UNIVERSITY OF CALIFORNIA, SAN DIEGO

The Political Economy of State Tax Policy: The Effects of Electoral Outcomes, Market Competition, and Political Institutions

A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy

in

Political Science

by

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2005

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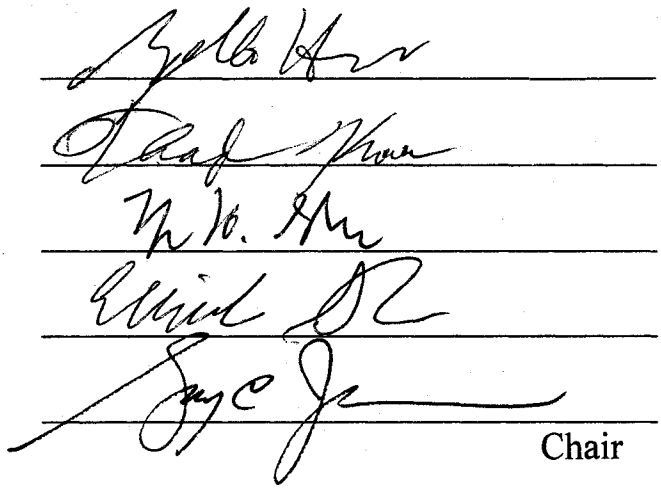

Chair

University of California, San Diego

2005

This dissertation is dedicated to the memory of

Marty Cronin.

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ABSTRACT OF THE DISSERTATION

The Political Economy of State Tax Policy: The Effects of Electoral Outcomes, Market Competition, and Political Institutions

By

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Professor Gary C. Jacobson, Chair

Existing analyses in the political science literature find that the partisan control of state government is, at best, a weak and conditional predictor of public policy outcomes. This dissertation explores whether the absence of strong party effects among the U.S. states can be explained, at least in part, by features of the context or environment in which state lawmaking occurs. Specifically, I consider how interjurisdictional competition over mobile economic resources, direct democracy institutions (especially the citizen initiative), and stringent anti-deficit rules or balanced budget requirements may constrain the policy choices of governors and legislative majorities. I test for the effects of these features by developing and estimating several econometric models of the determinants of annual changes in state tax policy. These models are estimated using an original data set of the tax policy choices made by elected officials over a fourteen-year period, fiscal years 1988 through 2001. Overall, I find that while the partisan control of state government does have policy implications, the ability of elected officials to move public policy in their

preferred direction is ultimately mitigated by each of the characteristics of the state lawmaking environment considered here.

I: Investigating the Link between the Partisan Control of State Government and Public Policy

1. Introduction

At the heart of the democratic ideal is the belief that government policy ought to be responsive to the preferences of citizens. According to many scholars, political parties are the key institutions for accomplishing this goal (Schattschneider 1942; Ranney 1951; American Political Science Association 1950; Key 1966). In stylized descriptions of representative democracy, it is competition between political parties in the electoral arena that successfully translates mass preferences into public policy. During elections, parties and their nominees compete for votes by presenting citizens with clear alternative visions regarding how the polity should be governed. The victorious party then uses its control over the institutions of government to implement, to the best of its ability, the vision it placed before the electorate. Thus, by voting into office the party whose policy goals most closely match their own, a majority of voters should be able to ensure that public policy closely aligns with their preferences.

While this depiction of representative democracy is obviously simplified, a failure of policy to respond to the partisan control of government (or electoral outcomes) in democratic systems may cast serious doubt on the extent to which citizens possess effective or operational control over government. As such, it has spurred political scientists – across a number of subfields – to empirically investigate the policy relevance of political parties (cf. Hibbs 1977; Tufte 1978; Jackman 1980; Kiewiet and McCubbins 1985; Alesina and Rosenthal 1994).

These investigations have been particularly common in the state politics literature. Scholars of American subnational government have produced a substantial body of research examining the impact of Republican and Democratic control of state government across a range of policy areas, including welfare, health, education, and fiscal policy. By and large, however, these efforts have produced unanticipated and vexing results.

First, many analyses find *no* evidence of party effects. Much of the research in the state politics literature finds that political variables do not play a statistically significant role in shaping policy choices, even after the imposition of rigorous controls and the use of sophisticated econometric techniques (Dawson and Robinson 1963; Dye 1966; Hofferbert 1966; Jones 1974; Plotnick and Winters 1985; Garand 1988; Schneider 1988; Kronebusch 1993; Gilligan and Matsusaka 1995; Camobreco 1996). Instead, these analyses show that outcomes are principally determined by environmental factors, a finding which has led many scholars of state politics to conclude that governors, legislators, and other elected officials simply act as neutral translators of economic and demographic conditions into public policy.

On the other hand, those empirical investigations which do find evidence that the partisan control of state government matters suggest that party effects are, at best, *weak* and *conditional*. Several recent empirical investigations of state fiscal policy-making show that Democrats, on average, target spending and taxes to higher shares of state-level personal income than do Republicans (Alt and Lowry 1994, 2000; Besley and Case 1995, 2003; Knight 2000; Rogers and Rogers 2000). However, the party effects that are evident in these investigations are relatively insubstantial when

compared to those that are found in many cross-national comparisons of Western democracies (Cameron 1978; Tufte 1978; Hicks and Swank 1984) or time-series analyses of individual nations (Alt 1985; Hibbs 1987; Alesina and Rosenthal 1994).[1]

Similarly, scholars of state welfare policy have found that Democratic control of state government is associated with the provision of more generous welfare benefits. Yet, this relationship *only* emerges under certain electoral conditions. For instance, party-policy linkages have been found when partisan divisions or party cleavage structures reflect class-based coalitions (Jennings 1979; Brown 1995), when competition between political parties is particularly intense (Dye 1984; Barrilleaux, Holbrook, and Langer 2002), and when the degree of lower-class political mobilization or turnout is high (Hill, Leighley, and Hinton-Andersson 1995).

Collectively, these results have been, and continue to be, a persistent puzzle for scholars of subnational politics. Not only do they appear to deny the stylized depiction of representative democracy presented above, but they are particularly unsettling in light of the intensity of partisan competition over governorships and legislative positions as well as observations that state-level Republican and Democratic parties differ ideologically.[2] As a result, they raise an important question for the discipline of political science: How can we account for the weak relationship

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[1] Moreover, these results are often inconsistent with theoretical expectations and contradictory across studies. For instance, some researchers conclude that the party of the governor has a significant effect on state fiscal policy and does so in an expected manner, with Democratic governors leading to significantly higher rates of state expenditures and revenues (Besley and Case 1995; Rogers and Rogers 2000). Conversely, others have found that the governor's partisan affiliation either has no statistically meaningful influence on outcomes (Knight 2000) or pushes state policy in an unanticipated direction (Besley and Case 2003).

[2] Using survey evidence, Erikson, Wright, and McIver (1989, 1993) demonstrate that, in every state, Democratic Party elites are more liberal than their Republican counterparts.

that is often observed between the partisan control of state government and public policy?

The papers that comprise this dissertation provide an answer to this question. Collectively, they suggest that, while the partisan control of state government does have public policy implications, the ability of elected officials (and thereby political parties) to shape policy is ultimately mitigated by the *unique institutional context or environment* in which state decision-making takes place.[3] Stated differently, the dissertation argues that there are *ex-ante* reasons to expect the absence of strong universal party effects among the American states.

The evidence marshaled for this claim comes from the results of three separate investigations – all written as stand alone papers – into state fiscal policy-making. Each paper considers a potential constraint on the ability of governors and legislative majorities to design policy in a manner that is consistent with their preferences and those of their constituents. The focus of the empirical analysis in each is the tax policy choices made by elected officials over a fourteen-year period, fiscal years 1988 through 2001. As I will discuss later in this chapter, budgeting represents an ideal arena for testing hypotheses concerning the policy relevance of state-level political parties.

The first of the three papers (Chapter 2) examines whether competition between states over mobile economic resources restricts the policy choices of elected

[3] Other parts to the state politics literature suggest alternative explanations. Smith (1997) argues that the inability to detect strong party effects stems from the improper conceptualization and measurement of the partisan composition of state government, while Kousser (2002) claims that these findings result from the failure to effectively isolate the discretionary policy choices of elected officials.

officials. Economic theory suggests that the fear of losing businesses and quality residents to other jurisdictions forces state lawmakers to design tax and expenditure policies in a manner that anticipates and often matches the fiscal policy choices of their counterparts elsewhere. In other words, competition may act as the "invisible hand" that shapes government policy.

I explore this possibility by testing rival hypotheses derived from partisan and market-based models or approaches to policy-making. These tests show that while state tax policy is responsive to the partisan control of government, interstate competition is an important constraint on decision-making. In particular, I find that annual changes in a state's revenue policy are positively and significantly related to the changes adopted by its competitor jurisdictions. Furthermore, my results suggest that competitive forces overwhelm political influences when it comes to the taxation of society's most mobile resource – capital. While I find that personal income taxes are highly responsive to the partisan control of government, corporate income taxes appear to be unaffected by partisan politics.

The second paper (Chapter 3) assesses the effects of direct democracy institutions, particularly the citizen initiative, on party government. Progressive reformers argued that the initiative, by empowering ordinary citizens to both propose and approve new legislation, would ultimately reduce the ability of political parties to successfully pursue their policy objectives. In this chapter, I test the expectations of the Progressives by comparing the determinants of annual changes in tax policy between states that allow direct democracy and those that do not. These tests demonstrate that the initiative weakens the link between the partisan control of

government and public policy. Estimations of an econometric model show that strong party effects are evident in pure representative states, but that these effects largely disappear when citizens have access to the initiative process.

The final paper (Chapter 4) considers the effects of anti-deficit rules or balanced budget requirements. While the objective of these rules is to minimize or eliminate budget deficits, they may, by barring certain budgetary outcomes, also indirectly weaken the ability of elected officials to shape fiscal policy as they please. In this chapter, I show that stringent anti-deficit rules lead to the adoption of more and larger revenue enhancing measures, *ceteris paribus*. By creating upward pressure on taxation, these rules limit the ability of Republican (i.e., tax-cutting) governors and legislative majorities to move revenue policy in their preferred direction, thereby leading to fewer observed differences between the revenue policy choices of governments controlled by the Democratic Party and those controlled by Republicans.

To further establish the context of these three papers, I use the remainder of this chapter to explain my choice of dependent variables. First, I present a number of reasons why tax policy represents an ideal arena for exploring the policy relevance of state-level political parties as well as testing hypotheses concerning the limits of party influence. Following this discussion, I clarify the method by which I measure the tax policy choices of state governments. In doing so, I explain why the operationalization used in these papers is superior to those found throughout the state politics and public finance economics literatures.

2. Why Tax Policy?

While any number of policy areas could be employed in the empirical analyses presented in this dissertation, taxation is a natural starting point. First, tax policy is a dependent variable over which state politicians have near complete control. American state governments face very few restrictions on their abilities to raise revenues. Generally speaking, the states are endowed with broad powers of taxation and these governments have the ability to tax and spend *as they please* as long as they do not violate the Supremacy, Commerce, or Privileges and Immunities clauses of the U.S. Constitution. This means that within their jurisdictions they have relatively unfettered power to decide whom and what to tax, the revenue instruments to be employed, and the proportion of private wealth and income to be allocated to the (state and local) public sector.[4]

Second, the Republican and Democratic parties appear to have systematically different preferences with respect to revenue policy, making this a policy area in which the partisan control of state government should have measurable effects on outcomes. It is generally thought that Republican voters and party elites, on average, prefer a smaller public sector, and thereby lower levels of taxation, than their Democratic counterparts. This belief is well supported by academic analyses as well as public opinion polls (Trilling 1976; Petrocik 1996; Jacoby 2000; Alvarez and McCaffery 2003). Furthermore, numerous scholars have demonstrated that the disagreement between the Republican and Democratic parties over the appropriate

[4] The states *do not* enjoy similar powers in many other policy areas. When it comes to welfare policy, for instance, governors and legislators share lawmaking responsibilities with the federal government and are often required to design policy in a manner that conforms to federal guidelines.

size of the public sector is *the* defining feature of the partisan alignment that has dominated U.S. politics since the New Deal period (Ladd and Hadley 1978; Sundquist 1983; McClosky and Zaller 1984).

Third, the recurrent nature of the budgetary process provides researchers with a wealth of data. While elected officials are usually at liberty to choose whether or not to place an issue on the state's legislative agenda, they have no choice when it comes to budgetary matters. All state governments are constitutionally required to draft and adopt a budget either annually or biennially.[5] As a result, governors and legislators are continually writing and re-writing state tax laws.[6]

Finally, revenue decisions are among the most important policy choices made by state governments, making them substantively interesting for scholars and the public alike. Over time, the states have exercised their taxing authority to become crucial institutions in the allocation of societal resources. As of the 2000 fiscal year, the own-source revenues of state governments constituted just over ten percent of the country's GDP. Given the breadth and depth of the public sector in most states, state revenue policies undoubtedly have a noticeable affect on the distribution of societal resources, the quantity and quality of public goods provided by the state, and the overall functioning of state and local economies.

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[5] Twenty-nine states budget on an annual basis, while twenty-one do so biennially.

[6] Even those jurisdictions that budget biennially routinely make policy adjustments in "off years" through the use of corrective and supplemental revenue bills.

3. Measuring the Tax Policy Choices of Elected Officials

While state revenue policy is an ideal dependent variable, accurately capturing the tax policy choices of governors and legislators is a difficult task. Traditionally, scholarship in the political science and public finance literatures operationalize these choices using a measure of annual changes in state revenue collections (Poterba 1994; Alt and Lowry 2000; McAtee, Yackee, and Lowry 2003) or changes in tax rates (Berry and Berry 1992, 1994). However, these traditional approaches are problematic for testing the relationship between the partisan control of government and policy because each fails to isolate and fully describe government action.

Studies based on yearly changes in revenues have a difficult time separating the policy actions of governments from cyclical fluctuations in the economy. As the state economy expands and personal and corporate incomes rise, so do tax collections. Conversely, if the state experiences a recession, revenues usually fall. These shifts in revenue collection often create the impression that states have increased or cut taxes when no such action has occurred. While econometric models can control for these factors, it is all but impossible to determine whether economic influences have been sufficiently isolated.

Furthermore, the extent to which tax receipts respond to changes in the economy will depend upon the mix of revenue instruments employed by the state. Jurisdictions that rely heavily on personal and corporate income taxes will see revenue collections respond dramatically to cyclical fluctuations in the economy since these taxes tend to be elastic over the entire business cycle. On the other hand, jurisdictions that depend largely on consumption taxes will see much smaller yearly variations in

tax receipts since these revenue instruments are usually inelastic over the business cycle.

Additionally, studies that rely upon changes in tax rates may be even more problematic. While increases or decreases in rates clearly result from government action (as opposed to fluctuations in the state economy), a simple comparison of rates can often be misleading. To begin with, there is considerable variation among states in their use of deductions and other tax provisions. For instance, states *i* and *j* may both raise their top marginal corporate income tax rate from five to six percent. However, because these states are likely to differ in terms of their depreciation allowances, the method of determining the profits a firm earned within the state's boundaries, and the deductibility of federal taxes, these increases cannot be treated as being identical, even though they often are. Instead, a measure of "effective" tax rates would need to be calculated for each state. For large time-series cross-sectional analyses such measures would be nearly impossible to generate.

Secondly, most tax policy changes involve relatively "minor" but effective tinkering with the tax code, such as creating new credits, deductions, or exemptions, closing existing loopholes, or implementing a tax holiday. For instance, in 2001, twenty-four states enacted a change in their personal income, corporate income, or sales tax policy that was expected to have an observable effect on the amount of revenues raised. However, in only five cases did this actually involve a rate change. These more minor policy changes will be missed in an empirical investigation that focuses exclusively on tax rates.

Finally, state governments are increasingly relying on fees as a means of generating revenues. Spurred by the tax revolt of the 1970s, many states have adopted legal restrictions on the ability of legislatures to increase or adopt new taxes. The most common restrictions are tax limitations which constrain the growth of tax revenues to the growth rate of personal income, inflation, or population and supermajority requirements, which call for a three-fifths, two-thirds, or three-quarters legislative vote in order to raise taxes (Knight 2000).[7] Since these restrictions often do not apply to user fees, revenue hungry governments have turned to fee increases (for services such as vehicle registration and licensing, state parks, and college tuition) as a means of filling state coffers (Hansen 1983). In the past three fiscal years alone, state governments have raised user fees by over $2.8 billion as a means of closing projected budget shortfalls. Important shifts in state fiscal policy that result from fee increases or decreases would be overlooked in a study that uses year-to-year variations in tax rates as the dependent variable.

To avoid these potential problems, I have compiled an original data set for use with this dissertation. This data set consists of all *enacted revenue measures* – i.e., legislatively adopted changes to state tax policy – for each of the fifty states over a fourteen-year period, fiscal years 1988 through 2001.[8] Included are all tax changes that were expected to have an impact (either positively or negatively) on state revenue collections. Thus, the data encompass any increase or decrease in tax rates as well as less "headline worthy" changes to policy such as the creation or elimination of

[7] A handful of states also have voter approval requirements that force the legislature to obtain voter approval via a referendum for all tax increases and for the creation of any new revenue instruments.
[8] Data for fiscal years prior to 1988 are unavailable.

deductions and credits, the closing or opening of tax loopholes, changes in user fees, and the creation of tax holidays.

I collected the data on enacted revenue measures from various issues of *The Fiscal Survey of States*, a publication of the National Association of State Budget Officers (NASBO). Each year, NASBO conducts a survey of budget officials to determine, by state, the changes in tax policy that were adopted during the most recent legislative session. A list of these changes is then published along with an estimate of the net fiscal impact of each. The annual per-capita increase or decrease for all tax changes is the operationalization of the dependent variable that will be used for the bulk of the empirical analyses in the succeeding chapters.[9]

Overall, I believe that this dependent variable is better able to isolate the tax policy choices of governors and legislatures than either of the measures discussed above. My measure should not be confounded by fluctuations in the state economy and it will capture the more minor changes in state tax policy that are often missed in an analysis based solely on increases or decreases in tax rates. As such, it enables me to reliably estimate the determinants of government action and role that political parties play in shaping policy outcomes.

[9] To verify the robustness of econometric results generated using these data, alternative operationalizations of the tax policy choices of elected officials will occasionally be employed.

Chapter II: What Drives State Tax Policy: Electoral Outcomes or Interjurisdictional Competition?

1. Introduction

The terrorist attacks of September 11th, 2001 and the end of the economic expansion of the 1990s combined to trigger a severe financial crisis among state governments. States in every region of the country experienced sharp declines in revenue collections and, the largest source of state revenues, receipts from personal income taxes, fell for eight straight quarters (National Association of State Budget Officers 2003a, 2003b, 2004). At the same time, state governments faced rising pressures on the expenditure side of their budgets. Medicaid costs grew at double-digit rates and new homeland security measures proved more costly than originally anticipated. The result was several years of staggering budget shortfalls.

While the principal determinants of these shortfalls were consistent across jurisdictions, the means by which governors and legislators returned states to fiscal balance varied widely. Many states, including Florida and Oregon, reduced projected deficits by imposing deep cuts in service provision (Bousquet and Ulferts 2003; Quinn and Hunsberger 2003), while other jurisdictions, such as Virginia and Nevada, responded by enacting record increases in taxes (Hagar 2003; Shear and Jenkins 2004). Furthermore, among those jurisdictions that raised new taxes, the particular revenue instruments used often differed.

The diversity of strategies employed by state governments raises many important questions about state fiscal policy-making. What factors explain the revenue and expenditure choices of state governments? Why do some states respond

to a common exogenous shock by cutting expenditures and others by seeking out new sources of revenue? And why might a given state favor one type of tax over another?

Traditionally, political scientists have relied upon partisan models to explain fiscal choices such as these. Partisan models usually treat states as quasi-independent political systems and focus on internal factors as the primary determinants of policy. Most importantly, they suggest that the revenue choices of state governments will reflect the outcomes of intrajurisdictional electoral competition between the Republican and Democratic parties (Alt and Lowry 1994, 2000; Ringquist and Garand 1999). During elections, competing teams of politicians present voters with distinct platforms or ideologies, and voters choose between the available options. Once elected, those actors who control the policy-making institutions of state government – the governor and majority party in the legislature – use their formal and informal powers to shape fiscal policy in a manner that is consistent with their preferences and their campaign promises. According to political scientists, a state's tax and expenditure policies will largely be a function of the partisan control or composition of that state's government.

Economic theory, on the other hand, posits a market-based alternative to the partisan model. This approach envisions subnational governments as interdependent actors and emphasizes external influences as important determinants of state fiscal policy choices. According to many economists, states or groups of states compete amongst themselves over mobile capital (businesses) and high-quality labor (residents) through the tax and service packages that they design (Oates 1972, 1999; Gordon 1983; McGuire 1991; Oates and Schwab 1991; Shannon 1991). This

competition then acts as the "invisible hand" that shapes tax policy, incentivizing states to anticipate and often match the fiscal policy choices of other jurisdictions – particularly the choices of "competitor" states. In this market-based approach, a state's tax and expenditure policies are considered to be, in large part, a function of the policy choices of its competitors.

The market model represents a strong challenge to the expectations of political scientists. If economists are correct and interjurisdictional competition both constrains and shapes state revenue policy, then the party in control of state government may find it difficult to respond to the tax and expenditure preferences of its constituents. In other words, competition may weaken or undermine the hypothesized link between the partisan control of government and public policy. Such a reality would be troubling for democratic theorists and proponents of "responsible party government."

Interestingly, casual observation provides evidence that market forces do play an integral role in shaping state fiscal policy. Local newspapers abound with accounts of states engaging in fights over potential capital investment – fights that have the consequence of affecting tax rates as well as the level of public goods provision. For instance, twelve states recently offered the Boeing corporation tax breaks, low-interest loans, employee training, and discounted land if it were to locate the assembly line for its new jetliner within their jurisdictions (Dunphy 2003). As part of its attempt to lure Boeing, the state of Washington made its tax structure more competitive with those of rival jurisdictions by passing a $3.2 billion package of tax incentives for the entire aerospace industry. To further increase its competitive position, Washington also

raised its gasoline tax by five cents per gallon to pay for a new transportation plan desired by manufacturing interests (Pfleger 2003).

In the mid-1980s, interjurisdictional competition also appears to have led many southern states to increase taxes and public goods provision. Convinced that their medium- and long-range economic development was jeopardized by the poor quality of their public schools, the states of Mississippi, South Carolina, Arkansas, and Tennessee enacted a series of dramatic education reforms. Included in these were several tax hikes, the revenues from which were earmarked for increasing per-pupil expenditures, improving teacher pay (to avoid the exodus of well-trained educators to other regions of the country), and building new schools (Richburg 1985; Shannon 1991). These tax increases were justified to voters on the grounds that they were essential for attracting higher-paying jobs and increasing the overall competitiveness of the region (Raspberry 1988).

Despite anecdotal evidence indicating that interstate competition may be an important determinant of public policy, existing empirical investigations in the state politics literature have not incorporated or tested the expectations of the market model. Not surprisingly, political scientists routinely examine the relationship between the partisan composition of government and state fiscal policy while ignoring the potential effect of competition (Alt and Lowry 1994, 2000; Ringquist and Garand 1999).[10] As a result, we know relatively little about whether (and to what extent) interjurisdictional competition constrains the policy choices of elected officials.

[10] Similarly, economists test for the interdependence of states, but ignore the role that politics may play in shaping outcomes (Case, Rosen, and Hines 1993).

In this paper, I extend our understanding of state fiscal policy-making by examining the role that both political and economic forces play in determining outcomes. Specifically, I test several hypotheses that can be logically derived from the partisan and market approaches. To test these hypotheses, I develop and estimate an econometric model of annual *changes* in state tax policy. Two data sets are used in my analysis. The first is an original data set of enacted revenue measures which consists of all legislatively adopted changes to state tax policy. These data are used to examine the determinants of policy change at the aggregate level (i.e., across all categories of taxation). The second data set consists of yearly changes in per-capita revenue collections by type of tax. I employ these data to separately estimate the determinants of policy change by revenue instrument.

A number of precautions are taken in this analysis to ensure the robustness of my findings. First, my econometric model is estimated twice – once using the two-stage least squares instrumental variables approach recommended by the spatial economics literature (Anselin 1988; Kelejian and Robinson 1993; Franzese and Hays 2004) and a second time using OLS with panel corrected standard errors as suggested by Beck and Gleditsch (2003). Additionally, in order to test the expectations of the market approach, I develop and employ two alternative techniques for defining competitor states – one based upon geographic proximity and the other economic similarity.

Overall, I find evidence that supports both the partisan and market models. My results indicate that annual changes in tax policy are strongly related to state-level electoral outcomes. In general, when Democrats win control of the institutions of state

government they enact more and larger revenue enhancing measures. However, my results also show that tax policy appears to be significantly shaped by the actions of competitor states, regardless of whether I define competitors geographically or economically. Finally, I find that the extent to which policy is democratically controlled appears to be conditioned on the type of tax being considered, with taxes on capital (corporate income taxes) being unresponsive to the partisan control of state government and taxes on labor (personal income taxes) being most responsive.

In the following section, I present in more detail the partisan and market-based approaches that inform this analysis, and derive hypotheses from each. Next, I describe the data that will be used, my full econometric model, and the results it generates. Finally, I discuss the implications of my analysis for our understanding of the factors that shape state-level policy outcomes.

2. Explaining State Fiscal Policy: Theories and Hypotheses

2.1 The Partisan Model

The partisan model has traditionally been the dominant approach used in the formal and empirical investigations of state fiscal policy-making conducted by political scientists (cf. Ringquist and Garand 1999; Alt and Lowry 1994, 2000; Kousser 2004).[11] This model treats states as quasi-independent political systems or nation-states and assumes that the principal forces shaping policy choices are largely

[11] Increasingly, this model is being used in the empirical analyses of state fiscal policy undertaken by public finance economists (e.g., Besley and Case 1995, 2003; Knight 2000; Rogers and Rogers 2000).

internal to any individual jurisdiction.[12] At its core, the partisan approach assigns a great deal of explanatory power to the preferences of the political actors who control the policy-making institutions of state government – the governor and the majority party in the legislature. According to this model, these actors each have the *incentives* and the *ability* to shape state tax and expenditure policies.

In the partisan model, the desire to win reelection and retain political power is thought to incentivize governors and legislative majorities to manipulate state fiscal policy. During elections, political parties compete for the right to control the institutions of state government by presenting voters with a choice between alternative visions regarding how the polity should be governed. Once elected, the victors use their formal and informal powers to satisfy members of their electoral coalition. Officials do so by implementing – to the greatest extent possible – the policies they campaigned on, legislating in a manner that is generally consistent with their ideology, and securing benefits for and screening costs from their supporters (Peterson 1995). Governors or political parties who fail to successfully carry out these tasks increase their risk of being removed from office during the following election (Lowry, Alt, and Ferree 1998).[13]

This intuition (while applicable across all areas of public policy) should be particularly true with respect to state fiscal policy. To begin with, the recurrent and high-profile nature of the budgetary process makes it a useful tool for elected officials. While the legislature and governor are usually free to choose whether or not to place

[12] In this sense, political models of state policy-making are analogous to closed-economy models in the comparative political economy literature (e.g., Tufte 1978; Hibbs 1987).
[13] Of course elected officials may also be motivated to shape state policy by their personal beliefs.

an issue on the state's agenda, they have no choice when it comes to the budget. Constitutionally, a budget must be enacted either annually (as in twenty-nine states) or biennially (as in twenty-one states). As a result, state governments spend a considerable amount of time drafting, holding public hearings on, amending, debating, and ultimately passing their budgets. Each of these steps affords office holders with numerous opportunities to service the demands of their electoral coalitions.

Furthermore, societal interests attach considerable importance to the outcome of the budgetary process.[14] The budget ultimately determines which programs will and will not be funded, the revenue instruments used, and the distribution of the state's revenue burden across individuals, businesses, and economic activities. Not surprisingly, the outcome of the budgetary process often has clearly defined winners and losers. This suggests that lawmakers can expect to reap rich rewards when they fashion fiscal policy in a manner preferred by a majority of their constituents or a key member of their electoral coalition and punished when they do not. For instance, members of liberal legislative majority that votes to reduce corporate income taxes at the expense of raising teacher salaries or building new schools may find themselves punished at the ballot box during the succeeding election.

In addition to having the incentives to shape the budget, the partisan model also maintains that the governor and majority party in the legislature each has the ability to do so (Rosenthal 1990, 1998; Winters 1999; Brunori 2001). Generally speaking, the executive and legislative branches of state government share in the

[14] The significance of the budgetary process is evidenced by the central role that tax and expenditure policies play in state-level gubernatorial and legislative elections (Brunori 2001) as well as the intense lobbying effort that surrounds state budget-making (De Figueiredo 2003).

exercise of power and jointly make policy. This is particularly true with state tax and expenditure policy. Both the governor and legislature are responsible for enacting the budget and each has substantial formal and informal authority to influence state fiscal choices.

State constitutions generally require the governor to play a meaningful legislative role when it comes to budgeting by assigning to the state's chief executive the powers of *initiation* and *rejection*. In most states, the governor is responsible for preparing the budget and submitting it to the legislature for consideration. This gives the governor a first-mover advantage, allowing her to set the state's fiscal agenda and propose any enhancements or reductions in revenues or expenditures that she desires. The governor can then use her position as the state-level leader of her political party as well as her visibility in the media to pressure the legislative branch into adopting her proposals (Rosenthal 1990; Herzik 1991; Morehouse 1998).[15]

If the legislature is uncooperative, the governor can still shape the budget by either vetoing or threatening to veto appropriations and revenue bills. With one exception (the state of North Carolina), every governor has the authority to reject a particular piece of legislation. In addition to the ordinary executive veto, forty-three governors are empowered with a line-item veto. This power permits a governor to delete an individual item – such as a tax change or expenditure – from an appropriations bill while signing the remainder of the bill into law.[16] The ability to

[15] Typically, the governor is the leader of her political party in the state. As a result, senate and house leaders of the governor's party often act as "lieutenants" in the legislature, guiding the governor's proposals through the lawmaking process (Morehouse 1998; Rosenthal 1998)

[16] In twelve of these states the governor also possesses an item-reduction veto which allows her to reduce an item in an appropriation bill, rather than veto it entirely (Carter and Schap 1990; Abney and Lauth 1997).

reject legislation allows a governor to negotiate with legislative leaders from a position of strength, and, since few executive vetoes are overridden, gives her the last word or almost the last word on all budgetary matters (Herzik and Wiggins 1989).[17]

While governors usually have the first and last word in the budgetary process, much of the heavy lifting is done by state legislatures, which are charged with reviewing, modifying, and ultimately adopting the budget. For the most part, the legislature can add to, subtract from, or eliminate expenditures, programs, or revenue instruments. Within the legislature it is the majority party that has the ability to shape state fiscal policy in a manner that closely matches its member's preferences. The majority party can do so by manipulating legislative institutions and affecting how its members vote.

Ordinarily, the leadership of the majority party in each chamber exerts a great deal of influence over that chamber's appropriations and finance committees. It is these committees that are the principal legislative actors when it comes to reviewing and modifying the governor's budget. Their hearings, mark-up sessions, and conferences are considered to be among the most important steps of the budget-making process (Rosenthal 1998).[18] Majority party leaders – usually the speaker in the house and president or president pro-tem in the senate – appoint the committee members from the majority party as well as the committee chairs.[19] As a general rule,

[17] In all but six states an override requires a supermajority in each house. Such majorities are difficult to achieve since members of the governor's party are inclined to uphold a veto.
[18] The overall influence of appropriations and finance committees varies from state to state. However, where these committees are weak greater responsibility for drafting the budget is usually placed in the hands of the majority party leadership or caucus (Rosenthal 1998). This should still result in a budget that is biased towards the interests and preferences of the majority party.
[19] Oftentimes, the speaker of the house and president of the senate are also responsible for appointing the minority party members to these committees.

only legislators who are loyal to the party and supportive of the leadership are given these assignments (Jewell and Whicker 1994). By stacking the budget committees in this manner, leaders can ensure that the appropriations bills that are discharged from committees for consideration by the full chamber are fashioned principally by dependable co-partisans.

Once these bills reach the floor, the majority party leadership should again succeed in biasing outcomes in favor of the preferences of its caucus. Party leaders, through the use of selective incentives, are thought to be able to influence the roll call votes of their fellow caucus members on procedural matters, amendments, and final passage. Party leaders have a number of tools at their disposal, including the power to make committee assignments, appoint and remove committee chairs, calendar and expedite the passage of a member's bill, and distribute perquisites such as office space or legislative staff (Rosenthal 1990). Equally as important, legislative leaders play a key role in raising and allocating campaign funds among the members of their party's caucus (Jewell and Whicker 1994; Jewell and Morehouse 2001). Collectively, these resources give leaders plenty of carrots and sticks with which to discipline party members who may be tempted to defect to the position of the minority party on key budgetary votes.

In light of the incentives faced by elected officials as well as the formal and informal powers of governors and legislative majorities, the partisan model anticipates that state fiscal policy will be a function of the outcome of state-level elections. In other words, policy will respond to the partisan composition of state government. If, for instance, voters give control of the legislature to members of a political party that

generally favors high levels of public goods provision and therefore higher taxes (e.g., the Democratic party), the legislature should move policy in that direction. Likewise, if voters elect members of a party that favors a smaller state public sector (e.g., the Republican party), then taxes ought to decline.[20] The same logic should also hold true for governors.

Overall, the political approach implies a theoretical and empirical model of the following form:

$$\Delta Tax_{it} = \beta_1 P_{it} + \beta_2 X_{it} + \varepsilon_{it} \qquad (1)$$

where ΔTax_{it} us the change state *i*'s tax policy at time *t*, P_{it} is a vector of state-level political characteristics at time *t* that includes the partisan composition of the state legislature and the partisan affiliation of the governor, and X_{it} is a vector of state level characteristics for state *i* at time *t* that includes a number of demographic, economic, and institutional measures. The empirical regularity that we should observe if electoral outcomes are an important determinant of state fiscal policy is a correlation between changes in a state's tax policies and the partisan make-up of its government – a significant β_1. This predicted relationship is expressed below as the Partisanship Hypothesis.

Partisanship Hypothesis (H_1): The partisan composition of state government will affect changes in state tax policy, *ceteris paribus*.

[20] Traditionally, it is assumed that state Democratic parties and their nominees have a higher preference for taxes and spending than do state Republican parties. Such an assumption, although potentially problematic due to the federal nature of America's party system, is reasonable in light of survey research on the ideology of state party elites. For instance, research by Erikson, Wright, and McIver (1989) has shown that, in every state, Democratic party elites are more liberal than their Republican counterparts.

2.2 The Market Model

While the partisan approach is widely used by political scientists, the market model is most prevalent in the theoretical and formal investigations of subnational fiscal policy-making undertaken by public finance economists (cf. Gordon 1983; Mintz and Tulkens 1986; Wilson 1986, 1995; Wildasin 1988; Oates and Schwab 1991).[21] This model differs substantially from the partisan approach detailed above, both in terms of its underlying logic and conclusions. The primary difference between the two, however, is that the market model treats states as *interdependent*, rather than independent, actors. As a result, market-based approaches assign a great deal of explanatory power to factors *external* to any given state – particularly the policy actions of that state's "competitor" jurisdictions.[22] In this approach, state *i*'s tax policies are shaped in large part by the policy choices of other states, and the policy choices of other states are in turn shaped by state *i*'s decisions.

In the market approach, states are treated as interdependent actors because they are believed to compete with one another over a relatively fixed supply of mobile capital (businesses) and quality labor (residents). This approach usually maintains (at least implicitly) that states engage in this competition because they desire or benefit from the accumulation of these resources. Formal models constructed by public finance economists often assume that states pursue capital and quality labor as a means of enhancing the well being or utility of their constituents (e.g., Wilson 1987, 1995; Oates and Schwab 1991; Inman and Rubinfeld 1996). New businesses and

[21] These models are often developed with local (as opposed to state) governments in mind.
[22] In this respect market models of state fiscal policy are analogous to open-economy models in the comparative political economy literature (e.g., Franzese 2003; Simmons and Elkins 2004).

residents are thought to result in economic growth, improved job opportunities, and increases in personal incomes.

In market models, the locational decisions of mobile capital and labor are not exogenous. Individuals and firms chose to locate in a particular state based upon its characteristics or features relative to those of other potential jurisdictions. However, since many features of a state are fixed – including its climate, geography, natural resources, and legal and cultural history – states are thought to compete for mobile resources, in large part, through the public policies that they design. Chief among these are tax and expenditure policies.[23]

Utility-maximizing individuals and firms are thought to compare tax and service packages across jurisdictions and make locational decisions on this basis (Oates 1972; Oates and Schwab 1991; McGuire 1991). If one state imposes a high tax burden relative to other states, its economic growth and fiscal well-being may be harmed as individuals and businesses "vote with their feet" and move elsewhere. Similarly, if a state under-funds its elementary and secondary schools, transportation systems, or other important public goods it may have trouble attracting new investment and residents or even maintaining its existing stock (Kenyon 1990; Shannon 1991).

According to the market model, jurisdictions that hope to avoid this fate need to design their tax and expenditure policies in a manner that recognizes and yields to

[23] Of course many factors enter into these decisions that are largely unrelated to state fiscal policy. For instance, firms may be attracted to locations near their suppliers or in areas with a seaport or particular types of natural resources. Individuals, on the other hand, may make residential decisions on the basis of familial ties or various quality of life factors, such as the climate and the availability of particular recreational activities.

the realities of the marketplace – i.e., each state must keep a vigilant eye on the policy choices made by others, particularly those states with which it "competes" for mobile actors. In this sense, horizontal competition places certain bounds on the actions of the fifty states, setting the limits on how far any state can push ahead of its competitors on the tax and expenditure front and likewise how far it can fall behind. To borrow the analogy of Shannon (1991), the behavior of competitor states can be compared to a wartime convoy of ships – the farther any state moves ahead of the convoy in terms of its level of taxes and expenditures, the greater are the risks of losing mobile resources to more fiscally conservative jurisdictions. Similarly, the farther any state falls behind the convoy, the greater become the risks of losing economic growth to states that provide a higher quality of public services.[24]

At this point, it is important to mention that the market model does not predict a "race to the bottom." Many economists, political scientists, and legal scholars have argued that state governments, in their eagerness to promote economic growth and attract mobile resources, aggressively hold down tax rates and produce public goods and services at suboptimal levels (cf. Break 1967; Peterson and Rom 1990; Rivlin 1992; Peterson 1995; Enrich 1996). If businesses and individuals made locational decisions solely on the basis of tax rates, this expectation may be reasonable. However, the market model posits that mobile actors are as concerned about the level and types of public goods that are provided by the state as they are with their annual

[24] It is this pattern of competition which is thought to prevent any single state from undertaking particularly "bold" policy actions such as imposing a personal income tax rate of fifty percent, offering free health care for residents, or eliminating its public university system (Kenyon 1990).

tax bill.[25] Relatively low levels of public service provision may reduce the general attractiveness of a given jurisdiction just as much as relatively high levels of taxation. This means that, at times, interjurisdictional competition will necessitate raising additional revenue to finance an expansion of the state public sector – a conclusion that runs counter to that of the "race to the bottom" literature.

Additionally, the market model does not imply fiscal policy convergence among all states. Instead, it anticipates competition or mimicking between competitor jurisdictions only. This expectation stems from the observation that there is substantial variation in the needs and wants of different mobile actors as well as the attributes of states – including those attributes that are determined exogenously and those that are shaped by public policy.[26] These variations lead states or groups of states to compete for different mobile resources (Kenyon 1997). For instance, Nevada, Arizona, and Florida may compete among themselves for wealthy retirees while Tennessee, Alabama, and Mississippi vie for new textile manufacturers. Of course, the market model does assume that states are aware of the identity of competitors, their policy actions, and the potential consequences of not matching competitors' decisions.

Overall, the economic approach implies a theoretical and empirical model of the following form:

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[25] For instance, studies show that high spending on education draws immigrants and increases a state's rate of economic growth (Wasylenko and McGuire 1985). Additionally, consultants who assist firms in making locational decisions indicate that higher levels of government expenditures on education, police protection, and cultural activities can increase the attractiveness of a location (Ady 1997).

[26] If the model were to assume that all states are homogenous and compete over the same set of capital and labor, then universal policy convergence might be a reasonable expectation.

$$\Delta Tax_{it} = \rho_1 \sum_{j=1}^{n} w_{ij} \Delta Tax_{jt} + \beta_2 X_{it} + \varepsilon_{it} \qquad (2)$$

where ΔTax_{it} is the change in state i's tax policy at time t, $\sum_{j=1}^{n} w_{ij} \Delta Tax_{jt}$ is a weighted measure of the tax policy changes of state i's competitors at time t, and X_{it} is a vector of state level characteristics for state i at time t that includes a number of demographic, economic, and institutional factors. It is important to note that w_{ij} in this terms is an element in a weight matrix that defines the degree of competition between states i and j. Put in simpler terms, it defines i's competitors.[27] This final term will be referred to throughout the paper as the "spatial lag." The term "spatial lag" comes from the spatial econometrics literature. This expression is used because, instead of lagging the value of the dependent variable one unit in time, one "lags" the dependent variable in space.

If horizontal competition is an important predictor of state revenue policy, we should anticipate three empirical regularities. The first of these is a strong positive correlation between the changes in state i's tax policies and those of i's competitors – a positive and significant ρ_1. While a negative coefficient may also imply horizontal interdependence between states, it would not be interdependence based on the type of competition detailed in this section. The market-based model anticipates that the fiscal policies of competitor states will generally move in the same direction. A

[27] It is worth noting that this last term is widely used in the growing field of spatial econometrics to model spatial dependence or neighbor effects (see Anselin 1988). The w_{ij} component in this term is an element in an n x n weight matrix that defines the degree of interdependence or competition between states i and j. w_{ij} takes on a non-zero value where there is a relationship (competition) between states i and j and zero if there is none.

negative coefficient would imply the opposite – a tax increase by state *i*'s competitors would lead state *i* to actually reduce its own taxes. While one can imagine state *i* acting in this manner occasionally, this is not a sustainable pattern of behavior. If *i* cut taxes every time its competitors increased them, eventually its level of public service provision would lag far enough behind that of its competitors that it would begin losing mobile factors of production to these jurisdictions. This expectation is expressed below as the Emulation Hypothesis.

Emulation Hypothesis (H_2): Changes in state tax policy will be positively correlated with changes in the tax policies of competitor states, *ceteris paribus*.

A second hypothesis that can be generated from the market model is that high tax jurisdictions should be less likely to enact revenue-enhancing measures than low-tax jurisdictions, all else being equal. If states are engaged in horizontal competition over businesses and residents, those that already generate a great deal of revenue per-capita and thereby provide a high level of public services, are likely to be pushing the bounds of a sustainable fiscal policy. Further tax increases may jeopardize future economic development and drive mobile resources into the jurisdiction of a more fiscally conservative competitor. This expectation is labeled the Decelerator Hypothesis.[28]

Decelerator Hypothesis (H_3): High-tax states will be less likely to raise taxes than low-tax states, *ceteris paribus*.

[28] This could just as easily be labeled the Accelerator Hypothesis. The logic of market-based models also implies that low tax states will be more likely to raise taxes than high tax states.

A third prediction that can be derived from the market model pertains to the relative effect that horizontal competition will have on different revenue-generating mechanisms. If competition between states exists as a result of the mobility of factors of production, it logically follows that the potential harmful effects of taxing a given resource depends, in part, on the likelihood of the resource actually leaving. When mobility is absent or relatively low, there is less risk involved in levying a tax that is disproportionate to that of one's competitors and thereby less of a need to act strategically. Conversely, if mobility is high, a state faces very strong incentives to anticipate and match decisions made outside its jurisdiction.

Economists generally assume that capital is relatively more mobile than labor (particularly uninvested capital), since it has no emotional or familial ties to a geographic location and can often be moved with little cost. In light of this, it seems reasonable to expect that subnational governments will be more responsive to the actions of their competitors when it comes to taxing corporate as opposed to personal income. This logic is consistent with many of the findings in formal models of tax competition developed by public finance economists (Gordon 1983; Wilson 1987; Wildasin 1989; Oates and Schwab1991). This expected relationship is expressed below as the Mobility Hypothesis.

Mobility Hypothesis (H_4): State taxation of capital (corporate income) will be more responsive to interjurisdictional competition than will state taxation of labor (personal income), *ceteris paribus*.

2.3 Constructing a Unified Model

The partisan and market models have unique theoretical underpinnings and generate different and seemingly contradictory sets of expectations. However, these competing theoretical perspectives need not be mutually exclusive. One can certainly imagine a world in which state officials recognize both economic competition and electoral politics as constraints and manage to incorporate both into their decision-making process. If this is true then equation (1) or (2) by itself is under-specified and, if estimated, would produce biased and untrustworthy results.

To allow for the possibility that electoral politics and market competition both affect state fiscal outcomes, I combine equations (1) and (2) into a single additive expression that takes the following form:

$$\Delta Tax_{it} = \beta_1 P_{it} + \rho_1 \sum_{j=1}^{n} w_{ij} \Delta Tax_{jt} + \beta_2 X_{it} + \varepsilon_{it} \qquad (3)$$

Ultimately, equation (3) is the expression that I estimate in the proceeding empirical analysis. This equation enables me to test the partisan and market models simultaneously. Given the additive nature of the expression, if either of these models is a poor predictor of outcomes, the inclusion of explanatory variables meant to capture its potential effects should not significantly alter the coefficients on other right-hand side variables. Put differently, it would be far worse to incorrectly assume that these approaches are mutually exclusive and estimate equations (1) and (2) separately than to estimate them jointly and discover that only one approach "matters."

3. Data and Empirical Analysis

The empirical problem now is twofold. First, I need to identify appropriate measures of tax policy change, the partisan composition of state government, and the policy actions of competitor states. Second, I need to estimate the effects of these latter two variables while controlling for a battery of potential confounding influences. Below I describe how these measures are created as well as the specific econometric methodology used to estimate equation (3).

3.1 Dependent Variables

In this paper, I measure government policy choices using an original data set of enacted revenue measures – i.e., legislatively adopted changes to state fiscal policy. This data set consists of *all* changes in policy that were expected to have an impact on state revenue collections. Included are increases or decreases in tax rates, the creation or elimination of deductions and credits, the closing or opening of tax loopholes, changes in fees, and the creation of tax holidays.

The data on enacted revenue measures were culled from various issues of *The Fiscal Survey of States*, a publication of the National Association of State Budget Officers (NASBO). Each autumn, NASBO publishes a list of the tax increases and decreases enacted by each state for the succeeding fiscal year. In addition to reporting the specific revenue measures adopted, it provides an estimate of the net fiscal impact of each. The net annual per-capita revenue increase or decrease for all tax changes (usually Table 7 in the reports) is the operationalization of the dependent variable that is used to test the hypotheses developed above. Since this figure is reported in current

dollars by NASBO, I have converted the values for each year into 1996 dollars using the Consumer Price Index for all urban consumers (CPI-U).

Data on enacted revenue measures are available for fiscal years 1988 through 2001.[29] While this time period may strike readers as relatively brief there is sufficient variation on the dependent variable to generate reliable estimates of equation (3). The fourteen years included in this analysis witnessed a large number of changes to state tax policy. On average, thirty-three states per fiscal year enacted at least one change that was expected to have a noticeable effect on revenue collections, with an even larger number altering their tax policies during the recession of the early 1990s and the expansionary years in the latter part of the decade.

3.2 Explanatory Variables

In order to assess the Partisanship Hypothesis, the econometric model used here includes a number of dummy variables – one for each of the possible configurations of the partisan control of state government. The variable measuring unified Democratic control is excluded and serves as the reference category. The data for these variables were gathered from various issues of the *Book of the States* and the *Statistical Abstract of the United States*. Additionally, cross-sectional variations in the timing of state budget processes were accounted for in order to ensure that these

[29] Any NASBO data on enacted revenue measures prior to fiscal year 1988 is unusable in this analysis because it does not include the net fiscal impact of tax changes. Similarly, the data reported after 2001 cannot be used because corresponding data for many of the control variables are not yet available from the U.S. Census Bureau.

measures accurately reflect the partisan composition of state government at the time the budget was passed and signed into law.

It is worth noting that there is some dispute as to how to best measure party strength in state governments (see Smith 1997). In alternative model specifications (not reported here) I experimented with other commonly used methods. In some of these I employed a continuous measure of the legislative strength of the Democratic Party. In others, I used dummy variables that separately measure the partisan control of the legislature and the partisan affiliation of the governor. Ultimately, however, each of these measures performed equally well.

Testing the Emulation Hypothesis poses different challenges. Because this hypothesis anticipates a positive correlation between changes in state *i*'s revenue policy and that of its competitors, it requires the creation of a method of identifying competitor states – i.e., an appropriate weighting mechanism, w_{ij}, to aid in calculating the spatial lag of the dependent variable in equation (3). Not surprisingly, creating these sorts of weighting mechanisms is complicated because there is no clear or universally-accepted method of identifying competitors. In light of this ambiguity (and as a robustness check), I employ two defensible techniques and run separate regressions using each.

The first of these, $w^{geo.}$, is based upon geographic proximity. With this weighting device, states are considered competitors if they share a common border or vertex of nonzero length. Values for this weight can be generated using the following:

$W_{ij} = 1/S_i$ if i and j share a border; $w_{ij} = 0$ otherwise; and S_i = the number of borders or vertices state i shares. [30]

The reasons underlying the use of a geographic weight are twofold. First, it is probably less costly for firms and individuals to relocate to a neighboring state than one in a different region of the country. This should make competition between geographic neighbors more intense than the competition between states located farther apart. Anecdotal evidence appears to support this statement. A recent survey found that the most aggressive "poachers" of California businesses are the states of Oregon and Nevada, two of its three neighbors (Flaccus 2003). Second, if similar states are more likely to compete with one another than non-similar states (e.g., if Tennessee is more likely to compete with Alabama than New York) then geography should once again serve as a good proxy for competition since neighboring jurisdictions are more similar – across a number of dimensions – than are distant ones.[31]

The second weighting mechanism, $w^{manu.}$, is based upon economic similarity. This weight treats all states as competitors but assigns much greater importance to states that have similar levels of manufacturing employment. The logic underlying the creation of this weight is that states with a similar economic base will be competing over a similar pool of capital and labor. Values for this weight are generated using the following:

[30] This method of weighting imposes the restriction that each state's competitors have an equal effect on its policy actions. It also implies that the marginal impact of each neighbor declines as the total number of neighbors increases.

[31] The assumption that neighboring jurisdictions are more similar than non-neighboring ones is consistent with Tobler's (1979) *First Law of Geography*, in which 'everything is related to everything else, but near things are more related than distant things.'

$$w_{ij} = \frac{\sqrt{\frac{1}{|manu_i - manu_j|}}}{S_i}$$ where $manu_i$ is the percent of non-agricultural employees working in manufacturing establishments in state i (mean over the sample period)[32]; and $S_i = \sum_j \sqrt{\frac{1}{|manu_i - manu_j|}}$

Each weight is substituted into the spatial lag term in equation (3) to generate a measure of the tax policy changes of competitor states. These measures are then included as right-hand side variables. However, since both cannot be utilized in the same model estimation (due to concerns of multicollinearity), I estimate equation (3) twice – once using the geographic weight to determine the tax actions of competitors and once using the weight based upon economic similarity.

Finally, the Decelerator Hypothesis is tested by including a temporal lag of total per-capita revenues as an explanatory variable. The source for this revenue data is the World Tax Database. These data have been converted into 1996 dollars using the CPI-U.

3.3 Control Variables

In addition to the terms already described, several state-level characteristics are included in the model to control for potentially confounding influences. Previous studies have found that socioeconomic variables are important determinants of public policy (Dawson and Robinson 1963; Hofferbert 1966; Hero and Tolbert 1996). To

[32] Data on state-level manufacturing employment comes from the *Statistical Abstract of the United States*.

account for these factors I include state per-capita income, the annual change in per-capita income, the annual change in the state-level unemployment rate, a measure of the previous year's budget surplus as a percentage of state expenditures, and the percent of a state's population that is black. Along with these socioeconomic factors, a number of institutional variables are also used, including a ten-point scale for the stringency of a state's balanced budget requirement,[33] a dummy variable for the existence of a tax or expenditure limitation, the legislative percentage that is required to pass a tax increase,[34] and a dummy for states that allow the citizen initiative.

Previous research has also found a positive relationship between liberal electorates and the liberalness of state-level public policy (Erikson, Wright, and McIver 1989). As a result, I add a control for voter preferences. The measure I use here is the state opinion liberalness score developed by Erikson, Wright and McIver (1993).[35]

Lastly, I include a dummy variable for the eleven states of the former Confederacy. Studies of the relationship between the partisan control of state government and public policy often remove the south from their empirical analyses due to its lack of a competitive two-party system (e.g., Alt and Lowry 1994). I depart from this tradition here because, in addition to party effects, I am substantively

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[33] All states, with the exception of Vermont, have either a constitutional or statutory balanced budget requirement. Higher values on the scale used here represent more stringent requirements.

[34] A number of states require a three-fifths, two-thirds, or three-quarters legislative vote in order to raise taxes (Knight 2000).

[35] These scores are based on responses to 122 *CBS/New York Times* telephone surveys (between 1976 and 1988) in which respondents were asked their ideological identification. Specifically, survey respondents were asked the following question: "How do you describe your views on most political matters? Generally do you think of yourself as liberal, moderate, or conservative?" Higher values on this index represent a more liberal public opinion.

interested in the impact of interjurisdictional competition – much of which may be regional in nature. As a result, I keep the southern states in my analysis and rely on the south dummy variable to capture the purported uniqueness of the region's politics. Summary statistics for all of the variables used in this analysis as well as a list of my data sources are provided in Table 2.1.

Table 2.1 here (See Appendix 1)

3.4 Estimation strategy

The hypotheses developed in this paper are tested by estimating equation (3). However, as equation (3) stands, it should not be estimated with ordinary least squares. The equation suffers from a simultaneity bias because the spatial lag of the dependent variable on the right-hand side of the equation is potentially endogenous to the dependent variable on the left-hand side. This simultaneity is easy to recognize intuitively. Theory indicates that some units *j* affect unit *i* (i.e., state *i*'s policy choices are affected by the policy choices of its competitors), which is why a weighted average of *j*'s outcomes are included as an explanatory variable in the first place. However, *i* also affects some units *j* (i.e., the policy choices of state *i*'s competitors are also affected by the choices made by state *i*), meaning that the spatial lag actually contains some parts of *i*'s outcome. The existence of simultaneity means that OLS results may be biased and inconsistent (Anselin 1988; Franzese and Hays 2004).

Fortuitously, the growing field of spatial econometrics suggests two techniques that can be used to estimate equation (3). The first approach, and the one which has received the most attention, is to use the maximum likelihood estimators developed by

Ord (1975).[36] However, these ML estimators have two rather significant drawbacks when applied to models such as the one developed in this paper. First, while they produce accurate estimates of most effects, they have a tendency to noticeably underestimate the strength of the interdependence between units (Franzese and Hays 2004). This is troubling in light of the fact that I am substantively interested in the potential interdependence between states and am not modeling interdependence as a nuisance to be corrected. Moreover, ML is computationally very demanding, particularly when used with relatively large samples. The source of these difficulties is the large matrices that are necessary to estimate the coefficient of the spatial lag. Running these models can often consume hours of computer time (Land and Deane 1992).

The second approach is to use a two-stage least squares instrumental-variable technique (2SLS-IV). In this approach the simultaneity problem is addressed by identifying one or more variables (instruments), Z, that covary with the endogenous regressor, X, but are uncorrelated with the error term of the structural equation. In the first stage of the model, X is regressed on Z, and in the second stage the dependent variable, Y, is regressed on the fitted values of X that are derived from the first stage estimation as well as all of the exogenous regressors. Typically, the spatial econometrics literature recommends using as instruments the spatial lags of the exogenous right-hand side variables (Anselin 1988; Kelejian and Robinson 1993). This approach does not underestimate interdependence and is much easier to

[36] For an application of this technique to state fiscal policy see Case, Rosen, and Hines (1993).
[37] The same weights are used to generate the spatial lags of the exogenous variables as are used to generate the spatial lag of the dependent variable.

implement than spatial ML. Furthermore, it produces estimates that are unbiased and reasonably efficient (Land and Deane 1992; Franzese and Hays 2004).

As a result, I estimate equation (3) using the 2SLS-IV approached discussed here. In keeping with the recommendation of methodologists, I instrument my measure of the weighted average of the policy changes made by state *i*'s competitors (i.e., the spatial lag of the dependent variable) with spatial lags of my exogenous independent variables.[37] The results of this estimation are discussed below.

3.5 Testing Hypotheses 1-3

Hypotheses 1 though 3 are tested (simultaneously) by estimating equation (3) using the data on enacted revenue measures. Table 2.2 reports the results of two separate estimations of the first stage of my econometric model.[38] In this stage, the policy changes made by state *i*'s competitors, my *endogenous* right-hand side variable, is instrumented using the spatial lags of all of my *exogenous* variables. These spatial lags are created using the weights discussed above. The first column (labeled Model 1) displays the first-stage estimation that uses the geographic weight in determining both the policy changes made by competitor states and the values of the spatial lags of the exogenous variables. The second column (labeled Model 2) reports the estimation that makes use of the economic similarity weight.

Table 2.2 here (See Appendix 1)

While it is probably not useful to spend a great deal of effort interpreting these estimations, there are two result that are worth mentioning. First, the values of the

coefficients of determination, .53 and .81, show that the first stage of both models is quite successful in predicting the actions of competitor states. These large values imply that the second stage estimation will be reasonably efficient. Additionally, the coefficients on many of the instruments used here have the correct sign and are statistically significant, suggesting that economic, political, and institutional factors all play an important role in shaping state policy choices.

Table 2.3 reports the estimations of the second stage of my econometric model. In this stage, the policy changes of state *i* are regressed on all of my exogenous independent variables as well as the fitted values of my endogenous regressor that were derived from the first stage. Once again, Model 1 uses the geographic weight and Model 2 employs the weight based upon economic similarity. Here, as in Table 2.2, both models generally perform well and each has a relatively high R-squared, particularly in light of the fact that the dependent variable is a measure of policy change.

Table 2.3 here (See Appendix 1)

Both estimations provide support for the Partisanship Hypothesis, indicating that changes in state fiscal policy are responsive to electoral outcomes. According to models 1 and 2 when Republicans control the governorship and at least one legislative chamber they set taxes at a significantly lower level than do Democrats. For instance, the table indicates that the tax changes enacted by a unified Republican government will decrease the tax burden by between $22 and $26 per-capita when compared to the

[38] The states of Alaska and Hawaii are excluded from all of the following estimations because they have no neighboring states. Nebraska has also been excluded because of its non-partisan legislature.

baseline case of unified Democratic control. Similarly, when the Republicans control the governorship and are the majority in one legislative chamber the tax level they set will be between $12 and $15 lower per-capita than that set by Democrats.

In addition to supporting the Partisanship Hypothesis, the results reported here provide strong evidence for the first two hypotheses derived from the market model.[39] With respect to the Emulation Hypothesis changes in state tax policy appear to be positively and significantly influenced by changes in the tax policies of other or competing states, regardless of whether the geographic or economic similarity weight is used. According to the coefficients in Table 2.3, a tax increase of $1 per capita by a state's competitors should lead the state to enact a similar per-capita tax increase of between 53 and 42 cents.

Furthermore, the estimates of equation (3) provide consistent support for the Deceleration Hypothesis. The negative and significant coefficient on the variable *Revenue Per-Capita*$_{t-1}$ in both models indicates that the higher a state's per-capita tax burden in the previous period, the less likely it is to enact a large revenue enhancing measure in the current period. This empirical regularity suggests high tax states are cautious about pushing their tax burdens too far ahead of those of their competitors.

Both the geographic and economic similarity weights perform well. Since I find strong evidence that horizontal competition affects tax policy in both estimations, I am confident that these results are not simply a product of the mechanism used. That being said, a word of caution is in order with respect to the economic similarity weight. Since a state's level of manufacturing employment may itself be an outcome

[39] The Mobilty Hypothesis will be tested later in the analysis.

of interjurisdictional competition, the values of this weight may be endogenously determined. In light of this possibility, geography is probably the better mechanism for defining competitor jurisdictions – a state's geographic location is clearly exogenous.

3.6 An Alternative Specification

While the above empirical analysis appears to provide strong support for the market and partisan models, skeptical readers may not yet be convinced that horizontal competition is driving these results. It is possible that the significant coefficients on the spatial lags result from the fact that competitor jurisdictions are often subject to common random shocks. The presence of common shocks may result in correlated errors between "competitor" states which then produce regression results that mimic or are observationally equivalent to those that we would see if states were actually altering policy as the result of the choices made by other jurisdictions. For instance, states *i* and *j* may both be hit by a hurricane and simultaneously raise taxes in order to pay for reconstruction. The casual observer, if he or she overlooks the hurricane, may conclude that these states are interacting strategically when in reality they are not.

The potential for my results to be affected by shocks such as these is noteworthy since equation (3) assumes that states respond to the actions of their competitors "instantaneously." As equation (3) is currently written, ΔTax_{it} (the tax changes made by state *i* at time *t*) is a function of the tax changes made by competitor states during the *same* fiscal year.

Similarly, readers may question the previous set of results because they simply do not believe that the budgeting process affords state governments the opportunity to respond to the actions of their competitors during the same fiscal year. Clearly, there is a great deal of cross-sectional variation in the timing of the budget process, with some states drafting a budget biennially and others doing so annually.[40] This variation may hamper the ability of states to act simultaneously. Moreover, the uncertainty that characterizes the state budget process may make it difficult for a state to anticipate and match the budget actions of its competitors, particularly if its competitors are slow to adopt their new budget or engage in long budget battles.

Here, I address both of these concerns by developing and estimating an alternative specification to equation (3). Since both potential criticisms relate to the same underlying assumption, this alternative specification simply requires me to replace the assumption of simultaneous state action. If I assume that state *i* is influenced by the policy choices made by its competitors in the *previous* period instead of the current period, I reduce the risk that common shocks are leading to inaccurate inferences about the interdependence of states. Furthermore, this new assumption addresses, in part, the concerns of critics who see a great deal of variation and uncertainty in state budgeting.

In this alternative specification, I lag my measure of the policy actions of state *i*'s competitors by one time period. The new expression takes the following form:[41]

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[40] However, if need be, states that budget biennially can usually hold special sessions of the legislature to alter state tax policy during non-budgetary years.

[41] The only difference between equations (3) and (4) is that the subscript on the spatial lag term now reads $t - 1$ as opposed to t.

$$\Delta Tax_{it} = \beta_1 P_{it} + \rho_1 \sum_{j=1}^{n} w_{ij} \Delta Tax_{jt-1} + \beta_2 X_{it} + \varepsilon_{it} \quad (4)$$

While relaxing the assumption of instantaneous effects requires only a minor change in notation, it has much broader implications for the estimation strategy. Since I am now assuming that it takes one fiscal year for state *i* to respond to the policy actions of competitor states, Equation (4) does not suffer from the same simultaneity problems as equation (3). As a result, it need not be estimated via two-stage least squares or maximum likelihood. According to Beck and Gleditsch (2003), spatial lag models that use time-series cross-sectional data and employ a temporal lag of the spatial lag can be estimated using OLS with panel-corrected standard errors, provided that a temporal lag of the dependent variable is also included (to ensure that errors are serially uncorrelated).

In light of the recommendation by Beck and Gleditsch, I use OLS with panel-corrected standard errors to estimate equation (4). The equation is estimated twice – once employing the geographic weight and a second time using the weight based on economic similarity. The same dependent and independent variables are used here as were employed in the original estimation of equation (3). The results are presented in Table 2.4.

Table 2.4 here (See Appendix 1)

Overall, this second set of results suggests that my earlier findings of policy interdependence between states are not driven by common shocks among competitors or by my simplification of the budget process. The coefficients on both of the new (temporally lagged) spatial lag terms are positive and significant (one at the 95 percent

level and the other at the 90 percent level) regardless of whether the geographic or economic similarity weight is used. Once again, it appears as if changes in state tax policy are positively and significantly related to changes in the policies of competitor states. Furthermore, those political variables that were significant in my earlier results remain important predictors of outcomes.

While equation (4) is much easier to estimate and produces results that are generally consistent with those of equation (3), it is ultimately an inferior approximation of the market model. According to the market-based approach, states compete *in concert* for mobile capital and labor. For instance, when Boeing decides to search for a jurisdiction in which to build the factory for a new jetliner, it compares the tax and service packages offered by states in the current period. Similarly, if states are actively competing for Boeing, they design their incentive packages at roughly the same time (certainly in the same fiscal year), by anticipating the actions of rival jurisdictions and structuring their own offers in a manner that recognize the current policies of competitors. This means that the assumption of simultaneous action, despite the aforementioned criticisms, is necessitated by the market model. In other words, we have strong theoretical reasons to believe that state policy actions have a simultaneous and reciprocal effect on their competitors. Equation (3) allows for this relationship while equation (4) does not. In light of this, I recommend interpreting equation (4) as little more than a robustness check for the previous results.

3.7 Testing Hypothesis 4

The market model suggests that the effects of horizontal competition on state fiscal policy should vary depending upon the type of tax under consideration. In particular, economic theory expects that the taxation of highly mobile resources (capital) will be more responsive to the actions of rival states than will the taxation of less mobile resources (labor). The logic underlying this expectation is that state governments must act more strategically when it comes to taxing capital since capital has no familial or geographic ties to the jurisdiction (particularly uninvested capital) and can often be quickly and easily moved.

I test this hypothesis by estimating the annual determinants of changes in state corporate and personal income tax policy.[42] To do so, I employ equation (3) as well as the 2SLS-IV technique detailed above. As with all of the previous regressions, equation (3) is estimated twice, once using the geographic weight to determine the value of the spatial lag and a second time using the weight based upon economic similarity.

However, as was mentioned earlier, I cannot test this hypothesis with the NASBO data of enacted revenue measures. There are an insufficient number of policy changes per year to estimate a two-stage model by revenue instrument. To overcome this problem, I use data on annual changes in per-capita revenues for both personal and corporate income taxes as my dependent variables. Data for fiscal years 1969 through 2000 are included in the estimation of equation (3). All of the independent

[42] Additional types of state taxes, such as the general sales tax and excise taxes on gasoline, cigarettes, and alcohol, are not included in this analysis because the market approach does not generate a clear prediction about the relative effect of horizontal competition on each of these.

variables that were employed to test hypotheses 1 though 3 are used here as well, with one exception. The data for the variable that measures the previous year's budget surplus as a percentage of state expenditures is not available over this longer time period. As a result, it has been dropped from the analysis.

My new second-stage results are shown in tables 2.6 and 2.8.[43] Table 2.6 reports my estimations of equation (3) for changes in personal income tax revenue, and Table 2.8 reports estimates for corporate income taxes. Two striking patterns emerge in these new results. The first is that horizontal competition between states appears to be a significant predictor of annual changes in both personal and corporate tax revenues. The coefficient on the spatial lag is consistently positive and significant at the 95 percent level, indicating (once again) that changes in state tax policy are a function of the changes made by competitor jurisdictions. Similarly, the Deceleration Hypothesis is supported. In all cases but one, the coefficient on the lagged measure of revenues per-capita is negative and significant, at the 95 percent level. This suggests that states which tax relatively heavily in the previous period will have smaller revenue increases during the current period – possibly out of a recognition that further tax increases may jeopardize their competitive position.

Table 2.6 here (See Appendix 1)

The second major finding in these estimations is that while the partisan composition of state government affects the taxation of labor, taxes on capital appear to be entirely unresponsive to electoral outcomes. In models of change in personal income tax revenue, the coefficients on four of the five partisan dummy variables are

[43] My first-stage results are reported in tables 2.5 and 2.7 (see Appendix 1).

statistically significant at the 95 percent level. Furthermore, each of these coefficients has the anticipated negative sign, indicating that Republican control of state government leads to smaller annual increases in personal income taxes than does Democratic control. On the other hand, *none* of the partisan variables even approach statistical significance in the two estimations of equation (3) that use annual changes in corporate income tax revenue as the dependent variable. This is consistent with the expectations of the Mobility Hypothesis. The taxation of corporate income appears to be so constrained by interjurisdictional competition that it is unresponsive to the partisan composition of government. On the other hand, the taxation of personal income, while certainly influenced by competition between states, is not as constrained and appears to be shaped, in large part, by electoral outcomes.

Table 2.8 here (See Appendix 1)

4. Conclusion

This paper tests two alternative and potentially contradictory approaches to conceptualizing the fiscal policy choices of state governments. The first of these, the partisan model, suggests state action can be largely explained by examining the preferences of the political actors who control the policy-making institutions of state government. The second approach, the market model, argues that states are constrained by interjurisdictional competition for mobile businesses and high-quality residents. This model anticipates that state action will largely reflect market forces, particularly the actions of competitor jurisdictions.

Overall, I find that state fiscal policy is responsive to both electoral outcomes and interjurisdictional competition. Estimations of my econometric model demonstrate that annual changes in state tax policy are strongly related to variables that measure the partisan composition of the state legislature and the partisan identification of the governor. In general, it appears that Democratic control of the institutions of state government leads to the adoption of more and larger revenue enhancing measures. This finding suggests that democracy "works" at the state level despite the existence of strong competitive pressures between jurisdictions.

Similarly, estimations of my econometric model consistently show that horizontal competition acts as a powerful constraint when it comes to state-level decision-making. Annual changes in revenue policy are positively and significantly related to the changes adopted by competitor states – at least when competitor jurisdictions are defined by geographic contiguity and economic similarity. Moreover, high-tax states are significantly less likely to enact new revenue enhancing measures than are low-tax jurisdictions. This set of findings suggests that state governments act strategically to attract economic activity to their jurisdictions, always keeping a vigilant eye on the policy choices being made by other states.

Lastly, I find that the responsiveness of state tax policy to the partisan control of government depends, to a large extent, on the type of tax being considered. Both changes in aggregate state taxation and the taxation of personal income are clearly shaped by electoral outcomes. Conversely, taxes on corporate income appear to be entirely unaffected by partisan politics.

In the end, this paper has important implications for the study of state politics. First, it presents a new rigorous understanding of when we may expect to find policy-relevant differences between state-level political parties. Over the years, political scientists have devoted a great deal of effort to searching for a link between the partisan composition of state governments and policy outcomes. Most of these efforts have been met with little or no success (Dawson and Robinson 1963; Dye 1966; Hofferbert 1966; Winters 1976; Garand 1988), while others have found evidence that politics matters after controlling for the degree of electoral competition (Barrilleaux, Holbrook, and Langer 2002), differences in the constituency bases of party support (Brown 1995), or the degree of lower-class political mobilization (Hill, Leighley, and Hinton-Andersson 1995). The results presented here add to this list. They suggest that political scientists should not expect to find strong evidence of party effects in those areas of public policy that are most likely to impact competition between states over highly mobile resources. When interjurisdictional competition is intense states must act strategically. However, acting strategically vis-à-vis competitor jurisdictions may, at times, force state governments to be unresponsive to the preferences of their constituents.

Additionally, the findings presented here imply that scholars need to incorporate the interdependence of states into their theories and econometric models. It is clear from the statistically significant coefficients on the spatial lags (i.e., the measures of the policy actions of other states) that states are *not* independent observations. In other words, the policy decisions of state governments are interconnected. Omitting this from studies of subnational politics will not only

introduce bias into our econometric results but will lead to incomplete understandings of state-level policy making.

Chapter III: Does the Citizen Initiative Weaken Party Government?

1. Introduction

During the Progressive movement the citizen initiative was championed by reformers, including Hiram Johnson, Theodore Roosevelt, and Woodrow Wilson, as a popular check on the power of political parties (Mowry 1951; Hofstadter 1955; Magleby 1988; Smith and Tolbert 2004).[44] Progressives had come to believe that parties were unresponsive to the demands of voters. They argued that "corrupt" party bosses used their control of conventional lawmaking institutions, particularly legislatures, to act upon the narrow policy interests of their corporate backers while blocking long-needed social and governmental reforms (Cain and Miller 2001). By placing law-making authority directly in the hands of ordinary citizens, progressives hoped to undercut the ability of political parties to pursue their policy objectives as well as improve the representation of voters in state government.[45]

While Progressives succeeded in transforming the citizen initiative into a standard feature of the political landscape in many American states, its ultimate impact on the power of political parties remains unclear.[46] In this research, I evaluate the expectations of the Progressive reformers by examining whether direct democracy affects the ability of a partisan legislative majority and governor to shape public policy

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[44] The initiative is a direct democracy institution that empowers citizens to both propose and approve changes in constitutional and statutory law. In addition to the initiative, direct democracy institutions also include the referendum (in which legislation is drafted and approved by the legislature and then placed on the ballot for voter ratification) and the recall (which allows citizens to remove elected officials from office prior to the end of their statutory term).

[45] Ironically, the Progressives often used existing political parties or formed minor third parties as a means of competing for and obtaining political office.

[46] Currently, 24 states provide for the citizen initiative – 15 allow both statutory and constitutional initiatives, 6 allow only statutory initiatives, and 3 allow only constitutional initiatives. Figure 3.1 (see Appendix 2) maps these jurisdictions.

in a manner that is consistent with their preferences. Stated differently, this paper asks: Does the citizen initiative weaken party government in the American states?

In the analysis that follows, I argue that direct democracy fundamentally reduces the capacity of partisan legislators and governors to bias policy outcomes in their favor. The initiative may do so both directly and indirectly. First, it allows voters to *directly* constrain the actions of the elected officials by enacting outright the policies they prefer or by proposing and passing ballot measures that either limit the policy choices available to lawmakers or re-write the rules by which these actors set policy. Second, because voters can propose initiatives in response to unpopular legislation or legislative inaction, the mere existence of the citizen initiative may *indirectly* induce the legislature and governor to alter their policy choice as a means of averting an unwanted ballot measure.[47]

To examine the effects that the initiative may have on the ability of parties to set public policy, I develop an econometric model of the determinants of the policy choices made by state governments. I separately estimate this model for jurisdictions with and without the citizen initiative and compare (across estimations) the effects of variables that measure the partisan configuration of state government. If policy is significantly more responsive to partisan variables among the non-initiative states than it is among jurisdictions with the initiative (*ceteris paribus*), then we can conclude that direct democracy weakens the ability of political parties to shape policy outcomes to

[47] The initiative process may also be used to pass ballot measures that overtly weaken or limit the autonomy of political parties (*e.g.*, measures that require open primary elections). However, an investigation into the effect of direct democracy on party organizations is beyond the scope of this paper. For such an analysis see Bowler and Donovan (2005) and Persily and Anderson (2005).

their liking. If, on the other hand, the estimations reveal that there are few or no observable differences between the effects of party variables across these two subsets of states, then we can conclude that the expectation of Progressives was incorrect and the citizen initiative has not weakened party government.

The approach I use here differs from the existing literature on the effects of direct democracy institutions in an important way.[48] Existing efforts have generally asked whether and how laws are systematically different in states with and without the initiative process. Usually a measure of policy is regressed on several control variables (*i.e.*, known determinants of policy) and a dummy variable that is assigned a value of one for initiative states. If the coefficient on the dummy variable is significant, the researcher concludes that the initiative affects public policy.[49] By contrast, I examine how the initiative process mediates the potential relationship between the partisan control of government and the policy outputs produced via the traditional legislative process.[50] In other words, rather than test for the direct effects of the initiative process on outcomes, I study the *interaction* between this institution and political parties.

The focus of the empirical analysis is the fiscal policy choices made by state governments over a fourteen-year period – fiscal years 1988 through 2001. While there are many other policies that could be employed in this paper (including various civil rights or regulatory laws), fiscal policy is a natural starting point. Budgetary

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[48] For a recent review of the direct democracy literature see Lupia and Matsusaka (2004).
[49] These studies often find that direct democracy leads to more socially and economically conservative policies across a wide range of policy areas, including abortion notification laws, state tax and expenditure policies, and civil rights laws (Matsusaka 1995; Gamble 1997; Gerber 1999).
[50] My approach is similar to that of Gerber 1996a.

decisions are among the most important policy choices made by state governments, making them substantively interesting for scholars and the public alike. The budget ultimately determines which government programs will and will not be funded, the distribution of the state's revenue burden across individuals and businesses, and the amount of private wealth and income that will be allocated to the state public sector. Additionally, because all states are constitutionally required to budget either annually or biennially, state governments must make budgetary choices on a regular basis, providing researchers with a wealth of data.[51] Finally, there is a clear intersection between state fiscal policy and direct democracy. Since the passage of California's Proposition 13 in 1978, citizens and interests groups have frequently turned to the initiative process to resolve conflicts over state budgetary priorities as well as the size of the state public sector.[52]

In this paper, I operationalize state fiscal policy choices using an original data set of enacted tax measures. This data set consists of all legislatively adopted alterations to state tax policy that are expected to have an effect on revenue collections, either positively or negatively. Included are any changes in tax rates, deductions, and exemptions as well as modifications in user fees. By using enacted tax measures I am able to effectively isolate the policy choices made by elected officials and reliably estimate the determinants of government action.

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[51] Jurisdictions that budget biennially routinely make adjustments to state fiscal policy in off years by using supplemental appropriations and revenue bills. As a result, most states engage in some form of budgeting annually.

[52] According to the National Conference of State Legislators (NCSL) Ballot Measure Database, 137 citizen initiatives pertaining to state fiscal policy appeared on state ballots from 1990 through 2004, approximately 38 percent of which won voter approval (http://www.ncsl.org/programs/legman/elect/dbintro.htm).

Overall, I find strong and consistent evidence that the existence of the citizen initiative weakens party government at the state level. Estimations of the model of policy change that are limited to non-initiative states show that the partisan configuration of government affects annual changes in state tax policy in significant and expected ways. The Republican control of state government generally leads to a reduction in taxation, while Democratic control leads to the adoption of more and larger revenue enhancing measures, *ceteris paribus*. However, party effects disappear almost completely when the model is estimated on the subset of states that allow the citizen initiative. Furthermore, where party effects do exist among initiative states, the coefficients are approximately 75 percent smaller than they are among pure representative jurisdictions. These findings are robust to alternative specifications of the econometric model and alternative operationalizations of the dependent variable.

Interestingly, it is not only Democratic legislative majorities and governors that appear to be constrained in direct democracy states. The results reported in this paper indicate that fiscal policy in these jurisdictions is less responsive to *both* the Republican and Democratic control of government. This is particularly surprising in light of the role that direct democracy played during the tax revolt of the late 1970s and early 1980s, which intuitively suggests that Democrats, but not necessarily Republicans, ought to be constrained.

The remainder of the paper is organized as follows. In the next section I provide the conceptual framework for the analysis by exploring, in greater detail, how the initiative process may alter the ability of partisan elected officials to set public policy in direct democracy states. Next, I estimate an econometric model of the

determinants of annual changes in state tax policy and interpret the results. Following the discussion of the results, I consider the possibility that estimated initiative effects are simply proxies for unobserved cross-sectional differences in the partisan environments of states with and without the initiative. The final section discusses the conclusions as well as the implications of my analysis for both the state politics and direct democracy literatures.

2. Party Government and Direct Democracy

The citizen initiative and the legislative process are alternative mechanisms for generating public policy, each of which should bias outcomes towards the preferences of a different set of actors. The initiative process, at least in principle, is relatively open. In other words, agenda control is not restricted. Any citizen may propose any change to the status quo that she likes and, as long as a sufficient number of signatures are gathered, her proposal is put before the electorate for consideration. Once a proposal is placed on the ballot, citizens vote (at large) between the proposal and the status quo, with majority rule generally determining whether the ballot measure is adopted or the status quo remains unaltered. As a result of the open agenda and majority rule preference aggregation, outcomes of successful initiative elections tend to be *median enhancing*, that is they closely reflect the preferences of the statewide median voter (Gerber 1996b, 1999).[53]

Access to the agenda in the traditional legislative process, on the other hand, is highly restricted. In state legislatures, just as in the United States House of

Representatives, the majority party has near monopoly control over the legislative calendar and uses this power to disproportionately bias legislative decision-making to the benefit of its membership (Rosenthal 1990, 1998; Kim 2005).[54] Majority party leaders, acting as agents of their party's caucus, can ensure that only those bills that are desired by fellow party members reach the floor for a vote, while those that would split the caucus or, if passed, displease its membership are kept off of the legislative calendar.[55] Ordinary citizens and, to a lesser extent, members of the minority party cannot place proposals before the legislature or prevent unwanted legislation from receiving a vote (Cox and McCubbins 1993). As a result, the policy that is produced via the legislative process will reflect the preferences of the *majority party caucus* and, since legislation requires the signature of the governor before becoming law, the preferences of the *governor* as well.

In contrast to the public policies resulting from direct democracy, the outputs of the legislative process may be inconsistent with the preferences of the statewide median voter. In particular, these policies may lie far to the left or right of most voters' preferences. Research has shown that the need of politicians to garner and keep the support of policy-motivated activists works against the Downsian incentive for candidates and political parties to converge towards the ideological position of the median voter, and instead, encourages officials to pursue relatively "extreme" policy

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[53] In theory, voters will accept any proposal that moves the status quo closer to the median voter's ideal point while any ballot measure that moves policy farther away will be rejected.

[54] Policy-making in state legislatures closely resembles the party government model developed by scholars of the United States Congress (see Rohde 1991; Cox and McCubbins 1993; Aldrich 1995).

[55] There is some dispute over the *degree* to which leaders of the majority party can exercise control over the legislative agenda (see Finocchiaro and Rhode 2002). However, a broad consensus exists that the majority party possesses greater agenda setting powers than does the minority party and that these powers can be used to disproportionately benefit its membership.

(Aranson and Ordeshook 1972; Aldrich 1983; Cain 1984). These analyses are consistent with evidence showing that since the 1970s activists have helped pull American political parties far apart on the ideological spectrum while most voters remain clustered somewhere in the middle (Jacobson 2000).

In states without direct democracy the majority party in the legislature should, by making use of its positive agenda setting powers and ability to discipline its members on roll call votes,[56] be relatively successful at setting public policy at its ideal point (contingent of course on the preferences of the governor). In these jurisdictions, voters have little recourse against "unresponsive" elected officials other than attempting to vote the incumbent party or the governor out of office during the next election. However, voters may be reticent to take this action since replacing the current majority party or governor with the alternative may simply mean exchanging one set of relatively "extreme" policy preferences for another.

Direct democracy, however, should fundamentally alter the balance of power between elected officials and the median voter. By allowing citizens to both propose and adopt changes to the status quo, the initiative process ends the monopoly that the legislature usually enjoys when it comes to setting the state's policy agenda, proposing policy alternatives, and ultimately making final policy choices (Cain and Miller 2001).[57] In states that allow direct democracy, citizens can use their access to the

[56] Once a desired bill reaches the floor, majority party leaders rely upon a system of selective incentives to maintain party unity and secure the bill's passage. Leaders have a number of tools at their disposal to do so, including the power to make committee assignments, appoint and remove committee chairs, allocate perquisites (such as office space or legislative staff), and distribute campaign funds.

[57] Of course, the majority party still maintains its control of the agenda within the legislature.

agenda to weaken the capacity of the legislative majority and governor to shape outcomes to their liking.

Generally speaking, the initiative empowers voters to do so in two ways. First, it allows the median voter to *directly* constrain the behavior of elected officials. Using direct democracy, citizens can circumvent elected officials and enact their preferred policy outright. By legislating in this manner, citizens are able to move policy away from the preferences of elected officials and towards that of the median voter. Similarly, voters can propose and pass ballot measures that either limit the policy choices available to lawmakers or rewrite the rules by which legislators set policy. Using this particular type of ballot measure, voters continue to delegate policy-making authority to legislators, but are able to guarantee (at least in theory) that policy will ultimately remain close to the median voter's desired outcome regardless of who controls the legislature or governorship in the future.

For example, both of these approaches were employed by California residents in their "tax revolt" of the late 1970s. Confronted with a high per-capita tax burden, a substantial budgetary surplus, and elected officials who either could not or did not want to agree on a set of tax relief measures, a large majority of voters passed Proposition 13 which had qualified for the state ballot under the leadership of Howard Jarvis and a group called the United Organization of Taxpayers. This ballot measure not only moved state tax policy closer to the preferences of voters by reducing property taxes by 57 percent, but it constrained future lawmakers by limiting the yearly growth in property tax assessments to 2 percent and requiring that any new tax increases receive a two-thirds vote in the state legislature (Hansen 1983).

In addition to empowering voters to directly constrain the legislature, the citizen initiative has also been shown to have an *indirect* effect on policy outcomes. Game theory has illustrated that direct democracy may induce a median-enhancing change in the behavior of legislators, even if it is never used (Gerber 1996a). Interest groups or citizens can, in response to legislative inaction or unpopular legislation, threaten to pursue their policy goals via the initiative process. This threat may then spur the majority party in the legislature and the governor to alter its policy choices as a means of avoiding a ballot measure that would pull policy farther away from its ideal point. Even in the absence of an explicit threat, legislators may anticipate the behavior of potential initiative authors and draft laws in a manner that preempts future ballot measures. In either case, the changes in the policy choices of legislators that result from the existence or threatened use of direct democracy are likely to benefit the median voter.[58]

Lastly, it is important to note that voter-adopted initiatives, whether they directly set policy or simply restrict the choices available to elected officials, are likely to have long-standing effects on outcomes. Once adopted, there is often little that elected officials can do to amend or repeal an initiative.[59] Those initiatives that change state constitutional law can only be altered by a new constitutional amendment – a task that is quite difficult and usually requires the consent of voters. Furthermore, half of the states that allow for statutory initiatives impose restrictions on the ability of

[58] The formal model developed by Gerber (1996a) shows that when a legislature is constrained by the threat of an initiative proposal it passes laws that are closer to, and never further from, the ideal point of the median voter.

[59] Additionally, previous research has shown that laws passed by citizen initiative are rarely altered, even when amendment of the initiative is allowed (Gerber and Phillips 2005).

legislators to alter laws adopted via direct democracy. As is shown in Table 3.1, these states typically either forbid the legislature from modifying a citizen initiative for a set period of time or require a supermajority vote of the legislature to do so.[60] Moreover, even if legislators can make changes to laws adopted by voters, they may be reticent to do so for fear of inviting a more "extreme" initiative or being seen as opposing the expressed will of state voters.

Table 3.1 here (See Appendix 2)

Given the potential for citizens and interest groups to use direct democracy in a manner that constrains the actions of elected officials, I expect to observe systematic evidence that the majority party and the governor have a weakened capacity to shape public policy in states that allow for the initiative. In particular, I anticipate that outcomes of the legislative process will be significantly *less* responsive to the partisan configuration of government in states with the initiative than in those jurisdictions without this institution.

3. Evaluating the Effects of Direct Democracy on Party Government

Were Progressive reformers correct to believe that the citizen initiative would weaken the ability of political parties to pursue their policy objectives? If so, to what extent has this become manifest in state fiscal policy? This section rigorously addresses these questions by modeling the determinants of tax policy change. The relative importance of "party effects" will be measured by separately estimating this

[60] The state of California imposes the most severe restrictions on the legislature, disallowing *any* amendment or repeal of an initiative unless the text of the initiative expressly permits it.

model for states with and without the citizen initiative, and then comparing across estimations the effects of variables that measure the partisan composition of government.

For the bulk of my empirical analysis I measure changes in state tax policy using an original data set of enacted revenue measures. This data set covers fiscal years 1988 through 2001 and consists of *all* legislatively adopted changes to state tax policy that, at the time of their adoption, were expected to have an impact – either positively or negatively – on revenue collections. Included are any decreases or increases in tax rates, the creation and elimination of deductions, credits, or "loopholes," changes in user fees, and the creation of tax holidays. Measuring tax policy change in this fashion effectively isolates and captures the choices made by elected officials.

The data on enacted revenue measures were gathered from various issues of *The Fiscal Survey of States*, a publication of the National Association of State Budget Officers (NASBO).[61] Each autumn, NASBO publishes a list of the tax increases and decreases enacted by each state for the succeeding year. In addition to reporting the specific revenue measures adopted, it provides an estimate of the net fiscal impact of each. The annual per-capita revenue increase or decrease for all enacted tax changes is the operationalization of the dependent variable used here. Since this figure is

[61] Unfortunately, any NASBO data on enacted revenue measures prior to fiscal year 1988 is unusable in this analysis because it does not include the net fiscal impact of tax changes. Similarly, the data reported after fiscal 2001 is not usable in this analysis because corresponding data for many of the control variables is not yet available from the U.S. Census Bureau.

reported in current dollars by NASBO, I have converted the values for each year into 1996 dollars using the Consumer Price Index for all urban consumers (CPI-U).

I also estimate the econometric model using the annual per-capita change in total tax revenues as the dependent variable. While this is a less direct measure of policy change since revenue collections often rise and fall for reasons that have little to do with the actions of lawmakers, its use enables me to more than double the number of fiscal years included in the empirical analysis as well as check the robustness of the results generated using the NASBO data. Data on total revenue collections were gathered for fiscal years 1969 through 2000 using the World Tax Database. This database is compiled by the Office of Tax Policy Research at the University of Michigan Business School.[62]

In order to capture the effect that the partisan control of state government has on annual changes in revenue policy, the econometric model includes a number of partisan dummy variables – one for each of the possible configurations of the partisan control of state government. The variable measuring unified Democratic control serves as the reference category. While there are alternative approaches to measuring the strength of a political party in state government (see Smith 1997), the strategy that I utilize here reflects the insights gained from theories of party government. Additionally, cross-sectional variations in the timing of state budget processes were accounted for in order to ensure that these measures accurately reflect the partisan

[62] These data have also been converted into 1996 dollars using the CPI-U.

composition of state government at the time in which the budget was passed and signed into law.

A number of state-level characteristics are also included in the analysis to control for potentially confounding influences. Previous research in the state politics literature has shown that socioeconomic factors are important determinants of public policy (Dawson and Robinson 1963; Hofferbert 1966; Dye 1984). I allow for these influences by utilizing measures of per-capita income, changes in both income and the unemployment rate, the percentage of residents with a bachelor's degree, and the percentage of the population that is black. Although I do not have formal predictions about the effects of these variables, I believe that per-capita income captures the capacity of a state to increase taxes (with a higher income level leading to more and larger tax increases); changes in per-capita income as well as the unemployment rate capture state economic health (with growth in income and reductions in unemployment leading to budget surpluses and a thereby greater likelihood of tax cuts); and education levels along with the relative size of the African American population capture the fiscal "generosity" of voters (with higher education levels and a smaller black population leading to a greater willingness to pay higher taxes).[63]

Furthermore, because we also have strong reasons to believe that state fiscal conditions, budgetary institutions, and public opinion shape decision-making, I utilize a number of variables to measure these affects. To account for the overall fiscal condition of a state, I use the previous year's budget surplus as a percentage of state expenditures and a lagged measure of tax revenues per capita. Research has

demonstrated that states with budget surpluses in the previous period as well as high-tax states are less likely to enact a revenue enhancing measure in the current period (Phillips 2004).[64] I allow for institutional influences by including a dummy variable for the existence of a tax or expenditure limitation, a ten-point scale that measures the stringency of the state's balanced budget requirement, and the legislative percentage that is required to pass a tax increase. Finally, to permit the possibility that states with liberal electorates are more likely to raise taxes, I utilize the state-level opinion liberalness scores developed by Erikson, Wright, and McIver (1989, 1993). Table 3.2 reports summary statistics and the source for each of the variables used in this analysis.

Table 3.2 here (See Appendix 2)

As with many other empirical investigations of state politics (Alt and Lowry 1994, 2000; McAtee, Yackee, and Lowery 2003), the econometric estimations reported here exclude the 11 Southern states that fought as members of the Confederacy during the Civil War. These states are dropped because they lacked a competitive two-party system for many of the years covered in this analysis.[65] I also exclude Nebraska as a result of its nonpartisan legislature and Alaska and Hawaii due to their unique economic circumstances.[66]

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[63] Previous scholarship has shown that states with larger black populations enact more conservative policies (Hero and Tolbert 1996).
[64] Phillips (2004) shows that high tax states are less likely to raise taxes than their lower-tax counterparts out of a fear of driving mobile capital labor into competitor jurisdictions.
[65] Previous research has shown that coefficients on party variables do not pool across the country –*i.e.*, they are much weaker among southern states. This is also the case for the data set used here.
[66] Furthermore, cases with an independent governor have been removed.

Before splitting the sample into initiative and non-initiative states, I report an estimation of the econometric model that utilizes all observations in the data set. This estimation serves as the baseline to which I compare later results and provides insight into the effect that the partisan control of government has on outcomes across *both* types of states. Table 3.3 reports the results of this analysis. The model (Model 1) is estimated using OLS with panel-corrected standard errors (as are all subsequent models) and includes fiscal year fixed effects (not reported here).[67] Model 1 makes use of all of the independent and control variables discussed earlier. Additionally, a dummy variable is included to capture the existence of the citizen initiative. This dummy is employed to examine whether initiative states are any more or less likely to enact a revenue-enhancing measure than their counterparts without direct democracy.[68]

Overall, Model 1 performs well. Not only does the model explain a large proportion of the temporal and cross-sectional variation in tax policy change (approximately 29 percent), but many of the coefficients on the control variables are statistically significant and have their expected impact.

Table 3.3 here (See Appendix 2)

Importantly, the model demonstrates that the preferences of the political party or parties that control the policy-making institutions of state government play a significant and systematic role in shaping state fiscal policy. When we consider the

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[67] Beck and Katz (1995) recommend using OLS with panel corrected standard errors to estimate time-series cross-sectional models.

[68] Existing research has found that initiative states, at least over the past 30 years, have significantly lower levels of revenues and expenditures per-capita (Matsusaka 1995, 2004). In light of this finding, it seems reasonable to expect that direct democracy states will be less likely to raise taxes, *ceteris paribus*.

entire sample of states, the model finds a strong link between party and changes in tax revenues. The coefficients on four of the partisan dummy variables are statistically significant – three at the 95 percent level and one at the 90 percent level.[69] The negative signs on these coefficients also indicate that, on average, Republican control of state government leads to the enactment of fewer and smaller revenue enhancing measures than does Democratic control, *ceteris paribus*. According to Table 3.3, when Republicans win the governorship and the majority of seats in both legislative chambers the tax level they set is almost $32 lower per capita than it would be under unified Democratic government. Similarly, if Republicans control only the legislature or governor's mansion the tax level will be approximately $20 or $15 lower than it is when Democrats possess both branches.

Interestingly, Model 1 finds no evidence that the existence of the initiative is an important predictor of changes in tax policy. While the coefficient on the initiative dummy variable has a negative sign (as anticipated) it does not approach statistical significance. This result strongly implies (at least for the time period under consideration here) that, on average, initiative states do not have different preferences for taxation than do states without this institution.

Table 3.4 presents two additional estimations of the econometric model, the combination of which directly test the expectations of the Progressives. Here, the sample is divided into two subsets: states that allow the citizen initiative and those that do not (*i.e.*, pure representative jurisdictions). These estimations allow us to examine

[69] When Republicans control one legislative chamber and the governor is a Democrat, the changes to state tax policy are statistically indistinguishable from the prediction under unified Democratic control.

whether the impact of the partisan control of government varies by type of state. Model 2 estimates the determinants of tax policy change for pure representative jurisdictions, while Model 3 does the same for states that allow the citizen initiative.

A number of important findings emerge from these results. First, the estimation that is limited to pure representative states shows that policy in these jurisdictions is *highly* responsive to the partisan composition of government. In Model 2, the coefficients on the partisan variables, with one exception, are all statistically significant at the 95 percent level.[70] Moreover, they are, on average, approximately 75 percent larger than those in the baseline model and several times larger than those in Model 3.

Table 3.4 here (See Appendix 2)

On the other hand, fiscal policy appears almost entirely *unresponsive* to the partisan control of government among states that allow the initiative. While the partisan variables in Model 3 have the anticipated sign, all but one – unified Republican government – is statistically insignificant. Additionally, the magnitude of the coefficient on this significant variable is much smaller than the size of its counterpart in Model 2. In pure representative states, Republicans set the tax level $50 lower per-capita than do Democrats, while in states that allow the initiative Republicans only succeed at lowering the tax burden by $26. These results not only suggest that that elected officials have a weakened capability to set state fiscal policy at their ideal point in direct democracy states but that the party effects that were evident in the baseline model (*i.e.*, the estimations that included all states) were driven

largely by the strong and robust relationship between the partisan control of government and tax policy among pure representative states.

Additionally, the results presented in Table 3.4 indicate that it is not just Democratic officials that are constrained in direct democracy states. In these jurisdictions policy is less responsive to *all* partisan configurations of government. Stated differently, both Republican and Democratic legislative majorities and governors appear to be less successful at moving fiscal policy in their preferred direction when citizens have access to the initiative process. This finding may surprise readers in light of the central role that direct democracy played in the "tax revolt" of the late 1970s and early 1980s. During these years, the initiative process was frequently used to pursue conservative fiscal policies such as revenue reductions, legislative supermajority requirements for tax increases, and tax and expenditure limitations, which suggests that Democrats, but not necessarily Republicans, ought to be constrained by the initiative process.[71]

To further explore the link between party and policy in direct democracy states, Model 4 (presented in Table 3.5) includes a variable that captures cross-sectional variation in the number of voter signatures that are required to place a proposal on the ballot.[72] Matsusaka (1995) argues that states have different degrees of the initiative. For instance, states with a 5 percent signature requirement can be

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[70] Once again, the insignificant category is Republican governor and Democratic legislature.

[71] However, this finding is consistent with recent analyses which show that the initiative process is used by citizens and interest groups to enact both liberal and conservative changes to status quo fiscal policies (Matsusaka 2000, 2004; Phillips 2005).

[72] The signature requirement varies widely from state to state. This requirement is usually expressed as a percentage of the total votes cast in the preceding gubernatorial election and ranges from a low of two percent in North Dakota to a high of fifteen percent in Wyoming. As a general rule the signature requirement is higher for constitutional, as opposed to statutory, initiatives.

thought of as having "more of an initiative" than those with a 10 or 15 percent requirement since in these states it is easier for voters to place proposals on the state's agenda. By controlling for the ease of ballot access, the relationship between the partisan control of government and policy outcomes among direct democracy states may be strengthened.

Table 3.5 here (See Appendix 2)

The inclusion of this additional variable does appear to slightly increase the effect of the explanatory factors of interest. The coefficient on unified Republican government increases in magnitude (from 25.53 to 31.54) and the dummy variable for the existence of a Democratic governor and Republican legislature becomes significant that the 90 percent level. Nevertheless, tax policy remains relatively less responsive to the partisan control of government in direct democracy states. Interestingly, Model 4 demonstrates that a state's signature requirement is an important predictor of the policy choices of elected officials. This new variable has a positive and significant relationship to tax policy change, indicating that states with higher signature requirements are more likely to enact a revenue enhancing measure, *ceteris paribus*. While I do not have a conclusive explanation for this relationship, it may be the case that there are fewer voter-imposed restrictions on the ability of legislatures to raise new revenues in states where access to the ballot is relatively difficult.[73]

[73] It is also possible that in states with higher signature requirements legislators are less reticent to raise taxes because there is a smaller chance that their policy choices will be over turned via the initiative process.

Finally, I examine whether the differences in party effects that we have observed between states with and without the citizen initiative are statistically significant. The estimations of the econometric model presented thus far demonstrate that the coefficients on the party variables are much greater among pure representative states than they are among direct democracy jurisdictions. However, it is not yet clear that these differences are statistically meaningful. To test for this possibility, I re-estimate the econometric model on my full sample of states (*i.e.*, all non-southern states) and add a series of interaction terms. Specifically, I interact my five measures of the partisan control of government with an initiative dummy variable. The results of this new estimation are reported in Table 3.6.

Table 3.6 here (See Appendix 2)

As anticipated, the coefficients on all of the new interaction terms in Model 5 are positive. These positive coefficients suggest that Republicans are more successful at lowering taxation, or at least slowing the growth in tax revenues, in states without direct democracy institutions, *ceteris paribus*. Yet, none of these new terms reach statistical significance at either the 90 or 95 percent level.[74] As a result, they fail to provide evidence that party effects are meaningfully larger in pure representative states.

These insignificant results, however, may be driven by the fact that my current operationalization of tax policy change (using enacted revenue measures) only allows us to consider the fiscal behavior of states governments over a fourteen-year period.

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[74] Although, the coefficient on the interaction between unified Republican government and the initiative dummy variable is significant at the 85 percent level.

To investigate this possibility, I re-estimate Model 5 using an alternate dependent variable – the annual per-capita change in total tax revenues. This new operationalization, while a more indirect measure of the policy choices made by elected officials, is available beginning in 1969 and allows the econometric model to be estimated with over thirty years of data, more than doubling the number of observations. The results of this new estimation, Model 6, are reported below in Table 3.7.

Table 3.7 here (See Appendix 2)

The results of Model 6 demonstrate the robustness of many of my previous findings. Just as in my baseline model, this new estimation shows that (when we consider the entire sample of states) the partisan control of government is an important predictor of changes in tax policy. More importantly, the coefficients on all of the terms that interact the partisan control of state government with the existence of the citizen initiative remain positive. Furthermore, three of the coefficients are now statistically significant – two at the 95 percent level and one at the 90 percent level – indicating that Republican governors and legislative majorities are, on average, significantly less successful at slowing the growth in tax revenues in states that allow the citizen initiative. For instance, Table 3.7 shows that when Republicans win control of government in pure representative states they are able to set taxation approximately $36 lower per-capita than it would be under unified Democratic government. On the other hand, in states that allow the initiative, Republican control of both the legislature and governorship results in only a $10 reduction in taxes when compared to the base-line case. In other words Table 3.7 provides strong evidence

that the relationship between the partisan composition of government and policy change is *significantly* weaker in direct democracy jurisdictions.

V. Are Initiative States Different?

The results of the econometric model provide strong evidence that the citizen initiative weakens the ability of elected officials to shape state fiscal policy. While variables that measure the partisan control of state government are important determinants of outcomes among states without the initiative process, these measures are poor predictors of policy in direct democracy jurisdictions. Skeptical readers, however, may question whether the empirical analysis has truly identified initiative effects. It is possible that the citizen initiative is acting as a proxy for some hitherto unaccounted for variable or variables. The primary reason to suspect that an alternative explanation exists is that the initiative is clearly not randomly distributed among the states (Matsusaka 1995). The vast majority of direct democracy jurisdictions are found in the west. Of the states that are located west of the Mississippi River, sixteen allow the citizen initiative while only seven eastern states have adopted this institution.

The most probable alternative explanation for the findings presented thus far is that interparty conflict is systematically different in states with and without the citizen initiative. A number of recent analyses in political science have found that differences in state partisan environments account for cross-sectional variation in the responsiveness of public policy to the partisan control of state government. In particular, this research has demonstrated that a stronger party-policy linkage exists

when partisan divisions (*i.e.*, party cleavage structures) reflect class-based New Deal-type coalitions (Brown 1995), when competition between political parties is most intense (Barrilleaux, Holbrook, and Langer 2002), and when electoral polarization is high (McAtee, Yackee, and Lowry 2003). As a robustness check on the earlier results, Table 3.8 (below) employs a series of difference-of-means tests to explore the possibility that pure representative and initiative states are significantly different from one another on each of these dimensions.

The first three rows of Table 3.8 test whether initiative and non-initiative states systematically differ with respect to the cleavage structures or coalitional configurations that define their politics. Previous research has identified the existence of three dominant partisan cleavages among the states (Brown 1995).[75] The most common of these is the New Deal cleavage in which economic class plays the defining role in differentiating the membership of state-level political parties. This is the cleavage that Brown found to be necessary for creating a robust relationship between the partisan control of government and public policy. The remaining coalitional configurations are the southern and post-New Deal cleavages. In the former, race constitutes the most prominent factor separating partisan coalition, and in the latter, race and class play equally important roles. According to Brown's data, direct democracy jurisdictions are slightly more likely than pure representative states to be characterized by the southern and New Deal cleavages. However, these differences are small and statistically insignificant.

Table 3.8 here (See Appendix 2)

The fourth row of the table replicates this analysis with respect to interparty competition. Here, I compare the mean Ranney competition score of initiative states to the mean of their pure representative counterparts.[76] The Ranney competition index is a widely employed and long-standing indicator of the intensity of interparty competition over the partisan control of state government. Scores on this index are allowed to range from .5 (which indicates the complete absence of partisan competition) to 1 (which suggests "perfect" competition).[77] The results presented here show that the partisan environment in pure representative states is slightly more competitive than it is among states without the citizen initiative. Once again, however, the difference between the two is quite small and fails to approach statistical significance.[78]

Finally, I test for the existence of systematic differences in partisan polarization. Logically, we might expect to see a greater discrepancy between the fiscal policies adopted under Republican and Democratic control of state government (and thereby stronger party effects) where the within-state ideological divide between political parties is largest. If the ideological difference between the Democratic and Republican parties in pure representative states is greater than it is in their counterparts that allow the initiative, this could explain the stronger party-policy linkage within

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[75] Brown identifies the existence of these cleavages by disaggregating (by state) data collected in a series of CBS News/*New York Times* national polls conducted from 1976 through 1988.
[76] This measure is also commonly referred to as the "folded" Ranney index.
[77] The folded Ranney index is calculated as: $1 - |\textit{unfolded Ranney index} - 0.5|$. The unfolded Ranney index is computed by averaging together (over a specified period of time) the proportion of seats held by Democrats in the upper and lower houses of the legislature, the Democratic proportion of the gubernatorial vote, and the percentage of the time that the governorship and legislature were both controlled by the Democratic party.
[78] The values of the Ranney competition index used in this analysis were calculated for the time period 1985 though 1998.

these jurisdictions. The final row of Table 3.8 explores this possibility by comparing, by type of state, the average score on the index of mass polarization (IMP). This index was developed by Erikson, Wright, and McIver (1993) using data from CBS News/*New York Times* surveys, and measures the distance between the mean Democratic and mean Republican ideology in each state. Higher values on this index represent larger within-state ideological differences. The results presented here provide little evidence of a meaningful difference in polarization.[79] While the IMP scores do suggest that partisan polarization is slightly (and unexpectedly) greater in direct democracy states than it is among pure representative jurisdictions, the difference is not statistically significant.[80]

Overall, the partisan environments of states with and without the citizen initiative do not appear to be meaningfully different. Data show that these states have similar party cleavage structures, levels of interparty competition, and ideological polarization. In short, Table 3.8 does not produce compelling evidence that the finding of a greater party-policy linkage in pure representative states is driven by anything other than the existence and use of the citizen initiative.

VI. Conclusion

Progressive reformers championed the citizen initiative as a check on the power of "unresponsive" political parties. These reformers hoped that, by giving ordinary citizens the power to both propose and pass changes in state law, voters

[79] The IMP scores generated for use in this analysis are based upon survey data from 1976 through 2000. These data are available at the following website: http://mypage.iu.edu/~wright1/

would be better represented in government and political parties would have a weakened capacity to pursue their policy goals. While the initiative has come to play an important role in state politics, the discipline of political science knows relatively little about the ultimate effect that direct democracy has on the capacity of parties to shape policy. This paper helps close this gap by investigating whether the citizen initiative has weakened party government in the American states.

Overall, I find strong evidence that the citizen initiative reduces the capacity of parties to shape public policy. Estimations of my econometric model that include all states or that are limited to pure representative jurisdictions find a strong link between the political party that controls state government and policy outcomes. In particular, I find that Democratic control of state government leads to larger annual revenue increases than does Republican control. However, in those estimations that are limited to states that allow for the citizen initiative, the link between party and policy becomes significantly weaker and, in some instances, disappears entirely.

These results have important implications for the study of politics at the state level. First, the finding of much weaker party effects among direct democracy states suggests that, in the presence of the citizen initiative, political parties may have a difficult time meeting the policy demands of party activists or other key constituent groups. Since the preferences of these groups are generally thought to lie far to the left or right of those of the most citizens, the initiative may have a moderating effect on policy outcomes. Stated differently, by weaken the ability of parties to set policy

[80] Interestingly, the higher polarization scores in direct democracy states suggest that policy volatility, and thereby party-policy linkages, should be highest in these jurisdictions.

as the please, direct democracy may better represent the interests of citizens with preferences closer to those of the median voter.

Second, this paper suggests that even though the partisan control of state government is an important determinant of policy outcomes, party influence is not constant. The results of the econometric analysis presented here demonstrate that party effects vary cross-sectionally and that a good deal of this variation can be attributed to differences in policy-making institutions. Stated differently, the partisan control of state government matters, but the extent to which it matters is a function of state-level political institutions. In the ongoing search for party-policy linkages among the states, researchers must recognize this reality and incorporate it into their theoretical and empirical analyses.

Chapter IV: Anti-Deficit Rules, Tax Policy, and Party Government

1. Introduction

The propensity of governments to experience budget deficits and thereby finance public goods and services with public debt has long been an issue of civic concern in the United States (Savage 1988; McCubbins 1991; Tobin 1996). In American political discourse, budget deficits are routinely criticized on the grounds that fiscal imbalance may impose real costs on citizens. Heavy government borrowing can leave constituents with large interest payments that consume substantial portions of the budget and necessitate further tax increases. Similarly, since government borrowing results in the transfer of resources from future generations to current ones, budget deficits have the potential to shift the fiscal and economic burdens created by those who currently exercise political power onto individuals who bear no responsibility for their creation (Bohn and Inman 1996).[81]

To limit the practice of deficit financing, all state governments, with the exception of Vermont, have adopted various types of constitutional and statutory balanced budget requirements or anti-deficit rules (GAO 1993; NASBO 2005).[82] While advocates of these budgetary institutions argue that they are necessary for deficit reduction (ACIR 1987; Mitchell 1997), opponents often see such requirements – particularly those that are constitutional and thus difficult to change – as

[81] To the extent that such transfers represent a subsidy for the consumption of public services by current residents, budget deficits may also result in an excessively large public sector (Inman 1982; Sjoblum 1985). This possibility underlies conservative groups' support for a federal balanced budget amendment (Mitchell 1997).

[82] These rules vary widely from state to state with respect to their scope and degree of restrictiveness (Bohn and Inman 1996; Poterba 1997).

undemocratic restrictions on political decision-making (Schick 1997).[83] According to these critics, anti-deficit rules, by barring certain budgetary outcomes, may restrict the ability of elected officials and political parties to respond to the preferences of their constituents, particularly if their constituents prefer budget deficits and borrowing to the tax increases or budget cuts that may be necessary to produce fiscal balance.[84] Stated differently, critics fear that such requirements may lead to the outright rejection of the "majority will."

While state governments have had a long experience with anti-deficit rules, the discipline of political science knows relatively little about how these institutions alter the lawmaking process.[85] Do balanced requirements lead governors and legislative majorities to make different fiscal policy choices? And, is there merit to the claims of critics of these institutions? In other words, do anti-deficit rules weaken the responsiveness of government policy to voter preferences or electoral outcomes?

In this paper, I explore these questions by evaluating the impact of anti-deficit rules on one aspect of state budgeting – the tax policy choices made by elected officials. Unfortunately, since there is only one observation without any type of balanced budget rule (Vermont), I cannot meaningfully compare the fiscal behavior of

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[83] Advocates of balanced budget requirements tend to view fiscal imbalance as an inevitable consequence of poorly constrained democratic political processes. They argue that elected officials, in the absence of an external constraint, generally fail to make the hard and often unpopular policy choices that are necessary for deficit reduction. Instead lawmakers are thought to pursue their short-term electoral interests by appealing to voters with deficit-producing tax cuts or increases in government expenditures to finance well-liked public services.

[84] Balanced budget requirements are also routinely opposed on the grounds that they undermine the ability of governments to respond to crises or because they provide a mechanism by which the judicial branch of government can intervene in the budget-making process.

[85] With a notable exception (Alt and Lowry 1994), political scientists have historically viewed anti-deficit rules (and the cross-sectional variation among these rules) as institutional details that do not warrant substantial research attention.

states that do and do not have a balanced budget requirement. Instead, I investigate the effects of these institutions by examining how anti-deficit rules of *varying severity* affect the creation of tax policy. Specifically, I test whether stringent balanced budget requirements have an independent effect on the tax policy choices made by state governments, regardless of the policy preferences (*i.e.*, partisan affiliation) of lawmakers. I also test whether these requirements reduce the ability of elected officials to move revenue policy in their preferred direction. In conducting this investigation, I exploit the cross-sectional variation in state balanced budget requirements to examine whether certain types of anti-deficit rules are more effective than others at constraining the tax policy choices of elected officials.

In the following analysis I argue that there are theoretical reasons to anticipate that strong balanced budget requirements will alter the fiscal policy choices of lawmakers. In particular, I claim that these rules will create *upward* pressure on state taxation, and, that they will do so in at least two ways. First, by mandating that governors and legislators restore fiscal balance in the face of revenue shortfalls, these rules are likely to force elected officials – regardless of their partisan affiliation or policy preferences – to raise taxes. Second, in jurisdictions with strong balanced budget requirements, governors and legislative majorities that want to lower the tax burden will often need to enact offsetting cuts in government expenditures in order to do so. This should make tax cuts more "costly" to implement and therefore less likely.

Ultimately, by making tax increases more likely and revenue reductions difficult to enact, stringent anti-deficit rules should constrain the ability of elected officials to shape policy as they prefer – just as the critics of these institutions

predicted. In particular, Republican (i.e., tax-cutting) governors and legislative majorities should find it increasingly difficult to move tax policy in their preferred direction when faced with one or more stringent anti-deficit rules.

On the other hand, there are also reasons to suspect that balanced budget requirements, no matter how strict, do not fundamentally alter the fiscal policy choices of lawmakers. First, anti-deficit rules generally lack an explicit enforcement mechanism. Very few states require automatic budget cuts or tax increases in response to fiscal imbalance nor do many impose legal sanctions on elected officials who ignore budget rules (Gold 1992; GAO 1993; Poterba 1997). Furthermore, courts have routinely declined to play any meaningful role in interpreting or applying balanced budget requirements. As a general principle, state courts have avoided ruling on cases involving state fiscal policy on the grounds that doing so may violate the separation of powers (Lubecky 1986; Tobin 1996). Finally, governors and legislators may use accounting "gimmicks" to hide deficits. Evidence shows that instead of increasing tax revenues or reducing expenditures, states often close budget shortfalls by deferring payments across fiscal years, accelerating tax receipts, or shifting money among funds (GAO 1993; Schick 1997; Berthelsen 2003; Russakoff 2003; Tankersley 2005).

To examine how anti-deficit rules alter state policy-making, I estimate an econometric model of the tax policy choices of elected officials. I first use this model to test for the independent effects of balanced budget requirements. I do so by utilizing measures of various anti-deficit rules as right-hand side explanatory variables. Included are those rules that have been identified in previous research as

those most commonly employed by state governments (ACIR 1987; GAO 1993; NASBO 2005). Then, in order to examine whether stringent anti-deficit rules weaken the ability of lawmakers to move tax policy in their preferred direction, I interact these measures with dummy variables that capture the partisan control of state government.

The focus of my empirical analysis is the tax policy choices made by state governments over a fourteen-year period – fiscal years 1988 through 2001. I operationalize these using an original data set of enacted revenue measures. This data set consists of all of the modifications to state tax policy that were approved by the legislature (and governor) and expected, at the time of their adoption, to have either a positive or negative affect on revenue collections. By using enacted revenue measures, as opposed to annual changes in revenue collections (the traditional measure of tax policy change), I am able to more effectively isolate the policy choices made by elected officials and thereby more reliably estimate the determinants of government action.[86]

This study of anti-deficit rules differs from those in the existing literature in important ways.[87] First, this paper addresses a new question. Previous scholarly efforts focused almost exclusively on whether anti-deficit rules eliminate or reduce end-of-year of budget deficits (ACIR 1987; Von Hagen 1991; Alt and Lowry 1994;

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[86] Studies based upon annual changes in revenue collections have a difficult time identifying actual changes in tax policy since revenues often grow or decline for reasons that have little to do with government action. For example, revenue collections tend to rise quite rapidly as the economy expands, even if the state government does not increase tax rates. While econometric models can control for economic changes, it is all but impossible to determine whether these influences have been sufficiently isolated.

[87] For a recent review of the literature on balanced budget requirements see Poterba (1997).

Poterba 1994; Bayoumi and Eichengreen 1995; Bohn and Inman 1996).[88] In contrast, I examine how these requirements mediate the relationship between the partisan control of government and the fiscal policy outputs produced by the legislative process. While this question has been overlooked in existing scholarship, its answer has important implications for understanding the responsiveness of state-level public policy to electoral outcomes.

Second, unlike most analyses of balanced budget requirements, this paper explicitly tests for the separate effects of different types of anti-deficit rules. Existing efforts have traditionally based their empirical results upon a single anti-deficit restriction, such as a prohibition on carrying over a deficit from one fiscal year to the next (Alt and Lowry 1994; Poterba 1994) or some type of composite index (ACIR 1987; Von Hagen 1991; Bayoumi and Eichengreen 1995).[89] Consequently, these efforts fail to distinguish between those types of balanced budget requirements that are effective at shaping the policy choices of elected officials and those that are not. The results of the empirical analysis presented here allow us to make these distinctions.

Overall, I find strong and consistent evidence that balanced budget rules systematically alter the tax policy choices of elected officials in the manner anticipated. Repeated estimations of my econometric model show that stringent anti-deficit rules create upward pressure on taxation, despite the fact that these rules generally lack an explicit enforcement mechanism. My results show that jurisdictions with more stringent balanced budget requirements adopt more and larger tax increases,

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[88] These studies usually find that balanced budget requirements limit the ability of states to establish and maintain large budget deficits.

[89] A notable exception to this generality is Bohn and Inman (1996).

ceteris paribus. In particular, I find that rules which require the legislature to pass a balanced budget or that prohibit states from carrying over a deficit from one fiscal year to the next are the most likely to exert upward pressure on state taxation, with no carryover rules having the largest effect.[90] Interestingly, my empirical analysis also suggests that constitutional requirements are not more or less effective at altering the behavior of elected officials than are rules based on statutory law.

Furthermore, my econometric estimations provide evidence suggesting that stringent balanced budget requirements ultimately weaken the link between the partisan control of state government and revenue policy. When measures of state-level anti-deficit rules are interacted with measures of the partisan control of state government, I find that Republicans are less successful at reducing taxation when they are confronted with strong balanced budget requirements. Interestingly, this appears to be particularly true in instances of divided government.

The remainder of this paper is organized as follows. In the next section, I provide an overview of the use of anti-deficit rules at the state level and highlight cross-sectional variation in their features. I then provide the conceptual framework for the analysis by exploring, in greater detail, how anti-deficit rules may weaken the ability of elected officials to shape fiscal policy to their liking. Next, I estimate an econometric model of the determinants of annual changes in state tax policy and interpret the results. Following the discussion of my results I consider the possibility that the estimated effects of stringent anti-deficit rules are simply proxies for

[90] Correspondingly, I find that rules which simply require the governor to submit to the legislature a balanced budget have a negligible impact on revenue policy.

differences in state ideologies. The final section discusses my conclusions as well as the implications of this analysis for the study of budgetary institutions.

2. State Anti-deficit Rules

All states, with the exception of Vermont, have adopted at least one, and oftentimes several, anti-deficit rules or balanced budget requirements. Most of these are written into the state's constitution and date back to its admission to the union.[91] While the nature and scope of anti-deficit rules vary widely, they can be broadly categorized into three groups, depending on the stage in the budget process at which fiscal balance is required (Bohn and Inman 1996; Poterba 1997; NASBO 2005).[92] Using these groupings, Table 4.1 details the types of balanced budget requirements that were in force in each state over the time period covered by my empirical analysis and whether the requirements were largely constitutional or statutory. Furthermore, the table reports the index of balanced budget stringency developed by the Advisory Commission on Intergovernmental Relations (1987). This index aggregates all of the features of state balanced requirements that are reported here into a ten-point scale, with a score of 10 representing the most rigorous requirement and zero the absence of any anti-deficit rules.[93]

Table 4.1 here (See Appendix 3)

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[91] This fact enables me to treat state anti-deficit rules as being largely exogenous.

[92] The anti-deficit rules discussed here only apply to the general fund accounts of state budgets. Typically, expenditures from these accounts constitute between 50 to 60 percent of total state spending (GAO 1993). States generally do not have balanced budget requirements for non-general fund accounts (Bohn and Inman 1996).

[93] For a score of 10, a state had to have a constitutional provision against carrying a deficit forward and requirements that the governor submit and legislature pass a balanced budget.

As Table 4.1 demonstrates, the most widely adopted rules are those that oblige the governor to *submit* to the legislature a balanced budget at the start of the budget-making process. In total, forty-three states have some version of this requirement. These rules are generally considered to be the weakest and least effective restrictions on deficits because they do not constrain the legislature nor do they apply to the enacted budget. Under this rule the legislature can still legally adopt (and the governor sign) a budget that is known to be out of balance.

Additionally, thirty-eight states have an anti-deficit rule that requires the legislature to actually *pass* a balanced budget. These rules are generally considered to be of intermediate restrictiveness. By prohibiting elected officials, at least in principle, from intentionally or knowingly adopting an unbalanced budget, they impose a greater constraint on the policy choices of lawmakers than those requirements that apply solely to the governor's proposed budget. Nevertheless, they do not mandate end-of-year fiscal balance. In the absence of an additional restriction, these rules allow states to run budget deficits when revenue collections fall short of expectations.[94]

Finally, a large number of states (thirty-five) have enacted an end-of-year balanced budget requirement or no carryover rule. This type of restriction expressly prohibits the government from carrying over a budget deficit from one fiscal year to the next. In jurisdictions that operate under this rule, revenue shortfalls – even if they

[94] Cynics may speculate that by allowing deficits when revenue collections fail to meet expectations, these rules create an incentive for legislators to employ unrealistic assumptions about expected tax revenues as a means of avoiding the hard policy choices that are often required to achieve fiscal balance. However, there is no conclusive evidence that lawmakers do so.

materialize after the budget has been signed into law – must be reduced to zero before the end of the fiscal year through some combination of tax increases and reductions in government expenditures. Since no carryover restrictions are applied at the end of the fiscal year rather than at the beginning, they are typically regarded as the most strict and effective balanced budget requirements.

In the next section, I explore how the more stringent of these requirements may alter the tax policy choices of elected officials. Additionally, I consider whether anti-deficit rules also weaken the ability of elected officials to shape state tax policy in a manner consistent with their preferences.

3. Anti-Deficit Rules and the Tax Policy Choices of Elected Officials

Previous research has shown that state revenue policy often reflects the preferences (as measured by the partisan affiliation) of the political actors who control the policy-making institutions of state government – the governor and the majority party in the legislature (Alt and Lowry 1994, 2000; Ringquist and Garand 1999; Kousser and Phillips 2005). Stringent anti-deficit rules, however, may constrain or alter the choices of these actors by barring certain budgetary outcomes. In particular, anti-deficit rules are likely to create upward pressure on state taxation. These fiscal institutions have the potential to do so in at least two ways.

First, anti-deficit rules are likely to lead to more tax increases regardless of the partisan affiliation or policy preferences of elected officials. In principle, governors and legislators in jurisdictions with stringent balanced budget laws, such as no carryover rules, are required to *fully* correct any revenue shortfalls faced by their

state.[95] Lawmakers in these jurisdictions, however, are limited with respect to the strategies that are available for reestablishing fiscal balance. In general, they can close deficits by reducing government expenditures, increasing taxes, or relying on some combination of both.[96]

Even if reducing expenditures is the preferred strategy of elected officials, this approach alone will regularly prove unsuccessful in completely eliminating budget deficits. If revenue shortfalls are large, extend across several fiscal years, or if the state is already operating under a "bare-bones" budget, cuts in government spending are unlikely to close revenue shortfalls. Additionally, the federal government, state constitutions, various entitlement programs, and voter-approved ballot measures mandate the provision of many public goods and services by state governments, making them extremely difficult to cut (Holcombe and Sobel 1997; Brunori 2000; NASBO 2004). In other words, many state expenditures are not discretionary.[97] Consequently, the elimination of budget deficits in states with stringent balanced budget requirements will frequently necessitate tax increases, regardless of the policy preferences on partisan affiliation of lawmakers.

The recent experiences of Idaho provide an illustrative example. In the face of a $200 million budget shortfall and one of the nation's most stringent balanced budget

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[95] State lawmakers are often confronted with revenue shortfalls as a result of changing economic and demographic conditions, new mandates from the federal government, and errors in budget forecasting (Alt and Lowry 2000).

[96] Some states may also be able to reduce budget deficits by withdrawing money from "rainy day" funds (GAO 1993; Holcombe and Sobel 1997).

[97] A recent analysis by the National Association of State Budget Officers (2004) suggests that as little as 32 percent of the average state's budget consists of discretionary spending.

requirements,[98] the conservative Republican governor and legislature reluctantly enacted a one-cent increase in the state's sales tax as well as a 29-cent per-pack increase in the cigarette tax (Taule 2003a, 2003b). These revenue enhancements came on the heels of deep reductions in the budgets of many state agencies and were justified on the grounds that there was simply nothing left to cut.[99] According to Governor Kempthorne, further spending cuts could not be sustained without dismantling entire state agencies, releasing prisoners from the Department of Corrections, or eliminating programs for seniors who rely on assistance for food (Oxley 2003a, 2003b; Taule 2003b).

In similar fiscal circumstances, however, lawmakers in jurisdictions with weaker anti-deficit rules than Idaho's (or no balanced budget requirement at all) may be able to *avoid* many of the tax increases that are often necessary to fully close revenue shortfalls. For instance, legislators in a state whose most stringent anti-deficit rule only requires the governor to submit a balanced budget can legally leave the status quo unchanged and simply wait for revenue collections to improve. Alternatively, lawmakers in these jurisdictions can adopt measures that address, but do not fully correct, the fiscal imbalance.

This recently occurred in the state of California. Prior to fiscal year 2005, California lawmakers operated under a relatively weak balanced budget requirement. The governor was constitutionally obligated to propose a balanced budget, but the legislature was not mandated to pass such a budget nor was the state prohibited from

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[98] The state of Idaho's balanced budget requirement is scored a "10" on the ACIR's (1987) index of balanced budget stringency.

[99] The budgets of most state agencies were reduced by 7.1% (Taule 2003b).

carrying a deficit over into the next fiscal year (ACIR 1987; Bohn and Inman 1996).[100] In the presence of these lax rules, the legislature and governor were not forced to eliminate the record-breaking $38 billion revenue shortfall the state faced in fiscal year 2004 (Russakoff and Sanchez 2004). Instead of enacting large tax increases (or budget cuts), as was the case in Idaho, lawmakers addressed much of the state's fiscal imbalance through the issuance of debt (Sallady 2004).

In addition to making tax increases more likely, balanced budget requirements should also create upward pressure on taxation by making tax cuts more "costly" to implement, *ceteris paribus*, and thereby both less frequent and smaller in size. In the presence of a stringent anti-deficit rule, lawmakers who want to lower current rates of taxation may need to enact cuts in government expenditures in order to maintain fiscal balance. Reducing state expenditures, however, will be both challenging and potentially unpopular. As mentioned earlier, generating significant cuts in state spending is often difficult since the federal government, state constitutions, entitlement programs, and citizen initiatives mandate the provision of many state public goods and services. Furthermore, trading lower levels of service provision for lower taxation is likely to lead to dissatisfaction among voters, particularly among those individuals who are forced to bear the burden of service cuts.[101] If these reductions in services affect large numbers of voters or key constituent groups, they

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[100] In 2004 California voters passed Proposition 58, the California Balanced Budget Act, which strengthened the states balanced budget requirement. The proposition mandates the enactment of balanced budget in under which general fund expenditures cannot exceed estimated general fund revenues. It also prohibits the future financing of budget deficits through the use of bonds (NASBO 2005).

[101] Even though voters may strongly support both tax cuts and balanced budgets they ordinarily prefer that someone else's government services be reduced.

may reduce the political support for the proponents of the tax cuts and jeopardize their hold on political power.

The state of Virginia's most recent attempt at tax reduction exemplifies this intuition. After James Gilmore III won election to the governorship, he and the Republican majority in the legislature enacted a five-year phase out of the state's car tax. In order to conform to Virginia's rather stringent balanced budget requirement, however, lawmakers were forced to make corresponding (and often deep) cuts in the state budget along the way.[102] In the 2001-02 budget alone, the governor and legislature were required to reduce state expenditures by over $420 million, most of which came from reductions in education funding, the budgets of state agencies, aid to local communities, and police grants (Timberg and Shear 2001). Over time, public opposition to these cuts grew, particularly from powerful constituent groups, including county officials, state teachers, university presidents, and public employees (Melton 2001a, 2001b). Under mounting pressure, lawmakers were eventually forced to halt the car tax rollback (Melton 2001b).[103]

On the other hand, elected officials in jurisdictions with weaker balanced budget requirements than Virginia's, may be able to lower taxes without resorting to as many (or any) corresponding reductions in government expenditures – even if doing so creates short-term revenue shortfalls.[104] This should make the enactment of tax cuts much easier and potentially less politically costly. It is certainly possible that

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[102] Virginia's constitution prohibits the state from carrying over a budget deficit from one fiscal year to the next (ACIR 1987; Poterba and Inman 1996).
[103] Eventually car tax relief was capped at 70 percent (Shear and Jenkins 2005).

Governor Gilmore and his co-partisans in the Virginia legislature would have been able to fully eliminate their state's car tax (as originally planned) if they had been legally allowed to tolerate short-term fiscal imbalance. As a result, it seems logical to anticipate that lawmakers in jurisdictions with less stringent balanced requirements will be more likely to adopt revenue-reducing changes to status quo fiscal policies than will their counterparts in jurisdictions with stronger anti-deficit rules.

Finally, and in light of the above analysis, we should expect stringent anti-deficit rules to reduce the ability of Republican governors and legislative majorities to move state revenue policy in their desired direction. Previous research has demonstrated that Republican voters and state lawmakers generally prefer lower levels of taxation than do their Democratic counterparts (cf. Alt and Lowry 1994, 2000; Besley and Case 1995, 2003; Jacoby 2000; Alvarez and McCaffery 2003; Kousser and Phillips 2005). By making tax increases more likely and tax cuts difficult to enact, strong balanced budget requirements should create serious obstacles for Republican officials. Ultimately, these fiscal institutions may reduce the ability of Republicans to reduce the size of the state public sector, thereby weakening the link between the partisan control of government and policy tax policy.

Despite the theoretical arguments and anecdotal evidence presented here, stringent anti-deficit rules may not *systematically* alter the tax policy choices of elected officials. Ultimately, the extent to which these rules actually constrain revenue policy depends on the willingness of lawmakers to abide by these restrictions. There

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[104] Elected officials in these states may tolerate short-term deficits in the hope that tax cuts will stimulate future economic growth and revenue collections to such an extent that fiscal balance will be restored.

are reasons to believe that governors and legislative majorities that are unwilling to make the difficult decisions necessary to create fiscal balance may be able to successfully avoid doing so, no matter how stringent the anti-deficit rule. First, these rules generally lack an explicit enforcement mechanism (Gold 1992). Very few states mandate automatic budget cuts and none trigger an automatic tax increase in response to fiscal imbalance (NASBO 2005).[105] Moreover, only three states apply any type of legal sanctions or penalties, such as removal from office, fines, and jail terms, to officials who ignore budget rules.[106] And, among these jurisdictions, there is no evidence that any of the aforementioned sanctions have ever been used (GAO 1993).[107]

Additionally, both federal and state courts have routinely declined to play any meaningful role in interpreting or applying state balanced budget requirements, even when these requirements are written into state constitutions.[108] In general, courts have avoided ruling on cases involving state fiscal policy on the grounds that doing so would violate the separation of powers (Lubecky 1986; Tobin 1996).[109] State courts, in keeping with the jurisprudence of the Supreme Court of the United States, have

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[105] In a few cases, state governors are allowed to unilaterally reduce expenditures in response to an unanticipated budget deficit.

[106] These states are New Mexico, South Dakota, and Virginia.

[107] Of course, in the absence of an explicit enforcement mechanism, citizens may sanction elected officials who disregard state balanced budget requirements by voting them out of office during the following election.

[108] Interestingly, both elected and appointed judges avoid involving themselves in state budgetary disputes.

[109] Courts have also avoided these cases by invoking the principles of "mootness" and "standing." A case is considered moot if the matter is no longer current. Generally, by the time a budgetary controversy comes before a judge the relevant fiscal year has already elapsed. The doctrine of standing limits access to the courts solely to those individuals or parties who can show a direct injury over and above that incurred by the general public. Typically, courts have denied standing to individual taxpayers on budgetary matters.

consistently held that budgetary controversies, such as cutting particular programs, raising taxes, or allocating funds among competing constituent groups, are legislative or political questions, rather than judicial functions.[110] For example, the New Jersey Supreme Court in the case of *Camden v. Byrne* (1980) asserted that the judiciary possessed no power to force the state legislature to appropriate or refrain from appropriating funds since fiscal responsibility "lies solely and exclusively with the legislative branch of government."

In the rare instances when courts have become involved in state fiscal policy disputes, they have ruled in a manner that gives elected officials increased flexibility in subverting balanced budget requirements. New York courts, for instance, through a series of cases, have created a loophole in the state's balanced budget rule that enables lawmakers to achieve fiscal balance through the issuance of anticipatory notes or bonds.[111] As a result of these rulings, New York lawmakers can perpetually avoid balancing the budget through the issuance of short-term notes.[112] Similarly, the Georgia Supreme Court has allowed elected officials to create development authorities and other quasi-governmental agencies as a means of engaging in deficit financing.[113] These agencies have the authority to borrow money on behalf of the state and their indebtedness is usually not considered debt for the purpose of Georgia's balanced budget requirement (Tobin 1996).

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[110] See *Board of Education of the Township of Fairfield v. Kean* (1982) and *Michigan Association of Counties v. Department of Management and Budget* (1984).
[111] See *Wein v. State of New York* (1976) and *Wein v. State of New York* (1977).
[112] In effect, the state's entire debt can simply be re-issued every year.
[113] See *Nations v. Downtown Development Authority* (1985).

Furthermore, governors and legislators may use a variety of accounting gimmicks to hide deficits from the public. Evidence has shown that instead of increasing tax revenues or reducing expenditures, elected officials in states with balanced budget requirements often close revenue shortfalls by changing budget execution (GAO 1993; Schick 1997; Tankersley 2005). The most popular techniques for doing so are postponing payment for government services until the following fiscal year or accelerating the collection of revenues from taxes or grants. For example, Governor McGreevey of New Jersey was able to create a revenue windfall of almost $300 million for his state in 2003, and thereby a balanced budget, by shifting a June payment to school districts into the next fiscal year. Also in fiscal year 2003, Governor Sebelius of Kansas was able to balance her state's budget by advancing the deadline for paying property taxes by one month (Russakoff 2003).[114]

4. Estimating the Effects of Anti-deficit Rules

Do stringent anti-deficit rules alter or constrain the tax policy choices of elected officials? If so, do they also weaken the link between the partisan control of state government and fiscal policy outcomes? This section rigorously addresses these questions by estimating an econometric model of the determinants of the tax policy choices of elected officials. The effects of balanced budget requirements will be

[114] Lawmakers can also hide budget deficits by shifting money among various accounts. Usually, anti-deficit rules apply only to a state's general fund. This means that elected officials can allocate revenues from other accounts into the general fund account without worrying about creating fiscal imbalance elsewhere (Bohn and Inman 1996). The state of California employed this strategy in its fiscal year 2004 budget. To help eliminate a staggering deficit, the legislature transferred $289 million from a special-purpose transportation fund into the general fund (Berthelsen 2003).

examined by including, as explanatory variables, measures of various state-level anti-deficit rules. Additionally, in several estimations, these measures will be interacted with dummy variables that capture partisan control of state government.

In order to effectively measure the tax policy choices of elected officials, I have compiled an original data set of enacted revenue measures. This data set covers fiscal years 1988 through 2001 and consists of *all* legislatively adopted changes to state tax policy that, at the time of their adoption, were expected to have either a positive or negative effect on total state revenue collections. Included are any changes in tax rates, the creation and elimination of deductions, credits, or "loopholes," changes in user fees, and the creation of tax holidays.

The data on enacted revenue measures were gathered from various issues of *The Fiscal Survey of States*, a publication of the National Association of State Budget Officers (NASBO). Each year, NASBO publishes a list of the tax increases and decreases enacted by each state for the succeeding year. In addition to reporting the specific revenue measures adopted, it provides an estimate of the net fiscal impact of each. The estimated annual per-capita increase or decrease for all tax changes is the operationalization of the dependent variable used here. Since this figure is reported in current dollars by NASBO, the values for each year were converted into 1996 dollars using the Consumer Price Index for all urban consumers (CPI-U).

State balanced budget requirements will be measured using two different approaches. The first of these employs a series of dummy variables that categorize states on the basis of their most stringent anti-deficit rule. The first dummy, *Governor Submit*, is coded one if a state's most stringent anti-deficit rule is simply a requirement

that the governor submit a balanced budget to the legislature at the start of the budget-making process. The second, *Legislature Pass*, is assigned a value of one if the legislature is required to pass a balanced budget but is not obligated to ensure that revenues equal expenditures at the close of the fiscal year. The final dummy, *No Carry*, is coded one if a state has adopted a prohibition against carrying over a budget deficit from one fiscal year to the next – *i.e.*, if end-of-year fiscal balance is mandated. This three dummy variable approach enables us to test for the separate effects of different types of anti-deficit rules.

The second method that I employ for capturing state-level anti-deficit rules is the index of balanced budget stringency (*Budget Stringency Index*) created by the Advisory Commission on Intergovernmental Relations (1987). This index assigns a score ranging from zero to 10 to each state based on the combined restrictiveness of all its anti-deficit rules. The use of this measure allows for the consideration of many features of a state's balanced budget requirement simultaneously. Scores on this index not only take into account the number and type of anti-deficit rules that a jurisdiction has adopted but also whether they are based on constitutional or statutory law. Furthermore, this particular measure allows for a great deal of variation on my key independent variable.[115]

In order to capture the effect that the partisan control of state government has on annual changes in revenue policy, the econometric model includes a number of partisan dummy variables – one for each of the possible configurations of the partisan

[115] There is relatively little variation across states in the categories that are employed in my first (i.e., three dummy variable) approach to measuring the stringency of balanced budget requirements.

control of state government. The variable for unified Democratic control serves as the reference category and is excluded from all of my estimations. While previous research in state politics has relied upon alternative approaches (Alt and Lowry 1994; Brown 1995; Barrilleaux, Holbrook, and Langer 2002), the strategy that I utilize here reflects the insights gained from recent theories of party government.[116] Specifically, the notion that it is more important to capture the identity of the majority party in the legislature than the percentage of seats held by any given party (Cox and McCubbins 1993). Additionally, I account for cross-sectional variations in the timing of state budget processes to ensure that my partisan dummy variables accurately reflect the partisan control of state government at the time in which the budget was passed and signed into law.

In addition to the terms already described, several state-level characteristics are included in the model to control for other potential determinants of state fiscal policy. Previous studies have found that socioeconomic variables are important determinants of public policy (Dawson and Robinson 1963; Hofferbert 1966; Hero and Tolbert 1996). To account for these factors I include state per-capita income, the annual change in per-capita income, the annual change in the state-level unemployment rate, a measure of the previous year's budget surplus as a percentage of state expenditures, a lagged measure of total tax revenues per capita,[117] the percent of a state's population that is black, and the percent that has earned a bachelor's degree. Along with these socioeconomic factors, several institutional variables are also used, including a

[116] For a review of these alternative approaches see Smith (1997).
[117] Research has demonstrated that high-tax states will be less likely to raise (and low-tax states less likely to cut) taxes in the current period (Phillips 2004).

dummy variable for the existence of a tax or expenditure limitation, the legislative percentage that is required to pass a tax increase,[118] and a dummy variable for states that allow the citizen initiative. Finally, to permit the possibility that states with liberal electorates are more likely to raise taxes, I utilize the state-level opinion liberalness scores developed by Erikson, Wright, and McIver (1989, 1993). Table 4.2 reports summary statistics and the source for each of the variables used in this analysis.

Table 4.2 here (See Appendix 3)

As with many other empirical investigations of state politics (Alt and Lowry 1994, 2000; McAtee, Yackee, and Lowery 2003), the econometric estimations reported here exclude the 11 Southern states that were members of the Confederacy during the Civil War. These states are dropped because they lacked a competitive two-party system for many of the years covered in this analysis.[119] I also exclude Nebraska because it has a nonpartisan legislature and Alaska and Hawaii due to their unique economic circumstances. Furthermore, cases with an independent governor and tied legislature are removed.

I begin my empirical analysis by estimating a baseline model of the determinants of annual changes in state tax policy (Model 1). This model includes each of the aforementioned partisan and control variables, but excludes measures of state-level anti-deficit rules. The results of this estimation are displayed in Table 4.3 below. These results were generated using OLS with panel-corrected standard errors

[118] A number of states require a three-fifths, two-thirds, or three-quarters legislative vote in order to raise taxes (Knight 2000).

(as are all subsequent estimations) and include fiscal year fixed effects, not reported here.[120]

Overall, the model performs quite well. It explains a large proportion of the temporal and cross-sectional variation in tax policy change (approximately 28 percent) and many of the coefficients on the control variables are statistically significant at either the 90 or 95 percent level and have their anticipated impact. It is worth noting that the model shows that the preferences of the political party or parties that control the policy-making institutions of state government play a significant and systematic role in shaping the revenue policy. The coefficients on all but one of the partisan dummy variables are statistically significant, two at the 95 percent level and two at the 90 percent level. The negative signs on these coefficients also indicate that, on average, Republican control of state government leads to the enactment of fewer and smaller revenue enhancing measures than does Democratic control, *ceteris paribus*.

Table 4.3 here (See Appendix 3)

Models 2 and 3 add measures of anti-deficit rules to the baseline model. These new estimations allow us the test for the independent effects of balanced budget requirements on the tax policy choices of elected officials. In Model 2, state anti-deficit rules are measured using the series of dummy variables detailed above. The category that is excluded in this estimation is *Governor Submit*. The effects of the remaining anti-deficit dummy variables, then, can be interpreted in relation to those

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[119] Previous research has shown that coefficients on party variables do not pool across the country – i.e., they are much weaker among southern states. This is also the case for the data set used here.
[120] Beck and Katz (1995) recommend using OLS with panel corrected standard errors to estimate time-series cross-sectional models.

states whose most stringent anti-deficit rule only requires the governor to propose a balanced budget.[121] Model 3, on the other hand, measures state-level balanced budget requirements using ACIR's index of balanced budget stringency.

Generally speaking, the inclusion of these new variables does not produce significant changes in the coefficients on the other explanatory variables, although they slightly improve the overall explanatory power of the model. Most importantly, however, the results of both models 2 and 3 demonstrate that stringent balanced budget requirements exert an independent effect on state tax policy, as expected. In Model 2, the coefficients on both of the anti-deficit dummy variables are positive and statistically significant, indicating that states with more stringent balanced budget requirements set taxation at higher levels than do states with relatively weak requirements, *ceteris paribus*. According to this model, lawmakers in states whose most stringent anti-deficit rule obligates the legislature to pass a balance budget increase taxes by approximately $15 more per-capita each year than do their counterparts in those jurisdictions which merely require that the governor's proposed budget be balanced. Similarly, elected officials in jurisdictions with no carryover rules grow the annual tax burden by almost $20 more per-capita than do their counterparts from states in the base-line category.

Table 4.4 here (See Appendix 3)

Model 2 also provides preliminary evidence that no carryover rules, which are generally considered to be the most severe balanced budget requirement, act as a

[121] Vermont is excluded from this estimation since it does not fit into either of three categories.

greater constraint on the fiscal policy choices of lawmakers than do rules that only require the legislature to pass a balanced budget. The reasons for this are twofold. First, the magnitude of the coefficient on the former is larger than that on the latter. According to Table 4.4, states with a no carryover restriction raise taxes by approximately $5 more per-capita each year than do jurisdictions whose most stringent anti-deficit rule only requires elected officials to pass a balanced budget. Correspondingly, the coefficient on the no carryover dummy achieves a higher level of statistical significance.[122] This finding provides additional evidence that the more stringent or restrictive the anti-deficit rule, the greater the influence it will have on the tax policy choices of elected officials.

The results of Model 3 are largely consistent with those of Model 2. The coefficient on the balanced budget stringency index is positive and statistically significant at the 90 percent level, once again indicating that states with stronger anti-deficit rules set taxation at higher levels than do states with relatively weak requirements, *ceteris paribus*. According to this model, lawmakers in a state with the most severe anti-deficit rules – a state that received a score of "10" on the index – will, on average, raise taxes by approximately $18 more per capita each year than a state with no balanced budget requirement.

To further explore how state-level anti-deficit rules may alter the revenue policy choices of elected officials, Model 4 considers whether balanced budget requirements that are constitutional in nature act as a greater constraint than those that

[122] *No Carry* is significant at the 95 percent level whereas *Legislature Pass* is only significant at the 90 percent level.

are based in statutory law. Previous research has argued that constitutionally based budgetary rules impose greater constraints on policy-making because they are more difficult to overturn (Kieweit and Szakaly 1996).[123] To test for this possibility Model 4 includes an interaction between *No Carry* and a new dummy variable, *Constitutional*, which is coded one if a state's balanced budget requirement is considered to be constitutional in nature and zero otherwise.[124] The baseline case in this estimation is those states whose most stringent anti-deficit rule requires the governor to submit a balanced budget.[125]

Table 4.5 here (See Appendix 3)

These new results are largely consistent with those generated in the estimations of models 2 and 3 – jurisdictions with the most stringent anti-deficit rules enact more and larger revenue enhancing measures, *ceteris paribus*. Contrary to expectations, though, constitutional restrictions appear to exert no greater upward pressure on taxation than do those that are statutory. The coefficient on the new interaction term is (surprisingly) both negative and insignificant. This result, when considered in tandem with my previous findings, indicates that the important feature of an anti-deficit rule is the stage in the budgetary process at which it mandates fiscal balance, not whether the rule is constitutional or statutory.

The econometric estimations presented thus far all provide very strong evidence that stringent anti-deficit rules lead elected officials to enact more and larger

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[123] While small legislative majorities can vote to waive or rewrite a statutory restriction, constitutional changes typically require supermajorities in the legislature and the approval of voters.
[124] Interacting the terms *Legislature Pass* and *Constitutional* is impossible due to insufficient variation.
[125] Once again, the state of Vermont is excluded from this analysis since it has no balanced budget requirement.

revenue-enhancing measures, with prohibitions on carrying over a budget deficit from one fiscal year to the next bringing about the largest tax increases. These fiscal institutions, by creating upward pressure on state taxation, appear to be serious obstacles for Republican (i.e., tax-cutting) governors and legislative majorities. In particular, they suggest that Republicans in states with strict balanced budget requirements, particularly no carryover rules, will be less effective at moving revenue policy in their preferred direction than their co-partisans elsewhere. Stated differently, these fiscal institutions may weaken the link between the partisan control of state government and revenue policy.

I rigorously examine this possibility in models 5 and 6 by re-estimating my econometric model, adding a new series of interaction terms. In model 5, I interact my measures of the partisan control of state government with the no carryover dummy variable. In model 6, the five partisan dummies are interacted with the balanced budget stringency index. The results of these new estimations are reported below in tables 4.6 and 4.7.

Table 4.6 here (See Appendix 3)

Just as in all of the previous estimations, the coefficients on the partisan dummy variables in models 5 and 6 are negative, demonstrating that Republican governors and legislative majorities reduce state taxation relative to their Democratic counterparts. Importantly, however, the coefficients on *all* of the new interaction terms (with one exception) are positive. These positive coefficients imply that Republicans in states with stringent balanced budget requirements are less successful at lowering taxation (or at least slowing the growth in taxation) than are their co-

partisans in jurisdictions with weaker or no anti-deficit rules. In other words, stringent anti-deficit rules appear to weaken the relationship between the partisan composition of government and changes in revenue policy.

Table 4.7 here (See Appendix 3)

Interestingly, the extent to which these rules weaken the ability of Republican lawmakers to lower taxation does not appear to be constant across all partisan configurations of state government. In both models 5 and 6 the coefficients on the new interaction terms only achieve statistical significance in those instances when the governor is a Republican and the Democratic Party controls one or more of the state's legislative chambers.

Unfortunately, I do not have a strong *ex-ante* explanation for this empirical regularity. I suspect, however, that the existence of a strong balanced budget requirement strengthens the hand of Democratic legislators when it comes to blocking or reducing tax cuts favored by Republican governors. Democratic legislators, by refusing to adopt offsetting reductions in government expenditures, can threaten to create an "illegal" fiscal imbalance. This threat may then to force Republican governors and their legislative allies to accept smaller tax cuts.[126] Furthermore, Democrats may be able use the state's balanced budget requirement as a rhetorical cover for opposing revenue reductions. Future research should explore these possibilities as well as other alternative explanations.

[126] Previous research has shown that voters tend to punish members of the governor's party when the state is running a budget deficit (Lowry, Alt, and Ferree 1998). As a result, the threat of fiscal imbalance should lead the governor to make large tax policy concessions (Alt and Lowry 2000).

5. Are States with Stringent Balanced Budget Requirements Different?

The results of my econometric analysis provide strong evidence that stringent balanced budget requirements lead to the adoption of more and larger revenue-enhancing changes to state tax policy. Correspondingly, they also suggest these fiscal institutions weaken the capacity of Republican governors and legislative majorities to move fiscal policy in their preferred direction – i.e., reduce the size of the state public sector. At this point, however, skeptical readers may question whether my empirical results have truly identified the effects of anti-deficit rules. It is possible that my measures of stringent balanced budget requirements are simply acting as proxies for some hitherto unaccounted for variable or variables.

The most reasonable alternative explanation for the findings reported here is that the ideology or "liberalness" of voters (and thereby lawmakers) is systematically different in states with and without stringent anti-deficit rules. If states with liberal electorates – i.e., electorates that prefer a higher level of taxation – are more likely to have adopted a stringent balanced budget requirement, voter ideology may be the real cause of the strong positive relationship we observe between tax increases and anti-deficit rules.[127] As a robustness check on my earlier results, Table 4.8 employs two difference of means tests to the explore this possibility

Table 4.8 here (See Appendix 3)

The first row of the table tests whether voters are more liberal in states that have adopted a stringent anti-deficit requirement. Specifically, I compare the mean public opinion liberalness score of states with a no carryover rule to the mean of their

counterparts that have not adopted this particular requirement. These scores were developed by Erikson, Wright, and McIver (1993) using responses to *CBS News/New York Times* telephone surveys in which respondents were asked their ideological identification.[128] The responses were aggregated for each state and normalized to yield a number with a theoretical range of –100 to +100, with higher values representing a more liberal public opinion. Interestingly, the results presented here show that electorates in states with a no carryover rule are significantly more *conservative* than electorates elsewhere. This result is a bit surprising since it suggests that elected officials in these states should actually be less likely to raise taxes than officials in states with weaker or no anti-deficit requirements.

The second row of the Table 4.8 presents an alternative, albeit less direct, test of whether electorates are more liberal in states with stringent balanced budget requirements. Here, I compare the mean ideology of U.S. senators from states with and without a no carryover rule.[129] I measure the ideology of senators using the DW-Nominate scores developed by Poole and Rosenthal (1996). These scores are based upon roll call voting behavior and indicate where individual senators lie on the liberal-conservative spectrum.[130] DW-Nominate scores range from –1 for the most liberal senator to +1 for the most conservative. Consistent with my analysis of the public

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[127] Previous research has found a positive relationship between liberal electorates and the liberalness of state-level public policy (Erikson, Wright, and McIver 1989).

[128] The public opinion liberalness scores developed by Erikson, Wright, and McIver are the most widely employed measures of state-level voter ideology. They are commonly used in empirical analyses in both the political science (cf. Smith 1997; Kousser 2002; McAtee, Yackee, and Lowry 2003) and public finance economics literatures (cf. Matsusaka 1995; Besley and Case 2003).

[129] While the ideology of U.S. Senators is obviously a less direct measure of state-level voter ideology than the opinion liberalness scores developed by Erikson, Wright, and McIver (1989, 1993), this approach has previously been used, with some success, to measure voter preferences (see Matsusaka 1995).

opinion data, senators from states with no carryover rules are significantly more conservative than their counterparts from jurisdictions with weaker balanced budget requirements.

Overall, the difference of means tests presented here provide fairly convincing evidence that liberal electorates are *not* the cause of the strong positive relationship observed, in my empirical analysis, between restrictive anti-deficit rules and tax increases. In fact, Table 4.8 demonstrates that voters are significantly more conservative in states with stringent balanced budget requirements than they are elsewhere. This result points to an interesting paradox: strong balanced budget requirements, an institution favored by conservative voters and interest groups, appears to lead to more and larger tax increases, an outcome that most conservatives would (and do) oppose.

6. Conclusion

While most state governments have had a long experience with anti-deficit rules, the discipline of political science knows relatively little about how and whether these institutions shape the policy choices of lawmakers. This paper helps close this gap by investigating the impact that these rules have on one aspect of state budgeting – the tax policy choices made by elected officials. In particular, I consider whether stringent anti-deficit rules, by prohibiting certain budgetary outcomes, alter the tax policy choices of elected officials. Furthermore, I explore whether these fiscal institutions weaken the ability of the governor and majority party in the legislature to

[130] The DW-Nominate scores used in this analysis include the 100th through 106th sessions of Congress.

shape revenue policy as they prefer. In addressing these questions, the paper also exploits the cross-sectional variation in state balanced budget requirements to examine whether certain anti-deficit requirements impose a greater constraint on the decision-making of elected officials than others.

In this analysis I find strong evidence that anti-deficit rules systematically alter the tax policy choices of lawmakers and that they do so in a manner that appears to make it more difficult for Republican (i.e., tax-cutting) governors and legislative majorities to shift state revenue policy in their preferred direction. Estimations of my econometric model show that stringent anti-deficit rules lead lawmakers to adopt more and larger revenue-enhancing measures. Moreover, interaction models demonstrate that Republicans in states with stringent balanced requirements are significantly less successful at reducing taxation than their co-partisans elsewhere.

The results reported in this paper also provide insight into the effects of various features of state-level anti-deficit rules. Estimations of my econometric model suggest that the most important predictor of the extent to which an anti-deficit rule will constrain elected officials is the stage of the budgetary process at which it mandates fiscal balance. Rules which require that revenues equal expenditures at the end of the fiscal year lead elected officials to adopt larger tax increases than do rules that only obligate the governor to submit or the legislature to pass a balanced budget. Furthermore, I find that constitutionally based balanced budget requirements are no greater a constraint on the fiscal behavior of governors and legislators than those based in statutory law.

Overall, this paper suggests that fiscal or budgetary rules have important implications for the study of state policy and politics. First, the findings presented here demonstrate that such institutions, despite the fact that they generally lack clear and explicit enforcement mechanisms, can and do exert a measurable independent influence on the policy actions of state governments. As a result, they need to be incorporated into the theories and empirical analyses of political scientists. A failure to do so will inevitably lead to an incomplete understanding of state policy-making.

Second, this paper provides evidence suggesting that while the partisan control of government is an important determinant of policy outcomes, the extent to which party "matters" is not constant across all states. The econometric results presented in this paper show that the magnitude of party effects varies and that this variation can be, in part, attributed to state balanced budget requirements as well as specific attributes of these requirements. In other words, budgetary institutions can and do affect the responsiveness of state-level public policy to electoral outcomes. In the ongoing search for party-policy linkages at the state-level researchers should recognize this reality and adjust their expectations accordingly.

V: Conclusion

Traditionally, empirical analyses in the state politics literature have produced little evidence showing that variation in the partisan control of state government deliver measurable differences in public policy. Existing efforts show that party effects among the U.S. states are, at best, weak and conditional. These unanticipated results raise a significant question for scholars of subnational politics as well as the discipline of political science: How can we account for the weak relationship that is usually observed between the partisan affiliation of elected officials and public policy at the state level?

This dissertation, through three separate analyses of state tax policy, provides an answer. Each chapter demonstrates that while the partisan control of state government does have policy implications, the ability of the governor and majority party in the legislature to shape policy is mitigated or constrained by features of the state policy-making environment. In particular, these chapters find that interjurisdictional competition over mobile economic resources, direct democracy institutions (especially the citizen initiative), and stringent anti-deficit rules or balanced budget requirements all work to limit party government.

Importantly, this dissertation also demonstrates that the relationship between party and policy can and does vary. First, it suggests that party effects will not be constant across all policy areas. According to Chapter 2, the partisan control of government will matter much less in those areas of public policy that are most likely to impact competition between states over highly mobile resources. Second, Chapters

3 and 4 illustrate that party effects will vary as a function of state-level policy-making institutions. In the ongoing search for party-policy linkages among the states, researchers must recognize these variations and incorporate them into their theoretical and empirical analyses.

Finally, while this dissertation has identified several constraints on the ability of political parties and elected officials to set policy as they please, it is ultimately unclear what these findings imply about the condition of democracy among the U.S. states. For proponents of responsible party government these results are likely to be troubling. The absence of strong party effects may suggest that citizens do not possess substantial operational control over state government. On the other hand, if political parties tend to move policy far to the left or right of the preferences of the median voter (as a means of satisfying members of their core constituencies), then the absence of strong party effects may be much less troubling. Furthermore, to the extent that constraints on party government exhibit a moderating effect on policy outcomes they may, in the end, result in public policies that better represent the interests of individuals with preferences closer to those of the median voter.

Appendix 1: Tables for Chapter 2

Table 2.1. Summary Statistics for Variables Included in Chapter 2[131]

Variable	Mean	SD	Minimum	Maximum	Data Source(s)
Dependent Variables					
Enacted Tax Measures	$7.36	51.24	-449.52	376.11	(1)
ΔPersonal Tax Revenues	$14.03	34.61	-126.35	466.59	(2)
ΔCorporate Tax Revenues	$1.53	15.71	-87.50	122.03	(2)
Partisan Model					
Unified Democratic	.23	.42	0	1	(3,4)
Unified Republican	.19	.39	0	1	(3,4)
Dem. Gov. & Rep. Leg.	.08	.27	0	1	(3,4)
Dem. Gov. & Split Leg.	.15	.36	0	1	(3,4)
Rep. Gov. & Split Leg.	.12	.32	0	1	(3,4)
Rep. Gov. & Dem. Leg.	.24	.42	0	1	(3,4)
Market Model					
$\text{Competitors}^{\text{Geo.}}$	$6.87	32.27	-119.79	198.95	(1)
$\text{Competitors}^{\text{Manu.}}$	$7.18	23.80	-69.02	123.72	(1)
$\text{Revenue Per-capita}_{t-1}$	$1,488	325	642	2,718	(2)
Controls					
$\%\ \text{Surplus}_{t-1}$	6.67%	6.36	-14.6	41.4	(1)
ΔUnemployment	-.22	.77	-3	3	(4)
Income Per-capita	$22,926	3,680	15,072	37,714	(4)
ΔIncome Per-capita	$566.55	510.92	-1,998	2,466	(4)
Opinion Liberalness	-14.21	7.49	-28	-.2	(5)
% Black	6.12%	5.90	.3	28.2	(4)
Balanced Budget Stringency	8.04	2.63	0	10	(7)
Legislative Vote	54.27	6.63	51	75	(8)
Tax & Expenditure Limitation	.58	.49	0	1	(3)
Initiatives	.48	.50	0	1	(3)
South	.23	.42	0	1	(6)

Data sources: (1) National Association of State Budget Officers, *The Fiscal Survey of States*; (2) World Tax Database, http://wtdb.org; (3) Council of State Governments, *Book of the States*; (4) U.S. Census Bureau, *Statistical Abstract of the United States*; (5) Erikson, Wright, and McIver 1993; (6) The eleven states of the former Confederacy; (7) ACIR (1987); (8) Knight (2000).

[131] Summary statistics for the explanatory variables are reported for fiscal years 1988 – 2001.

Table 2.2. Determinants of Enacted Revenue Measures
FY 1988 – 2001
First-Stage Estimation
(DV = Weighted Measure of the Tax Policy Changes of State *i*'s Competitors)

Explanatory Variables	Model 1		Model 2	
	b	SE	b	SE
Exogenous Stage-Two Variables				
Unified Republican	-5.63	4.11	-.62	1.73
Dem. Gov. & Rep. Leg.	-3.24	4.60	-1.33	2.12
Dem. Gov. & Split Leg.	-1.26	3.60	-.92	1.61
Rep. Gov. & Split Leg.	-4.99	3.94	-.85	1.70
Rep. Gov. & Dem. Leg.	-4.55	2.79	.83	1.29
Revenue Per-Capita$_{t-1}$	-.01*	.005	-.0001	.002
% Surplus$_{t-1}$	-.13	.18	.26**	.09
ΔUnemployment	2.39	1.55	.21	.69
Income Per-capita	.0001	.001	-.0002	.0002
ΔIncome Per-capita	.001	.003	-.001	.002
Opinion Liberalness	.03	.25	.24*	.13
% Black	.34	.23	-.02	.11
Balanced Budget Stringency	.37	.56	.25	.26
Tax & Expenditure Limits	3.35	2.52	-.25	1.05
Legislative Vote	.07	.17	.02	.08
Initiatives	-2.05	2.89	.78	1.10
South	8.61	7.43	-1.12	2.72
Instrumental Variables				
Unified Republican$^{Geo.}$	-38.14**	6.83	--	--
Unified Republican$^{Manu.}$	--	--	-75.24**	6.94
Dem. Gov. & Rep. Leg.$^{Geo.}$	-8.55	10.08	--	--
Dem. Gov. & Rep. Leg.$^{Manu.}$	--	--	-43.45**	11.75
Dem. Gov. & Split Leg.$^{Geo.}$	7.28	7.05	--	--
Dem. Gov. & Split Leg.$^{Manu.}$	--	--	-9.64	9.69
Rep. Gov. & Split Leg.$^{Geo.}$	-28.10**	7.1	--	--
Rep. Gov. & Split Leg.$^{Manu.}$	--	--	-61.18**	11.76
Rep. Gov. & Dem. Leg.$^{Geo.}$	-14.31**	5.39	--	--
Rep. Gov. & Dem. Leg.$^{Manu.}$	--	--	11.50*	6.30
Revenue Per-Capita$_{t-1}^{Geo.}$	-.04**	.01	--	--
Revenue Per-Capita$_{t-1}^{Manu.}$	--	--	-.10**	.01
% Surplus$_{t-1}^{Geo.}$	-2.13**	.35	--	--
% Surplus$_{t-1}^{Manu.}$	--	--	-1.03**	.34
ΔUnemployment$^{Geo.}$	11.86**	2.14	--	--
ΔUnemployment$^{Manu.}$	--	--	8.13**	1.41
Income Per-capita$^{Geo.}$	.002*	.001	--	--

Table 2.2 Continuing

Explanatory Variables	Model 1		Model 2	
	b	SE	b	SE
Income Per-capita$^{Manu.}$	--	--	.007**	.001
ΔIncome Per-capita$^{Geo.}$	-.02**	.004	--	--
ΔIncome Per-capita$^{Manu.}$	--	--	-.02**	.002
Opinion Liberalness$^{Geo.}$	.91	.57	--	--
Opinion Liberalness$^{Manu.}$	--	--	1.29	.96
% Black$^{Geo.}$	-1.57**	.59	--	--
%Black$^{Manu.}$	--	--	.67	.73
Balanced Budget Stringency$^{Geo.}$	3.10**	1.43	--	--
Balanced Budget Stringency$^{Manu.}$	--	--	10.31**	2.92
Tax & Expenditure Limits$^{Geo.}$	-.16	6.03	--	--
Tax & Expenditure Limits$^{Manu.}$	--	--	.86	7.91
Legislative Vote$^{Geo.}$	.23	.35	--	--
Legislative Vote$^{Manu.}$	--	--	-1.66**	.54
Initiatives$^{Geo.}$	2.52	7.00	--	--
Initiatives$^{Manu.}$	--	--	40.66**	12.21
South$^{Geo.}$	-9.54	12.54	--	--
South$^{Manu.}$	--	--	-44.82**	19.20
Constant	50.21	31.30	47.82	37.97
N	645		645	
R^2	.53		.81	

***p<.05; *p<.10*

Table 2.3. Determinants of Enacted Revenue Measures
FY 1988 – 2001
Second-Stage Estimation
(DV = Policy Changes Made by State *i*)

Explanatory Variables	Model 1		Model 2	
	b	SE	b	SE
Partisan Approach				
Unified Republican	-22.15**	7.09	-25.65**	6.87
Dem. Gov. & Rep. Leg.	-9.03	8.44	-12.45	8.23
Dem. Gov. & Split Leg.	2.32	6.21	1.05	6.10
Rep. Gov. & Split Leg.	-12.29*	6.85	-15.39**	6.65
Rep. Gov. & Dem. Leg.	.33	5.33	-2.78	5.15
Market Approach				
$Competitors^{Geo.}$	.53**	.11	--	--
$Competitors^{Manu.}$	--	--	.42**	.11
$Revenue\ Per\text{-}Capita_{t-1}$	-.02**	.01	-.02**	.01
Control Variables				
$\%\ Surplus_{t-1}$	-1.26**	.34	-1.31**	.33
ΔUnemployment	3.79	2.70	6.63**	2.48
Income Per-capita	-.00003	.001	.0003	.001
ΔIncome Per-capita	.001	.004	-.003	.004
Opinion Liberalness	.11	.39	.16	.38
% Black	-.31	.31	-.35	.30
Balanced Budget Stringency	.94	.81	.85	.79
Tax & Expenditure Limits	2.00	3.99	3.20	3.91
Legislative Vote	.33	.30	.40	.30
Initiatives	-4.08	4.34	-4.22	4.36
South	-12.65*	7.86	-11.85	7.73
Constant	31.14	28.36	32.34	28.53
N	645		645	
R^2	.20		.22	

***p<.05; *p<.10*

Table 2.4. Determinants of Enacted Revenue Measures
FY 1989 – 2001
OLS with Panel-Corrected Standard Errors
(DV = Policy Changes Made by State *i*)

Explanatory Variables	Model 3		Model 4	
	b	SE	b	SE
Partisan Approach				
Unified Republican	-29.38**	8.04	-29.91**	6.93
Dem. Gov. & Rep. Leg.	-14.36	9.48	-14.37	9.03
Dem. Gov. & Split Leg.	-.56	6.08	-1.73	5.89
Rep. Gov. & Split Leg.	-17.40**	7.46	-19.11**	7.28
Rep. Gov. & Dem. Leg.	-4.30	6.40	-4.64	6.00
Market Approach				
$Competitors^{Geo.}$	.16**	.05	--	--
$Competitors^{Manu.}$	--	--	.22*	.13
$Revenue\ Per\text{-}Capita_{t-1}$	-.03**	.01	-.03**	.01
Control Variables				
ΔTax_{t-1}	.01	.03	-.04	.12
$\%\ Surplus_{t-1}$	-1.27**	.35	-1.19**	.38
ΔUnemployment	9.26**	4.04	9.53**	4.13
Income Per-capita	-.0001	.001	.00002	.001
ΔIncome Per-capita	-.006	.008	-.007	.007
Opinion Liberalness	.54	.33	.55*	.32
% Black	.74	.55	-.28	.19
Balanced Budget Stringency	.74	.55	.71*	.32
Tax & Expenditure Limits	4.23	3.88	3.77	3.83
Legislative Vote	.35	.37	.34	.37
Initiatives	-3.95	4.49	-3.95	5.17
South	-13.68**	4.52	-12.07**	4.03
Constant	60.41*	33.62	58.13	35.06
N	598		598	
R^2	.21		.21	

***p<.05; *p<.10*

Table 2.5. Determinants of Annual Changes in Personal Income Tax Revenue FY 1969 – 2000 First-Stage Estimation (DV = Weighted Measure of the Changes in Personal Income Tax Revenue among State *i*'s Competitors)

Explanatory Variables	Model 7		Model 8	
	b	SE	b	SE
Exogenous Stage-Two Variables				
Unified Republican	7.24**	1.75	2.15**	.84
Dem. Gov. & Rep. Leg.	4.88**	1.86	.36	.92
Dem. Gov. & Split Leg.	2.65	1.73	.60	.82
Rep. Gov. & Split Leg.	2.99	1.93	.53	90
Rep. Gov. & Dem. Leg.	.79	1.30	1.10*	.63
Revenue Per-Capita$_{t-1}$	-.01**	.002	-.001	.001
ΔUnemployment	-.52	.64	.28	.30
Income Per-capita	.00001	.0003	.0001	.0001
ΔIncome Per-capita	.0002	.001	.00004	.0006
Opinion Liberalness	.42	.11	-.07	.06
% Black	-.24**	.12	.05	.06
Balanced Budget Stringency	-.64**	.27	-.10	.13
Tax & Expenditure Limits	3.56	1.21	.61	.51
Legislative Vote	.14	.10	.01	.05
Initiatives	-4.53**	1.35	-.58	.58
South	-1.02	3.58	-1.68	1.42
Instrumental Variables				
Unified Republican$^{Geo.}$	1.31	3.02	--	--
Unified Republican$^{Manu.}$	--	--	21.93**	2.77
Dem. Gov. & Rep. Leg.$^{Geo.}$	-3.10	3.69	--	--
Dem. Gov. & Rep. Leg.$^{Manu.}$	--	--	7.47	4.52
Dem. Gov. & Split Leg.$^{Geo.}$	-9.33**	3.44	--	--
Dem. Gov. & Split Leg.$^{Manu.}$	--	--	-4.22	3.89
Rep. Gov. & Split Leg.$^{Geo.}$	-3.96	3.52	--	--
Rep. Gov. & Split Leg.$^{Manu.}$	--	--	-.73	4.18
Rep. Gov. & Dem. Leg.$^{Geo.}$	2.05	2.55	--	--
Rep. Gov. & Dem. Leg.$^{Manu.}$	--	--	4.90	3.05
Revenue Per-Capita$_{t-1}^{Geo.}$	-.01**	.004	--	--
Revenue Per-Capita$_{t-1}^{Manu.}$	--	--	-.003*	.002
ΔUnemployment$^{Geo.}$	-1.13	.80	--	--
ΔUnemployment$^{Manu.}$	--	--	-1.06**	.48
Income Per-capita$^{Geo.}$	.002**	.0004	--	--
Income Per-capita$^{Manu.}$	--	--	.0002	.0002
ΔIncome Per-capita$^{Geo.}$	.01**	.002	--	--
ΔIncome Per-capita$^{Manu.}$	--	--	.02**	.001

Table 2.5 Continuing

Explanatory Variables	Model 7		Model 8	
	b	SE	b	SE
Opinion Liberalness$^{Geo.}$	.81**	.23	--	--
Opinion Liberalness$^{Manu.}$	--	--	-.02	.43
% Black$^{Geo.}$	-.32	.29	--	--
%Black$^{Manu.}$	--	--	.39	.38
Balanced Budget Stringency$^{Geo.}$	3.09**	.65	--	--
Balanced Budget Stringency$^{Manu.}$	--	--	-1.05	1.32
Tax & Expenditure Limits$^{Geo.}$	4.91*	2.87	--	--
Tax & Expenditure Limits$^{Manu.}$	--	--	4.71	3.36
Legislative Vote$^{Geo.}$	.42**	.20	--	--
Legislative Vote$^{Manu.}$	--	--	.58	.26
Initiatives$^{Geo.}$	-7.00**	3.23	--	--
Initiatives$^{Manu.}$	--	--	-6.18	4.74
South$^{Geo.}$	9.31	5.97	--	--
South$^{Manu.}$	--	--	-12.01	9.92
Constant	-27.53**	11.30	-22.16	9.92
N	1536		1536	
R^2	.24		.52	

***p<.05; *p<.10*

Table 2.6. Determinants of Annual Changes in Personal Income Tax Revenue FY 1969 – 2000 Second-Stage Estimation (DV = Changes in Personal Income Tax Revenue for State *i*)

Explanatory Variables	Model 7		Model 8	
	b	SE	b	SE
Partisan Approach				
Unified Republican	-9.29**	3.29	-9.24**	3.11
Dem. Gov. & Rep. Leg.	-7.61**	3.46	-7.44**	3.31
Dem. Gov. & Split Leg.	-8.93**	3.17	-8.97**	3.04
Rep. Gov. & Split Leg.	-7.30**	3.52	-7.27**	3.37
Rep. Gov. & Dem. Leg.	-4.00	2.51	-4.14	2.40
Market Approach				
$\text{Competitors}^{\text{Geo.}}$	.66**	.16	--	--
$\text{Competitors}^{\text{Manu.}}$	--	--	.70**	.14
$\text{Revenue Per-Capita}_{t-1}$	-.004	.004	-.01**	.004
Control Variables				
ΔUnemployment	-.44	.92	-.84	.82
Income Per-capita	.001*	.0004	.001**	.0003
ΔIncome Per-capita	.01**	.002	.01**	.002
Opinion Liberalness	-.06	.18	.15	.17
% Black	.22	.16	.23	.15
Balanced Budget Stringency	.42	.39	.31	.37
Tax & Expenditure Limits	.74	1.94	1.43	1.84
Legislative Vote	-.11	.18	-.09	.17
Initiatives	2.06	2.23	-.72	2.02
South	-8.98**	4.08	-10.42**	3.90
Constant	.01	11.29	2.38	10.77
N	1536		1536	
R^2	.02		.10	

***p<.05; *p<.10*

Table 2.7. Determinants of Annual Changes in Corporate Income Tax Revenue FY 1969 – 2000
First-Stage Estimation
(DV = Weighted Measure of the Changes in Corporate Income Tax Revenue among State *i*'s Competitors)

Explanatory Variables	Model 9		Model 10	
	b	SE	b	SE
Exogenous Stage-Two Variables				
Unified Republican	-.57	.93	-.76	.54
Dem. Gov. & Rep. Leg.	-.38	.98	-.40	.59
Dem. Gov. & Split Leg.	-.21	.92	-.47	.53
Rep. Gov. & Split Leg.	.06	1.02	-.55	.58
Rep. Gov. & Dem. Leg.	-1.66**	.69	-.80**	.41
Revenue Per-Capita$_{t-1}$	-.001	.001	.001	.001
ΔUnemployment	-.34	.34	.01	.19
Income Per-capita	-.0001	.0002	-.0001	.0001
ΔIncome Per-capita	.0001	.001	.001	.0003
Opinion Liberalness	.05	.14	.02	.04
% Black	.01	.06	-.002	.04
Balanced Budget Stringency	-.001	.14	-.001	.09
Tax & Expenditure Limits	.68	.64	.02	.33
Legislative Vote	.03	.05	-.01	.03
Initiatives	-.71	.72	.12	.37
South	.11	1.89	.24	.91
Instrumental Variables				
Unified Republican$^{Geo.}$	-1.82	1.60	--	--
Unified Republican$^{Manu.}$	--	--	-9.97**	1.79
Dem. Gov. & Rep. Leg.$^{Geo.}$	-3.02	1.95	--	--
Dem. Gov. & Rep. Leg.$^{Manu.}$	--	--	-8.44**	2.91
Dem. Gov. & Split Leg.$^{Geo.}$	2.95	1.82	--	--
Dem. Gov. & Split Leg.$^{Manu.}$	--	--	-3.76	2.51
Rep. Gov. & Split Leg.$^{Geo.}$	1.03	1.87	--	--
Rep. Gov. & Split Leg.$^{Manu.}$	--	--	.19	2.69
Rep. Gov. & Dem. Leg.$^{Geo.}$	.16	1.36	--	--
Rep. Gov. & Dem. Leg.$^{Manu.}$	--	--	-13.44**	1.96
Revenue Per-Capita$_{t-1}^{Geo.}$	-.01**	.002	--	--
Revenue Per-Capita$_{t-1}^{Manu.}$	--	--	.001	.001
ΔUnemployment$^{Geo.}$	-1.84**	.42	--	--
ΔUnemployment$^{Manu.}$	--	--	-1.75**	.31
Income Per-capita$^{Geo.}$	-.0001	.0002	--	--
Income Per-capita$^{Manu.}$	--	--	-.001**	.0001
ΔIncome Per-capita$^{Geo.}$	.005**	.001	--	--
ΔIncome Per-capita$^{Manu.}$	--	--	.01**	.001

Table 2.7 Continuing

Explanatory Variables	Model 9		Model 10	
	b	SE	b	SE
Opinion Liberalness$^{Geo.}$	.08	.12	--	--
Opinion Liberalness$^{Manu.}$	--	--	.02	.28
% Black$^{Geo.}$	-.14	.16	--	--
%Black$^{Manu.}$	--	--	-.08	.24
Balanced Budget Stringency$^{Geo.}$	.13	.34	--	--
Balanced Budget Stringency$^{Manu.}$	--	--	-.01	.85
Tax & Expenditure Limits$^{Geo.}$	-.99	1.52	--	--
Tax & Expenditure Limits$^{Manu.}$	--	--	3.11	2.16
Legislative Vote$^{Geo.}$	.14	.11	--	--
Legislative Vote$^{Manu.}$	--	--	.17	.16
Initiatives$^{Geo.}$	-1.64	1.71	--	--
Initiatives$^{Manu.}$	--	--	-2.64	3.05
South$^{Geo.}$	-2.19	3.16	--	--
South$^{Manu.}$	--	--	-4.55	6.39
Constant	8.40	5.98	11.19	9.05
N	1536		1536	
R^2	.20		.39	

***p<.05; *p<.10*

Table 2.8. Determinants of Annual Changes in Corporate Income Tax Revenue FY 1969 – 2000
Second-Stage Estimation
(DV = Changes in Corporate Income Tax Revenue for State *i*)

Explanatory Variables	Model 7		Model 8	
	b	SE	b	SE
Partisan Approach				
Unified Republican	-.59	1.36	-.89	1.34
Dem. Gov. & Rep. Leg.	-1.32	1.47	-1.68	1.45
Dem. Gov. & Split Leg.	1.78	1.36	1.62	1.34
Rep. Gov. & Split Leg.	-1.12	1.49	-.92	1.48
Rep. Gov. & Dem. Leg.	.76	1.11	.12	1.06
Market Approach				
$Competitors^{Geo.}$	.58**	.16	--	--
$Competitors^{Manu.}$	--	--	.52**	.13
Revenue Per-Capita$_{t-1}$	-.01**	.002	-.01**	.002
Control Variables				
ΔUnemployment	-.85*	.45	-1.06**	.41
Income Per-capita	.0001	.0002	.0001	.0002
ΔIncome Per-capita	.002**	.001	.003**	.001
Opinion Liberalness	-.02	.07	-.02	.07
% Black	.05	.07	.05	.07
Balanced Budget Stringency	.002	.17	-.03	.16
Tax & Expenditure Limits	-.04	.82	.11	.81
Legislative Vote	.08	.08	.08	.08
Initiatives	-.36	.90	-.48	.89
South	-3.20*	1.76	-3.89**	1.72
Constant	.49	5.32	2.42	5.04
N	1536		1536	
R^2	.14		.15	

***p<.05; *p<.10*

Appendix 2: Tables and Figures for Chapter 3

Figure 3.1. Citizen Initiative in the United States

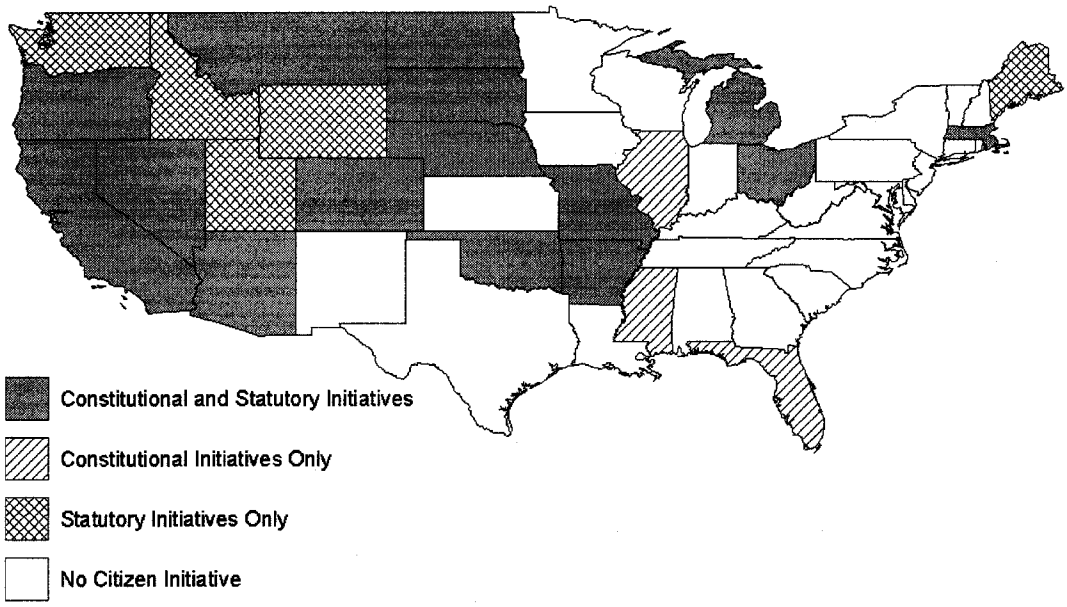

Table 3.1. Restrictions on the Legislature's Power to Amend Statutory Initiative

State	Restriction
Alaska	No repeal within two years; amendment by majority vote anytime thereafter
Arizona	No repeal; ¾ vote to amend; amending legislation must "further the purpose" of the measure
Arkansas	2/3 vote to amend or repeal
California	No amendment or repeal unless the initiative permits it
Michigan	¾ vote to amend or repeal
Nevada	No amendment or repeal within three years of enactment
North Dakota	2/3 vote required to amend or repeal within seven years of effective date
Oregon	2/3 vote required to amend or repeal within two years of enactment
Washington	2/3 vote required to amend or repeal within two years of enactment
Wyoming	No repeal within two years of effective date; amendment by majority vote any time thereafter

Source: National Conference of State Legislatures

Table 3.2. Summary Statistics for Variables Included in Chapter 3

Variable	Mean	SD	Minimum	Maximum	Data Source(s)
Dependent Variable					
Enacted Tax Measures	$8.10	53.79	-449.72	376.01	(1)
ΔTotal Tax Revenue	$30.18	81.26	-468.40	801.73	(2)
Partisan Variables					
Unified Democratic	.16	.37	0	1	(3,4)
Unified Republican	.24	.42	0	0	(3,4)
Dem. Gov. & Rep. Leg.	.10	.30	0	1	(3,4)
Dem. Gov. & Split Leg.	.19	.39	1	1	(3,4)
Rep. Gov. & Split Leg.	.13	.33	0	1	(3,4)
Rep. Gov. & Dem. Leg.	.20	.40	0	1	(3,4)
Control Variables					
Revenue Per-Capita$_{t-1}$	$1,548	332	642	2,718	(2)
% Surplus$_{t-1}$	7.38%	6.74	-18.5	41.4	(1)
ΔUnemployment	-.05	.81	-2.3	3	(4)
Income Per-capita	$22,637	3,792	15,942	36,651	(4)
ΔIncome Per-capita	$316	488	-1.832	2,264	(4)
Opinion Liberalness	-12.49	7.42	-28	-.2	(5)
% Black	6.22%	5.95	.3	28.2	(4)
% Bachelors	22.59%	4.66	11.75	38.7	
Balanced Budget Stringency	7.83	2.79	0	10	(6)
Legislative Vote	53.67%	6.07	51	75	(7)
Tax & Expenditure Limits	.57	.50	0	1	(3)
Initiatives	.54	.50	0	1	(3)
Signature Requirement	6.95%	3.02	2	15	(3)

Data sources: (1) National Association of State Budget Officers, *The Fiscal Survey of States*; (2) World Tax Database, http://wtdb.org; (3) Council of State Governments, *Book of the States*; (4) U.S. Census Bureau, *Statistical Abstract of the United States*; (5) Erikson, Wright, and McIver 1993; (6) ACIR (1987); (7) Knight (2000).

Table 3.3. Determinants of Enacted Annual Revenue Changes
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 1	
	b	SE
Partisan Variables		
Unified Republican	-32.19**	7.73
Dem. Gov. & Rep. Leg.	-19.71**	9.89
Dem. Gov. & Split Leg.	-4.02	6.58
Rep. Gov. & Split Leg.	-21.96**	9.26
Rep. Gov. & Dem. Leg.	-15.23*	9.04
Control Variables		
% $Surplus_{t-1}$	-1.54**	.41
ΔUnemployment	1.09	4.04
Income Per-capita	.003	.002
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	.02*	.01
Opinion Liberalness	.07	.60
% Black	-1.29**	.61
%Bachelors	-.65	.82
Balanced Budget Stringency	1.76*	.96
Legislative Vote	.52*	.29
Tax & Expenditure Limits	-2.55	5.98
Initiatives	-2.60	6.14
Constant	10.63	35.31
N	490	
R^2	.29	

***p<.05; *p<.10*

Table 3.4. Determinants of Enacted Annual Revenue Changes
FY 1988 - 2001
By Type of State

Explanatory Variables	Model 2		Model 3	
	Pure Representative States		Direct Democracy States	
	b	SE	b	SE
Partisan Variables				
Unified Republican	-49.83**	10.53	-25.53**	9.98
Dem. Gov. & Rep. Leg.	-38.84**	18.66	-5.51	8.37
Dem. Gov. & Split Leg.	-8.10	8.92	-4.29	10.45
Rep. Gov. & Split Leg.	-33.47**	12.86	-15.50	11.25
Rep. Gov. & Dem. Leg.	-29.46**	12.86	-2.11	12.16
Control Variables				
% $Surplus_{t-1}$	-2.25**	.74	-1.93**	.45
ΔUnemployment	.63	4.35	.58	4.37
Income Per-capita	.003	.003	.0001	.003
ΔIncome Per-capita	-.01	.01	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.05**	.01	-.01	.01
Opinion Liberalness	.41	1.45	.37	.61
% Black	-1.99**	.70	-1.96**	.57
%Bachelors	1.19	1.09	-1.28	1.27
Balanced Budget Stringency	4.32**	1.50	-1.74	1.83
Legislative Vote	5.77*	1.24	.47	.33
Tax & Expenditure Limits	-.95	8.75	-7.97	8.26
Constant	-266.18**	81.25	112.44**	61.64
N	231		259	
R^2	.36		.30	

***p<.05; *p<.10*

Table 3.5. Determinants of Enacted Annual Revenue Changes
FY 1988 - 2001
By Type of State

Explanatory Variables	Model 4	
	Direct Democracy States	
	b	SE
Partisan Variables		
Unified Republican	-31.54**	9.93
Dem. Gov. & Rep. Leg.	-13.92*	8.01
Dem. Gov. & Split Leg.	-3.35	10.47
Rep. Gov. & Split Leg.	-16.68	11.26
Rep. Gov. & Dem. Leg.	-3.21	12.00
Control Variables		
% $Surplus_{t-1}$	-2.24**	.46
ΔUnemployment	.37	4.42
Income Per-capita	.001	.003
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02	.01
Opinion Liberalness	.40	.61
% Black	-2.27**	.62
%Bachelors	-.86	1.23
Balanced Budget Stringency	-.70	2.08
Legislative Vote	.35	.34
Tax & Expenditure Limits	-10.73	8.20
Signature Requirement	2.52**	.95
Constant	81.91	66.60
N	259	
R^2	.31	

***p<.05; *p<.10*

Table 3.6. Determinants of Enacted Annual Revenue Changes
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 5	
	b	SE
Partisan Variables		
Unified Republican	-40.87**	11.84
Unified Republican * Initiatives	20.42	13.79
Dem. Gov. & Rep. Leg.	-34.48	22.08
Dem. Gov. & Rep. Leg. * Initiatives	26.53	24.96
Dem. Gov. & Split Leg.	-7.20	8.93
Dem. Gov. & Split Leg. * Initiatives	11.44	14.91
Rep. Gov. & Split Leg.	-29.82*	15.51
Rep. Gov. & Split Leg. * Initiatives	21.27	21.14
Rep. Gov. & Dem. Leg.	-26.68*	16.14
Rep. Gov. & Dem. Leg. * Initiatives	26.81	21.81
Control Variables		
% $Surplus_{t-1}$	-1.47**	.43
ΔUnemployment	.84	4.00
Income Per-capita	.003*	.002
ΔIncome Per-capita	-.02**	.001
Revenue $Per\text{-}Capita_{t-1}$	-.02*	.01
Opinion Liberalness	.10	.64
% Black	-1.52**	.67
%Bachelors	-.75	.85
Balanced Budget Stringency	1.93*	1.09
Legislative Vote	.46*	.28
Tax & Expenditure Limits	-.97	5.60
Initiatives	-20.22*	10.57
Constant	15.83	33.45
N	490	
R^2	.29	

***p<.05; *p<.10*

Table 3.7. Determinants of Annual Changes in Tax Revenue
FY 1969 – 2000
All Non-Southern States

Explanatory Variables	Model 6	
	b	SE
Partisan Variables		
Unified Republican	-36.04**	8.98
Unified Republican * Initiatives	26.27**	12.00
Dem. Gov. & Rep. Leg.	-41.12**	12.38
Dem. Gov. & Rep. Leg. * Initiatives	29.58**	14.55
Dem. Gov. & Split Leg.	-15.49*	9.61
Dem. Gov. & Split Leg. * Initiatives	6.54	13.10
Rep. Gov. & Split Leg.	-24.75**	9.19
Rep. Gov. & Split Leg. * Initiatives	24.57*	14.17
Rep. Gov. & Dem. Leg.	-5.01	8.21
Rep. Gov. & Dem. Leg. * Initiatives	4.47	11.31
Control Variables		
ΔUnemployment	-10.79**	2.83
Income Per-capita	.01**	.001
ΔIncome Per-capita	.01*	.004
Revenue Per-Capita$_{t-1}$	-.04**	.01
Opinion Liberalness	-.95**	.41
% Black	-1.02**	.48
%Bachelors	-.77	.83
Balanced Budget Stringency	-.49	.95
Legislative Vote	-.59	.44
Tax & Expenditure Limits	5.35	4.71
Initiatives	-21.78**	8.01
Constant	32.51	31.24
N	1184	
R^2	.26	

***p<.05; *p<.10*

Table 3.8. State Cleavage Structures, Competitiveness, & Polarization Scores Difference of Means Tests

	Initiative States	Pure Representative States	t-Statistic
Southern Cleavage	.05	0	-.66
	(.05)	(0)	
	N = 19	N = 15	
New Deal Cleavage	.63	.47	.94
	(.11)	(.13)	
	N = 19	N = 15	
Post-New Deal Cleavage	.32	.53	-1.26
	(.11)	(.13)	
	N = 19	N = 15	
Ranney Competition Index	.85	.87	-.58
	(.02)	(.02)	
	N= 19	N = 17	
Index of Mass Polarization	40.87	36.78	1.44
	(7.96)	(9.07)	
	N = 20	N = 17	

Appendix 3: Tables for Chapter 4

Table 4.1 State Anti-Deficit Rules

State	Governor Must Submit Balanced Budget	Legislature Must Pass Balanced Budget	No Deficit Carry Over	Constitutional or Statutory?	ACIR Stringency Index
AL	X	X	X	C	10
AK	X	X	X	S	6
AZ	X	X	-	C	10
AR	X	X	X	S	9
CA	X	-	-	C	6
CO	X	X	X	C	10
CT	X	X	-	C	5
DE	X	X	X	C	10
FL	X	X	X	C	10
GA	X	X	X	C	10
HI	X	-	X	C	10
ID	-	X	X	C	10
IL	X	X	-	C	4
IN	-	-	X	S	10
IA	X	X	X	S	10
KS	X	X	X	C	10
KY	X	X	X	C	10
LA	X	X	X	C	4
ME	-	-	X	S	9
MD	X	X	-	C	6
MA	X	X	-	C	3
MI	X	X	-	C	6
MN	X	X	X	S	8
MS	X	X	X	S	9
MO	X	-	X	C	10
MT	X	X	X	C	10
NE	X	X	X	S	10
NV	X	X	-	C	4
NH	X	-	-	S	2
NJ	X	X	-	C	10
NM	X	X	X	S	10
NY	X	-	-	C	3
NC	X	X	X	C	10
ND	X	X	X	S	8
OH	X	X	X	C	10
OK	X	X	X	C	10
OR	X	X	X	C	8
PA	X	-	-	C	6
RI	X	X	X	S	10

Table 4.1 Continued

State	Governor Must Submit Balanced Budget	Legislature Must Pass Balanced Budget	No Deficit Carry Over	Constitutional or Statutory?	ACIR Stringency Index
SC	X	X	X	C	10
SD	X	X	X	C	10
TN	X	X	X	C	10
TX	X	X	-	C	8
UT	X	X	X	C	10
VT	-	-	-	-	0
VA	-	-	X	C	8
WA	X	-	X	S	8
WV	-	X	X	C	10
WI	X	X	-	C	6
WY	-	-	X	C	8

Table 4.2. Summary Statistics for Variables Included in Chapter 4

Variable	Mean	SD	Minimum	Maximum	Data Source(s)
Dependent Variable					
Enacted Tax Measures	$7.36	51.24	-449.52	376.11	(1)
Partisan Variables					
Unified Democratic	.16	.37	0	1	(3,4)
Unified Republican	.24	.42	0	1	(3,4)
Dem. Gov. & Rep. Leg.	.10	.30	0	1	(3,4)
Dem. Gov. & Split Leg.	.19	.39	0	1	(3,4)
Rep. Gov. & Split Leg.	.13	.33	0	1	(3,4)
Rep. Gov. & Dem. Leg.	.20	.40	0	1	(3,4)
Anti-Deficit Rules					
Governor Submit	.11	.31	0	1	(5)
Legislature Pass	.24	.43	0	1	(5)
No Carry	.65	.48	0	1	(5)
Constitutional	.68	.47	0	1	(6)
Budget Stringency Index	7.84	2.79	0	10	(7)
Controls					
% $Surplus_{t-1}$	7.38%	6.74	-18.5	41.4	(1)
Revenue Per-$capita_{t-1}$	$1,547.74	332.44	642.43	2,717.69	(2)
ΔUnemployment	-.05	.81	-2.3	3	(4)
Income Per-capita	$22,637.3	3,792.37	15,942.03	36,650.72	(4)
ΔIncome Per-capita	$315.55	487.63	-1,832.25	2,264.28	(4)
Opinion Liberalness	-12.49	7.42	-28	-.2	(8)
% Black	6.22%	5.95	.3	28,2	(4)
% Bachelors	23.59%	4.66	11.75	38.7	(4)
Legislative Vote	53.67%	.50	51	75	(9)
Tax & Expenditure Limitation	.57	.50	0	1	(10)
Initiatives	.54	.50	0	1	(3)

Data sources: (1) National Association of State Budget Officers, *The Fiscal Survey of States*; (2) World Tax Database, http://wtdb.org; (3) Council of State Governments, *Book of the States*; (4) U.S. Census Bureau, *Statistical Abstract of the United States*; (5) NASBO (2005); (6) GAO (1993); (7) ACIR (1987); (8) Erikson, Wright, and McIver 1993; (9) Knight (2000); (10) Bohn and Inman (1996).

Table 4.3. Determinants of Annual Changes in Tax Revenue
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 1	
	b	SE
Partisan Variables		
Unified Republican	-31.10**	7.88
Dem. Gov. & Rep. Leg.	-18.08*	9.60
Dem. Gov. & Split Leg.	-7.14	7.42
Rep. Gov. & Split Leg.	-22.87**	9.49
Rep. Gov. & Dem. Leg.	-15.11*	9.37
Control Variables		
% $Surplus_{t-1}$	-1.40**	.37
ΔUnemployment	1.04	4.11
Income Per-capita	.002	.002
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02*	.01
Opinion Liberalness	-.04	.56
% Black	-1.06**	.51
Tax & Expenditure Limits	.92	4.89
Legislative Vote	.60**	.27
Initiatives	-4.42	5.84
Constant	33.43	30.63
N	490	
R^2	.28	

***p<.05; *p<.10*

Table 4.4. Determinants of Annual Changes in Tax Revenue
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 2		Model 3	
	b	SE	b	SE
Partisan Variables				
Unified Republican	-27.42**	7.97	-32.19**	7.73
Dem. Gov. & Rep. Leg.	-15.61*	9.00	-19.71**	9.89
Dem. Gov. & Split Leg.	-2.35	7.58	-4.02	6.58
Rep. Gov. & Split Leg.	-20.30**	9.31	-21.96**	9.26
Rep. Gov. & Dem. Leg.	-13.38	9.23	-15.29*	9.04
Anti-Deficit Rules				
Legislature Pass	15.07*	8.83	-	-
No Carry	19.81**	8.78	-	-
Budget Stringency Index	-	-	1.78*	.96
Control Variables				
% $Surplus_{t-1}$	-1.76**	.44	-1.54**	.41
ΔUnemployment	1.19	4.05	1.09	4.04
Income Per-capita	.003*	.002	.003	.002
ΔIncome Per-capita	-.02**	.01	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02**	.01	-.02*	.01
Opinion Liberalness	.05	.56	.07	.60
% Black	-1.14*	.62	-1.29**	.61
Tax & Expenditure Limits	-1.92	6.56	-2.55	5.98
Legislative Vote	.76**	.27	.52*	.29
Initiatives	-5.65	5.04	-2.60	6.14
Constant	-1.02	41.58	10.63	35.31
N	476		490	
R^2	.29		.29	

***p<.05; *p<.10*

Table 4.5. Determinants of Annual Changes in Tax Revenue
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 4	
	b	SE
Partisan Variables		
Unified Republican	-27.39**	8.00
Dem. Gov. & Rep. Leg.	-15.64*	8.94
Dem. Gov. & Split Leg.	-2.50	7.36
Rep. Gov. & Split Leg.	-20.34**	9.25
Rep. Gov. & Dem. Leg.	-13.46	9.20
Anti-Deficit Rules		
Legislature Pass	14.78	10.19
No Carry	20.00**	7.96
No Carry * Constitutional	-.68	4.82
Control Variables		
% $Surplus_{t-1}$	-1.77**	.43
ΔUnemployment	1.18	4.04
Income Per-capita	.003	.002
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02**	.01
Opinion Liberalness	.05	.56
% Black	-1.11	.72
Tax & Expenditure Limits	-1.81	6.97
Legislative Vote	.77**	.28
Initiatives	-5.52	4.86
Constant	-4.12	41.19
N	476	
R^2	.29	

***p<.05; *p<.10*

Table 4.6. Determinants of Annual Changes in Tax Revenue
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 5	
	b	SE
Partisan Variables		
Unified Republican	-54.08**	21.30
Unified Republican * No Carry	31.17	24.32
Dem. Gov. & Rep. Leg.	-50.11	35.82
Dem. Gov. & Rep. Leg. * No Carry	41.24	39.45
Dem. Gov. & Split Leg.	-31.03*	18.05
Dem. Gov. & Split Leg. * No Carry	32.13	21.31
Rep. Gov. & Split Leg.	-59.81**	19.25
Rep. Gov. & Split Leg. * No Carry	61.02**	24.26
Rep. Gov. & Dem. Leg.	-60.08**	19.91
Rep. Gov. & Dem. Leg. * No Carry	58.83**	23.35
Anti-Deficit Rules		
No Carry	-29.82	19.84
Control Variables		
% $Surplus_{t-1}$	-1.53**	.40
ΔUnemployment	-1.63	3.94
Income Per-capita	.003**	.002
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02*	.01
Opinion Liberalness	.01	.53
% Black	-1.50**	.59
Tax & Expenditure Limits	.80	5.03
Legislative Vote	.39	.28
Initiatives	-1.40	4.87
Constant	50.68	33.24
N	476	
R^2	.31	

***p<.05; *p<.10*

Table 4.7. Determinants of Annual Changes in Tax Revenue
FY 1988 - 2001
All Non-Southern States

Explanatory Variables	Model 6	
	b	SE
Partisan Variables		
Unified Republican	-59.09**	26.98
Unified Republican * Stringency	3.29	3.16
Dem. Gov. & Rep. Leg.	-7.61	31.76
Dem. Gov. & Rep. Leg. * Stringency	-1.13	3.63
Dem. Gov. & Split Leg.	-10.95	23.85
Dem. Gov. & Split Leg. * Stringency	.41	3.42
Rep. Gov. & Split Leg.	-78.45**	24.77
Rep. Gov. & Split Leg. * Stringency	7.28**	3.38
Rep. Gov. & Dem. Leg.	-60.10**	25.97
Rep. Gov. & Dem. Leg. * Stringency	5.65*	3.43
Anti-Deficit Rules		
Budget Stringency Index	-.65	2.85
Control Variables		
% $Surplus_{t-1}$	-1.51**	.42
ΔUnemployment	-.62	4.01
Income Per-capita	.004**	.002
ΔIncome Per-capita	-.02**	.01
Revenue $Per\text{-}Capita_{t-1}$	-.02**	.01
Opinion Liberalness	.01	.58
% Black	-1.24*	.64
Tax & Expenditure Limits	-2.63	6.34
Legislative Vote	.43	.28
Initiatives	.65	6.03
Constant	16.31	41.19
N	490	
R^2	.30	

***p<.05; *p<.10*

Table 4.8. Comparisons of State Ideologies
Difference of Means Tests

	No Carry = 1	No Carry = 0	t-Statistic
Opinion Liberalness	-15.26	-8.24	-3.73
	(1.54)	(1.09)	
	N = 24	N = 13	
DW-Nominate	.04	-.2	6.86
	(.02)	(.03)	
	N = 384	N = 183	

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