

THE HARRIS SCHOOL OF PUBLIC POLICY STUDIES  
THE UNIVERSITY OF CHICAGO

WORKING PAPER #09.05  
May 2009

---

**DIRECT DEMOCRACY AND  
REDISTRIBUTION**

*Christopher R. Berry*

## Direct Democracy and Redistribution

Christopher R. Berry  
The University of Chicago  
Harris School of Public Policy  
crberry@uchicago.edu

This draft: March 14, 2009

**Abstract.** One of the most robust empirical findings about direct democracy is that US states with the voter initiative tax and spend significantly less than states without the initiative, at least since the mid-1970s. The fiscal differential between initiative states and non-initiative states has been interpreted as an indication that voters prefer smaller government than legislators. Yet, existing research has not explained exactly which elements of the public budget are cut as a result of the initiative. This paper does so. I find that the major fiscal effect of the initiative is not smaller government in general, but specifically the effect is lesser and more unequal education funding. In particular, the overall spending differential in initiative states is due primarily to reductions in state aid to school districts for elementary and secondary education. Local governments do not compensate for the lost state aid through increases in revenue from other sources. Therefore, because state funding of education is a progressive force that works toward equalizing school spending, initiative states also experience significantly higher levels of inequality across districts in per pupil spending. I discuss implications of these results for the understanding of direct democracy and its effects on the relationship between voters and politicians.

*Preliminary: Please do not cite or circulate without the author's permission. Comments welcome.*

Over the last several years there has been a resurgent interest in the politics of the voter initiative and referendum. This burgeoning scholarship examines direct democracy as a window into more general aspects of politics. For example, recent studies have looked at direct legislation to shed light on interest group influence, legislative responsiveness, voter competence, and the economic theory of government.<sup>1</sup> Based on a comparison of policy outcomes between states with and without the voter initiative, one theme in this literature is that the availability of a direct legislation option tends move social (Gerber 1999) and economic (Matusaka 1995) policies toward the preferred position of the median voter.

If it is true that policy differentials between initiative and non-initiative states reflect the will of the median voter, then it is possible to learn much more from the fiscal accounts than simply whether voters prefer “larger” or “smaller” government than their legislators do. Examining differences fiscal policy between initiative and non-initiative states in depth provides insight into differences between voters and politicians over basic questions about the functions government ought to perform in society, how these functions ought to be prioritized, and which level of government ought to perform them. This paper presents the first detailed analysis of the effects of the initiative on state and local government finance, and in so doing sheds light on fundamental questions of representation and policymaking.

To preview my results, I find that the major fiscal effects of the voter initiative are to increase inequality in spending for public education and to decrease the level of school spending. Specifically, in the presence of the voter initiative, state governments cut their

---

<sup>1</sup> Recent reviews of the literature include Garrett (2008), Matusaka (2005), and Smith and Tolbert (2007). Also see Donovan and Bowler (1998).

budgets by providing less aid to local school districts. Because local districts do not recover the lost state aid from other sources, overall education spending is lower on average in initiative states.<sup>2</sup> In addition, because state aid is generally progressive—supporting the poorest districts—reductions in state funding are absorbed disproportionately by districts at the bottom of the state’s spending distribution. These findings can be interpreted to suggest that voters prefer less redistribution than their legislators, or that anti-tax interest groups subvert the initiative process. I conclude by discussing the implications of my findings for these two competing explanations of the initiative’s fiscal effects.

## **1. Background**

Direct democracy is lawmaking by voters. Although the United States does not allow direct legislation at the national level, it is widely practiced in state and local politics, in the form of the initiative and referendum. The referendum allows citizens to vote on laws proposed by the legislature; the initiative allows citizens to propose laws directly, and to have their proposals voted on by the electorate. The initiative is considered to be the purest form of direct democracy (Gerber 1999) in that it allows laws to be made entirely by citizens without the intermediation of the legislature. The standard form of the initiative is simple: a citizen, or interest group, wishing to propose a new law must collect a specified number of signatures from voters in order to have the proposal placed on the ballot. If the proposition gains the support of a majority of voters, it becomes law.

---

<sup>2</sup> These results are consistent with Fischer (2008), who finds that Swiss cantons with stronger institutions of direct democracy spend less on public education than other cantons. She does not investigate inequality in spending, however.

The adoption of direct democracy swept through the United States at the turn of the century, concurrent with Populist and Progressive agitation to make legislatures more responsive to the broader “public interest” (Cronin, 1989).<sup>3</sup> Figure 1 shows states with the initiative, and the year in which it was adopted. South Dakota started the trend in 1898, and within 20 years most of the states that were to adopt the initiative had done so. Indeed, only five states have adopted the initiative since 1918 – in order, Alaska, Wyoming, Illinois, Florida, and Mississippi – so that there are now a total of 24 initiative states. While the basic form of the initiative is common across states, the details vary, primarily in the signature requirements, as will be discussed below.

Arguably the most robust empirical finding about direct democracy is that states with the voter initiative have significantly lower taxes than states without the initiative, at least since the mid-1970s. The seminal study of the fiscal effects of the voter initiative is Matsusaka (1995), which showed that budgets in initiative states were roughly 4 percent smaller than in non-initiative states over the period 1960 to 1990. Subsequently, at least ten different studies have concluded that the presence of the voter initiative reduces state taxes and spending, all else equal.<sup>4</sup> Closely related to these findings, initiative states are also more likely to enact tax and expenditure limitations and supermajority requirements for tax increases (Bowler and Donovan 1995).

There is also mounting evidence that initiative states enact more conservative social policies than non-initiative states. For example, Gerber (1999) argues that initiative states are more likely to have the death penalty and to require parental notification for

---

<sup>3</sup> See Smith and Fridkin (2008) for a fascinating analysis of the *politics* of initiative adoption, focusing on the question of why a legislature would willingly delegate power back to citizens.

<sup>4</sup> See Matsusaka (2004, Appendix 4) for a review. By contrast, Primo (2007) finds that the *local* initiative has a positive impact on city spending, at least where the signature requirements are not too stringent.

abortions. Arceneaux (2002) and Bowler and Donovan (2004) also find that initiative states adopt more restrictive abortion policies, while Hero and Tolbert (1996) find that initiative states are more likely to enact official English laws. Matsusaka (2007) examines laws on seven different social issues and finds that initiative states are about 20 percent more likely than non-initiative states to adopt a conservative policy. Importantly, none of these studies finds that citizens in initiative states are significantly more conservative than citizens in non-initiative states, so the policy differentials do not appear to be the product of ideological differences between the two groups of states.

Matsusaka (1995, 2005) suggests three theoretical reasons to expect the voter initiative to produce different policy outcomes from pure representative decision making: (a) vote trading is not possible with direct legislation, meaning that logrolling should be reduced (e.g., Weingast, Shepsle, and Johnsen 1981; Weingast and Marshall 1988), (b) the initiative takes control of the agenda away from bureaucrats and politicians, removing their “setter’s advantage” (Romer and Rosenthal 1979), and (c) information asymmetries between legislators and citizens are avoided under direct voting.

If any one of these explanations is correct, then one implication is that policies in initiative states more closely reflect the will of the majority than in non-initiative states. That is, legislatures sometimes enact policies that are out of step with the preferences of the median voter, and the presence of the initiative causes policy to be brought back into line more quickly than would be the case otherwise. Evidence supporting this interpretation is provided by Matsusaka (2004, 2007) and Gerber (1999), who show that, in the cases they examine, the policy changes wrought by the initiative are clearly preferred by a majority of voters. In other words, the initiative pushes policy outcomes

closer to the position preferred by the median voter, or prevents policy from deviating from that position in the first place.

Not all observers are so sanguine about the ability of the initiative to promote the popular will, however. To the contrary, many critics argue that the expense of waging an initiative campaign privileges moneyed interest groups rather than ordinary citizens (e.g., Broder 2000, Ellis 2002, Garrett 1999, Sabato, Ernst, and Larson 2001, Schrag 1998). According to this view, the initiative causes policy to be more favorable to interest groups than would be the case if the legislature acted on its own.<sup>5</sup> Such concerns have led some scholars to challenge the view that the initiative makes policy more responsive to the will of the majority (Lascher, Hagen, and Rochlin 1996, Camobreco 1998).<sup>6</sup> Indeed, scholars even called into question the populist credentials of the initiative-led “tax revolt” of the 1970s and 1980s, during which many states hobbled the government’s ability to raise revenues and expenditures (Smith 1998, 2004).

While I will not be able to provide a general answer to the controversy over whether the initiative benefits citizens or special interests, a detailed investigation of the fiscal differentials between initiative and non-initiative states will shed new light on the question. In other words, it is important to learn not only whether initiative states spend more or less than non-initiative states, but exactly how the allocation of spending differs. In the remainder of the paper, I analyze itemized fiscal data for state and local governments to uncover the precise channels through which initiative-induced spending

---

<sup>5</sup> But see Gerber (1999), who finds that broad citizen interest groups are better able to use the initiative to change policy, while narrow economic interest groups are more successful in blocking initiatives to preserve the status quo. Meanwhile, Boehmke (2005) finds the initiative states have more interest groups and that they are more representative of the general population than in non-initiative states.

<sup>6</sup> Matsusaka (2004, appendix 4) has challenged the methodology of these studies.

cuts are realized. Having done so, I then return to broader questions of policymaking under direct democracy.

## **2. Data and Empirical Strategy**

I use three primary data sources on state and local government finances. First, I use the *Annual Survey of State and Local Government Finances* (hereafter, *Annual Survey*) for the years 1970 to 2003. Second, I use files from the *Historical Data Base on Government Finances* compiled by the US Census Bureau (hereafter, *Historical Database*), which covers the years 1972 and 1977 to 2002, excepting 2001. The main difference between the two is that the *Annual Survey* provides more years of data but less detail on expenditures by function and by type of local government. Wherever possible, I use data from the *Annual Survey* to maximize my sample size; however, some of the detailed functional analysis relies on data only available in the *Historical Database*. I explain below which source is used in each step of the analysis. In addition to these two general data sources on government finance, I use additional data on education finance from the National Center on Education Statistics (NCES). I obtained state-level data on the sources of public school revenue for the years 1971 to 2002. Published first in the *Digest of Education Statistics* and later in the *Common Core of Data*, these data show the level and proportion of revenue received by public elementary and secondary schools from local, state, and federal sources and provide additional detail on school enrollment.

To analyze the relationship between direct democracy and fiscal policy, I pool the observations across states and years and regress fiscal outcomes against an indicator for whether the state has a voter initiative. I emphasize that I am not examining the effects of particular voter initiatives. Rather I am comparing average fiscal policy outcomes in

states with and without the initiative.<sup>7</sup> This approach captures both the direct effect of the initiative and its indirect effect, or “threat effect,” and is consistent with prior studies such as Gerber (1999, chap. 7) and Matsusaka (1995, 2004). The logic of the threat effect is that the mere availability of the initiative leads legislators to adjust policy in anticipation of possible action by voters. Thus, the initiative may have an effect on policy outcomes even if it is rarely, or never, used to pass legislation.<sup>8</sup>

In order to attribute differences in fiscal policy to the presence or absence of the initiative, it is essential to control for other important determinants of the public budget. The regressions that follow utilize a common set of control variables. *Income per capita* captures demand for government services, which is expected to be positively related to income (i.e., Wagner’s law). *Population density* captures the effects of possible economies, or diseconomies, of scale in the provision of government services. The *proportion of the state’s population that lives in metropolitan areas* reflects differences in revenue and expenditure needs between rural and urban areas. The *population growth rate* over the preceding five years captures short-run spikes in needs for government services. I also control for revenue received from the federal government, both because it is important to the budget constraint and because of the possible simulative effect of *federal aid* via the so-called “flypaper effect” (e.g., Bailey and Connolly 1998).

I control for the proportion of the *population under 18*, a measure of demand for education spending, which constitutes a large share of state and local budgets. I control

---

<sup>7</sup> Following Matsusaka (1995), I do not count Illinois as an initiative state for this analysis. Although technically an initiative state, the subject matter of initiatives is restricted from directly addressing fiscal policy.

<sup>8</sup> Gerber, Lupia, McCubbins, and Kiewet (2001) study the direct effects of winning initiatives on policy outcomes in California. They argue that legislatures, bureaucracies, and courts can thwart the implementation and enforcement of initiatives, and that most winning initiatives are implemented only partially. Their results suggest that the ultimate policy impact of an initiative’s direct effects vary widely from one initiative to another; however, they do not study the initiative’s threat effect.

for the *population over 65*, because it has been argued that the elderly prefer lower spending on education (Poterba, 1997), although they may place additional demands on the public budget. Additionally, I include the civilian *unemployment rate* to account for fluctuations in the general health of the state economy. Finally, to capture, however imperfectly, ideological preferences over the public budget, I use Poole and Rosenthal's (1991) *DW Nominate* score (first dimension) for the state's U.S. senators.<sup>9</sup> This metric has the advantage of being comparable across time as well as across states. The theoretical range of the score is from  $-1$  for the most liberal to  $+1$  for the most conservative.

Because only one state changed its initiative status over the study period (Mississippi, in 1992), I am not able to include state-level fixed effects in the models.<sup>10</sup> I do include fixed effects for the four main Census regions to account for unobservable sources of time-invariant regional heterogeneity. In addition, all the models include dummy variables for all but one year to capture the effects of secular changes that affect all states, such as the condition of the national economy. Because observations for the same state over time are clearly not independent, I cluster the standard errors in all models by state, which accounts for arbitrary forms of serial correlation, as well as heteroskedasticity (Arellano 1987, White 1984). I exclude Alaska, Hawaii, and Wyoming from the analysis.<sup>11</sup> Throughout, all dollar values are reported on a per capita basis, and

---

<sup>9</sup> My results are robust to using alternative measures of state ideology, as will be discussed below.

<sup>10</sup> Technically, a state fixed effect model *could* be estimated, but identification would be based solely on changes in Mississippi before and after the initiative adoption of 1992.

<sup>11</sup> Alaska is removed because of its extremely high level of mineral wealth relative to population, and Wyoming because it is an extreme observation on large number of variables. Hawaii has the only completely state-run school system. Including Hawaii in the analysis notably affects estimates of the allocation of spending between the state and local sectors. Matsusaka (1995, 2004) excludes Alaska and Wyoming from his analysis, but includes Hawaii.

adjusted to 2000 dollars using the consumer price index. A table of summary statistics is provided in the appendix.

### **3. Results**

My first step is to reproduce Matsusaka's (1995, 2004) main finding – lower revenue and taxes for the combined state and local sector in initiative states – which I am able to do without difficulty. The results shown in Table 1 indicate that in states with the voter initiative, combined state-local revenues are lower by \$154 per capita, and expenditures are lower by about \$163. Given average own-source revenues of \$3,200 and direct general expenditures<sup>12</sup> of \$3,900, these point estimates suggest that the overall initiative effect is a reduction of about 4 to 6 percent in the state budget, roughly equivalent to Matsusaka's results.

Results for the control variables in Table 1 are also consistent with past studies. More affluent and faster growing states spend more, on a per capita basis. Federal aid is translated into state spending at a greater than one-to-one rate, consistent with literature on the fly paper effect. States spend more when unemployment is higher, suggesting counter-cyclical fiscal policy. The coefficient for the average NOMINATE score of the state's Senators is negative, suggesting that conservative states spend less, although the relationship falls shy of statistical significance. The remaining control variables generally demonstrate the expected signs, though do not attain statistical significance, and comport with results of similar models reported by Matsusaka (1995, 2004).

Having established a baseline result consistent with the existing literature, I now examine the specific sources of the fiscal differential between initiative and non-initiative

---

<sup>12</sup> Direct general expenditures include all government expenditures except expenditures to other governments, utility, liquor store, employee retirement or other trust funds.

states. Whereas Table 1 looked at the finances of the combined state-local sector, I next analyze the finances of states and local governments separately. Table 2 shows the results for state governments. Models (1) and (2) demonstrate that state government own-source revenue and general expenditure are lower by \$165 and \$149 in initiative states, basically in line with the findings of Table 1. More interesting results are shown in models (3) and (4). According to the Census Bureau's accounting system, the category *general expenditures* (i.e., Model (2)) is composed of *direct general expenditures*, meaning the money the state government spends on its own operations, and *intergovernmental expenditures*, or state aid to local governments. It is clear from comparing models (3) and (4) that the lion's share of the initiative effect operates through state aid to local governments. Intergovernmental expenditures are lower by \$93 in initiative states, while direct general expenditures are lower by only \$55, and the latter effect does not approach statistical significance. The initiative differential represents 12 percent of average intergovernmental expenditures (\$785 per capita), but only 3 percent of average direct general expenditures (\$1800 per capita). In other words, while state governments may have made modest reductions in their own activities as a result of the initiative, most of their reductions were made in the form of smaller transfers to the local sector.

Specifically, the point estimates suggest that approximately two-thirds of the initiative-induced state revenue reductions were translated into reduced aid to local governments.

The results from Table 2 prompt the obvious question, how do local governments respond to the initiative and its effect on state aid? Table 3 shows equations for the local government sector.<sup>13</sup> Intergovernmental revenue from the state is lower by roughly \$120

---

<sup>13</sup> This refers to the combined finances of all local governments in the state.

per capita in initiative states, consistent with the results seen in Table 2.<sup>14</sup> Meanwhile, local government own-source revenue is essentially unaffected by the presence of the initiative. The point estimate of \$16 in model (3) is both statistically and substantively insignificant. In other words, local governments in initiative states do not compensate for lost state aid by increasing collections from their own revenue sources.

A story begins to emerge from the data. States collect less revenue under the initiative, and this debit is passed on to local governments in the form of cuts in intergovernmental aid. Local governments, in turn, receive less revenue from the state, but do not increase their own revenue collection in order to make up the difference. Estimates of the initiative's effect on aggregate state-local revenue and expenditures in previous studies mask this important pattern. To my knowledge, this marks the first time it has been shown that the primary effect of the voter initiative on fiscal policy is to reduce the amount of state aid sent to local governments. In the next section, I investigate the specific nature of the reductions in state aid to localities under the initiative.

### **3.1 State Aid Unraveled**

First I ask which local governments are affected by the cuts in state aid associated with the voter initiative. Table 4 repeats the analysis of the initiative's effect on local revenue for each distinct type of local government: counties, municipalities, townships, school districts, and special districts. The observations are state-level aggregates for each type of government; for instance, measuring total state revenue received by all school

---

<sup>14</sup> Conceptually estimated initiative effect for state intergovernmental expenditure (Table 2, model (4)) and for local intergovernmental revenue (Table 3, model (4)) should be exactly equal. In implementation, they differ slightly for two reasons. First, the state expenditure model uses two additional years of data that are available for state governments but not local governments. Second, the figures are reported separately by officials of state and local governments. There are some forms of federal aid that are delivered to localities by state governments, which local governments sometimes report as state aid, while state governments do not report the same monies as part of their own intergovernmental expenditures. That said, the differential in the estimates from the two tables is relatively small compared to the respective standard errors.

districts in the state, and so on. In each case, I regress intergovernmental revenue from the state against the initiative indicator and the standard set of controls. For this analysis, I rely on the *Historical Database* because comparable data are not available in the *Annual Survey*. Because data on intergovernmental revenue received by local governments are only available for the years 1972, 1977 to 1992, 1997, and 2002, the sample size for this analysis (47 states \* 19 years = 893 observations) is notably smaller than in the preceding tables. Nevertheless, a clear pattern emerges.

Among all types of local governments, only school districts experience a statistically or substantively significant differential in state aid between initiative and non-initiative states. Specifically, school districts in initiative states receive \$74 per capita less in state aid. This figure represents 18 percent of mean state aid to school districts (\$425 per capita). Moreover, school districts account for approximately two-thirds of the total reduction in state aid to local governments in initiative states.<sup>15</sup>

That education funding is the main target of initiative-induced cutbacks in state aid is reinforced by a supplemental analysis of state intergovernmental expenditures for education, shown in model (6). In other words, the dependent variable in model (6) is state aid for education, regardless of the type of local government receiving the aid. The estimated initiative differential of \$79 per capita is roughly equal to the estimated differential for school district revenue, and more precisely estimated due to the enhanced sample size.<sup>16</sup> Moreover, additional analyses (not shown) of state intergovernmental expenditures for other functions do not show initiative effects. Among all the functional

---

<sup>15</sup> The sum of the estimated initiative effects in models (1) to (5) of Table 4 is \$115, and  $74/115 = 0.64$ .

<sup>16</sup> The analysis of intergovernmental revenue by function pertains to the local government sector in aggregate. Because there are more years of data available for the aggregate local sector than for specific sub-types of local government, the functional analysis takes advantage of a larger sample size.

categories tracked by the Census Bureau, *no function other than education* demonstrates a differential between initiative and non-initiative states that is even remotely close to being statistically or substantively significant.<sup>17</sup>

The unmistakable message from Table 4 is that the primary fiscal effect of the voter initiative is to dampen the state government's role in education finance. However, one lingering concern is that the preceding analyses have been conducted on the basis of *per capita* funding, while analyses of education finance in particular should be conducted on a *per pupil* basis.<sup>18</sup>

With the analytical focus now squarely on education finance, I utilize the NCES data set. Table 5 presents models of per pupil funding for elementary and secondary education. Model (1) demonstrates that total state and local education funding is lower in initiative states by roughly \$420 per pupil, a differential that represents about 6 percent of average funding (\$6790 per pupil). Models (2) and (3) solidify the findings of the preceding analysis. State funding for education in initiative states is about \$500 less per pupil than in non-initiative states, or 16 percent of average state education funding (\$3150). Model (3) suggests that local governments in initiative states make up for some of the lost state money with about \$100 in increased funding from their own sources, although the effect is nowhere near statistically significant.<sup>19</sup>

---

<sup>17</sup> The complete set of intergovernmental revenue functions includes: education, general support, tax relief, health, hospitals, highways, transit subsidies, housing and community development, welfare, sewerage, water, electric utilities, gas utilities, transit utilities, and "other." Results of the analyses for these functions are available on request.

<sup>18</sup> Although the analyses do control for the proportion of the population under 18, this variable may not fully capture differences in public school enrollment across states.

<sup>19</sup> In considering the control variables in Table 5, note that the coefficient on the school-age population is negative. This result is consistent with other studies, such as Holcombe and Kenny (2008), who explain the negative relationship by noting that raising per pupil expenditures is more expensive when a larger share of the population is in school. The positive coefficient for the elderly population is somewhat surprising, although the literature on this relationship is inconsistent (Fletcher and Kenny forthcoming).

To summarize the results up to this point, the major fiscal effect of the voter initiative is to reduce state government funding for elementary and secondary education. Local governments in initiative states make up at best a small fraction of the lost state funding, with the net result being that aggregate education funding is significantly lower. I emphasize that this outcome does not represent decentralization in the conventional sense, if decentralization is meant to imply a *transfer* of responsibility from the state to the local sector. Instead, the initiative state differential arises almost purely from a diminution of the state's role. However, the net result does resemble decentralization in the sense that the local sector's *share* of education funding is higher in initiative states as a result of diminished state funding.

### **3.2 Direct Democracy and Inequality**

What are the likely implications of a reduction in state education aid to local governments? In general, state funding for education is distributed progressively, meaning that poorer school districts receive more money (e.g., Card and Payne 1998). Therefore, cutbacks in state education funding may reflect a general shift toward a less progressive system of school finance in initiative states. To investigate the connection between the voter initiative and the inequality of education spending, I use school district-level data from the Historical Database to compute four measures of within-state, across-district inequality in per pupil spending: the Gini coefficient, the coefficient of variation, the Theil index, and the log of the ratio of spending by the ninety-fifth-percentile district to the fifth-percentile district.<sup>20</sup> I multiply each of these indices by 100

---

<sup>20</sup> These four indexes of inequality are reviewed in Murray, Evans, and Schwab (1998) and discussed in detail in Berne and Stiefel (1983). See also Massey and Denton (1988). Because several of these inequality measures are highly sensitive to extreme values, I followed Murray, Evans, and Schwab in using the following algorithm to delete potential outliers. Within each state and year of observation, I identified the

to facilitate presentation of the results. Maryland, North Carolina, and Virginia are omitted from this analysis because they contain no independent school districts as classified by the *Census of Governments*. I then regress the state-level aggregate measures of school spending inequality against the initiative indicator and the usual set of controls. In addition, to control for the overall level of income inequality in the state, I include the state per capita income Gini coefficient from the University of Texas Inequality Project (Galbraith and Hale 2006).

Table 6 reports the models of per pupil spending inequality. Across the board, inequality is significantly higher in initiative states. The initiative coefficients in model (1) suggests that education spending inequality is one Gini point higher in initiative states ( $p = 0.09$ ). The initiative effect represents roughly 14 percent of the mean Gini coefficient in the sample (7.3). For the coefficient of variation, the Theil index, and the log 95<sup>th</sup>/5<sup>th</sup> percentile spending ratio, the initiative effect is significant at  $p < .05$  and the estimated coefficient represents 17, 32, and 20 percent of the respective mean values. By any of these measures, then, per pupil spending inequality across districts is statistically and substantively higher in initiative states.

In order to better understand precisely how the distribution of school spending differs between initiative and non-initiative states, I estimated the effect of the initiative on spending by the fifth-, fiftieth-, and ninety-fifth-percentile districts in each state.

Again, the data are from the historical database and cover the period 1970 to 2002,

---

fifth-percentile and ninety-fifth-percentile school district in terms of per-pupil spending. I deleted any district whose spending was greater than 150 percent of the ninety-fifth-percentile value or less than 50 percent of the fifth-percentile value. In addition, because elementary and high schools have different operating costs, I exclude districts that are not unified across elementary and secondary school. Unified districts account for more than 90 percent of all public school enrollment. Finally, I weighted districts by their enrollment in computing the inequality indexes.

excluding 2001. For each state, I identify the district at the fifth percentile of per pupil spending in each year, and so, too, for the fiftieth and ninety-fifth percentile districts. I then regress spending at each point in the distribution on the initiative dummy and the full set of control variables, including the state income Gini coefficient.

The results, shown in models (5) through (7) of Table 6, paint a clear picture. Spending at the 5<sup>th</sup> percentile is around 14 percent lower in initiative states, a differential that is highly significant statistically. Spending by the median district is lower by 8 percent, which is again a statistically significant differential. By contrast, the differential for the 95<sup>th</sup> percentile district cannot be distinguished from zero. I can reject the hypothesis that the initiative effect is equal for districts at these different points in the spending distribution.<sup>21</sup> Based on these results, it is evident that the increases in inequality observed in initiative states are the result of losses in funding at the bottom and, to a lesser extent, middle of the expenditure distribution.<sup>22</sup>

With the results contained in Tables 2 through 6, we can now assemble a coherent explanation for the fiscal effects of the voter initiative. Initiative states spend significantly less in aggregate than non-initiative states. The differential is due primarily to reductions in state aid to school districts for elementary and secondary education. Local governments do not compensate for the lost state aid through increases in their own revenue sources. Therefore, because state funding of education is a progressive force that

---

<sup>21</sup> In order to test these hypotheses, I estimated the equations for the 5<sup>th</sup>, 50<sup>th</sup>, and 95<sup>th</sup> percentiles by seemingly unrelated regression and then tested the equality of the initiative coefficients. The hypothesis that the initiative coefficient is equal for the 5<sup>th</sup> and 95<sup>th</sup> percentile districts is rejected with a  $p$  value of 0.03; for the 50<sup>th</sup> versus 95<sup>th</sup> percentile at  $p = 0.04$ ; and for the 50<sup>th</sup> versus 5<sup>th</sup> percentile at  $p = 0.10$ . All tests account for clustering by state.

<sup>22</sup> Moreover, in additional analyses (not shown) I found that the gini coefficient of income inequality was not significantly higher in initiative states, suggesting that higher education spending inequality cannot be attributed to overall higher levels of economic inequality in initiative states.

works toward equalizing school spending,<sup>23</sup> initiative states also experience significantly higher levels of inequality across districts in per pupil spending. In other words, the main fiscal effect of the voter initiative is not smaller government generally speaking, but it is lower and more unequal education spending.

### **3.3 California**

Before concluding the analysis, I consider one possible alternative explanation for the results presented above: is the initiative effect simply a proxy for a California effect? The state has received considerable scholarly attention for its use of the voter initiative generally, for its famous initiative-led tax revolt (Proposition 13), and for its education funding system, which swung from being decentralized to highly centralized during my study period.<sup>24</sup> The reader may, for good reason, wonder whether the key findings presented above would survive were California excluded from the analysis. The answer is *yes*. I have run versions of all the analyses presented above omitting California, and in no case did the substantive or statistical significance of the results change markedly. If anything, the results become a little stronger when California is excluded.

## **4. Discussion**

The results presented in this paper add substantial specificity to the finding in the existing literature that initiative states spend less than non-initiative states. The spending differential between initiative and non-initiative states is not simply a matter of “smaller” versus “bigger” government across the board. Rather, spending in initiative states differs

---

<sup>23</sup> Using a data set similar to mine, Card and Payne (1998) show that the slope of state aid with respect to district income is significantly negative, meaning that poorer districts receive more funding. Furthermore, in results available on request, I regressed the four measures of educational inequality shown in Table 6 against the state share of funding for education. In each case, there was a significant negative relationship, implying that inequality is lower where state funding is higher.

<sup>24</sup> An insightful discussion of these issues can be found in Gerber et al. (2001, chap. 15).

in a very particular facet: education. State governments spend significantly less on education aid, and the overall school funding system is significantly more unequal in initiative states.<sup>25</sup>

Having uncovered the specific nature of the fiscal policy differences between initiative and non-initiative states, it is now possible to investigate their origins and implications with finer detail. In this section, I explore the following three questions in light of the preceding results. Are the spending differentials between initiative and non-initiative states due to the institution itself or to some other factor? If the former, are the initiative-state spending differentials due to the direct effect of the initiative or the threat effect? Do initiative-induced policy differences reflect the will of the majority or the influence of special interests?

#### *4.1 Is the “initiative effect” spurious?*

Using the same methodology employed in the analyses presented above, many prior studies, most prominently Matsusaka (1995, 2004), have attributed the estimated taxing and spending differentials between initiative and non-initiative states to the causal effect of the initiative itself. However, identifying the causal effect of the initiative is not unproblematic. That the institution was adopted long ago is an advantage in ruling out one form of endogeneity; namely, simultaneous causation.<sup>26</sup> In other words, we can be reasonably confident that a state’s initiative status does not change quickly in response to

---

<sup>25</sup> Whether this reduction in state aid amounts to a form of decentralization is open to debate. The state government reduces its role in education spending, but the local sector does not increase its role substantially. The result is that the local share of spending increases. Not wishing to engage in semantics, I simply note that if this is decentralization, it is *decentralization by attrition* of the state government rather than *decentralization by transfer* of responsibility from the state to local governments.

<sup>26</sup> By *endogeneity*, I refer to the situation in which an explanatory variable—in this case, possibly the state’s initiative status—is correlated with the disturbance in a regression. Endogeneity generally results from one (or more) of three causes: simultaneity, omitted variables, or measurement error. See, e.g., Wooldridge (2002, chap. 4) for a discussion.

contemporary changes in preferences for taxing and spending. However, that the initiative status of individual states does not change over time during the study period makes it impossible to observe changes in spending before and after the introduction of the institution, a disadvantage in ruling out another form of endogeneity; namely, omitted variable bias. Because identification in these models is necessarily cross-sectional, therefore, it is especially important to rule out the influence of omitted variables that may be correlated with a state's initiative status and also influence its fiscal decisions. Now knowing more about the nature of the fiscal differentials between initiative and non-initiative states—i.e., that differences are concentrated in the realm of education and involve the distribution as well as the level of funding—it is possible to investigate more specifically the soundness of causal claims about the institution.

Given that the voter initiative is a longstanding constitutionally based institution, it is natural to begin by asking whether state constitutions that allow the initiative also differ in their rules with respect to education finance. Do non-initiative state constitutions have more egalitarian requirements for the provision of public education? Baicker and Gordon (2004) rate state constitutional language regarding the equality of public education funding. Specifically, they rate the strength of the constitution's language supporting equity in education as *low*, *medium*, or *high*.

Table 7 shows the cross-tabulation of state constitutional language ratings by initiative status. If anything, the non-initiative states are more likely to receive a low rating, precisely the opposite pattern that would be expected if constitutional provisions were the source of the educational inequality differential. In any event, the difference in

the distribution of the ratings between initiative and non-initiative states is not statistically significant, as indicated by the reported chi-square and Fisher exact tests.

Moreover, if I rerun the models from the preceding tables including constitutional language dummies, the results do not change in any important way (not reported). I do find that states with stronger language on educational equity have more total spending on education, financed almost exclusively by the state government. While egalitarian constitutional language is associated with lower spending inequality, the relationship is not significant. Most important, the estimated effect of the voter initiative remains significant and in the expected direction even after the inclusion of the constitutional dummy variables. Thus, it does not appear that the presence of the initiative is merely a proxy for a more generally egalitarian constitutional regime in the area of education finance.

If state constitutional provisions regarding education do not explain the fiscal differences between initiative and non-initiative states, perhaps courts' interpretations of them do. State supreme courts have been arguably the most powerful force for equality and centralization in education finance over the past 40 years (Card and Payne 1998, Guthrie 2004). Beginning with California's *Serrano v. Priest* in 1971, thirty-seven states have had their system of education funding challenged on equity or adequacy grounds. In twenty-five of these states, the system has been ruled unconstitutional, resulting in court-ordered funding reforms.

Could the court rulings, rather than the initiative itself, explain the higher spending and lower inequality in non-initiative states? Table 8 suggests that the answer is no. Non-initiative states were more likely to have had their funding system ruled

unconstitutional than initiative states as of 2004, but the difference is not statistically significant. Furthermore, including a dummy variable equal to one if the State Supreme Court had ruled the education funding system unconstitutional as of the year in question does not alter the results of the preceding analyses in any important way. The results (not reported) do suggest that court school finance judgments have led to greater state centralization of funding. In addition, inequality in education funding is somewhat lower after a court intervention, although the effect is not statistically significant.<sup>27</sup> In any event, court rulings are not an explanation for the observed differential in education finance between initiative and non-initiative states.

Another concern with results showing that initiative states enact more conservative policies than non-initiative states is that the differential could be the result of ideology rather than of the initiative itself. In other words, perhaps initiative states are generally more conservative, and it is this difference in ideology that accounts for policy differences between initiative and non-initiative states. However, note that all of the models presented above control for state ideology, as measured by the average NOMINATE score of the state's Senators. Because NOMINATE scores are at best an imperfect measure of state ideology, as a further robustness check I reran all of the models reported above using 5 alternative measures. I use Berry et al.'s (1998) citizen and government ideology scores,<sup>28</sup> Erikson, Wright, and McIver's (2007) state partisanship and ideology scores, and finally the fraction of seats in the state legislature that were held by Democrats. Without displaying all 5 permutations of each model, the

---

<sup>27</sup> See Berry (2007) for a more detailed analysis of the fiscal effects of state supreme court judgments related to educational equity and adequacy.

<sup>28</sup> Although their article was published in 1998, Berry et al. provide updated scores through 2002 via ICPSR Study #1208.

bottom line is that the estimated coefficient for the voter initiative does not change significantly depending which measure of ideology is used.<sup>29</sup> These findings are consistent with Matsusaka (2004, chapter 3), who examines multiple measures of state ideology and never finds a notable difference between initiative and non-initiative states. There is simply no evidence to suggest that the estimated policy differences between initiative and non-initiative states can be chalked up to differences in political ideology.

Finally, in order to more precisely isolate the influence of the initiative, I utilize information on the signature requirements for placing an initiative on the ballot in each state. The number of signatures required to place a measure on the ballot ranges from 2 percent (North Dakota) to 12 percent (Mississippi) of the electorate.<sup>30</sup> The higher the signature requirement, the more difficult it is to place an initiative on the ballot. Therefore, if the preceding results reflect a causal relationship, rather than something spurious, the estimated effect of the initiative should decline as the signature requirement increases.<sup>31</sup>

To test this hypothesis, I ran all of the preceding models including an interaction between the signature requirement and the initiative dummy.<sup>32</sup> The results of these models for the measures of spending inequality are contained in table 9. The estimated coefficients for the signature requirement are always negative, as predicted, and significant ( $p < 0.10$ ) in three of the four models. Note that the “main effect” of the

---

<sup>29</sup> Complete results are available on request.

<sup>30</sup> In fact, Wyoming has the highest signature requirement—15 percent—but this state is excluded from my analysis, following Matsusaka (2004). States also differ in how they define “electorate” in determining signature requirements (Matsusaka and McCarty 2001).

<sup>31</sup> The idea of using variation in signature requirements to identify the effect of the initiative originates with Matsusaka (1995, 2004 chapter 3). See also Bowler and Donovan (2004).

<sup>32</sup> In other words, I add a variable equal to the signature requirement for initiative states and equal to zero for non-initiative states. There is no “main effect” of the signature requirement since it is always zero for non-initiative states.

initiative appears larger in these models, because the coefficient now reflects the effect of the initiative when the signature requirement is zero, which is not a meaningful quantity of interest. To facilitate interpretation, figure 2 graphs the initiative effect on the gini coefficient of education spending for different levels of the signature requirement (i.e., model 1 of Table 9).<sup>33</sup> The differential in educational inequality between initiative and non-initiative states is largest where signature requirements are lowest, and declines as the signature requirement is raised. That the differential in inequality is greatest where it is easiest to qualify for the ballot is further evidence suggesting that the relationship is due to presence of the initiative itself.

As a general matter, when other models reported above are estimated with the inclusion of the signature requirement variable, the results comport with those shown in table 9; namely, the signature requirement always carries the expected sign, but is usually only marginally significant (i.e.,  $0.05 \leq p \leq 0.20$ ). In other words, the relationship between the signature requirement and the various fiscal outcomes is always in the expected direction, but it is often imprecisely estimated. Overall, these results are consistent with a causal interpretation of the initiative, but hardly dispositive. However, they do raise the bar for those wishing to claim that the fiscal differentials between initiative and non-initiative states are spurious. In order to be a threat to the preceding results, any omitted variable must not only be correlated with the presence of the initiative and a state's fiscal policies, it must also be (at least weakly) correlated with signature requirements.

#### *4.2 Direct effect or threat effect?*

---

<sup>33</sup> Figure 2 was produced using the *grinter* command, written for Stata by Frederick Boehmke.

Granting that the fiscal differentials between initiative and non-initiative states are due to the institution itself, then it is important to ascertain whether the initiative influences policy directly or through a threat effect (Gerber 1996; Matsusaka and McCarty 2001). In other words, is education policy different in initiative states as a result of specific initiatives that were enacted or as a result of legislative efforts to formulate policies that forestall voter initiatives in the first place?

I began by examining the track record of education-related voter initiatives in the states during the period under study. The Initiative and Referendum Institute (IRI) at the University of Southern California has compiled information on *every* voter initiative related specifically to education. According to IRI, only one education initiative passed prior to 2000; namely, Proposition 98 in California in 1988. This fact suggests a very simple empirical test: rerun the preceding models excluding California and all years after 2000. If the results hold, they *cannot* be due to the direct effect of education initiatives, as there are no observations with successful initiatives in these states and years. In fact, the results do hold. When I run all of the preceding models excluding the observations in states and years with successful education initiatives, the estimated initiative coefficients change hardly at all (not shown).

The idea that the differential fiscal policies of initiative states are due to the passage of specific education-related initiatives can be rejected. However, it is possible that non-education initiatives may have indirect effects on education finance. For example, suppose that voters use the initiative to enact tax and expenditure limitations (TEs), which constrain government budgets. Aid to local school districts may be an attractive target for cuts by state politicians facing TEs, given that the state's

expenditures are hard for voters to observe when funneled through local governments. To test this possibility, I estimated models including indicators of the presence of TELs as well as interactions between TELs and the initiative dummy (not shown).<sup>34</sup> While it is true that initiative states are significantly more likely to enact TELs (Bowler and Donovan 1995), controlling for TELs does not notably alter the estimated effect of the voter initiative in the models reported above. Thus, it does not appear that the initiative influences policy primarily through the channel of TELs.<sup>35</sup>

Another possibility, suggested by Gerber (1998) and Matsusaka (2007), is that even failed initiatives can influence policy by conveying information about voter preferences to legislators. For example, IRI reports that multiple initiatives designed to increase school funding equality have been defeated at the polls; e.g., Arkansas Initiated Act 1 in 1980, Oregon Measure 15 in 1994, Nebraska Measure 411 in 1996, and others. If legislators interpret the failure of such initiatives as a signal that voters prefer a less redistributive education finance system, then the results reported above could be the product of legislative efforts to move policy closer to the (perceived anti-redistributive) preferred policies of voters. However, when I run the models including an indicator for past failed education initiatives, the variable itself is insignificant and its inclusion does not alter the estimated coefficients for the initiative dummy variable in any important way (not shown).

Collectively, the results discussed in this section indicate that the initiative influences education policy primarily through a threat effect. This result is consistent

---

<sup>34</sup> My data on TELs are from Mullins and Wallin (2004). They tally 23 different types of TELs. I ran models including both the total number of TELs, a dummy variable indicating the presence of any TEL, as well as a complete set of 23 dummy variables for each type of TEL.

<sup>35</sup> These results are generally consistent with literature expressing skepticism of the effects of TELs on the ability of government to raise taxes (e.g., Kouser, McCubbins, and Rozga 2008, McCubbins 2008).

with game-theoretic models, e.g., Gerber (1996) and Matsusaka and McCarty (2001), suggesting that the indirect effect is the primary way that the initiative should affect policy.<sup>36</sup> On the other hand, these results would appear to be in tension with recent empirical work by Matsusaka (2007) showing that, while both the direct effect and the threat effect of the initiative alter policy outcomes, the direct effect is more important.<sup>37</sup> Further research into the operation of threat effects in the area of education finance would seem to be in order but is beyond the scope of this paper.

#### 4.3 *Does the initiative advantage special interest groups?*

Arguably the greatest controversy surrounding the initiative is whether it causes policy to become more consonant with the will of the majority or whether it is a tool for special interests to circumvent the legislative process. In the present context, the central question is whether education financing more closely reflects the preferences of citizens in initiative states than in non-initiative states. Unfortunately, whereas Gerber (1999) and Matsusaka (2007) are able to use state-level survey data to gauge the congruence between government policy and citizen preferences on several social issues, I am aware of no such survey to date on the topic of education funding inequality.<sup>38</sup> While the controversy over whether the initiative benefits citizens or interest groups cannot be resolved here, I close by evaluating the weight of the evidence on each side of the debate in light of the findings shown above. I focus on three key issues: public opinion on education spending;

---

<sup>36</sup> With complete information, in fact, the initiative will influence outcomes *only* through the threat effect, because politicians will alter policy so as to prevent voter initiatives from ever actually reaching the ballot. That an initiative *does* reach the ballot, therefore, can be informative to voters about the proposals' likely impact (Boehmke and Patty 2007).

<sup>37</sup> Specifically, he examines nine separate policy issues and finds that states that have the voter initiative but have not used it have policies that are more congruent with public opinion than states that do not have the initiative. However, states where an initiative on the issue has passed are even more likely to have congruent policies than states where the initiative is available but none has actually passed.

<sup>38</sup> There are many surveys on the *level* of education spending, which I discuss below.

the track record of education-related initiatives; and consonance of these findings with the existing literature.

#### 4.3.1 *Public Opinion*

Perhaps the strongest piece of evidence against the idea that the initiative moves policy in a direction favored by voters is that opinion surveys regularly show that voters favor more spending on education,<sup>39</sup> yet initiative states spend less. Voters also report that they are willing to pay higher taxes to support education programs for poor children.<sup>40</sup> That initiative states spend less on education, therefore, appears to be at odds with public sentiment and consistent with the view that anti-tax interest groups effectively utilize the initiative for their own goals (e.g., Smith 1998).

At the same time, as shown in Table 6, spending reductions in initiative states are not equally felt by all districts. Reductions come at the bottom of the distribution, while districts at the top are essentially unaffected. If residents of high-spending districts are most likely to vote, it may be that the spending shifts in initiative states are consistent with the will of the most politically active citizens; that is, policy outcomes may reflect the preferences of the median *voter* if not the median citizen.

#### 4.3.2 *Performance of Education-Related Initiatives*

If voters in initiative states actually prefer more redistribution in education funding, rather than less, then we should expect initiatives that propose equalization to pass when put before voters. Yet, according to IRI data, most education initiatives,

---

<sup>39</sup> For example, research by the Phi Delta Kappan (<http://www.pdkintl.org>), the organization that conducts the most extensive annual education-related surveys, consistently shows that a majority of respondents want more spending on public education.

<sup>40</sup> In the 2006 Phi Delta Kappan survey, 66 percent of respondents said they would be willing to pay higher taxes to support educational programs for low-income children (see <http://www.pdkintl.org/kappan/k0609pol.htm>).

including those that would improve equality of school funding, fail. Specifically, of the 43 education-related initiatives that have been put before voters, 31 have failed. Of the 11 initiatives that had an explicit goal of increasing equality or progressively redistributing funding, eight failed. It is not easy to reconcile the idea that voters prefer more equal school spending with the fact that they regularly defeat initiatives that would accomplish that very goal.

On the other hand, Gerber (1999) suggests that economic interest groups are more effective in blocking initiatives they oppose than in passing their own initiatives. Based on this evidence, one might argue that the failure of education initiatives reflects the victory of special interests rather than majority will. Without additional data, it is difficult to know precisely why individual initiatives failed or passed.

#### *4.3.3 Relation to Existing Literature*

The decrease in (generally progressive) state aid for education and resulting increase in spending inequality in initiative states are broadly consistent with the anti-redistribution theme first noted by Matsusaka (1995). He argues that initiative states collect less of their revenues from broad-based taxes and more from user charges and fees, which force those who use government services to pay for them (see also Bowler and Donovan 2004b). Reliance on fees rather than taxes presumably narrows the scope for redistribution (Matsusaka 1995 618-20, 2004 chapter 3). The anti-redistribution findings would also appear to be consistent with evidence that initiative states generally adopt more conservative policies on social issues (Arceneaux 2002, Bowler and Donovan

2004, Gerber 1999, Matsusaka 2007). More generally, these results are consonant with evidence that voters are more fiscally conservative overall than their legislators.<sup>41</sup>

However, when I analyze other spending categories that are more directly redistributive, such as welfare or housing and community development, I do not find any differential for initiative states (not shown). The absence of an initiative effect for these other functions could be due to the fact that welfare and housing policies are set largely at the federal level, whereas states have greater control over education policy.

#### *4.3.4 Summary and Interpretation*

In summary: initiative states have greater inequality of education funding; attempts to increase equality generally fail at the ballot box; and initiative states also have more conservative policies along other fiscal and social dimensions. While one can raise questions about any one of these findings in isolation, taken together it is difficult to argue that voters in initiative states actually prefer more equality in school funding. Of course, the issue can only be settled definitively with further research into state-level public opinion with respect to the distribution, not just the level, of education spending.

While there is no unambiguous answer to the controversy, my reading is that the weight of the evidence favors the interpretation that the initiative causes policy to move in a direction preferred by the median voter, though not necessarily the median citizen. One possible explanation for this result could be that direct democracy leads to outcomes that favor the median voter while legislatures generate outcomes that favor the median citizen.<sup>42</sup> That is, if more affluent voters are more likely to participate in referendum elections, then the median voter will have a higher income, and presumably less taste for

---

<sup>41</sup> The argument that the median voter is more fiscally conservative than her legislators is consistent with work by Peltzman (1992), although he does not address the role of the initiative specifically.

<sup>42</sup> I am grateful to Lawrence Kenny for suggestions underlying this explanation.

redistribution, than the median citizen.<sup>43</sup> By contrast, if legislative districts are drawn so as to be relatively homogeneous with respect to income and to apportion representation according to population (irrespective of voting propensity), then the median voter in the legislature should approximate the position of the median citizen.<sup>44</sup> This explanation is highly speculative, of course, and the theoretical issues involved are very complex.

## **5. Conclusion**

My aim in this paper has been to advance scholarship on direct democracy by elucidating the specific fiscal policy differences between initiative and non-initiative states as window into general issues of representation and policymaking. I have shown that the differences are not simply a matter of bigger versus smaller government. State governments offer less aid to local school districts in initiative states. Local districts do not make up for the lost state aid by increasing their own revenue. As a result, education spending is lower in initiative states. And it is lower especially for districts at the bottom of the spending distribution, resulting in greater overall inequality in education funding in initiative states. Finally, as predicted by game-theoretic models, the policy differences between initiative and non-initiative states appear to arise from a threat effect rather than from specific initiatives that passed at the ballot box.

Now knowing the precise nature of the initiative's impact on fiscal policy, several new avenues have been opened for future research on this important institution. For

---

<sup>43</sup> See Meltzer and Richard (1981) for a related model in which the median voter has a lower income than the average voter, and hence greater taste for redistribution.

<sup>44</sup> The following simple example illustrates the idea. Imagine an issue, such as income redistribution, on which preferences are correlated with income. Suppose there are two groups, the rich and the poor. The poor comprise 60 percent of the population but are only half as likely to vote as are the rich. In a referendum election, the median voter will be from the rich group. On the other hand, suppose there is a legislature with 10 seats, where 6 of the districts are poor and 4 are rich. Even though the turnout will be half as much in the 6 poor districts, the poor will still have 6 seats in the legislature. Therefore, the median voter in the legislature will be from the poor group, which is also the group containing the median citizen.

example, Matsusaka (1995, 2004) suggests three channels through which the initiative may alter public policy: by unbundling legislative logrolls; by undoing the agenda setter's advantage in public budgeting; or by improving politicians' information about voter preferences. Above, I suggested an additional, more speculative explanation; namely, that districting leads legislatures to produce median-citizen outcomes whereas direct democracy leads to median-voter outcomes. Future research might look for evidence of each mechanism in the specific context of education policymaking. In addition, the evidence underscores the importance of the initiative's threat effect, and additional research into how the threat is understood by education policymakers could be fruitful. Finally, based on the findings shown here, it is not clear that legislators and voters are the most important protagonists. As discussed above, courts have been a powerful force promoting equality and centralization in public education. Future research is needed to determine whether policy differences between initiative and non-initiative states may reflect differences between voters and courts as much or more than differences between voters and legislators.<sup>45</sup>

In conclusion, I return to the guiding question of Matsusaka (2004): does the initiative benefit the many or the few? He argues that the initiative serves the interests of the majority of voters, although he is careful not to make judgments about whether policies preferred by the majority are "better" in a normative sense. Neither do I intend to

---

<sup>45</sup> Existing research has already demonstrated that courts often prevent voter-approved initiatives from taking effect (Gerber et al. 2001). I am suggesting the reverse possibility: that voters—that is, the presence of the initiative—may undermine the implementation of court decisions. Rather than being out of step with voters, legislators may find themselves caught in the middle between anti-redistribution voters and pro-equality courts, trying to strike a balance. Legislators in initiative states may strike the balance closer to the preferred position of the median voter, while legislators in non-initiative states may strike the balance closer to the position of the median justice. This is all pure speculation, of course, and resolving the question is beyond the scope of this paper.

offer a normative judgment.<sup>46</sup> But I do emphasize that the initiative has specific and important distributional consequences. The initiative does not bring about smaller government across the board. The major fiscal effect of the voter initiative is to reduce state aid to poor school districts, resulting greater inequality in education spending. The desirability of this outcome is likely to be viewed differently by the many and the few.

---

<sup>46</sup> In any case, a social welfare analysis of the voter initiative would have to account for more than just its direct effects on policy. Indirect effects on citizen education, interest group mobilization, and turnout would have to be considered (see Boehmke 2005, Boehmke and Alvarez 2005, Donovan, Tolbert, and Smith 2008, Kouser and McCubbins 2005, Nicholson 2005, Smith and Tolbert 2004).

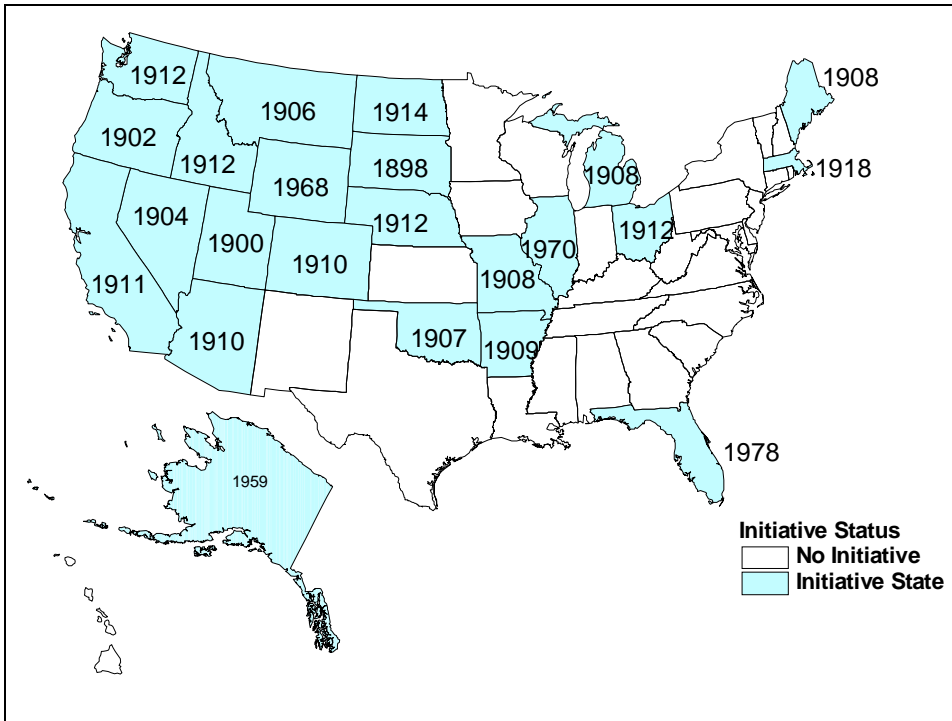
## REFERENCES

- Arceneaux, Kevin, "Direct Democracy and the Link between Public Opinion and State Abortion Policy," *State Politics and Policy Quarterly*, December 2002, Vol. 2(4), 372-387.
- Baicker, Katherine, and Nora Gordon. 2004. "The Effect of Mandated State Education Spending on Total Local Resources." NBER Working Paper 10701.
- Bailey, Stephen J., and Stephen Connolly, "The Flypaper Effect: Identifying Areas for Further Research," *Public Choice*, 95 (June 1998), 335-61.
- Berne, Robert, and Leanna Stiefel. *The Measurement of Equity in School Finance: Conceptual, Methodological, and Empirical Dimensions* (Johns Hopkins University Press, 1983).
- Berry, Christopher. 2007. "The Impact of School Finance Judgments on State Fiscal Policy." In *School Money Trials: The Legal Pursuit of Educational Adequacy*, Martin West and Paul Peterson, eds. Washington, D.C.: Brookings Institution Press, 213-240.
- Berry, William D., Evan J. Ringquist, Richard C. Fording, and Russell L. Hanson, "Measuring Citizen and Government Ideology in the American States, 1960-93," *American Journal of Political Science*, 42 (January 1998): 327-48.
- Boehmke, Frederick J. 2005. *The Indirect Effect of Direct Democracy: How Institutions Shape Interest Group Systems*. The Ohio State University Press.
- Boehmke, Frederick J., and R. Michael Alvarez. 2005. "The Influence of Initiative Signature Gathering Campaigns on Political Participation." Working paper.
- Boehmke, Frederick J., and John W. Patty. 2007. "The Selection of Policies for Ballot Initiatives: What Voters Can Learn from Legislative Inaction." *Economics & Politics* 19(1): 97-121.
- Bowler, Shaun and Todd Donovan. 1995. "Popular Responsiveness to Taxation." *Political Research Quarterly* 48: 79-100.
- Bowler, Shaun and Todd Donovan. 2004. "Measuring the Effects of Direct Democracy on State Policy: Not All Initiatives Are Created Equal," *State Politics and Policy Quarterly* Vol. 4(3), 345-363.
- Bowler, Shaun and Todd Donovan. 2004b. "Evolution in State Governance Structures: Unintended Consequences of State Tax and Expenditure Limitations." *Political Research Quarterly* 57: 189-96.
- Broder, David S. 2000. *Democracy Derailed: Initiative Campaigns and the Power of Money*. New York: Harcourt Brace.
- Camobreco, John F. 1998. "Preferences, Fiscal Policies, and the Initiative Process." *Journal of Politics* 60: 819-29.
- Card, David, and A. Abigail Payne. 1998. "School Finance Reform, the Distribution of School Spending, and the Distribution of Student Test Scores," *Journal of Public Economics* 83, no. 1 (2002): 49-82.
- Cronin, Thomas E. 1989. *Direct Democracy: The Politics of Initiative, Referendum, and Recall*. Cambridge, MA: Harvard University of Press.
- Donovan, Todd, and Shaun Bowler. 1998. "An Overview of Direct Democracy in the American States," in Shaun Bowler, Todd Donovan, and Caroline Tolbert, eds., *Citizens as Legislators*. Columbus, Ohio: Ohio State University Press..
- Donovan, Todd, Caroline J. Tolbert, and Daniel A. Smith. 2008. "Priming Presidential Votes by Direct Democracy," *Journal of Politics* 70: 1217-31.
- Ellis, Richard. 2002. *Democratic Delusions: The Initiative Process in America*. Lawrence: University of Kansas Press
- Erikson, Robert S., Gerald C. Wright; John P. McIver, 2007, "Replication data for: Public Opinion in the States: A Quarter Century of Change and Stability", ([http://php.indiana.edu/~wright1/cbs7603\\_pct.zip](http://php.indiana.edu/~wright1/cbs7603_pct.zip)). Gerald C. Wright, Distributor.

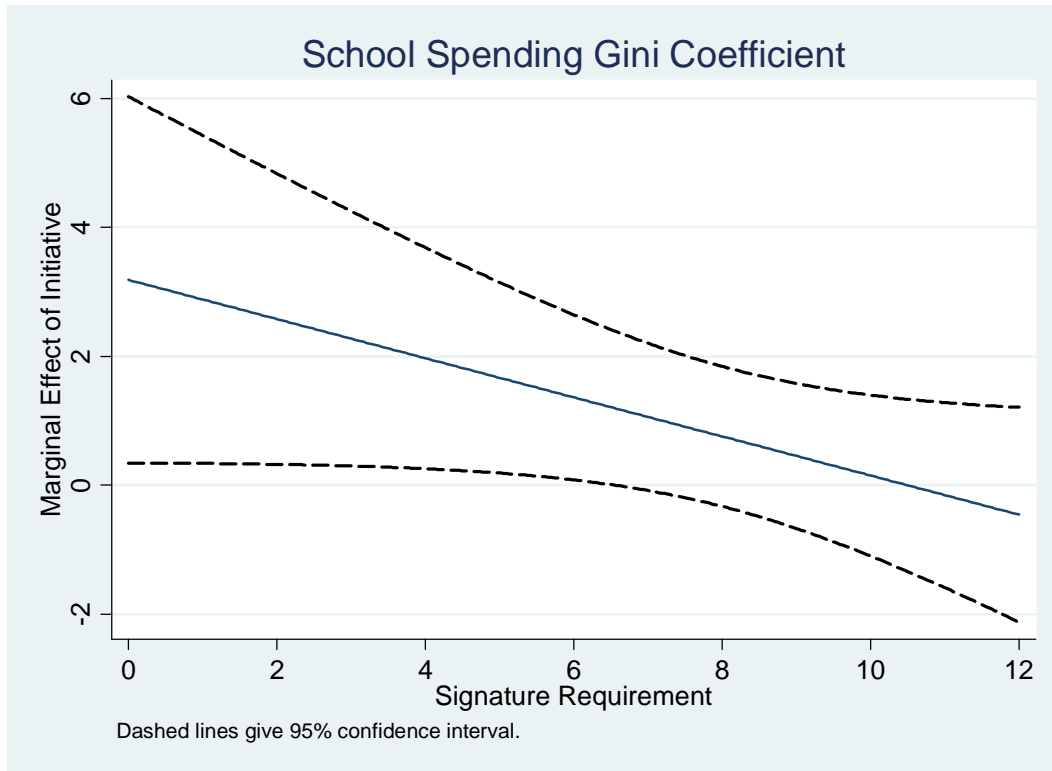
- Fischer, Justina A.V. 2008. "Direct Democracy and Public Education in Swiss Cantons." In N. C. Soguel and P. Jaccard (eds.), *Governance and Performance of Education Systems*. London: Springer 137–153.
- Fletcher, D., and Kenny, L.W. (forthcoming). "The Influence of the Elderly in a Median Voter Framework." *Education Finance and Policy*.
- Galbraith, James K., and Travis Hale. 2006. "State Income Inequality and Presidential Election Turnout and Outcomes." The University of Texas Inequality Project Working Paper 33.
- Garrett, Elizabeth. 2008. "Direct Democracy and Public Choice." USC Legal Studies Research Paper No. 08-20.
- Garrett, Elizabeth. 1999. "Money, Agenda Setting, and Direct Democracy." *Texas Law Review* 77: 1845-90.
- Gerber, Elisabeth. 1996. "Legislative Responses to the Threat of Popular Initiatives." *American Journal of Political Science* 40.
- \_\_\_\_\_. 1999. *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*. Princeton, NJ: Princeton University Press.
- Gerber, Elisabeth, and Arthur Lupia. 1995. "Campaign Competition and Policy Responsiveness in Direct Legislation Elections." *Political Behavior* 17: 287-306.
- Gerber, Elisabeth, Arthur Lupia, Mathew D. McCubbins, and D. Roderick Kiewiet, *Stealing the Initiative: How State Government Responds to Direct Democracy*, Upper Saddle River, NJ: Prentice Hall, 2001.
- Guthrie, James. "Twenty-First-Century Education Finance: Equity, Adequacy, and the Emerging Challenge of Linking Resources to Performance." In *Money, Politics, and Law: Intersections and Conflicts in the Provision of Educational Opportunity; 2004 Yearbook of the American Education Finance Association*, edited by Karen DeMoss and Kenneth K. Wong (Larchmont, N.Y.: Eye of Education, 2004).
- Hahn, Harlan, and Sheldon Kamieniecki. 1987. *Referendum Voting: Social Status and Policy Preferences*. Westport, CT: Greenwood Press.
- Hero, Rodney, and Caroline Tolbert. 1996. "A Racial/Ethnic Diversity Interpretation of Politics and Policy in the States of the U.S." *American Journal of Political Science* 40: 851-71.
- Holcombe, Randall G., and Lawrence W. Kenny. 2008. "Does Restricting Choice in Referenda Enable Governments to Spend More?" *Public Choice* 136: 887-101.
- Hoxby, Caroline M. 1998. "All School Finance Equalizations Are Not Created Equal." NBER Working Paper 6792. Cambridge, MA: National Bureau of Economic Research.
- Kouser, Thad, and Mathew D. McCubbins. 2005. "Social Choice, Crypto-Initiatives, and Policymaking by Direct Democracy." *Southern California Law Review* 78(4): 949-84.
- Kousser, Thad, Mathew D. McCubbins and Kaj Rozga (2008), 'When Does the Ballot Box Limit the Budget? Politics and Spending Limits in California, Colorado, Utah, and Washington', in Garrett, Elizabeth, Elizabeth A. Graddy and Howell E. Jackson (eds), *Fiscal Challenges: An Interdisciplinary Approach to Budget Policy*, Cambridge: Cambridge University Press, pp. 290-321.
- Lascher, Edward L., Michael G. Hagen, and Steven A. Rochlin. 1996. "Gun Behind the Door? Ballot Initiatives, State Policies, and Public Opinion." *Journal of Politics* 58: 760-75.
- Lupia, Arthur. 1994. "Shortcuts versus Encyclopedias: Information and Voting Behavior in California Insurance Reform Elections." *American Political Science Review* 88: 63-76.
- Magleby, David B. 1984. *Direct Legislation: Voting on Ballor Propositions in the United States*. Baltimore: Johns Hopkins University Press.
- Matusaka, John. 1992. "Economics of Direct Legislation." *Quarterly Journal of Economics* 107 (May).
- \_\_\_\_\_. 1995. "Fiscal Effects of the Voter Initiative: Evidence from the Last 30 Years." *Journal of Political Economy* 103.

- \_\_\_\_\_. 2004. *For the Many or the Few: The Initiative, Public Policy, and American Democracy*. Chicago: The University of Chicago Press.
- \_\_\_\_\_. 2005. "Direct Democracy Works." *Journal of Economic Perspectives* 19(2), 185-206.
- \_\_\_\_\_. 2007. "Direct Democracy and Social Issues." Working paper: Marshall School of Business, University of Southern California.
- McCubbins, Colin. 2008. "It's All About the Benjamins: Growth in Government and Revenue Initiatives in the American States." Working Paper, UC San Diego.
- Mullins, Daniel R., and Bruce A. Wallin. 2004. "Tax and Expenditure Limitations: Introduction and Overview." *Public Budgeting and Finance* (Winter): 2-15.
- Murray, Shelia, William N. Evans, and Robert Schwab, "Education Finance Reform and the Distribution of Education Resources," *American Economic Review* 88 (September 1998): 789-812.
- National Center on Education Statistics, *Digest of Education Statistics* (U.S. Department of Education, Institute of Education Sciences, various years) ([www.nces.ed.gov/programs/digest](http://www.nces.ed.gov/programs/digest) [September 2006]); *Common Core of Data* (U.S. Department of Education, Institute of Education Sciences, various years) ([www.nces.ed.gov/ccd](http://www.nces.ed.gov/ccd) [September 2006]).
- Nicholson, Steven. 2005. *Voting the Agenda: Candidates, Elections, and Ballot Propositions*. Princeton, NJ: Princeton University Press.
- Peltzman, Sam. 1992. "Voters as Fiscal Conservatives." *Quarterly Journal of Economics* 107 (May): 327-61.
- Poole, Keith T. and Howard Rosenthal. 1991. "Patterns of Congressional Voting." *American Journal of Political Science* 35 (Feb.): 228-78.
- Primo, David. 2007. "The Effect of Initiatives on Local Government Spending." Working Paper.
- Romer, Thomas, and Howard Rosenthal. 1979. "Bureaucrats versus Voters: On the Political Economy of Resource Allocation by Direct Democracy." *Quarterly Journal of Economics* 93 (Nov.): 563-87.
- Sabato, Larry J., Howard R. Ernst, and Bruce A. Larson, eds. 2001. *Dangerous Democracy: The Battle over Ballot Initiative in America*. Lanham, MD: Rowman and Littlefield.
- Schrag, Peter. 1998. *Paradise Lost: California's Experience, America's Future*. New York: New Press.
- Smith, Daniel A. 1998. *Tax Crusaders*. London: Routledge.
- Smith, Daniel A. 2004. "Peeling Away the Populist Rhetoric: Toward a Taxonomy of Anti-Tax Ballot Initiatives." *Public Budgeting and Finance* (Winter): 88-110.
- Smith, Daniel A., and Dustin Fridkin. 2008. "Delegating Direct Democracy: Interparty Legislative Competition and the Adoption of the Initiative in the American States." *American Political Science Review* 102(3): 333-350.
- Smith, Daniel A., and Caroline J. Tolbert. 2004. *Educated by Initiative: The Effects of Direct Democracy on Citizens and Political Organizations in the American States*. Ann Arbor: University of Michigan Press.
- Weingast, Barry R., and William J. Marshall. 1988. "The Industrial Organization of Congress; or, Why Legislatures, Like Firms, Are Not Organized as Markets." *Journal of Political Economy* 96 (Feb.):132-63.
- Weingast, Barry R., Kenneth A. Shepsle, and Christopher Johnsen. 1981. "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics." *Journal of Political Economy* 89 (Aug.): 642-64.

**Figure 1: Initiative States with Year of Adoption**



**Figure 2: Initiative Effect on Inequality Declines with Signature Requirement**



**Table 1. Combined State-Local Finances**

	(1)	(2)
	General Own Source Revenue per Capita	General Expenditure per Capita
Dummy = 1 if initiative state	-154.03 (75.70)**	-163.45 (70.74)**
State per Capita Income	0.12 (0.02)***	0.12 (0.02)***
Intergovernmental Revenue from Federal, per Capita	1.22 (0.31)***	2.07 (0.34)***
ln(Population)	39.04 (69.00)	25.75 (67.41)
State Pct Metro Pop	0.48 (2.31)	1.54 (1.87)
Pct Population Change Over Previous 5 Years	868.36 (465.77)*	1562.24 (487.24)***
Proporiton of the population aged >65	10.70 (18.51)	11.48 (16.88)
Proportion of the population agd 5-17	33.72 (20.27)	17.49 (20.89)
Unemployment Rate of the Civilian Labor Force	10.61 (10.31)	29.00 (10.14)***
DW NOMINATE	-51.71 (104.08)	-40.65 (113.82)
Region=Midwest	167.90 (108.00)	207.02 (109.09)*
Region=South	-126.17 (96.19)	-116.08 (89.50)
Region=West	170.33 (104.76)	150.97 (95.53)
Constant	-1809.32 (1204.63)	-1430.51 (1279.10)
Observations	1504	1504
R-squared	0.88	0.91
# of Clusters	47	47

*Notes:* Standard errors, clustered by state, are reported in parantheses. Analysis covers 1970-2002, excepting 2001. All models also include year dummies. Alaska, Hawaii, and Wyoming are excluded. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

<b>Table 2. State Government Finances</b>				
	(1)	(2)	(3)	(4)
	General Own Source Revenue per Capita	General Expenditure per Capita	Direct General Expenditure per Capita	Total Intergov'tal Expenditure per Capita
Dummy = 1 if initiative state	-165.00 (96.47)*	-148.68 (86.40)*	-55.39 (52.89)	-93.29 (52.42)*
State per Capita Income	0.04 (0.01)***	0.04 (0.01)***	0.03 (0.01)**	0.01 (0.01)
Federal revenue per capita	0.72 (0.19)***	1.74 (0.15)***	1.16 (0.15)***	0.58 (0.14)***
ln(Population)	-108.66 (81.58)	-76.74 (62.10)	-243.85 (42.92)***	167.11 (42.05)***
State Pct Metro Pop	4.14 (3.53)	3.79 (2.61)	4.98 (1.65)***	-1.19 (1.61)
Pct Population Change Over Previous 5 Years	82.94 (598.89)	364.03 (575.76)	-755.80 (552.47)	1119.77 (384.36)***
Proportion of the population aged >65	-4.11 (18.43)	-2.81 (17.50)	-8.58 (13.30)	5.77 (10.91)
Proportion of the population aged 5-17	15.72 (22.24)	12.19 (20.44)	-8.90 (17.52)	21.08 (16.75)
Unemployment Rate	1.67 (11.64)	11.52 (11.07)	8.17 (11.08)	3.35 (8.41)
DW NOMINATE	-200.57 (89.41)**	-190.54 (84.17)**	-125.03 (57.14)**	-65.51 (63.61)
Region=Midwest	-7.13 (104.66)	4.53 (91.97)	-124.62 (60.96)**	129.14 (72.02)*
Region=South	-159.88 (94.35)*	-164.50 (77.97)**	-71.83 (67.24)	-92.67 (62.64)
Region=West	44.78 (156.10)	36.40 (138.65)	-148.16 (91.66)	184.57 (80.29)**
Constant	895.89 (992.37)	601.37 (854.60)	2338.30 (769.90)***	-1736.96 (676.93)**
Observations	1598	1598	1598	1598
R-squared	0.74	0.86	0.89	0.60
# of Clusters	47	47	47	47

Notes: Standard errors, clustered by state, are reported in parentheses. Analysis covers 1970-2003. All models also include year dummies. Alaska, Hawaii, and Wyoming are excluded. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

**Table 3. Local Government Finances**

	(1)	(2)
	General Own Source Revenue per Capita	Total Intergov'tal Revenue from State per Capita
Dummy = 1 if initiative state	16.94 (64.59)	-119.87 (54.67)**
State per Capita Income	0.08 (0.02)***	0.01 (0.01)
Intergovernmental Revenue from Federal, per Capita	0.98 (0.79)	0.91 (0.57)
ln(Population)	128.24 (67.71)*	141.89 (48.88)***
State Pct Metro Pop	-4.80 (2.66)*	-2.41 (1.80)
Pct Population Change Over Previous 5 Years	90.17 (488.14)	682.74 (408.15)
Proportion of the population aged >65	10.74 (18.25)	5.17 (11.19)
Proportion of the population aged 5-17	14.41 (22.27)	15.60 (15.02)
Unemployment Rate of the Civilian Labor Force	10.68 (10.94)	10.03 (7.81)
DW NOMINATE	67.21 (71.63)	-96.37 (73.07)
Region=Midwest	103.74 (103.93)	51.79 (90.73)
Region=South	14.01 (108.61)	-108.95 (72.48)
Region=West	166.73 (107.37)	217.99 (84.71)**
Constant	-1904.54 (1,066.56)*	-1040.59 (643.67)
Observations	1504	1504
R-squared	0.69	0.55
# of Clusters	47	47

*Notes:* Standard errors, clustered by state, are reported in parentheses. Analysis covers 1970-2002, excepting 2001. All models also include year dummies. Alaska, Hawaii, and Wyoming are excluded. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

**Table 4. State Aid to Local Governments**

	Total Aid by Type of Government:					(6) Total Education Aid to Local Governments
	(1)	(2)	(3)	(4)	(5)	
	Counties	Municipalities	Townships	Special Districts	Schol Districts	
Dummy = 1 if initiative state	-27.99 (26.97)	-34.31 (24.80)	13.27 (10.79)	7.38 (7.03)	-74.20 (41.97)*	-79.05 (34.51)**
State per Capita Income	0.00 (0.01)	0.01 (0.01)**	0.00 (0.01)	0.00 (0.00)	0.00 (0.02)	0.00 (0.01)
Federal revenue per capita	2.12 (0.84)**	2.69 (1.01)**	0.66 (0.54)	0.36 (0.11)***	2.86 (1.58)*	0.07 (0.31)
ln(Population)	85.85 (30.33)***	15.32 (22.63)	-17.58 (9.07)*	2.86 (1.55)*	35.08 (52.62)	24.52 (31.80)
State Pct Metro Pop	-180.65 (121.78)	19.66 (115.57)	86.83 (45.80)*	1.26 (11.05)	-161.23 (204.33)	-62.32 (115.04)
Pct Change in Population Last 5 Years	-178.04 (276.76)	-27.74 (209.36)	-80.38 (78.90)	-10.99 (27.99)	946.33 (401.78)**	117.90 (271.65)
Pct population aged >65	-26.93 (12.72)**	5.24 (6.67)	2.55 (3.71)	-0.60 (1.10)	22.47 (13.24)*	9.05 (6.73)
Pct population agd 5-17	-30.33 (15.88)*	6.07 (7.70)	3.58 (5.44)	-0.11 (1.31)	30.61 (17.77)*	7.95 (8.26)
Unemployment Rate	-18.42 (7.22)**	-4.73 (3.88)	0.68 (1.74)	0.15 (0.33)	25.59 (8.48)***	9.73 (5.80)
DW NOMINATE	2.46 (56.31)	-46.33 (33.32)	-17.26 (11.29)	-0.19 (5.17)	-52.51 (73.65)	-41.66 (51.17)
Region=Midwest	27.59 (42.88)	-108.27 (61.25)*	-72.89 (25.78)***	-8.23 (7.91)	189.93 (69.19)***	93.58 (59.51)
Region=South	21.79 (38.59)	-99.03 (53.48)*	-68.97 (29.56)**	-9.86 (6.12)	82.12 (118.14)	111.71 (79.01)
Region=West	70.76 (60.84)	-58.56 (49.63)	-89.25 (25.89)***	-10.21 (10.70)	266.44 (95.43)***	251.86 (80.95)***
Constant	27.21 (576.84)	-573.26 (430.64)	98.32 (243.78)	-35.32 (49.35)	-1202.85 (744.12)	-273.73 (397.74)
Observations	893	893	893	893	893	1222
R-squared	0.41	0.57	0.66	0.39	0.48	0.50
# of Clusters	47	47	47	47	47	47

Notes: The dependent variable in models (1) to (5) is total revenue from the state government for all functions. Models (1) to (5) cover years 1972, 1977-1992, 1997, and 2002. Model (6) covers years 1972, 1977-2000, and 2002. Standard errors, clustered by state, are reported in parantheses. All models also include year dummies. Alaska, Hawaii, and Wyoming are excluded. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

**Table 5. Education Funding per Pupil**

	(1)	(2)	(3)
	Total Education Revenue per Pupil	Education Revenue from State Govt per Pupil	Local Education Revenue per Pupil
Dummy = 1 if initiative state	-420.37 (150.84)***	-509.39 (195.48)**	102.63 (202.94)
Proportion of the population aged >65	78.92 (44.88)*	34.94 (57.03)	33.71 (64.55)
Proportion of the population aged 5-17	-88.76 (51.22)*	-40.17 (57.50)	-49.72 (69.39)
Per Capita Income (\$1000s)	236.35 (34.40)***	-2.86 (33.94)	247.73 (37.90)***
ln(Population)	115.61 (143.02)	197.70 (218.57)	-96.48 (261.39)
State Pct Metro Pop	3.29 (6.11)	5.13 (9.20)	-1.30 (10.22)
Pct Population Change Over Previous 5 Years	116.64 (1766.64)	846.70 (2022.75)	-791.39 (2134.21)
Unemployment Rate of the Civilian Labor Force	-0.94 (31.73)	23.50 (37.22)	-24.12 (39.89)
DW NOMINATE	-275.34 (207.17)	-208.25 (301.13)	-41.00 (290.05)
Intergovernmental Revenue from Federal per Capita	2.06 (0.45)***	1.15 (0.46)**	0.56 (0.61)
Region=Midwest	-121.62 (266.34)	-188.89 (292.78)	85.36 (316.59)
Region=South	-713.62 (288.85)**	-395.05 (275.46)	-416.16 (400.63)
Region=West	-106.24 (308.85)	365.78 (441.45)	-531.36 (551.30)
Constant	-565.36 (2166.77)	787.77 (2556.34)	-1545.07 (3098.46)
Observations	1359	1360	1359
R-squared	0.87	0.51	0.64
# of Clusters	47	47	47

Notes: Standard errors, clustered by state, are reported in parentheses. Analysis covers years 1971, 1973-2000, and 2002. All models also include year dummies. All dollar figures are in year 2004 dollars. Alaska, Hawaii, and Wyoming are excluded. \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

**Table 6. Education Spending Inequality**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	School District Spending GINI Coefficient	School District Spending Coefficient of Variation	School District Spending Theil Coefficient	ln(95th/5th Percentile School District Spending)	ln(5th percentile per pupil spending)	ln(50th percentile per pupil spending)	ln(95th percentile per pupil spending)
Dummy = 1 if initiative state	1.07 (0.61)*	2.46 (1.15)**	0.37 (0.18)**	0.11 (0.05)**	-0.14 (0.03)***	-0.08 (0.03)**	-0.00 (0.05)
Gini Coefficient of Income Inequality	-5.36 (13.57)	-3.86 (25.10)	-0.94 (3.85)	0.14 (1.01)	-1.94 (0.71)***	-2.47 (0.82)***	-2.31 (1.37)*
Proportion of the population aged >65	-0.28 (0.16)*	-0.45 (0.29)	-0.06 (0.04)	-0.02 (0.01)*	0.02 (0.01)**	0.03 (0.01)***	0.03 (0.01)*
Proportion of the population agd 5-17	0.04 (0.16)	0.22 (0.26)	0.02 (0.04)	0.00 (0.01)	-0.00 (0.01)	-0.01 (0.01)	0.01 (0.02)
Per Capita Income (\$1000s)	0.05 (0.10)	0.09 (0.17)	0.01 (0.02)	0.00 (0.01)	0.03 (0.00)***	0.04 (0.00)***	0.05 (0.01)***
ln(Population)	1.78 (0.38)***	2.73 (0.70)***	0.36 (0.10)***	0.06 (0.04)	-0.01 (0.03)	0.01 (0.03)	0.05 (0.05)
State Pct Metro Pop	-0.05 (0.02)**	-0.08 (0.05)*	-0.01 (0.01)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Pct Pop Change Over Previous 5 Years	0.87 (5.27)	7.28 (8.71)	1.02 (1.29)	0.84 (0.44)*	0.54 (0.28)*	0.65 (0.31)**	1.51 (0.50)***
Unemployment Rate	-0.15 (0.12)	-0.31 (0.20)	-0.03 (0.03)	-0.01 (0.01)	0.01 (0.01)*	0.00 (0.00)	-0.01 (0.01)
DW NOMINATE	0.51 (0.73)	1.41 (1.34)	0.17 (0.22)	0.07 (0.05)	-0.01 (0.03)	0.01 (0.03)	0.07 (0.07)
Federal Intergovernmental Revenue	0.00 (0.00)**	0.01 (0.00)**	0.00 (0.00)**	0.00 (0.00)	0.00 (0.00)***	0.00 (0.00)***	0.00 (0.00)***
Region=Midwest	-0.34 (0.81)	-0.73 (1.36)	-0.15 (0.22)	-0.04 (0.05)	0.00 (0.04)	-0.03 (0.04)	-0.04 (0.07)
Region=South	-1.46 (1.00)	-3.08 (1.86)	-0.50 (0.28)*	-0.14 (0.07)*	-0.10 (0.06)	-0.10 (0.07)	-0.18 (0.13)
Region=West	-2.27 (1.11)**	-3.80 (2.15)*	-0.68 (0.34)*	-0.03 (0.09)	0.00 (0.05)	-0.02 (0.06)	-0.01 (0.10)
Constant	-1.00 (6.56)	-4.80 (12.42)	-1.20 (1.91)	0.08 (0.55)	7.14 (0.49)***	7.37 (0.45)***	6.85 (0.89)***
Observations	1355	1355	1355	1355	1355	1355	1355
R-squared	0.39	0.32	0.27	0.3	0.82	0.86	0.65
# of Clusters	44	44	44	44	44	44	44

Notes: Standard errors, clustered by state, are reported in parantheses. Analysis covers years 1971, 1973-2000, and 2002. All models also include year dummies. Alaska, Hawaii, Maryland, North Carolina, Virginia, and Wyoming are excluded (see discussion in text). \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

---

**Table 7: Constitutional Language on Educational Equity**

---

Classification	Number of States	
	Initiative	Non-initiative
Low	10	16
Medium	11	7
High	1	3
Test of Association		<i>p</i> -value
Pearson chi2		0.23
Fisher's exact		0.27

---

Note: Constitutional classifications from Baicker and Gordon (2004)

---

**Table 8: Court Rulings on Education Finance**

---

Was the education finance system ruled unconstitutional before 2004?	Number of States	
	Initiative	Non-initiative
No	12	11
Yes	10	15
Test of Association		<i>p</i> -value
Pearson chi2		0.40
Fisher's exact		0.56

---

Note: Data from Guthrie (2004)

**Table 9: Signature Requirements**

	(1)	(2)	(3)	(4)
	School District Spending GINI Coefficient	School District Spending Coefficient of Variation	School District Spending Theil Coefficient	ln(95th/5th Percentile School District Spending)
Dummy = 1 if initiative state	3.19 (1.39)**	6.80 (2.70)**	1.11 (0.46)**	0.24 (0.13)*
Signature requirement × initiative dummy	-0.30 (0.16)*	-0.62 (0.30)**	-0.11 (0.05)*	-0.02 (0.02)
Gini Coefficient of Income Inequality	-8.46 (12.83)	-10.19 (23.99)	-2.02 (3.73)	-0.05 (1.09)
Proportion of the population aged >65	-0.22 (0.15)	-0.34 (0.28)	-0.04 (0.04)	-0.02 (0.01)
Proportion of the population agd 5-17	0.15 (0.15)	0.45 (0.23)*	0.06 (0.03)	0.01 (0.01)
Per Capita Income (\$1000s)	0.04 (0.10)	0.06 (0.17)	0.00 (0.02)	0.00 (0.01)
ln(Population)	1.78 (0.39)***	2.73 (0.75)***	0.36 (0.11)***	0.06 (0.04)
State Pct Metro Pop	-0.05 (0.02)**	-0.07 (0.04)	-0.01 (0.01)	-0.00 (0.00)
Pct Pop Change Over Previous 5 Years	4.45 (5.13)	14.61 (8.33)*	2.27 (1.23)*	1.06 (0.42)**
Unemployment Rate	-0.09 (0.12)	-0.20 (0.22)	-0.01 (0.04)	-0.01 (0.01)
DW NOMINATE	0.70 (0.74)	1.80 (1.33)	0.23 (0.21)	0.08 (0.05)*
Federal Intergovernmental Revenue	0.00 (0.00)*	0.01 (0.00)*	0.00 (0.00)	0.00 (0.00)
Region=Midwest	-0.72 (0.81)	-1.51 (1.31)	-0.28 (0.21)	-0.06 (0.06)
Region=South	-1.71 (1.02)	-3.59 (1.88)*	-0.59 (0.29)**	-0.15 (0.07)**
Region=West	-2.60 (1.09)**	-4.45 (2.05)**	-0.79 (0.33)**	-0.05 (0.09)
Constant	-2.52 (6.48)	-7.92 (12.79)	-1.73 (1.98)	-0.01 (0.56)
Observations	1355	1355	1355	1355
R-squared	0.406	0.342	0.297	0.313
# of Clusters	44	44	44	44

Notes: Standard errors, clustered by state, are reported in parantheses. Analysis covers years 1971, 1973-2000, and 2002. All models also include year dummies. Alaska, Hawaii, Maryland, North Carolina, Virginia, and Wyoming are excluded (see discussion in text). \* significant at 10%, \*\* significant at 5%, \*\*\* significant at 1%.

**Table A1: Summary Statistics**

	Mean	Median	Std. Dev.	N
<b>Table 1: State + Local Finances</b>				
General own-source revenue	3,189.42	3,143.25	809.65	1,504
General expenditures	3,882.17	3,805.66	938.63	1,504
<b>Table 2: State Finances</b>				
General own-source revenue	1,898.93	1,821.10	561.84	1,598
General expenditures	2,586.98	2,479.33	734.86	1,598
Direct general expenditures	1,802.73	1,676.77	588.67	1,598
Intergovernmental expenditures	784.26	725.65	286.18	1,598
<b>Table 3: Local Government Finances</b>				
General own-source revenue	1,329.58	1,296.56	427.04	1,504
Intergovernmental revenue from state	732.05	685.94	283.46	1,504
<b>Table 4: State Aid to Local Government</b>				
State aid to counties	138.65	83.37	153.43	893
State aid to municipalities	120.21	73.69	142.40	893
State aid to townships	24.36	0.00	58.77	893
State aid to special districts	9.98	3.87	19.14	893
State aid to school districts	424.98	459.46	231.34	893
Total aid for education	537.85	521.16	174.10	1,222
<b>Table 5: Education Funding</b>				
Total	6,797.34	6,632.80	1,918.54	1,359
Revenue from state	3,154.41	3,004.39	1,207.62	1,359
Revenue from local governments	3,121.76	3,011.05	1,461.35	1,359
<b>Tables 6 &amp; 9: Education Funding Inequality</b>				
Gini coefficient	7.73	7.43	2.71	1,355
Coefficient of variation	14.67	14.09	5.03	1,355
Theil coefficient	1.14	0.95	0.82	1,355
Log(95th/5th percentile)	0.56	0.53	0.24	1,355
Log(5th percentile spending)	7.68	7.70	0.36	1,355
Log(50th percentile spending)	7.94	7.94	0.33	1,355
Log(95th percentile spending)	8.40	8.41	0.41	1,355

Notes: All fiscal variables are expressed in year 2004 dollars. All fiscal variables are expressed in per capita terms for Tables 1 through 4, and in per pupil terms for Tables 5, 6, and 9. The measures of inequality used in Tables 6 and 9 are multiplied by 100 to facilitate presentation.