintenance factor, represented by the lightly shaded portion.

Between Years 1 and 2, state revenue grows fast enough for Test 2 to determine the guarantee, but not so fast that the state is required to reduce the maintenance factor. Accordingly, the guarantee is what was actually allocated last year increased by the growth rates in ADA and per capita income, as required by Test 2. The maintenance factor is also increased in the same manner. In Year 2, the guarantee is represented by the white part of the bar. The lightly shaded portion represents the increased maintenance factor.

From Year 2 to Year 3, the growth in state tax revenues is finally strong enough to require a partial restoration payment, represented by the darkly shaded portion of the bar in addition to the white portion of the bar that represents the Test 2 requirement based on Year 2 revenue. In Year 3, K–14 education receives revenue equal to the sum of the partial restoration payment and the guarantee based on the previous year. Therefore, Year 3 revenues exceed the Proposition 98 guarantee based on Year 2 revenue. However, it is still lower than the amount K–14 education would have received had the original reduction in Year 0 not occurred—an amount represented by the total height of the bar.

Finally, between Years 3 and 4, revenue growth is strong enough for the state to make the final restoration payment. The maintenance factor is reduced to zero, and Proposition 98 funds are restored to the level of Year 0, as adjusted for the cumulative change in ADA and per capita personal income. However, schools have forever lost the amount of funding represented by the sum of the maintenance factors for Years 1, 2, and 3 (the sum of the light gray shaded areas).

The process shown in Figure D.2 is a hypothetical example. In reality, the maintenance factor would grow or shrink depending on the strength of the state's economy. As a result, the process of fully restoring K–14 funding to its pre-reduction level could take considerably longer than the three years shown in the example.

Proposition 111 represented a compromise in which K–14 education lost ground in some areas in return for gaining ground in others. Schools and community colleges conceded to a formula for determining their fair share of the state's budget cutbacks in lean revenue years. They also gave up their claim to any permanent increase in the Proposition 98 base from revenues collected in excess of the state's appropriations limit. On the other hand, by substituting the Test 3 formula for suspension, they avoided some major downside risks because under the original provisions, once the guarantee was suspended, there was no limit on the extent to which funding could be reduced. More important, the schools gained a constitutional guarantee that their funding would eventually be restored to levels that would have been required had no reduction occurred. Finally, the change in the Gann limit and Test 2 inflation rate meant that the guarantee would grow faster than it would have under the original formulation of Proposition 98.

1990 to 1995: Recession, Loans, and Prepayments

The state did not have to wait long to see the provisions added by Proposition 111 brought into play. In late 1990, California's economy began a recession that was to last for four years. As evidence of this recession rolled in, forecasts of the state's revenue were revised downward. In the spring of 1991, the Legislative Analyst estimated a huge revenue shortfall for 1991–1992. The amount needed to maintain the prior year's state funding level, as adjusted for population growth and inflation, was estimated to exceed revenues by $14 billion—a gap equal to 38 percent of 1990–1991 revenues. It was clear that the state faced a budget problem of unprecedented proportions. It was also clear that any realistic solution would require some reduction in funding for K–14 education.

Not only did the recession affect the revenue forecasted for 1991–1992, it also affected state revenue received in 1990–1991. In the final months of 1990–1991, general fund revenues plummeted, and the basis for computing the 1990–1991 Proposition 98 guarantee shifted from Test 2 to Test 3. Ultimately, general fund revenues dropped $4.3 billion below the level assumed in the 1990–1991 state budget, and the 1990–

1991 Proposition 98 guarantee dropped more than $1.3 billion below the funds already appropriated for K–14 education.

The decline in 1990–1991 revenue was ultimately so steep that 1991–1992 looked better by comparison. Although the analyst's spring 1991 forecast for 1991–1992 revenue was a large decline from initial assumptions, it still represented modest growth from actual revenue in 1990–1991. In fact, general fund revenue was expected to grow modestly between 1990–1991 and 1991–1992, at a rate slightly higher than the estimated growth in per capita personal income. As a result, it appeared that the Proposition 98 guarantee for 1991–1992 would be based on Test 2, not Test 3. Because Test 2 is based on the prior year's appropriations, not on the prior year's guarantee, the 1991–1992 guarantee would be higher than Proposition 98 funds in 1990–1991. Under those circumstances, K–14 education would not be required to contribute anything toward solving the $14 billion budget gap.

This politically unpalatable outcome was due to two factors. First, the Test 3–based reduction in the Proposition 98 guarantee occurred in 1990–1991 well after K–14 funds had been appropriated for that year. Second, under the terms of Test 2, the following year's guarantee was based on the funds actually appropriated to education, rather than on the prior year's guarantee.

Proposition 98 had forced the Legislature into a fiscal bind. If it was to bring Proposition 98 funds into line with general fund revenues in 1991–1992, it had to reduce 1990–1991 appropriations to the level indicated by Test 3. The Legislature could not simply let K–14 education keep the overpayment of $1.3 billion, while ignoring this amount in calculating the following year's Proposition 98 guarantee. If the school districts and community colleges received the money as a 1990–1991 appropriation, it had to be counted in determining the following year's guarantee. At the same time, the Legislature could not simply take back the overpayment from districts and colleges. After all, it was not until the final months of the 1990–1991 fiscal year that the full extent of the overpayment became known. A take-back at that time would have precipitated a rash of school district bankruptcies.

In the end, the Legislature hit upon a controversial solution: Rather than take back the overpayment in 1990–1991, it simply counted this

amount toward meeting Proposition 98 requirements for 1991–1992. To this end, it reduced the 1990–1991 appropriation level to school districts by $1.366 billion and then immediately gave them back $1.233 billion as an emergency loan. The loan was to be repaid from 1991–1992 entitlements. Thus, the net cash districts would receive in 1991–1992 would be $1.233 billion below their Proposition 98 guarantee. The $1.233 billion was available for districts to spend in 1990–1991, but it did not count in the base for determining the guarantee for 1991–1992.

The remaining $133 million was applied to a debt the state had left over from 1989–1990. In that year, it had appropriated $133 million less money to K–14 education than the Proposition 98 guarantee—a $133 million underpayment. It therefore used part of its overpayment in 1990–1991 to settle its debt from 1989–1990. Although received in 1990–1991, this payment did not count as Proposition 98 funds for that year; instead, it counted toward meeting 1989–1990 guarantee requirements and was counted as part of that year's base for purposes of computing the 1990–1991 guarantee.

In essence, the state treated the overpayment as a three-year problem, allowing districts to keep more cash than they were entitled to by the 1990–1991 guarantee in return for receiving less cash than they were entitled to for 1989–1990 and 1991–1992. Over the three-year period, they would receive the same amount of cash, in total, as they would have if Proposition 98 funds equaled the minimum guarantee in each year.

The spring of 1992 was a replay of the spring of 1991. The state owed K–14 education the aid necessary to meet the Proposition 98 guarantee for the year less the $1.233 billion school districts owed the state from the loan they had received in the previous year. As the end of the year approached, however, it became clear that the state had once again appropriated more for K–14 education than was required. This year, the overpayment was $1.083 billion. As in the previous year, the state recaptured its overpayment with an emergency loan. In effect, school districts repaid just $150 million of the original $1.233 billion loan and refinanced the remaining $1.083 billion. The state did not charge districts interest on these loan balances.

Had the story ended here, school districts would have repaid the full $1.083 billion loan in 1992–1993. Had they done so, however, per pupil funding from state and local sources would have fallen below nominal 1990–1991 levels, an outcome unacceptable to the education community. The governor, on the other hand, was equally adamant that appropriations for K–14 education not exceed the minimum guarantee unless paid for by compensating cuts elsewhere in the state budget.

Ultimately, the Legislature and the governor agreed to provide school districts with another loan. This time the loan was characterized as a $973 million prepayment of future Proposition 98 entitlements. The prepayment would then be deducted from entitlements in 1993–1994 and 1994–1995. At the end of 1992–1993, therefore, the loan balance stood at $973 million. School districts had paid off an additional $110 million of their original $1.233 billion loan, for a cumulative repayment of $260 million. In 1993–1994, the state provided districts with an additional prepayment of $787 million, bringing the loan balance to $1.76 billion. Rather than prescribe a fixed repayment schedule, the Legislature provided that one-half of any growth in Proposition 98 funds per ADA in 1994–1995 and thereafter would be used to repay this amount.

This arrangement was soon voided by another event. In *CTA et al. v. Gould*, a coalition of education supporters had challenged the legality of the Legislature's financing scheme.[2] An initial court ruling in this case cast serious doubt on whether the state could require the school districts to repay any of the $1.76 billion. Late in 1994–1995, the opposing parties in *CTA v. Gould* reached an out-of-court settlement, which relieved school districts of some of their loan obligation. Districts agreed to repay $825 million of the $1.76 billion loan balance. The payments were to be made over an eight-year period, from 1994–1995 through 2001–2002, through reductions in amounts to which school districts would otherwise have been entitled under Proposition 98. The state

[2]Joining the California Teachers Association (CTA) as plaintiffs were the Superintendent of Public Instruction and the California School Boards Association. Russell Gould was California's Director of Finance at the time the lawsuit was filed.

agreed essentially to forgive the rest of the loan, although the settlement presented the bookkeeping in a different light. Over a six-year period, beginning in 1996–1997, the state agreed to provide districts revenue in excess of the Proposition 98 guarantee. The districts would then repay this excess to the state, reducing the loan balance. From this bookkeeping perspective, therefore, school districts would repay the entire loan over the eight-year period from 1994–1995 through 2001–2002. In the first two years, the payments would come wholly from school funds. In the last six years, the state would essentially reimburse schools for some of their expenses, by providing them funds in excess of the Proposition 98 guarantee. In the last year, 2001–2002, the total payment was $350 million, the state reimbursed schools for $225 million, leaving schools with a net payment of $125 million. Table D.2 gives the repayment schedule.

The settlement also involved three issues with consequences beyond 2001–2002. First, the state agreed to count its $225 million reimbursement in 2001–2002 as part of the Proposition 98 base for that

Table D.2

Repayment Schedule in *CTA v. Gould* Settlement

	Payment ($ millions)		
Fiscal Year	Gross Payments K–12 Education	State Increase in Proposition 98 Guarantee	Net Payments K–12 Education
1994–1995	50	—	50
1995–1996	100	(a)	100
1996–1997	150	50	100
1997–1998	200	100	100
1998–1999	250	150	100
1999–2000	310	185	125
2000–2001	350	225	125
2001–2002	350	225	125
Total	1,760	935	825
2002–2003 and thereafter	—	225	—

[a]Proposition 98 maintenance factor increased by $275 million, eventually resulting in corresponding increase in the guarantee level (see the text). Nominal dollars.

year, increasing the guarantee by that amount for all subsequent years. Second, the state agreed to increase the Test 3 maintenance factor by $275 million. These two actions together increased the Test 2 base by $500 million. Finally, the state agreed that it would never again resort to the prepayments it had initiated in 1990–1991.

The first half of the 1990s were lean years for California's public schools. The 1994–1995 average per pupil funding from all sources stood at $5,452, just 5.9 percent higher than the $5,146 per pupil received by K–12 education five years earlier. After adjusting for inflation, per pupil funding was 10.6 percent lower than the 1989–1990 level.

Funding for revenue limits was hit particularly hard, as evidenced by the difference between the statutory cost-of-living adjustments and the amount of funding actually provided for the COLAs. Had statutory COLAs been fully funded, average revenue limit funding per pupil would have been 18.6 percent higher in 1994–1995 than in 1989–1990. Instead, it was only 5.5 percent higher. As a result, funds were 89 percent of what they would have been if the COLA had been fully funded—a deficit of 11 percent. Nor did categorical programs escape unscathed. In fact, during this period, real per pupil funding for categorical programs was cut by roughly the same percentage as was funding for revenue limits.

As bad as things were for schools, however, they could have been far worse. Through the creative use of loans and prepayments, the state had allowed K–12 schools to spend a total of $2.153 billion more than the minimum amounts required by Test 3 in 1990–1991 and 1993–1994. As of the end of 1994–1995, the schools had been required to repay only $260 million of this amount, and another $133 million had been counted toward meeting 1989–1990 guarantee requirements. They still owed the state $825 million, but that was less than half the $1.76 billion balance before the *CTA v. Gould* settlement.

1995 to 2000: Recovery, Restoration, and Class Size Reduction

In retrospect, the debt school districts owed from the first half of the 1990s was made virtually irrelevant by the economy's strong recovery in

the second half. In the first half of the decade, real personal income per capita grew by only 12 percent in California; in the second half, it grew by 28 percent. The progressivity of California's personal income tax magnified these income growth trends, causing dramatic changes in the general fund revenue of the state government. In the first half of the decade, real revenue per capita fell by 15 percent. In the second half, it rose by 41 percent. The rapid growth in revenue per capita forced the state to restore quickly the Test 3 maintenance factor. It also pushed the Proposition 98 guarantee from Test 3 to Test 2, where the growth in per capita personal income fueled a rapid growth in the guarantee. Most important, it significantly increased state revenue, providing the Legislature with the means for new initiatives. In the last three years of the 1990s, K–14 education received much more revenue each year than the Proposition 98 guarantee, making the guarantee itself largely irrelevant during this period.

The pace for restoring the Test 3 maintenance factor was based on the difference between the growth rates in state revenue and personal income, both measured in per capita terms. This restoration is depicted in Figure D.3. At the end of 1993–1994, the maintenance factor stood at more than $2.2 billion. Over $1.2 billion was restored in 1994–1995,

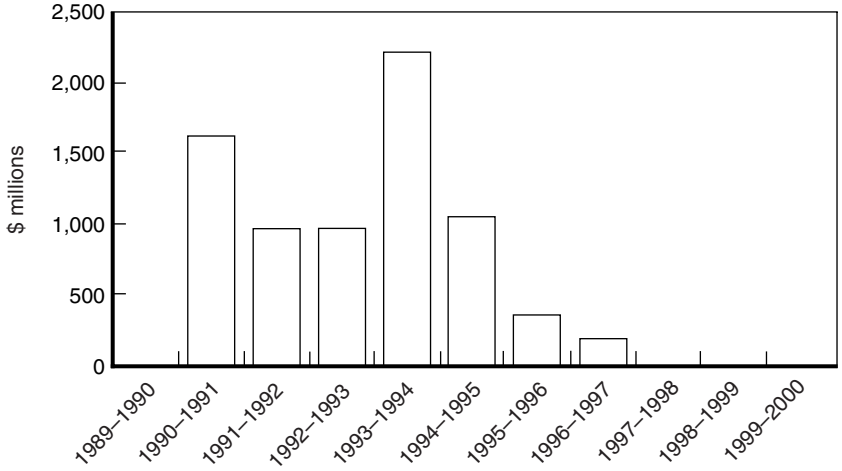


Figure D.3—Proposition 98 Maintenance Factor

a year with weak growth in personal income but paradoxically strong growth in state revenue. In 1995–1996, the maintenance factor was increased by the $275 million agreed to in the *CTA v. Gould* settlement. Yet, by the end of the year, nearly $1.1 billion of the factor had been restored, leaving just $300 million. By the end of 1997–1998, the maintenance factor was fully restored.

The maintenance factor was created by reductions in the Proposition 98 guarantee under Test 3. During the first half of the decade, Test 3 set the guarantee in three of five years. In the second half, Test 2 determined the minimum in every year. Moreover, because the growth rate in personal income each year exceeded the inflation rate, Test 2 required an increase in inflation-adjusted revenue per pupil.

This rapid growth in the guarantee led to a problem opposite of the one the state experienced in the first half of the decade. In the early 1990s, the Legislature almost always initially appropriated more revenue for schools than subsequently required by the guarantee. In the second half, the opposite was true. In each year from 1995 to 1997, updates of the Proposition 98 guarantee repeatedly disclosed that K–14 education was still owed additional amounts. In the next fiscal year, the Legislature was then forced to appropriate so-called settle-up payments that were counted toward satisfying the prior year's guarantee. Because these funds represented a one-time windfall, they were mostly allocated for non-recurring purposes. However, the payments were incorporated in the prior year's Proposition 98 base for future calculations of the guarantee.

The first settle-up payments were made in the summer of 1995 because of under-appropriations of the 1994–1995 guarantee. Revised estimates of the 1994–1995 guarantee revealed that Proposition 98 funds for that year were short of the guarantee by $543 million. The Legislature then appropriated an additional $543 million for K–14 in 1995–1996. Of this total, $473 million went to K–12 education and $73 million went to community colleges. The total amount was counted as fulfilling the 1994–1995 guarantee. The largest portion of this appropriation was a per ADA block grant that school districts could use for instructional materials, deferred maintenance, educational technology, or any other non-recurring costs. Before spending these

block grant funds, districts were required to hold public hearings on the adequacy of their existing funding for each of these items.

In the spring of 1996, revised estimates of the 1995–1996 guarantee once again led to settle-up payments. In this case, payments to K–12 schools amounted to over $1.1 billion and payments to community colleges amounted to $136 million. The largest single K–12 appropriation was $387 million for a block grant to school sites. These funds were allocated to all schools at a funding rate of $64 per ADA, with a minimum of $25,000 per school. They could be used for any purpose determined by the school site council and approved by the district governing board. Another $367 million was appropriated for one-time costs associated with K–3 CSR—an initiative discussed in more detail below. An additional $200 million was appropriated for a school district block grant similar to that of the previous year.

After having been faced with the issue of what to do with settle-up monies late in the fiscal year, the Legislature decided to plan ahead for 1996–1997. Rather than wait until the spring of 1997 to decide how to spend additional amounts that it might owe schools, the Legislature instead stipulated that half of any excess funds would be dedicated to equalizing revenue limits and the remaining half to increasing those limits. There were three rounds of equalization in 1996–1997, one funded by the 1996 Budget Act and two from settle-up funds. In each round, the state first computed the average revenue limit for districts of the same type and size and then raised all district limits to that average. The other half of the settle-up monies for 1996–1997 reduced the deficit factor for revenue limits from 10.12 percent to 8.8 percent. Unlike previous settle-up payments, which were used for one-time purposes, these revenue limit adjustments increased the state's financial obligation in future years.

When anticipated, the rapid growth in the Proposition 98 guarantee created opportunities for new initiatives. The best example is CSR, initiated in 1996–1997. By the spring of 1996, it was becoming apparent that the growing state economy would once again provide a major increase in Proposition 98 guarantee, most likely as much as $2 billion. The Legislature dedicated $1.2 billion to maintaining the status quo. Of this total, about $700 million was allocated for the 3.21 percent

COLA to revenue limits—an increase mandated by statute. Another $300 million was required to adjust revenue limits for ADA growth. The Legislature also dedicated about $200 million for equalizing revenue limits and for pupil transportation, leaving at least $800 million.

At the time, revenue limits were 10.12 percent lower than they would have been if statutory COLAs had been enacted. Eliminating the entire deficit would have cost the state $2.2 billion; $800 million toward that end would have significantly reduced the deficit. However, the Legislature had already funded a 3.2 percent COLA to revenue limits, a significant increase in unrestricted state aid. School districts were targeting much of this for salary increases, making up in part for the slow increase in salaries during the early 1990s. Some feared that additional unrestricted aid would end up in even larger salary increases and that little would be used to increase classroom resources or to decrease California's high pupil-teacher ratio. These concerns were particularly pressing because of the poor performance of California students on the 1994 NAEP. Among the 39 states participating in the fourth grade reading assessment, California tied with Louisiana for lowest average score. A staggering 56 percent of California fourth graders scored below basic in reading ability.

In light of these concerns, Governor Pete Wilson proposed to allocate the remaining $800 million in the 1996–1997 budget to an initiative that would directly affect classroom resources. Specifically, he proposed to use $771 million as the down payment on a multiyear initiative to reduce class sizes in the early primary grades to no more than 20 students. In addition, he proposed to use $367 million of the 1995–1996 settle-up payments to complement the initiative. Of this total, $200 million would be used to provide facilities to accommodate the additional classes necessitated by reducing class size. Another $167 million was designated for a Governor's Reading Initiative intended to ensure that all K–3 students would have new instructional materials. Federal funds from Goals 2000, the 1994 federal legislation to aid states in developing academic standards for their schools, provided another $33 million for the reading initiative.

K–3 Class Size Reduction was phased in over two years. In the first year, school districts could choose to reduce class sizes in up to three

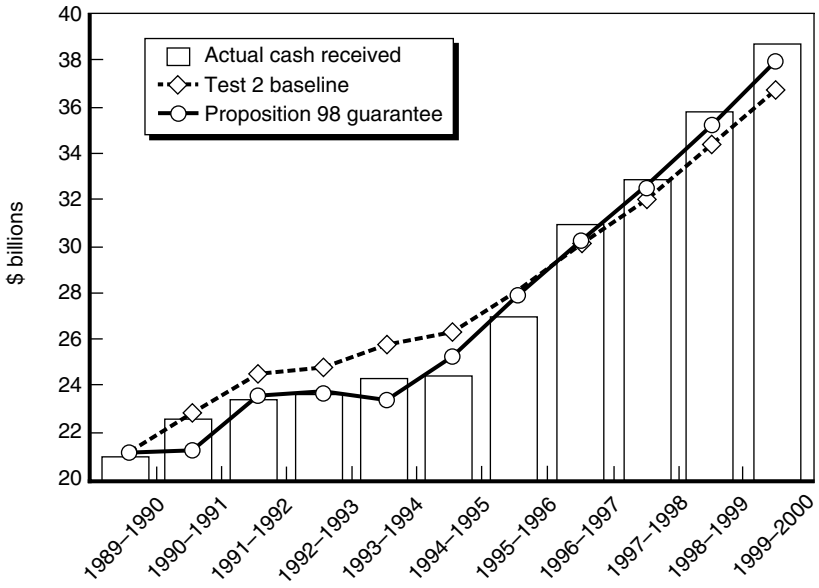
grades from kindergarten through third grade. In the second, districts could reduce class sizes in all four grades. The Legislature also increased the payment to districts for reducing class sizes. In the first year, school districts received $650 for every student in a classroom that did not exceed 20.4 students on average over the school year. In the second year, the payment was raised to $800 per pupil, and the total cost of the program rose to $1.2 billion.

In 1995–1996 and 1996–1997, the Legislature did not appropriate more funds for K–14 education than required by Proposition 98. In fact, some had feared that Proposition 98's floor on school revenue would also become a de facto ceiling, with the Legislature viewing the Proposition 98 guarantee as the measure of whether K–14 education was adequately funded. These fears were put to rest in the late 1990s. In the last three years of the decade, state tax revenue increased by 26 percent, and the state provided K–14 education with amounts significantly in excess of the Proposition 98 guarantee. In 1997–1998, Proposition 98 funds exceeded the guarantee by $354 million. In 1998–1999, the excess was $372 million. For 1999–2000, it was an impressive $1.8 billion. And, in each year, these additional amounts were permanently built into the base for calculating the following year's guarantee.

The Decade in Perspective

At the microscopic level, the history of Proposition 98 is the complex series of events. At the macroscopic level, however, these events are merely process. What counts is the outcome—the tax revenue allocated to California's public schools. Figure D.4 summarizes this macro-history.

During the 1990s, Proposition 98 funds tracked the baseline set by Test 2, with some deviations. That baseline is shown by the dotted line in Figure D.4. That line is the Proposition 98 funds K–14 education would have had to receive to keep pace with growth in ADA and per capita personal income since 1989–1990. Put another way, the dotted line represents the funds that K–14 education would have received had Proposition 98 been funded at the Test 2 level in every year, no more, no less. The dark line shows the actual Proposition 98 guarantee in each



NOTE: Nominal dollars are used.

Figure D.4—Proposition 98 Funds

year. The bars show the funding that K–14 education received in each year.

As the figure demonstrates, K–14 funding sometimes fell short of the guarantee. The shortfall was due to the various loans and repayments from 1989–1990 through 1995–1996. Nevertheless, the total funding received over this seven-year period, $166.3 billion, slightly exceeded the total of the guarantee for these three years, which was $166.0 billion. In total, the requirements of Proposition 98 were honored.

As the figure also demonstrates, the guarantee was often less than the Test 2 baseline. This gap was due to the operation of Test 3, which replaced Test 2 in 1990–1991, 1992–1993, and 1993–1994. Test 3 was designed to reduce the guarantee below the Test 2 base when state revenue growth lagged the growth in per capita personal income.

Those reductions were temporary, however. Test 3 requires that the guarantee eventually return to the level it would have reached if the reductions had not occurred. As the figure shows, by 1997–1998, the

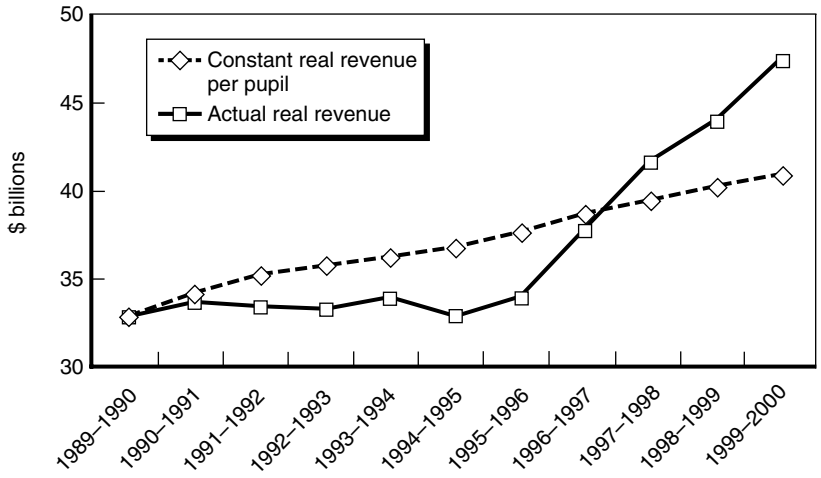
maintenance factor derived from the Test 3 reductions had been paid off; and, as a result, K–14 funding was more than restored to its 1989–1990 level, as increased by the growth in ADA and per capita personal income.

Finally, the figure shows the abundance of funding provided to K–14 education in the late 1990s. In 1997–1998, 1998–1999, and 1999–2000, the Legislature provided K–14 education with funding in excess of amounts required by Proposition 98. Although the actual cash received by K–14 education in 1996–1997 exceeded that year's minimum guarantee requirements, $1.1 billion of this amount was counted toward amounts owed for 1995–1996 and 1996–1997. As a result, the amount of funds counting toward the 1996–1997 guarantee actually fell short of the guarantee requirements by $116 million. From 1997–1998 onward, however, Proposition 98 funds exceeded the guarantee. These additional funds were also built into the funding base for determining subsequent years' guarantees. As a result, the guarantees for the following years were successively ratcheted up to a level above the Test 2 baseline.

As noted, the Test 2 baseline is 1989–1990 Proposition 98 funds adjusted for the growth in ADA and personal income per capita. Over the 1990s, personal income per capita grew faster than consumer prices did. Specifically, over the decade, personal income per capita grew by 43 percent whereas the CPI grew by just 33 percent. Thus, at the end of the decade, Proposition 98 funds were higher than the 1989–1990 funds adjusted for ADA growth and inflation. In that sense, the real purchasing power of California's public schools was higher at the end of the decade than at the beginning.

To capture this increase, we first convert all funds to inflation-adjusted dollars. Specifically, using the CPI, we convert all dollar amounts to their equivalents in 1999–2000 dollars. By that standard, a dollar of revenue in 1989–1990 is converted to 1.33 dollars. Funds adjusted in this manner are referred to as *real* funds.

The next step is to compare the growth in real funds with the growth in enrollment. This comparison is made in Figure D.5. Although Proposition 98 applies to K–14 education, this figure focuses on just the K–12 component. The dashed line in the figure represents the real K–12



NOTE: Real (1999 to 2000) dollars are used.

Figure D.5—K–12 Total Revenue

revenue that would be required to maintain the same level of revenue per pupil as in 1989–1990. The solid line is actual, real revenue. In both cases, revenue is all K–12 revenue from local, state, and federal sources. From 1989–1990 to 1999–2000, total real revenues for K–12 education increased by nearly 46 percent, growing from $32.7 billion to $47.4 billion. Over this same period, enrollment grew by 24.7 percent, from 4.8 million to 5.9 million. As a result, real funding per pupil grew by 16 percent, from $6,861 to $7,956.

In the first half of the 1990s, real funding for K–12 education failed to keep pace with enrollment growth. During the latter half, however, real funding grew much faster than enrollment, thereby erasing many of the losses of the earlier years. Specifically, as the figure shows, in 1990–1991, the growth in real K–12 revenue almost kept pace with enrollment growth. By 1992–1993, however, real revenue had fallen 6 percent below amounts needed to maintain 1989–1990 levels of real per pupil spending; by 1994–1995, it had fallen 10.6 percent below this benchmark. In 1995–1996, the combination of an improving state economy and a settlement agreement in the *CTA v. Gould* lawsuit caused real per pupil spending to rise slightly; and, in 1996–1997, it was nearly

completely restored to pre-recession levels. From 1996–1997 to 1999–2000, real per pupil spending grew by 17 percent, ending the decade 16 percent higher than in 1989–1990.

Cumulatively, the surplus at the end of the decade partly made up the deficits from the early 1990s. In 1999–2000, total spending on K–12 schools exceeded by $6.5 billion the amount needed to maintain 1989–1990 spending levels, as adjusted for enrollment growth and inflation. In just this *one year,* therefore, the amount of funding received by schools in excess of enrollment and inflation-driven needs offset almost half of the *cumulative* $13.6 billion shortfall of the seven years 1990–1991 through 1996–1997.

As this short history demonstrates, Proposition 98 has added another level of complexity to California's already complex school finance system. It is tempting to conclude that these complexities might have been avoided. We wonder, however, if complexity is the natural consequence of creating rules to replace legislative discretion about budgetary decisions. Given the complexity of budgetary decisions, wouldn't the rules themselves have to be complex? In any event, a natural question is whether the real benefits for schools justifies these complexities. Would schools and colleges have fared worse without Proposition 98? We address that question in Chapter 5.

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