Occasional Papers

Financing New School Construction and Modernization: Evidence from California

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Presented to the Finance & Facilities Working Group - K-12 Education, Joint Committee to Develop a Master Plan for Education - Kindergarten through University
June 2001

Public Policy Institute *of* California

Abstract

In this paper, we examine the level and distribution of school facilities spending in California. We find that spending levels dropped prior to passage of Proposition 13. While spending on school facilities has increased in the past decade, California's per capita spending is still 20 percent lower than the national average. We also find that revenue for school facilities is unequally distributed across school districts. This disparity is explained almost equally by differences in enrollment growth and those in assessed values of property.

Acknowledgments

Prepared for delivery at the 2001 Spring Meeting, National Tax Association "Tax Policy for a New Economy", Washington DC. We would like to thank Jackie Chou for excellent research assistance. We would also like to thank Jon Sonstelie, Lisa Barrow, and Max Sawicky for comments on an earlier draft. The text of this occasional paper will be published in the National Tax Journal 54 No. 3, September 2001.

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1. Introduction

There has been a resurgence of interest in the way state and local governments finance new school construction and modernization. This renewed interest reflects two general concerns about school facility finance. First, there is a general belief that inadequate investment in new school construction and modernization has resulted in a nationwide school infrastructure crisis. For example, according to a 1995 survey conducted by the U.S. General Accounting Office, 25,000 schools nationwide are in need of major repair or replacement. Furthermore, 60 percent of all schools are in need of at least one major school facility upgrade (GAO 1995). According to the National Center for Educational Statistics (NCES), state and local governments will need to invest over $127 billion to meet the nation's current school infrastructure needs (NCES 2000).

Besides general concerns about the level of school infrastructure spending, there is also a growing concern about the distribution of school infrastructure spending across school districts. Most states finance new school construction and modernization projects with a mixture of state and local revenues. At the local level, school infrastructure spending is financed primarily with revenue raised from voter-approved general obligation bond issues. The bonds are typically financed with revenue from temporary property tax increases that remain in effect until the bonds are fully repaid. The reliance on the local property tax to finance new school construction and modernization has raised concerns about the equity of school facility finance in many states. In recent years, that concern has manifested itself in a new wave of school finance litigation as supreme courts in several states have been asked to hear cases on the constitutionality of school facility finance systems. For example, in 1994 the Arizona Supreme Court ruled that reliance on local general obligation bonds to finance school facilities was unconstitutional because it "created vast disparities in a district's ability to afford school construction, building maintenance, and equipment (Education Week, May 22, 1996)." In response, Arizona has transferred the responsibility of financing school facilities from local school districts to the state. Similarly, in Colorado, a coalition of low-wealth districts recently filed a class-action lawsuit to overturn the state's system of school facility finance. The case went to trial in April of 2000 (American School & University, April 2000).

The growing concern about a nationwide school infrastructure crisis and the recent wave of litigation related to school facility finance, has focused attention on the methods by which states' finance school facilities. This paper examines one particular system, namely California's system of school facility finance. We begin by examining how the level of school infrastructure spending in California has changed over time and how it compares to the level of spending in other states. We then examine the distribution of revenue for school construction and modernization across school districts. We examine how disparities in capital expenditures across

districts are related to (1) changes in demand for new schools, measured by a districts' growth in student enrollments, and (2) the relative cost of financing new school construction and modernization projects, measured by a district's property wealth per pupil.

We focus on California for several noteworthy reasons. First, California's public school system is large and diverse, containing over 1,000 school districts and nearly 6 million K-12 students. Approximately 11 percent of all K-12 students in the United States attend a school located in California. Second, concerns about the level of school infrastructure spending in California mirror concerns at the national level. For example, the Legislative Analyst's Office (LAO) of California estimates that 33 percent of all students attend an overcrowded school or one in need of significant modernization (LAO 2001). Furthermore, the California State Allocation Board estimates that California needs to invest approximately $30 billion to address its current infrastructure needs. Third, California, like most other states, relies heavily on local general obligation bonds, financed through property tax overrides, to fund new school construction and modernization. As a result, California provides an ideal setting to examine the impact differences across districts in property wealth have on the distribution of school infrastructure spending.

2. A Short History of School Facilities Finance in California

In order to understand current facility funding patterns, it is important to examine both historical spending levels and how revenue sources for school construction and modernization have changed over time. Prior to the passage of Proposition 13 in 1978, California financed school construction and renovation primarily with funds raised through local general obligation bond elections. Passage of a local bond measure required the support of two-thirds of the voters within a district. Local bonds were repaid with property tax revenue raised from a special tax assessment on all property located within a school district. School districts could issue additional bonds up to their debt capacity level, which was set at 1.25 percent of assessed value for elementary and secondary districts and 2.5 percent for unified districts. Local bond revenue was supplemented by the State School Building Aid Program, which provided loans to school districts that were bonded to their debt capacity yet were facing high enrollment growth.[1]

In June of 1978, California voters passed Proposition 13. Proposition 13 took away from school districts and other local governments the power to set their own property tax rates, imposing a limit on the sum of all local tax rates of 1 percent of assessed value plus an adjustment for any outstanding local debt. As a consequence, Proposition 13 eliminated the ability of local agencies, including school districts, to issue general obligation bonds.

The state responded to the ongoing needs of California's school districts by implementing a number of new programs. First, the state asked voters to approve state bonds to finance new school facilities. Between 1982 and 1998, voters approved $17.5 billion worth of state bonds to finance K-12 school construction costs. State bond revenue was allocated to school districts through the Leroy F. Green State School Building Lease-Purchase Program.[2] Under the Lease Purchase Program, the State provided assistance for two facilities programs -- new construction and modernization. Eligibility for new construction funding was based on housing capacity. To qualify, a district had to demonstrate that existing seating capacity was insufficient to house either current student enrollments or anticipated student enrollments based on a 5-year projection of enrollment growth. To qualify for modernization funding, a school building had to be at least 30 years old, or in the case of a portable classroom, at least 20 years old.

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[1] To qualify for a state loan, the state required districts to maintain a property tax rate equivalent to the rate necessary to finance general obligation bonds at the district's debt capacity level. After 20 years, if the state loan was not fully repaid, any outstanding balance was forgiven.

[2] The Lease Purchase Program was actually established in 1976, prior to the passage of Proposition 13, and was initially setup as a loan program similar to the State School Building Aid Program. However, after the passage of Proposition 13, the program was turned into a grant program.

In November 1998, the State Legislature enacted the Leroy Greene School Facilities Act of 1998. This new state program was funded with bond revenue from Proposition 1A, a $9.2 billion state bond initiative approved by voters in 1998. Under the School Facilities Program, the state provides per pupil funding for new school construction and modernization on a matching basis.[3] In particular, new school construction grants are funded on a 50/50 state and local matching basis. Modernization grants are funded on a 80/20 state and local matching basis.[4]

Proposition 13 prohibited local school districts from issuing new general obligation bonds and as a result it shifted the primary responsibility for financing new school construction and modernization from local school districts to the state. However, by 1984 it became increasingly clear that revenue raised through state bond issues was insufficient to meet California's school infrastructure needs. As a result, beginning in 1984 voters and the State Legislature passed a number of new programs designed to reinstate the authority of local school districts to raise revenue for new school construction and modernization. In 1984, voters passed Proposition 46, which reestablished the authority of local school districts to issue general obligation bonds, subject to the approval of two-thirds of the voters within a district. In 1986, the State Legislature approved AB 2926, which authorized school districts to directly impose developer fees to finance new school construction. Developer fees can only be imposed on new industrial, commercial, or residential development. The maximum fee a district can impose was set at $1.50 per square foot for residential development and $0.25 per square foot for commercial and industrial development. Finally, in 1986, the state also implemented the Mello-Roos Community Facilities District Act, which allows school districts to create special financing districts to fund new school construction.[5]

Figures 1 and 2 document the historical trend in school facility spending in California from 1960 to the present. Figure 1 illustrates the level of school facility spending from 1960 to the present and student enrollment over the same time period. Figure 2 illustrates school facility spending on a per pupil basis. It is commonly believed that after passage of Proposition 13 in 1978, spending levels for different government services were dramatically reduced. In reality, school facilities expenditures were falling even before Proposition 13 was passed. As Figures 1 and 2 illustrate, prior to the 1990s, spending on facilities reached its apex in the mid 1960s, with declines in per pupil and overall levels of expenditures

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[3] For new school construction, districts receive a fixed allocation per unhoused student of $5,200 for elementary students, $5,500 for middle school students and $7,200 for high school students. For school modernization, the per student allocations are $2,246 for elementary students, $2,376 for middle school students, and $3,110 for high school students.

[4] If a school district is unable to provide matching funds, they may be eligible for state financial hardship funding. For details see Part 10, Chapter 12.5 of the California Education Code.

[5] Community Facility Districts (CDF's) often encompass only part of a school district and their creation is subject to the approval of two-thirds of the landowners within the boundaries of the proposed CDF.

occurring in the late 60s and early 1970s. Thus, the decline in capital expenditures per pupil predated Proposition 13, with revenues declining on a per-pupil basis beginning in the mid-1960s.

This decline in spending was partly related to a natural pattern in infrastructure finance; periods of large expenditures can be followed by relatively less spending if the demand for structures was met. Capital expenditure in California continued to decline until the mid-1980s. Thus, although the decline in per-pupil capital expenditures originally reflected a decrease in need, as student enrollments fell, fiscal limitations put into place maintained low levels of capital financing even as buildings aged and enrollments started to increase again.

Figures 1 and 2 also show that California experienced a dramatic decline in school facility spending between 1978 and 1984. This decline is directly attributable to Proposition 13. Recall that between June of 1978 (the passage of Proposition 13) and November of 1984 (the passage of Proposition 46), the only revenue available for school construction and modernization was state bond revenue. Since 1984, spending on school facilities has risen steadily. The rise in spending is primarily due to three events: (1) the passage of a number of state bond issues, (2) the reestablishment in 1984 of the authority of local school districts to issue general obligation bonds, and (3) the ability of school districts to impose developer fees beginning in 1986. Together, these three sources of revenue constitute over 73

Figure 1: California School Facilities Expenditures and Enrollment

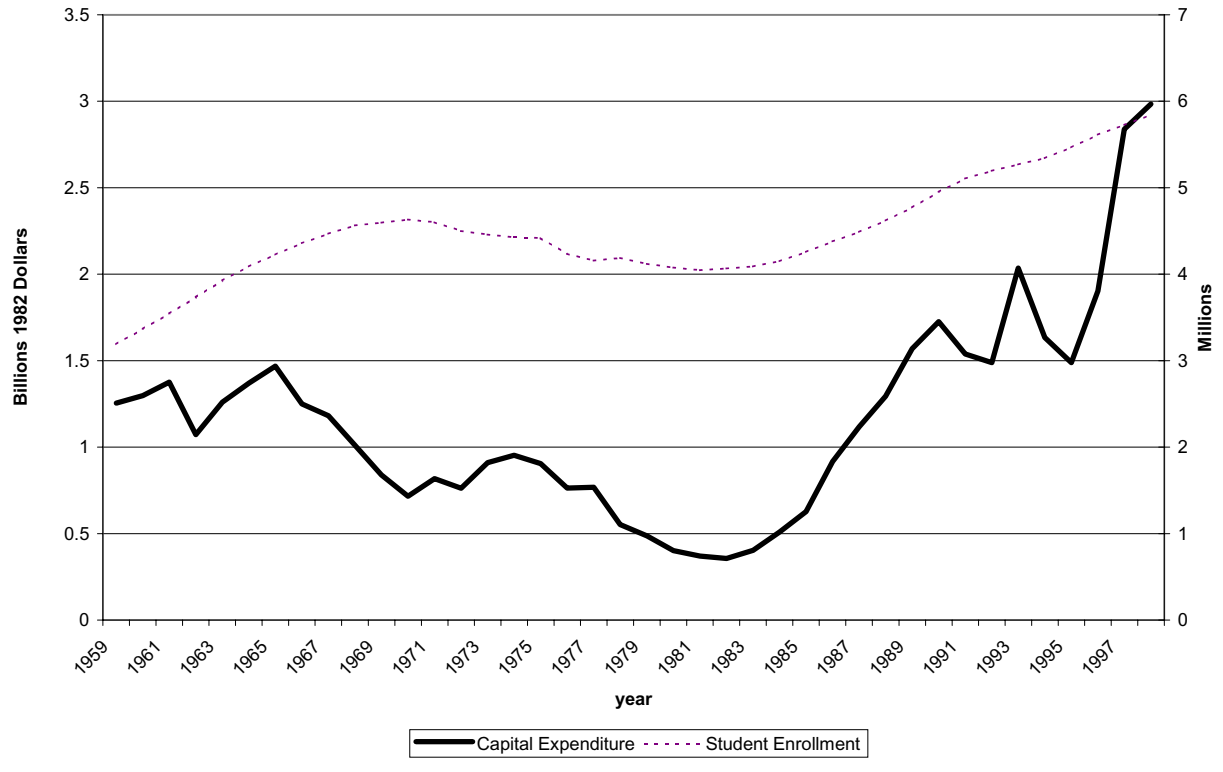


Figure 2: California Per Pupil Capital Expenditures on K-12 Facilities

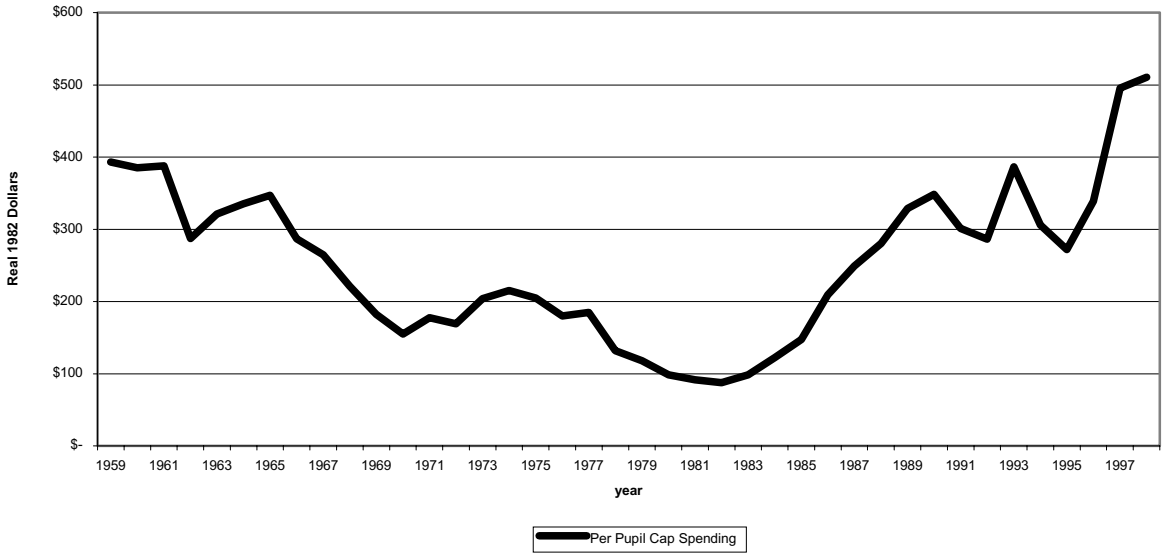
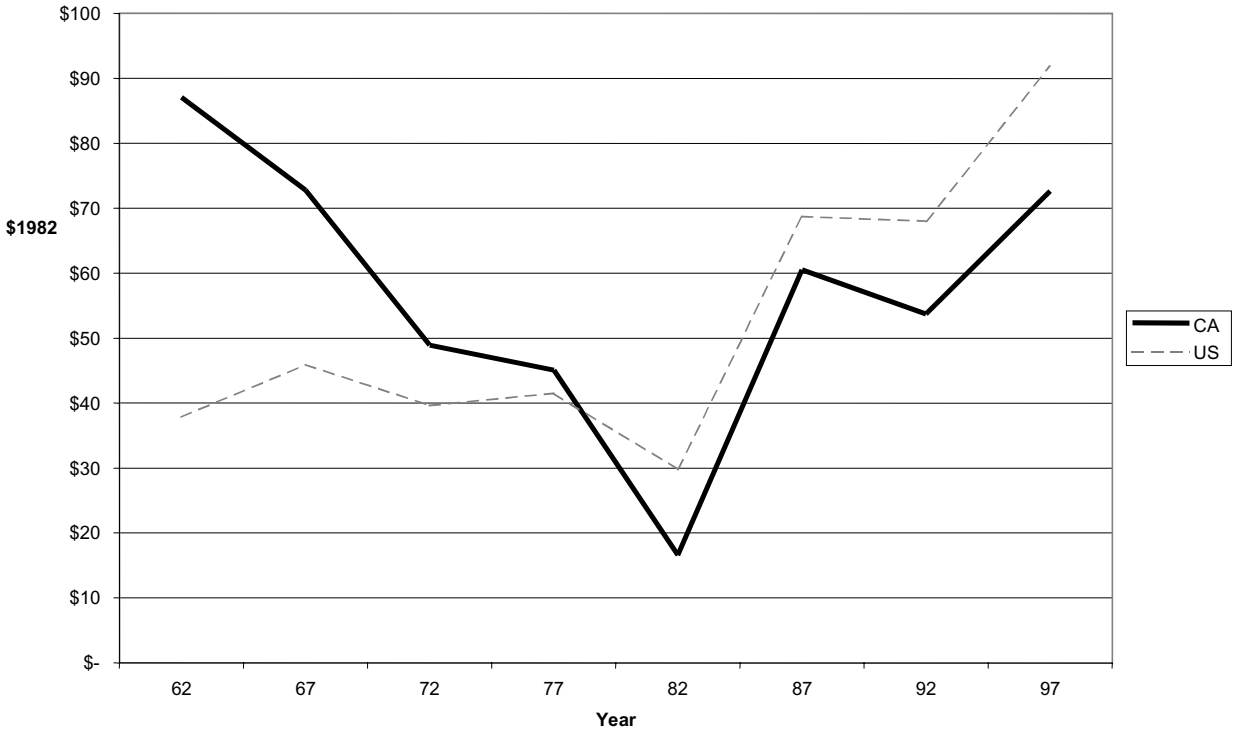


Figure 3: California and US Per Capita Spending on School Facilities



percent of the revenue available to school districts for new school construction and modernization.

Although school infrastructure spending has increased steadily since the mid-1980s, California is still spending less than the national average. According to the Census of Governments, California spent $543 per pupil on capital expenditures in 1996-97 as compared to a US average of $711. This reversed patterns found in the 1960s, when California was spending well above the national average. In Figure 3, we graph California and U.S per capita spending on all school facilities from 1962-1997 based on information from the Census of Governments.[6] While California spent twice as much as the national average in 1962, by 1977 California was spending about the same amount as the rest of the country. In 1982 school facility spending dipped both nationally and in California, but the drop in California was much larger. Since 1984, per capita spending has been increasing both nationally and in California, but spending in California still lags the U.S average by $20 per capita. Put in a slightly different way, California is spending 20 percent less per capita than the nation as a whole despite having an increasing share of its population enrolled in public schools.

[6] This information is for capital expenditure by school districts for both K-12 and higher education. In early years the Census of Governments did not break out K-12 capital expenditures from spending on higher education.

3. The Size and Distribution of School Facility Spending in the 1990s

Table 1 summarizes the total revenue raised for new school construction and modernization during the period 1992-93 to 1998-99. The data were assembled from yearly school district accounting records provided by the California Department of Education. The first column of Table 1 lists eight revenue sources for school construction and modernization. The second column lists the aggregate revenue raised from each of those sources between 1992-93 and 1998-99. The third column lists the percentage of total revenue derived from each revenue source. Local general obligation bonds, state aid, and developer fees are the largest sources of revenue and constitute 73 percent of all funding. Other revenue sources include: (1) Certificates of Participation (COPs), which are short term debt, (2) interest on funds that have been received by the school district but not yet spent, (3) federal aid, (4) revenue from the sale or lease of land, buildings, and other capital to outside organizations and (5) other miscellaneous revenue sources. Note that Mello-Roos funds are not included in the school district accounting records but constitute about 4 percent of facility funding. Furthermore, note that federal funding for school facilities constitutes less than one percent of the total.

Table 1
Revenue Sources
1992-93 to 1998-99

Revenue Source	Revenue (Millions of $'s)	Percentage of Total
Local G.O. Bonds	$6,457	32.2%
Developer Fees	2,273	11.3
State Aid	5,912	29.5
Other Revenue		
Certificates of Participation (COPS)	845	4.2
Interest	1,313	6.5
Federal Aid	189	0.9
Sale/Lease of Land, Buildings and Other Capital	1,147	2.6
Other	1,931	9.6
Total Revenue	20,067	100

Table 2 summarizes the three largest sources of revenue in terms of average revenue per pupil. Because school construction and modernization projects usually take several years to complete, we measured revenue per pupil by taking the aggregate revenue raised from each revenue source over the period 1992-93 to 1998-99 and dividing it by the average enrollment over the time period. In addition, revenue raised prior to 1998-99 is measured in constant 1998 dollars. Local general obligation bond revenues constitute 32.6 percent of revenues for unified school districts, 29.7 percent of revenues for elementary districts and 34.1 percent of revenues for high school districts. Furthermore, those averages mask considerable variation in the number of districts with positive local general obligation bond revenue. Specifically, only 37 percent of unified school districts, 24 percent of elementary districts, and 30 percent of high school districts raised local general obligation bond revenue over the time period. Developer fees constitute a smaller percentage of revenues for unified districts (10 percent) as compared to elementary (13 percent) and high school districts (17 percent). In addition, state aid constitutes 32 percent of revenues for elementary districts as compared to 23 percent and 24 percent for unified and high school districts, respectively.

Table 2
Revenue Per Pupil
1992-93 to 1998-99

Revenue Source	Unified	Elementary	High School
Local G.O. Bonds	$1,456	$1,152	$1,584
Developer Fees	464	517	795
State Aid	1,017	1,252	1,101
Total Revenue	4,460	3,876	4,643
Districts	316	580	115
Average Enrollment	11,827	1,985	5,529

Table 2 also illustrates that while there are more elementary districts than unified or high school districts, over two-thirds of California students are enrolled in unified districts. Thus, for the remainder of this paper we focus on the distribution of revenue across unified school districts. We have also excluded Los Angeles Unified from our analysis. Over the time period of our analysis, Los Angeles Unified had an average enrollment of over 600,000 students – more than three times the enrollment of the next largest district. The size of the district naturally raises concerns about whether our results would change if we removed it from our sample. As a consequence, we performed our analysis on two samples: one including all unified school districts and one excluding Los Angeles Unified. We

found the results from the two samples to be quite similar. As a result, we report only results from the sample without Los Angeles Unified. The results for elementary and high school districts are similar to those reported for unified districts.

Table 3
Revenue Sources by Quintiles of Total Capital Revenue per Pupil*
Unified School Districts
(In Dollars)

Quintiles of Total Revenue Per Pupil	Local GO Bonds	Developer Fees	State Aid	Total Revenue
First Quintile $0 - $1,444	3	200	282	836
Second Quintile $1,445 - $2,489	526	267	516	2,010
Third Quintile $2,490 - $3,494	555	294	1,210	3,045
Fourth Quintile $3,495 - $5,700	1,254	485	1,732	4,468
Fifth Quintile $5,701 and Above	3,250	923	2,176	9,033

* Weighted by district enrollment.

Table 3 summarizes the distribution of local general obligation bonds, developer fees, and state aid, by quintiles of total revenue per pupil[7]. The quintiles are weighted by district enrollment. For example, of all students attending a unified school district, 20 percent attended a district in which total revenue per pupil was less than $1,444. Similarly, 20 percent attended a district in which total revenue per pupil was greater than or equal to $5,701. As the table illustrates, there are wide variations in the distribution of total revenue per pupil across school districts. Total revenue per pupil averaged only $836 among school districts in the first quintile. In contrast, total revenue per pupil averaged $9,033 among school districts in the fifth quintile. The difference in average total revenue per pupil between the fifth and first quintiles is $8,197. Part of this disparity might be

[7] In this paper total revenue refers to total capital revenue and excludes current revenue sources. We will refer to the financing of day-to-day school activities as current revenue.

explained by districts in the bottom quintile not needing additional facilities; that is, there might be a large number of school districts with little or no spending. However, if we look at the disparity between the fourth and fifth quintiles - that is, school districts that are spending positive amounts on facilities- we find striking contrasts. Districts in the top quintile are spending double the average in the fourth quintile. Thus, facilities expenditures are highly concentrated in districts serving only 20 percent of California's student population.

Table 3 also illustrates the underlying cause of this variation; namely, the wide variation in general obligation bond revenue and state aid. The difference in general obligation bond revenue between the fifth and first quintile is $3,247, or approximately 40 percent of the difference in total revenue per pupil. The difference in state aid per pupil between the fifth and first quintile is $1,894, or approximately 23 percent of the difference in total revenue per pupil. Differences in general obligation bond revenue also explain about 43 percent of the difference in average spending levels between the fourth and fifth quintile, whereas state aid is much more equal across these two quintiles.

Table 3 suggests that approximately 65 percent of the variation in total revenue per pupil can be explained by the variation in general obligation bond revenue and state aid. We now turn to examining the determinants of these two sources of revenue in more detail. We begin by examining the determinants of state aid. As we noted in section 2, the State provides assistance for two facilities programs -- new construction and modernization. Funding eligibility for these programs is based primarily on two factors: current and projected enrollment growth and the age of the existing capital stock. Ideally, we would like to examine how revenue per pupil is related to both enrollment growth and the age of the existing capital stock. Unfortunately, information on the age of school buildings is unavailable. Consequently, we focus our attention on the relationship between revenue per pupil and enrollment growth.

Table 4 illustrates how revenue per pupil is related to the growth rate in district enrollment between 1989-90 and 1998-99. It provides information on capital revenue per pupil for unified school districts, separated into quintiles of enrollment growth. The quintiles are weighted by district enrollment. For example, of all students attending a unified school district, 20 percent attended a district with an enrollment growth of less than 9 percent. As expected, state aid is positively related to enrollment growth and increases throughout the distribution of enrollment growth. State aid averaged $857 among school districts located in the first quintile. In contrast, state aid per pupil averaged $2,497 among school districts located in the fifth quintile. The difference in state aid per pupil between the fifth and first quintiles is $1,640, or approximately 54 percent of the difference in total revenue per pupil.

Table 4
Distribution of Total Revenue per Pupil by Quintiles of Enrollment Growth*
Unified School Districts
(In Dollars)

Quintiles of Enrollment Growth	Local GO Bonds	State Aid	Total Revenue
First Quintile Below 9.00%	832	857	2,813
Second Quintile 9.01% - 16.15%	958	552	3,191
Third Quintile 16.16% - 24.84%	1,376	964	3,605
Fourth Quintile 25.06% - 35.90%	1,328	1,071	3,830
Fifth Quintile 35.91% and Above	799	2,497	5,867

*Weighted by district enrollment.

Table 4 also illustrates the relationship between enrollment growth and general obligation bond revenue. One would expect bond revenue to be positively related to enrollment growth, as local governments with higher enrollment growth will also need to raise more money locally. However, Table 4 suggests that general obligation bond revenue is only weakly related to enrollment growth. In particular, while bond revenue steadily increases with enrollment growth up to the third quintile, it decreases thereafter. In fact, general obligation bond revenue is lowest among districts located in the fifth quintile of enrollment growth. We are therefore left with the task of explaining what determines the distribution of general obligation bond revenue across districts.

As we noted in section 2, the passage of Proposition 46 in 1984 gave school districts the authority to issue general obligation bonds to finance school construction projects, subject to the approval of two-thirds of the voters within a district. General obligation bonds are repaid with revenue raised from property tax overrides levied on all real property within a school district. Local voters must authorize these property tax overrides as part of the general obligation bond measure.

The reliance upon the local property tax to finance general obligation bond revenue leads naturally to the question of how differences across districts in assessed value per pupil affect the ability and willingness of districts to locally finance school facility spending. There are essentially two issues to consider. First, recall that school districts can only issue bonds up to their debt capacity limit, which is set at 1.25 percent of assessed value for elementary and secondary districts and 2.5 percent for unified school districts. Thus, debt limits may place an institutional constraint on the amount of bond revenue low-assessed value districts can raise. Although debt capacity limits may not be binding for unified school districts, which tend to have relatively high limits, an analysis by the Coalition for Adequate School Housing (CASH) suggests that these limits may significantly constrain the ability of many elementary districts from raising funds through general obligation bond issues (CASH 1997).

Second, differences across districts in assessed value per pupil directly affect the marginal price of school spending – defined as the additional tax burden a homeowner faces when spending per pupil is increased by $1. Because bond issues are financed through the local property tax, the marginal price of school facility spending facing a homeowner is $\frac{V}{T} * S$, where V is the assessed value of a homeowner's home, T is the assessed value of all property within a district, and S is the number of students attending public school in a district. Note that the marginal price of school spending is inversely related to the assessed value of property within the district, $\frac{T}{S}$. Thus, all else equal, districts with higher assessed value per pupil face a lower marginal price of school spending, which may manifest itself in a higher demand for school facility spending.[8]

While there exists very little evidence on the relationship between the demand for school facility spending and assessed value per pupil, there is extensive evidence suggesting that the demand for *current* spending per pupil varies significantly with assessed value per pupil.[9] Nationally, districts with higher assessed value per pupil tend to have substantially higher levels of current spending per pupil. Does a similar relationship hold for general obligation bond

[8] Note that the marginal price of school spending may differ across school districts for several reasons. First, holding the assessed value of property with districts constant, districts with lower enrollments will have a higher assessed value per pupil and thus face a lower marginal price of school spending. Second, all else equal, residents in districts with a higher percentage of nonresidential property will face a lower marginal price of school spending since some of the additional tax burden necessary to finance an increase in facility spending is shifted to the owners of nonresidential property.

[9] See for example, Bergstrom, Rubinfeld, and Shapiro (1982), Brokaw, Gale, and Merz (1990), Downes (1992) and Sonstelie, Brunner, and Ardon (2000). The relationship between assessed value and current spending was the basis for numerous lawsuits concerning current expenditures including *Serrano vs. Priest* in California. For a discussion of these lawsuits, see Murray, Evans, and Schwab (1998).

revenue? Specifically, does general obligation bond revenue vary systematically with assessed value per pupil?

Table 5 documents the relationship between assessed value per pupil and the distribution of bond revenue per pupil and total revenue per pupil. The table provides information on revenue per pupil for unified school districts, separated into quintiles of assessed value per pupil. The quintiles are once again weighted by district enrollment. As Table 5 illustrates, there appears to be a strong positive relationship between general obligation bond revenue and assessed value per pupil. General obligation bond revenue averaged only $511 among school districts in the first quintile. In contrast, bond revenue averaged $2,608 among school districts in the fifth quintile. Furthermore, these averages mask considerable variation across quintiles in the percent of districts with positive general obligation bond revenue. For example, of the 55 school districts with assessed value per pupil of $187,447 or less, 20 percent had positive general obligation bond revenue. Among those districts, the average bond revenue per pupil was $2,107. In contrast, of the 73 school districts with assessed value per pupil of $455,598 or higher, 53 percent had positive general obligation bond revenue. Among those districts, general obligation bond revenue averaged $6,479.

Table 5 also reveals a strong positive relationship between assessed value per pupil and total revenue per pupil. Total revenue per pupil averaged $2,995 among school districts in the first quintile. In contrast, total revenue per pupil averaged $5,992 among school districts in the fifth quintile. The difference in average total revenue per pupil between the first and fifth quintile is nearly $3,000. The wide variation in total revenue across districts is directly related to the variation in general obligation bond revenue. For example, the $2,097 difference in average general obligation bond revenue between the first and the fifth quintile explains approximately 70 percent of the difference in total revenue.

Finally, Table 5 reveals that districts in the 5th quintile of assessed value per pupil have substantially higher revenue per pupil than districts in any other quintile. For example, while there is a $600 difference in total revenue per pupil between districts in the fourth and first quintiles of assessed value per pupil, there is a $2,485 difference in total revenue per pupil between districts in the fourth and fifth quintiles. Thus, most of the variation in revenue per pupil across assessed value quintiles occurs in districts with very high assessed value per pupil – districts that raise substantial revenue through general obligation bond issues.

As a point of comparison, the last column of Table 5 illustrates the relationship between current revenue per pupil in 1998-99 and assessed value per pupil. Current revenue is the revenue available to a school district for its daily operations. Under the conditions set forth by the 1971 ruling of the California Supreme Court in *Serrano v Priest*, differences across districts in current revenue per pupil could not be systematically related to differences in property tax wealth.

Table 5

Distribution of Revenue per Pupil by Quintiles of Assessed Value per Pupil* Unified School Districts (In Dollars)

Quintiles of Assessed Value Per Pupil	Local GO Bonds	State Aid	Total Revenue	Current Revenue
First Quintile $0 - $187,447	511	1,403	2,995	5,724
Second Quintile $187,448- $248,576	711	1,509	3,697	5,438
Third Quintile $248,577 - $328,202	618	1,307	3,339	5,495
Fourth Quintile $328,203 - $455,597	1,001	652	3,507	5,842
Fifth Quintile $455,598 and Above	2,608	1,076	5,992	5,774

*Weighted by district enrollment.

Table 5 reveals that this condition has been met – in stark contrast to the distribution of capital revenue per pupil, current revenue per pupil is quite equally distributed across quintiles of assessed value per pupil.

Taken together, Table 4 and Table 5 suggest that disparities in capital revenue across districts are related to difference in both enrollment growth and assessed value per pupil. To examine which underlying factor seems to be driving the inequality in capital revenues, we regressed total revenue per pupil in a district on assessed value per pupil, median family income, and the growth rate of student enrollment. We include family income in our model to account for the fact that wealthier families tend to have higher demands for school spending, which could manifest itself in higher revenue per pupil. To account for heteroscedasticity, all of the variables in our regression are weighted by district enrollment.

Table 6 reports coefficient estimates for unified school districts. The coefficients on assessed value per pupil and enrollment growth are both positive and statistically different from zero at the five-percent significance level. Our results indicate that a one thousand dollar increase in assessed value per pupil results in approximately a $4.50 increase in revenue per pupil. Similarly, a one-percent increase in student enrollment results in approximately a $47.34 increase in revenue per pupil. Thus, both factors seem to play a role.

Table 6
Regression Estimates
Dependent Variable: Total Revenue per Student

Variable	Coefficient *(St. Error)*
Assessed Value per Pupil	0.0045 *(0.0008)*
Income	- 0.001 *(0.16)*
Growth in Enrollment	47.34 *(6.69)*
Constant	1,117 *(628)*
R^{sq}	0.27
Observations	245

To examine the relative importance assessed value per pupil and enrollment growth play in explaining differences across districts in revenue per pupil, we estimated the effect of moving from the 40th percentile to the 60th percentile in both assessed value and enrollment growth. This is the equivalent of a school district's characteristics changing from the value at the bottom of the third quintile to the top value in the third quintile. If a school district's assessed value changed from $248,577 to $328,202, we estimate that revenues per pupil would increase by $358. Similarly, if enrollment growth increased from 16.15 percent to 24.84 percent, revenues per pupil would increase by $411. Thus, enrollment growth and assessed value seem to play approximately equal roles in explaining variations in capital revenues.

4. Conclusions

Concerns about the level and distribution of school facility spending have sparked new interest in the way state and local governments finance new school construction and modernization. In this paper, we examined the level and distribution of school facility funding for one particular state, California. We find that California is spending less on facilities than other states and that declines in capital expenditures predate the passage of Proposition 13 in 1978. We also find that inequalities in the distribution of assessed value per pupil across school districts have led to large disparities in the distribution of capital resources across districts. Districts with higher assessed value per pupil have significantly higher capital revenue per pupil. We explore the relationship between assessed value per pupil, income, and the demand for local school facility spending further in Brunner and Rueben (2001). In that paper, we focus on developing an empirical framework for estimating local demand functions for school infrastructure spending. We find that both income and assessed value per pupil play an important role in explaining variation in the demand for school facility spending by local school districts.

Finally, while our results raise new concerns about the equity of California's system of school facilities finance, they should nevertheless be interpreted with caution. As we noted in a prior section, California implemented a new system of school facility finance in 1998. The new system provides hardship funding for school districts with low assessed value that are unable to raise enough local revenue to qualify for matching state funds. While our analysis picks up the first round of state funding under this program, it is still too early to tell how this new program will affect the distribution of capital revenue across school districts. In addition, the LAO (2001) has proposed drastically changing how facilities are funded and suggests moving to a per pupil facility allocation. Under this proposed system, facilities funding will be both more regular and less related to the assessed value of property within a school district.

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