MERCATUS CENTER
George Mason University

March 2, 2017

Senator Mike Dunleavy
Chairman
Senate State Affairs Committee
Alaska State Capitol
Juneau, AK 99801

Chairman Dunleavy and distinguished Members of the Senate State Affairs Committee:

Thank you for the opportunity to testify today. My name is Matthew Mitchell and I am a senior research fellow at the Mercatus Center at George Mason University. For several years now, my colleagues and I have been studying state fiscal policies and the institutions that govern them. We have consulted decades of peer-reviewed academic research and conducted our own analyses using comprehensive datasets and cutting-edge empirical techniques. I am delighted to have the opportunity to share some of the lessons that we have learned.

Lesson 1: Institutions Matter. States often find themselves in fiscal trouble. They frequently wrestle with unsustainable spending patterns, recurrent shortfalls that necessitate painful decisions, and long-term obligations that cannot be met. Though short-term remedies such as tax increases, skipped pension contributions, or ill-conceived budget cuts can turn red ink into black ink, problems often reemerge. Our research suggests that sustainable solutions require institutional change.

That is, solutions require modifications to the rules that shape the political, legislative, and budgeting process. Simply put, states with good institutions are more likely to make good budgetary decisions.

Lesson 2: The Details Matter. One of the most popular mechanisms for ensuring prudent fiscal policy is a tax and/or expenditure limit (TEL). In my attached 2010 study, "TEL It Like It Is: Do State Tax and Expenditure Limits Actually Limit Spending?," I examined 30 years of data to see how various TELs performed. A few lessons are clear. The most effective TELs

1. Target spending (as does Alaska's) rather than revenues,
2. Limit budget growth to the sum of inflation and population growth (as Alaska's does),
3. Are codified in the constitution (as Alaska's is),
4. Require a supermajority or public vote to be overridden (as Alaska's does),
5. Prohibit unfunded mandates to lower-level governments (Alaska's TEL does not have this provision), and
6. Refund immediately revenue that is collected in excess of the limit to taxpayers (Alaska's TEL does not have this feature).

As you can see, Alaska's TEL has many of the features that make for a stronger and more effective limit. There is room, however, for some improvement. For example, the state might prohibit unfunded mandates on lower levels of government (about a dozen states have such a prohibition). Or, it might immediately refund to taxpayers any revenue that is collected in excess of the limit (about 5 states currently do this). In addition, the state might reassess the date on which the limit is based. If lawmakers deem real per capita spending in 1981 to be excessive, then they ought to consider a different base date.

Lesson 3: There Are Other Tools. Tax expenditure limits are neither the only nor the most-effective means of ensuring prudent fiscal policy. For example, research suggests that item-reduction vetoes,[1] strict balanced-budget requirements, and supermajority requirements for tax increases are all more effective in restraining spending than TELs. For your reference, I have included my survey with Olivia Gonzalez, "State Budget Institutions," which reviews some of this research.

One institutional difference that seems to have a significant effect on state budgets is discussed in the third attachment, "A House Divided against Itself Cannot Spend (as Much): The Fiscal Effect of Separate Taxing and Spending Committees in State Legislatures." This paper, which I coauthored with Pavel Yakovlev of Duquesne University, explores the effect of having separate committees oversee taxing and spending decisions. Controlling for other factors that might confound the estimate, we conclude that states with separate spending and taxing committees spend between $300 and $450 less per person per year relative to other states. This effect—about 9 to 13 percent of annual per capita spending—is larger than almost any other institutional effect. Alaska's House and Senate Finance Committees currently oversee both spending and taxing decisions. Our research suggests that the state could significantly reduce spending by separating these functions into separate committees in each chamber.

I hope that this research helps you think through institutional changes that might set Alaska on an even more prudent fiscal path. I am happy to answer any questions you might have.

Sincerely,

Matthew Mitchell, PhD

Senior Research Fellow
Director, Project for the Study of American Capitalism
Mercatus Center at George Mason University

Attachments

[1] This is a special variety of veto authority that allows the governor to spend less on an item than the legislature is calling for. In contrast to the more-common line-item veto, the governor need not eliminate the item altogether if he or she opposes it.

No. 10-71
December 2010

WORKING PAPER

TEL IT LIKE IT IS: Do State Tax and Expenditure Limits Actually Limit Spending?

By Matthew Mitchell

MERCATUS CENTER
George Mason University

T.E.L. It Like It Is: Do State Tax and Expenditure Limits Actually Limit Spending?

By Matthew Mitchell, Research Fellow, Mercatus Center at George Mason University[1]

State and local government spending has grown at a remarkable pace in the years since World War II. Many states have attempted to arrest this growth by adopting tax or expenditure limitations (TELs). These are formal rules—either codified in statutes or in state constitutions—that limit the growth of government budgets by a particular formula. Twenty-seven states currently operate under TELs, though there is considerable variation in their design and application. In this paper, I examine the impact of TELs on government spending. I focus on the details of their design and on the circumstances in which they are applied. I find that some varieties of TELs can decrease state spending as a share of state income, but the effect is small—in the range of about 2 to 3 percent. Some TELs, such as the most common variety, are associated with less spending in low-income states but are actually associated with more spending in high-income states. Certain characteristics can make TELs more effective. These include constitutional (as opposed to statutory) codification, a focus on spending rather than on revenue, a provision that automatically and immediately refunds surpluses, and—of particular importance—a provision that requires either a supermajority vote or a public vote for override.

[1] I thank Thomas Stratmann and Richard Williams for helpful comments and feedback. I thank Mark Crain, Steven Yamarik, and Noel Johnson for graciously sharing data. I alone am responsible for errors that remain.

I. Introduction

In 1976, New Jersey became the first state in the Union to enact a tax or expenditure limitation.[2] It was a statutory limit on state spending that forbade legislators from growing expenditures faster than state income growth. Though legislators let it expire just six years later, the New Jersey statute kicked off a new experiment in constitutionally limited government. In the next decade, nearly two-dozen states would enact TELs of their own. Today, 27 states operate under TELs, while a 28th state—Colorado—has temporarily suspended its (particularly restrictive) TEL until 2011.[3] (Other states limit local spending by cities and/or counties, but this is not the focus of my research.)

Do TELs limit budget growth? Early tests of this question concluded that they do not.[4] As time has permitted more data and more sophisticated means of testing it, however, some subsequent research has concluded that certain varieties of TELs *can* limit spending in certain circumstances.[5] In recent years, studies of TELs have tended to follow one of two tracks. They have either looked at the circumstances in which TELs are applied, or they have looked at the properties that make some TELs effective and others less so.

Studies examining the circumstances in which TELs have been applied have tended to focus on whether TELs have a different impact in high-income states relative to low-income states.[6] Since many TELs (like New Jersey's 1976 TEL) tie state budget growth to state income growth, scholars have hypothesized that TELs in low-income states will be more limiting than TELs in high-income states. Indeed, that is what the data suggest: TELs seem to be associated with lower levels of government

[2] Bails and Tieslau (2000) p. 258.
[3] See Waisanen (2010) for an up-to-date accounting of TELs in the states. Some states limit the amount that can be appropriated to some share of estimated revenue. While Waisanen considers this a TEL, I do not.
[4] See, for example, Abrams and Dougan (1986) or Bails (1990).
[5] Elder (1992) was one of the first to conclude that TELs can limit spending. Rueben (1995) attempts to control for endogeneity and reaches the same conclusion. Not all recent studies conclude that TELs work. Kausser, McCubbins, and Moule (2008) found that TELs were "largely ineffective."
[6] See, for example, Shadbegian (1996) and Crain (2003).

spending in low-income states and higher levels of spending in high-income states. The latter finding is worth emphasizing: these studies have not simply found TELs to be ineffective limits on state budgets in high-income states; they have actually found that TELs are associated with *greater* than average levels of spending in high income states. It may be that in high-income states, TELs increase spending by acting as an excuse for elected officials to spend up to the limit.

A second (and less-developed) class of studies has focused on the variety of forms that TELs can take and has concluded that TELs can effectively limit budget growth, but only when they take certain forms. For example, Michael New (2001 and 2003) has argued that TELs limit spending so long as they: a) are based on the relatively restrictive "inflation plus population" formula, b) are passed by citizen initiative, c) immediately refund surpluses to taxpayers, and d) mandate reductions in the limit when the state devolves a function of government to the localities.

This study combines the two approaches described above to evaluate TELs based on where they are applied (high- vs. low-income states) and based on how they are structured. A more detailed and comprehensive dataset permits me to explore the various structures of TELs in greater detail than previous work.

II. The Wide Variety of Tax and Expenditure Limitations

No two TELs are exactly alike. Among other things, they vary according to what they limit, how they limit it, how they are enforced, how they can be overridden, how they treat surpluses, and how they can be changed.

There are a number of characteristics that might be expected to make TELs more or less effective in restraining spending. The states are listed according to these characteristics in table A1 in the appendix.

In the first place, TELs differ in their adoption method. They can be the product of legislation, a referendum, an initiative, or a constitutional convention. They also differ in how they are codified—either via statute or the state constitution. TELs also differ in what they target. Some TELs apply to spending, others to revenue, and still others to both. TELs can be overridden in different ways; some require a supermajority vote of the legislature or a vote of the people to be overridden, others can be overridden with a simple majority vote. Surpluses are another factor. Some TELs automatically and immediately refund any revenue that is in excess of the limit. Lastly, TELs differ in how they treat functions transferred to lower levels of government. Some TELs prohibit the state from placing unfunded mandates on lower levels of government. They do this by either automatically adjusting when the state transfers a function to lower levels or by requiring the state to fund any activity it requires of the lower levels.

Perhaps the most-important characteristic of a TEL is the formula by which it limits a state's budget. Table A2 in the appendix lists each state and the variety of TEL each has had since 1970 to the present (some, of course, have had none). The most common variety of TEL—currently operative in 12 states—limits state budget growth to growth in state personal income. Another variety of TEL isn't based on *growth* in income, but on the overall *share* of state income that the budget consumes. Idaho's TEL, for example, requires general fund appropriations be no more than 5.33 percent of total state personal income. Five states—Alaska, Nevada, Ohio, Utah, and Washington—currently stipulate that budgets can grow no faster than inflation plus population growth. Six other states—Connecticut, Indiana, Maine, Massachusetts, Ohio, and Oklahoma—limit their budgets to another factor such as a fixed number. Lastly, some states—such as Louisiana—fall into more than one of these categories.

III. Testing the Effectiveness of Tax and Expenditure Limitations

To assess the impact of TELs on government budgets, I used data from 49 states covering 30 years from 1977 up to and including 2006.[7] I ran a series of ordinary least square (OLS) regressions with standard control variables and state and year fixed effects. Table 1 describes the variables in these regressions. Table 2 reports the summary statistics.

I assessed the impact of TELs on two measures of state spending: state annual expenditures as a share of total annual income, and state *and local* annual expenditures as a share of total annual income. By focusing on spending as a share of income, these variables are proxies for government's share of the economy (spending is more telling than revenue because states might attempt to circumvent TELs by borrowing more).[8] I test the impact of TELs on both state-only expenditures as well as state and local expenditures because states may be tempted to work around TELs by forcing certain expenditures on local governments, leaving the overall size of government unchanged.

Because there is such a wide variety of TELs in operation, I performed a number of tests to see which variety—if any—is effective. These tests can be divided into three broad categories. The simplest tests involve a "dummy TEL" variable that essentially treats all TELs the same. The second set of tests allow for more or less stringency in the application of TELs. The final set of tests examines the impact of different TEL formulas. I describe each of these tests, beginning with the dummy-variable approach, in the sections that follow.

[7] Following standard practice, I omit Alaska due to its unusual fiscal characteristics (most of its revenue comes from severance taxes on oil). See, for example, Bails and Tieslau (2000), Shadbegian (1996), or Primo (2006). For similar reasons, some scholars also omit Hawaii and/or Wyoming. See, for example, Crain (2003), note 1, p. 150. The case for these being outliers, however, is not as clear-cut as the case of Alaska (see Primo, 2006, note 31, p. 293). So in the interest of preserving data, I kept these states in the analysis. In tests that omit all three, the coefficients obtain the same sign and similar magnitude, but do not obtain the same level of statistical significance.

[8] See Kousser, McCubbins, and Moule (2008).

Table 1. Description of Variables

Variable	Description
Dependent Variable	
State Expenditure Share	State expenditures as a share of state income in state x in year t.
State and Local Expenditure Share	State and local expenditures as a share of state income in state x in year t.
Variables of Interest	
Dummy TEL	A dummy variable equal to 1 if state x has a TEL in year t and 0 otherwise.
TEL Index	An index that measures the stringency of the TEL in state x in year t. The index is composed of the following factors: adopted by referendum or constitutional convention, adopted by initiative, constitutional, applies to spending (as opposed to revenue), requires a supermajority for override, automatically refunds surpluses, and prohibits unfunded mandates.
Supermajority or Public Vote Override	A dummy variable equal to 1 if, in year t, state x has a TEL that requires either a supermajority vote of the legislature or a public vote to be overridden. It takes the value 0 otherwise.
Inflation + Population Basis	A dummy variable equal to 1 if, in year t, state x has a TEL that limits its budget growth to the sum of inflation plus annual population growth and has a supermajority or public vote override requirement. It takes the value 0 otherwise.
Income Growth Basis	A dummy variable equal to 1 if, in year t, state x has a TEL that limits its budget growth to growth in income in the state and has a supermajority or public vote override requirement. It takes the value 0 otherwise.
Income Share Basis	A dummy variable equal to 1 if, in year t, state x has a TEL that limits its budget to some share of state income and has a supermajority or public vote override requirement. It takes the value 0 otherwise.
Other Basis	A dummy variable equal to 1 if, in year t, state x has a TEL that limits its budget growth by some other number and has a supermajority or public vote override requirement. It takes the value 0 otherwise.
Control Variables	
Population	Total population in state x in year t.
Percent 18 to 64	Share of the population aged 18 to 64 in state x in year t.
Percent Urban	Share of the population living in an urban setting in state x in year t.
Unemployment Rate	Share of the population unemployed in state x in year t.
Per capita income	Real per capita income in state x in year t (thousands of 2008$).

Sources: Expenditure share is computed using expenditure data from the Census of Governments and personal income data from the Bureau of Economic Analysis. TEL data are derived from the sources listed in tables A1 and A2. All population data are from the Census. Unemployment data are from Bureau of Labor Statistics. Per capita income data are from the Bureau of Economic Analysis.

Table 2. Summary Statistics					
Variable	**Mean**	**Median**	**Minimum**	**Maximum**	**Standard Deviation**
Dependent Variables					
State Expenditure Share	13.4%	13.2%	6.8%	24.1%	3.0%
State and Local Expenditure Share	20.7%	20.5%	13.0%	35.7%	3.1%
Variables of Interest					
Dummy TEL	0.37	0	0	1	0.5
TEL Index	1.21	0	0	6	1.8
Supermajority or Public Vote Override	0.24	0	0	1	0.4
Inflation + Population Basis	0.04	0	0	1	0.2
Income Growth Basis	0.12	0	0	1	0.3
Income Share Basis	0.10	0	0	1	0.3
Other Basis	0.03	0	0	1	0.2
Control Variables					
ln (Population)	15.00	15.10	12.93	17.40	0.99
Percent 18 to 64	61.1%	61.2%	54.6%	65.7%	1.9%
Percent Urban	70.2%	70.3%	33.3%	94.9%	14.7%
Unemployment Rate	5.8%	5.5%	2.2%	17.4%	2.0%
Per Capita Income (thousands, 2008$)	$30.9	$30.1	$18.3	$56.4	$6.1

A Simple Test of Tax and Expenditure Limitations: The "Dummy" TEL Test

Equations (1) and (2) depict the simplest empirical models to test the impact of TELs on spending. My sample includes observations from 49 states up to 30 years.[9] The subscript *x* denotes an observation from a particular state and the subscript *t* denotes an observation from a particular year. These tests use a "dummy variable" equal to 1 if state x had a TEL in year t and 0 otherwise. Following Crain (2003) and Shadbegian (1996), I interacted this term with per capita income to assess the differential impact that TELs have in high- and low-income states.

[9] Due to missing years in the state and local expenditure data, the second regression includes fewer observations.

$$(\text{State Expenditure Share})_{xt} \quad (1)$$
$$= \beta_0 + \beta_1(\text{Dummy TEL})_{xt} + \beta_2(\text{Dummy TEL})_{xt}(\text{Per Capita Income})_{xt}$$
$$+ \beta_3 \ln(\text{Populaion})_{xt} + \beta_4(\text{Percent 18 to 64})_{xt} + \beta_5(\text{Percent Urban})_{xt}$$
$$+ \beta_6(\text{Unemployment Rate})_{xt} + \beta_7(\text{Per Capita Income})_{xt} + \boldsymbol{\varphi_x} + \boldsymbol{\tau_t} + \varepsilon_{xt}$$

$$(\text{State and Local Expenditure Share})_{xt} \quad (2)$$
$$= \beta_0 + \beta_1(\text{Dummy TEL})_{xt} + \beta_2(\text{Dummy TEL})_{xt}(\text{Per Capita Income})_{xt}$$
$$+ \beta_3 \ln(\text{Populaion})_{xt} + \beta_4(\text{Percent 18 to 64})_{xt} + \beta_5(\text{Percent Urban})_{xt}$$
$$+ \beta_6(\text{Unemployment Rate})_{xt} + \beta_7(\text{Per Capita Income})_{xt} + \boldsymbol{\varphi_x} + \boldsymbol{\tau_t} + \varepsilon_{xt}$$

I also included a set of control variables, taken from the standard literature on state spending.[10] For each state in each year, I included the natural logarithm of the population, the share of the population aged 18 to 64, the share of the population living in an urban setting, the unemployment rate, and the real per capita income level (measured in 2008 dollars). The inclusion of these control variables was meant to capture variation in state spending that may be unrelated to the presence of TELs. By including the population and the share of the population in an urban setting, I effectively controlled for economies of scale in the provision of government services. Because younger residents and older residents tend to generate the most demand for public services, the share of the population aged 18 to 64 accounts for this factor. The unemployment rate is a proxy for potential claims on unemployment insurance and other state welfare programs, so its inclusion controlled for these demands. Lastly, by including real per-capita income, I accounted for whatever demand for public services results from higher income.

[10] See, for example, Crain (2003); Crain and Crain (1998); Bohn and Inman (1996); Matsusaka and Gilligan (1995); Poterba (1994); and Alt and Lowry (1994).

$\boldsymbol{\varphi_x}$ represents a set of state dummy variables, one for each state in the sample, while $\boldsymbol{\tau_t}$ represents a set of dummy variables for each year in the sample. Lastly, ε_{xt} is a random disturbance term. The results of these tests are reported in table 3.

Table 3. A Simple Test of the Effect of TELs

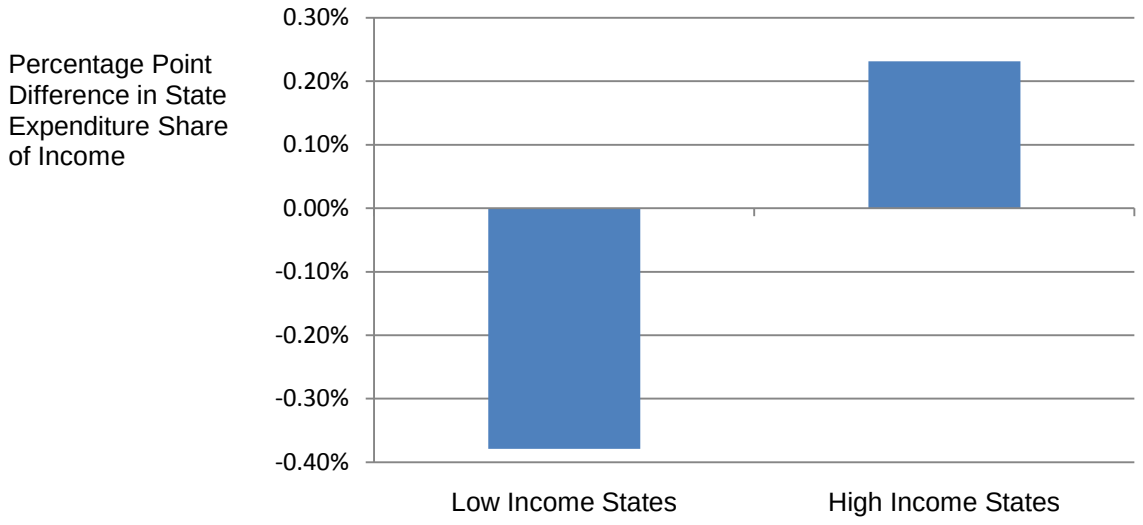
	Dependent Variable: State Expenditures as a Share of Income	Dependent Variable: State and Local Expenditures as a Share of Income
Independent Variables	**Model 1**	**Model 2**
Variables of Interest		
Dummy TEL	–0.016	–0.018
	(0.008)**	(0.009)*
Interaction: (Dummy TEL)	0.0005	0.0005
X (Per Capita Income)	(0.0003)*	(0.0003)
Control Variables		
ln (Population)	–0.024	–0.024
	(0.010)**	(0.013)*
Percent 18 to 64	0.046	–0.095
	(0.066)	(0.104)
Percent Urban	–0.037	–0.043
	(0.036)	(0.051)
Unemployment Rate	0.168	0.290
	(0.050)***	(0.074)***
Per Capita Income, thousands	–0.003	–0.003
	(0.0006)***	(0.0008)***
Year Dummy Variables	Yes	Yes
State Dummy Variables	Yes	Yes
Total Panel Observations	1470	1372
Adjusted R-Squared	0.92	0.87

Notes:

Robust standard errors account for clustering at the state level and are reported in parentheses.
* Indicates significance at the 10 percent level for a two-tailed test. ** Indicates significance at the 5 percent level for a two-tailed test. ***Indicates significance at the 1 percent level for a two-tailed test.

In the first model, the estimated coefficient on the dummy TEL obtains statistical significant at the 5 percent level, while the coefficient on the interaction term obtains significance at the 10 percent level.[11] This suggests that there is some reason to suspect that TELs impact state spending. The negative estimated coefficient on the Dummy TEL in conjunction with the positive coefficient on the interaction term suggest that in low-income states, TELs are associated with less spending, while in high-income states, TELs are actually associated with more spending. Figure 1 depicts the respective marginal effects of a TEL in a low- and high-income state.[12]

Figure 1. The Marginal Impact of a TEL on State Expenditure Share of Income



Source: Author's calculations based on regression results from model 1 in table 5.
Note: High-income states are those whose per-capita income is one standard deviation above the average, and low-income states are those whose per-capita income is one standard deviation below the average.

Note, first, that the effects are relatively modest. In the best case-scenario, a TEL in a low-income state (which I define as a state with per capita income one standard deviation below average) is associated with a state spending share of income that is about 4/10 of one percentage point lower than

[11] When the interaction term is not included, the dummy TEL variable fails to obtain statistical significance.
[12] The marginal effect is given by: $\hat{\beta}_1 + \hat{\beta}_2 \cdot (\text{Per Capita Income})$ where $\hat{\beta}_1$and $\hat{\beta}_2$ are estimates of β_1 and β_2, respectively.

average. The average state share of spending is about 13.4 percent. So, in low-income states, TELs seem to decrease the state spending share of income by less than 3 percent (=0.37/13.4).

Now, however, consider the impact of a TEL in a high-income state. In these states, TELs are associated with a state spending share of income that is a little more than 2/10 of one percentage point *greater* than average.

The second model estimated the effect of TELs on state and local spending, instead of state-only spending. In this model, the estimated coefficient on the Dummy TEL obtains statistical significance at the 10 percent level, while the estimated coefficient on the interaction term fails to obtain statistical significance at all. On the one hand, this suggests that in terms of combined state and local spending, TELs may not have a differential impact in low and high-income states. On the other hand, the marginal statistical significance on the dummy coefficient suggests that there is relatively weak evidence that TELs impact combined state and local spending at all.

Getting into the Details: Testing the Stringency of TELs

As I noted in section II above, no two TELs are exactly alike. It is quite possible, then, that a simple dummy variable test like the one reported in the last section fails to capture the rich variation in TELs and, with it, the differential impact that these various types of TELs may have on spending. Each TEL may or may not have a number of additional characteristics (outlined in table A1 in the appendix) that impact its effectiveness. Theoretically, a number of factors seem likely to make TELs more effective in limiting spending:

- **Adopted by initiative, referendum, or constitutional convention:** This is important because if a TEL is the result of a referendum or a constitutional convention, rather than the result of ordinary legislation, then it represents an extra-legislative constraint on policy makers.[13]
- **Constitutional:** TELs can be codified in state constitutions or in state statutes. The latter can be easily changed or overridden by subsequent simple-majority vote legislation. But constitutional TELs are not easily undone.
- **Applies to spending**: A TEL can limit either the spending or the revenue side of a state's budget. States may respond to revenue-based TELs by resorting to fees or borrowing, but a spending-based TEL is more difficult to evade.
- **Requires a supermajority or public vote for override:** All TELs contain provisions that permit them to be overridden or suspended. TELs that require either a supermajority legislative vote or a vote of the people to do this are more stringent than TELs that do not. In fact, one might say that TELs without this characteristic are not limiting at all.
- **Automatically refunds surpluses:** TELs often stipulate what is to be done with government revenue that is in excess of the allowable amount. Sometimes it is placed in a rainy day fund. Sometimes it is returned to the voters. TELs that immediately refund surpluses to voters are more stringent because they make it difficult for governments to use the excess funds and because they give taxpayers an incentive to support the TEL.
- **Prohibits unfunded mandates on local governments:** States may react to TELs by forcing lower levels of government to carry out certain governmental functions. Some TELs attempt to limit this by either automatically adjusting the TEL when functions are devolved to lower levels of government or by forcing the state to fund any activity it mandates lower levels perform. These provisions make it more difficult for states to evade the intent of a TEL.

[13] See Buchanan and Tullock (1965) or Buchanan and Brennan (1985) on constitutional rules that restrain in-period political outcomes.

These characteristics are not mutually exclusive and are often highly correlated (for example, the correlation coefficient between those TELs that limit spending and those that were adopted by referendum is 0.56). I, therefore, cannot test all of these characteristics in one regression using separate indicator variables. Instead, I developed an "index variable." The index was created by assigning one point for each of the above-listed characteristics thought to make a TEL more stringent. Like the other variables in this study, it is described above in table 1 and its summary statistics are reported in table 2.

In testing the stringency index, I employed a model similar to that of models 1 and 2. As I did with the dummy TEL indicator, I interacted the stringency index with real per-capita income. This allowed me to capture the differential impact that more-stringent TELs have in high and low-income states. As with models 1 and 2, I employed state and year fixed effects and a standard set of control variables. Now, for brevity, I allow the matrix $\mathbf{X}$ to stand in for the control variables. The models are given by equations 3 and 4:

$$(\text{State Expenditure Share})_{xt} = \beta_0 + \beta_1(\text{TEL Index})_{xt} + \beta_2(\text{TEL Index})_{xt}(\text{Per Capita Income})_{xt} + \mathbf{\Phi X} + \boldsymbol{\varphi}_{\mathbf{x}} + \boldsymbol{\tau}_{\mathbf{t}} + \varepsilon_{xt} \quad (3)$$

$$(\text{State and Local Expenditure Share})_{xt} = \beta_0 + \beta_1(\text{TEL Index})_{xt} + \beta_2(\text{TEL Index})_{xt}(\text{Per Capita Income})_{xt} + \mathbf{\Phi X} + \boldsymbol{\varphi}_{\mathbf{x}} + \boldsymbol{\tau}_{\mathbf{t}} + \varepsilon_{xt} \quad (4)$$

The results of these tests are reported in table 4.

Table 4. Testing the Stringency of TELs

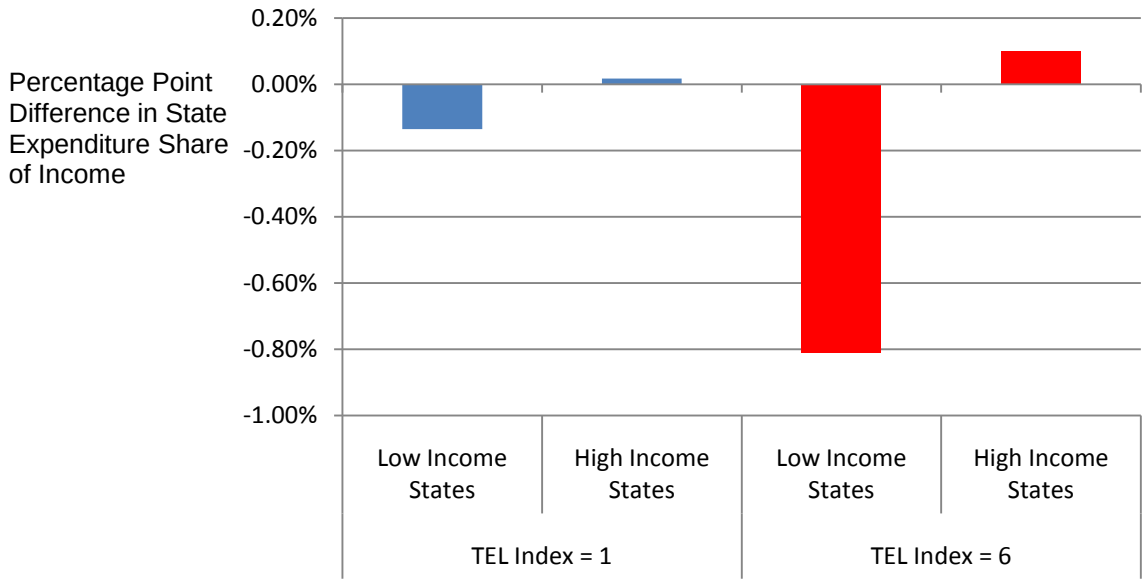
Independent Variables	Dependent Variable: State Expenditures as a Share of Income Model 3	Dependent Variable: State and Local Expenditures as a Share of Income Model 4
Variables of Interest		
TEL Index	–0.004	–0.003
	(0.002)**	(0.002)
Interaction: (TEL Index)	0.0001	0.0001
X (Per Capita Income)	(0.00006)*	(0.00008)
Control Variables		
All Control Variables From Model 1	Yes	Yes
Year Dummy Variables	Yes	Yes
State Dummy Variables	Yes	Yes
Total Panel Observations	1470	1372
Adjusted R-Squared	0.92	0.86

Notes:
Robust standard errors account for clustering at the state level and are reported in parentheses.
* Indicates significance at the 10 percent level for a two-tailed test. ** Indicates significance at the 5 percent level for a two-tailed test.

In the regression model on state-only spending, the estimated coefficients on the TEL Index obtained statistical significance at the 5 percent level, while that of the interaction term obtained significance at the 10 percent level. In the regression model on state and local spending, neither coefficient obtained statistical significance. Figure 2 depicts the marginal impact of the TEL stringency index. It shows the different impact that strong and weak TELs have in low and high-income states. Weak TELs—those with an Index that takes a value of 1—tend not to impact state spending very much in either low or high-income states. At best, they decrease spending by about 1/10 of one percentage point in low-income states. At worst, they increase spending by less than 1/100 of one percentage point in high-income states.

The most-stringent TELs, on the other hand, do have an appreciable impact on state spending. In low-income states, those TELs with an index value of 6 (i.e., those that have all of the 6 characteristics listed above) are associated with a spending share of income that is about 8/10 of one percentage point lower than would otherwise be the case. This is 6 percent less than the average state spending share of income. In high-income states, these more-stringent TELs are associated with spending shares that are about 1/10 of one percentage point greater.

Figure 2. The Marginal Impact of TEL Stringency on State Spending



Source: Author's calculations based on regression results from model 3 in table 4.
Note: High-income states are those whose per capita income is one standard deviation above the average, and low-income states are those whose per capita income is one standard deviation below the average.

If more-stringent TELs seem to be more impactful, which of the six characteristics listed above seem to matter the most? To answer this question, I ran separate regressions, each with a dummy variable indicating one of the 6 characteristics listed above. Each regression also included an interaction term

that was the product of the characteristic dummy and real per capita income. I ran these tests for both state-only and state and local spending as a share of income.[14]

In terms of their impact on state spending as a share of income, all factors obtained the predicted sign, but only four were statistically significant in some way. Three factors obtained statistical significance at the 10 percent level. These were constitutional TELs, TELs that limit spending, and TELs that automatically and immediately refund surpluses. An additional characteristic obtained statistical significance at the 1 percent level: TELs that require a supermajority or public vote to be overridden.

In terms of their impact on state and local combined spending, all factors showed the predicted sign but only one factor obtained statistical significance. This, again, was the supermajority or public vote requirement for overriding the TEL. As in the state-only tests, this factor obtained statistical significance at the 1 percent level. These results suggest that among all of the characteristics listed above, a supermajority vote or a public vote to override the TEL stands out. This fits with the theoretical prediction. And, indeed, some researchers have coded states as having "advisory" limits if they lack a supermajority or public vote requirement (see, e.g., Skidmore, 1999).

In the next section, I examine the different impact of different TEL formulas. Given the importance of the supermajority or public vote override characteristic, I coded states as having TELs only if they had a supermajority vote requirement (see table 1, above, for a description of the variables).

[14] For the sake of brevity, I do not report these tests. I am happy to share the results with anyone who is curious, however.

More Details: Testing Different TEL Formulas

As I noted in section II, above, one of the most important distinguishing characteristics of a TEL is the formula by which it limits the budget. In this section, I describe a number of tests that were designed to assess the impact that different TEL formulas may have on spending.

The models are given by equations 5 and 6, below. As before, I employed a standard set of control variables as well as state and year fixed effects. I tested four different varieties of TELs:

1. Those whose formulas permit budgets to grow no faster than inflation plus population growth;
2. Those whose formulas permit budgets to grow no faster than state income growth;
3. Those whose formulas limit the overall budget size to some share of income in the state; and
4. An "other" category that captures all other varieties of TELs. These are often a combination of inflation or some fixed number; see appendix table A2 for details.

As with the previous models, I also included interaction terms to account for the different impact that TELs may have in high- and low-income states. Recall that researchers have used these terms because TELs often incorporate income in their formulas. Now that I am using separate variables to account for the different types of TELs, however, I only interact per capita income with those TEL types that include income in their formula (that is, with TEL types 2 and 3 above).[15] Descriptions and summary statistics for these variables are reported tables 1 and 2, respectively. The results of these tests are reported in table 5, below.

[15] I also ran regressions with interaction terms on all TEL types. As expected, the interaction terms on TEL types 1 and 4—those without income in their formulas—failed to obtain statistical significance.

$$(\text{State Expenditure Share})_{xt} \quad (5)$$

$$= \beta_0 + \beta_1(\text{Inflation Plus Pop TEL})_{xt} + \beta_2(\text{Income Growth TEL}) + \beta_3(\text{Income Growth TEL})_{xt}(\text{Per Capita Income})_{xt} + \beta_4(\text{Income Share TEL})_{xt} + \beta_5(\text{Income Share TEL})_{xt}(\text{Per Capita Income})_{xt} + \beta_6(\text{Other TEL})_{xt} + \mathbf{\Phi X} + \boldsymbol{\varphi}_{\mathbf{x}} + \boldsymbol{\tau}_{\mathbf{t}} + \varepsilon_{xt}$$

$$(\text{State and Local Expenditure Share})_{xt} \quad (6)$$

$$= \beta_0 + \beta_1(\text{Inflation Plus Pop TEL})_{xt} + \beta_2(\text{Income Growth TEL}) + \beta_3(\text{Income Growth TEL})_{xt}(\text{Per Capita Income})_{xt} + \beta_4(\text{Income Share TEL})_{xt} + \beta_5(\text{Income Share TEL})_{xt}(\text{Per Capita Income})_{xt} + \beta_6(\text{Other TEL})_{xt} + \mathbf{\Phi X} + \boldsymbol{\varphi}_{\mathbf{x}} + \boldsymbol{\tau}_{\mathbf{t}} + \varepsilon_{xt}$$

Those TELs that restrict budget growth to inflation plus population growth seem not to have a statistically significant impact on state expenditures as a share of income. In model 5, the coefficient on this term failed to obtain statistical significance. This is somewhat surprising given the fact that these TELs are widely regarded as the most restrictive. There is some evidence that this variety of TEL does, however, seem to impact state and local expenditures as a share of income. In model 6, the coefficient on this term obtained significance at the 5 percent level.

Those TELs that limit budget growth to state income growth seem to have a statistically significant impact on both state spending and state and local spending. Their coefficients obtained statistical significance at the 5 percent level in the state-only tests and at the 1 percent level in state and local spending tests. TELs that limit budgets to some share of income had no statistically significant impact on either state-only spending or on combined state and local spending. Lastly, those TELs that are based on other factors seem to have a statistical significant impact on state-only spending (at the 1 percent level), but no statistically significant impact on state and local spending.

Table 5. Testing Different TEL Formulas		
	Dependent Variable: State Expenditures as a Share of Income	**Dependent Variable: State and Local Expenditures as a Share of Income**
Independent Variables	**Model 5**	**Model 6**
Variables of Interest		
Inflation + Pop Basis	–0.004	–0.006
	(0.002)	(0.003)**
Income Growth Basis	–0.020	–0.038
	(0.008)**	(0.011)***
Interaction Term: (Income Growth Basis) X (Per Capita Income)	0.001	0.001
	(0.0003)**	(0.0004)***
Income Share Basis	–0.016	–0.004
	(0.012)	(0.017)
Interaction Term: (Income Share Basis) X (Per Capita Income)	0.001	0.0003
	(0.0004)	(0.0006)
Other Basis	0.014	0.0071
	(0.005)***	(0.007)
Control Variables		
All Control Variables from Model 1	Yes	Yes
Year Dummy Variables	Yes	Yes
State Dummy Variables	Yes	Yes
Total Panel Observations	1470	1372
Adjusted R-Squared	0.92	0.87

Notes:

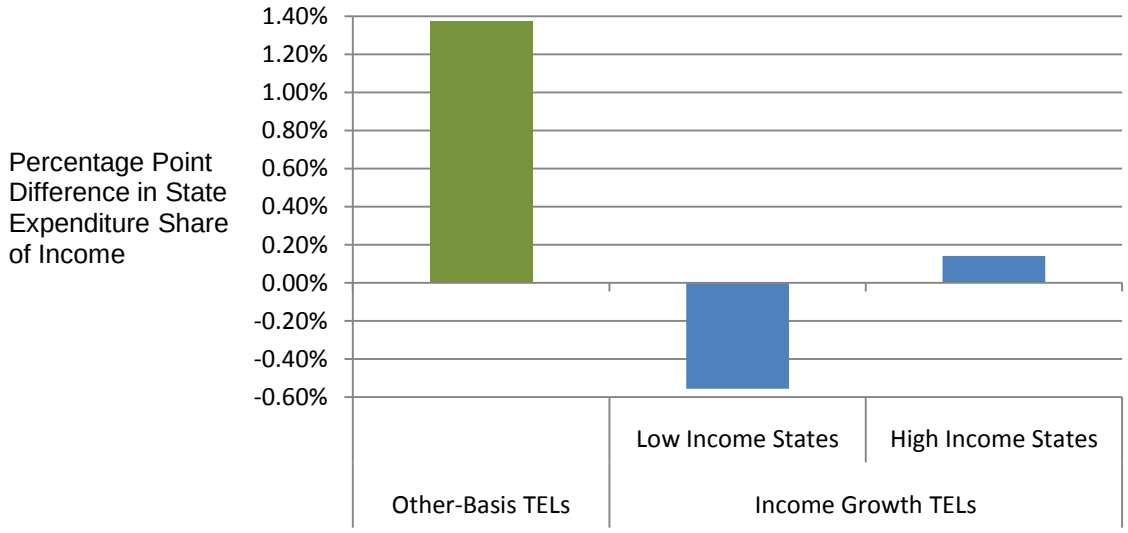
Robust standard errors account for clustering at the state level and are reported in parentheses. ** Indicates significance at the 5 percent level for a two-tailed test. ***Indicates significance at the 1 percent level for a two-tailed test.

Figure 2 displays the marginal impact of those TEL varieties that have a statistically significant impact on state-only spending. In the case of income-growth-based TELs, the impact on state spending depends on whether the state is a high or low-income state. In low-income states, income-growth-based TELs are associated with an expenditure share of income that is nearly 6/10 of a percentage point lower relative to other states. Since the average state's expenditure share of income is about 13.4 percent, this represents a 4 percent difference compared to the average. In high-income states, however, these types

of TELs are associated with spending that is more than 1/10 of a percentage point higher relative to other states (about 1 percent higher compared to the average state spending share).

Those TELs that limit budgets by some other basis have a comparatively worse record. They are associated with state spending shares that are nearly 1.4 percentage points higher than other states. Compared with a typical spending share, this is a more than 10 percent difference. Unlike the income-based TELs, the impact of the other-based TELs does not depend on whether the state is high or low income.

Figure 2. The Marginal Impact of Different TELs on State Expenditure Share of Income



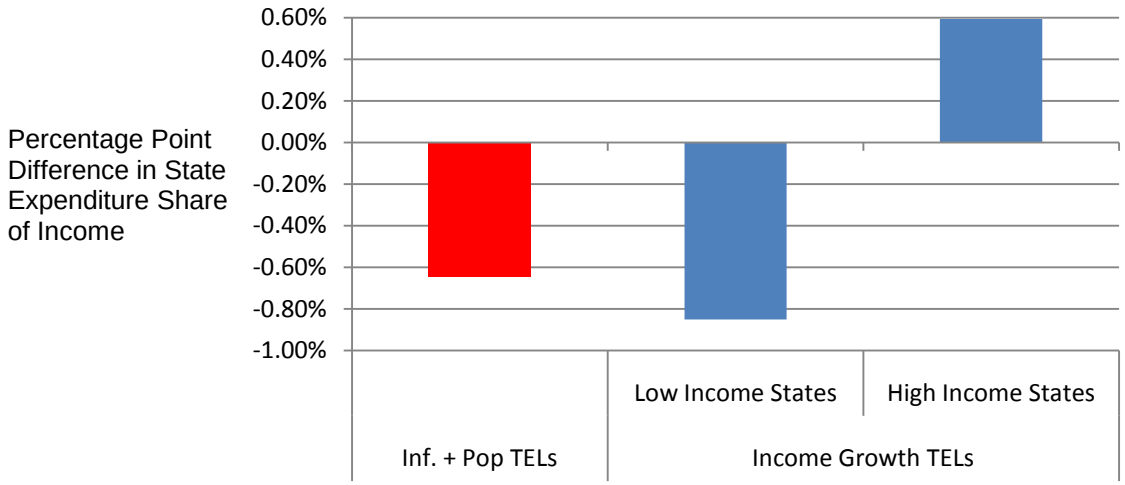
Source: Author's calculations based on regression results from model 5 in table 5.
Note: High income-states are those whose per capita income is one standard deviation above the average, and low-income states are those whose per capita income is one standard deviation below the average.

Figure 3 depicts the marginal impact of those types of TELs that have a statistically significant effect on combined state and local spending as a share of income. Those TELs that limit budget growth to the sum of inflation plus population growth are associated with state and local spending shares that are

about 6/10 of one percentage point lower (this is a 3 percent difference relative to the typical state and local spending share). This impact holds in both high- and low-income states.

Income-growth based TELs, however, have a different impact depending on whether the state is a low-income or a high-income state. In low-income states, these TELs are associated with state and local spending shares that are more than 8/10 of one percentage point lower (this is a 4 percent difference relative to the typical state and local spending share). In high-income states, however, they are associated with state and local spending shares that are nearly 6/10 of one percentage point higher (a difference of nearly 3 percent relative to the typical state and local spending share).

Figure 3. The Marginal Impact of Different TELs on State and Local Expenditure Share of Income



Source: Author's calculations based on regression results from model 6 in table 5.
Note: High income-states are those whose per capita income is one standard deviation above the average, and low-income states are those whose per capita income is one standard deviation below the average.

III. Discussion and Conclusion

Over the last half-century, real state and local government spending has grown at a remarkable clip, outpacing real growth in the private sector by 34 percent.[16] According to the Government Accountability Office, absent policy changes, state and local spending will continue to grow at an unsustainable pace for at least the next 50 years. As a consequence, the "fiscal position [of state and local governments] will steadily decline through 2060."[17]

As policy makers look for tools to arrest the growth of government budgets, TELs are likely to be part of the discussion. In terms of limiting budgets, however, the TEL record is somewhat mixed. The most common variety of TEL—that which limits state budget growth to growth in state income—is associated with smaller budgets in low-income states, but is actually associated with *larger* budgets in high-income states. It may be that this variety of TEL serves as an excuse for policy makers to spend up to the limit, rather than as a binding constraint on spending. Another common variety of TEL limits budgets to some share of income. These TELs, however, have no statistically significant impact on either state-only spending or state-and-local spending as a share of income. It may be that policy makers are careful to set these limits so high that they are not binding. Lastly, TELs that are based on some other factors such as inflation or a fixed number are associated with significantly more state spending as a share of income. Here, again, it is plausible that policy makers view these limits as an excuse to spend up to the limit rather than as a constraint.

Those TELs that limit budgets to inflation plus population growth seem to limit combined state and local spending. In states with this variety of TEL, state and local spending as a share of state income is about 6/10 of a percentage point less than in other states (this is a 3-percent difference relative to the

[16] Author's calculations, based on data from the National Economic Accounts. See, also, Mitchell, 2010.
[17] See Government Accountability Office, 2010.

average state and local spending share). Unlike income growth-based TELs, this variety of TEL seems to have an impact in both high- and low-income states. This variety of TEL is often favored by advocates of limited government because it is particularly restrictive (the sum of inflation and population growth is typically less than income growth). But this research suggests another reason for these advocates to favor the inflation-plus-population TEL: it limits spending in both low and high-income states.

In addition to the formulas on which they are based, there are other characteristics that can make TELs more effective. These include extra-legislative adoption, constitutional codification, a limit that is based on spending rather than on revenue, a supermajority or public vote requirement for overrides, a provision that automatically and immediately refunds surpluses in excess of the limit, and a prohibition on unfunded mandates to the local levels. I found that those TELs with more of these characteristics tended to have more of an impact on spending. Separate tests of each characteristic suggest that a supermajority or public vote requirement is particularly important.

Given the continued interest in limiting the growth of state and local budgets, policy makers would do well to remember that TELs are not the only arrow in their quiver. Strict balanced-budget requirements are another option (while all states but Vermont have some sort of balanced budget requirement, some are more strict than others). Mark Crain (2003) and David Primo (2007) have both found that states with stricter balanced budget requirements tend to spend less than other states. The impact is at least as large as the best-case impact of a TEL. Similarly, Bohn and Inman (1996) have shown that when states with balanced budget requirements encounter budget shortfalls, they tend to react by cutting spending rather than by raising taxes.

Another option is a supermajority requirement for all tax increases. Crain and Miller (1990), Knight (2000), and Crain (2003) have all found that these requirements are associated with smaller budgets.

Knight found the effect to be quite large; he showed that these requirements decrease taxation levels by about 8 percent relative to the mean state.

A special variety of veto power known as the item-reduction veto has also been shown to limit state budgets. This kind of veto gives the governor an option to write in a lower spending amount for a particular item. In contrast with other veto varieties, these have been shown to have a statistically significant impact on state spending.[18] The impact is quite significant. Crain (2003) found that states with this power spend about 14 percent less per capita than others.

[18] See Crain and Miller (1990) and Crain (2003).

Bibliography

Abrams, Burton, and William Dougan. "The Effects of Constitutional Restraints on Government Spending." *Public Choice* 49 (1986): 101–16.

Alt, James, and Robert Lowry. "Divided Government, Fiscal Institutions, and Budget Deficits: Evidence from the States." *The American Political Science Review* 88, no. 4 (1994): 811–828.

Bails, Dale. "The Effectiveness of Tax-Expenditure Limitations: A Re-evaluation." *American Journal of Economics and Sociology* 49, no. 2 (1990): 223–238.

Bails, Dale, and Margie Tieslau. "The Impact of Fiscal Constitutions on State and Local Expenditures." *Cato Journal* 20, no. 2 (2000): 255–277.

Bohn, Henning, and Robert Inman. "Balanced Budget Rules and Public Deficits: Evidence from the U.S. States." *Carnegie-Rochester Conference Series on Public Policy* 45 (1996): 13–76.

Buchanan, James, and Geoffrey Brennan. *The Reason of Rules: Constitutional Political Economy.* Indianapolis, IN: Liberty Fund, 1985.

Buchanan, James, and Gordon Tullock. *The Calculus of Consent: Logical Foundation of Constitutional Democracy.* Ann Arbor: The University of Michigan, 1965.

Bureau of Economic Analysis. *National Economic Accounts.* 2010. http://www.bea.gov/national/index.htm#gdp (accessed July 10, 2010).

Crain, Mark. *Volatile States: Institutions, Policy, and the Performance of American State Economies.* Ann Arbor, MI: University of Michigan Press, 2003.

Crain, Mark, and James C. Miller III. "Budget Process and Spending Growth." *William and Mary Law Review* 31, no. 4 (1990): 1021–46.

Crain, Mark, and Nicole Crain. "Fiscal Consequences of Budget Baselines." *Journal of Public Economics* 67, no. 3 (1998): 421-36.

Elder, Harold. "Exploring the Tax Revolt: An Analysis of the Effectiveness of State Tax and Expenditure Limitation Laws." *Public Finance Quarterly* 20, no. 1 (1992): 47–63.

Government Accountability Office. *State and Local Governments: Fiscal Pressures Could Have Implications for future Delivery of Intergovernmental Programs.* Washington, D.C.: U.S. Government Printing Office, 2010.

Knight, Brian. "Supermajority Voting Requirements for Tax Increases: Evidence from the States." *Journal of Public Economics* 76, no. 1 (2000).

Kousser, Thad, Matthew McCubbins, and Ellen Moule. “For Whom the TEL Tolls: Can State Tax and Expenditure Limits Effectively Reducer Spending?” *State Politics and Policy Quarterly* 8 (2008): 331–361.

Matsusaka, John, and Thomas Gilligan. “Deviations from Constituent Interests: The Role of Legislative Structure and Political Parties in the States.” *Economic Inquiry* 33 (1995): 383–-401.

Mitchell, Matthew. “State Spending Restraint: An Analysis of the Path Not Taken.” *Mercatus Center at George Mason University Working Paper*, no. 48 (August 2010).

New, Michael. “Limiting Government Through Direct Democracy: The Case of State Tax and Expenditure Limitations.” *Policy Analysis* 420 (2001).

New, Michael. “Proposition 13 and State Budget Limitations: Past Successes and Future Options.” *Cato Institute Briefing Papers* 83 (2003).

Poterba, James. “State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics.” *The Journal of Political Economy* 102 (1994): 799–821.

Primo, David. *Rules and Restraint: Government Spending and the Design of Institutions.* Chicago, IL: University of Chicago Press, 2007.

Rueben, Kim. “Tax Limitation and Government Growth: The Effect fo State Tax and Expenditure Limits on State and Local Government.” *Mimeo, Department of Economics, MIT*, 1995.

Shadbegian, Ronald. “Do Tax and Expenditure Limitations Affect the Size and Growth of State Government?” *Contemporary Economic Policy* 14 (1996): 22–35.

Appendix

Table A1. Characteristics of TELs

State	Time	Adoption Method	Con. or Statute	Limits Spending or Revenue	Supermaj. or Public Vote is Required to Over-ride	Immediate Refunds of Surpluses	No Unfunded Mandate
Alabama	1970–present	-	-	-	-	-	-
Alaska	1970–1981	-	-	-	-	-	-
Alaska	1982–present	Referenda	Constitution	Spending	Yes	No	No
Arizona	1970–1977	-	-	-	-	-	-
Arizona	1978–present	Referenda	Constitution	Spending	Yes	No	Yes
Arkansas	1970–present	-	-	-	-	-	-
California	1970–1978	-	-	-	-	-	-
California	1979–1988	Initiative	Constitution	Revenue	Yes	Yes	Yes
California	1989–present	Initiative	Constitution	Revenue	Yes	Yes	Yes
Colorado	1970–1977	-	-	-	-	-	-
Colorado	1978–1990	Legislature	Statute	Spending	No	No	No
Colorado	1991	Legislature	Statute	Spending	Yes	No	No
Colorado	1992–2005	Initiative	Constitution	Revenue and Spending	Yes	Yes	Yes
Colorado	2006–2011	Initiative	-	-	-	-	-
Connecticut	1970–1990	-	-	-	-	-	-
Connecticut	1991–present	Legislature	Statute	Spending	Yes	No	No
Delaware	1970–present	-	-	-	-	-	-
Florida	1970–1993	-	-	-	-	-	-
Florida	1994–present	Referenda	Constitution	Revenue	Yes	No	No
Georgia	1970–present	-	-	-	-	-	-
Hawaii	1970–1977	-	-	-	-	-	-

Hawaii	1978–present	Con. Convention	Constitution	Spending	Yes	No	Yes
Idaho	1970–1979	-	-	-	-	-	-
Idaho	1980–present	Legislature	Statute	Spending	Yes	No	Yes
Illinois	1970–present	-	-	-	-	-	-
Indiana	1970–2001	-	-	-	-	-	-
Indiana	2002–present	Legislature	Statute	Spending	No	No	Yes
Iowa	1970–1991	-	-	-	-	-	-
Iowa	1992–present	Legislature	Statute	-	-	-	-
Kansas	1970–present	-	-	-	-	-	-
Kentucky	1970–present	-	-	-	-	-	-
Louisiana	1970–1979	-	-	-	-	-	-
Louisiana	1980–present	Legislature	Statute	Revenue	No	No	No
Louisiana	1993–present	Referenda	Constitution	Revenue and Spending	Yes	No	No
Maine	1970–2004	-	-	-	-	-	-
Maine	2005–present	Legislature	Statute	Spending	No	No	No
Maryland	1970–present	-	-	-	-	-	-
Massachusetts	1970–1985	-	-	-	-	-	-
Massachusetts	1986–2001	Initiative	Statute	Revenue	No	No	No
Massachusetts	2002–present	Legislature	Statute	Revenue	No	No	No
Michigan	1970–1977	-	-	-	-	-	-
Michigan	1978–present	Initiative	Constitution	Revenue	Yes	Yes	Yes
Minnesota	1970–present	-	-	-	-	-	-
Mississippi	1970–1982	-	-	-	-	-	-
Mississippi	1983–1992	Legislature	Statute	-	-	-	-
Mississippi	1993–present	Legislature	Statute	Spending	-	-	-
Missouri	1970–1980	-	-	-	-	-	-
Missouri	1981–present	Initiative	Constitution	Revenue	Yes	Yes	Yes

Montana	1970–1981	-	-	-	-	-	-
Montana	1982–2005	Legislature	Statute	Spending	Yes	No	
Montana	2006–present	-	-	-	-	-	-
Nebraska	1970–present	-	-	-	-	-	-
Nevada	1970–1978	-	-	-	-	-	-
Nevada	1979–present	Legislature	Statute	Proposed Spending	-	-	-
New Hampshire	1970–present	-	-	-	-	-	-
New Jersey	1970–1975	-	-	-	-	-	-
New Jersey	1976–1983	Legislature	Statute	Spending	Yes	No	?
New Jersey	1984–1990	-	-	-	-	-	-
New Jersey	1991–present	Legislature	Statute	Spending	No	No	Yes
New Mexico	1970–present	-	-	-	-	-	-
New York	1970–present	-	-	-	-	-	-
North Carolina	1970–1991	-	-	-	-	-	-
North Carolina	1992–present	Legislature	Statute	Spending	No	No	
North Dakota	1970–present	-	-	-	-	-	-
Ohio	1970–2005	-	-	-	-	-	-
Ohio	2006–present	Legislature	Statute	Spending	Yes	No	?
Oklahoma	1970–1984	-	-	-	-	-	-
Oklahoma	1985–present	Referenda	Constitution	Spending	No	No	No
Oregon	1970–1979	-	-	-	-	-	-
Oregon	1980–2000	Legislature	Statute	Spending	No	Yes	Yes
Oregon	2001–present	Initiative	Constitution	Revenue and Spending	No	Yes	Yes
Pennsylvania	1970–present	-	-	-	-	-	-
Rhode Island	1970–1976	-	-	-	-	-	-
Rhode Island	1977–1991	-	-	-	-	-	-
Rhode Island	1992–present	Referenda	Constitution	-	-	-	-

South Carolina	1970–1979	-	-	-	-	-	-
South Carolina	1980–present	Referenda	Constitution	Spending	Yes	No	No
South Dakota	1970–present	-	-	-	-	-	-
Tennessee	1970–1977	-	-	-	-	-	-
Tennessee	1978–present	Con. Convention	Constitution	Spending	No	No	Yes
Texas	1970–1977	-	-	-	-	-	-
Texas	1978–present	Referenda	Constitution	Spending	No	No	No
Utah	1970–1988	-	-	-	-	-	-
Utah	1989–present	Legislature	Statute	Spending	Yes	No	Yes
Vermont	1970–present	-	-	-	-	-	-
Virginia	1970–present	-	-	-	-	-	-
Washington	1970–1979	-	-	-	-	-	-
Washington	1980–1992	Legislature	Statute	Revenue	?	No	?
Washington	1993–present	Initiative	Statute	Spending	Yes	No	Yes
West Virginia	1970–present	-	-	-	-	-	-
Wisconsin	1970–2000	-	-	-	-	-	-
Wisconsin	2001–present	Legislature	Statute	Spending	No	No	?
Wyoming	1970–present	-	-	-	-	-	-

Sources: Bert Waisanen, "State Tax and Expenditure Limits–2010" (Washington, DC: *National Conference of State Legislatures*, 2010); Mandy Rafool, "State Tax and Expenditure Limits" (Washington, DC: National Conference of State Legislatures, 1996); Daniel Mullins and Bruce Wallin, "Tax and Expenditure Limitations: Introduction and Overview," *Public Budgeting & Finance*, Winter 2004; Michael New, "Limiting Government Through Direct Democracy: The Case of State Tax and Expenditure Limitations," *Policy Analysis*, 2001, No. 420; Michael New, "Propostion 13 and State Budget Limitations: Past Successes and Future Options," *Cato Institute Briefing Papers*, 2003, No. 83; Mark Skidmore, "Tax and Expenditure Limitations and the Fiscal Relationships Between State and Local Governments," *Public Choice*, 1999, Vol. 99, pp. 77–102. Question marks indicate the data is unknown and were coded as "0" in the dataset. Please contact the author with any additional information.

Table A2. Basis of Limit

State	Time	Growth in Population Plus Inflation	Growth in Income	Some Share of Total State Income	Based on Some Other Number	If "Other", what?
Alabama	1970–present	-	-	-	-	-
Alaska	1970–1981	-	-	-	-	-
Alaska	1982–present	Yes	-	-	-	-
Arizona	1970–1977	-	-	-	-	-
Arizona	1978–present	-	-	Yes	-	-
Arkansas	1970–present	-	-	-	-	-
California	1970–1978	-	-	-	-	-
California	1979–1988	Yes	-	-	-	-
California	1989–present	-	Yes	-	-	-
Colorado	1970–1977	-	-	-	-	-
Colorado	1978–1990	-	-	-	Yes	7 percent over the previous year.
Colorado	1991	-	-	Yes	-	-
Colorado	1992–2005	Yes	-	-	-	-
Colorado	2006–2011	-	-	-	-	-
Connecticut	1970–1990	-	-	-	-	-
Connecticut	1991–present	-	Yes	-	Yes	Average growth in income in 5 previous years, or last year's inflation, whichever is greater.
Delaware	1970–present	-	-	-	-	-
Florida	1970–1993	-	-	-	-	-
Florida	1994–present	-	Yes	-	-	-
Georgia	1970–present	-	-	-	-	-
Hawaii	1970–1977	-	-	-	-	-
Hawaii	1978–present	-	Yes	-	-	-
Idaho	1970–1979	-	-	-	-	-
Idaho	1980–present	-	-	Yes	-	-
Illinois	1970–present	-	-	-	-	-
Indiana	1970–2001	-	-	-	-	-
Indiana	2002–present	-	-	-	Yes	A complex formula.
Iowa	1970–1991	-	-	-	-	-
Iowa	1992–present	-	-	-	-	-
Kansas	1970–present	-	-	-	-	-
Kentucky	1970–present	-	-	-	-	-
Louisiana	1970–1979	-	-	-	-	-
Louisiana	1980–present	-	-	Yes	-	-

Louisiana	1993–present	-	Yes	Yes	-	-
Maine	1970-–2004	-	-	-	-	-
Maine	2005–present	-	Yes	-	Yes	Average of 10 year personal income growth or maximum of 2.75%. Formulas are based on state's tax burden ranking.
Maryland	1970–present	-	-	-	-	-
Massachusetts	1970–1985	-	-	-	-	-
Massachusetts	1986–2001	-	Yes	-	-	-
Massachusetts	2002–present	-	Yes	-	Yes	The 2002 law added a definition for a limit that was tied to inflation in government purchases plus 2 percent.
Michigan	1970–1977	-	-	-	-	-
Michigan	1978–present	-	-	Yes	-	-
Minnesota	1970–present	-	-	-	-	-
Mississippi	1970–1982	-	-	-	-	-
Mississippi	1983–1992	-	-	-	-	-
Mississippi	1993–present	-	-	-	-	-
Missouri	1970–1980	-	-	-	-	-
Missouri	1981–present	-	-	Yes	-	-
Montana	1970–1981	-	-	-	-	-
Montana	1982–2005	-	Yes	-	-	-
Montana	2006–present	-	-	-	-	-
Nebraska	1970–present	-	-	-	-	-
Nevada	1970–1978	-	-	-	-	-
Nevada	1979–present	Yes	-	-	-	-
New Hampshire	1970–present	-	-	-	-	-
New Jersey	1970–1975	-	-	-	-	-
New Jersey	1976–1983	-	Yes	-	-	-
New Jersey	1984–1990	-	-	-	-	-
New Jersey	1991–present	-	Yes	-	-	-
New Mexico	1970–present	-	-	-	-	-
New York	1970–present	-	-	-	-	-
North Carolina	1970–1991	-	-	-	-	-
North Carolina	1992–present	-	-	Yes	-	-
North Dakota	1970–present	-	-	-	-	-

Ohio	1970–2005	-	-	-	-	-
Ohio	2006–present	Yes	-	-	Yes	3.5% if Inf + Pop < 3.5%.
Oklahoma	1970–1984	-	-	-	-	-
Oklahoma	1985–present	-	-	-	Yes	12% annual growth.
Oregon	1970–1979	-	-	-	-	-
Oregon	1980–2000	-	Yes	-	-	-
Oregon	2001–present	-	-	Yes	-	-
Pennsylvania	1970–present	-	-	-	-	-
Rhode Island	1970–1976	-	-	-	-	-
Rhode Island	1977–1991	-	-	-	-	-
Rhode Island	1992–present	-	-	-	-	-
South Carolina	1970–1979	-	-	-	-	-
South Carolina	1980–present	-	Yes	Yes	-	-
South Dakota	1970–present	-	-	-	-	-
Tennessee	1970–1977	-	-	-	-	-
Tennessee	1978–present	-	Yes	-	-	-
Texas	1970–1977	-	-	-	-	-
Texas	1978–present	-	Yes	-	-	-
Utah	1970–1988	-	-	-	-	-
Utah	1989–present	Yes	-	-	-	-
Vermont	1970–present	-	-	-	-	-
Virginia	1970–present	-	-	-	-	-
Washington	1970–1979	-	-	-	-	-
Washington	1980–1992	-	Yes	-	-	-
Washington	1993–present	Yes	-	-	-	-
West Virginia	1970–present	-	-	-	-	-
Wisconsin	1970–2000	-	-	-	-	-
Wisconsin	2001–present	-	Yes	-	-	-
Wyoming	1970–present	-	-	-	-	-

Sources: Bert Waisanen, "State Tax and Expenditure Limits--2010" (Washington, DC: *National Conference of State Legislatures*, 2010); Mandy Rafool, "State Tax and Expenditure Limits" (Washington, DC: National Conference of State Legislatures, 1996); Daniel Mullins and Bruce Wallin, "Tax and Expenditure Limitations: Introduction and Overview," *Public Budgeting & Finance*, Winter 2004; Michael New, "Limiting Government Through Direct Democracy: The Case of State Tax and Expenditure Limitations," *Policy Analysis*, 2001, No. 420; Michael New, "Propostion 13 and State Budget Limitations: Past Successes and Future Options," *Cato Institute Briefing Papers*, 2003, No. 83; Mark Skidmore, "Tax and Expenditure Limitations and the Fiscal Relationships Between State and Local Governments," *Public Choice*, 1999, Vol. 99, pp. 77–102. These sources occasionally conflict. In that case, state websites were consulted. Please contact the author if you have additional information.

MERCATUS CENTER
George Mason University
Bridging the gap between academic ideas and real-world problems

ECONOMIC PERSPECTIVES

STATE BUDGET INSTITUTIONS

Prepared by Matthew D. Mitchell and Olivia Gonzalez

Over the past six decades, state and local government spending has increased at more than twice the rate of private sector growth.[1] Left unchecked, this growth puts state and local governments on a costly path that is unsustainable.[2] Either spending growth must slow, taxes must rise, or both. Spending growth can contribute to significant fiscal stress,[3] requiring difficult adjustments when large budget gaps arise. Unfortunately, short-term thinking often dominates the adjustment process so that legislators frequently make choices—such as underfunding pension obligations—that improve the short-term fiscal outlook at the expense of worsening the long-term outlook.

By altering the institutions, or rules, that govern the fiscal decision-making process, policymakers can encourage the sort of long-term thinking that is too often absent from the budgeting process. Reforming the institutions that shape legislators' spending and taxing decisions is a better way to put states on a more sustainable fiscal path.

INSTITUTIONS THAT CONSTRAIN BUDGETS

A study by Mercatus Center economists identified 15 institutions that are significantly associated with less spending.[4] These institutions shape fiscal outcomes in three areas: the budget process, the legislative process, or the political process.

INSTITUTIONS THAT SHAPE THE BUDGET PROCESS

Many state constitutions include budget rules that have an explicit goal of improving fiscal health. Specific goals of budget rules involve restraining government spending, eliminating deficits, or cutting wasteful programs in some way.

- *A balanced budget requirement*. This is one rule that many states have implemented to reduce or eliminate deficits. They vary in stringency, but in general they require a state to balance its budget so that expenditures do not exceed revenues over a given time.

A well-designed budget rule should seek to reduce budget gaps or constrain spending growth and cannot easily be manipulated. To achieve this, there are four main principles that policymakers can use to guide the design of rules that shape the budget process:[5]

- *Broad scope.* Applying a budget rule to all spending categories forces legislators to place all spending on the table if cuts are needed. It also reduces the incentive for future lawmakers to place their favorite items beyond the scope of these rules.

- *Few escape clauses.* Legislators should not have opportunities to sidestep the rule. It is essential that escape clauses cannot be used as an easy way out of difficult spending decisions. If an escape clause is to be used, the threshold for activating it should be high, such as requiring the approval of 90 percent of voters.

- *Minimal accounting discretion.* Too much discretion leads policymakers to create new spending categories, such as "off-budget" entities not subject to the rules.

- *Enforcement*. A budget rule is only effective if it has teeth. Internal enforcement is often susceptible to manipulation while external enforcement through the courts can act as a powerful motivator for legislators to follow budget rules. In either scenario, the enforcer should be credible and have limited discretion. Constitutional rules are typically the most binding rules because they provide a check against legislative discretion.

When approaching each state's unique fiscal situation, state policymakers can use the principles of well-designed budget rules as a general guide for informing policy reform. The following seven institutions are specific examples of budget rules proven to be associated with less spending and a better fiscal outlook.

- *Vetoes*. Line-item vetoes allow governors to strike specific sections of bills, whereas item-reduction vetoes allow governors to write in a lower spending amount for these sections rather than zeroing out an entire budget item. Research suggests[6] that in states where different parties control the executive branch and

Balanced budget rules enforced externally through state constitutions and by independently elected judges have been shown to lead to effective budget balancing. States with more stringent requirements spend about $180 less per capita per year, or about $830 million for the median state.

the legislature, line-item vetoes are associated with less spending per capita[7]—about $100 per year. This translates into a reduction of about $460 million for the median state. Even more significantly, item-reduction vetoes have been shown to lower per capita expenditures by about $470 per year,[8] a reduction of about $2 billion for the median state.

- *Strict balanced budget requirements*. The mere existence of a balanced budget requirement does not guarantee a balanced budget. Most states have these requirements, but some are ineffective. More stringent rules require end-of-the-year balanced budgets and don't permit deficits to be carried over into the next year. Rules enforced externally through state constitutions and by independently elected judges have been shown to lead to effective budget balancing.[9] States with more stringent requirements spend about $180 less per capita per year[10] or about $830 million for the median state. Other benefits include an increased likelihood of having larger rainy day funds and surpluses, making it easier for states to weather economic downturns.

- *Annual budget cycles*. Having a budget cycle that lasts one year as opposed to two years has been shown to be associated with less spending. It has been theorized that biennial cycles are more susceptible to influence by special interest groups pushing for more spending. Moreover, under a biennial cycle, agencies have a longer leash and may be able to use that greater discretion to increase their budgets, whereas annual budget cycles allow legislators to exercise greater oversight. Empirical evidence demonstrates that states with annual budgets tend to spend about $120 less per capita per year than states with biennial cycles.[11]

- *Supermajority requirements for tax increases.* Tax increases may be an enticing way to quickly balance a budget, but their costs are often overlooked, and studies suggest they tend to lead to future spending increases.[12] Some states require that for any tax increase to pass it must gain supermajority approval by the state legislature—usually three-fifths, two-thirds, or three-fourths of the legislature's consent. Although raising taxes can already be politically challenging, imposing a supermajority can act as an additional constraint on tax hikes. The latest research shows that supermajority requirements for tax increases are associated with about $100 less spending per capita per year.[13] States with these requirements also have lower effective tax rates[14] and tend to see a lower spending growth rate than other states.[15]

- *Tax and expenditure limits (TELs)*. Many states create TELs to limit budget growth. The limit is determined by a preset formula. The effectiveness of TELs varies greatly depending on their design.

  Effective TEL formulas limit spending to the sum of inflation plus population

growth. This type of formula is associated with statistically significantly less spending. TELs tend to be more effective when they require a supermajority vote to be overridden, are constitutionally codified, and automatically refund surpluses. These rules are also more effective when they limit spending rather than revenue and when they prohibit unfunded mandates on local government. Having one or more of these characteristics tends to lead to less spending.[16]

Ineffective TELs are unfortunately the most common variety. TELs that tie state spending growth to growth in private income are associated with *more* spending in high-income states.

- *No automatic shutdown provision*. Some state governments cease operations in the event of a budget impasse because of the presence of an automatic shutdown provision. Research demonstrates that the absence of such a provision is better for a state's fiscal health.

  States without an automatic shutdown provision spend about $80 less per capita per year or about $370 million for the median state.[17]

  In the presence of automatic shutdown provisions, legislators or governors who prefer to increase spending have bargaining power when presenting their budgets. This type of rule can lead to more spending because policymakers usually prefer to accept a budget that is not ideal to no spending at all.

- *Baseline budgeting*. When considering a new budget, states can create a baseline using either the dollars spent in the previous year or using the level of services that those dollars bought. Research shows that spending grows more slowly in states that use dollars spent as the baseline, rather than services rendered.[18]

INSTITUTIONS THAT SHAPE THE LEGISLATIVE PROCESS

The following six institutions shape the legislative process and have been found to be associated with more constrained budgets.

- *Separate spending and taxing committees*. In some states, legislative rules consolidate spending and taxing authority into one committee whose members both allocate funds and set tax policy. This committee design makes it easier for members to direct spending toward their preferred projects, which in turn causes them to favor higher tax rates. In other states, a tax committee has sole responsibility for setting tax rates while a separate committee allocates spending. Evidence suggests that states with separate spending and taxing committees spend much less than other states.[19] States in which one legislative committee has both spending and taxing powers spend between $300 and $450 more per person per year.

- *State rainy day funds*. Policymakers can create rainy day funds in which they deposit extra revenue so that they have reserves to draw from when budget shortfalls arise. Well-designed rainy day funds are governed by strict rules that compel legislators to ensure a predetermined level of funding. Policymakers should exercise caution when designing these funds to make sure there is not too much legislative discretion regarding the input and withdrawal of funds. Research shows that states with well-structured rainy day funds experience less spending volatility[20] and less fiscal stress.[21]

- *Centralized spending committees*. When states disperse spending authority into several legislative committees it can also be detrimental to budgetary restraint.[22] Multiple spending committees create a fiscal commons,[23] a situation in which many can draw from a common resource while responsibility for the total level of spending rests with no single group. This leaves little incentive for each group to keep spending in check. In contrast, states that centralize spending authority spend about $200 less per capita each year.[24]

- *Small senates*. The larger the senate, the greater the incentive members face to spend because the cost is spread across more districts. There is evidence that senates with 10 fewer seats relative to other states spend about $170 less per capita per year.[25]

- *Large house-to-senate seat ratio*. For bicameral legislatures, a larger ratio of house to senate seats is associated with less spending. All else being equal, when senate districts are divided into more house districts, each house member's constituency is smaller. States with a one-unit larger house-to-senate ratio spend about $45 less per capita compared with other states.[26]

- *"Part-time" legislatures*. Legislatures made up of members who don't make legislating their only means of employment tend to spend less than states that have full-time legislators. States in which members work year-round and are considered professional legislators demonstrate a propensity to spend more.[27]

INSTITUTIONS THAT SHAPE THE POLITICAL PROCESS

The following two institutions have been thought to constrain budgets by improving incentives in the political process. In both instances, however, the empirical evidence is more complicated.

- *Direct democracy*. When citizens are allowed to vote directly on legislation in statewide ballots, policies are thought to better reflect public attitudes toward spending. Researchers have found that direct democracy was associated with[28] more spending in the early 20th century, but with less spending more recently.

- *Term limits*. While early research found that legislative term limits were associated with less spending,[29] more recent research[30] finds that legislative term limits are associated with *more* spending (particularly pork-barrel spending). On the other hand, gubernatorial term limits have been associated with less spending since the 1970s,[31] while the same limits were associated with more spending prior to the 1970s. The expectation that term limits would make policymakers more accountable for fiscal outcomes is a reasonable hypothesis, but the empirical evidence is mixed.

LINKS

1. http://mercatus.org/publication/state-and-local-governments-outpace-growth-private-sector
2. http://mercatus.org/publication/state-spending-restraint
3. http://mercatus.org/publication/state-fiscal-crises-states-abilities-withstand-recessions
4. http://mercatus.org/publication/institutions-and-state-spending-overview
5. http://mercatus.org/publication/making-budget-rules-bite
6. http://mercatus.org/publication/institutions-and-state-spending-overview
7. http://www.jstor.org/stable/3217387?seq=1#page_scan_tab_contents
8. http://www.press.umich.edu/16580/volatile_states
9. http://www.nber.org/papers/w5533
10. http://press.uchicago.edu/ucp/books/book/chicago/R/bo5509178.html
11. http://www.press.umich.edu/16580/volatile_states
12. http://mercatus.org/publication/state-budget-gaps-and-state-budget-growth
13. http://www.jstor.org/stable/3217387?seq=1#page_scan_tab_contents
14. http://www.sciencedirect.com/science/article/pii/S0047272799000821
15. http://heinonline.org/HOL/LandingPage?handle=hein.journals/wmlr31&div=41&id=&page=
16. http://mercatus.org/publication/principles-privilege-free-tax-system-applications-state-nebraska
17. http://mercatus.org/publication/institutions-and-state-spending-overview
18. http://www.sciencedirect.com/science/article/pii/s0047272797000637
19. http://mercatus.org/publication/state-fiscal-policy-separate-taxing-and-spending-committees
20. http://pfr.sagepub.com/content/33/4/439.abstract
21. http://mercatus.org/publication/state-fiscal-crises-states-abilities-withstand-recessions
22. http://mercatus.org/publication/institutions-and-state-spending-overview
23. http://link.springer.com/article/10.1007/s10602-012-9119-2
24. http://www.jstor.org/stable/725688?seq=1#page_scan_tab_contents
25. http://onlinelibrary.wiley.com/doi/10.1111/j.1465-7295.1995.tb01870.x/abstract
26. http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=1405176&fileId=S0003055407070566

27. http://pfr.sagepub.com/content/28/3/210.abstract

28. http://link.springer.com/article/10.1007/BF00138166

29. http://object.cato.org/sites/cato.org/files/serials/files/cato-journal/2000/11/cj20n2-7.pdf

30. http://ftp.iza.org/dp6456.pdf

31. http://www.jstor.org/discover/10.2307/3217387?sid=21105853000451&uid=3739832&uid=2&uid=4&uid=3739256

CONTACT

Sam Pfister, 703-993-9692, spfister@mercatus.gmu.edu
Mercatus Center at George Mason University
3434 Washington Blvd., 4th Floor, Arlington, VA 22201
www.mercatus.org

ABOUT THE MERCATUS CENTER

The Mercatus Center at George Mason University is the world's premier university source for market-oriented ideas—bridging the gap between academic ideas and real-world problems.

A university-based research center, Mercatus advances knowledge about how markets work to improve people's lives by training graduate students, conducting research, and applying economics to offer solutions to society's most pressing problems.

Our mission is to generate knowledge and understanding of the institutions that affect the freedom to prosper and to find sustainable solutions that overcome the barriers preventing individuals from living free, prosperous, and peaceful lives.

Founded in 1980, the Mercatus Center is located on George Mason University's Arlington and Fairfax campuses.
www.mercatus.org

A House Divided against Itself Cannot Spend (as Much)

The Fiscal Effect of Separate Taxing and Spending Committees in State Legislatures

Matthew D. Mitchell and
Pavel A. Yakovlev

May 2015

MERCATUS WORKING PAPER

MERCATUS CENTER
George Mason University

3434 Washington Blvd., 4th Floor, Arlington, Virginia 22201
www.mercatus.org

Matthew D. Mitchell and Pavel A. Yakovlev. "A House Divided against Itself Cannot Spend (as Much): The Fiscal Effect of Separate Taxing and Spending Committees in State Legislatures." Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, May 2015.

Abstract

In recent years, a raft of studies has examined the effect of various institutions on state fiscal outcomes, especially per capita spending. A review of the literature reveals that one institution has an especially large effect on government spending: states with separate legislative committees overseeing taxing and spending legislation spend significantly less than states without separate committees. The size of this effect was found to be an order of magnitude larger than that of any other institution. Despite this large effect, separate committees are one of the least studied state institutions. We found only one peer-reviewed study of separate taxing and spending committees, and it was based on data from a relatively short time period in the 1980s. We offer the first formal theoretical model of the institution, emphasizing the important role that transaction costs play in political logrolls. We empirically test the model, improving on the previous test with a longer panel (spanning 40 years), a larger set of controls, separate tests on different measures of fiscal policy, and tests to learn whether it makes a difference if taxing and spending committees are separate in one or both legislative chambers. Controlling for other factors, we find that states with separate taxing and spending committees spend between $300 and $450 less per capita than states without separate committees. Having these functions separate in one chamber seems to have a larger effect than having them separate in both chambers. Moreover, the pattern does not hold for all subcategories of state spending.

JEL codes: H11, H72, H75, H76

Keywords: institutions, state spending, public choice, legislative committees, legislative logroll, political transactions costs

Author Affiliation and Contact Information

Matthew D. Mitchell
Senior Research Fellow
Mercatus Center at George Mason University
mmitchell@mercatus.gmu.edu

Pavel A. Yakovlev
Associate Professor of Economics
Duquesne University
yakovlevp@duq.edu

A House Divided against Itself Cannot Spend (as Much)

The Fiscal Effect of Separate Taxing and Spending Committees in State Legislatures

Matthew D. Mitchell and Pavel A. Yakovlev

I. State Spending and Fiscal Institutions

As state governments have expanded in both size and scope, policymakers have adopted several fiscal institutions explicitly designed to rein in spending and minimize fiscal pressure. The earliest of these institutions were adopted in the wake of the fiscal crises of the late 1830s and were intended to limit state debt accumulation (Ratchford 1941, 121; Rodden 2006, 145). More modern institutional limits on state spending were adopted in the 1970s, beginning with New Jersey's adoption of a tax and expenditure limit (TEL) in 1976 and gaining momentum after California's adoption of Proposition 13 in 1978 and Colorado's Taxpayer Bill of Rights in 1992 (Bails and Tieslau 2000).

In recent decades, academic interest in institutions that might affect state spending has also grown. This interest has been fueled, in part, by a newfound theoretical appreciation for institutions as those "humanly devised constraints that shape human interaction" (North 1990a, 3). This interest has also been fueled by greater availability of panel data and newer techniques with which to analyze such data. A number of institutions have been studied, including term limits (Erler 2007), direct democracy (Matsusaka 2008), biennial budgeting (Crain 2003), baseline budgeting (Crain and Crain 1998), tax and expenditure limits (Mitchell 2010; Zycher 2013), certain varieties of vetoes (Besley and Case 2003), various balanced budget requirements (Primo 2007), supermajority requirements for tax increases (Crain 2003), "citizen" legislatures in which legislating is a part-time job (Owings and Borck 2000), government shutdown procedures in the event of a budgetary impasse (Primo 2007), and even legislature size (Chen and Malhotra 2007).

Besley and Case (2003) offer an overview of institutions and state policy outcomes, whereas Mitchell and Tuszynski (2012) review studies that specifically focus on the effect of institutions on state spending. Figure 1 (page 28), adapted from Mitchell and Tuszynski (2012), suggests that state institutions differ widely in their effect on per capita state spending. It also shows that among these institutions, one stands out. Crain and Muris's (1995) study found that those states in which separate committees have jurisdiction over taxing and spending decisions seem to spend significantly less than those in which one committee has jurisdiction over both issues. By their estimate, this institution of separate committees has an effect on per capita spending that is more than twice as large as an item reduction veto (the second-largest effect) and more than 12 times as large as the effects of other institutions surveyed by Mitchell and Tuszynski (2012) and commonly advocated as ways to rein in spending.

Although the estimated fiscal effect of separate taxing and spending committees is economically significant, this institution remains among the least studied. Whereas balanced budget requirements, supermajority requirements for tax increases, and TELs have each been analyzed extensively, separate taxing and spending committees have, to our knowledge, been studied only once, by Crain and Muris (1995). This research gap is unfortunate because, in many cases, subsequent analysis has yielded a more nuanced understanding of the way that institutions affect policy. TELs, for example, arrest state spending only in certain circumstances or when designed in certain ways (Mitchell 2010). In some cases, subsequent analysis has completely overturned previous understanding. Erler (2007), for example, finds that legislative term limits are associated with higher per capita spending whereas earlier estimates by Bails and Tieslau (2000) indicated that they were associated with lower per capita spending. More recently, Yakovlev, Tosun, and Lewis (2012) explore the fiscal effect of binding legislative term limits

and find that term limit stringency increases state government spending primarily through higher transfers to local governments. Similarly, more recent data may tell a more nuanced story on the fiscal effect of separate taxing and spending committees.

Crain and Muris's (1995) analysis is two decades old and is based on data from a six-year period in the 1980s. We improve on their study in a number of ways. First, we offer the first theoretical model of the institution, emphasizing the role that political transaction costs play in disrupting legislative logrolls. Second, we test the model with a longer and more up-to-date panel dataset, which includes a wider array of institutional and demographic factors as control variables. We also test to learn whether a difference occurs if these functions are separate in both legislative chambers or in just one. Finally, we evaluate the effect of the institution on several fiscal measures: general spending per capita, general revenue per capita, and five subcategories of state government spending.

In the next section, we offer further context for the institution. In section III, we develop a simple theoretical model. In section IV, we present the results of our data analysis, and in section V, we offer concluding remarks.

II. Political Transaction Costs and Separate Taxing and Spending Committees

A mutually beneficial exchange is costly. Beyond the price that a buyer agrees to pay a seller, both the buyer and the seller incur economic transaction costs that include the cost of searching for and acquiring information about one another and their respective products, the cost of bargaining with one another, and the cost of enforcing whatever agreement is struck. The subfield known as *transaction cost economics* (Williamson 1979; 1985; 1991) analyzes how different institutional arrangements affect those costs.

Beginning with North (1990b) and Dixit (1998), a number of authors have awakened political and economic theorists to the notion of *political transaction costs*. Like economic transaction cost models, political transaction cost models emphasize the costs associated with entering into an exchange. In this case, however, the focus is on political exchange rather than on economic exchange. Whereas North (1990b) and Dixit (1998) studied exchange among citizens and politicians, others have examined agreements or logrolls between politicians (Weingast and Marshall 1988; Epstein and O'Halloran 1999; Johnson and Libecap 2003; Spiller and Tommasi 2003). A frequent argument is that political transaction costs are likely to be substantially larger than economic transaction costs. First, political transactions typically involve agreements between more than two parties (Dixit 1998, 48). Second, these exchanges are often more vague, thereby allowing more room for interpretation (Dixit 1998, 49). Finally, these agreements involve significant commitment problems because "parties holding political power cannot make commitments to bind their future actions because there is no outside agency with the coercive capacity to enforce such agreements" (Acemoglu 2003, 620).

A number of political transaction cost models have focused on logrolls between legislators with different spending priorities (Weingast and Marshall 1988; Congleton and Tollison 1999; Johnson and Libecap 2003). In these models, one group of legislators agrees to vote for spending that benefits another group in exchange for the latter's support for the former's priorities. Typically, authors working in this literature have implicitly assumed that the power to appropriate funds to a particular end is commensurate with the power to raise those funds initially.

In some cases, this assumption is true. In South Carolina, for example, the House Ways and Means Committee crafts both revenue and appropriations bills, and the Senate Finance Committee does the same. In a number of states, however, these functions reside in separate

committees in each house. In Colorado, for example, the House and Senate Finance Committees put together revenue bills while separate Appropriations Committees develop legislation to allocate this money. In still other states, such as New Mexico, separate committees oversee these functions in one chamber (the House), while a single committee oversees them in the other chamber (the Senate). Consulting local officials, state statutes, and legislative websites, we have developed an original dataset that accounts for these arrangements.[1] Figure 2 (page 29) shows the current arrangement in all 50 states.

In seven states, these functions are separate in one chamber only, whereas in 25 other states, they are separate in both chambers. Sometimes the separation of these functions is effectuated through formal rules. In North Dakota, for example, House and Senate Rules specify the powers granted to the Appropriations Committees and do not include the power to raise revenue (North Dakota Legislative Assembly 2013). In Tennessee, in contrast, formal rules codify the union of these powers in one committee (Office of the Chief Clerk of the Senate 2013). Tennessee Senate Rules state that the Committee on Finance, Ways, and Means shall have responsibility for crafting all bills related to 10 areas, including the following:

> All measures relating to taxes and the raising of revenue . . . Expenditure of funds . . . All measures dealing with the appropriation of state funds . . . General appropriations bills . . . Assessment and collection of property taxes. (Office of the Chief Clerk of the Senate 2013, 24).[2]

In many states, however, the de facto separation of these powers into separate committees or the de facto union in one committee is achieved by informal norms and practices rather than by formal de jure rules. In the Idaho House, for example, where the Revenue and Taxation

[1] See section IV of this paper for more details.

[2] In the House in Tennessee, the procedures are slightly less formal. That chamber has a similarly named House Committee on Finance, Ways, and Means. In practice, this committee has jurisdiction over both revenue raising and appropriations, and no other standing committees deal with either type of legislation. However, the House rules fail to explicitly name the respective jurisdictions of committees.

Committee is typically responsible for crafting bills to raise revenue and the Appropriations Committee is responsible for writing bills that spend the revenue, the formal House Rules say nothing about these de facto powers (State of Idaho Legislature 2014).

A number of new institutional economists have emphasized the importance of both formal and informal institutions. North (1990a, 4), for example, argues that "institutions include any form of constraint that human beings devise to shape human interaction" and emphasizes that these can be both "formal constraints" and "informal constraints—such as conventions and codes of behavior." Similarly, new institutional economist Avner Greif (2006, 30) defines an *institution* as a "system of social factors that conjointly generate a regularity of behavior" and is at pains to be clear that these factors include rules, beliefs, norms, and organizations. Yet despite the theoretical importance of informal as well as formal rules, most empirical institutional work tends to neglect the informal aspect (Shirley 2005).

In our empirical analysis of state committee powers (section IV of this paper), we account for both the formal and the informal separation of spending and taxing functions. In the next section, we present a stylized theoretical model of the institution.

III. Theoretical Model

Our model is a modified version of Meltzer and Richard's (1981; 1983) classic model of the size of government. It begins with the following assumptions:

1. Let the fraction of time that i spends in leisure be $l_i = 1 - n_i$, where n_i is the fraction of time i spends at work.
2. Let i's income be $y_i = n_i x_i$, where x_i is i's productivity.

3. Let i's consumption be $c_i = (1-t)y_i + g_i$, where $(1-t)y_i$ is after-tax private consumption, t is a flat tax rate, and g_i is i's share of public spending.
4. Let total government spending be $G = tH\bar{y} = tH\bar{n}\bar{x}$, where H is the size of the population and the bars indicate that these are mean values for the population's income, $\bar{y}$;; fraction of time worked, $\bar{n}$; and productivity, $\bar{x}$.
5. Let i's share of government public spending be $g_i = \frac{G}{H^{\gamma}}$, where γ measures the degree of rivalry in public spending, so that $\gamma = 0$ indicates that public spending is completely nonrival and $\gamma = 1$ indicates it is completely rival.
6. Let i's utility be quasi-linear in leisure and take the form $U_i = c_i + \beta_i \ln(l_i)$.

Taxes reduce after-tax private consumption but fund an individual's share of public spending. Because of the labor–leisure tradeoff, some revenue-maximizing tax rate is less than 1. The first task of the tax writer is to understand the relationship between tax rates and average hours worked. If one makes the appropriate substitutions, a representative individual's utility function can be written as equation 1:

$$U_i = (1-t)n_i x_i + g_i + \beta_i \ln(1-n_i). \quad (1)$$

Though g_i is a function of the average fraction of time worked, $\bar{n}$, the individual can do little to affect this. All the individual can choose is his or her own fraction of hours worked. Taking the derivative of equation 1 with respect to n_i, setting it equal to 0, and solving for n_i yields $n_i = 1 - \frac{\beta_i}{(1-t)x_i}$. This equation is the individual's labor supply function. It says that the fraction of hours an individual works is a positive function of his or her ability, x_i, but a negative function of the tax rate, t, and his or her marginal value of leisure, β_i. If the average taxpayer has the same labor supply function, we can rewrite this as equation 2, where the bars indicate that these are average values:

$$\bar{n} = 1 - \frac{\bar{\beta}}{(1-t)\bar{x}}. \quad (2)$$

We can now define government spending in terms of this average labor supply function:

$$G = tH\bar{n}\bar{x} = tH\bar{x} - \frac{tH\bar{\beta}}{(1-t)}. \quad (3)$$

This equation tells the tax writer that at low levels of t, a marginal increase in the tax rate increases revenue, but at high levels of t, a marginal tax increase decreases revenue. The revenue-maximizing tax rate, found by taking the first-order condition, is

$$t_{max} = 1 - \sqrt{\frac{\bar{\beta}}{\bar{x}}}. \quad (4)$$

A. A Committee with Both Spending and Taxing Authority

We next consider the case of a direct democracy in which one legislative committee (a subset of the entire population) possesses both taxing and spending authority. This spending and taxing committee (STC) is capable of steering all rivalrous spending toward a subset of the population, *and* it is capable of setting its own tax rate. Though the committee members can steer spending to whomever they wish, whatever proposal they develop must still pass the full legislature if it is to become law. So in the extreme case, the STC will form a minimum winning coalition of size $\frac{H+1}{2}$ and distribute rivalrous public spending toward members of this coalition (Buchanan and Tullock 1962; Riker and Ordeshook 1973; Riker 1984).[3] The STC funds this spending with a flat income tax that is paid by the entire population. In this case, we can define the share of public spending allocated to a member of the STC:

[3] This assumption is stylized. A number of authors (Weingast 1979; Collie 1988; Groseclose and Snyder 1996) have noted that coalitions are often significantly larger than the minimum necessary to win. Thus, one should think of our minimum winning coalition as an extreme bound.

$$g_{STC} = \frac{G}{\left(\frac{H+1}{2}\right)^{\gamma}} = \frac{tH\bar{n}\bar{x}}{\left(\frac{H+1}{2}\right)^{\gamma}}. \quad (5)$$

If spending is completely rival ($\gamma = 1$), then the coalition member's share of spending is equal to total spending, divided by the number of members of the minimum winning coalition (with whom he or she must share that rival spending). However, if spending is completely nonrival ($\gamma = 0$), then his or her share of spending is simply the entire government spending bill.

Now we substitute equation 2, the average fraction of hours worked, into equation 5, so that one's share of government spending can be written in terms of the tax rate:

$$g_{STC} = \frac{tH\bar{x}}{\left(\frac{H+1}{2}\right)^{\gamma}} - \frac{tH\bar{\beta}}{\left(\frac{H+1}{2}\right)^{\gamma}(1-t)}. \quad (6)$$

Now we consider the utility of the STC committee member:

$$U_{STC} = (1-t)y_{STC} + \frac{tH\bar{x}}{\left(\frac{H+1}{2}\right)^{\gamma}} - \frac{tH\bar{\beta}}{\left(\frac{H+1}{2}\right)^{\gamma}(1-t)} + \beta \ln(1-n_{STC}). \quad (7)$$

This member will select the utility-maximizing tax rate:

$$t^*_{STC} = 1 - \sqrt{\frac{\bar{\beta}}{x - y_{STC}\frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H}}}. \quad (8)$$

By substituting this tax rate and the labor supply function of equation 2 into the equation for total government spending, $G = tH\bar{n}\bar{x}$, we arrive at an equation for total government spending when one committee has the authority to both allocate rival spending and set the tax rate:

$$G^*_{STC} = \left(1 - \sqrt{\frac{\bar{\beta}}{\bar{x} - y_{STC}\frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H}}}\right) H \left(\bar{x} - \frac{\bar{\beta}}{\sqrt{\frac{\bar{\beta}}{\bar{x} - y_{STC}\frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H}}}}\right). \quad (9)$$

B. Separate Spending and Taxing Committees

In the previously described scenario, STC members are able to set the tax rate and allocate rival spending in whatever way they please. Now we consider an alternative institutional arrangement in which one set of legislators on a spending committee (SC) allocates rival spending, while members of a taxing committee (TC) set the tax rate. If transaction costs are minimal, then the members of these separate committees can easily logroll; SC members can ensure that TC members are part of the minimum winning coalition that obtains the rival spending.[4] In this case, separating these two legislative powers does not change the outcome. Total government spending will be equal to equation 9.

As the discussion in the previous section suggests, however, the assumption of zero transaction costs may be unrealistic. Because no court will enforce a logrolling agreement, TC members have no assurance that SC members will cut them in on the deal and allocate them their promised share of rival spending. And if no member simultaneously sits on both committees, then no official forum exists in which logrolling packages can be assembled. Thus, all deals must be struck behind closed doors and therefore are not easily monitored.

With transaction costs in mind, we consider the extreme case in which TC members believe that they have absolutely no reason to expect that SC members will allocate them their promised share of rival spending. In this case, SC members will continue to allocate rival spending to a minimum winning spending coalition of size $\frac{H+1}{2}$. But TC members will select the optimal tax rate by figuring the probability that they will be selected as members of the minimum winning coalition that will eventually pass the spending bill. If each member of the legislature

[4] In assumption 6, i's utility is quasi-linear in leisure and takes the form $U_i = c_i + \beta_i \ln(l_i)$. Hence, preferences are not lexicographic, and individuals are willing to make tradeoffs.

has an equal chance of being selected for the minimum winning coalition, then the probability that any one member will be in the coalition is equal to the size of the coalition, divided by the size of the legislature, $\frac{\frac{H+1}{2}}{H}$. Thus, the TC member's expectation of benefiting from government spending is $\left(\frac{\frac{H+1}{2}}{H}\right)^{\gamma}$. Note that if the good is completely rival ($\gamma = 1$), this is equal to the probability that a TC member will be selected as a member of the coalition, whereas if the good is completely nonrival ($\gamma = 0$), this is simply equal to 1, because even those outside the coalition may consume the good.

Therefore, the TC member's *expected* share of government spending will be

$$g_{TC}^{e} = \left(\frac{\frac{H+1}{2}}{H}\right)^{\gamma} \frac{G}{\left(\frac{H+1}{2}\right)^{\gamma}} = \left(\frac{\frac{H+1}{2}}{H}\right)^{\gamma} \frac{tH\bar{n}\bar{x}}{\left(\frac{H+1}{2}\right)^{\gamma}}$$

$$= \frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H^{\gamma}} \frac{tH\bar{n}\bar{x}}{\left(\frac{H+1}{2}\right)^{\gamma}} = \frac{tH\bar{n}\bar{x}}{H^{\gamma}}. \quad (10)$$

Substituting equation 2 for the average fraction of time worked and simplifying this equation results in the following:

$$g_{TC}^{e} = \frac{tH\bar{x}}{H^{\gamma}} - \frac{tH\overline{\beta}}{H^{\gamma}(1-t)}. \quad (11)$$

Now we consider the utility of a TC member:

$$U_{TC} = (1-t)y_{TC} + g_{TC}^{e} + \beta \ln(1 - n_{TC}). \quad (12)$$

Substituting equation 11 into equation 12, we obtain equation 13:

$$U_{TC} = (1-t)y_{TC} + \frac{tH\bar{x}}{H^{\gamma}} - \frac{tH\overline{\beta}}{H^{\gamma}(1-t)} + \beta \ln(1 - n_{TC}). \quad (13)$$

The TC member selects the tax rate that maximizes his or her utility:

$$\frac{\partial U_{TC}}{\partial t} = -y_{TC} + \frac{H\bar{x}}{H^{\gamma}} - \frac{H\overline{\beta}H^{\gamma}(1-t) - tH\overline{\beta}(-H^{\gamma})}{\left(H^{\gamma}(1-t)\right)^{2}} = 0. \quad (14)$$

This equation simplifies to equation 15:

$$t_{TC}^{*} = 1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{TC}\frac{H^{\gamma}}{H}}}. \tag{15}$$

We compare this tax rate with that selected by the committee with both taxing and spending powers, t_{STC}^{*}, equation 8. If we assume $y_{TC} \sim y_{STC}$ (and there is no obvious reason why incomes would be systematically different), then we obtain the following inequality:

$$1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{TC}\frac{H^{\gamma}}{H}}} \leq 1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{STC}\frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H}}}$$

$$t_{TC}^{*} \leq t_{STC}^{*}. \tag{16}$$

In the presence of large transaction costs, the tax rate selected by the committee with only taxing authority, t_{TC}^{*}, will be less than or equal to that selected by the committee with both taxing and spending authority, t_{STC}^{*}. In the limiting case of a pure public good, when $\gamma = 0$, the two tax rates are equal.

By substituting this tax rate and the labor supply function of equation 2 into the equation for total government spending, $G = tH\bar{n}\bar{x}$, we can now write an equation for total government spending when the tax-writing committee lacks the power to allocate rival spending:

$$G_{TC}^{*} = \left(1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{TC}\frac{H^{\gamma}}{H}}}\right) H \left(\bar{x} - \frac{\overline{\beta}}{\sqrt{\frac{\overline{\beta}}{\bar{x} - y_{TC}\frac{H^{\gamma}}{H}}}}\right). \tag{17}$$

We know that $t_{TC}^{*} \leq t_{STC}^{*}$, so the question is whether G_{TC}^{*} is greater than or smaller than G_{STC}^{*}. The higher tax rate set by the STC will cause laborers to work less, so the net effect depends on whether or not these taxes are below the apex of the Laffer Curve. Recall from equation 4 that the apex of the Laffer Curve is at $t_{max} = 1 - \sqrt{\frac{\overline{\beta}}{\bar{x}}}$. Clearly,

$t^*_{STC} = 1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{STC}\frac{\left(\frac{H+1}{2}\right)^{\gamma}}{H}}}$ and $t^*_{TC} = 1 - \sqrt{\frac{\overline{\beta}}{\bar{x} - y_{TC}\frac{H^{\gamma}}{H}}}$ are both below the revenue-maximizing tax rate, so we know that the higher tax rate selected by the STC will generate more revenue and spending than the tax rate selected by the TC.

The model offers two clear theoretical predictions. First, in the presence of transaction costs, those legislative bodies with separate taxing and spending committees will spend less on rival public spending than those with combined committees. Second, even if political transaction costs are significant, legislatures with separate taxing and spending committees will spend the same amount on nonrival goods as legislatures with combined committees. Because state government spending consists of both rival and nonrival categories, we expect total spending and total revenue to be lower in states with separate taxing and spending committees primarily as a result of lower rival expenditures.

IV. Empirical Investigation

A. Models and Data Description

To test these theoretical predictions, we surveyed state legislative bodies to create two dummy variables. The first, *separate committees in one chamber*, takes the value 1 only if one of the state's two legislative chambers has separate committees with jurisdiction over spending and taxing bills. The variable takes the value 0 otherwise. The second variable, *separate committees in both chambers*, takes the value 1 if both of the state's legislative chambers have separate committees with jurisdiction over spending and taxing bills; otherwise, it takes the value 0. This information was gathered from phone interviews with legislative committee members and their staff members. We then cross-checked the data against state legislative rules and committee

websites. To create a panel dataset, we asked respondents about past committee jurisdictions. In some cases, the historical record was clear enough to answer with certainty. In other cases, however, historical knowledge had a shorter timeline, which limited the length of the panel for some states. The resulting dataset is an unbalanced panel of 47 states from 1970 to 2010 (owing to uncertainty, some states have shorter time spans). Because these arrangements are dictated by longstanding formal and informal rules, we believe that reverse causality is a minimal concern.

We regressed seven measures of state fiscal policy on both of these dummy variables and a series of controls. The first two dependent variables—state general expenditures per capita and state general revenue per capita—gauge the institutions' relationship with the overall size of government. The remaining five—health care expenditures per capita, education expenditures per capita, highway and infrastructure expenditures per capita, welfare expenditures per capita, and local government aid per capita—gauge the institutions' relationship with particular categories of spending. All expenditure data were gathered from the US Census (US Census Bureau 2014a, 2014c).

All models are estimated using OLS (ordinary least squares) with Driscoll and Kraay (1998) standard errors that are robust to general forms of heteroskedasticity, autocorrelation, and spatial correlation. Exploiting institutional variation across time, we use a two-way fixed-effect model that controls for time and state fixed effects. We also use three vectors of controls that respectively account for demographic, economic, and politico-institutional differences that might affect state fiscal outcomes. Thus, for each of the seven fiscal outcomes, we estimate the following:

$$\begin{aligned} Fiscal\ Outcome_{i,t} = \alpha &+ \delta_1 Separate\ Committees\ in\ One\ Chamber_{i,t} \\ &+ \delta_2 Separate\ Committees\ in\ Both\ Chambers_{i,t} \\ &+ \mathbf{X_{i,t}\beta_1} + \mathbf{Z_{i,t}\beta_2} + \mathbf{\Theta_{i,t}\beta_3} + \mathbf{\Gamma_{i-1}} + \mathbf{\Pi_{t-1}} + \varepsilon_{i,t}. \end{aligned} \quad (18)$$

Subscripts $i = 1, \ldots, 47$ and $t = 1970, \ldots, 2010$ denote the state and year, respectively. The vector $\boldsymbol{\Gamma_{i-1}}$ is a set of all but one state dummies, the vector $\boldsymbol{\Pi_{t-1}}$ is a set of all but one year dummies, α is the *y*-intercept, and $\varepsilon_{i,t}$ is a random disturbance term. The vector $\mathbf{X_{i,t}}$ includes demographic factors known from previous studies to be significant determinants of state fiscal variables. It includes the natural logarithm of state population, the percentage of the population that is Caucasian, and the percentage of the population over 65 years of age (National Cancer Institute 2015).

The vector $\mathbf{Z_{i,t}}$ contains economic variables known to affect state fiscal outcomes. It includes real gross state product per capita (Bureau of Economic Analysis 2014), the unemployment rate (US Bureau of Labor Statistics 2014), federal aid to the state per capita (US Census Bureau 2014c), and percentage of revenue resulting from severance taxation (US Census Bureau 2014d).

The vector $\boldsymbol{\Theta_{i,t}}$ contains six politico-institutional variables known to affect fiscal policy. First, it includes Berry et al.'s (1998; 2012) measure of citizen ideology (higher values indicate more liberal states). Second, it includes an indicator variable that equals 1 if state i has lifetime term limits in year t and 0 otherwise. Third, to capture the varying stringency of term limits across states, it includes an index that is equal to the reciprocal of the term limit length in years so that shorter term limits, which are considered more stringent, cause the variable to take on a greater value. Fourth, it includes the Tax and Expenditure Limit index constructed by Amiel, Deller, and Stallmann (2009), in which greater values indicate stricter limits. Fifth, it includes a lame duck governor indicator variable (Klarner 2013a). This variable takes the value 1 if the governor is in his or her last term before being term limited and 0 otherwise. And sixth, it includes a divided

government indicator variable (Klarner 2013b).[5] This variable takes the value 1 if both chambers of the legislature and the executive branch are not controlled by the same party and 0 otherwise. Table 1 (page 30) describes each of the variables used and presents their descriptive statistics.

Previous studies have found the demographic, economic, and politico-institutional factors included in the vectors $\mathbf{X}_{i,t}$, $\mathbf{Z}_{i,t}$, and $\mathbf{\Theta}_{i,t}$ to be significant determinants of state fiscal variables (see, for example, Crain 2003, Erler 2007, and Besley and Case 2003).

B. Results

Table 2 (page 31) presents the results of a series of regressions using real per capita state expenditures as the dependent variable. In every specification, the estimated coefficient on *separate committees in one chamber* is negative and statistically significant at the 1 percent level. The magnitude of these estimates is quite large, suggesting that the institution is also economically significant. Moreover, the result is robust to the inclusion and exclusion of control variables.[6] Other factors being equal, we find that those states in which one chamber of the legislature has separate committees that oversee taxing and spending legislation spend between $300 and $450 less per capita than other states do. In other words, states with this institutional feature spend between 9 and 13 percent less per capita than does the average state. Though our estimated effect is not as large as that found by Crain and Muris (1995), if one compares it to the other estimates reported in figure 1, the effect is clearly larger than that of almost any other institution previously studied.

[5] As a result, Nebraska, with its unicameral legislature and missing divided government data, is omitted from our analysis. Following standard practice, we also omit Alaska and Hawaii because of their unusual fiscal characteristics.

[6] We ran a number of robustness checks that are not reported. In one set of regressions, we used panel-corrected standard errors, which assume that the disturbances are heteroskedastic and contemporaneously autocorrelated. The estimated effect of *separate committees in one chamber* on general expenditures per capita remained statistically significant and did not change much in magnitude. In another set of tests, we clustered the robust standard errors on states. Again, the results did not change.

Table 2 also shows that those states with separate taxing and spending committees in both chambers spend statistically significantly less per capita. In three of the four specifications, the estimated effect of *separate committees in both chambers* is slightly smaller than that of *separate committees in one chamber*. This finding suggests that most of the expenditure-reducing effect of having separate taxing and spending committees is achieved when just one chamber separates these functions. Again, these results are robust to various specifications.[7]

Though they are not our primary focus, the estimated effects of our control variables are worth noting. Two of the three demographic control variables obtain statistical significance in predicting per capita expenditures. First, more populated states tend to spend less per capita, which suggests that there are economies of scale in state spending. Second, states with a larger population over age 65 spend more per capita, which is consistent with the theory that this portion of the population relies more heavily on government services. In our tests, the estimated effect of *percentage that is Caucasian* is consistently negative but never obtains standard statistical significance.

Three of our four economic control variables obtain statistical significance in the per capita expenditure regressions. In particular, states with higher per capita gross domestic product, more federal aid per capita, and a greater share of revenue from severance taxes tend to spend more per capita. Though the estimated effect of the unemployment rate is consistently positive, it does not obtain statistical significance in any of these tests.

Among the six politico-institutional control variables in our tests, three are statistically significant in predicting per capita expenditures. According to our estimates, states with lifetime and longer (less stringent) legislative term limits spend more per capita. This finding suggests

[7] Nor do they change when we use panel-corrected standard errors or cluster the robust standard errors on states. The unreported results are available from the authors on request.

that nonlifetime term limits with shorter terms may restrain state spending. The estimated magnitude suggests that a one standard deviation increase in the stringency of the term limit is associated with $48 less in per capita expenditures. We also find that states with politically divided governments spend about $52 more per capita than other states. Three politico-institutional factors were statistically insignificant. Though a more liberal citizenry is positively related to per capita spending, the effect is not statistically significant. Tax and expenditure limits and lame duck governors are both negatively related to per capita expenditures, but neither effect is statistically significant.

Table 3 (page 32) presents the results when real general state revenue per capita is the dependent variable. States with separate taxing and spending committees in one chamber are found to collect between $100 and $350 less per capita in revenue. The effect is statistically significant at the 1 percent level and robust to various specifications.[8] The estimated effect of *separate committees in both chambers* is found to be statistically significant in only two regressions and changes signs in one (statistically insignificant) specification. Thus, most of the revenue-reducing effect of separate committees is achieved when just one chamber separates these functions. With one exception, the effects of the remaining explanatory variables in the general revenue regressions are comparable to those found in the general expenditures tests. The exception is the estimated effect of more stringent tax and expenditure limits. Interestingly, more stringent limits are found to *positively* correlate with general revenue per capita.

Table 4 (page 33) presents the results for the five main components of state government spending. Interestingly, the expenditure-reducing effect of having separate taxing and spending

[8] In three of four specifications with panel-corrected standard errors, the estimated effect was statistically significant and comparable in magnitude. In all four specifications with robust clustered errors on states, the estimated effect was statistically significant. These results are available from the authors on request.

committees is not consistent across all subcategories of spending. Although having *separate committees in one chamber* has a negative and statistically significant relationship with health care and local aid per capita, it has a positive and statistically significant relationship with highway and infrastructure spending per capita (and no statistically significant relationship with education and welfare spending per capita). A somewhat similar pattern is evident with *separate committees in both chambers*: it has a negative and statistically significant effect on health care and welfare spending per capita, but a positive and statistically significant effect on highway and infrastructure spending per capita (and no statistically significant effect on education and local aid per capita).

Nondiscretionary spending may be one explanation. Some subcategories of spending, such as education and welfare, may possibly be so formula driven that they are largely unaffected by discretionary logrolling among legislators. However, the theoretical model of section III of this paper suggests another explanation. The model predicts that separate taxing and spending committees will spend less than unified committees on rival goods but will spend the same amount on nonrival goods. We note that those states with separate committees in either one or both chambers spend statistically significantly less on three subcategories: health care, welfare, and local aid expenditures per capita. Each of these goods is rival; when one constituent consumes it, another may not. Now we note that states with separate committees in one and both chambers spend statistically significantly more on highway and infrastructure spending per capita. This may be the least rival subcategory: one constituent's consumption of these services does not inhibit that of another. That states with separate committees spend *more* on this category rather than the same amount as states with combined committees is a somewhat mysterious finding. When legislators are unable to concentrate spending on rival goods, they may be more likely to substitute into nonrival public goods.

V. Conclusion

When James Buchanan won the Nobel Prize in economics, he was asked to summarize the central insight of public choice economics. Reportedly, he replied simply: "Don't let the fox guard the chicken coop." This idea—also evident in Juvenal's rhetorical question, "*Quis custodiet ipsos custodes?*"—is the motivation behind a number of institutional checks and balances adopted by states over the years. Some of these institutions—such as balanced budget rules, term limits, and tax and expenditure limits—have been the subject of extensive political and academic analysis. In this paper, we explore the fiscal implications of a relatively simple but mostly ignored institution: the separation of taxing and spending authority into different legislative committees.

First, we develop a simple theoretical model of the institution. The model assumes that in the states where taxing and spending functions are combined in one committee, members of that committee will allocate public spending to a minimum winning coalition of the whole legislature. In contrast, if tax writers and appropriators serve on separate committees, and if political transaction costs are significant (Dixit 1998; Acemoglu 2003), then tax writers cannot be certain that appropriators will include them in the minimum winning coalition. In accordance with this expectation, tax writers will therefore set a lower tax rate in such a setting and total government spending will be lower than in the case where the same committee sets the tax rate and appropriates funds.

Political transaction cost models typically stress the notion that transaction costs stand in the way of efficiency-enhancing Coasean bargains (see, for example, Acemoglu 2003). Our model, by contrast, highlights the positive role that transaction costs might play in thwarting

*in*efficient legislative logrolls of the nature explored by Riker (1984) and Buchanan and Tullock (1962). In other words, what's good for the goose may not be good for the gander.

To the best of our knowledge, this institution has been studied only once before, by Crain and Muris (1995). In an effort to improve on their study, we examine a longer panel, incorporate a larger set of control variables, run separate tests on seven different dependent variables, and examine whether it matters if states have separate committees in one or both chambers.

Other factors being equal, we find that those states with separate taxing and spending committees spend between $300 and $450 less per capita (between $790 and $1,200 less per household) than other states.[9] They also raise between $100 and $350 less in per capita revenue than do other states. We find that whether spending and taxing functions are separate in both chambers or merely in one makes little difference. Interestingly, we find that the effect also varies across subcategories of state spending. The marginal effect of having separate committees in one or both houses is negative and statistically significant for health care, welfare, and local aid spending per capita but is positive and significant for highway and infrastructure spending per capita. This finding may suggest that highway and infrastructure spending is less rivalrous than these other categories.

[9] According to the latest estimates, a household has approximately 2.63 persons (US Census Bureau 2014b).

References

Acemoglu, Daron. 2003. "Why Not a Political Coase Theorem? Social Conflict, Commitment, and Politics." *Journal of Comparative Economics* 31 (4): 620–52.

Amiel, Lindsay, Steven Deller, and Judith Stallmann. 2009. "The Construction of a Tax and Expenditure Limitation Index for the US." Staff Paper 536, Department of Agricultural and Applied Economics, University of Wisconsin–Madison.

Bails, Dale, and Margie A. Tieslau. 2000. "The Impact of Fiscal Constitutions on State and Local Expenditures." *Cato Journal* 20 (2): 255–77. http://ideas.repec.org/a/cto/journl/v20y2000i2p.html.

Berry, William D., Evan J. Ringquist, Richard C. Fording, and Russel L. Hanson. 1998. "Measuring Citizen and Government Ideology in the American States, 1960–93." *American Journal of Political Science* 42 (1): 327–48.

———. 2012. "State Ideology Data." September 13. https://rcfording.wordpress.com/state-ideology-data/.

Besley, Timothy, and Anne Case. 2003. "Political Institutions and Policy Choices: Evidence from the United States." *Journal of Economic Literature* 41 (1): 7–73. doi:10.1257/002205103321544693.

Buchanan, James M., and Gordon Tullock. 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.

Bureau of Economic Analysis. 2014. "Regional Economic Accounts." October. http://www.bea.gov/regional/.

Chen, Jowei, and Neil Malhotra. 2007. "The Law of *k*/*n*: The Effect of Chamber Size on Government Spending in Bicameral Legislatures." *American Political Science Review* 101 (4): 657–76.

Collie, Melissa P. 1988. "Universalism and the Parties in the US House of Representatives, 1921–80." *American Journal of Political Science* 32 (4): 865–83.

Congleton, Roger D., and Robert D. Tollison. 1999. "The Stability Inducing Propensities of Very Unstable Coalitions: Avoiding the Downward Spiral of Majoritarian Rent-Seeking." *European Journal of Political Economy* 15 (2): 193–205. doi:10.1016/S0176-2680(99)00003-8.

Crain, W. Mark. 2003. *Volatile States: Institutions, Policy, and the Performance of American State Economies*. Ann Arbor: University of Michigan Press.

Crain, W. Mark, and Nicole Verrier Crain. 1998. "Fiscal Consequences of Budget Baselines." *Journal of Public Economics* 67 (3): 421–36. doi:10.1016/S0047-2727(97)00063-7.

Crain, W. Mark, and Timothy J. Muris. 1995. “Legislative Organization of Fiscal Policy.” *Journal of Law and Economics* 38 (2): 311–33.

Dixit, Avinash K. 1998. *The Making of Economic Policy: A Transaction-Cost Politics Perspective*. Cambridge, MA: MIT Press.

Driscoll, John C., and Aart C. Kraay. 1998. “Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data.” *Review of Economics and Statistics* 80 (4): 549–60. doi:10.1162/003465398557825.

Epstein, David, and Sharyn O’Halloran. 1999. *Delegating Powers: A Transaction Cost Politics Approach to Policy Making under Separate Powers*. New York: Cambridge University Press.

Erler, H. Abbie. 2007. “Legislative Term Limits and State Spending.” *Public Choice* 133 (3–4): 479–94. doi:10.1007/s11127-007-9209-2.

Greif, Avner. 2006. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. New York: Cambridge University Press.

Groseclose, Tim, and James M. Snyder Jr. 1996. “Buying Supermajorities.” *American Political Science Review* 90 (2): 303–15. doi:10.2307/2082886.

Johnson, Ronald N., and Gary D. Libecap. 2003. “Transaction Costs and Coalition Stability under Majority Rule.” *Economic Inquiry* 41 (2): 193–207.

Klarner, Carl. 2013a. “Governors Dataset.” *Klarner Politics, Indiana State University*. January 11. http://www.indstate.edu/polisci/klarnerpolitics.htm.

———. 2013b. “State Partisan Balance Data.” *Klarner Politics, Indiana State University*. January 11. http://www.indstate.edu/polisci/klarnerpolitics.htm.

Matsusaka, John G. 2008. *For the Many or the Few: The Initiative, Public Policy, and American Democracy*. Chicago: University of Chicago Press.

Meltzer, Allan H., and Scott F. Richard. 1981. “A Rational Theory of the Size of Government.” *Journal of Political Economy* 89 (5): 914–27.

———. 1983. “Tests of a Rational Theory of the Size of Government.” *Public Choice* 41 (3): 403–18. doi:10.1007/BF00141072.

Mitchell, Matthew. 2010. “TEL It Like It Is: Do State Tax and Expenditure Limits Actually Limit Spending?” Mercatus Working Paper 10-71, Mercatus Center, George Mason University, Arlington, VA. http://mercatus.org/sites/default/files/publication/TEL%20It%20Like%20It%20Is.Mitchell.12.6.10.pdf.

Mitchell, Matthew, and Nick Tuszynski. 2012. “Institutions and State Spending: An Overview.” *Independent Review* 17 (1): 35–49.

National Cancer Institute. 2015. “US Population Data: 1969–2013.” SEER (database). http://seer.cancer.gov/popdata/.

North, Douglass C. 1990a. *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge University Press.

———. 1990b. “A Transaction Cost Theory of Politics.” *Journal of Theoretical Politics* 2 (4): 355–67. doi:10.1177/0951692890002004001.

North Dakota Legislative Assembly. 2013. *Senate and House Legislative Manual, 2013–14, 63rd Legislative Assembly, State of North Dakota*. Bismarck: North Dakota Legislative Assembly. http://www.legis.nd.gov/files/resource/63-2013/legislative-rules/rules13a.pdf?20140115121827.

Office of the Chief Clerk of the Senate. 2013. *Temporary Rules of Order of the Senate for the One Hundred Eighth General Assembly State of Tennessee*. Nashville, TN: Office of the Chief Clerk of the Senate. http://capitol.tn.gov/senate/publications/Temp%20Rules%20Of%20Order%20108th.pdf.

Owings, Stephanie, and Rainald Borck. 2000. “Legislative Professionalism and Government Spending: Do Citizen Legislators Really Spend Less?” *Public Finance Review* 28 (3): 210–25. doi:10.1177/109114210002800304.

Primo, David M. 2007. *Rules and Restraint: Government Spending and the Design of Institutions.* Chicago: University of Chicago Press.

Ratchford, Benjamin Ulysses. 1941. *American State Debts*. Durham, NC: Duke University Press.

Riker, William H. 1984. *The Theory of Political Coalitions*. Westport, CT: Greenwood Press.

Riker, William H., and Peter C. Ordeshook. 1973. *An Introduction to Positive Political Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Rodden, Jonathan. 2006. *Hamilton’s Paradox: The Promise and Peril of Fiscal Federalism*. New York: Cambridge University Press.

Shirley, Mary. 2005. “Institutions and Development.” In *Handbook of New Institutional Economics*, edited by Claude Ménard and Mary Shirley, 611–38. Dordrecht, Netherlands: Springer.

Spiller, Pablo T., and Mariano Tommasi. 2003. “The Institutional Foundations of Public Policy: A Transactions Approach with Application to Argentina.” *Journal of Law, Economics, and Organization* 19 (2): 281–306.

State of Idaho Legislature. 2014. “House Rules.” http://legislature.idaho.gov/house/rules.htm.

US Bureau of Labor Statistics. 2014. *Unemployment Rate*. Washington, DC: U.S. Bureau of Labor Statistics.

US Census Bureau. 2014a. “Federal, State, and Local Governments: Definitions.” January 23. http://www.census.gov/govs/definitions/.

———. 2014b. “State and County QuickFacts.” December 3. http://quickfacts.census.gov/qfd/states/00000.html.

———. 2014c. “State Government Finances.” January 23. http://www.census.gov/govs/state/.

———. 2014d. “State Government Tax Collections.” October. https://www.census.gov/govs/statetax/historical_data.html.

Weingast, Barry R. 1979. “A Rational Choice Perspective on Congressional Norms.” *American Journal of Political Science* 23 (2): 245–62.

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 (1): 132–63.

Williamson, Oliver E. 1979. “Transaction-Cost Economics: The Governance of Contractual Relations.” *Journal of Law and Economics* 22 (2): 233–61.

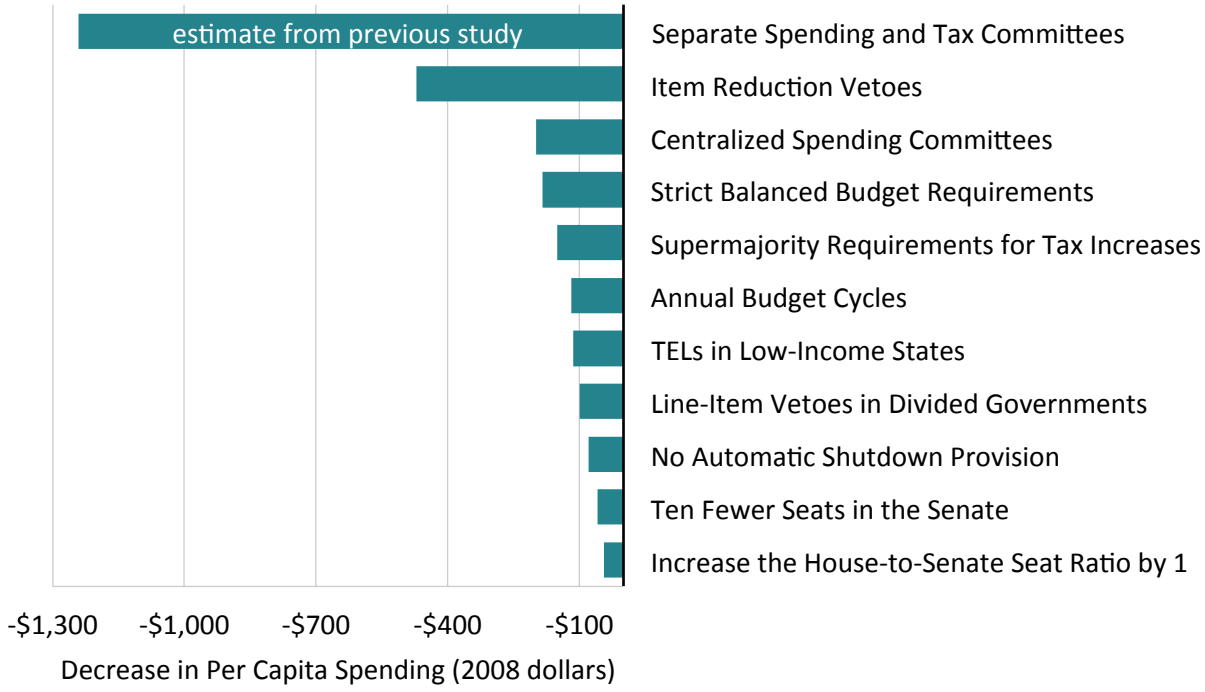
———. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.

———. 1991. “Comparative Economic Organization: The Analysis of Discrete Structural Alternatives.” *Administrative Science Quarterly* 36 (2): 269–96. doi:10.2307/2393356.

Yakovlev, Pavel A., Mehmet Serkan Tosun, and William P. Lewis. 2012. “Legislative Term Limits and State Aid to Local Governments.” IZA Discussion Paper 6456, Institute for the Study of Labor, Bonn. http://papers.ssrn.com/abstract=2039642.

Zycher, Benjamin. 2013. *State and Local Spending: Do Tax and Expenditure Limits Work?* Washington, DC: American Enterprise Institute.

Figure 1. The Marginal Effect of Institutions on Per Capita Spending



Adapted from Matthew Mitchell and Nick Tuszynski (2012), "Institutions and State Spending: An Overview," *Independent Review* 17 (1): 35–49.

Sources: W. Mark Crain and Timothy J. Muris (1995), "Legislative Organization of Fiscal Policy," *Journal of Law and Economics* 38 (2): 311–33: separate committees, centralized spending committees. W. Mark Crain (2003), *Volatile States: Institutions, Policy, and the Performance of American State Economies* (Ann Arbor: University of Michigan Press): item reduction vetoes, supermajority requirements for tax increases, annual budget cycles, tax and expenditure limits in low-income states. David M. Primo (2007), *Rules and Restraint: Government Spending and the Design of Institutions* (Chicago: University of Chicago Press): strict balanced-budget requirements, shutdown provision. Jowei Chen and Neil Malhotra (2007), "The Law of *k*/*n*: The Effect of Chamber Size on Government Spending in Bicameral Legislatures," *American Political Science Review* 101 (4): 657–76: House-to-Senate ratio, number of senators.

Note: TEL = tax and expenditure limit. All figures are converted into 2008 dollars.

Figure 2. States with Separate Taxing and Spending Legislative Committees

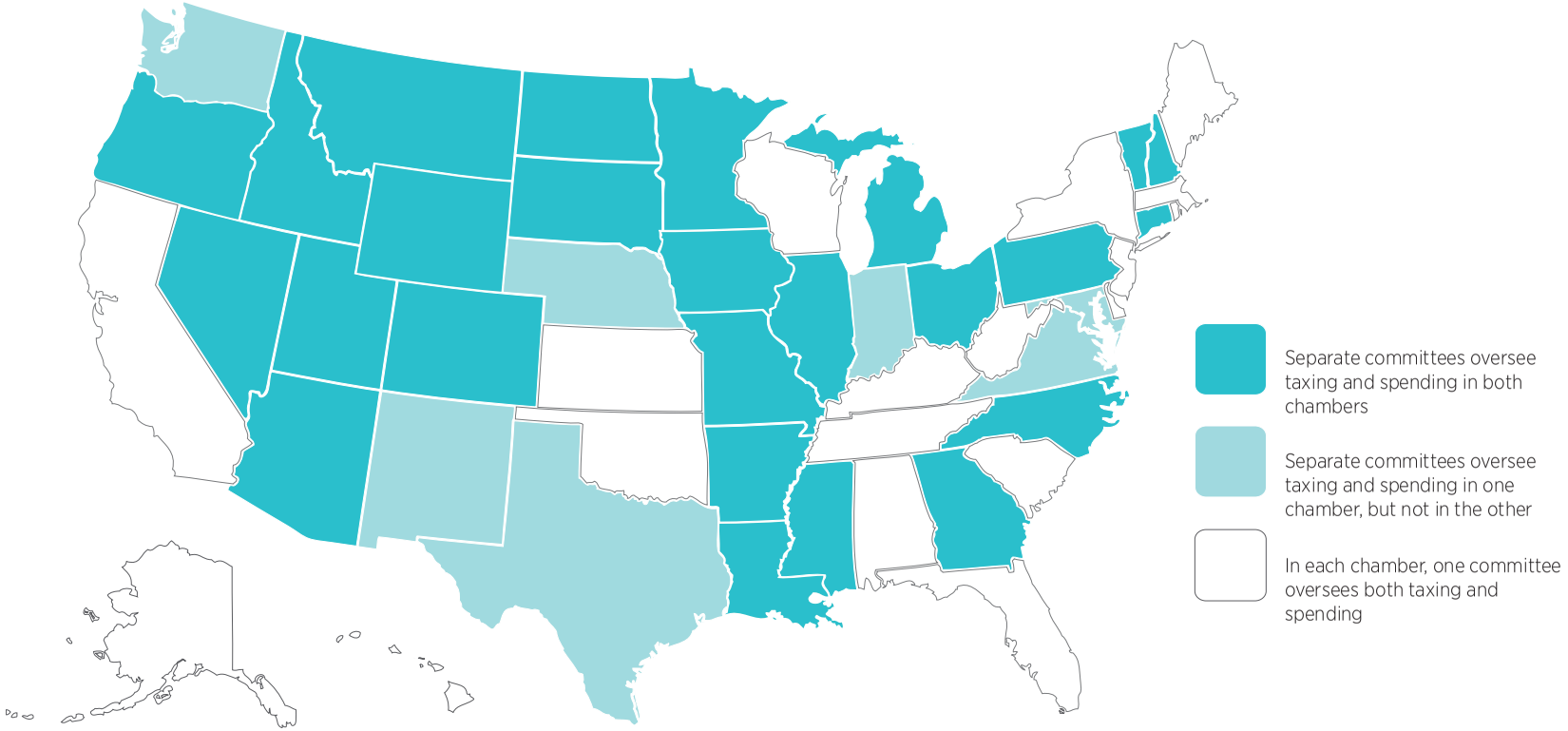


Table 1. Variables and Descriptive Statistics

Variable	Description	Observations	Mean	Standard deviation	Minimum	Maximum
General expenditures per capita	Total state expenditures per capita (2005 dollars); excludes utility expenditures, liquor store expenditures, and employee retirement or other insurance trust expenditures	1,421	3,552.07	1,203.33	1,307.16	9,129.62
General revenue per capita	Total state revenue per capita (2005 dollars); excludes revenue from utilities, liquor stores, and insurance trusts	1,421	3,562.50	1,169.73	1,310.65	9,818.47
Health care spending per capita	State health care expenditures per capita (2005 dollars)	1,421	221.89	98.67	51.54	630.26
Education spending per capita	State education expenditures per capita (2005 dollars)	1,421	573.52	191.61	189.40	1,316.06
Highway and infrastructure spending per capita	State highway and infrastructure expenditures per capita (2005 dollars)	1,421	305.71	141.20	103.29	1,220.72
Welfare spending per capita	State welfare expenditures per capita (2005 dollars)	1,421	705.82	385.96	28.19	2,008.69
Local aid spending per capita	State local aid expenditures per capita (2005 dollars)	1,421	1,026.47	404.26	127.14	3,119.58
Separate committees in one chamber	Separate taxing and spending committees in one chamber	1,421	0.12	0.32	0	1
Separate committees in both chambers	Separate taxing and spending committees in both Chambers	1,421	0.51	0.50	0	1
Ln(population)	Log of state population	1,421	14.99	1.01	12.72	17.44
Percentage that is Caucasian	Percentage of state population that is Caucasian	1,421	85.99	9.31	60.76	99.64
Percentage over age 65	Percentage of state population that is over age 65	1,421	12.24	1.93	6.92	18.41
Real gross state product per capita	Gross state product per capita (2005 dollars)	1,421	34,235.93	8,512.20	18,468.77	72,560.93
Unemployment rate	Unemployment rate	1,421	5.80	1.99	2.25	17.45
Federal aid to state per capita	Federal aid to state per capita (2005 dollars)	1,421	1,018.95	455.58	282.68	3,646.15
Percentage of state revenue resulting from severance tax	Percentage of state revenue resulting from severance tax	1,421	1.44	3.46	0.00	28.50
Citizen ideology	Citizen ideology index created by Berry et al. (1998) and subsequently revised (2012); value of 0 for the most conservative position and 100 for the most liberal position	1,421	47.73	15.45	7.49	95.97
Lifetime legislative term limit	Value of 1 if the state had a binding term limit in that year that prevents legislators from seeking office ever again; 0 otherwise	1,421	0.04	0.20	0	1
Term Limit Stringency index	Reciprocal of the term limit length in years; 0 if no term limit	1,421	0.01	0.02	0.00	0.08
Tax and expenditure limit	Tax and Expenditure Limit (TEL) index developed by Amiel, Deller, and Stallmann (2009); higher values indicate more restrictive rules regarding taxation and expenditures	1,421	6.53	7.85	0.00	30.00
Lame duck governor	Value of 1 if the governor is in the last term before he or she is term limited; 0 otherwise	1,421	0.33	0.47	0	1
Politically divided government	Value of 1 if both legislative chambers and the governor's office are not controlled by the same party; 0 otherwise	1,421	0.53	0.50	0	1

Table 2. Determinants of General Expenditures Per Capita

Variables	(1)	(2)	(3)	(4)
Separate committees in one chamber	−409.9***	−449.9***	−285.5***	−313.2***
	(81.06)	(92.27)	(62.29)	(67.48)
Separate committees in both chambers	−390.2***	−552.7***	−252.0***	−263.1***
	(100.9)	(116.4)	(68.07)	(78.30)
Ln(population)		−863.2***	−477.0***	−446.2***
		(216.4)	(116.4)	(123.8)
Percentage that is Caucasian		−8.215	−19.45	−16.69
		(8.680)	(12.58)	(13.39)
Percentage over age 65		147.9**	116.4***	109.8***
		(57.27)	(32.52)	(27.35)
Real gross state product per capita			0.0306***	0.0301***
			(0.00691)	(0.00695)
Unemployment rate			14.94	13.34
			(12.82)	(13.71)
Federal aid to state per capita			0.983***	0.991***
			(0.102)	(0.103)
Percentage of state revenue resulting from severance tax			29.03**	27.39**
			(12.77)	(12.59)
Citizen ideology				1.651
				(2.121)
Lifetime legislative term limit				190.7***
				(65.41)
Term Limit Stringency index				−2,381***
				(424.4)
Tax and expenditure limit				−1.820
				(2.848)
Lame duck governor				−3.560
				(16.03)
Politically divided government				52.54***
				(16.62)
Constant	2,144***	14,240***	8,423***	7,738***
	(63.32)	(2,746)	(1,288)	(1,488)
State fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
R-squared	0.90	0.91	0.94	0.95
Observations	1,421	1,421	1,421	1,421
Number of groups	47	47	47	47

Note: Estimated with ordinary least squares with Driscoll and Kraay (1998) standard errors (in parentheses). State and year fixed-effects coefficients are not reported. Sample consists of 47 states (Alaska, Hawaii, and Nebraska are excluded).

*** indicates significance at 1 percent; ** indicates significance at 5 percent; * indicates significance at 10 percent.

Table 3. Determinants of General Revenue Per Capita

Variables	(1)	(2)	(3)	(4)
Separate committees in one chamber	−259.3***	−347.1***	−109.3**	−183.5***
	(39.78)	(54.11)	(46.72)	(52.87)
Separate committees in both chambers	−176.1**	−376.5***	32.85	−20.73
	(69.04)	(90.24)	(87.14)	(92.00)
Ln(population)		−1,241***	−776.2***	−730.1***
		(204.6)	(74.90)	(72.52)
Percentage that is Caucasian		2.838	−16.020	−8.747
		(15.93)	(13.02)	(12.60)
Percentage over age 65		113.7**	86.33***	95.51***
		(55.65)	(23.72)	(20.85)
Real gross state product per capita			0.0377***	0.0377***
			(0.00502)	(0.00473)
Unemployment rate			−11.02	−12.31
			(12.06)	(13.49)
Federal aid to state per capita			1.188***	1.173***
			(0.0580)	(0.0566)
Percentage of state revenue resulting from severance tax			65.01***	65.09***
			(8.910)	(8.091)
Citizen ideology				−2.211
				(1.439)
Lifetime legislative term limit				177.6***
				(45.15)
Term Limit Stringency index				−2,137***
				(555.6)
Tax and expenditure limit				3.584*
				(1.890)
Lame duck governor				10.26
				(13.26)
Politically divided government				49.10***
				(13.99)
Constant	1,952***	18,965***	12,403***	11,099***
	(38.63)	(2,061)	(768.5)	(948.0)
State fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
R^2	0.86	0.88	0.96	0.96
Observations	1,421	1,421	1,421	1,421
Number of groups	47	47	47	47

Note: Estimated with ordinary least squares with Driscoll and Kraay (1998) standard errors (in parentheses). State and year fixed-effects coefficients are not reported. Sample consists of 47 states (Alaska, Hawaii, and Nebraska are excluded).

*** indicates significance at 1 percent; ** indicates significance at 5 percent; * indicates significance at 10 percent.

Table 4. Determinants of Categorical Expenditures Per Capita

Variables	Health care spending per capita	Education spending per capita	Highway and infrastructure spending per capita	Welfare spending per capita	Local aid spending per capita
Separate committees in one chamber	−119.3***	−20.30	50.69***	21.20	−83.37**
	(13.71)	(13.08)	(17.24)	(16.04)	(33.94)
Separate committees in both chambers	−73.08***	−18.06	79.94***	−109.2**	106.1
	(18.31)	(21.38)	(28.29)	(41.75)	(69.65)
Ln(population)	74.92***	−247.0***	17.60	−109.4***	45.50
	(18.16)	(25.27)	(38.09)	(33.93)	(32.74)
Percentage that is Caucasian	−2.402	0.888	−6.855	1.178	9.200
	(2.628)	(3.131)	(4.243)	(7.762)	(8.783)
Percentage over age 65	29.47***	21.02***	6.134	−0.633	5.304
	(5.494)	(6.190)	(6.192)	(9.910)	(15.03)
Real gross state product per capita	0.00390***	0.00235***	0.00258**	0.000205	0.00322
	(0.000629)	(0.000847)	(0.00101)	(0.00231)	(0.00474)
Unemployment rate	5.379***	−2.702	−3.024	−2.272	6.452
	(1.253)	(2.927)	(2.639)	(5.559)	(5.416)
Federal aid to state per capita	0.0349**	−0.0101	0.0589***	0.339***	0.334***
	(0.0160)	(0.0153)	(0.0203)	(0.0515)	(0.0541)
Percentage of state revenue resulting from severance tax	−0.0660	0.656	−0.236	−0.278	23.10***
	(1.988)	(1.593)	(2.492)	(4.024)	(6.636)
Citizen ideology	−0.0634	0.821**	−0.274	2.086***	0.653
	(0.229)	(0.339)	(0.281)	(0.711)	(1.057)
Lifetime legislative term limit	4.952	53.33***	−23.04***	48.55**	132.2**
	(14.58)	(7.010)	(6.638)	(18.64)	(60.25)
Term Limit Stringency index	55.55	−846.7***	468.8***	−1,467***	−844.3**
	(187.4)	(92.52)	(80.21)	(292.2)	(391.0)
Tax and expenditure limit	0.576	0.130	0.603	−0.192	−4.914***
	(0.494)	(0.551)	(0.438)	(0.635)	(1.626)
Lame duck governor	−10.75***	−5.086	−8.224*	−14.29	24.21*
	(3.114)	(5.840)	(4.881)	(9.507)	(12.73)
Politically divided government	12.16***	2.153	8.077*	0.307	33.21**
	(3.522)	(2.646)	(4.228)	(7.496)	(14.72)
Constant	−1,137***	3,693***	536.9	1,504	−1,319
	(396.3)	(633.7)	(469.0)	(967.0)	(981.5)
State fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
R^2	0.54	0.85	0.31	0.92	0.74
Observations	1,421	1,421	1,421	1,421	1,421
Number of groups	47	47	47	47	47

Note: Estimated with ordinary least squares with Driscoll and Kraay (1998) standard errors (in parentheses). State and year fixed-effects coefficients are not reported. Sample consists of 47 states (Alaska, Hawaii, and Nebraska are excluded).

*** indicates significance at 1 percent; ** indicates significance at 5 percent; * indicates significance at 10 percent.

Acknowledgments

We gratefully acknowledge research assistance by Andrea Castillo, Jacob Feldman, Steven Rossi, Emily Washington, Olivia Gonzalez, Adam Michel, Tyler Richards, and Michael Farren. We received numerous helpful suggestions from Michael Farren, Thomas Stratmann, and two anonymous reviewers. We are responsible for any errors that remain.