

Funding Formulas for California Schools II: An Analysis of a Proposal by the Governor's Committee on Education Excellence

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Contents

Summary	iii
Acknowledgments	vii
Introduction	1
POLICY CHOICES	3
Grade Level	3
Disadvantaged Students	4
Concentration Factors	8
Regional Wage Adjustments	11
SIMULATIONS	15
Baseline	15
Parameters	19
Results	21
Conclusion	27
Appendix	29
References	37

Summary

In its recent report, the Governor's Committee on Education Excellence proposes a major restructuring of California's school finance system.¹ It would replace most of the myriad separate programs through which revenue now flows from the state to local school districts with two simple programs: a base program and a targeted program. The base program would serve the educational needs of all students. The targeted program would provide supplemental funds for disadvantaged students. Base revenue would be allocated according to the total number of students in each district. Targeted revenue would be allocated according to the number of English learners and students from low-income families. The Committee would not restrict the use of funds in these two programs, although districts would be obliged to demonstrate that targeted funds enhance the education of disadvantaged students. The Committee's proposed reform would not affect some current revenue programs, the most notable of which is special education. Overall, however, 86 percent of state revenue allocated to public schools would be consolidated into the new base and targeted programs.

The Committee is not specific about every detail of its proposed new school finance system, including the level of base funding. It does stipulate, however, that targeted revenue for each low-income student should be 40 percent of revenue per student in its base program and that targeted revenue for each English learner be 20 percent of that base revenue per student. It also suggests that base revenue vary with the grade attended by students, using the current funding formula for charter schools as a model.

Using those parameters, we have simulated the Committee's proposal. Our simulations compare the revenue school districts would have received under various versions of the Committee's proposed system with the revenue districts actually received in 2004-2005 from the programs the Committee would eliminate. In conducting these simulations, we have imposed the condition that no district receives less revenue under the proposed system than it actually received in 2004-2005.

Each simulation starts by assuming a level of base revenue in grades 4 through 6. From that foundation, base revenue in other grades is derived, which then determines targeted revenue for low-income students and English learners. Table S.1 shows the additional revenue required by the Committee's proposal for three different assumptions about base revenue for grades 4 through 6. If base revenue for grades 4 through 6 is \$5,530 per student, the Committee's proposed finance system would require revenue of approximately \$41 billion, a \$4.5 billion increase over the revenue allocated in 2004-2005 through the programs the Committee would consolidate. Adjusting for inflation between 2004-2005 and 2007-2008, this additional revenue is approximately \$5 billion, which is the Committee's estimate of the cost of its proposal. Thus, we believe that our simulation with the assumed value of \$5,530 per student for base revenue in grades 4 through 6 best represents the Committee's proposal.

¹ Governor's Committee on Education Excellence, "Students First: Renewing Hope for California's Future," November 2007.

Table S.1
Additional Revenue Required for Finance Proposal of Governor's Committee
(2004-2005 dollars)

Base Revenue for Grades 4 - 6 (\$/student)	Base Revenue (\$ M)	Targeted Revenue (\$ M)	Total Revenue (\$ M)
5,000	9	2,374	2,384
5,530	1,697	2,798	4,495
6,000	4,601	3,175	7,776

Most of the additional revenue required by that proposal would be allocated to the new targeted program. Of the \$4.5 billion in additional revenue, roughly 60 percent would be allocated to that program. In contrast, of the \$36 billion in revenue in all the programs that the Governor's Committee would eliminate, only 5 percent of the total was allocated through targeted programs. Relative to the status quo, the Committee would place a much higher priority on providing additional resources for disadvantaged students.

This priority is clearly reflected in the revenue gains districts would experience with the Committee's proposal. Districts with high percentages of low-income students would receive the largest gains (Table S.2). For example, among unified districts with more than 10,000 students, districts with fewer than 10 percent of students living in families below the federal poverty threshold have an average gain of \$698 per student. In comparison, districts with more than 20 percent low-income students have an average gain of \$1,071 per student. The same general pattern holds for unified districts of smaller size and for elementary and high school districts. Among districts of the same type and similar size, the average gain in revenue is larger for high-poverty districts than for low-poverty districts.

Table S.2
Average Increase in Revenue with Base Revenue for Grades 4 - 6 of \$5,530 per Student
(2004-2005 dollars per student)

	Percent of Low-income Students*		
	0 - 10	10 - 20	20 or more
Elementary Districts			
Small (0 - 250 students)	228	324	781
Medium (250 - 1,500 students)	322	487	1,163
Large (1,500 + students)	509	851	1,249
High School Districts			
Small (0 - 1,500 students)	180	355	797
Medium (1,500 - 6,000 students)	323	542	921
Large (6,000 + students)	362	700	637
Unified Districts			
Small (0 - 3,000 students)	406	472	868
Medium (3,000 - 10,000 students)	595	759	1,215
Large (10,000 + students)	698	906	1,071

*Low-income students are students living in families with income below the federal poverty threshold.

Other patterns are apparent in the distribution of gains. Large districts gain more than small districts, a reflection of the current allocation of revenue. Currently, revenue per pupil tends to be greater for small districts than for large districts. Accordingly, small districts gain less from the Committee's proposal. Similarly, because high school districts tend to have more revenue per pupil under the current system than elementary and unified districts, high school districts would have smaller gains on average under the Committee's proposal.

The finance proposal of the Governor's Committee is quite similar to another recent proposal by Alan Bersin, Michael Kirst, and Goodwin Liu.² Like the Governor's Committee, Bersin, Kirst, and Liu would consolidate a large number of current revenue programs into two programs: a base program and a targeted program. The two proposals differ in four areas, however. While Bersin, Kirst, and Liu recognize that it may be desirable to weight grade levels differently in allocating base revenue, they do not make an explicit recommendation about those weights. A second difference concerns the definition of disadvantaged students. Like the Governor's Committee, Bersin, Kirst and Liu define targeted students as English learners and students from low-income families. They would use a different measure of low-income families, however, and apply different weights for low-income students and English learners. They would also provide additional funds to districts with high concentrations of disadvantaged students, a third main difference between the two proposals. The Governor's Committee considered a concentration factor for its funding formula, but did not recommend it. Lastly, Bersin, Kirst, and Liu propose to adjust school district revenue for differences in regional labor market conditions, another adjustment the Governor's Committee considered but did not recommend.

These differences illustrate that there are significant policy choices in implementing the direction of reform that both the Governor's Committee and Bersin, Kirst, and Liu have chosen. Those choices are far less significant, however, than the fundamental decisions the state would have to make in adopting either proposal. The first decision concerns the devolution of fiscal authority to local school districts. Both proposals would eliminate dozens of revenue programs, most of which have restrictions on how funds can be used. By eliminating those programs, the state would also lose its control over the use of revenue, delegating that authority to local school districts. The second important decision concerns the priority both proposals place on targeting new revenue to districts with high proportions of disadvantaged students. Overall, school districts in California have fewer resources than districts in many other states, yet the state has set very high standards for its schools. Can the state allocate a high proportion of additional funds to high poverty districts when all districts in the state may reasonably believe that their resources are inadequate for the job the state has asked them to do?

² Bersin, Alan, Michael W. Kirst, and Goodwin Liu, "Getting Beyond the Facts: Reforming California School Finance," Chief Justice Earl Warren Institute on Race, Ethnicity, and Diversity, University of California, Berkeley, California, 2007.

Acknowledgments

In constructing the simulation model used in this paper, we were guided by an advisory group consisting of Carol Bingham and Sandra Silva of the California Department of Education, Paul Warren of the Legislative Analyst's Office, and Nicolas Schweizer of the California Department of Finance. Their assistance was invaluable. We are particularly indebted to Carol and Sandra, who provided most of the revenue data used in our model and spent many hours with us explaining the intricacies of California's school finance system.

Although the bulk of the data employed in this project came from the California Department of Education, data on several important revenue programs came from other state agencies. For their assistance in obtaining these data, we thank the following: Jeremy McCarroll in the Office of Public School Construction; Ginny Brummels, John Korash, and Rodney Renteria in the State Controller's Office; and James Queirolo of the Department of Mental Health. Jannelle Kubinec of School Services of California generously shared with us her descriptions of California's many categorical revenue programs. In addition to this revenue data, Julie Williams and Eric Zilbert of the California Department of Education responded quickly and efficiently to our request for student achievement data.

We also benefited from comments on an earlier draft of this paper by Jennifer Imazeki, Hans Johnson, Robert Manwaring, and Debbie Reed.

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Introduction

In introducing his Committee on Education Excellence, Governor Arnold Schwarzenegger acknowledged the many excellent public school teachers in California but declared that “they work in a system that is broken.” He charged his Committee with helping him to repair this system and “to make California’s schools the best in the nation once again.”³ Judging by its recently released report, “Students First: Renewing Hope for California’s Future,” the Committee has done its part. It has made fundamental and coherent recommendations in a wide range of areas, laying out an ambitious agenda that promises to transform California’s public schools.

While the Committee warns against picking and choosing among its recommendations, we believe its proposed reform of California’s school finance system is particularly important. Based on its research review, the Committee concluded that “California’s educational finance system is the most complex in the nation, but yields little benefits” (page 21). In its view, the system is inequitable, inefficient, and “not sufficient for students who face the greatest challenges” (page 23).

The Committee would dramatically simplify that system and allocate substantially more revenue to school districts with many disadvantaged students. In particular, it would consolidate a large number of complex revenue programs into two simple programs: a base program and a targeted program. The base program would serve the educational needs of all students. The targeted program would provide supplemental funds for disadvantaged students who are likely to need additional assistance. Base revenue would be allocated to districts in proportion to average daily attendance (ADA), with different weights for students in different grades. Targeted revenue would be allocated according to the number of English learners and students from low-income families. For each low-income student, districts would receive targeted funds equal to 40 percent of base funding per pupil. For each English learner, districts would receive targeted funds equal to 20 percent of base funding per pupil. This rate would be lower for students classified as English learners for more than three years. The Committee would not restrict the use of funds in these two programs, although school districts would be obliged to demonstrate that targeted funds enhance the education of disadvantaged students. It would exclude some programs from consolidation, the most significant of which is special education. Overall, however, 86 percent of state revenue allocated to public schools would be consolidated into the new base and targeted programs.

In this paper, we use the PPIC school finance simulation model to analyze the Committee’s proposal. The model compares the revenue each school district received in 2004-2005 with the revenue it would have received if an alternative formula had been used to allocate revenue. Because the Committee is not specific about every detail of its proposed system, we must assume the values of certain parameters in those simulations. As a consequence, our results ought to be regarded as illustrative of the general concepts proposed by the Governor’s Committee, rather than a definitive analysis of its proposed system.

³ Press release, Office of the Governor of California, April 8, 2005, GAAS:124:05.

Policy Choices

The finance reform proposed by the Governor's Committee on Education Excellence (GCEE) is similar to a recent proposal by Alan Bersin, Michael Kirst, and Goodwin Liu (2007), which we analyzed in "Funding Formulas for California Public Schools: Simulations and Supporting Data." Both share the same underlying philosophy: simplify the system and direct more resources to disadvantaged students. As in the GCEE proposal, the Bersin-Kirst-Liu (BKL) proposal would also consolidate most current revenue programs into base and targeted programs. Also as in the GCEE proposal, base revenue would be allocated according to the number of students, and targeted revenue would be allocated according to the number of low-income students and English learners.

While the two proposals share the same core philosophy, they do differ in four areas. These differences illustrate important policy choices that the state would face in implementing this philosophy. The remainder of the section discusses these differences. By this discussion, we do not intend to pit one proposal against another. Instead, our intention is to draw out some of the details of both proposals, providing a foundation for the simulations that follow. The reality is that, despite some differences, both proposals are quite similar to each other and also quite different from the status quo.

The following discussion often refers to evidence presented in our paper "Funding Formulas for California Schools: Simulations and Supporting Data" or in the supporting document, "Funding Formulas for California Schools: Further Analysis," which is available on the PPIC website. In what follows, we refer to the paper as *Funding Formulas* and to the web document as *Further Analysis*.

Grade Level

The base program allocates revenue in proportion to the number of students in a district. In counting students for this purpose, the Governor's Committee recommends different weights for students in different grades. It further recommends that these weights be "structured in a manner similar to the revenue limit funding structure already employed in California for charter schools."⁴ Table 1 displays the general purpose entitlement rates for charter schools in 2004-2005. For example, for every student in grades K through 3, a charter school received \$4,724 in general purpose funding. Because charter schools are also eligible for revenue from the K-3 class size reduction program, as a practical matter the base funding for students in grades K through 3 was the general purpose entitlement rate plus the \$928 per pupil a school would have received for maintaining class sizes of 20 or fewer students. Column 3 of the table shows the funding per pupil with both the general purpose rate and class size reduction funds. The fourth column turns these funding levels into weights, using the funding level for grades 4 through 6 as a base. For example, the implicit weight for high school students is 1.2, implying that districts would receive 20 percent more revenue for every high school student than for a student in grades 4 though 6.

⁴ Governor's Committee Technical Report, page 5-19.

Table 1
Grade Level Weights in Charter School Funding Model, 2004-2005

Grade Span	General Purpose Entitlement (\$/pupil)	K - 3 Class Size Reduction (\$/pupil)	Total (\$/pupil)	Implicit Weights
K - 3	4,724	928	5,652	1.18
4 - 6	4,793	0	4,793	1.00
7 - 8	4,934	0	4,934	1.03
9 - 12	5,732	0	5,732	1.20

Bersin, Kirst, and Liu also mention the possibility of weighting student counts by grade level. However, they characterize the choice of weights as a judgment best left to policy makers and do not recommend specific weights themselves. In fact, policy judgments vary considerably across states. Massachusetts, New Hampshire, North Dakota, and Wyoming give higher weights to high school students than to other students. Another five states (Arizona, Florida, Minnesota, New Jersey, and Vermont) give higher weights to middle and high school students than to elementary students. And five states (Alabama, Minnesota, New Mexico, Oklahoma, and South Carolina) distinguish between grades K through 3 and grades 4 through 6, giving higher weight to the earlier grades. Nine states treat all grades uniformly.⁵

Disadvantaged Students

Both proposals would allocate targeted revenue according to the number of students from low-income families, families with income below a certain threshold. The thresholds differ between the two proposals, however. Under the GCEE proposal, low-income students are those living in families with income below the federal poverty guidelines. In 2007, the federal poverty guideline for a family of four was \$20,650. Under the BKL proposal, low-income students are those who qualify for free or reduced-price lunch. A student qualifies for free or reduced-price lunch if his or her family's income is less than 185 percent of the federal poverty guidelines. For a family of four, this threshold was \$38,203 in 2007. Because it has a higher income threshold, the BKL definition of poverty casts a wider net. Every student who is low-income under the GCEE definition is also low-income under the BKL definition, but many more students would be classified as low-income under the BKL definition. Nevertheless, even the higher income threshold is far below median family income. In 2006, the median income for a family of four living in California was \$74,801, more than twice as high as the threshold for reduced-price lunch.⁶

Though the two definitions of poverty are closely related, they imply entirely different methods for determining the number of low-income students. The BKL measure of poverty is

⁵ We thank Jennifer Imazeki for this summary of grade-level weights in different states.

⁶ The estimate of median family income in 2006 is from the American Community Survey of the U.S. Census Bureau, available at <http://www.census.gov/hhes/www/income/statemedfaminc.html>.

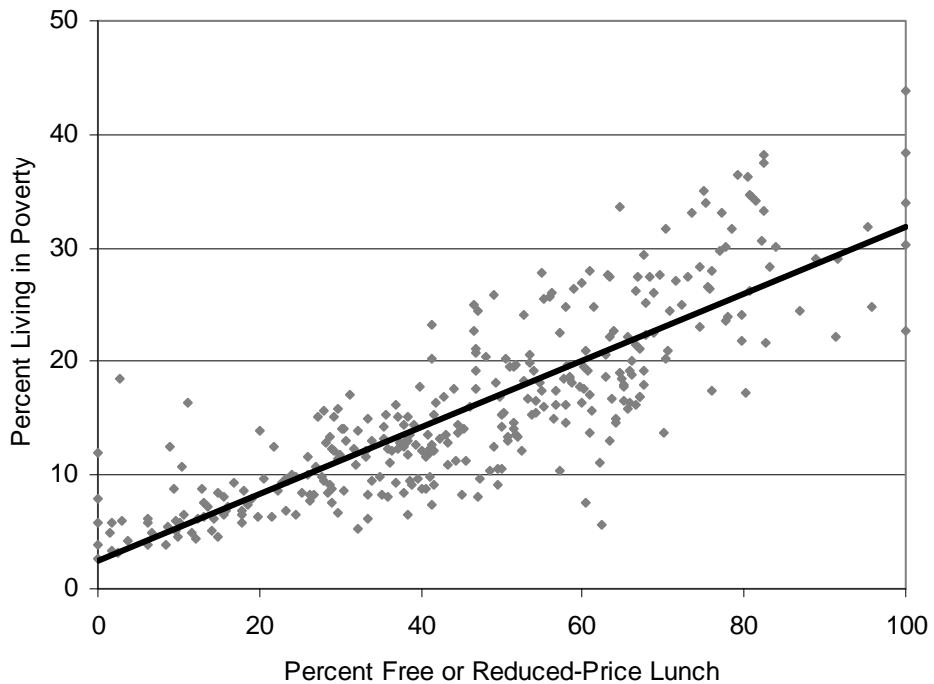
simply the number of students in a district who participate in a district's free or reduced-price lunch program. For its children to participate, a family must apply for the program, certifying that its annual income satisfies the eligibility criteria. The BKL measure of poverty thus depends upon the participation rate of qualified families. On the other hand, the GCEE measure of poverty starts with the decennial census. For the census years, the U.S. Census Bureau estimates for each school district the percentage of children ages 5 through 17 living in households with income below the federal poverty guideline. It then updates this statistic annually to use in distributing federal aid. While this measure of student poverty does not depend on participation rates, the annual updates are estimates that may not capture unique trends in individual school districts.⁷

The two measures are compared in *Funding Formulas*. On average across districts, the GCEE measure, the percentage of children in a district living in families with income below the federal poverty guidelines, is approximately one-third of the BKL measure, the percentage of students participating in the district's free or reduced-price lunch program. The relationship between the two measures is displayed in Figure 1 for unified districts in 2004-2005. The points in the figure represent values of the two measures for those districts, and the bold line is the average value of the GCEE measure for various values of the BKL measure.⁸ According to that relationship, when the BKL measure is 20 percent, the average value of the GCEE measure is 8 percent. When the BKL measure is 100 percent, the average GCEE measure is 32 percent. Similar relationships hold for elementary and high school districts. The data for these districts is displayed in Figure 7 of *Further Analysis*.

⁷ The estimates are based on countywide poverty estimates and federal income tax returns from taxpayers within a district's boundaries.

⁸ By average value, we mean the value from an ordinary least squares regression of the percent living in poverty on the percent in free or reduced-price lunch. The y-intercept for that regression is 2.5 percentage points and the slope is 0.29.

Figure 1
Percent Living in Poverty and Percent Free or Reduced-Price Lunch
Unified Districts, 2004-2005



The close relationship between the two measures has an important implication for school finance formulas: Either measure will give approximately the same percentage of targeted revenue to each district. For example, if a district would receive 5 percent of targeted revenue with the BKL measure of poverty used to allocate that revenue, it would receive approximately 5 percent with the GCEE measure. Furthermore, if revenue per targeted student is adjusted so that the total amount of targeted revenue allocated throughout the state is the same, the allocation of revenue to each district will be approximately the same. For example, under the GCEE proposal, districts would receive 40 percent of base funding per pupil for each low-income student, using the federal poverty guidelines to determine poverty status. The allocation of targeted revenue would be about the same if each district received 13 percent (0.33×40 percent) of base funding per pupil for each student qualifying for free or reduced-price lunch.

Although the two definitions of poverty may not imply significant differences in the relative distribution of revenue, the ways in which the two proposals incorporate English learners do imply significant differences. Compared to the BKL proposal, the GCEE proposal would allocate more revenue to districts in which disadvantaged students are both low-income and English learners than to districts in which disadvantaged students are low-income but fluent in English. These distinctions are important because most English learners are also low-income students. Using participation in free or reduced-price lunch to define poverty, 85 percent of English learners are also low-income students. However, the majority of low-income students are not English learners. Considering the universe of students who are English

learners or poor, roughly 37 percent of students are both poor and English learners, 57 percent are poor students who are not English learners, and about 6 percent are English learners who are not poor. Under the BKL proposal, districts would receive the same amount of additional revenue for students in each of the three groups. Under the GCEE proposal, districts would receive additional revenue of 60 percent of base funding for a student who is both poor and an English learner, 40 percent for a student who is poor and fluent in English, and 20 percent for a student who is an English learner but not poor.

The GCEE approach to incorporating English learners is generally consistent with the performance of students from each group on statewide achievement tests. English learners who are also economically disadvantaged score lower on statewide achievement tests than students who are economically disadvantaged but fluent in English. The percentages of students who score in the proficient or advanced range in English and math are displayed in Table 2. These percentages, or proficiency rates, are derived from student-level data, a necessary requirement for sorting students into the three groups described above.⁹ The partition of students by income is based on the criterion of economic disadvantage used by the California Department of Education in reporting test results. Students are economically disadvantaged if they participate in the free or reduced-price lunch program or if neither of their parents is a high school graduate. In the English-Language Arts CST (California Standards Test), students who are economically disadvantaged and also English learners (column 1) have much lower proficiency rates than students in either of the other three groups represented in the table. In particular, they have lower proficiency rates than students who are economically disadvantaged, but fluent in English (column 2). The same pattern holds for the Mathematics CST. Note also that students who are English learners but not economically disadvantaged (column 3) have higher proficiency rates than students who are English learners and disadvantaged (column 1).

⁹ Student-level test data were obtained through a special request to the Standards and Assessment Division of the California Department of Education. To protect student identities, these data did not include student records for which five or fewer students in a school belonged to a specific category.

Table 2
Percentage of Students Proficient on California Standards Tests by Grade, Economic Status, and English Fluency, 2007

	<u>Disadvantaged*</u>		<u>Not Disadvantaged</u>	
	EL	Not EL	EL	Not EL
English-Language Arts				
Grade 2	27	44	51	70
Grade 3	13	33	30	61
Grade 4	22	49	40	76
Grade 5	13	42	26	69
Grade 6	8	38	19	65
Mathematics				
Grade 2	43	54	63	77
Grade 3	40	54	58	76
Grade 4	38	54	53	75
Grade 5	24	46	38	68
Grade 6	13	37	26	62

**"Disadvantaged" signifies students who are economically disadvantaged according to the definition of the California Department of Education. "EL" signifies English learner.

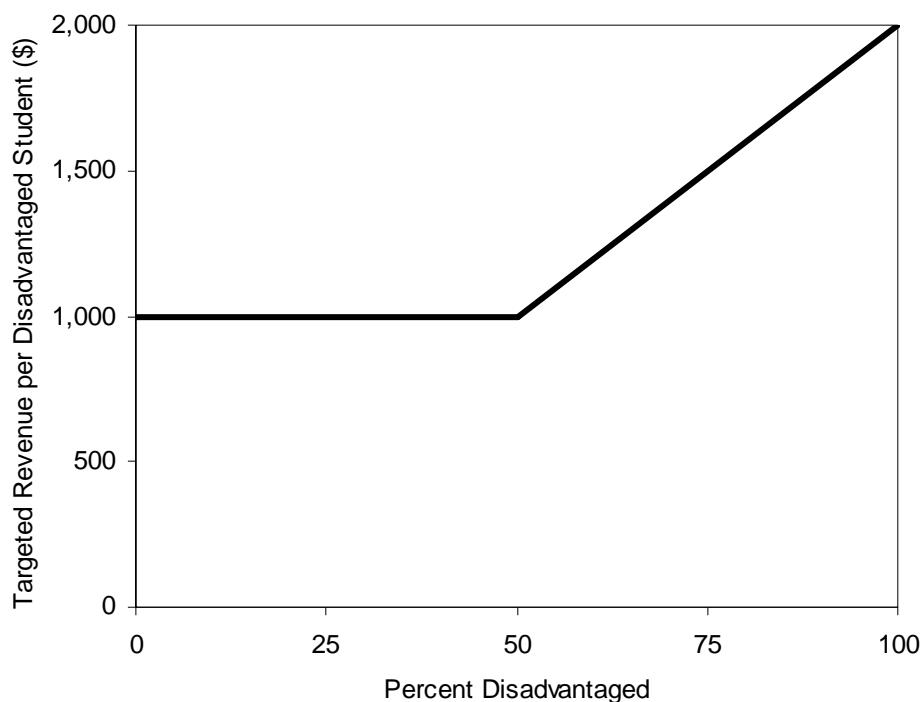
Proficiency rates are not direct measures of resource needs, of course. An English learner who is not proficient in English or mathematics may require a different intervention than a struggling student who is economically disadvantaged but fluent in English. Different interventions may require different resources and thus have different costs. After reviewing the existing research on the costs of educating English learners, Gàndara and Rumberger (2006) concluded that the research is inconclusive on the question of whether the cost of educating English learners is higher or lower than the cost of educating economically disadvantaged students who are fluent in English. In a subsequent paper, Gàndara, Maxwell-Jolly, and Rumberger (2008) extend the policy recommendations in the previous paper, an extension resulting from "deliberations from several informal meetings and two formal convenings of major stakeholders in the area of English Learner (EL) education"(page 1). Armed with the views of EL stakeholders, Gàndara and her co-authors "concur with the Governor's Committee on Education Excellence that an initial additional 20 percent above and beyond the weight for poor students be assigned to EL students . . ." (page 8).

Concentration Factors

In addition to the different definitions of disadvantaged students, the two proposals differ in the emphasis they place on districts with high percentages of such students. Under the GCEE proposal, the revenue per disadvantaged student does not change as the percentage of those students increases. However, it does change in the BKL proposal. Once the percentage reaches 50, the amount per disadvantaged student increases proportionally with the percentage of disadvantaged students. When all students are disadvantaged, the revenue per disadvantaged student is twice as high as when 50 percent or fewer of students are

disadvantaged. Figure 2 demonstrates an example of this concentration factor. The bold line in the figure represents a district's targeted revenue per disadvantaged student as the percentage of disadvantaged students increases. When the percent of disadvantaged students is less than 50, targeted revenue is \$1,000 per disadvantaged student. As the percentage increases, that rate increases. When the percentage is 75, targeted revenue is \$1,500 per disadvantaged student. At 100 percent, it is \$2,000 per disadvantaged student.

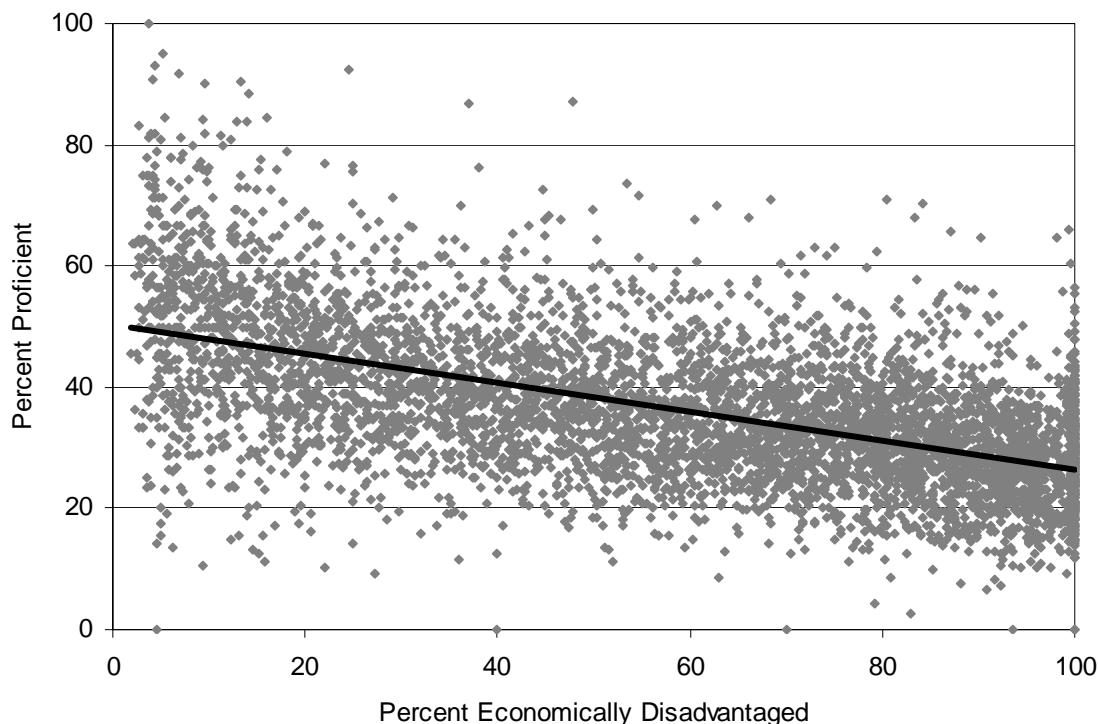
Figure 2
An Illustration of the BKL Concentration Factor



The rationale for a concentration factor is that a disadvantaged student is more likely to need additional help in schools in which many other students are also disadvantaged. To make this idea concrete, let us present a simple example that connects disadvantaged students with the need for additional resources. Imagine a school with a general education program involving regular classroom work and homework. For some students, this routine is sufficient to master the academic content specified by the state. It is sufficient for them to attain proficiency as measured by statewide tests. For others, the routine is not sufficient and additional help is necessary to attain proficiency. This intervention is an after-school program that combines nutrition, play, and tutoring. On average, the percentage of disadvantaged students who do not attain proficiency with the regular routine is greater than the percentage of other students who do not attain proficiency. Because of this difference, schools with high percentages of disadvantaged students need additional resources to operate their intervention program. The targeted program provides the funds for these additional resources.

The question is whether the percentage of disadvantaged students attaining proficiency falls as the percentage of disadvantaged students in a school rises. If it does, there is a rationale for a concentration factor. We explored that question in *Funding Formula* and provide additional evidence in *Further Analysis*. Regardless of the subject tested (English Language Arts or Mathematics) or the grade level (elementary, middle, or high school), the percentage of disadvantaged students who are proficient declines with the percentage of students who are disadvantaged. Figure 3 provides a representative example for the 2007 English Language Arts CST for elementary schools. The points in the figure represent proficiency rates and disadvantage percentages for these schools. The bold line in the figure is the average relationship between the proficiency rate of disadvantaged students and the percent who are disadvantaged.¹⁰ Figure 6 of *Further Analysis* presents equivalent figures for the mathematics CST and for middle and high schools in both English and mathematics. In all cases, there is a clear negative relationship between the two variables.

Figure 3
Proficiency of Disadvantaged Students and Percent Disadvantaged
English Language Arts CTS, Elementary Schools, 2007



While this negative relationship tends to support the use of a concentration factor in a funding formula, it is important to keep in mind that California's school finance system operates at the district level, not the school level. A district may have relatively few

¹⁰ By the average relationship, we mean the ordinary least squares regression of the percent proficient on the percent economically disadvantaged. A student is economically disadvantaged if he or she participates in the school's subsidized lunch program or if neither parent is a high school graduate. The y-intercept of the average relationship is 50.6 percentage points, and the slope is -0.24.

disadvantaged students, but still have some schools with a high concentration of disadvantaged students. School-level concentration will not necessarily be identified through district-level data.

Regional Wage Adjustments

The targeted programs in both the BKL and GCEE proposals reflect the reality that schools with many disadvantaged students may need additional resources. The targeted program would provide districts with the revenue necessary to employ those additional resources. The cost of resources, particularly personnel, may also vary from district to district implying that districts with similar resource needs may require different levels of revenue. The BKL proposal would account for this possibility by adjusting the revenue in its base and targeted programs for regional wage differences. The Governor's Committee considered a regional wage adjustment, but did not recommend it.

The rationale for regional wage adjustments is that school districts must compete with other employers for qualified workers and that labor market conditions differ across regions. In particular, the wage an employer must offer to attract qualified employees will depend on what other employers in its region are offering. These offers, in turn, depend on a number of regional factors including housing prices and regional amenities. More generally, the competitive wage in a region is the wage that will make employees content to live and work in that region instead of alternative regions. Because local amenities and housing prices affect the welfare of workers, the competitive wage incorporates these other factors. The difference in competitive wages for non-teachers across the state should act as a guide for the differences in teacher costs across the state.

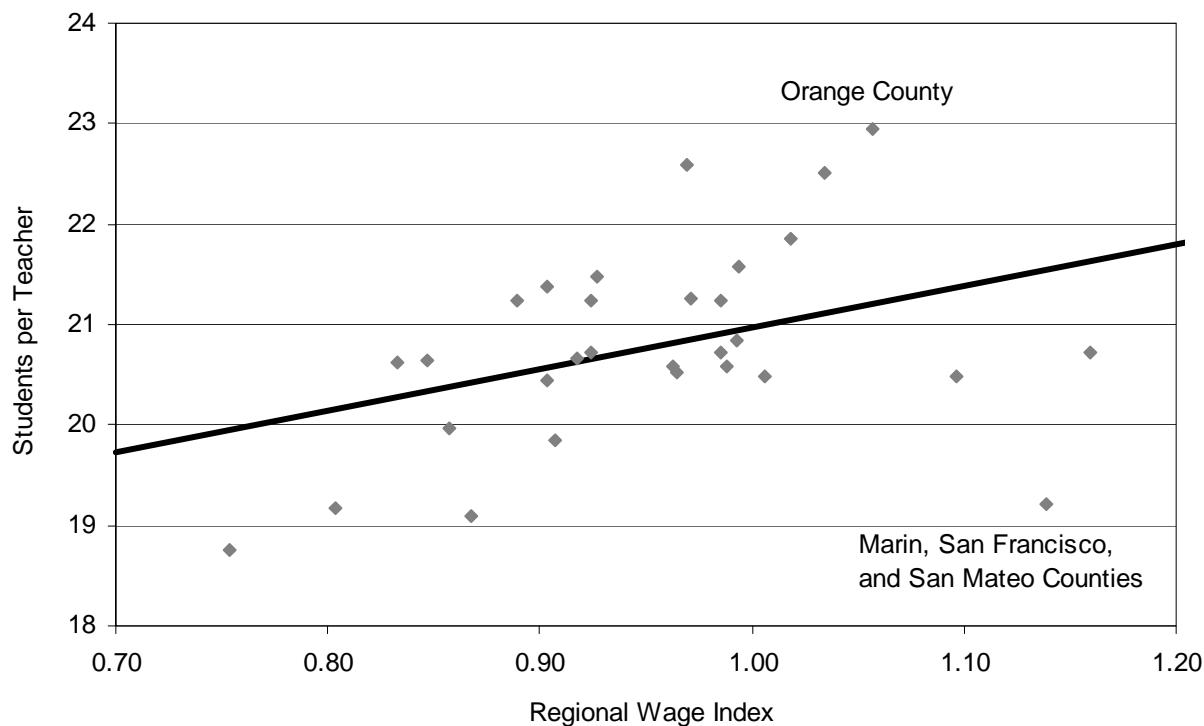
In *Funding Formulas*, we demonstrated considerable variation across California regions in the average wages of college-educated workers who are not teachers, the segment of the labor market in which school districts must compete for teachers and administrators. We also showed that the compensation of public school teachers is positively correlated with the average wage of college-educated workers in their region. However, the revenue of California school districts does not reflect these regional wage differences, and thus districts in relatively high-wage regions employ fewer teachers per student than their counterparts in low-wage regions.

This relationship between regional wage differences and students per teacher is depicted in Figure 4. The regions are based on the Metropolitan Statistical Area (MSA) designations of the U.S. Census Bureau. An MSA is a county or group of counties containing a significant urban area. Thirty-four of California's 58 counties are in one of these MSAs. The remaining 24 counties are grouped into 5 regions. The 25 MSAs plus the 5 regions constitute the 30 regions represented in the figure. The figure shows a wage index for each region and the ratio of students per teacher in the region.¹¹ The bold line in the figure represents the average

¹¹ The index is based on the average wage of college-educated workers not employed in public schools. It is the average wage for a region divided by the average wage for the state. The derivation of the index is described in Rose and Sengupta (2007).

relationship between the wage index and the student-teacher ratio.¹² According to this relationship, a region with an index of 0.8 will have a student-teacher ratio of 20, and a region with an index of 1.2 will have a ratio of 21.5, a difference of 7.5 percent.

Figure 4
Students per Teacher and Regional Wage Index
California Regions, 2003-2004



The figure also reveals a few regions not well-represented by this average relationship. The San Francisco MSA, consisting of San Francisco, Marin, and San Mateo Counties, has a wage index of 1.14 and a student-teacher ratio of 19.2. In comparison, Orange County has an index of 1.06 and a student-teacher ratio of 23.0. Other factors are clearly at work in determining student-teacher ratios. For example, many districts in Marin and San Mateo Counties have "excess taxes," property tax revenue in excess of the state's revenue limit for a district. Districts in that fortunate circumstance have more revenue than other districts, allowing them to employ relatively more teachers. In an attempt to sort out the contribution of these various factors, Rose and Sengupta (2007) used a statistical model to estimate a district's student-teacher ratio as a function of its revenue per student, its regional wage index, and a number of other factors. They found that, holding other factors including revenue per student

¹² By average relationship, we mean an ordinary least squares regression of the student-teacher ratio of a region on its wage index. The y-intercept of that relationship is 16.8 students per teacher, and the slope is 3.9.

constant, a 10 percent increase in a district's regional wage index increases its student-teacher ratio by 2 percent, a response that is significantly greater than that depicted by the average relationship in Figure 4. For the same increase in the wage index, the ratio of students to other certified employees rises by about 6 percent.

While this statistical evidence provides a rationale for incorporating a regional wage index in the state's funding formula, a number of practical issues argue against including such an index. To us, the most compelling is simplicity, a clearly stated priority of the Governor's Committee. Adjusting for regional wage differences is not complicated by itself, but it does beg the question of what other cost differences ought to be incorporated in the state's funding formula. Because school districts operate in such a wide variety of circumstances, adjusting revenue for cost differences could quickly degenerate into a series of special cases. We considered some of these possible adjustments in *Funding Formulas*. In particular, we considered differences across districts in utility and transportation costs, two other sources of cost differences frequently identified. We found that differences in labor costs across districts are far more important than differences in utility or transportation costs, suggesting that if the state incorporates any cost adjustments in its funding formulas it should start with an adjustment for differences in regional labor markets.

Simulations

The previous section concerned four areas in which the GCEE and BKL proposals differ. Those differences are minor, however, compared to the similarities between the two. Both would greatly simplify California's school finance system and direct significantly more resources to disadvantaged students. The important contrast is not between the two proposals but between either and the status quo. Accordingly, this section focuses on that contrast by comparing the revenue districts would receive under the GCEE proposal with the revenue they receive under the current system. *Funding Formulas* provides a similar analysis for the BKL proposal and a full description of the PPIC school finance simulation model, which is used in both simulations.

Baseline

The Governor's Committee would allocate revenue among school districts according to a simple formula, base revenue in proportion to the total number of students and targeted revenue in proportion to the number of low-income students and English learners. Because that formula is so transparent, understanding how it would change the allocation of revenue is largely a matter of understanding how revenue is currently allocated through the programs the Committee would consolidate. This section takes up that task, first for the programs that would be consolidated into the GCEE base program and then for the programs that would be consolidated into the GCEE targeted program. Our analysis employs revenue data for 2004-2005, the data underlying the PPIC model.

The GCEE proposal would consolidate a large number of revenue programs into its base program.¹³ By our count, this consolidation would involve 45 of the revenue programs existing in 2004-2005. These programs are listed in Table A.1 in the Appendix. The largest are revenue limit funds, class size reduction, lottery revenue, home-to-school transportation, the school improvement program, and instructional materials. In 2004-2005, revenue in all programs consolidated into the GCEE base program averaged \$5,958 per ADA. Revenue limit funds amounted to 84 percent of that total. The 45 programs consolidated into the new base program constitute 82 percent of state revenue allocated to public schools in 2004-2005.¹⁴

Base revenue per ADA varied considerably among districts. Thirty percent had base revenue at least \$500 per ADA greater than the statewide average. However, most high-revenue districts are small. In Table 3, districts of each type (elementary, high school, and unified) are partitioned into three groups according to size. For each type, the average revenue per ADA is largest for the small districts. Average revenue per ADA is \$7,896 for unified districts with fewer than 3,000 ADA, \$5,901 for unified districts with ADA between 3,000 and 10,000, and \$5,824 for unified districts with more than 10,000 ADA. The dispersion of revenue is also greatest for small districts. Only 16 percent of small unified districts had revenue within \$500 per ADA of the average for that group of districts. On the other hand, 95 percent of large unified districts had revenue per pupil within that range.

¹³ The programs are specified in Appendix D of the Committee's Technical Report.

¹⁴ In this case, "state revenue" includes all revenue limits funds, including property taxes.

Table 3
Revenue in Programs Consolidated into GCEE Base Program, 2004-2005

	Number of Districts	Average Revenue per ADA	Percent of Districts Within \$500 of Average	Percent of Districts Within \$1,000 of Average
Elementary districts				
Small (0 - 250 ADA)	197	8,759	9	17
Medium (250 - 1,500 ADA)	180	6,190	78	93
Large (1,500 ADA +)	180	5,834	93	98
High school districts				
Small (0 - 1,500 ADA)	27	7,982	15	41
Medium (1,500 - 6,000 ADA)	27	6,724	74	85
Large (6,000 ADA +)	29	6,518	93	93
Unified districts				
Small (0 - 3,000 ADA)	123	7,896	16	28
Medium (3,000 - 10,000 ADA)	104	5,901	97	99
Large (10,000 ADA +)	107	5,824	95	100

Base revenue also varies by district type. For large districts, average revenue per ADA is approximately equal for elementary and unified districts, \$5,834 and \$5,824 respectively. However, average revenue per ADA is nearly \$700 higher for large high school districts. A similar pattern holds for medium-sized districts.

The important question is whether these patterns in the distribution of base revenue reflect differences in district needs and costs not recognized in the GCEE proposal. In addressing that question, we focus on the distribution of revenue limit funds because they constitute the bulk of base revenue. That revenue source dates back to the 1971 ruling of the California Supreme Court in *Serrano v. Priest*.¹⁵ Before that time, school districts financed their activities by levying local property taxes. This local revenue was supplemented by state aid. In *Serrano*, the Court found this system unconstitutional because differences in property wealth among districts led to differences in revenue. As the legislature began to fashion a response to this ruling, California voters weighed in with the passage of Proposition 13. The initiative limited the property tax rate and gave the legislature the authority to allocate property tax revenue among local governments. The legislature used this authority to craft a response to the *Serrano* ruling. It assigned to each school district a portion of the tax revenue from properties located within its boundaries and then supplemented that local revenue with state aid so that total revenue equaled an amount referred to as the district's revenue limit. These limits were set by state statute, giving the state the authority to equalize district funding over time. The manner in which the legislature has used this authority is the key to understanding current variations in revenue limit funding.

When the revenue limit system was established, each district was assigned a base revenue limit, which was its general purpose revenue per ADA from state and local sources in 1972-73. The state has updated those base limits over the years. In any particular year, a district's revenue limit is its base revenue limit for that year multiplied by its ADA. The state

¹⁵ For an account of these events, see Sonstelie, Brunner, and Ardon (2000).

has taken steps to equalize these base limits, partly to satisfy the courts. In general, these equalizations raise the base limits of districts with relatively low limits. For this purpose, each district is placed in one of six groups defined by type (elementary, high school, and unified) and size (small and large).¹⁶ Equalization occurs within groups, but not across them. Initially, small districts of each type tended to have higher revenue limits than large districts of the same type. Equalization within size grouping preserved that difference. Similarly, high school districts tended to have higher revenue limits than other districts, a difference that has also persisted.

Base revenue limits differ for a variety of other reasons. In the 1980s, the state provided districts with incentives to lengthen the school day and year and increase the pay of beginning teachers. Those incentives were eventually rolled into base limits. When the state discontinued the practice of counting excused absences in average daily attendance, it adjusted revenue limits to offset the negative effect of this change on districts that had high rates of excused absences. A further adjustment was created when, in the wake of Proposition 13, the state discontinued most summer school programs and curtailed adult education. Districts were permitted to add the revenue lost from these reductions to their revenue limits even though the programs were discontinued (Goldfinger, 1999).

Another wedge between base revenue limits and revenue limit funding is excess taxes. When the property tax revenue assigned to districts exceeds their revenue limits, districts are allowed to keep these excess taxes. The number of these "excess tax" districts varies from year to year as property tax revenue varies. In 2004-2005, there were 74 of these districts.

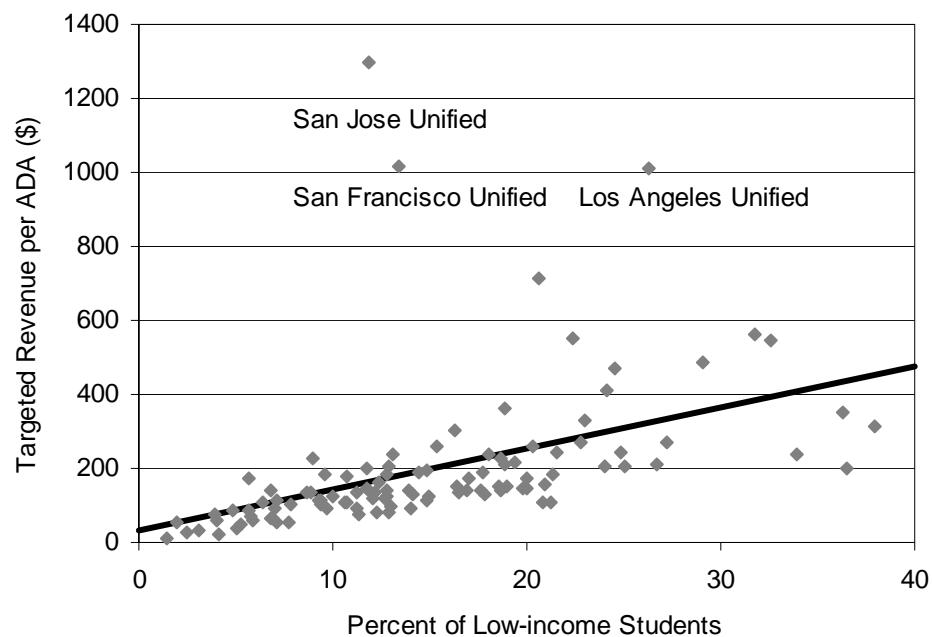
This account of variations in revenue limit funding is not meant to be exhaustive. Its purpose is rather to suggest that many variations in revenue limit funding do not appear to be related to differences in district costs. One obvious exception is the alternative to the revenue limit formula used to determine funding for necessary small schools. Another possible exception is the partition of districts into groups by type and size, and the equalization of base limits within those groups. Does that partition and the average revenue limit in each group represent a true difference in cost between districts in different groups? We do not know the answer to that question, though it does seem odd that unified and elementary districts have approximately the same average revenue limits while high school districts have higher averages. If high schools are more expensive to operate than elementary schools, unified districts should have higher revenue limits than elementary districts.

Relative to these complications in the allocation of base revenue, the distribution of targeted revenue seems straightforward, in part because much less revenue is involved. The Governor's Committee would consolidate fourteen current programs into its targeted program. The programs are listed in Table A.1 of the Appendix. In 2004-2005, those programs had average revenue of \$304 per ADA. The largest two were the Targeted Instructional Improvement Block Grant and Economic Impact Aid, which together constituted 73 percent of the total. Revenue per ADA in the fourteen programs was clearly related to the percentage of low-income students in a district. Figure 5 shows the relationship between targeted revenue per ADA and the percentage of students in a district living in families below the federal poverty threshold. The points in the diagram represent the values of both variables for large unified

¹⁶ Large elementary districts have more than 100 ADA, large high school districts more than 300 ADA and large unified districts more than 1,500 ADA.

districts in 2004-2005. Note that three districts had targeted revenue exceeding \$1,000 per ADA. In each case, the explanation is the Targeted Instructional Improvement Block Grant program, a program that grew out of court-ordered and voluntary desegregation plans. In 2004-2005, San Jose Unified received \$1,089 per ADA from this program, raising its total targeted revenue to \$1,297. San Francisco Unified and Los Angeles Unified also received large grants from this program, \$806 and \$723 per ADA, respectively.

Figure 5
Targeted Revenue per ADA and the Percent of Low-Income Students
Large Unified Districts (10,000 ADA or more), 2004-2005



Despite these outliers, there is a clear positive relationship between targeted revenue per ADA and the percent of low-income students. The bold line in the figure is the average relationship between these variables.¹⁷ The height of the line is the average revenue per ADA for districts with similar percentages of low-income students. When the percent of low-income students is zero, the average is \$35, the intercept of that relationship. Each percentage point increase in low-income students increases the average by \$11.07, the slope of that relationship. If 40 percent of students are low-income, the average is \$478 ($\$35 + 40 \times \11.07). Table 4 shows the intercepts and slopes of this relationship for other types of districts. For each type, revenue per ADA is positively related to the percent of low-income students.

¹⁷ By average relationship, we mean the ordinary least squares regression of targeted revenue per ADA on the percent of low-income students.

Table 4
**Average Relationship Between Targeted Revenue per ADA and
 Percentage of Low-Income Students, 2004-2005**

	Intercept	Slope	Percent of Districts Within \$50 of Average Relationship	Percent of Districts Within \$100 of Average Relationship
Elementary districts				
Small (0 - 250 ADA)	157	3.47	14	32
Medium (250 - 1,500 ADA)	-23	10.29	24	51
Large (1,500 ADA +)	33	7.26	34	62
High school districts				
Small (0-1,500 ADA)	160	2.54	19	48
Medium (1,500 - 6,000 ADA)	-22	13.19	30	63
Large (6,000 ADA +)	75	12.10	41	66
Unified districts				
Small (0 - 3,000 ADA)	58	8.66	24	46
Medium (3,000 - 10,000 ADA)	42	7.64	34	72
Large (10,000 ADA +)	35	11.07	26	63

*Intercepts are negative in two cases because the line best representing the average relationship is zero for a value of the percentage of low-income students that is greater than zero. However, no district in either group had a percentage of low-income students below this value.

Parameters

Because the Governor's Committee is not specific about every detail of its proposal, we must make certain assumptions to simulate it. This section describes those assumptions and the rationale behind each. In making assumptions, we attempted to be consistent with the Committee's expressed intent. We recognize, however, that there may be more than one interpretation of that intent. Consequently, we regard our simulations to be illustrative, not definitive.

Our simulations compare the revenue that districts would have received under the funding formula proposed by the Governor's Committee with the revenue districts received in 2004-2005 from the programs that Committee would consolidate into its base and targeted programs. In most cases, our comparisons employ a hold harmless condition, as recommended by the Governor's Committee in its technical report. By that condition, we mean that no district receives less money in either the GCEE base or targeted program that it received in 2004-2005 in the programs that would be consolidated into the two new programs.

For both the base and targeted programs, the Governor's Committee would allocate revenue across districts in proportion to student counts. In determining those counts, however, it would weight certain students differently. For the base program, it would weight students by grade level. Though the Committee is not explicit about what grade-level weights should be, it suggests that the weights in the current charter school model might be a good guide.

Accordingly, we have used those weights in simulating the Committee's proposals. The weights are summarized in Column 4 of Table 1. Students in grades 4 through 6 receive a weight of unity. For grades 7 and 8, the weight is 1.03. For grades K-3, the weight is 1.18, and for high school, the weight is 1.20.

The Committee is very explicit about the weights for low-income students and English learners. For each low-income student, a district would receive additional funds equal to 40 percent of base funding. The Committee would use the federal poverty guidelines, not eligibility for free or reduced-price lunch, as a definition of poverty. For each student classified as an English learner for three years or less, a district would receive additional funding equal to 20 percent of base funding. This percentage would be less for students classified as English learners for longer than three years; but, because we do not have data on the length of time students are classified as English learners, our simulations assign all English learners a weight of 20 percent.

The Committee does not clearly specify whether the additional revenue for low-income students and English learners should be percentages of each district's base revenue or percentages of a statewide average for base revenue. If the former option were followed, the additional revenue a district would receive for disadvantaged students would depend on the distribution of its students by grade level. Because of the grade-level weights in the base funding formula, a district with a relatively high percentage of high school students would have relatively high base revenue per ADA and thus relatively large targeted revenue for each disadvantaged student. For simplicity, we have chosen the second approach. In determining the targeted revenue for each district, we apply the percentages for low-income students and English learners to the statewide average for base funding per ADA. In calculating that average, we do not impose a hold harmless condition.

These assumptions leave just one parameter to determine, the level of base funding. We parameterize that level by the base funding per pupil for students in grades 4 through 6, a rate we refer to as the grade 4-6 base rate. This grade level receives the lowest weight in the GCEE base funding proposal, a weight we have normalized to unity. Base funding levels for all other grades are determined by multiplying the grade weights in Column 4 of Table 1 by this grade 4-6 base rate. These funding levels and the distribution of students by grade level determine the statewide average for base funding and thus the targeted revenue for low-income students and English learners.

The Committee does not specify the level of base funding, but it does estimate the additional cost of its proposal to be \$5 billion for 2007-2008.¹⁸ Corrected for inflation between 2004-2005 and 2007-2008, this additional cost is approximately \$4.54 billion for 2004-2005, the fiscal year for our simulation model. With some experimentation, we determined that a grade 4-6 base rate of \$5,530 yields an additional cost of \$4.5 billion, assuming districts are held harmless with respect to both base and targeted revenue. Accordingly, we have simulated the GCEE proposal with that rate. To show the sensitivity of our results with respect to that choice, we have also simulated the proposal with grade 4-6 base rates of \$5,000 and \$6,000.

¹⁸ In the analysis that follows, base funding refers to the consolidated general purpose funding that each districts would receive under the GCEE proposal.

Table 5 gives the rate of targeted revenue per disadvantaged student for each of the three grade 4-6 base rates we employ in our simulations. For example, when the grade 4-6 base rate is \$5,530 per ADA, the statewide average for base funding (without the hold harmless condition) is \$6,189. Forty percent of that average is \$2,476, which is the targeted revenue districts receive for every low-income student. Similarly, 20 percent of that average is \$1,238, which is the targeted revenue districts receive for every English learners.

Table 5
Funding Rates for GCEE Targeted Program

Grade 4-6 Base Rate (\$/ADA)	Statewide Base Funding (\$/ADA)	Targeted Rates (\$/student) Low-income	Targeted Rates (\$/student) English Learners
5,000	5,596	2,238	1,119
5,530	6,189	2,476	1,238
6,000	6,715	2,686	1,343

Results

These assumptions and parameter values make it relatively straightforward to simulate the GCEE proposal. With districts held harmless and a grade 4-6 rate of \$5,530 per ADA, the GCEE base and targeted programs would have required \$40,694 million, a \$4,495 million increase over the revenue allocated in 2004-2005 through the programs consolidated into the new base and targeted programs (Table 6). The revenue required for the base program would be \$1,697 million more than the revenue of programs consolidated into the new base program. The new targeted program would require \$2,798 million more than was allocated through targeted programs in 2004-2005. Thus, roughly 60 percent of the additional revenue required by the GCEE proposal would be allocated to the new targeted program. In contrast, of the \$36 billion in revenue in all the programs that the Governor's Committee would consolidate, only 5 percent of the total was allocated through targeted programs.

Table 6
Additional Revenue with GCEE Funding Formula

Grade 4-6 Base Rate (\$/ADA)	Districts Not Held Harmless			Districts Held Harmless		
	Base (\$ M)	Targeted (\$ M)	Total (\$ M)	Base (\$ M)	Targeted (\$ M)	Total (\$ M)
5,000	-2,091	2,327	236	9	2,374	2,384
5,530	1,338	2,759	4,098	1,697	2,798	4,495
6,000	4,380	3,143	7,523	4,601	3,175	7,776

If districts were not held harmless, the additional cost of the GCEE program would be \$4,098 million, a reduction of \$397 million from the cost when districts are held harmless. The bulk of this reduction would come through the base program. Without the hold harmless condition, the base program would cost an additional \$1,338 million. With the condition, the cost rises to \$1,697, an increase of \$359 million. In contrast, the cost of the hold harmless condition for the targeted program is only \$39 million. Almost all districts would receive more money from the GCEE targeted program than they now receive from the programs consolidated into that new program.

Higher grade 4-6 base rates increase the total revenue, of course, but also change the distribution of new revenue between the targeted and base programs. For a grade 4-6 base rate of \$5,530, 62 percent of additional revenue is allocated through the targeted program. For a rate of \$6,000, this proportion falls to 41 percent.

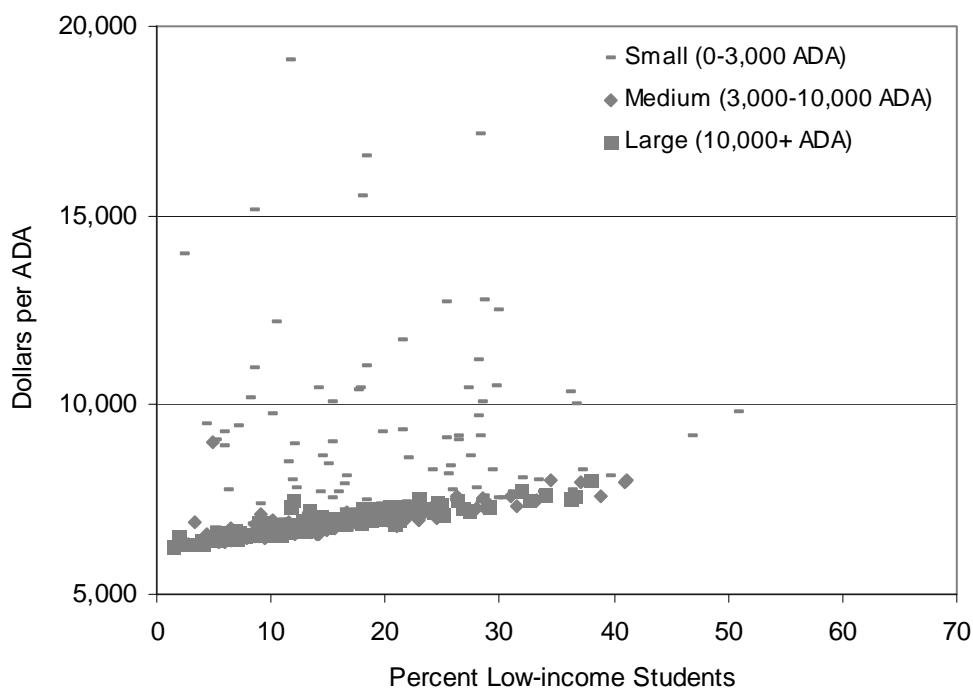
As the grade 4-6 base rate increases, the cost of the hold harmless condition decreases. For the grade 4-6 base rate of \$5,000, the additional revenue required because of the hold harmless condition is \$2,148 million (\$2,384 million minus \$236 million). For a grade 4-6 base rate of \$5,530, that cost falls to only \$397 million. For a rate of \$6,000, it is just \$253 million.

At higher grade 4-6 rates, the hold harmless condition is not particularly expensive because the districts that would be held harmless are small. While their revenue per ADA may exceed the GCEE funding formula, that difference multiplied by ADA is still small. Figure 6 illustrates this reality. The points in the figure show the percent of low-income students in each unified district and the revenue per ADA those districts would receive under the GCEE funding formula with the hold harmless condition and a grade 4-6 rate of \$5,530. The vast majority of districts are clustered in a band that begins at about \$6,200 per ADA for districts with few low-income students and extends to \$8,000 per ADA when about 40 percent of students are low-income. All but one of the districts that lie significantly above this band have fewer than 3,000 ADA.¹⁹ If the hold harmless condition were not applied, the revenue of these districts would be substantially reduced, moving them down to the lower band of districts. However, because the districts that would experience reductions are small, relatively little revenue would be saved by this action. Figures A.1 and A.2 in the Appendix are equivalent diagrams for elementary and high school districts. The figures reveal the same general conclusion: Districts that benefit substantially from the hold harmless condition are small.

The saving from relaxing the hold harmless condition would be further reduced by two recommendations of the Governor's Committee. First, the Committee would continue the practice of allowing districts to keep property tax revenue in excess of their base revenue. Second, it would continue the provisions for necessary small schools "until a suitable alternative approach is developed" (Technical Report, pages 5-17). Many of the small districts depicted in Figure 6 have excess taxes and necessary small schools, and thus relaxing the hold harmless condition would not substantially reduce their revenue.

¹⁹ The exception is Palo Alto Unified with ADA of 9,693, revenue per pupil of \$9,020, and 5 percent low-income students. Palo Alto Unified had excess taxes in 2004-2005.

Figure 6
Revenue per ADA with GCEE Funding Formula
Unified Districts*



*One district had revenue exceeding \$20,000 per ADA and is not shown above. It had an ADA of 20.

Because the GCEE proposal would focus considerably more revenue than the current system on disadvantaged students, the districts serving high percentages of such students experience the largest gains under the GCEE proposal. Table 7 shows the distribution of gains with a grade 4-6 base rate of \$5,530 per ADA. The table partitions districts into 27 different groups based on type, size, and percent of low-income students. The numbers in parentheses in each cell of the table indicate the number of districts in that cell. For example, the upper-left cell consists of small elementary districts with 10 percent or fewer low-income students. Fifty-nine districts fit that description, and the average gain for these districts was \$228 per ADA. For each district type and size, the average gain increases as the percent of low-income students increases. For large unified districts, districts that enrolled nearly 60 percent of students in 2004-2005, the average gain increases from \$698 per ADA for the districts with less than 10 percent low-income students to \$1,071 per ADA for districts with more than 20 percent of low-income students.

Table 7
**Average Increase in Revenue with Grade 4-6 Base Rate of \$5,530 per ADA,
 2004-2005 Dollars per ADA (Number of Districts in Parentheses)***

	Percent of Low-income Students		
	0 - 10	10 - 20	20 or more
Elementary Districts			
Small (0 - 250 ADA)	228 (59)	324 (52)	781 (86)
Medium (250 - 1,500 ADA)	322 (66)	487 (49)	1,163 (65)
Large (1,500 ADA +)	509 (73)	851 (42)	1,249 (65)
High School Districts			
Small (0 - 1,500 ADA)	180 (5)	355 (14)	797 (8)
Medium (1,500 - 6,000 ADA)	323 (11)	542 (10)	921 (6)
Large (6,000 ADA +)	362 (12)	700 (12)	637 (5)
Unified Districts			
Small (0 - 3,000 ADA)	406 (26)	472 (45)	868 (52)
Medium (3,000 - 10,000 ADA)	595 (48)	759 (32)	1,215 (24)
Large (10,000 ADA +)	698 (32)	906 (50)	1,071 (25)

*The hold harmless condition was applied in simulating revenue increases.

The one exception to this trend is for large high school districts. The gain for districts with 10 to 20 percent low-income students is greater than the gain for districts with 20 percent or more of such students. The explanation for this exception is twofold. First, on average, the five districts with more than 20 percent low-income students have higher base revenue under the current system than the twelve districts with 10 to 20 percent low-income students. Accordingly, the average increase in base revenue for the high poverty districts is less than the average for the other districts. On average, the difference is \$130 per student. Second, although the high poverty districts receive a bigger increase in targeted revenue than the other districts, the difference is not large. On average, the difference in the increase is only \$67 per student. Thus, on net, the average gain for high poverty districts is \$63 per student less (\$130-\$67) than for districts with 10 to 20 percent low-income students.

In addition to the positive relationship between poverty and the increase in revenue, Table 7 reveals another significant trend: High school districts tend to gain less than either elementary or unified districts. For example, large high school districts in which low-income students represent 10 to 20 percent of the student population would gain an average of \$700 per ADA. In comparison, large elementary and unified districts with 10 to 20 percent of such students would gain \$851 and \$906 per ADA, respectively. In general, this result is due to the distribution of revenue under the 2004-2005 baseline. High school districts tended to have higher base revenue than other districts. The GCEE formula does weight high school students more heavily than other students, but the difference between what high school districts would receive and what they did receive is still smaller than for other districts. The web document "Governor's Committee on Education Excellence: Simulation Results" has base and targeted revenue for every school district.

These general patterns hold for other values of the grade 4-6 base rate (Tables A.2 and A.3 in the Appendix). The GCEE proposal would direct relatively more revenue to districts with high proportions of low-income students, to large districts, and to unified and elementary districts. These patterns reflect not only the priorities of the Committee, particularly its emphasis on providing more resources to disadvantaged students, but also the implicit priorities of the current system. Considering the large differences in achievement between disadvantaged students and other students, California's current distribution of revenue among districts appears to place little emphasis on providing more resources to districts with many disadvantaged students. Also, the current system provides more revenue per pupil to high school districts than to elementary and unified districts. The GCEE proposal weights high school students more heavily than other students, but this weight applies not only to high school districts but also to unified districts. Lastly, under the current system, small school districts receive more revenue per pupil than large districts. The GCEE proposal would continue this practice, but it would not allocate additional revenue to those schools.

Conclusion

The report of the Governor's Committee concerns more than school finance. The Committee makes important recommendations with regard to teachers, school leaders, state and local governance, and a substantial new investment in preschool. In our view, however, none of these recommendations is as fundamental as the Committee's proposed reform of school finance. The reality is that California currently allocates more than \$40 billion of tax revenue (more than \$1,000 per resident) through a system that few understand. Good schools require much more than a sound finance system, but that system is also about more than schools. When the government levies taxes, it has an obligation to use the proceeds rationally and transparently. California's school finance system fails those tests.

From that perspective, the Committee's finance proposal is a step in the right direction. By consolidating a large number of revenue programs into two programs with simple formulas for allocating revenue, it makes the school finance system much more transparent. It also makes the system more rational: Districts with similar students receive similar revenue; districts in which students have greater need receive more revenue. The proposal also brings the school finance system in line with the state's expectations for academic achievement. Schools throughout the state are expected to meet the same high academic standards regardless of the backgrounds of their students, yet student background has a very significant effect on academic achievement. Accordingly, schools with many disadvantaged students should have significantly more resources than other schools. The current system does not systematically produce this outcome; the proposed system would.

The proposal of the Governor's Committee is also remarkably similar to a proposal by Alan Bersin, Michael Kirst, and Goodwin Liu. It is heartening that two groups of experienced, knowledgeable, and respected individuals arrived independently in much the same place. This agreement suggests that there may be wide consensus about the direction reform should take. That is not to suggest that there will be no difficult policy choices in implementing that direction. In fact, those difficulties are illustrated by the four main differences in the two proposals that we have noted above.

In addition to those policy choices, subsequent reform proposals should address the special problems of small school districts in sparsely populated areas. On average, these districts currently receive more funding than would be provided by the GCEE funding formulas. The Governor's Committee recognizes the legitimate needs of these districts and recommends that the state continue its revenue provisions for necessary small schools. Alternatively, the state might use the occasion of a general reform of its school finance system to reconsider these provisions. An approach used by other states is to include a measure of population density in the state's funding formula. That approach might also be sensible for California.

These policy choices will be easier if a consensus emerges about the direction of reform, a possibility suggested by the similarities in the two reform proposals. However, the common direction identified by the Governor's Committee and by Bersin, Kirst, and Liu does require the state to make two very difficult decisions. The first decision is to devolve to local school

districts the authority over how revenue is spent. Both proposals would consolidate many revenue programs, most of which have restrictions on how revenue can be used – restrictions established by past legislatures. Would a future legislature be willing to remove those restrictions, allowing each local school district to decide how best to spend its funds?

California's evolving accountability system provides a ready rationale for the devolution of spending authority, but not everyone may find this rationale convincing. The second decision is to place a higher priority on disadvantaged students in allocating revenue, a priority in both the proposal of the Governor's Committee and the proposals by Bersin, Kirst, and Liu. This priority is certainly consistent with the state's goal of high achievement for all students, but it runs directly counter to another significant reality. California school districts have fewer resources than districts in many other states. As a consequence, all California districts may reasonably believe that they are being asked to accomplish great feats with rather modest means.²⁰ Can the state place a priority on providing resources to some districts when all districts may believe their resources are inadequate?

²⁰ For an account of this tension, see Rose et al., *High Expectations, Modest Means: The Challenge Facing California's Public Schools*, Public Policy Institute of California, 2003.

Appendix

Table A.1
2004-2005 Revenue Programs Allocated to Governor's Committee Funding Model

Revenue Program	Budget Act Number	Dollars per ADA Subtotals
Revenue sources consolidated into new base program		
District Revenue Limit		
Local Revenue (Including ERAF)		1,820.95
State Aid (net of COE transfers)		3,201.00
Local Funded Charter School Gen. Purpose Entitlement		30.85
Charter School In Lieu of Property Taxes		
Unified Districts		10.18
Elementary and High School Districts		5.79
Charter School Categorical Block Grant	6110-211-0001	3.16
Basic Aid Supplement Charter School Adjustment		0.08
State Lottery Revenue		157.46
Instructional Materials Block Grant	6110-189-0001	61.93
Instructional Materials - Williams Case		23.55
School Library Materials	6110-149-0001	0.71
State Mandates		24.50
School Improvement		
Kindergarten - Grade 6	6110-116-0001(1)	56.57
Grades 7 - 12	6110-116-0001(2)	11.97
Class Size Reduction		
Kindergarten - Grade 3	6110-234-0001	272.86
Grade 9	6110-232-0001	13.96
Tenth Grade Counseling	6110-108-0001	2.04
Supplemental Grants	6110-235-0001	28.79
Year Round Schools	6110-224-0001	14.56
Charter School Facilities Grants	6110-485	0.12
Tobacco Use Prevention Education (Prop 99)		2.84
Environmental Education		0.00
Home to School Transportation	6110-111-0001	
Pupil Transportation	sch. (1)	84.12
Small School District Bus Replacement	sch. (2)	0.69
School Safety Block Grants	6110-228-0001	
Grades 8-12	sch. (1)	14.87
School Community Policing Partnership Comp. Grant	sch. (5)	1.50

Table A.1 continued

Revenue Program	Budget Act Number	Dollars per ADA	Subtotals
High Risk Youth Education and Public Safety Program	6110-212-0001	0.03	
Staff Development Day Buyout	6110-112-0001	36.15	
Math and Reading Professional Development Program	6110-137-0001	5.02	
Beginning Teacher Support and Assessment	6110-191-0001	9.15	
National Board Certification Incentives	6110-195-0001	1.08	
Intersegmental Staff Development	6110-197-0001	0.22	
Staff Development - Instructional Support	6110-193-0001		
Reader Services for Blind Teachers	sch. (3)	0.05	
Teacher Peer Review	sch. (2)	4.30	
Supplemental Instruction (Summer School)	6110-104-0001		
Grades K-12, Core Academic	sch. (4)	16.21	
After School Programs	6110-649	10.05	
Early Mental Health Initiative		1.60	
Basic Aid Choice/Court Ordered Voluntary Pupil Transfer		0.62	
American Indian Early Child Education Program	6110-151-0001(2)	0.09	
Gifted and Talented Pupil Program	6110-124-0001	8.32	
Specialized Secondary Program Grants	6110-122-0001	0.69	
Advanced Placement Programs	6110-240-0001	0.43	
Partnership Academy Programs	6110-166-0001	3.56	
Schools Apportionment - Apprentice Program	6110-103-0001	2.27	
Child Nutrition	6110-203-0001	12.80	
Child Nutrition Breakfast Startup	6110-201-0001	0.17	
Child Nutrition, Linking Education, Activity, & Food		0.02	
Subtotal			5,957.90

Table A.1 continued

Revenue Program	Budget Act Number	Dollars per ADA	Subtotals
Revenue sources consolidated into new targeted program			
Targeted Instructional Improvement Block Grant	6110-132-0001	128.02	
Economic Impact Aid	6110-128-0001	92.74	
Supplemental Instruction (Summer School)	6110-104-0001		
Grades 7-12, CAHSEE	sch. (1)	32.97	
Grades 2-9, Retained or Recommended for Retention	sch. (2)	12.45	
Grades 2-6, Low STAR or At Risk	sch. (3)	4.80	
English Learners Student Assistance	6110-125-0001	9.41	
Community-Based English Tutoring Program	6110-617	8.61	
Community Day Schools	6110-190-0001	5.52	
Dropout Prevention	6110-120-0001	3.78	
CalSAFE	6110-198-0001		
Child Care	sch. (2)	2.62	
Academic and Supportive Services	sch. (1)	1.98	
Healthy Start	6110-200-0001	0.35	
Opportunity Classes and Programs	6110-127-0001	0.30	
At Risk Youth (LAUSD)	6110-280-0001	0.10	
Subtotal			303.63

Table A.1 continued

Revenue Program	Budget Act Number	Dollars per ADA	Subtotals
Revenue sources not consolidated into student-centered funding model			
Revenue sources consolidated into new school intervention program			
Low Performing Schools/High Priority Schools	6110-123-0001(2)	33.11	
Immediate Intervention/Underperforming Schools Program	6110-123-0001(1)	8.99	
Corrective Actions	6110-123-0001(3)	0.91	
Special Education			
Special Education Apportionment	6110-161-0001	462.07	
Federal Special Education-Local Assistance		168.63	
Special Education Property Taxes		55.22	
Special Education Annual Mandate Settlement		4.30	
Special Education ROCP Handicapped		0.59	
Special Ed DDS Early Intervention Program		0.17	
Adult Education			
Adults in Correctional Facilities	6110-158-0001	2.32	
ROC/Ps	6110-105-0001	71.43	
Agricultural Vocational Education	6110-167-0001	0.77	
Child Care and Development			
Preschool Education	sch. (1)	27.78	
General Child Development Programs	sch. (1.5a)	30.00	
Extended Day Care	sch. (1.5i)	1.83	
Alternative Payment Program Stage 2	sch. (1.5e)	0.48	
Alternative Payment Program Stage 3 Setaside	sch. (1.5f)	0.34	
Alternative Payment Program	sch. (1.5d)	0.18	
Migrant Day Care	sch. (1.5c)	0.12	
Resource and Referral	sch. (1.5g)	0.07	
Deferred Maintenance	6110-189-0001	42.39	
Student Assessment Testing			
STAR Program	sch. (3)	1.93	
English Lang Development Assessment	sch. (4)	1.49	
High School Exit Exam	sch. (5)	0.35	
Foster Youth Program	6110-119-0001	0.27	
Subtotal		1,021.25	

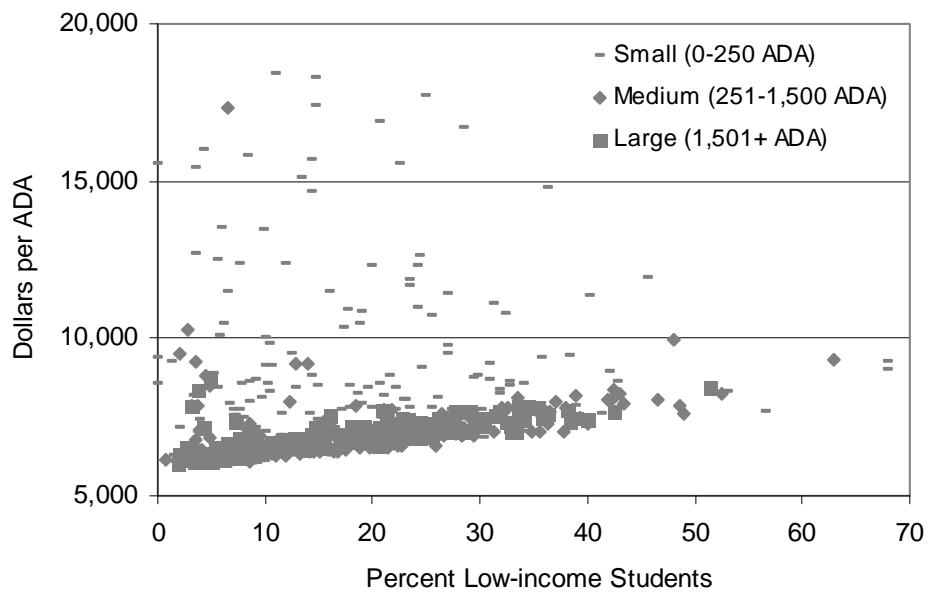
Table A.2
**Average Increase in Revenue with Grade 4-6 Base Rate of \$5,000 per ADA,
 Dollars per ADA (Number of Districts in Parentheses), 2004-2005**

	Percent of Low-income Students		
	0 - 10	10 - 20	20 or more
Elementary Districts			
Small (0-250 ADA)	153 (59)	254 (52)	665 (86)
Medium (250 -1,500 ADA)	171 (66)	337 (49)	917 (65)
Large (1,500 + ADA)	204 (73)	546 (42)	902 (65)
High School Districts			
Small (0-1,500 ADA)	134 (5)	205 (14)	699 (8)
Medium (1,500-6,000 ADA)	123 (11)	301 (10)	597 (6)
Large (6,000 + ADA)	101 (12)	408 (12)	461 (5)
Unified Districts			
Small (0-3,000 ADA)	232 (26)	355 (45)	714 (52)
Medium (3,000 -10,000 ADA)	192 (48)	393 (32)	805 (24)
Large (10,000 + ADA)	227 (32)	452 (50)	689 (25)

Table A.3
**Average Increase in Revenue with Grade 4-6 Base Rate of \$6,000 per ADA,
 Dollars per ADA (Number of Districts in Parentheses), 2004-2005**

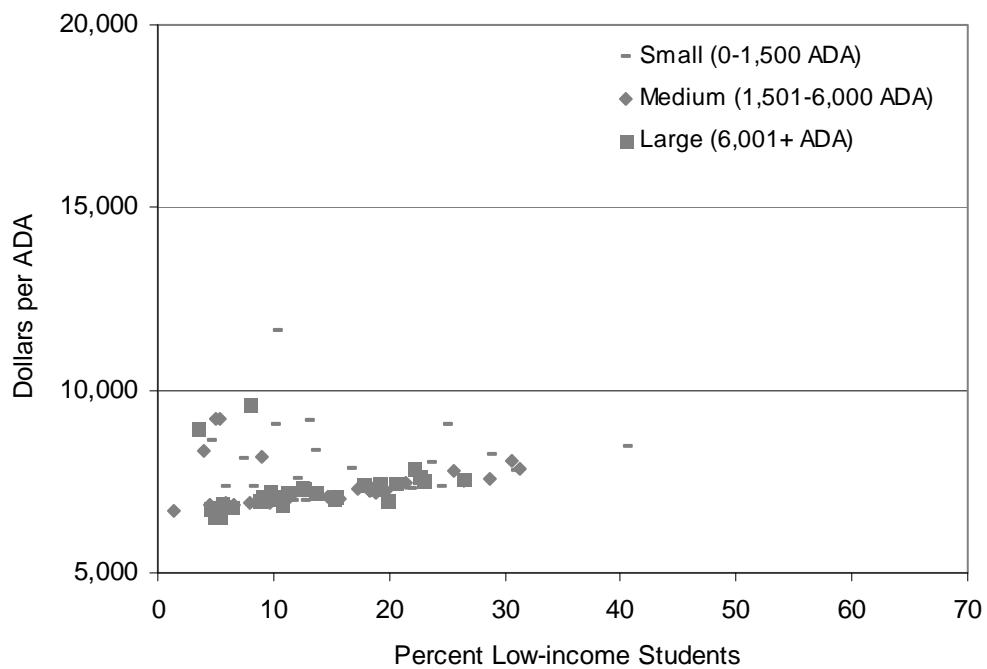
	Percent of Low-income Students		
	0 - 10	10 - 20	20 or more
Elementary Districts			
Small (0-250 ADA)	389 (59)	467 (52)	986 (86)
Medium (250 -1,500 ADA)	686 (66)	909 (49)	1,700 (65)
Large (1,500 + ADA)	992 (73)	1,394 (42)	1,840 (65)
High School Districts			
Small (0-1,500 ADA)	348 (5)	685 (14)	1,172 (8)
Medium (1,500-6,000 ADA)	700 (11)	1,139 (10)	1,561 (6)
Large (6,000 + ADA)	846 (12)	1,291 (12)	1,163 (5)
Unified Districts			
Small (0-3,000 ADA)	714 (26)	689 (45)	1,172 (52)
Medium (3,000 -10,000 ADA)	1,116 (48)	1,330 (32)	1,837 (24)
Large (10,000 + ADA)	1,246 (32)	1,479 (50)	1,689 (25)

Figure A.1
Revenue per ADA with GCEE Funding Formula
Elementary Districts*



* Seven districts have revenue greater than \$20,000 per ADA. Six had less than 60 students, and the seventh had 209 students.

Figure A.2
Revenue per ADA with GCEE Funding Formula
High School Districts*



* One district had revenue greater than \$20,000 per ADA. It had 915 students.

References

- Bersin, Alan, Michael W. Kirst, and Goodwin Liu, *Getting Beyond the Facts: Reforming California School Finance*, Chief Justice Earl Warren Institute on Race, Ethnicity, and Diversity, University of California, Berkeley, California, 2007.
- Gàndara, Patricia, and Russell W. Rumberger, *Resource Needs for California's English Learners*, University of California Linguistic Minority Research Institute, 2006.
- Gàndara, Patricia, Julie Maxwell-Jolly, and Russell W. Rumberger, *Resource Needs for English Learners: Getting Down to Policy Recommendations*, University of California Linguistic Minority Research Institute, 2008.
- Goldfinger, Paul M., "A History of Revenue Limits: Or, Why Is Your Base Revenue Limit Bigger than Mine?" *The Fiscal Report*, Volume 19, Number 25, School Services of California, Inc., 1999.
- Governor's Committee on Education Excellence, *Students First: Renewing Hope for California's Future*, November 2007.
- Governor's Committee on Education Excellence, *Students First: Renewing Hope for California's Future, Technical Report*, November 2007.
- Rose, Heather, and Ria Sengupta, *Teacher Compensation and Local Labor Market Conditions in California: Implications for School Funding*, Public Policy Institute of California, 2007.
- Rose, Heather, Ria Sengupta, Jon Sonstelie, and Ray Reinhard, *Funding Formulas for California Schools: Simulations and Supporting Data*, Public Policy Institute of California, 2008.
- Rose, Heather, Ria Sengupta, Jon Sonstelie, and Ray Reinhard, *Funding Formulas for California Schools: Further Analysis*, http://www.ppic.org/content/pubs/op/OP_108HROP_FA.pdf.
- Rose, Heather, Jon Sonstelie, Ray Reinhard, and Sharmaine Heng, *High Expectations, Modest Means: The Challenge Facing California's Public Schools*, Public Policy Institute of California, 2003.
- Sonstelie, Jon, Eric Brunner, and Kenneth Ardon, *For Better or For Worse? School Finance Reform in California*, Public Policy Institute of California, 2000.

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