

THE IMPACT OF FISCAL CONSTITUTION ON STATE AND LOCAL EXPENDITURES

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April, 1999

ABSTRACT

This paper provides an empirical assessment of various fiscal discipline mechanisms to determine whether the imposition of these budget rules has been effective at reducing real per capita state and local government expenditures. The primary contribution of this research is its focus on a comprehensive set of fiscal discipline mechanisms which are measured over a relatively long time period. In particular, our analysis examines the following budgetary mechanisms: tax and expenditure limits, line-item veto power, balanced budget requirements, super-majority voting requirements, term limits for state legislators, bill introduction limits, the length of the budget cycle, the initiative procedure and the state referendum. A random-effects panel data model is estimated using a data set covering 49 US states observed at regular intervals over the 26-year period beginning in 1969. The results indicate that the more general budgetary institutions such as expenditure limits, term limits and the initiative procedure have led to significant reductions in state and local spending levels while the other, more specific mechanisms have had little significant effect on these expenditures.

JEL CODES: H7, H3, C1

AUTHORS' NOTE: The authors would like to thank Karen Conway, Edward Lopez, Paul Trogen and Charles Rowley for valuable comments and suggestions. All errors remain our own.

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INTRODUCTION

The US has witnessed changing trends, over the past few decades, in the fiscal behavior and responsibilities of federal and state and local governments. In particular, two of the more politically popular trends include a general movement of fiscal responsibility away from the federal level toward the state and local level and an attempt to implement budgetary mechanisms that instill fiscal discipline at the state and local level. Proponents of these fiscal discipline mechanisms argue that these tools have been or will be effective at slowing the rate of spending at all levels of government.¹ The general assumption is that these budget rules will provide the citizenry with some protection against the inherent bias towards excess spending in public-sector decision making. This notion is based upon the assumption that state and local governments are more responsive to the needs of the citizenry and, therefore, are more efficient at providing the requisite goods and services.

The most interesting aspect of the reasoning discussed above is that it appears to run counter to the increases in spending that have actually been observed at the state and local level. For example, real per capita state and local direct general expenditures have increased approximately 78% over the ten-year period ending in 1994. This paper provides an empirical assessment of this phenomenon in order to determine whether or not the imposition of various budgetary institutions has been effective at restraining the growth of state and local government spending in recent decades. In particular, we consider the effect of tax and expenditure limits, the ability of the governor to use the line-item veto, balanced budget requirements, super-majority voting requirements, term limits, the length of the budget cycle, the initiative procedure and the state referendum.

Numerous empirical studies have been conducted in past years regarding the factors that determine and influence state and local government spending. In particular, following the passage of Proposition 13 in 1978, many studies were conducted to investigate the impact of specific fiscal discipline mechanisms on the rate of growth of state government spending or revenue. These studies, however, have generally focused on one or a very small number of fiscal discipline mechanisms (see, for example, Krol, 1997). This study differs

in several important respects from previous analyses. Specifically, the objective of this paper is to investigate the impact on state and local spending of a *comprehensive* set of fiscal and administrative mechanisms. In addition, this analysis employs a panel data set focusing on 49 of the 50 US states² using data observed at regular intervals over the 26-year period 1969 to 1994. As a result, this analysis is able to capture the effects of fiscal discipline measures over a relatively long period of time.

There are two reasons why the objectives of this analysis are important. First, there is presently a movement in the US towards imposing, at the federal level, some of the very fiscal discipline mechanisms which are analyzed in this paper.³ Second, there are state-based pressures to implement various discipline mechanisms in states in which they presently do not exist. The knowledge of whether or not a given budgetary rule significantly affects state-level expenditures, and if so, by what magnitude and in what direction, could prove to be extremely valuable to policy makers seeking to control expenditure levels in the face of ever-mounting budgetary difficulties.

The plan of this paper is as follows. The next section provides an overview of the fiscal discipline measures which are in place in various states over the time period of this analysis. Section 3 presents the theoretical model of state and local government expenditures and also briefly describes the random-effects model employed in this analysis. Section 4 provides a description of the data and the sources from which they were obtained, and also presents the results of empirical estimation. A brief summary of the results and concluding statements are presented in Section 5.

BUDGET RULES

In their seminal work, *The Calculus of Consent*, Buchanan and Tullock (1962) first introduced the argument that institutions and rules influence the way collective choices are made with the result that they have important effects on policy outcomes. One of the primary implications of public choice theory is that the rules or institutions within which various groups operate are likely to affect the outcomes of decisions made by these groups. Indeed, the work of Poterba (1994, 1995, 1996) has provided evidence which

suggests that budgetary rules and institutions can affect fiscal policy outcomes. This “public choice” view is in direct contrast to the “institutional irrelevance view” which holds that budgetary rules and institutions can be circumvented through various means, thereby rendering these rules ineffective. Under this view, there is little chance that taxpayers can succeed in instituting changes that reduce the level of government spending. However, as suggested by Abrams and Dougan (1986), this argument neglects the possibility of dissatisfied taxpayers using political pressures to produce constitutional changes that reduce the equilibrium budget size.

State and local governments function under a wide assortment of fiscal discipline mechanisms ranging from initiative procedures to super-majority voting requirements for tax increases. Variations in these mechanisms and institutions are likely to provide some explanation for the varying policy outcomes as they relate to state and local spending patterns and levels. The fiscal discipline mechanisms under investigation here can be divided into three general categories. The first category is budgetary constraint mechanisms which relate directly to spending or revenue levels. This category includes budget rules such as tax and expenditure limits, line-item veto power, balanced budget requirements, and super-majority voting requirements for tax increases.⁴ The second category is administrative constraint mechanisms which focus on the process by which the budgetary process is carried out or on those who enact the budget. This category includes mechanisms such as term limits for state legislatures, bill introduction limits, and the length of the budget cycle. The third category focuses on direct democracy mechanisms which allow citizens to directly participate in the budgetary process. The initiative procedure and the state referendum are members of this category. The following discussion summarizes each of these budget rules and outlines the theoretical justifications for including each in a model of state and local expenditures.

Tax and expenditure limitations are one of the more recently devised fiscal discipline mechanisms. The great majority of the existing tax and expenditure limits, 21 out of 23, were put in place during the ten-year period ending in 1986. New Jersey, in 1976, was the first state to place a limit on state taxing and spending powers but later, in 1982, allowed this limitation to expire. Colorado and Rhode Island followed

suit in 1977, with Tennessee joining the ranks in 1978.⁵ With the passage of Proposition 13 in California, 15 additional states then enacted some form of tax or expenditure limit. Connecticut and North Carolina are the most recent states to impose such limits. Tax and expenditure limits vary widely from state to state. Some limits are constitutional while others are statutory. Some place limits on spending while others constrain revenues. Furthermore, escape clauses in tax and expenditure limits differ significantly from state to state and significant categories of either expenditures or revenues are excluded from coverage in various states. It is also the case that the appropriate base for tax and expenditure limits is subject to wide variations across states (see Bails, 1990). If tax and expenditure limitations are successful at capping government spending and taxation then this variable should be statistically significant and negatively related to per capita government expenditures.

The ability of a governor to use the line-item veto or item-reduction veto is a means of reducing expenditure levels is currently available in all but 9 states (see Alm and Evers, 1991). The theoretical argument for including this measure in a model of state and local expenditures focuses on the notion that individual legislators are responsive to the median voter of their individual district, while governors are responsive to the median voter in their state. Furthermore, there is no inherent reason to argue that the preferences of these two groups of median voters will be identical. The state-wide median voter may prefer the governor to have veto authority to offset the power of the district median voters. A related argument is that the platforms offered to the median voter of the state and those offered to the median voter of the various districts may differ because the political parties of the governor and members of the legislature may differ. If this is the case, the state median voter may prefer a governor who is more likely to use the item veto when the majority of the legislature is of a different party. Both of these arguments suggest that those states where the governor has either a line-item veto or item reduction power are likely to have lower levels of per capita spending than those states where the governor has neither (Dearden and Husted, 1993). Thus, the line-item veto variable should have a negative impact on state and local spending.

Balanced budget requirements, of one type or another, are present in each US State except Vermont.

In forty-three states the governor is required to *submit* a balanced budget; in forty states the legislature is required to *pass* a balanced budget. However, in eleven of the latter states, the government can run a deficit legally simply by carrying it over to the next fiscal year, thereby rendering the balanced budget requirement ineffective. In the remaining 31 states the legislature must pass a balanced budget with no carryover and a proviso that if a deficit occurs during that year, it must be eliminated by either reducing spending or increasing taxes. Niskanen (1975) notes that special interest and monopoly models of government suggest that equilibrium levels of government expenditure will be greater than optimal and, as a result, balanced budget requirements should offer taxpayers some protection against excessive government spending. Given the structural differences in tax and spending limits across all states, and taking into consideration how the relationship between spending limits and balanced budget requirements, it is logical to assume that effectiveness of balanced budget requirements will depend on whether or not there is also a tax and expenditure limit in place. In particular, we predict that balanced budget requirements will only exert a negative influence on the level of state and local spending in those states which also impose tax and expenditure limitations.

Super-majority voting requirements are another constitutional restriction on legislative tax powers. This mechanism is aimed at reducing the ability of the legislative body to exploit the voters by requiring that *more than* a simple majority of voters approve tax increases. The origin of super-majority voting requirements dates back to 1934 when Arkansas voters approved a constitutional amendment referred by the legislature. This amendment required a two-thirds vote to increase “the rates for property, excise, privilege, or personal taxes now levied” (Mackey, 1993). Following theories of democracy and representative government, it is logical to expect that super-majority voting requirements will be effective at lowering government expenditures only when they are combined with a balanced budget requirement (see Farnham, 1990).

Of all the administrative constraints placed on decision makers in the public sector, none has been more controversial than term limits. Numerous constitutional challenges to term limits have been pursued in

various states and such limits were included as one of the cornerstones in the original Republican “Contract with America”. While term limits do not directly affect state and local spending, there is some theoretical basis for arguing that term limits are designed to make public sector decision makers more responsive to the desires of the citizenry. A more responsive legislative body should, in theory, lead to a more efficient and cost-effective governmental body which takes a longer view of their decision making process. The ultimate result should be a slower rate of growth in spending. The basic hypothesis advanced by Buchanan and Wagner (1977) is that since tax and spending decisions are made by elected officials, there is an inherent bias towards increasing spending. Term limits should overcome this bias leading to a decline over time in the growth of spending and taxation in those states with term limits relative to those without them.

The increasing volume in the number of bills introduced in state and local legislative bodies has led several states to implement bill introduction limits. While deadline systems and short-form bills are sometimes used as a method of deterrence, a more direct approach has been to set a numerical limit on bill introductions. At the present time there are 10 states which have some type of bill introduction limit; some place limits on bills introduced in the Senate, some place limits on bills introduced in the House, and some place restrictions on both. Proponents of bill limits argue that they reduce the number of “hero bills” going through the system with the general idea being to reduce the amount of time spent on superfluous proposals. Bill limits are thought to help streamline the legislative process and reduce costs for staff, printing, and paper (Erickson, 1993). It is believed, therefore, that the presence of bill introduction limits should have a negative effect on expenditure levels.

The selection of an annual versus a biennial budget cycle usually correspond to the frequency of the state’s legislative session. At the present time, 32 states meet annually and enact annual budgets while 7 states have biennial legislative sessions and biennial budget cycles. In 11 states, annual legislative sessions are accompanied by biennial budget cycles (Eckl, 1993). At the federal level, there have been several proposals to alter the budgetary procedure such that more long term efficient planning could be built into the process. There may be some reason to believe that a longer-term budget cycle would reduce the rate of

spending. However, one could argue that legislators involved in annual budgetary processes are more likely to conform to the median voter model and, hence, expenditures in such a process might be closer to the optimal level. If this hypothesis is valid, states with an annual budget cycle would have a lower level of per capita expenditures. Still, it is possible that the annual budgeting process simply leads to a greater inclination towards “logrolling” and the “pork barrel” spending which is characteristic of the federal budget process. As such, there is no a priori expectation regarding to effect of the length of the budget cycle on state and local government expenditures.

The initiative procedure and the state referendum are the “direct democracy” budget rules considered in this analysis. The initiative procedure gives citizens the right to introduce a matter for legislation either to the legislature or directly to the voters. The state referendum provides for a citizen-initiated popular vote on laws that have been enacted by the legislature. The requirements for qualifying initiatives and the referendum vary from state to state with the most significant difference being the percentage of signatures required. To understand the effect of these two “direct democracy” budget rules on the level of per-capita state and local government expenditures, consider the work of Weingast, Shepsle and Johnsen (1994). Their research suggests that legislatures are designed to increase the gains from trade between representatives by reducing the transaction costs associated with approving policy programs. The gains-from-trade hypothesis argues that because of vote trading and “logrolling”, legislatures may not implement median voter outcomes. However, this vote trading is not possible with direct voting procedures. If this hypothesis is true, then policy outcomes, and hence the level of government spending, will be different in those states that have the direct democracy options available to voters. Specifically, if the gains-from-trade hypothesis is valid then the initiative and referendum variables should have statistically significant and negative effect on the level of government spending.

A summary of the budget rules available in each of the states over the time period covered in this analysis is provided in the Appendices A and B.

THEORETICAL MODEL AND ESTIMATION METHODOLOGY

Following much of the empirical work on government expenditures, this research employs a regression technique. Because a thorough analysis of the relationship between government spending and fiscal discipline mechanisms would examine data over a long period of time *as well as* across many states, we use a panel data regression model. This model incorporates both time series and cross section data. In addition, since our data includes some variables that do not vary over time, it will be necessary to use the random-effects (RE) panel data model in estimation.⁶ This model is believed to be well suited for this analysis since it incorporates the notion that unobservable, time-invariant differences across states are most appropriately modeled as random variables. A description of the RE expenditures model is given below.

THE RE MODEL OF STATE AND LOCAL GOVERNMENT EXPENDITURES

A general expression of the model to be tested here may be given by partitioned regression equation described below:

$$(1) \quad \mathbf{Y}_{it} = \mathbf{X}_{it} \boldsymbol{\beta} + \mathbf{F}_{it} \boldsymbol{\delta} + \mathbf{u}_i + \boldsymbol{\varepsilon}_{it}$$

where “i” indexes cross-section observations (states) from 1 to N and “t” indexes time-series observations from 1 to T. The vector \mathbf{Y}_{it} is of dimension $(NT \times 1)$ and contains observations on the dependent variable of the model (real per capita expenditures of state “i” observed at time “t”). The matrix \mathbf{X}_{it} is of dimension $(NT \times K1)$ and contains observations the exogenous demographic and economic variables that affect per-capita spending levels. These variables are observed for each state “i” at time “t”; The vector $\boldsymbol{\beta}$ is of dimension $(K1 \times 1)$ and contains the parameters which measure the effects of the exogenous demographic and economic variables. The matrix \mathbf{F}_{it} is of dimension $(NT \times K2)$ and contains observations on the exogenous fiscal discipline mechanisms, as described in section 2. These mechanisms are observed in each state “i” at time “t”. The vector $\boldsymbol{\delta}$ is of dimension $(K2 \times 1)$ and contains the parameters which measure the effects of the discipline mechanisms. We note that $(K1 + K2) = K$ where “K” is the total number of parameters to be estimated.

Relevant unobservable time-invariant factors are captured by the $(NT \times 1)$ random vector \mathbf{u}_i , and the stochastic disturbances of the model are captured by the $(NT \times 1)$ vector $\boldsymbol{\varepsilon}_{it}$. Since both \mathbf{u}_i and $\boldsymbol{\varepsilon}_{it}$ measure stochastic components of the expenditures relationship, it is possible to combine these two terms to form the composite error term:

$$(2) \quad \boldsymbol{\omega}_{it} = \mathbf{u}_i + \boldsymbol{\varepsilon}_{it}$$

which is assumed to be normally distributed with zero mean. Re-writing equation (1) to incorporate the composite error term, the model to be estimated may be expressed as given below in equation (3):

$$(3) \quad \mathbf{Y}_{it} = \mathbf{X}_{it} \boldsymbol{\beta} + \mathbf{F}_{it} \boldsymbol{\delta} + \boldsymbol{\omega}_{it}.$$

Because the covariance structure of the composite error term is non-ideal, estimation of equation (3) via the generalized least squares (GLS) procedure will provide unbiased, consistent and efficient parameter estimates of the $\boldsymbol{\beta}$ and $\boldsymbol{\delta}$ vectors. These estimates will provide inferences on the way in which the fiscal discipline measures and the demographic and economic variables affect state and local government expenditures; it is these estimates which are of paramount interest in this analysis.

A detailed description of the fiscal discipline variables contained in the \mathbf{F}_{it} matrix in equation (3) has already been given in section 2. The sub-section which follows provides a discussion of the demographic and economic variables which are contained in the \mathbf{X}_{it} matrix in equation (3).

DEMOGRAPHIC AND ECONOMIC VARIABLES

Following traditional theory on state and local government expenditures, as discussed in Courat, Gramlich and Rubinfeld (1978), the demographic and economic variables which are believed to impact state and local expenditures are: real per capita personal income; the population density of the state; per capita real intergovernmental revenue; real per capita expenditures on government employee retirement; per capita real unemployment compensation; and, real per capita capital outlays. A more detailed discussion of each of these exogenous factors is given below.

The level of real per capita income of the citizenry appears in virtually all models of government

spending. Following Abrams and Dougan (1986), the theoretical argument is that demand for the publicly provided market basket of services is positively related to the income levels of consumers.

Population density can be related to the level of state and local government spending in one of two ways. First, a dense population may increase the marginal benefits of spending if it creates unique public goods problems. In this case, one might expect a positive relationship between density and per capita expenditures. Alternatively, dense populations may lead to economies of scale in the production and provision of government services (Matsusaka, 1995). In this case, a negative relationship would be expected between these two variables.

Real per capita intergovernmental revenue should exert a positive influence on spending. This argument stems from previous findings that federal government grants create a matching grants process at the state and local level as well as the flypaper effect of categorical grants. To the extent that categorical matching grants vary from state to state, the relative tax price of publicly provided goods across states will be altered (see Osman, 1966). Additionally, as Dougan and Kenyon (1984) have shown, categorical grants will tend to shift the marginal benefit curve from government provided goods outward because the grant increases the effective income of the group or groups that favor spending on the budget category for which the grant is designated.

Real per capita expenditure on public employee retirement is included to incorporate the notion that the size of the public sector will certainly influence the outcomes of various publicly made decisions. It is hypothesized that this variable should have a positive effect on state and local per capita expenditures.

Real per capita unemployment compensation was included in recognition of the fact that the impact of the business cycle on per capita expenditures may vary from state to state and from year to year. That is, some of the observed variation in state and local government spending is dependent upon the stage of the business cycle, which is likely to vary from state to state in any given year. Higher levels of real unemployment compensation are expected to lead to higher levels of real per capita expenditures at the state and local level.

Real per capita capital outlays, is included to capture the “lumpy” nature of these expenditures. To some extent this variable captures the impact of federal grants on state and local capital outlay projects which may be very large in some years and non-existent in other years. Additionally, states may elect to make these unusually large expenditures at different times so that expenditures may be unusually low when capital outlay projects are not being undertaken and unusually high when such projects *are* being undertaken. It is expected, therefore, that this variable would have a positive effect on the level of per capita expenditures at the state and local level.

DATA AND EMPIRICAL RESULTS

DATA DESCRIPTIONS AND SOURCES

As noted previously, this analysis uses a panel data set containing cross-section observation on 49 US states observed at 5-year intervals from 1969 through 1994. All of the economic variables which are measured in dollars were converted to real per capita levels. The ten fiscal discipline mechanisms were measured as standard binary dummy variables with one indicating the presence of the mechanism and zero indicating the absence of the mechanism. Table 1 provides a brief description of all of the variables in the data set, along with the customary summary statistics.⁷

[INSERT TABLE 1 ABOUT HERE]

Data on state expenditures, intergovernmental revenue, expenditure on government employee retirement and outlay expenditure was obtained from the US Bureau of the Census, *Governmental Finances* (selected years). Income and population data were downloaded from the homepage of the US Bureau of Economic Analysis. Information on initiative and referendum requirements, term limits and state density was obtained from the Council of State Governments, *Book of the States* (selected years). Information on balanced budget requirements for each state was obtained from the National Association of State Budget Officers, *State Balanced Budget Requirements: Provisions and Practice*. Unemployment compensation data was taken from the US Bureau of Labor Statistics, *Employment Earnings* (selected years). Information

on bill introduction limits and budget cycle lengths was obtained from *NCSL Legisbrief* (selected years). Alm and Evers (1991) provides information on the line-item veto; Bails (1990) provides details on tax and expenditure limitations. Information on super majority requirements was obtained from Mackey (1993).

EMPIRICAL RESULTS

The model to be estimated, as given previously by equation (3), may be re-formulated to express the regressors of the model in terms of the specific variables listed in Table 1 as follows:

$$\begin{aligned}
 (4) \quad (\text{Expenditure})_{it} = & \beta_1 + \beta_2 (\text{Income})_{it} + \beta_3 (\text{Density})_{it} + \beta_4 (\text{Gov Revenue})_{it} \\
 & + \beta_5 (\text{Retirement Expend})_{it} + \beta_6 (\text{Unemploy Comp})_{it} + \beta_7 (\text{Capital Outlays})_{it} \\
 & + \delta_1 (\text{Expenditure Limits})_{it} + \delta_2 (\text{Veto Power})_i + \delta_3 (\text{Balanced Budget})_i \\
 & + \delta_4 (\text{Bal Bud_Expend Lim})_{it} + \delta_5 (\text{Super Majority})_{it} + \delta_6 (\text{Sup Maj_Bal Bud})_{it} \\
 & + \delta_7 (\text{Term Limits})_{it} + \delta_8 (\text{Bill Limits})_i + \delta_9 (\text{Budget Cycle})_i \\
 & + \delta_{10} (\text{Initiative})_{it} + \delta_{11} (\text{Referendum})_i + \omega_{it} .
 \end{aligned}$$

We include the interaction dummy variable “Bal Bud_Expend Lim” to incorporate the notion that balanced budget requirements are thought to exert a negative influence on government expenditures only in those states in which tax and expenditure limits are also in place. Similarly, we include the interaction dummy variable “Sup Maj_Bal Bud” to incorporate the notion that super-majority voting requirements are expected to decrease government expenditures only in those states which also have balanced budget requirements.

The random-effects model given by equation (4) was estimated using the GLS procedure to obtain unbiased, consistent and efficient parameter estimates.⁸ The results of estimation are presented in Table 2.

[INSERT TABLE 2 ABOUT HERE]

The goodness of fit statistics reported in Table 2 suggest that the model has a relatively high level of explanatory power. Even after adjusting for degrees of freedom, the explanatory variables capture approximately 99% of the state-to-state variations in per capita state and local spending. In addition, a

likelihood ratio test of the null hypothesis that all of the explanatory variables are jointly equal to zero is strongly rejected at the 99% level of confidence. Furthermore, the results in Table 2 show that all of the demographic and economic variables except for density are significant at the 95% level of confidence or better. In addition, all of the significant variables bear the expected signs, as predicted by theory.

The empirical results reported in Table 2 provide valuable information with respect to the institutional framework within which state and local government spending decisions are made. It is interesting to note that the positive estimated coefficient on the intergovernmental revenue variable supports the notion that the matching aspect of federal grants leads to higher levels of state and local spending. In addition, the hypothesis regarding the willingness of the legislative body to vote itself higher retirement benefits is supported by the positive estimated coefficient on the retirement expenditures variable.

The remaining economic and demographic variables also exert the expected influence on state and local spending. In particular, the higher the level of unemployment compensation and the level of capital outlay expenditures in any given year, the higher the level of per capita state and local spending. Additionally, the empirical results indicate that per capita government expenditures increase as per capita personal income increases. This may be explained by the fact that as the income of voters increases, these voters will choose to spend some of these income gains on publicly provided goods and services and, as a result, are more likely to vote to support higher levels of governments spending.

The empirical results of Table 2 also provide valuable insight into the dynamics and effectiveness of the fiscal discipline mechanisms of the model. Among these variables, several are statistically significant (with negative coefficients) at the 95% level of confidence or better. These are: tax and expenditure limits; balanced budget requirements in the presence of tax and expenditure limits; super-majority voting requirements in the presence of a balanced budget requirement; term limits; and, the initiative procedure. The statistical significance of these variables supports the “public choice” view that budgetary rules and institutions matter. Specifically, the fact that these variables are statistically significant and have a negative coefficients indicates that these budgetary mechanisms lead to lower levels of per capita state and local

government expenditure.

The estimates in Table 2 indicate that per capita state and local spending in states which have a tax or spending limit in place will be more than \$41 lower than in those states which do not have such limitations in place. States with both a balanced budget requirement *and* tax and expenditure limitations face lower per capita expenditures of nearly \$135. For those states in which there are both super-majority voting requirements *and* a balanced budget requirement, state and local government expenditures are reduced by approximately \$96. It is interesting to note that neither super-majority voting requirements nor the balanced budget requirement by themselves appear to exert a statistically significant influence on government expenditures. In addition, per capita state and local spending in states which have term limits in place will be nearly \$105 lower than in those states that do not. And finally, the results of Table 2 also indicate that per capita state and local spending in states that use the initiative procedure will be approximately \$96 lower than in those states that do not. Taken together, these results indicate that, all else constant, a state which has these particular fiscal discipline mechanisms in place faces per capita expenditures which are nearly \$473 lower than those states which do not. The findings here indicate that, all else constant, per capita state and local spending in such states is approximately 14 times lower than in those states without these mechanisms in place.

Equally as interesting in the results of Table 2 is the evidence that the remaining fiscal discipline mechanisms *do not* have a statistically significant impact on per capita state and local expenditures. The individual t-statistics on these variables indicate that each estimate is insignificantly different from zero at the 95% level of confidence. In particular, the hypothesis that the line-item veto is a significant constraint on the public sector is rejected. As mentioned previously, both super-majority voting requirements and the balanced budget requirement, individually, appear to be relatively ineffective spending constraints.⁹ Furthermore, per capita state and local spending appears to be unrelated to the length of budget cycle, the requirement of bill introduction limits and the state referendum procedure.¹⁰ In addition, the results of a joint likelihood ratio test indicate the failure to reject the null hypothesis that these coefficients are *jointly* equal to zero at 95%. Based

on these findings, these remaining fiscal discipline mechanisms appear to offer little assistance as a means for controlling either the level of spending or the rate of growth in government spending.

CONCLUSIONS

The empirical evidence presented here suggests that the institutional framework within which policy spending decisions are made clearly is influenced by the presence of certain fiscal discipline mechanisms. These results are consistent with findings of Poterba (1996) who notes that budget rules and fiscal institutions do matter. Specifically, states which have adopted tax or expenditure limitations, those which provide their citizens with the initiative process, and those states in which term limits have been implemented face significantly lower levels of per capita state and local spending.

By contrast, the evidence here also suggests that certain other fiscal discipline mechanisms have been relatively ineffective at constraining the growth of the public sector. The imposition of a balanced budget requirement by itself does not seem to be an effective weapon for use in decreasing government expenditures. However, the balanced budget mechanism is effective at constraining spending when it is combined with tax and expenditure limitations. Similarly for super-majority voting requirements, while this mechanism by itself is ineffective at reducing state-level spending, it does exert a significant negative influence in those states in which a balanced budget requirement also is imposed.

The results of this analysis suggest that the following mechanisms are the ones which fiscal decision makers should focus on as effective tools for reducing per capita state and local spending: tax and expenditure limitations, the initiative process, term limits, and the balanced budget requirement in combination with tax and expenditure limits, and, the balanced budget requirement in combination with super-majority voting requirements. It is interesting to note that Congress has consistently rejected the introduction of tax and spending limitations and has all but abandoned the goal of term limits as a means of reducing government spending. The results of this study suggest that these are the very mechanisms which would be most effective at restraining expenditures at the state and local level. In addition, there has been little interest at the federal level in implementing the initiative process as a means of curbing spending, yet the

results uncovered here clearly indicate the usefulness of such a policy.

Perhaps the most telling implication of this empirical study, however, is that the two constraints which most recently had been advocated at the federal level, the line-item veto and the balanced budget amendment, have been relatively ineffective at controlling the growth in government. Contrary to the arguments advanced by proponents of these measures, the empirical evidence here indicates that neither of these policies has had the desired effect of constraining government expenditures at the state and local level.

APPENDIX A

ABSENCE OR PRESENCE OF TIME-INVARIANT BUDGET RULES, DURING THE PERIOD FROM 1969 THROUGH 1994, BY STATE

State:	Line-Item Veto	Balanced Budget Requirements	Bill Introduction Limits	Biennial Budget Cycle	State Referendum
Alabama	present	present	absent	absent	absent
Arizona	present	absent	absent	absent	present
Arkansas	present	present	absent	present	present
California	present	absent	present	absent	present
Colorado	present	present	present	absent	present
Connecticut	present	present	absent	absent	absent
Delaware	present	present	absent	absent	absent
Florida	present	present	present	absent	absent
Georgia	present	present	absent	absent	absent
Hawaii	present	absent	present	absent	absent
Idaho	present	present	absent	absent	present
Illinois	present	absent	absent	absent	present
Indiana	absent	absent	present	absent	absent
Iowa	present	present	absent	absent	absent
Kansas	present	present	absent	absent	absent
Kentucky	present	present	absent	present	present
Louisiana	present	absent	absent	absent	absent
Maine	absent	present	absent	present	present
Maryland	present	absent	absent	absent	present
Massachusetts	present	present	absent	absent	present
Michigan	present	absent	present	absent	present
Minnesota	present	present	absent	present	absent
Mississippi	present	present	absent	absent	absent
Missouri	present	present	absent	absent	present
Montana	present	present	present	present	present
Nebraska	present	present	absent	present	present

CONTINUED

APPENDIX A (continued)

State:	Line-Item Veto	Balanced Budget Requirements	Bill Introduction Limits	Biennial Budget Cycle	State Referendum
Nevada	absent	present	present	present	present
New Hampshire	absent	absent	absent	present	absent
New Jersey	present	present	absent	absent	absent
New Mexico	present	present	absent	absent	present
New York	present	absent	absent	absent	absent
North Carolina	absent	present	absent	present	absent
North Dakota	present	present	present	present	present
Ohio	present	present	absent	present	present
Oklahoma	present	absent	absent	absent	present
Oregon	present	absent	absent	present	present
Pennsylvania	present	present	absent	absent	absent
Rhode Island	absent	present	absent	absent	absent
South Carolina	present	present	absent	absent	absent
South Dakota	present	absent	present	absent	present
Tennessee	present	present	absent	absent	absent
Texas	present	present	absent	present	absent
Utah	present	present	absent	absent	present
Vermont	absent	absent	absent	absent	absent
Virginia	present	absent	absent	present	absent
Washington	present	absent	absent	present	present
West Virginia	present	present	absent	absent	absent
Wisconsin	present	absent	absent	present	absent
Wyoming	absent	absent	absent	present	present

APPENDIX B

YEARS IN WHICH TIME-VARYING BUDGET RULES WERE IN PLACE, DURING THE PERIOD FROM 1969 THROUGH 1994, BY STATE

State:	Tax and Spending Limits	Super-Majority Voting Requirements	Term Limit Provisions	Initiative Procedure
Alabama	none	none	none	1970
Arizona	1979-1994	1992-1994	1992-1994	1969-1994
Arkansas	none	1969-1994	1992-1994	1969-1994
California	1980-1994	1979-1994	1990-1994	1969-1994
Colorado	1978-1994	1992-1994	1990-1994	1969-1994
Connecticut	1991-1994	none	none	none
Delaware	1981-1994	1980-1994	none	none
Florida	none	none	1992-1994	1972-1994
Georgia	none	none	none	none
Hawaii	1979-1994	none	none	none
Idaho	1981-1994	none	1994	1969-1994
Illinois	none	none	none	1970-1994
Indiana	none	none	none	none
Iowa	none	none	none	none
Kansas	none	none	none	none
Kentucky	none	none	none	none
Louisiana	1980-1994	1969-1994	none	none
Maine	none	none	1993-1994	1969-1994
Maryland	none	none	none	none
Massachusetts	1987-1994	none	1994	1969-1994
Michigan	1979-1994	none	1992-1994	1969-1994
Minnesota	none	none	none	none
Mississippi	none	1970-1994	none	1992-1994
Missouri	1981-1994	none	1992-1994	1969-1994
Montana	1982-1994	none	1992-1994	1969-1994
Nebraska	none	none	none	1969-1994

CONTINUED

APPENDIX B (continued)

State:	Tax and Spending Limits	Super-Majority Voting Requirements	Term Limit Provisions	Initiative Procedure
Nevada	none	none	1994	1969-1994
New Hampshire	none	none	none	none
New Jersey	1977-1981	none	none	none
New Mexico	none	none	none	none
New York	none	none	none	none
North Carolina	1991-1994	none	none	none
North Dakota	none	none	none	1969-1994
Ohio	none	none	1992-1994	1969-1994
Oklahoma	1986-1994	1992-1994	1990-1994	1969-1994
Oregon	1980-1994	none	1992-1994	1969-1994
Pennsylvania	none	none	none	none
Rhode Island	none	none	none	none
South Carolina	1980-1994	none	none	none
South Dakota	none	1978-1994	1992-1994	1969-1994
Tennessee	1979-1994	none	none	none
Texas	1979-1994	none	none	none
Utah	1980-1994	none	1994	1969-1994
Vermont	none	none	none	none
Virginia	none	none	none	none
Washington	1980-1994	none	1992-1994	1969-1994
West Virginia	none	none	none	none
Wisconsin	none	none	none	none
Wyoming	none	none	1992-1994	1969-1994

TABLE 1: Descriptive Statistics

Variable Name and Definition	Mean	Std. Dev.	Minimum	Maximum
Expenditure = Real Per Capita State Expenditure (\$)	1,656.52	1,418.79	100.46	6,534.40
Income = Real Per Capita Personal Income (\$)	9,128.66	7,430.77	671.60	32,031.83
Density = Population Density Of the State	161.00	227.01	3.39	1,065.64
Gov Revenue = Real Per Capita Intergovernmental Revenue (\$)	412.08	391.48	19.94	2,506.45
Retirement Expend = Real Per Capita Expenditure on Government Employee Retirement (\$)	76.71	86.03	0.00	464.97
Unemploy Comp = Real Per Capita Unemployment Compensation (\$)	59.84	66.98	0.66	434.04
Capital Outlays = Real Per Capita Expenditure on Government Capital Outlays (\$)	350.93	302.11	34.81	2,023.28
Expenditure Limits = 1 if state has tax and/or expenditure limits	0.22	0.41	0	1
Veto Power = 1 if state has veto power	0.86	0.35	0	1
Balanced Budget = 1 if state has balanced budget requirements*	0.63	0.48	0	1
Bal Bud_Expend Lim = 1 if state has both balanced budget requirement AND expenditure limits	0.12	0.33	0	1
Super majority = 1 if state has Super majority requirements	0.11	0.31	0	1
Sup Maj_Bal Bud = 1 if state has super majority requirements AND balanced budget requirements	0.06	0.23	0	1

Continued

TABLE 1 (continued)

Term Limits = 1 if state has term limit provisions	0.06	0.24	0	1
Bill Limits = 1 if state has bill introduction limits**	0.20	0.40	0	1
Budget Cycle = 1 if state has a biennial budget cycle	0.35	0.48	0	1
Initiative = 1 if state has initiative requirements	0.45	0.50	0	1
Referendum = 1 if state has a referendum procedure	0.49	0.50	0	1

NOTE: *With no provision for carryover. **Applies to House, or Senate, or both. Data are observed at five-year intervals from 1969 through 1994 for all US states except Alaska.

TABLE 2: Random-Effects Estimates

Dependent Variable = Real Per Capita Government Expenditure

Variable Name:	Parameter Estimate	Estimated Standard Error
Constant	-35.816	49.757
Income	0.098**	0.002
Density	-0.084	0.068
Gov Revenue	1.041**	0.025
Retirement Expend	0.704**	0.110
Unemploy Comp	0.555**	0.093
Capital Outlays	0.900**	0.029
Expenditure Limits	-41.083*	18.162
Veto Power	20.721	42.739
Balanced Budget	-11.616	30.033
Bal Bud_Expend Lim	-134.680**	21.885
Super Majority	-22.637	26.892
Sup Maj_Bal Bud	-96.247*	40.505
Term Limits	-104.850**	16.713
Bill Limits	26.147	36.380
Budget Cycle	4.063	32.953
Initiative	-96.084**	30.913
Referendum	43.676	39.184
Adjusted R-square	99.03	
Likelihood Ratio Test For Overall Goodness of Fit ^a	1,117.75	
Likelihood Ratio Test for Significance of Selected Mechanisms ^b	1.04	

NOTE: * significant at the 95%; ** significant at 99%. ^aTests the null hypothesis that all slope coefficients = 0. ^bTests the null hypothesis that the coefficients on the following variables are jointly zero: Veto Power, Balanced Budget, Super Majority, Bill Limits, Budget Cycle and Referendum.

NOTES

1. Following Dye and McGuire (1992), the justification for combining the state and local sectors stems from the observation that the bundle of publicly provided goods and services varies from state to state. For example, one state may choose to delegate responsibility for park maintenance to local governments while another state may perceive this to be a state function.

2. Due to the unusual nature of fiscal discipline practices in Alaska, our analysis does not include inferences on this state.

3. In particular, there has been a movement towards implementing balanced budget requirements and the line-item veto, although, more recently, the latter has been declared unconstitutional.

4. It might be argued that the various types of debt restrictions that are placed on state and local governments should also be included in this list of fiscal constraint mechanisms. There are, however, several problems associated with including debt restrictions as a fiscal constraint mechanism. Von Hagen (1991), for example, did not find significant differences in per capita debt between states with and without such limits. Furthermore, Bunch (1991) showed that governments use public authorities to circumvent state constitutional debt limits with the effects being especially prevalent in states that have a debt limit that applies to both general obligation and revenue debt.

5. As noted by Stansel (1994), tax and expenditure limits in Rhode Island and Nevada are non-binding and, therefore, are considered to be non-existent for purposes of this study.

6. There are five fiscal discipline mechanisms which are time invariant in each state over the sample period of this analysis. These are: the line-item veto, balanced budget requirements, bill introduction limits, the length of the budget cycle, and the referendum procedure. The remaining four mechanisms vary in each state over the time period covered in this analysis.

7. The summary statistics reported in Table 1 represent the state averages computed over all years.

8. The standard tests for autocorrelation and heteroskedasticity were performed on the model and the

results indicated that neither of these error violations was present.

9. In the case of the super majority constraint mechanism, the relative insignificance of such requirements may stem, at least in part, from the fact that the bulk of these constraints have not been in place for a long enough period of time for the impact to have been adequately observed.

10. While the referendum variable is not significant at the 95% level of confidence, it might be interesting to note that this variable is marginally significant at the 77% level of confidence.