

Understanding the Incentives in California's Education Finance System

By William Duncombe and John Yinger, Syracuse University



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Getting Down to Facts

A research project designed to provide California's policy-makers and other education stakeholders with comprehensive information about the state's school finance and governance systems, and lay the groundwork for a conversation about needed reforms. The project was made possible by grants from the Bill & Melinda Gates Foundation, the William and Flora Hewlett Foundation, the James Irvine Foundation, and the Stuart Foundation.

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For the full text of the author's research report and the other studies in this project, see: www.irepp.net

For background on California's school finance system, see: www.californiaschoolfinance.org

Institute for Research on Education Policy & Practice
520 Galvez Mall, CERAS Building
Rm #518
Stanford, CA 94305

650.736.1258
IREPP@suse.stanford.edu

This report explores the incentives California's unique education finance system creates for parents, voters, and school officials, and estimates the extent to which these incentives influence education spending and student performance. The questions it addresses include:

1. How does California's education finance system compare to the systems in other states?
2. How do features of California's education finance system affect school district efficiency, and do they lead some districts to be more efficient than others?
3. Do local voters have a significant influence on educational outcomes even though Proposition 13 and other provisions of California's education finance system give extensive powers to the state?

Summary of Key Findings

California's centralized education finance system differs from other states' systems in several ways

The education finance system in California is constrained in two fundamental ways. On one side, Proposition 13 limits the local property tax rate and restricts the growth in assessed values for property. On the other side, court rulings from the *Serrano v. Priest* funding equity case have limited differences across districts in general-purpose revenue per pupil, defined as unrestricted state aid plus property taxes.

The Proposition 13 limit is binding because school districts have no other major sources of revenue. As a result, state policymakers largely determine the revenue available to a school district. The *Serrano* restriction is less binding for two reasons. First, it does not apply to state categorical aid, which can—and does—vary widely across districts. Second, now that the state has met the equalization guidelines set down by the court, it is free to implement additional education finance reforms.

These features lead to an education finance system in which, compared to other states, the state government plays a relatively large role and general-purpose aid plays a relatively small role.

General-purpose revenues, which are allocated without regard to educational costs, represent about half of state aid

As is true in most other states, California uses an approach to general-purpose or “foundation” aid for districts that provides funds based on a per-pupil target for spending minus an expected local contribution. But unlike most states, California since 1972 has calculated the amount for each district based upon past funding with annual adjustments. Six other states use a similar approach. Most others set foundation funding amounts based, at least partially, on the amount needed to provide the minimum education expected by the state. California does not make any adjustments in general-purpose funds (revenue limits) based on district costs.

California also devotes a smaller proportion of its state education aid to this general-purpose funding—and more to categorical aid—than do many other states. In 2003–04, 52.7% of state aid went to revenue limits compared to 68.0% in the United States as a whole and 57.9% in the five other largest states.

California's approach to categorical aid is different from that of many other states

California devotes more of its education budget to categorical aid than do many other states. In addition, the state allocates

Study Methods

The authors compare California’s education finance system to those of other states. They also draw on a large literature on education finance to identify the key incentives that operate on voters and education officials, show how these incentives can be incorporated into models of voter and school-district behavior, and estimate the extent to which these incentives influence educational outcomes in California.

The report examines the determinants of educational spending and student performance at the school district level using two widely studied tools: an education cost equation and an education demand equation.

An education cost equation indicates the amount of money a district must spend per pupil to obtain a given level of student performance, measured in this study by California’s Academic Performance Index (API). The authors use the results of the cost equation to develop indices of educational costs and school district efficiency. The cost index indicates the extent to which districts in high-wage labor markets or with a high concentration of disadvantaged students must pay more than other districts to achieve the same student performance. The efficiency index indicates which districts spend more than others to achieve the same student performance, after accounting for their educational costs.

The demand equation explains the level of student performance in a school district (an indicator of voters’ education demand) as a function of voters’ incomes, the price of education in that district, and other voter characteristics that might be related to their educational preferences, such as the percent of the district that is rural, the share of the population that is school age (5 to 17 years old), and the portion of the population composed of senior citizens.

somewhat more of its categorical aid to programs for economically disadvantaged students. In one analysis, this places California in a category with 17 other states that combine compensatory categorical aid programs with a foundation aid program that is not adjusted for costs.

The emphasis on categorical aid in California reveals another dimension of centralization in the state’s education finance system. Each categorical aid program places additional constraints and responsibilities on school districts. This gives state lawmakers more control over the allocation of school district budgets, but it limits local flexibility and innovation and raises the share of resources devoted to bookkeeping instead of education.

Overall, the authors find that the underfunding of districts with high concentrations of minority or low-income students may not be as severe in California as in some other states, but they say this outcome is more by accident than design.

Local revenue sources include a higher proportion not from property taxes

In looking at local revenue sources for education, the authors also find that 16.8% of local revenues came from “other revenue” sources in 2003–04, compared to just 6.6% in the United States as a whole and 5.6% in the other large states. Of these other sources in California, about 8.0% are from parcel taxes, which are a funding mechanism unique to this state. Nearly half (48.8%)

come from a miscellaneous category that appears, from the incomplete data available, to largely reflect contributions from local education foundations.

The authors used these realities in California’s funding system to estimate their cost and demand equations from which the rest of the findings were derived.

In California, money matters: There is a clear relationship between spending and student performance

The author’s estimated cost function shows a strong, statistically significant link between school district spending and student performance. Holding all other variables constant, a 10% increase in student performance as measured by the district-level API is associated with a 7.1% increase in spending.

These results can be used to estimate how much additional funding is needed to close the student-performance gap between high- and low-poverty districts. Regardless of enrollment size, the existing API gap between the highest- and lowest-poverty districts is about 30%. Based on the estimate in the previous paragraph, spending in the highest-poverty districts would therefore have to increase by about 21% (30% multiplied by 0.71) to eliminate this API gap. These estimates assume that the relationship between spending and achievement is causal and that this additional aid has no impact on school district efficiency. If the additional aid lowers school district efficiency—which is particularly likely if the aid takes the form of categorical grants—then these estimates understate the additional aid that will be needed, perhaps substantially.

Costs vary based on student characteristics and labor market conditions

As is true in other states, in California the cost of education is higher in districts with a high concentration of

students from poor families or students who are English learners. In addition, school districts located in relatively high-wage labor markets must pay more to obtain the same level of student performance, presumably because they must pay more than other districts to attract teachers of any given quality. District costs also differ by type of district. In comparison to costs in unified districts, the cost per pupil is higher in high school districts and lower in elementary districts, all else being equal.

Neither revenue limits nor categorical funding fully address these cost differentials

The *Serrano* limits on variation in revenue limits were an attempt to equalize per-pupil funding levels among districts. Revenue limits do not address the issue of variations in educational costs based on student characteristics or labor costs.

Categorical aid programs partially offset the high costs associated with a concentration of student disadvantages, but they do not come close to a full accounting for these costs. Nor do these programs account for cross-district variation in the wages needed to attract high-quality teachers.

As a result, the authors conclude, districts with high concentrations of poor students or of English learners—and districts in high-wage labor markets—do not currently receive enough funds to reach the same API targets as other districts.

Higher proportions of categorical aid lower district efficiency related to student performance

The authors state that the expenditure equation in this analysis provides clear evidence that an increase in categorical aid as a share of state support lowers the efficiency with which a district provides student performance as measured by the API. This result does not reflect costs associated with special

The Concept of Efficiency for this Analysis

District efficiency is difficult to study because it cannot be directly observed. For this study, the authors identified and controlled for variables conceptually linked to school-district efficiency. These variables include measures of district fiscal capacity (income, property values, and aid) and factors associated with voters' incentives and capacity to monitor school officials, such as median earnings, population mobility, and the price of funding any additional education through the parcel tax.

Efficiency can only be defined in relation to a particular performance standard. This study examines efficiency in delivering set targets on California's Academic Performance Index (API); spending on educational services that do not boost the API is defined to be inefficient, regardless of how valuable these services are to voters.

education. Further, while the authors say they cannot rule out the possibility that this result reflects some cost factor omitted from their expenditure equation, they have no evidence to suggest that is the case. Similarly, the demand equation in the analysis indicates that the student-performance level is lower in districts that receive a relatively higher share of their state support in categorical grants.

Local voter behaviors affect the efficiency of districts and student performance

In California, the parcel tax is the most visible local revenue source other than the property tax. This study indicates that a parcel tax affects voters' incentives to monitor school officials: voters in districts with relatively few parcels per pupil, which implies a relatively high "tax price," have a greater incentive to keep school officials efficient.

The study also shows that student performance is lower in counties that have a high share of new residents. The authors believe this result mainly reflects the fact that new residents are less likely than long-time residents to engage in the type of monitoring that encourages school officials to be efficient (e.g., being well-connected in the community and participating in neighborhood organizations). It could in

theory also be related to costs if the children of new residents require extra services, but the regression analysis controls for costs associated with poverty, English learner status, and changing enrollment.

In California, education foundations raise funds for public schools in many districts and provide a significant amount in a few. Based on their analysis, the authors conclude that districts in which conditions are right for foundations to succeed have higher levels of student performance than other districts, all else being equal.

In a totally centralized, state-controlled system, variation in student performance across districts would be determined solely by the decisions of state-level decision-makers. This analysis shows that California is not nearly this centralized. While local voter demand for school performance is somewhat constrained in this state, student-performance outcomes clearly reflect the effects of parcel tax elections, community monitoring of schools, and conditions that foster successful education foundations.

Authors' Conclusions

Although many other factors matter as well, school districts cannot be expected to meet performance standards unless they have sufficient funds. California's current funding system

does not address cost differences among districts. It also heavily depends on categorical aid, which reduces school district efficiency.

Further, there is enough local control in the California system so that API outcomes are responsive to local voter demand. The supplementation currently available to voters, such as parcel taxes and local education foundations, results in higher student performance in higher-income districts, even after controlling for state support.

The authors conclude, however, that further restricting local control will do little to address the main fairness problem in California. That problem is that districts with a relatively high concentration of disadvantaged students and those that operate in a relatively high-wage environment do not currently receive enough state support to reach even a modest student-performance target, such as the state's current goal of 800 on the API. This fairness problem can be addressed by incorporating educational costs into each district's revenue limit.

William Duncombe is a professor of public administration and the associate director of the Education Finance and Accountability Program at Syracuse University.

John Yinger is director of that program and trustee professor of public administration and economics at Syracuse.

Both have written and researched extensively on education costs and other school finance issues. This study was completed in January 2007.