

**School Finance Over Time:
How Changing Structures Affect
Support for K-12 Education**

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Abstract

Over the last 30 years, state governments have played an increasing role in funding K-12 education. This increasing role for state governments has followed the passage of school finance equalization lawsuits and the introduction of property tax limits in many states. This paper examines the changing reliance on the property tax and changes in state and local spending in states with and without school finance equalization decisions and property tax limits. We find increasing reliance on state aid in states that have undergone these institutional changes, with California facing the largest changes.

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School Finance Over Time: How Changing Structures Affect Support for K-12 Education

I. Introduction

The property tax is an important historical source of revenue for state and local governments, especially for public K-12 school districts. As late as the 1920s, school districts provided well over 80 percent of public school revenues primarily through the use of the local property tax. However, the property tax is a relatively unpopular tax: tax payments are highly visible since they tend to be paid in large, semi-annual payments rather than smaller bi-weekly withholding as in the case of income taxes or with each transaction as in the case of sales taxes, and if not administered well the tax is viewed as unfair. Indeed, many states have enacted tax caps or other limitation measures to limit the growth of property taxes. The use of the property tax for education is also controversial. Critics have long argued that school finance systems that rely heavily on property taxes are unfair because resources devoted to education depend on the property tax base in a community¹. In the past three decades state legislatures have, on their own initiative or at the behest of state courts, implemented school finance equalization programs to reduce the disparity in within-state education spending.

More recently, frustrated with the redistribution of local property taxes from wealthy school districts to property-poor school districts, the Texas legislature has been struggling with how to reform its overall tax structure in a way that provides some property tax relief yet still meets court requirements for equitable education financing. Kentucky, Maryland, Missouri, Tennessee, Utah and West Virginia have also sought to shift the burden of school finance to “sin taxes.” (*New York Times*, April 21, 2004)

Diversification of revenue sources is an important strategy for a system of state and local taxes. However, the current trend of shifting to state-level taxes presents issues for the fairness and stability of education finance. Using state sources rather than local sources exposes all communities to state level shocks in tax revenues. Additionally, in most states the property tax is solely a local tax. So as state aid increases, states are shifting their reliance from taxes on property wealth to reliance on taxes on income and sales. However, property taxes are usually less pro-cyclical than other state revenues, so states are ignoring an important stable source of revenue that can act as insurance for the state during economic downturns. Indeed, over the last few years, the percentage of state and local revenues from property taxes have increased for the first time in fifty years. Some states are also ignoring another type of diversification. Rather than varying the *use* of local property tax revenues, some states substitute property taxes with other tax sources as was the case in Michigan in 1993 and the current proposal in the Texas legislature,

¹ Much of the early rulings assumed that property poor districts served largely low-income households – this is not necessarily the case. Because of the value of industrial and business – some school districts that serve some of the lowest-income households, have relatively high property tax bases. Thus, while school finance equalization was beneficial for some students in California, low-income students in San Francisco and Los Angeles actually faced lower spending per pupil levels. (Sonstelie, et. al. 1998)

thereby reducing the tax base available to all levels of government in a state. Finally, as state (and by extension local) governments become more reliant on sin taxes they may introduce conflicts between social and fiscal policy. For example, are declining revenues from cigarette taxes a positive sign of reduced smoking or a fiscal burden on providing services? Although cigarette tax rates have increased over the last 30 years the percent of state and local revenues raised by these taxes has fallen.

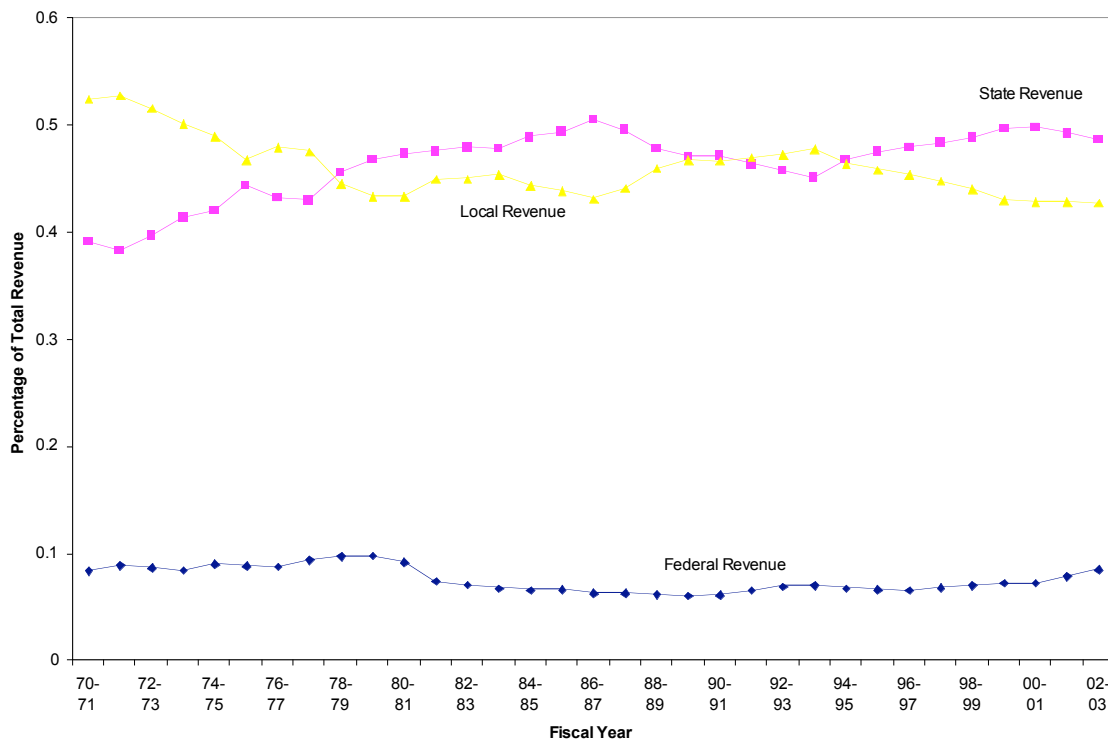
In this paper, we investigate state and local governments' decreasing reliance on the property tax in all states from 1972 to 2002. We also explore how reforms such as school spending equalization and tax and expenditure limits affect the role property taxes play in supporting education. Our analysis of this relationship is limited to 36 states in which schools districts may set property tax rates. For such states we are able to identify revenue for education that is derived from the property tax. In districts that are dependent on other local governments to raise revenues funds for education are intermingled with those for other government services. For those states we are not able to identify revenue for education from the property tax explicitly. Therefore, we also examine changing reliance on state aid for educational expenditures for all states. Districts that are reliant on another level of government may also differ from independent school districts in other important ways as well. (For instance, if a district is dependent on an overlapping city, the costs of certain aspects of providing education might be subsumed by this other entity, for example the usage of city buses to transport students.)

In the next section we describe institutional reforms that affect the role of the property tax in education finance. We review the literature on the impact of school finance reform and tax and expenditure limitation movements. In particular, we describe the extent to which state equalization aid and restrictions on property taxes or overall revenues can shift responsibility of funding to different levels of government. We describe the mechanisms that states employ to distribute state aid in an appendix to this paper. In section three, we describe the data used for our analysis and our classification of states based on the independence/dependence structure of school districts. We describe trends in state and local government reliance on the property tax, and trends in state and local education spending financing in sections four and five. In addition, we compare these trends across states with or without school finance equalization reforms and tax and expenditure limits. In section six, we examine the effect of increased reliance on state aid on the level of education spending and the subsequent decline in property tax reliance. This paper is the first of a series of papers examining the role the property tax has played in education finance. In the final section, we conclude the paper with a summary of our findings and directions for future work.

II. Institutional Reforms: State School Finance Equalization and Tax and Expenditure Limits

In the past three decades spending on K-12 has been increasing steadily, with states assuming a much larger role in public school finance. For example, as Figure 1 shows in 1970 local districts were responsible for about 53 percent of K-12 revenues, while the state share was less than 40 percent. By the 2002-2003 school year, these shares had

reversed and the share of education expenditures coming from local revenues fell 10 percentage points. The state share now, on average, surpasses the local share of spending per pupil. States provided roughly half of all resources for K-12 education, leaving the federal share at approximately 8.5% (NCES, *Digest of Education Statistics*, various years). Two movements have largely caused this shift to more reliance on state funding: state school finance equalization court cases that have mandated more equalized spending across districts and the tax and expenditure limitation movement which shifted reliance across funding sources depending on the specifics of the limit implemented and generally shifted revenue raising ability. We describe more fully the mechanism behind state funding formulas in the appendix to this paper.



Court-Mandated School Finance Reform

In virtually all states, opponents of local funding for primary and secondary schools have challenged the constitutionality of the public school finance system. In the 1970s and 1980s plaintiffs in traditional school-finance equity cases argued that a state’s method for funding public schools was inequitable because it violated the principle of fiscal neutrality in the state’s constitution. In the 1990s many of the challenges to state finance systems have focused on ensuring that all students in a state have equitable access to adequate educational opportunities as required by state education clauses. (Minorini and Sugarman, 1999, p47). In later analyses we differentiate between the timing of court decisions to distinguish between the changes in the finance cases.

By 2006, the state supreme courts overturned systems in 19 states (see, Department of Education, 2003 and www.schoolfundinginfo.com). In response to court orders, state legislatures implemented or revised equalization formulas and increased their state's share of educational spending.

There has been much research on the effect of these court cases beginning with an evaluation of the landmark 1971 *Serrano v. Priest* decision in which the California State Supreme Court declared the state's public school finance system unconstitutional. We examine the California literature and then turn to a review of the broader empirical studies that do cross-state comparisons of the effect of school finance reforms.

The general consensus from the California work has been that the shift toward state financing of education has led to a significant decrease in spending on education. Silva and Sonstelie (1995) show that prior to *Serrano* spending in California was similar to other states during the same period after adjusting for differences in family income and the tax price of an additional dollar of education. They found a very different story in 1989-1990. Spending was significantly lower in California than they would have predicted. They conclude that roughly one half of the decline in spending in California can be attributed to the *Serrano* decision.

Broader empirical work attempts to go beyond the California experience by looking at data from many states. Manwaring and Sheffrin (1997) and Downes and Shah (2005) find that on average, successful litigation or legislative education reform raises education spending significantly. Downes and Shah (2005) further show that the stringency of constraints on local discretion determines the effects of reforms on the level and growth of spending. Murray, Evans, and Schwab (1998) examined the effect of court-mandated school finance reforms between 1972 and 1992. They found that court-ordered reform reduced inequality by increasing spending at the bottom of the distribution while leaving spending at the top unchanged. In addition, they found that these reforms caused states to increase spending for education and leave spending in other areas unchanged and thus by implication states funded the additional spending on education through higher taxes. As a consequence, the state's share of total spending rises as a result of court-ordered reform. Corcoran et al (2004) extends Murray, Evans and Schwab and finds that states redistribute resources to local districts that, a priori, one would expect to raise less funds

Thus far, little of the research discussed has examined how the source of revenue used for equalization affects the amount of money or examined who controls the marginal dollar of resources. Hoxby (2001) empirically investigates the influence of the type of school finance formula on the growth in district spending between 1972 and 1992. Specifically she examines differences in state finance formulas and estimates what the effective "tax price" would be on a district of raising an additional dollar of revenue. Her results suggest in some states a highly equalizing finance formula is associated with leveling down. For example, in California mean per-pupil spending was 15 percent lower under the state's equalization scheme than would have occurred if no school finance equalization were in effect. However, in practice she finds that leveling up occurs in most other states because most states impose less dramatic equalization schemes. That

is, in California, an increase in local revenues is almost totally offset by a decline in state aid.²

Tax Limitation Laws

Concurrent with the introduction of school finance equalization changes there has also been an introduction of tax limits at both the state and local levels. Beginning with Proposition 13 passed in California in 1978, many states have passed restrictions on either the rate of revenue growth in state and local revenues or in the rates and assessments of property taxes. These limits typically limited the growth rate of state spending or revenues, usually limiting this growth rate to the growth rate of personal income. Many referenda were proposed limiting the use of local property taxes. Proposition 13 in California and Proposition 2 1/2 in Massachusetts are the most famous taxpayer initiatives for property tax reform. More recently there has been a resurgence in the passage of tax limitation laws, most notably Colorado's Taxpayer Bill of Rights or TABOR measure.

The empirical literature on the effects of TELs on taxes and spending has evolved over the last 15 years or so. Prior to 1991, most studies of the effect of TELs on taxes and spending concluded that limits had little effect (for example, see the studies of New Jersey by David Merriman (1987) and of Arizona by Ronald Fisher and Mary Gade (1991)). But beginning with Preston and Ichniowski (1991), in which the authors examine the impact of TELs on municipal government spending and property taxation, more recent studies have found significant and seemingly robust effects of TELs on the level of both taxes and spending. For example, in a cross-sectional study of the states, Poterba and Rueben (1995) find that the public-sector wage premium (employees in the public sector tend to be paid more than their counterparts in the private sector) is smaller in states with effective property tax limits. Rueben (1996) found some evidence of restricted levels of revenues in states that passed strict tax or expenditure limits and found even stronger evidence of a shift in spending to a different level of government in cases where only state or local taxes were curtailed. Cutler, Elmendorf, and Zeckhauser (1999) find that Proposition 2 1/2 in Massachusetts had a negative effect on the level of municipal property taxes. Dye and McGuire (1997) and Dye, McGuire, and McMillen (2005) find that the tax cap in Illinois, which was imposed on local governments in only a select number of counties, reduced the growth rate of both property taxes and spending in the affected jurisdictions. Thus part of the movement away from property taxes may also be related to these limitation movements. Fourteen states had limits in place that explicitly limited either the growth rate of school district revenues or expenditures or more commonly, limited both the assessed value and property tax rate allowed.

III. Data and Methodology

Our goal is to illustrate trends in the reliance on property taxes, state aid for education and the adequacy of education resources over time and across reform states. Specific

² In practice, California school districts have introduced different funding formulas including increased reliance on parcel taxes and parental private contributions. These funds raise a small amount of revenue on average but are a source for district specific revenues. (Sonstelie, Brunner and Ardon, 2000)

comparisons are given in following sections. In this section we describe the data series used and our classification of states according to school district taxing authority and institutional reform.

To examine spending and revenue patterns over time we use financial data from the U.S. Census Bureau's *State and Local Government Finances*. Data are available for 1972, 1977-2000 and 2002, for state and local revenues by source (e.g. property tax, general revenues) and expenditures by type (total education expenditure and state aid). We use state-level aggregates of revenues and expenditures by type of government. For example, we have property tax revenues and total government revenues at the state level and for all local school districts aggregated to the state level. In addition we calculate education expenditures at the state level and for all local school districts aggregated to the state level.

We have augmented the Census of Governments data with additional education data on education revenues by source and type of revenue from survey information collected by the U.S. Department of Education through various publications. From 1987 through 2002, these data are available online at the Department of Education through the Common Core of Data collections. From 1982 through 1988 they are published through the Common Core of Data collections and are available through the ICPSR archives. Education revenue data for the 1980 and 1981 fiscal years were taken from the Digest of Education Statistics.

All revenue and expenditure data are deflated by the CPI-U and expressed in 2002 Fiscal Year dollars. The deflators were calculated by the Department of Education using CPI data from the U.S. Department of Education Bureau of Labor Statistics.

We obtained fall enrollments from these Department of Education publications as well. In addition we have information on unemployment rates and gross state product from the U.S. Department of Labor. We obtained state level population from the Census of Governments files.

Structure of School Districts

The structure of school districts varies dramatically both within and between states. While school districts are the primary supplier of education services, they do not always have independent authority to set spending levels or to raise revenues. In school districts that are designated independent they have authority to generate their own revenues. These districts typically use the property tax for such revenues. Other school districts are dependent on a parent government, (e.g. a city, town, county or state) to raise revenues.

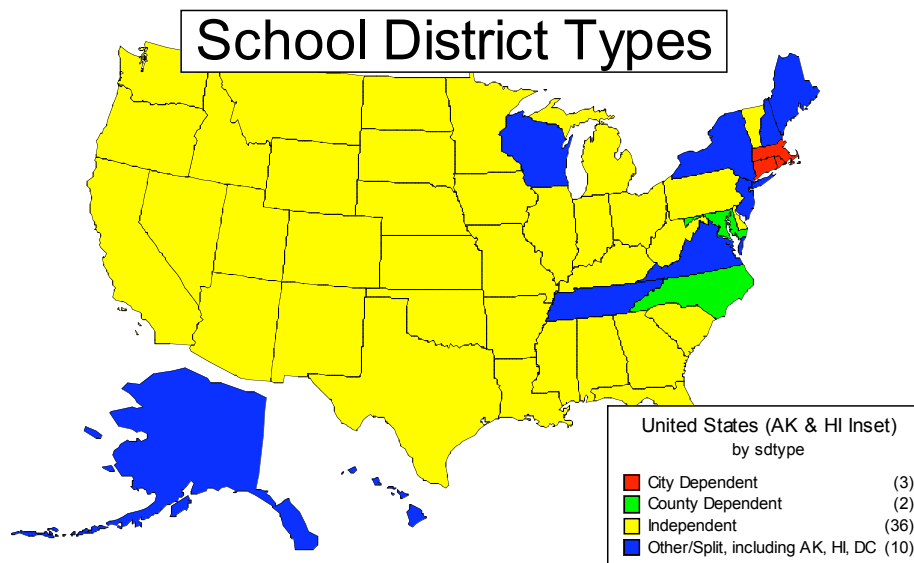
These differences in the structure of school districts have important implications in our ability to identify revenue sources for K-12 education. First, property tax revenue for dependent school districts is reported with the parent government. Thus, it is impossible to determine the extent in which these revenues are dedicated to the school district. Second, parent governments can also use additional revenue sources for schools. It is

impossible to determine if sales tax revenues, for example, provide resources for dependent school districts. It is also impossible to determine the specific tax base of inter-governmental aid for independent school districts.

We classified our states according to the extent to which we could attribute state and local education expenditures to school district revenue sources. Our classification is given in Figure 2. Thirty-six states are classified as “independent.” Most school districts in Connecticut, Massachusetts and Rhode Island are city- (or town-) dependent, thus these states are classified as “city dependent”. Districts in Maryland and North Carolina are primarily dependent on counties. These states are identified as “county dependent”. Seven other states have a mix of both dependent and independent school districts with the dependent school districts generally found in larger cities. These states are blue and coded as “split states.” Our sample excludes Alaska (split dependency), Hawaii (state dependent) and DC (city dependent), these states are blue in the figure and coded as “other states”. As Figure 2 shows, most dependent school districts are on the East Coast.

Dependency status of school districts is time invariant for most states, with few states changing explicitly the funding authority of districts. The 2 states where dependency status has changed are Delaware and Wisconsin. In 1979, Delaware switched from having a mixture of independent school districts and city-dependent school districts to having exclusively independent school districts. Wisconsin made the same switch in 1983, though it continues to have approximately 1% of education expenditure coming from the county level. For purposes of classification, Delaware has been classified as an independent school district state while Wisconsin has been classified as a mixed-type school district state. In future work we will more closely examine how our classification of dependency status affects specific school districts and examine at the school district level the effect of being an independent or dependent school district on the volatility and level of education spending.

Figure 2



Classification of Court-Mandated Education Reform State

School finance litigation is an ongoing process, with states often undergoing multiple lawsuits and decisions in the process of trying to equalize school finances. More recently, plaintiffs have been focusing on ensuring an adequate level of education for each student rather than an equal level of funding. In this paper, we are interested in the relatively long-term effects of school finance equalization and therefore focus our attention on the states that had the earliest programs in place. Specifically, we examine states that undertook equalization programs due to court mandates – namely reforms that took place before 1985. There were no state supreme court mandates between 1985 and 1989. This distinction is also useful since after the Kentucky Supreme Court’s 1989 Rose decision, most states that undertook court-mandated restructuring included additional statewide reforms (such as curricular and teacher preparation programs) to satisfy requirements for an “adequate” education. Thus we look separately at early-court mandated reform states and late court-mandated reform states.

To classify specific states we updated 2003 data from the Department of Education with information from the Access website, an advocacy website that is maintained by the Campaign for Education Equity at Teachers College, Columbia University. (Department of Education, 2003, www.schoolfundinginfo.com). As mentioned above, school finance litigation is an on-going process. Typically, states will appeal a verdict from a lower court. In addition, previous research has shown that school finance reforms initiated by legislatures without a supreme court mandate are ineffective. (Evans, Murray and Schwab, 1997). Thus, we classified states as court-mandated states if a state’s highest court declared the school finance system unconstitutional. These states include Arkansas, California, Connecticut, New Jersey, Washington, West Virginia and Wyoming as early court decision states and Alabama, Arizona, Kentucky, Massachusetts, Montana, New Hampshire, Ohio, Tennessee, Texas, and Vermont as late court decision states. Kansas and New York courts ruled in favor of plaintiffs in 2003 after our sample period. Our categorization also differs from Kenyon (2006) in that we do not classify Missouri or North Carolina as having had a state supreme court decided reform. In addition, Kenyon excludes Arkansas since litigation is ongoing.

Classification of Tax Limitation States

Similarly, the classification of tax limitation states can vary depending on the level of government and time period considered. We again separate tax limits passed in the 1970’s and 1980’s to again evaluate the longer term effects on revenues of tax restrictions. This separates the first wave of limits from later limits that have constrained multiple taxes and levels of governments beginning in 1992 with the Taxpayer Bill of Rights (TABOR) in Colorado. Again, we take 1985 as our break in early and late adopters, recognizing that there is a shift between the possible characteristics and long term consequences of early and late reforms. Further, due to our focus on schools we restrict our evaluation to the group of states that have limits on school district funding, or in the case of dependent schools, limit on the primary revenue authority government.

These limits can be overall limits on revenue or revenue growth allowed for school districts or limits on both assessed values and property tax rates. (If there are limits on property tax rates – but governments can change the assessment ratio – effective property taxes and other revenues are not limited.) The set of states with early limits are Arizona, Arkansas,, California, Indiana,, Kentucky, Louisiana, Massachusetts, Michigan, Mississippi, Missouri, New Mexico, Ohio, Oregon, Rhode Island, Texas and Washington. The late tax limited states are Colorado, Idaho, Illinois, West Virginia and Wisconsin. Because of its size and dramatic history, we also examine shifting patterns of reliance on revenue sources for states other than California within each category.³

IV. Trends in State and Local Government Revenues

State revenues largely come from taxes, fees and charges and grants in aid from the federal government. States use a wide variety of taxes to raise revenues. Most states levy income and sales taxes.⁴ These taxes account for most of state revenues. States also rely on fees and increasingly on sin taxes—lotteries and taxes on cigarettes. The major sources of revenue for local governments include the property tax, intergovernmental revenues, sales taxes and fees. Relatively few local governments rely on income taxes.

Table 1 shows the changing patterns of state and local government reliance on different revenue sources from 1972-2002. There are several important trends during this time period. In the first panel we present average state and local general revenue from the federal government and their own sources per capita and as a percent of U. S. GDP. Both measures indicate growth in state and local government spending during this time period. Between 1972 and 2002, state and local revenues have steadily increased from 13.5 percent of GDP to 16.1 percent in 2002. Real per capita state and local general revenues increased 70 percent over this time period.

Federal intergovernmental aid has funded about 20% of state and local expenditures over this period, dipping to 17% in 1987. While overall own source revenues have made up a fairly constant share of state and local revenues the composition of taxes within these revenues has changed. During this time period state and local governments have become more reliant on income taxes and charges and less reliant on the property tax. In 1972, individual income taxes accounted for 9 percent of total general revenues and steadily increased between 1972 and 2002 to 12 percent in 2002 (with a small decline in 1992). Net corporate income taxes increased between 1972 to 1987 from 2.6 percent of general revenues to 3.3 percent. State revenues from corporate incomes taxes have fallen since 1987. Revenues from general sales taxes increased slightly. Charges including tuition for higher education have increased nearly 4 percentage points from 1972 to 1992.

³ We examined differences if we used simple averages and revenue or population weighted averages in our analysis and found similar results in each case. We also examined the effects on revenue sources if states can shift into a category after a limit is passed and we found more dramatic disparities between groups of states.

⁴ Nine states have no or very minor individual income taxes and five states do not have a sales tax.

Table 1**Distribution of Selected Sources of State and Local Revenues Over Time, 1972-2002**

	1972	1977	1982	1987	1992	1997	2002
S&L General Revenue as Pct of GDP	13.5%	14.0%	14.1%	14.5%	15.4%	15.5%	16.1%
Real per capita General Revenue	\$3,442.2	\$3,853.8	\$3,674.4	\$4,479.1	\$4,885.8	\$5,296.0	\$5,850.4
	2	2	4	1	7	3	4
	Percentage of Total General Revenue						
Total Fed IG Revenue	18.7	21.9	19.1	16.7	18.3	19.0	21.4
Gen Rev-Own Sources	81.3	78.1	80.9	83.3	81.7	81.0	78.6
General Revenue Own Sources*							
Total Taxes	65.4	61.7	58.2	58.9	57.2	56.5	53.7
Property Tax	25.6	21.9	17.9	17.6	18.4	17.0	16.6
Tot Sales & Gr Rec Tax	22.4	21.3	20.5	21.0	20.2	20.3	19.2
Total Gen Sales Tax	12.1	12.8	13.2	14.1	13.5	13.8	13.2
Total Select Sales Tax	10.2	8.5	7.2	6.9	6.7	6.4	6.0
Alcoholic Beverage Tax	1.0	0.8	0.6	0.5	0.4	0.3	0.3
Tobacco Tax	1.8	1.3	0.9	0.7	0.6	0.6	0.5
Individual Income Tax	9.1	10.3	11.1	12.2	11.8	12.3	12.0
Corp Net Income Tax	2.6	3.2	3.3	3.3	2.4	2.6	1.7
Total General Charges	11.3	10.9	12.4	12.7	14.1	14.8	15.0
Chg-Total Education	4.2	3.6	3.7	3.6	4.0	4.1	4.3
Chg-Total High Ed	2.9	2.7	3.0	2.9	3.3	3.4	3.6
Chg-Elem Ed-Sch Lunch	0.8	0.6	0.5	0.4	0.4	0.3	0.4

Subcategories do not sum to 100 percent. Other categories are excluded.

Only two sources of tax revenues fell during this time period. Revenues from tobacco and alcoholic beverages have fallen as a share of general revenues. For example, tobacco taxes accounted for 1.8 percent in 1972 and only one-half a percent in 2002. This is largely due to falling demand for cigarettes as cigarette tax rates have increased dramatically in most states over this time period.⁵ Finally, the reliance on property taxes has also decreased during this time period: in 1972 property taxes accounted for fully one quarter of state and local general revenues, this share fell nearly 10 percentage points to 16.6 percent in 2002⁶. Note much of this decline in property taxes occurred between 1977 and 1982 around the time of the first round of tax limitation laws and school finance decision implementation.

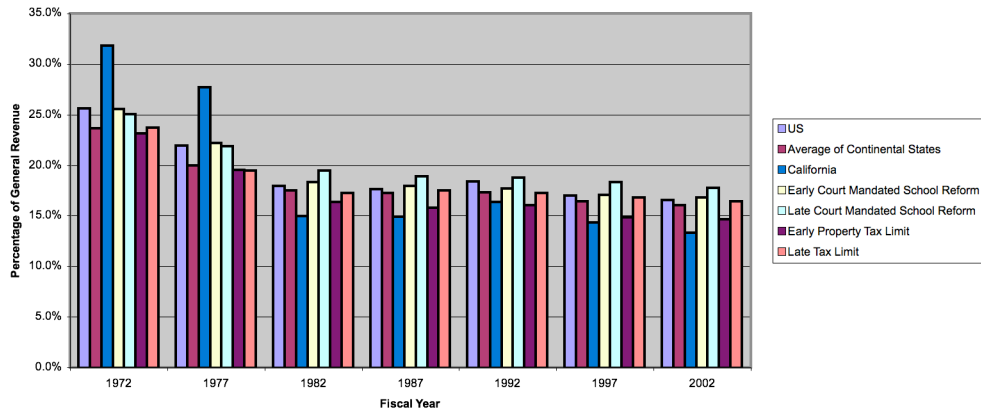
⁵ Median state cigarette taxes per pack were 12 cents in 1978 and 48 cents in 2003.

⁶ In the aftermath of the last recession the percent of state and local general revenues from property taxes has increased. In 2001 16% of revenues were from property taxes as compared to 16.6% in 2002.

Figure 3 further examines the decline of state and local governments' reliance on the property tax as a function of whether the state experienced a court school finance equalization or imposed a limit on property taxes during either the early or late portion of our sample.

The first bar shows the national change and mirrors the percentages presented in Table 1. The largest drop in the share of revenues from property taxes mainly occurs between 1977 and 1982. This time period is also important in illustrating how the reliance on the property tax varies across the groupings of states over time. The second bar in each grouping presents the simple average of the 48 continental United States, the average pattern is very similar to the overall pattern for the United States as a whole, but there is lower reliance on property tax if a simple average is taken. This is largely due to a higher reliance on property taxes in some of the larger states during this early period, most notably California. Indeed, almost one-third of California's state and local revenues came from property taxes in 1972(Bar 3). States that did not undergo equalization based on a successful court equalization case look similar to the average of all 48 continental states (and are omitted from our graph). Reliance on the property tax was relatively higher in states that were subject to a court mandated reform in either time period, but faced different declines in reliance over time. For states that underwent an early court-mandated reform, property tax reliance fell from over a quarter of revenue sources in 1972 to relying on property taxes for less than 17 percent of all revenues in 2002. This fall in property tax revenue while still dramatic, is lessened if California is excluded from the analysis – these states went from raising 24.5% of revenues from the property tax to 17 percent. States experiencing later reforms went from raising one-quarter of revenues from property taxes to 18 percent in 2002. However, they have more of this decline occurring later in the period. Similarly, states that had early property tax limits placed on their school districts also faced a larger than average decline in reliance on the property tax (from 23 percent in 1972 to 14.6 percent in 2002). There is little evidence that states experiencing later period TELs had a greater than average decline in their reliance on property tax revenues. This may in part be due to these later limits applying to all tax revenues rather than just property taxes.

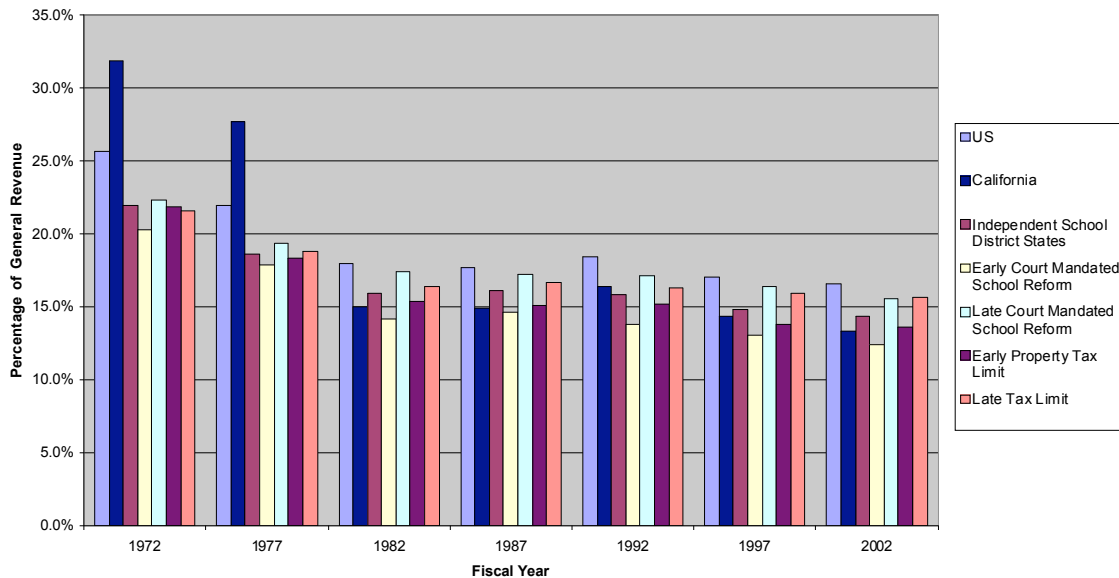
Figure 3: Property Tax Revenue as a Percent of State and Local



Next, we examine whether the source of state and local revenues is different for states that have independent school districts. Again, un-weighted revenues are smaller than the total U.S. averages. For the 36 states with independent school districts per capita revenue is slightly smaller than in all states. For example, in 1972 real per capita state and local revenue was about \$3,273 in these states as compared to \$3,288 in all states and \$3,445 in the country as a whole. Similarly in 2002, revenues were \$5,662 for these states as compared to \$5,747 for all 48 states and \$5,851 in the nation as a whole.

Figure 4 presents information on reliance on the property tax for states with predominantly independent school districts. The first bar is the average across all states. The second bar graphs the percent of general revenues raised by property tax for the 36 states with independent school districts, these states are slightly less reliant on the property tax in every period than the country as a whole. If we limit ourselves to the states with independent school districts, we again find a more dramatic drop in reliance on property taxes in states that have undergone early court mandated reform – falling from 20 percent to 12 percent. This is mainly being caused by California, as the decline is smaller when California is omitted from the sample. There is a similar drop in reliance on the property tax for states with early tax limits but again this result is attenuated if we omit California.⁷

Figure 4: Property Tax Revenue as a Percent of State and Local General Revenue for States with Independent School Districts



⁷ We have also examined these results using revenue-weighted averages and find stronger declines in reliance on the property tax and a larger California effect.

V. Trends in K-12 Education Spending

School finance equalizations and tax and expenditure limitations are intended to affect the level and growth of spending. As discussed in Section II, with the exception of California on average, school finance equalization has had the effect of increasing per pupil spending. Tax and expenditure limits have had mixed effects on the level and growth of per pupil spending. These trends are reflected in Table 2, which presents state and local direct education expenditure per capita for all states and for states with independent school districts.

In our sample states, per capita state and local education spending increased 50 percent from 1972 to 2002. Between 1977 and 1982, education spending fell by 12 percent in the United States or about 9 percent per state, but increased steadily since 1982. Part of this is due to the reduction in spending in California from \$1,079 in 1977 to \$861 in 1982; however per capita education spending fell even in states that did not experience an early court-mandated reform. Indeed, if we exclude California from the group of early court-mandated reform states, we find these states are the only ones who averaged an increase in spending in the 1977-1982 period. Part of this reduction in education spending in the late 1970's reflects changing demographics, with a decline in the number of school-age children.

Table 2: Real Per Capita State and Local K-12 Education Expenditures

	1972	1977	1982	1987	1992	1997	2002
US	\$ 960	\$ 966	\$ 851	\$ 1,026	\$ 1,136	\$ 1,208	\$ 1,428
California	\$ 1,084	\$ 1,079	\$ 861	\$ 1,014	\$ 1,106	\$ 1,115	\$ 1,521
Average of Continental States	\$ 912	\$ 936	\$ 855	\$ 1,013	\$ 1,120	\$ 1,192	\$ 1,364
No Court Mandated School Reform	\$ 924	\$ 937	\$ 851	\$ 998	\$ 1,109	\$ 1,184	\$ 1,356
Early Court Mandated School Reform	\$ 973	\$ 994	\$ 974	\$ 1,161	\$ 1,300	\$ 1,313	\$ 1,504
Excluding California	\$ 955	\$ 979	\$ 993	\$ 1,185	\$ 1,333	\$ 1,346	\$ 1,501
Late Court Mandated School Reform	\$ 833	\$ 893	\$ 784	\$ 958	\$ 1,028	\$ 1,133	\$ 1,291
No Tax Limit Passed	\$ 932	\$ 946	\$ 868	\$ 1,039	\$ 1,153	\$ 1,220	\$ 1,394
Early Property Tax Limit	\$ 889	\$ 913	\$ 835	\$ 973	\$ 1,068	\$ 1,138	\$ 1,317
Excluding California	\$ 876	\$ 902	\$ 833	\$ 970	\$ 1,065	\$ 1,139	\$ 1,303
Late Period Tax Limit	\$ 878	\$ 962	\$ 852	\$ 1,003	\$ 1,112	\$ 1,214	\$ 1,353
Independent School District States	\$ 904	\$ 925	\$ 865	\$ 1,012	\$ 1,091	\$ 1,162	\$ 1,315
No Court Mandated School Reform	\$ 920	\$ 925	\$ 854	\$ 985	\$ 1,076	\$ 1,156	\$ 1,315
Early Court Mandated School Reform	\$ 922	\$ 971	\$ 989	\$ 1,170	\$ 1,222	\$ 1,227	\$ 1,388
Excluding California	\$ 881	\$ 945	\$ 1,021	\$ 1,209	\$ 1,251	\$ 1,255	\$ 1,355
Late Court Mandated School Reform	\$ 838	\$ 894	\$ 813	\$ 990	\$ 1,049	\$ 1,134	\$ 1,262
No Tax Limit Passed	\$ 928	\$ 942	\$ 892	\$ 1,049	\$ 1,120	\$ 1,189	\$ 1,341
Early Property Tax Limit	\$ 888	\$ 899	\$ 836	\$ 974	\$ 1,061	\$ 1,127	\$ 1,286
Excluding California	\$ 873	\$ 885	\$ 834	\$ 971	\$ 1,058	\$ 1,128	\$ 1,267
Late Period Tax Limit	\$ 854	\$ 943	\$ 843	\$ 978	\$ 1,065	\$ 1,159	\$ 1,302

Note: The United States figure includes the national average, while the other categories of spending are an unweighted average of the continental states that are in the given category. (Alaska, Hawaii and the District of Columbia are excluded.) For state categorization see Appendix Table 1.

The reduction in the level of education spending per capita is also reflected in the share of states' budgets going toward education (Table 3). At the beginning of the time period, education was twenty-eight percent of state and local general expenditures in all states. The share fell during the 1972-1982 time period to approximately one quarter of state budgets and has remained roughly constant since 1982 in all states except California. The decline of education in the California budget is much more striking. In 1972 education spending was less important (as measured by share of budget) in California and other court-mandated reform states than in all other states. In California, education's share of the budget fell 5 percentage points from 1972 to 1982 and continued to decline until a recent increase between 1997 and 2002.

Table 3: K-12 Education Expenditures As A Share of State and Local Direct General Expenditures

	1972	1977	1982	1987	1992	1997	2002
US	27.7%	26.2%	24.3%	24.0%	23.2%	23.6%	23.8%
California	25.8%	24.9%	21.5%	21.0%	20.6%	20.4%	22.6%
Average of Continental States	27.9%	26.5%	25.0%	24.4%	23.7%	24.0%	23.4%
No Court Mandated School Reform	28.3%	26.5%	24.9%	24.4%	23.9%	23.8%	23.3%
Early Court Mandated School Reform	27.5%	26.7%	25.8%	25.0%	24.4%	24.2%	23.7%
Excluding California	27.8%	27.0%	26.5%	25.7%	25.0%	24.9%	23.9%
Late Court Mandated School Reform	26.8%	26.3%	24.7%	24.2%	22.7%	24.2%	23.6%
No Tax Limit Passed	28.0%	26.3%	24.9%	24.4%	23.7%	24.1%	23.6%
Early Property Tax Limit	28.0%	26.7%	24.9%	24.3%	23.3%	23.5%	23.0%
Excluding California	28.1%	26.8%	25.2%	24.5%	23.5%	23.7%	23.0%
Late Period Tax Limit	26.7%	26.8%	25.5%	24.8%	24.8%	24.8%	23.6%
Independent School District States	28.0%	26.5%	25.3%	24.6%	23.8%	23.9%	23.0%
No Court Mandated School Reform	28.5%	26.6%	25.2%	24.4%	23.8%	23.8%	23.1%
Early Court Mandated School Reform	26.3%	26.2%	25.5%	25.3%	24.1%	23.3%	22.3%
Excluding California	26.4%	26.5%	26.5%	26.4%	25.0%	24.0%	22.3%
Late Court Mandated School Reform	27.1%	26.5%	25.4%	24.8%	23.6%	24.5%	23.1%
No Tax Limit Passed	27.9%	26.1%	25.0%	24.5%	23.7%	23.9%	23.0%
Early Property Tax Limit	28.3%	26.9%	25.3%	24.8%	23.8%	23.7%	22.9%
Excluding California	28.5%	27.0%	25.6%	25.0%	24.1%	23.9%	22.9%
Late Period Tax Limit	26.7%	26.9%	26.0%	24.9%	24.5%	24.4%	23.3%

Note: The United States figure includes the national average, while the other categories of spending are an unweighted average of the continental states that are in the given category. (Alaska, Hawaii and the District of Columbia are excluded.) For state categorization see Appendix Table 1.

VI. Trends in State Aid and Property Tax Revenues for School Districts

In this section we consider the reliance on state aid and property tax revenues for local school districts. Table 4 presents the percent of state and local K-12 education spending coming from state aid by reform type for all states and then the share for independent school district states. Table 5 then reports property tax revenues as a percentage of education spending for states with independent school districts by the same groupings as Table 4. Thus for independent school district states, the property tax and state share figures make up the bulk of funding for K-12 expenditures.

As Table 4 shows, education spending for state and local governments is increasingly reliant on state aid. Overall, state spending as a percentage of state and local education steadily increased from 45 percent in 1972 to 53 percent in 2002. If we equal weight states, this increasing reliance is even starker, increasing 10 percentage points from 47 to 57 percent. This increasing reliance is especially true for states with school finance equalization decisions and tax limitation reforms. Again, California is the most striking case. In 1972 reliance state aid to school districts in California fell short of the national average share, but increased 20 percentage points between 1972 and 1992. This reliance on state aid is clearly being driven by court reforms. If we examine the percentage of state aid for late court reform states, in the early period state aid lagged behind the national average and the level of aid in states that never experienced reform. But in the 1997-2002 period this grouping increased its reliance on state aid by almost 10 percentage points.

The second panel of Table 4 reports the dependence on state aid for states with independent school districts by type of reform. For these states the dependency in state aid again grew faster in court-mandated states than in states with no equalization program and the dependence on state aid is higher for early reform states. Dependency on state aid also grew in states with early tax limitations. Again, because of the increasing pairing of state and local tax limits during the later period – we do not find an increase in state fund reliance for late tax reform states.

Table 4: Percent State K-12 Education Expenditures From State Aid

	1972	1977	1982	1987	1992	1997	2002
US	45.4%	51.6%	54.3%	53.3%	52.2%	53.7%	53.2%
California	39.9%	51.7%	69.6%	75.4%	61.0%	68.2%	61.8%
Average of Continental States	47.0%	51.9%	54.4%	52.9%	53.3%	55.1%	57.1%
No Court Mandated School Reform	48.1%	53.5%	55.5%	52.7%	53.2%	56.0%	56.3%
Early Court Mandated School Reform	46.2%	51.6%	56.5%	59.9%	59.3%	59.3%	58.8%
Excluding California	47.2%	51.5%	54.3%	57.3%	59.0%	57.8%	58.3%
Late Court Mandated School Reform	44.1%	46.9%	49.3%	48.5%	49.5%	49.5%	58.1%
No Tax Limit Passed	46.1%	50.1%	52.2%	49.7%	51.6%	51.6%	55.0%
Early Property Tax Limit	49.3%	53.7%	57.3%	58.0%	56.3%	60.1%	61.2%
Excluding California	50.0%	53.8%	56.5%	56.8%	56.0%	59.6%	61.2%
Late Period Tax Limit	44.3%	55.2%	56.4%	53.4%	53.3%	58.0%	54.8%
Independent School District States	48.9%	54.1%	57.4%	55.7%	56.5%	59.0%	60.5%
No Court Mandated School Reform	47.9%	53.9%	57.3%	54.1%	54.4%	58.2%	57.9%
Early Court Mandated School Reform	51.5%	57.3%	63.4%	66.5%	65.3%	68.2%	66.8%
Excluding California	54.4%	58.7%	61.9%	64.3%	66.4%	68.2%	68.1%
Late Court Mandated School Reform	50.3%	52.4%	53.5%	53.3%	57.3%	55.2%	64.7%
No Tax Limit Passed	47.6%	52.0%	55.3%	52.6%	55.0%	56.3%	58.9%
Early Property Tax Limit	51.1%	55.8%	59.4%	59.5%	58.6%	62.9%	64.6%
Excluding California	52.0%	56.1%	58.6%	58.2%	58.4%	62.5%	64.8%
Late Period Tax Limit	47.1%	57.9%	59.9%	56.3%	55.7%	57.8%	53.5%

Note: The United States figure includes the national average, while the other categories of spending are an unweighted average of the continental states that are in the given category. (Alaska, Hawaii and the District of Columbia are excluded.) For state categorization see Appendix Table 1.

As school districts become more dependent on state aid and therefore state revenue sources, we would expect the dependency on property taxes to decline. Table 5 shows that this is indeed the case. In states with independent school districts, the reliance on the property tax, as measured by school district property tax revenue as a percentage of state and local education spending fell 8.5 percentage points between 1972 and 1982 and has declined since then. This trend is most pronounced in the early court-mandated states where the reliance on property tax revenue was cut by over one-third from 44 percent to 28 percent between 1972 and 1982, with again the most dramatic declines occurring in California.

**Table 5: Percent State K-12 Education Expenditures From Property Taxes,
Independent School District States**

	1972	1977	1982	1987	1992	1997	2002
Independent School District States	43.6%	39.4%	35.1%	35.7%	35.0%	33.3%	30.4%
California	60.9%	56.9%	25.4%	22.7%	21.9%	28.8%	25.3%
No Court Mandated School Reform	43.7%	40.0%	36.5%	37.3%	36.2%	33.5%	31.7%
Early Court Mandated School Reform	43.6%	37.6%	28.1%	27.3%	24.7%	26.9%	23.7%
Excluding California	35.6%	30.8%	27.9%	27.6%	25.8%	26.0%	23.6%
Late Court Mandated School Reform	43.1%	38.5%	35.2%	36.1%	38.0%	37.1%	30.6%
No Tax Limit Passed	42.1%	39.1%	36.8%	38.1%	35.9%	34.9%	30.4%
Early Property Tax Limit	43.4%	38.7%	31.9%	31.5%	32.5%	29.6%	28.2%
Excluding California	36.6%	32.4%	28.2%	27.9%	28.9%	25.7%	24.6%
Late Period Tax Limit	50.8%	42.8%	38.3%	39.3%	39.3%	38.9%	37.6%

Note: The United States figure includes the national average, while the other categories of spending are an unweighted average of the continental states that are in the given category. (Alaska, Hawaii and the District of Columbia are excluded.) For state categorization see Appendix Table 1.

VII. Conclusions and Future Work

In this report we have examined the declining role that property taxes have played in providing funding for elementary and secondary schools. Overall, state and local governments have become less reliant on property tax revenues as funding sources. This declining reliance is especially dramatic for states that were subject to court-mandated school finance equalizations in the 1970s and 1980s or were subject to property tax limit rules. The ability to measure the reliance of schools on property tax revenues, however, is complicated by the fact that in some states school districts are subordinate units of other local governments. For the 36 states with independent school districts, we find that the reliance on the property tax has decreased with a concurrent increase in state aid for those states that were subject to a court-mandated equalization. Prior to equalization, these states spent less of their budget on education. However, we find that as states become less reliant on the property tax and more dependent on state aid, the share of state resources for education declines suggesting that education must compete with other state responsibilities.

Our next steps are to examine more closely the vulnerabilities introduced to school financing by this changing relationship. We will study whether districts in states that are more dependent on the property tax are in fact better able to sustain spending during

economic downturns. We will also explore more closely the relationship and stability of education finances across school districts both within and across states that were subject to different economic conditions. Specifically, we will explore not only the relationship between state revenue source and school expenditures, but also how funding structures affect the variability and response within states. Understanding the interplay between revenue sources and the ability to sustain education spending is important. As states centralize education financing and move away from the property taxes, it is critical to understand any unintended consequences that these changes might have.

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Appendix

State Finance Programs and the Reliance on Property Taxes

In this appendix we describe the finance programs to highlight the ways in which states can influence the source of school revenues. We are most interested in the reliance of states on property tax revenues. To date, few states rely very heavily on redistributing property taxes. We will discuss some different state funding strategies where there are options for increased reliance on property tax revenues without the introduction of a state-wide rate.

The mechanisms to distribute basic aid vary across states, but fall into three broad categories (flat grant, equalization grants and full-state funding) that differ in the extent in which resources are redistributed across school districts.

Flat grants are lump sum payments to districts that are independent of the district's ability to pay for education, providing assistance to poor and rich districts alike. Most states use flat grants to distribute small amounts of resources. For example, states will use flat grants to distribute money for textbooks or technology. Equalization grants such as Foundation grants and district power equalization (DPE) programs provide more assistance to "poorer" districts. Foundation grants establish the minimum level of funding, while DPE programs are designed to give districts the capacity to decide the appropriate level of spending.

Specifically, foundation grants are designed to guarantee that every district in a state receives at least a specified minimum level of funding per student, typically the level of basic need described above. Under a foundation grant, the state establishes a minimum tax rate and determines the ability of districts to raise the minimum amount given their tax base. State aid then fills the gap between the minimum acceptable level and the amount a district could raise under the minimum tax rate.

District power equalization (DPE), or guaranteed tax base (GTB), programs allow all districts to act "as if" they all had the same tax base per student. More specifically, under DPE the state would choose a guaranteed tax base per student, V . If district j sets a tax rate t_j and has a tax base V_j , it will raise $t_j V_j$ from local sources, receive state aid of $t_j(V - V_j)$ and thus spend $t_j V$ on education. In such a program, higher spending per pupil would require a higher tax rate. Thus, differences in education spending per pupil might remain, but spending differences would result from varying tax rates, reflecting local school districts preferences, not from the unequal distribution of the local tax base. An important feature of the DPE programs is that states could use excess funds raised by wealthier districts to supplement spending by poorer districts. This would retain reliance on the property tax yet equalize funding streams.

Under a full-state funding program, the state sets tax bases, tax rates and distributes aid on the basis of educational need, not a district's ability to raise revenues. Virtually, all states use a foundation program, about half of the states that have these programs have a

required local effort. Less popular are the DPE-type program and often these are used in conjunction with a foundation program, called a “tiered” program. Hawaii is the only state that has explicitly adopted a fully state-funded system. A few other states operate nearly full-state funding programs. For example, Washington is constitutionally obligated to fully fund the basic support program; local districts can impose taxes to provide supplementary support for non-basic programs. In Michigan, the local property tax system was largely replaced with a statewide sales and cigarette tax.

In an effort to equalize spending some states have opted to limit the amount of resources wealthy school districts can raise. For example, California and Texas have re-capture provisions to limit the amount of money localities can raise. In California, the re-capture provisions and Proposition 13⁸ significantly reduces the variation in per pupil spending and effectively makes California a state-funded system.⁹

Appendix Table 1: State Categorization

	School District Type	Court Mandated School Reform Status	Property Tax Limit Status
Alabama	1	2	0
Arizona	1	2	1
Arkansas	1	1	1
California	1	1	1
Colorado	1	0	2
Connecticut	2	1	0
Delaware	1	0	0
Florida	1	0	0
Georgia	1	0	0
Idaho	1	0	2
Illinois	1	0	2
Indiana	1	0	1
Iowa	1	0	0
Kansas	1	0	0
Kentucky	1	2	1
Louisiana	1	0	1
Maine	4	0	0
Maryland	3	0	0
Massachusetts	2	2	1
Michigan	1	0	1
Minnesota	1	0	0
Mississippi	1	0	1
Missouri	1	0	1

⁸ Proposition 13 limits property tax rates to 1% of assessed value and limits growth in assessments to about 2% until a property is resold. In implementation of Proposition 13 the distribution of property tax revenues was given to the state, thus making property taxes a largely state controlled tax in California.

⁹ The notable exception to this is the few basic aid districts that do not (and did not) receive any state aid.

Montana	1	2	0
Nebraska	1	0	0
Nevada	1	0	0
New Hampshire	4	2	0
New Jersey	4	1	0
New Mexico	1	0	1
New York	4	0	0
North Carolina	3	0	0
North Dakota	1	0	0
Ohio	1	2	1
Oklahoma	1	0	0
Oregon	1	0	1
Pennsylvania	1	0	0
Rhode Island	2	0	1
South Carolina	1	0	0
South Dakota	1	0	0
Tennessee	4	2	0
Texas	1	2	1
Utah	1	0	0
Vermont	1	2	0
Virginia	4	0	0
Washington	1	1	1
West Virginia	1	1	2
Wisconsin	4	0	2
Wyoming	1	1	0

Item

Code Definitions

School District Type	1 = Independent, 2 = City-Dependent, 3 = County-Dependent, 4 = Other/Split
Court Mandated School Reform Status	0 = No Court Mandated School Reform, 1 = Early Reform (<=1985), 2 = Late Reform (>1985)
Property Tax Limit Status	0 = No Property Tax Limit, 1 = Early Limit (<=1985), 2 = Late Limit (>1985)