CSDI Center for the Study of Democratic Institutions
VANDERBILT UNIVERSITY
PMB 505 • 230 APPLETON PLACE • NASHVILLE, TENNESSEE 37203-5721 • TEL 615-322-3175 • FAX 615-343-6003 • VANDERBILT.EDU/CSDI

Does Delegation Insulate Policymaking from Politics? Evidence from Official Revenue Forecasts in the American States, 1987-2004

George A. Krause, David E. Lewis, and James W. Douglas

Abstract

We evaluate the presumption that delegation insulates policy decisions from myopic partisan and electoral pressures by examining general fund revenue forecasts in the American states. State revenue forecasts provide a useful means of analyzing this question because different institutions make revenue forecasts across the states. This allows us to assess how institutional variation affects the degree of partisan or electoral pressure in policymaking. Our evidence shows that executive branch agencies and independent commissions produce more conservative forecasts with one important exception. Executive branch revenue forecasts in states with gubernatorial term limits are indistinguishable from legislative branch forecasts. Further, we find that legislative branch forecasts are least conservative during periods of unified party control. On a broader level, delegation to the executive branch or independent commissions may only be beneficial when the political system itself fails to check legislative excesses or executive myopia.

Working Paper: 03-2009
Research Concentration: Executive Politics and Regulatory Policymaking

Should the legislature craft policy or delegate away policymaking authority? This question is important for students of democratic governance since policymakers often must reconcile the tension between the demands of popular will with a desire for effective policy (Wilson 1887). The legislative choice to delegate embodies the tension between democratic responsiveness and prudential policymaking. Because legislators suffer from myopic electoral pressures and collective action problems, they often consider it wise to delegate policy making authority to another actor to escape the pernicious influence of their own direct influence in policymaking.[1] For example, legislatures throughout the world have adopted independent central banks as a means of preventing legislators themselves from meddling in monetary policy (e.g., Cukierman, Webb, and Neyapti 1992; Waller 2000). These legislatures reasoned that short term pressures to manipulate monetary policy for political gain could be so strong that they would not be able to resist them and collectively their choices would reduce investor confidence and hurt economic performance. In many policy areas, from pension funding to base closings, legislators face a similar choice, knowing that the short term or myopic incentives of political actors will lead to worse policy making in the aggregate. Their solution is to delegate. Delegation by legislatures to public agencies is presumed to make it significantly more costly for elected politicians to alter policy in the future (Lewis 2003; Moe 1989). Such policy "hand-tying" can restrict politicians' strong incentives for engaging in strategic policy manipulation (Patashnik 2000; Spulber and Besanko 1992).

In this study, we seek to evaluate a pair of core presumptions in the study of legislative delegation and the politics of institutional structure. First, is opportunistic political behavior mitigated when formal policymaking authority resides with non-legislative institutions? Moreover, are some non-legislative institutional arrangements more effective at reducing such

political influence than others? To address both questions, we advance a series of testable propositions designed to explain when the incentives are the strongest to influence policy for partisan or electoral reasons and how different institutions mitigate against it. We then test these propositions using data on official general fund revenue forecasts in the American states from 1987-2004. These data provide a salient, direct means to analyze the content of one type of policymaking across alternative types of institutions (i.e., legislatures, executive branch agencies, independent commissions). This is because official general fund revenue forecasts represent the state's *official* policy position that is the basis for constructing the fiscal budget. Therefore, these policy decisions can reveal how different institutional arrangements, under different political conditions, produce systematic variations involving government policy outputs.[2]

We show that legislative delegation often, but not always, leads to more conservative revenue forecasts in the American states. Specifically, our evidence reveals that executive branch agencies and consensus groups produce more conservative forecasts with one important exception. Executive branch revenue forecasts are indistinguishable from legislative branch revenue forecasts in those states where governors are subject to term limit restrictions. Governors in states without term limit restrictions, however, produce the most conservative revenue forecasts among all policymaking institutions. That is, governors who can be re-elected *ad infinitum* generate more cautious revenue forecasts since they are much more likely to deal with the political fallout resulting from overly optimistic revenue projections. Further, we find that legislative branch revenue forecasts are the most optimistic during times when unified party control exists. In turn, this suggests that the presence of a viable opposition party either within the institution or from the executive branch can provide a crucial check on legislative capacity to engage in irresponsible policymaking.

This essay is divided into five sections. In the next section we discuss the importance of revenue forecasting institutions in the American states. We describe the incentives for political actors to manipulate forecasts for short term or myopic political reasons and how these incentives vary under different political conditions. The section also explains how delegation to executive branch agencies or independent commissions can counteract these incentives. We advance a series of testable propositions predicated on the logic motivating the decision to delegate policymaking authority by the legislative branch. In the third section we present the data, variables, and statistical methods. The statistical findings are presented in the fourth section. We conclude by discussing both the positive and normative implications of how institutional choice affects opportunistic policymaking behavior under alternative political conditions.

Delegation and Revenue Forecasting in the American States

Policy Background

Analyzing official revenue forecasts in the American states is an attractive means of examining how legislative delegation influences policymaking on three distinct levels. Substantively, choosing an official forecast number has tangible policy consequences because of institutional constraints against deficit spending at the state level (Bohn and Inman 1996; Briffault 1996; Primo 2007; Rose 2006).[3] Because actual revenues are uncertain when budgets are passed, rosy forecasts enable legislators to better satisfy constituents' budgetary demands for lower taxes and increased spending by increasing the expected size of resources available to state governments. Yet, the social costs associated with falsely optimistic revenue forecasts are high since state governments will often be required to make mid-year cuts and/or tax increases if actual revenue collections are not meeting the earlier projections (Rodgers and Joyce 1996: 49;

Gold 1995; Shkurti 1990: 80). To the extent that forecasters consciously bias their estimates, they are faced with a choice between risky (more optimistic) forecasts which offer short-term budgetary payoffs or cautious (more pessimistic) forecasts that mitigate against painful mid-year fiscal adjustments. These choices have tangible political and policy consequences.

On a conceptual level, forecasting decisions are an attractive case because they are representative of a broad class of well known policy decisions. Pharmaceutical drug approval (Carpenter 2002), licensing of hydroelectric permits (Spence 1999), and cost estimation of government construction projects (Flyvbjerg 1998), like revenue forecasting, are examples of government policy decisions where legislators are more prone to make optimistic errors (i.e., Type I) than agents residing in either the executive branch or an independent commission.

Finally, on a measurement level, analyzing revenue forecasts in the American states allow us to assess systematic differences in policymaking outputs across institutional venue and political conditions. This is hardly a trivial matter since it is uncommon to obtain comparable measures of policy decisions that possess the same interpretation across both governments and time that can also be assessed in terms of an objective performance benchmark.[4] Specifically, the presence of systematic optimism or pessimism in revenue forecasts (i.e., bias) provides a useful measure of the extent to which partisan or electoral pressures have worked their way into policymaking across different institutions and political conditions.

The present study of legislative delegation departs both from past research on delegation and research on the determinants of government revenue forecasts in the American states. There is very little research which examines the efficacy of delegation as a means of limiting political influence. Past research has examined whether insulated agencies are more durable than other agencies as a means of evaluating whether or not the policies administered by these agencies are

insulated from political control (Lewis 2004). Insulated agencies are shown to be more durable than other agencies. This research, however, does not evaluate the content of policy outputs directly. Other research evaluates whether independent central banks are successful at adopting policies which provide stable economic growth and generally finds that more insulated central banks keep inflation lower than less insulated banks (e.g., Cukierman, Webb, and Neyapti 1992; Waller 2000). This research, however, does not compare policymaking between electoral and non-electoral institutions.[5]

There has been a significant amount of research on the content of state revenue forecasts but none of this research compares the performance of forecasters in legislatures vs. executive branch agencies or independent commissions. Some studies have focused on whether biases exist in official revenue forecasts (Feenberg et al 1989; Rodgers and Joyce 1996) while others have sought to determine whether they are biased upward in election years, irrespective of which institution possesses formal policymaking authority (Boylan 2008). Still other research has restricted its substantive focus to examining only executive branch revenue forecasts (both *official* and *unofficial*[6]) to show how organizational balancing between political appointees and civil service staffs within executive budget agencies shape the quality of policymaking (Krause, Lewis, and Douglas 2006). An extant literature examining consensus group forecasts also exists. These studies are limited in that they either take the form of single-state case studies (Deschamps 2004), rely on short-term survey data (Klay 1985; Voorhees 2004), or examine a small number of states and years (Bretschnieder et al 1989; Bretschnieder and Gorr 1992; Smith 2007). Most importantly, our study departs from past research by specifically considering how legislative delegation and political conditions influence revenue forecasting outputs across institutional

venues. Our aim is to illuminate the tradeoff between allowing political influence and ensuring effective policymaking in an issue area of tremendous practical import in American politics.

Logic and Hypotheses

Delegation of policymaking authority by legislatures is presumed to improve policy decisions by limiting deleterious political influence (Falaschetti and Miller 2001; Patashnik 2000; Spulber and Besanko 1992).[7] Policy opportunism is defined here as *making policy decisions on the basis of short-term political expediency at the expense of long-run sound policy judgment*.[8] For example, political actors often have strong short term incentives to prime the economic pump prior to an election but the long term effect of such choices is lower overall social welfare.

In the context of revenue forecasting, the legislative branch often has strong incentives to generate relatively more optimistic forecasts than non-legislative institutions in order to engage in credit claiming and deliver electorally valuable particularized benefits to constituents (Mayhew 1974). For example, rosier forecasts prior to a difficult election season provide a means of delivering electorally appealing tax cuts or spending. Even if the legislature wanted to commit to not manipulating forecasts *ex ante*, they would have a difficult time doing so. Once confronted with intense electoral pressure legislators know that they themselves may not be able to resist the temptation to manipulate forecasts. Legislators also cannot commit to the concurrent behavior of other legislators or future legislative behavior. Weak electoral accountability due to collective decision-making and plurality of interests represented by this institution only compounds the commitment problem (Bendor and Meirowitz 2004; Falaschetti and Miller 2001). Recognizing this dilemma, legislators may choose to delegate policymaking to an institution that is capable of limiting future political influence (Patashnik 2000; Spulber and Besanko 1992). In

the realm of revenue forecasting, this means that non-legislative institutions should produce relatively less rosy forecasts than legislative institutions, ceteris paribus.

The executive branch has less incentive to engage in opportunistic policy behavior vis-à-vis legislatures for two reasons. First, because the executive branch is headed by a unitary elected official whose policy decisions match the political jurisdiction that it affects, this political branch will most acutely incur electoral sanctions for opportunistic policymaking behavior vis-à-vis the legislative branch (Lowry, Alt, and Ferree 1998; Niemi, Stanley, and Vogel 1995). Second, chief executives are comparatively more effective than legislators at utilizing both *ex post* and *ex ante* control mechanisms as a means to better facilitate policy coordination with bureaucratic agencies (Moe 1995). Therefore, ceteris paribus, unitary chief executives often possess both weaker incentives for engaging in policy opportunism and greater capacity to ensure agent policy compliance compared to the legislative branch. These realities motivated early budget reformers to supply governors with innovations such as the executive budget (Cleveland 1915; Willoughby 1918) and line-item veto (Wells 1924) in order to promote better accountability and efficiency in government, and continue in modern times to be the catalyst for efforts to give state chief executives more budgetary power (see Schick 1971: 177-180; Clynch and Lauth 1991, 2006). Thus, executive branch revenue forecasts should be less sanguine compared to those generated by the legislative branch.

Executive branch agencies, however, will be more susceptible to myopic political pressures than independent commissions (Bernstein 1955; Lewis 2003; Moe 1989). This is because independent commissions are immune by design from the influence of electoral politics and the structure of their membership makes it more likely that their decisions will be governed by professional norms. Commissions diffuse policymaking authority across several competing

interests through external agents (Falaschetti and Miller 2001). Elected officials are also frequently restricted in the types of persons that can be nominated or appointed to independent boards and commissions. These nomination restrictions can include factors such as experience, professional expertise, background, partisanship, and institutional affiliation in a way that distances commission members from political influence (Lewis 2003). Moreover, executive branch agencies often require formal policy clearance or approval by the chief executive before decisions are made while independent commissions do not. Because commissions are well insulated from political considerations, these institutions are most capable of making forecasts according to professional norms consonant with the deliberations of members and staff. In the context of revenue forecasts, independent commissions, in the form of consensus groups, will be the most likely to err on the side of conservative forecasts. There are fewer pressures pushing commissions to be optimistic for political reasons and erring on the side of forecast conservatism is more consistent with professional norms (Rodgers and Joyce 1996).

Based on the preceding discussion, it is abundantly clear that the electoral incentives and structural characteristics of policymaking institutions exert a direct bearing on the relative level of opportunistic policymaking behavior. Specifically, less insulated institutions like legislatures and executives have a more difficult time committing to not manipulate forecasts for political reasons. This logic yields our first two hypotheses regarding the relationship between policymaking institutions and policy opportunism.

H1: Legislatures will exhibit relatively greater policy opportunism compared to non-legislative institutions.

H2: The executive branch will exhibit relatively greater policy opportunism compared to an independent commission.

Applied to revenue forecasting, the testable implication of H1 means that legislatures will produce more optimistic forecasts than either the executive branch or consensus groups, ceteris paribus. H2's testable implication is that the executive branch (governors) will generate relatively more optimistic revenue forecasts than those produced by consensus groups, ceteris paribus.

Yet, chief executives do possess varying incentives for engaging in policy opportunism (Canes-Wrone 2006). This is especially true in the realm of fiscal policymaking. Besley and Case (1995), for example, show that gubernatorial term limits yield increased fiscal profligacy in the form of both lower taxes and higher spending. Because governors that are subject to term limits have shorter time horizons, they have incentives to behave more myopically than governors that face no such restriction. Governors that are eligible for reelection will have to suffer electoral consequences later for the poor choices they make today. Governors that are term limited, however, can often escape the electoral consequences of the forecasting choices they make since they are no longer in office.[9] Put simply, governors operating under term limits are more likely to influence forecasts for myopic reasons than their chief executive counterparts whom do not face term limits. This logic leads to the following proposition regarding the relationship between the electoral constraints facing governors and policy opportunism.

> *H3: Governors operating under term limit restrictions will exhibit relatively greater policy opportunism compared to those governors not subject to term limit restrictions.*

In the realm of revenue forecasting, the testable implication of H3 is that governors facing term limits possess a stronger electoral incentive for generating rosier revenue forecasts than peers who can be more easily held accountable since they can run for re-election *ad infinitum.*

Of course, the extent to which legislatures manipulate outcomes for electoral or partisan reasons depends upon the political environment. In the presence of partisan fragmentation, for example, opposition party legislators or the governor can effectively constrain opportunistic policymaking behavior through the use both their formal powers and their ability to publicize opportunistic actions.[10] Intra-legislative division, where the chambers are controlled by different parties, will provide a strong constraint on this institution's opportunistic behavior.[11] An opposition party governor can also halt electorally motivated legislative behavior. Therefore, the legislative branch will be more inclined to advance myopic electoral or partisan goals under unified partisan control than under a divided partisan control. This yields the following proposition applied to revenue forecasting decisions:

> *H4: The legislative branch will exhibit relatively greater policy opportunism under unified partisan control vis-à-vis divided partisan control.*

The testable implication of H4 with respect to revenue forecasting behavior is that a legislature under unified government will produce rosier revenue forecasts than a legislature under divided government.

Data, Variables, and Statistical Methods

To evaluate the hypotheses described above we rely on data on state general fund revenue forecasts for the years 1987-2004. Our dependent variable is the p*ercentage forecast error* (PFE) measured as [(actual state general fund revenues – projected state general fund revenues) /actual state general fund revenues]*100. The average PFE is 2.09 (SD = 7.22) with the highest state (Alaska) averaging an 8.33 percent underprediction of revenues and the lowest state a 1.34 percent overprediction of revenues (Michigan). Positive (negative) values of PFE reveal forecast conservativism (optimism).[12] The PFE is a useful measure of the extent to which policymakers

engage in opportunistic policymaking behavior. Specifically, policymakers generating rosy revenue forecasts do so to deliver on spending increases and/or tax cuts or defer difficult tax increases and/or spending cuts. Yet, these rosy forecasts have tangible electoral costs for politicians who are most easily held accountable, and adversely affect the reputation of bureaucratic policy experts. Therefore, it is preferable to make revenue forecasts which err on the side of prudence by under-estimating actual revenues to avoid raising taxes and/or reducing expenditures during the fiscal year (Abney and Lauth 1998: 392; Bretschneider and Gorr 1987: 124; Rodgers and Joyce 1996: 49). Survey evidence reveals that the professional norm of state fiscal policy officials is to underestimate state government revenues between two and five percent (Rodgers and Joyce 1996: 53). Although legislators do not wish to overpredict government revenues because of the political fallout, they will wish to minimize revenue underprediction compared to unelected policy experts because underestimating revenues prevents them from delivering lower taxes and/or higher spending in the budget. To evaluate whether delegation is successful at "hand-tying" policymakers, we can assess the extent to which legislative-based forecasts are consistently more optimistic than those of the executive branch or independent consensus group commissions.

Our key theoretical variables consist of four binary variables indicating whether the official forecast is prepared by the legislative branch (*Legislative Branch*), the executive branch either operating under term limit restrictions (*Executive Branch: Term Limits*) or without such electoral restrictions (*Executive Branch: No Term Limits*), and the consensus group (*Consensus Group*) serves as the baseline group captured by the intercept. Table 1 lists the breakdown of state-years in which each policymaking venue has responsibility for generating official general fund revenue forecasts.[13] The policymaking institutions responsible for generating these

forecasts vary across states[14], yet do not exhibit any discernible geographic nor state size systematic patterns. In nearly one-third (33.22%) of our state-year observations, the legislative branch[15] is responsible for generating the official state general fund revenue forecast.[16] In these states, the PFE is 1.77 (SD = 7.20), meaning that in states where the legislature produces the official forecast, the state underestimates revenues by an average of 1.77 percent. These states are more optimistic on average than professional standards would advise.

Executive branch agencies are responsible for 21.44% of our sample's state-year observations. Although every state's executive branch is responsible for making revenue forecasts, only less than a quarter of the state-year cases in our sample period constitute an "official" forecast which will be used as the basis for fiscal policymaking in the upcoming cycle.[17] In executive branch states, careerist staff comprised of fiscal analysts and economists is responsible for arriving at revenue forecasts, subject to the approval of both governors and their budget directors. Two-thirds of these executive branch state-year observations occur in states with gubernatorial term limits, while the remaining one-third consists of executive branches that are not restricted in seeking re-election. In states where the executive branch produces the forecast the average PFE is 2.51 (SD = 5.84) which is higher than for states where the legislature produces the forecast. Official forecasts produced by the executive branch forecasts are more conservative on average than official forecasts produced by the legislative branch. If we separate out states with and without term limits, however, the PFE is 1.70 (SD = 5.74) for term limit states and 4.28 (SD = 5.69) for non-term limit states. These values are notable in the fact that there is such a difference between term limit and non-term limit states. Term limit states with executive branch forecasts produce outputs similar to states with legislative branch forecasts. States without term limits, however, produce significantly more conservative forecasts.

[Insert Table 1 About Here]

In 45.33% of state-years forecasts are produced by consensus groups whose sole purpose is to generate the official revenue forecasts for state governments. Consensus groups are independent commissions which are always comprised of at least some level of partisan political appointees -- representing some combination of the legislature and executive branches (including those agencies headed by an independently elected chief). In some instances, these independent commissions also consist of non-partisan members (usually university and private sector economists).[18] Typically, consensus groups' policy process works as follows.[19] Members derive independent forecasts prior to meeting as a collective body. At this meeting, the consensus group negotiates over the final forecast to adopt on behalf of the commission. One commonality among all consensus groups is that they strive for a unified collective judgment – often producing a strong norm of unanimity.[20] For instance, it is commonplace for consensus groups to agree on revenue forecasts without having to cast formal votes. The average PFE for consensus group states is 2.13 (SD = 7.81), which is also more conservative than the forecasts produced by the legislature or the executive branch when there are no term limits. Together, the average PFEs suggest that delegation leads to more conservative forecasts in most cases, as we would expect. The exception to this general pattern is cases where governors have a short time-horizon due to the presence of term limits.

Of course, other political, economic, and state institutional factors also influence the quality of states' official general fund revenue forecasts and may be correlated with key variables of interest. For reasons noted earlier, when the legislature has control over making official revenue forecasts, a divided partisan legislature or partisan division between the branches can influence the contours of forecasting by checking pressures to manipulate forecasts for short

term gain. Thus, in the model specifications accounting for partisan fragmentation, we include a binary indicator for divided partisan legislature which is coded 1 if the two chambers are not controlled by the same party, and 0 otherwise (26.0%).[21] In other models accounting for partisan divisions we include an indicator for divided government that is coded 0 if the same party controls the legislature and the executive branch and 1 otherwise (59.78%). We account for ideological differences among the states by including Berry et al.'s (1998) measure of state government ideology (mean = 49.40; SD = 24.83) and a folded version of this measure (mean = 20.82; SD = 13.53) which is simply equal to | 50 – State Government Ideology| so that larger deviations from 50 indicate more extreme liberal or conservative state governments.[22] Our expectation is that more extreme states will produce more optimistic forecasts to more fully support ideological goals such as tax cuts or increased spending. Because governors, unlike legislators, are held accountable for economic conditions (Niemi, Stanley, and Vogel 1995), they possess the short-term cyclical incentive to politically distort revenue forecasts for electoral purposes by avoiding tax increases and/or spending cuts that are unpopular with voters in election years (Boylan 2008). We include a binary indicator to account for gubernatorial election years (28%). Since volatile state economies should make accurate forecasts more difficult to attain, we control for state-level economic conditions, in the form of personal income growth (i.e., the percentage change in the state's real per capita income) and economic growth volatility (measured as the three-year lagged moving standard deviation in real gross state product growth), also impacts revenue forecasts.[23]

State budget processes vary substantially in ways that can influence forecasts. For instance, we account for a state's fiscal slack since states with large levels of fiscal slack can afford to produce less accurate and more upwardly biased revenue estimates. Our measure is the

combined size of the state's rainy day and surplus general funds as a percentage of actual general fund revenues.[24] We also include an indicator to control for whether a state legislature has formal authority to appropriate all of its expected revenues (8%).[25] We code this appropriation limit variable as 1 when the legislature must appropriate less than 100% of expected revenues, 0 when they are allowed to appropriate 100% of expected revenues. We expect that such forecasting slack will enable policymakers to generate more optimistic revenue forecasts since they can afford to be less risk-averse. We also include a measure that accounts for whether the state is legally bound to the official forecast (40%) since such restrictions could either increase incentives to manipulate the forecast or, conversely, create further pressure to bring revenues in line with expenditures. We control for whether states have a binding balanced budget requirement (82%) – that is, whether a balanced budget must actually be passed by a state's legislature – since the presence of a strict requirement creates an incentive for governors to provide more pessimistic revenue forecasts in order to produce a number that the legislature can realistically stay beneath (Cassidy, Kamlet, and Nagin 1989).[26] We account for whether a state operates under a biennial budgeting cycle (40%). Our expectation is that states with biennial budget cycles will typically create more pessimistic revenue forecasts since they confront more uncertainty than under an annual budget cycle scenario. We control for the proportion of general fund revenues that come from the sales tax for each state in a given year (mean = 0.23; SD = 0.11) since sales tax is a relatively stable revenue source when it is restricted to general sales taxes.[27] States with a greater dependence upon general sales tax revenues should have an easier time predicting their total general fund revenues.[28]

Statistical Methods

Our estimation strategy is to employ a *fixed effects variance decomposition* (FEVD) estimation approach which exploits the dominance of *between* (spatial) variance for those exogenous variables which follow either a strongly or weakly-time invariant process (Plümper and Troeger 2007). The FEVD approach is the appropriate technique to apply to this data design since panel-corrected standard error techniques are intended to handle situations where the number of time units are not exceeded by the number of cross-sectional units – $T \geq N$ (Beck and Katz 1995: 644). The use of a standard cross-sectional fixed effects technique is also problematic given our data design due to (1) problems of collinearity (Baltagi 1999: 309), (2) weakly time-invariant nature of our institutional venue dummy variables, and (3) the standard rank-condition assumption pertaining to such models will not be met (Assumption FE.2; Wooldridge 2003: 269).

The FEVD estimator is a three-stage technique where the conventional cross-sectional unit (fixed) effects are estimated in the first stage such that the forecast performance dependent variable is regressed only on the vector of time-variant covariates (*within-variance estimator*); the second stage entails estimating the unexplained portion of the unit effects not accounted for by the time-variant covariates in the previous stage by regressing the unit effects from the first stage on the vector of time-invariant covariates (*between-variance estimator*); and the final stage consists of regressing the forecast performance dependent variable on both time-variant and time-invariant vectors of covariates, plus the estimated unexplained portion of the unit effects not accounted for by the time-variant covariates in the second stage (*pooled OLS estimator).*[29] The temporal dynamics for the FEVD estimator are accounted for by a Prais-Winsten AR(1) serial correlation correction. This technique has the desirable dual properties of increasing the efficiency of standard fixed effect estimates while reducing omitted variable bias associated with

ignoring cross-sectional heterogeneity that is orthogonal to time-invariant covariates. Those variables with between-within variance ratios exceeding 2.23 are specified as being time-invariant variables in our model specification.[30, 31]

Statistical Findings

The regression results are reported in Table 2 and generally confirm the hypotheses above, albeit with some interesting nuance. The variation across states in which institution has the authority to produce the official revenue forecast is significantly related to the degree of forecast conservatism. Delegation of forecasting authority to other institutions can generate systematically more conservative forecasts. The effectiveness and need for delegation can hinge, however, on whether other institutions have incentives themselves to manipulate forecasts and the contours of the political environment.

[Insert Table 2 About Here]

The regression results reported in the table list several interesting findings relating to the control variables employed in our model specifications. Neither state government ideology (State Government Ideology) nor ideological extremism (|50 – State Government Ideology|) significantly affect general fund revenue forecast errors. Growth in real state personal income leads to significantly higher than anticipated general fund revenues. Other favorable fiscal conditions also result in more sanguine revenue forecasts. Both greater fiscal slack (in the form of rainy day and surplus general funds) and increased reliance on sales tax revenue sources result in less conservative forecasts being offered by the relevant official revenue forecasting institutions. States possessing balanced budget requirements produce roughly 2% more conservative revenue forecasts than those that do not face such fiscal balance restrictions. Moreover, states whose planned expenditures in a given fiscal year are legally bound to the

state's revenue forecasts (Binding Forecast) have approximately 2% more optimistic forecasts than states not facing such fiscal constraints. This result suggests that states operating under a binding forecast constraint will yield a 'revenue premium' to offset the loss in spending flexibility arising from this particular rule.

Turning our attention to the central findings of our study, we uncover clear support for our expectation that legislative institutions are more likely to respond to myopic electoral or partisan pressures in forecasting consistent with H1. Specifically, legislative branch official revenue forecasts are estimated to be 2.77% more optimistic relative to those produced by consensus groups (captured in the baseline intercept) and 1.70% more optimistic than those generated from executive branch institutions (Model 1). However, the legislative branch's relative optimism vis-à-vis the executive branch is noticeably stronger only in states where governors are not constrained by the existence of term limits (Models 2-4). On average, Model 2 reveals that the legislative branch provides a 5.02% ($p < 0.01$) higher revenue forecast than does a governor in a state without term limits; whereas this difference is a more modest 0.80% ($p = 0.45$) when a governor's number of terms is limited. This, in turn, suggests that delegation does not solve the legislature's influence dilemma if the legislature delegates to governors with short time horizons created by term limits. It is only solved by delegation to governors who have a long time horizon or a consensus group.

The executive branch's revenue forecasting performance displays many interesting patterns. For instance, we find clear support for H2 that the executive branch will produce more optimistic forecasts than independent commissions (consensus groups) for those governors in states with term limits (Models 2-4). However, in states whose governors who are not subject to term limits executive branch forecasters are estimated to produce 2.38% lower revenue forecasts

than those generated by consensus groups ($p < 0.01$). Models that make the distinction between governors facing term limits from those who do not provide a more nuanced portrait of the relative advantages between an executive branch agency and an independent commission. Specifically, governors in states with term limits (e.g., Maryland, Oregon, and Pennsylvania) produce significantly more optimistic revenue forecasts than consensus groups, whereas governors in states without term limits (e.g., Minnesota, Texas, North Dakota) actually make more conservative revenue forecasts than consensus groups even though consensus groups are widely known for being more prudent (Models 2-4). Furthermore, we find support for H3 since governors operating under term limit restrictions provide revenue forecasts which are approximately 4.50% higher than those generated by governors who are not subject to term limits (Models 2-4).[32] In summary, whether the executive branch will produce more conservative forecasts is highly contingent upon the electoral incentives confronting governors. Governors with shorter time horizons (i.e., those facing term limits) are more susceptible to electoral or partisan influence in forecasting than counterparts facing longer time horizons (i.e., are not subject to term limits).

Consistent with H4, the legislative branch produces more optimistic forecasts during times of unified partisan control. This implies that partisan fragmentation offsets legislative incentives to produce rosy forecasts produced to artificially justify cutting taxes and/or increasing spending. Specifically, legislative branch revenue forecasts under a unified legislature (government) are significantly higher by 2.26% (2.32%) than those generated from a divided legislature (government). The reduction in opportunistic policymaking behavior by the legislature because of divided government means that this branch's revenue forecasts are no more sanguine than those generated by consensus groups or many governors (i.e., no term

limits). These findings demonstrate that the political environment and, more specifically, partisan fragmentation can offset political opportunism that arises due to weak electoral accountability.

We also analyze these revenue forecasting differences by graphing estimated forecast conservativism by each forecasting institution. Figure 1 provides the estimated values of revenue forecast errors from Model 2, with a 95% confidence interval to account for forecast uncertainty attributable to the entire regression specification. Further, we include a pair of dashed lines to represent the professionally acceptable range of underestimating state government revenues (Rodgers and Joyce 1996: 53). Although legislative branch revenue forecasts are the most optimistic (forecast error = +1.69%), governors facing term limit restrictions appear only to be marginally more conservative than the legislative branch (forecast error = +2.22%). Interestingly enough, however, when the governor is not subject to term limit restrictions, executive branch revenue forecasts are significantly more conservative than those generated by consensus groups (+6.71% versus +4.60%). From a professional forecasting performance standard, consensus groups provide the best forecasts insofar that the largest portion of their density is inside the 2%-5% acceptable range, plus they err on the side of not falsely overstating revenues. This figure underscores a key lesson for delegation scholars. Not only is the extent to which policymaking institutions are insulated from political pressures crucial for mitigating credible commitment problems, but that legislative delegation does not reduce time-inconsistency problems inherent to policymaking. Electoral institutions and incentives can also induce delegatee institutions to engage in opportunistic policymaking behavior themselves.

[Insert Figures 1 & 2 About Here]

Figure 2 allows us to focus on differences within legislative branch forecasts based upon the existence or absence of partisan fragmentation (i.e., divided legislature, divided branches).

Clearly, not all legislative branch revenue forecasts exhibit the same level of policy opportunism. Specifically, when the chambers of legislature are controlled by the different parties or the opposition party controls the governorship there is less opportunistic policymaking behavior. Take, for example, the distinction between unified partisan legislatures and divided partisan legislatures analyzed in Model 3. The predicted revenue forecast error under unified partisan legislatures is +1.27%, while it is + 3.53% during times of divided partisan legislatures. Based upon Model 4, our simulated revenue forecast error is + 0.14% under unified partisan government and +2.46% in the presence of divided partisan governments. Both distinctions are nontrivial. Moreover, the revenue forecasts generated under unified government are below the commonly accepted professional standards of revenue underestimation ranging between 2% -- 5%. The findings demonstrate that legislative delegation may not be necessary to limit electoral and partisan pressures in policymaking. In a separation of powers system, partisan fragmentation can check these forces, too.

Discussion

Democratic governments are entrusted with policymaking responsibility by their citizens. However, democratic governments' ability to effectively make policy and deliver goods and services can be adversely affected in many instances by too much political intervention. This is true in policy areas as varied as monetary policy, fiscal policy, public construction projects, and regulatory policy. To be responsive to the public, a democratic government may have to limit its own ability to direct policy outcomes.

Theories of delegation are fundamental to addressing such normative puzzles regarding determining the proper jurisdiction for governmental policymaking. Legislative delegation of authority is one way that legislatures can limit their own influence over policymaking and,

arguably, improve its quality. By limiting future opportunities to meddle in policymaking for electoral or partisan reasons legislatures can improve the quality of policy decisions. Research on this topic has primarily focused on understanding the *causes* of delegation (e.g., Bawn 1995; Bendor and Meirowitz 2004; Epstein and O'Halloran 1999; Huber and Shipan 2002; Volden 2002). Yet, we know relatively little about the *consequences* of delegation. Some scholarly accounts herald the policy merits associated with legislative delegation by insulating policy from political influence (Patashnik 2000; Spulber and Besanko 1992). Does legislative delegation reduce opportunistic policymaking behavior by incumbent politicians who are hard to hold accountable? If so, does it matter which institutions are entrusted with policymaking authority, and if so, under what conditions?

These are the puzzles that we have attempted to address by looking at the case of official revenue forecasting by U.S. state governments. Our empirical evidence demonstrates that legislative delegation does lead to more conservative revenue forecasts in the American states, but with some notable caveats. Specifically, whether or not legislative delegation improves performance depends crucially on contextual factors related to institutional differences among states and their respective political environments. We found that executive branch agencies and consensus groups produce more conservative forecasts with one important exception. In states where governors are subject to term limits, executive branch revenue forecasts are indistinguishable from legislative branch revenue forecasts. In states without term limits, however, governors produce the most conservative revenue forecasts among all policymaking institutions. That is, governors who can be re-elected *ad infinitum* generate more cautious revenue forecasts since they are much more likely to deal with the political fallout resulting from

overly optimistic revenue projections. Further, revenue forecasts are the most optimistic when the legislative branch operates in a political environment where there is unified party control.

Our study has three broader implications that advance our general understanding of legislative delegation. First, recognizing differences among policymakers' time horizons is crucial for understanding legislative delegation. How political actors view the future determines whether delegation will have the salutary benefit of reducing opportunistic policymaking behavior. Our evidence shows that policymakers with a short time horizon (i.e., governors in states with term limits) are most susceptible to myopic political influence since such governors care little about either the policy or electoral consequences associated with official revenue forecast errors. These results are consistent with Besley and Case's (1995) claim that greater fiscal profligacy arises when governors cannot be sanctioned for their policymaking performance due to the existence of term limit restrictions. Moreover, these results are compatible with the claim that policymakers with shorter time horizons intertemporally discount future reputation costs at a steeper rate than counterparts possessing longer time horizons (Krause and Corder 2007). Second, political insularity -- in the form of term limits -- is *less* effective at reducing policy opportunism in some cases. In our data executive branch institutions produce more conservative official revenue forecasts when the governor is not subject to term limit restrictions compared to when they face this type of electoral constraint. In this sense, a moderate amount of political pressure can improve executive branch policy performance by balancing politicization and insularity in a manner that results in optimal policy decisions (Krause, Lewis, and Douglas 2006; Lewis 2008). Finally, partisan fragmentation (i.e., divided legislature or divided government) can provide a vital corrective to opportunistic policymaking impulses. Our

evidence clearly shows that the benefits of legislative delegation emerge only when the legislative branch has the capacity to act in a unified manner.

Put simply, delegation to either the executive branch or independent commissions will only be necessary when the political system itself does not act as a check on legislative excesses or executive myopia. Delegation will only remedy the legislative branch's propensity to influence policy for electoral or partisan reasons when the re-election motive for executives is sufficiently strong. Moreover, the type of partisan tensions that arise in separation of powers systems can provide critical checks on opportunistic policymaking behavior, thus rendering legislative delegation less necessary vis-à-vis majoritarian systems in which government authority is concentrated in the hands of a single political party. Our hope is that future theoretical and empirical research on this topic places a greater premium on providing a more nuanced linkage between institutional design and policymaking performance that is crucial for understanding policymaking effectiveness in democratic governments.

References

Abney, Glenn, and Thomas P. Lauth. 1998. "The End of Executive Dominance in State Appropriations." *Public Administration Review* 58(September/October): 388-394.

Alt, James E., and Robert C. Lowry. 1994. "Divided Government, Fiscal Institutions, and Budget Deficits: Evidence from the States." *American Political Science Review* 88(December): 811-828.

Alt, James E., and Robert C. Lowry. 2000. "A Dynamic Model of State Budget Outcomes Under Divided Partisan Government." *Journal of Politics* 62(November): 1035-1069.

Baltagi, Badi H. 1999. *Econometrics*. New York: Springer-Verlag.

Bawn, Kathleen. 1995. "Political Control versus Expertise: Congressional Choices About Administrative Procedures." *American Political Science Review* 89(March): 62–73.

Beck, Nathaniel, and Jonathan N. Katz. 1995. "What to Do (and Not to Do) with Time Series Cross-Section Data." *American Political Science Review* 89(September): 634-647.

Bendor, Jonathan B., and Adam Meirowitz. 2004. "Spatial Models of Delegation." *American Political Science Review* 98(June): 293-310.

Bernstein, Marver H. 1955. *Regulating Business by Independent Commission*. Princeton, NJ: Princeton University Press.

Besley, Timothy, and Anne Case. 1995. "Does Electoral Accountability Affect Economic Policy Choices? Evidence from Gubernatorial Elections. " *Quarterly Journal of Economics* 110(August): 769-798.

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

Book of the States. 1986-2004. Lexington, KY: The Council of State Governments.

Boylan, Richard T. 2008. "Political Distortions in State Forecasts." *Public Choice* 136(June): 411-427.

Bretschnieder, Stuart I., and Wilpen L. Gorr. 1987. "State and Local Government Revenue Forecasting." In Spyros G. Makridakis and Steven C. Whoolwright, eds. *The Handbook of Forecasting,* 2nd edition. New York: John Wiley and Sons.

Bretschnieder, Stuart I., and Wilpen L. Gorr. 1992. "Economic, Organizational, and Political Influences on Biases in Forecasting State Sales Tax Receipts." *International Journal of Forecasting* 7(March): 457-466.

Bretschneider, Stuart I., Wilpen L. Gorr, Gloria Grizzle, and Earle Klay. 1989. "Political and Organizational Influences on the Accuracy of Forecasting State Government Revenues." *International Journal of Forecasting* 5(July): 307-319.

Briffault, Richard. 1996. *Balancing Acts: The Reality Behind State Balanced Budget Requirements*. New York: The Twentieth Century Fund.

Budget Processes in the States. 1987-2002. Washington, D.C.: National Association of State Budget Officers.

Canes-Wrone, Brandice. 2006 . *Who Leads Whom? Presidents, Policy, and the Public*. Chicago: University of Chicago Press.

Carpenter, Daniel P. 2002. "Groups, the Media, Agency Waiting Costs, and FDA Drug Approval." *American Journal of Political Science* 46(July): 490-505.

Cassidy, Glenn, Mark S. Kamlet, and Daniel S. Nagin. 1989. "An Empirical Examination of Bias in Revenue Forecasts by State Governments." *International Journal of Forecasting* 5(October): 321-331.

Cleveland, Frederick J. 1915. "Evolution of the Budget Idea in the United States." *The Annals of the American Academy of Political and Social Science* 62(November): 15-35.
Clynch, Edward J., and Thomas P. Lauth. 1991. *Governors, Legislatures, and Budgets.* New York: Greenwood Press.
Clynch, Edward J., and Thomas P. Lauth. 2006. *Budgeting in the States: Institutions, Processes, and Politics.* Westport, CT: Praeger Publishers.
Crain, W. Mark. 2003. *Volatile States: Institutions, Policy, and the Performance of American State Economies*. Ann Arbor, MI: University of Michigan Press.
Cukierman, Alex, Steven B. Webb, and Bilin Neyapti. 1992. "Measuring the Independence of Central Bank Independence and its Effect on Policy Outcomes." *World Bank Economic Review* 6(September): 353-398.
Deschamps, Elaine. 2004. "The Impact of Institutional Change on Forecast Accuracy: A Case Study of Budget Forecasting in Washington State." *International Journal of Forecasting* 20(October):647-657.
Epstein, David, and Sharyn O'Halloran. 1999. *Delegating Powers: A Transaction Cost Politics Approach to Policymaking under Separated Powers*. New York: Cambridge University Press.
Falaschetti, Dino, and Gary J. Miller. 2001. "Constraining Leviathian: Moral Hazard and Credible Commitment in Institutional Design." *Journal of Theoretical Politics* 13(October): 389-411.
Feenberg, Daniel R., William Gentry, David S. Gilroy, and Harvey Rosen. 1989. "Testing the Rationality of State Revenue Forecasts." *The Review of Economics and Statistics* 71(May): 300-308.
Fiscal Survey of States, 1986-2005. Washington, D.C.: National Association of State Budget Officers.
Flyvbjerg, Bent. 1998. *Rationality and Power: Democracy in Practice*. Chicago, IL: University of Chicago Press.
Franklin, Aimee L., and James W. Douglas. 2003. "Revolving Funds as Budgeting Tools: An Examination of Oklahoma State Agencies." *State and Local Government Review* 35(Spring): 90-101.
Gold, Steven D. 1995. *The Fiscal Crisis of the States*. Washington DC: Georgetown University Press.
Horn, Murray J., and Kenneth Shepsle. 1989. "Administrative Process and Organizational Form as Legislative Responses to Agency Costs." *Virginia Law Review* 75: 499-508.
Huber, John D., and Charles R. Shipan. 2002. *Deliberate Discretion? The Institutional Foundations of Bureaucratic Autonomy*. New York: Cambridge University Press.
Klay, William Earle. 1985. "The Organizational Dimensions of Budgetary Forecasting: Suggestions from Revenue Forecasting in the States." *International Journal of Public Administration* 7(3): 241-265.
Krause, George A., and James W. Douglas. 2005. "Institutional Design versus Bureaucratic Reputational Explanations of Agency Performance: Evidence from U.S. Government Macroeconomic and Fiscal Projections." *Journal of Public Administration Research Theory* 15(April): 281-306.
Krause, George A., David E. Lewis, and James W. Douglas. 2006. "Political Appointments,

Civil Service Systems, and Bureaucratic Competence: Organizational Balancing and Executive Branch Revenue Forecasts in the American States." *American Journal of Political Science* 50(July): 770–787.
Krause, George A., and J. Kevin Corder. 2007. "Explaining Bureaucratic Optimism: Theory and Evidence from U.S. Federal Executive Agency Macroeconomic Forecasts." *American Political Science Review* 101(February): 129-142.
Kydland, Finn E., and Edward Prescott. 1977. "Rules Rather Than Discretion: The Inconsistencyof Optimal Plans." *Journal of Political Economy* 85(June): 473-490.
Lewis, David E. 2003. *Presidents and the Politics of Agency Design: Political Insulation in the United States Government Bureaucracy, 1946–1997*. Palo Alto, CA: Stanford University Press.
Lewis, David E. 2004. "The Adverse Consequences of the Politics of Agency Design for Presidential Management in the United States: The Relative Durability of Insulated Agencies." *British Journal of Political Science* 34(July): 377-404.
Lewis, David E. 2008. *The Politics of Presidential Appointments: Political Control and Bureaucratic Performance*. Princeton, NJ: Princeton University Press.
Lowry, Robert C., James E. Alt, and Karen E. Ferree. 1998. "Fiscal Policy Outcomes and Electoral Accountability in the American States."*American Political Science Review* 92(December): 759-774.
Mayhew, David. R. 1974. *Congress: The Electoral Connection*. New Haven, CT, Yale University Press.
Moe, Terry M. 1989. "The Politics of Bureaucratic Structure." In *Can The Government Govern?* John E. Chubb and Paul E. Peterson, eds. Washington, D.C.: Brookings Institution.
Moe, Terry M. 1995. "The Presidency and the Bureaucracy: The Presidential Advantage." In Michael Nelson, ed. *The Presidency and the Political System*. Fourth Edition. Washington, D.C.: Congressional Quarterly Press.
Niemi, Richard G., Harold W. Stanley, and Ronald J. Vogel. 1995. "State Economies and State Taxes: Do Voters Hold Governors Accountable?" *American Journal of Political Science* 39(November): 936-957.
Patashnik, Eric M. 2000. *Putting Trust in the U.S. Budget: Federal Trust Funds and the Politics of Commitment.* New York: Cambridge University Press.
Persson, Torsten, and Guido Tabellini. 2000. *Political Economics: Explaining Economic Policy*. Cambridge, MA: MIT Press.
Poterba, James M. 1994. "State Responses to Fiscal Crises: The Effects of Budgetary Institutions and Politics." *Journal of Political Economy* 102(August): 799-821.
Powell, G. Bingham, and Guy Whitten. 1996. "A Cross-National Analysis of Economic Voting: Taking Account of the Political Context." *American Journal of Political Science* 37(May): 391-414.
Plumper, Thomas, and Vera E. Troeger. 2007. "Efficient Estimation of Time-Invariant and Rarely Changing Variables in Finite Sample Panel Analyses with Unit Fixed Effects." *Political Analysis* 15(Spring): 124-139.
Primo, David, M. 2007. *Rules and Restraint: Government Spending and the Design of Institutions*. Chicago, IL: University of Chicago Press.
Rodgers, Robert, and Phillip Joyce. 1996. "The Effect of Underforecasting on the Accuracy of Revenue Forecasts by State Governments." *Public Administration Review* 56 (January/February): 48-56.

Rose, Shanna. 2006. "Do Fiscal Rules Dampen the Political Business Cycle." *Public Choice* 128(September): 407-431.
Schick, Allen. 1971. *Budget Innovation in the States.* Washington DC: The Bookings Institution.
Shkurti, William J. 1990. "A User's Guide to State Revenue Forecasting." *Public Budgeting and Finance* 10(Spring): 79-93.
Smith, Daniel L. 2007. "Rules, Participants, and Executive Politics in State Tax Revenue Forecasting." *Journal of Public Budgeting, Accounting & Financial Management* 19(Winter): 472-487.
Spence, David B. 1999. "Managing Delegation *Ex Ante*: Using Law to Steer Administrative Agencies." *Journal of Legal Studies* 28(June): 413-459.
Spulber, Daniel F., and David Besanko. 1992. "Delegation, Commitment, and the Regulatory Mandate." *Journal of Law, Economics, and Organization* 8(March): 126-154.
State Expenditure Report: 2003, 2004. Washington, DC: National Association of State Budget Officers.
Volden, Craig. 2002. "A Formal Model of the Politics of Delegation in a Separation of Powers System." *American Journal of Political Science* 46(January): 111-133.
Voorhees, William R. 2004. "More is Better: Consensual Forecasting and State Revenue Forecast Error." *International Journal of Public Administration* 27(nos. 8 & 9): 651-671.
Waller, Christopher J. 2000. "Policy Boards and Policy Smoothing." *Quarterly Journal of Economics* 115(February): 305-339.
Wells, Roger H. 1924. "The Line Item Veto and State Budget Reform." *American Political Science Review* 18(November): 782-791.
Willoughby, William Franklin. 1918. *The Movement for Budgetary Reform in the States.* New York: D. Appleton and Company.
Wilson, Woodrow. 1887. "The Study of Administration." *Political Science Quarterly* 2(June): 197-222.
Wooldridge, Jeffrey, M. 2003. *Econometric Analysis of Cross-Section and Panel Data*. Cambridge, MA: MIT Press.

TABLE 1:

Who Generates Official General Fund Revenue Forecasts in the American States, 1987-2004

Legislative Branch Forecast	Executive Branch Forecast: Term Limits	Executive Branch Forecast: No Term Limits	Consensus Forecast
Alabama	Arkansas	Colorado (1987-1988)	Alaska
Arizona	Georgia	Minnesota	Delaware
California	Kentucky (1987-1993)	North Dakota	Florida
Colorado (1989-2004)	Maine (1987-1992)	Rhode Island (1987-1990)	Hawaii
Connecticut	Mississippi (1987-1992)	Texas	Indiana
Idaho	Oregon		Iowa
Illinois	Pennsylvania		Kansas
Louisiana (1987)	Tennessee (1987-1992)		Kentucky (1994-2004)
Michigan (1987-1989)	Virginia		Louisiana (1988-2004)
Montana	West Virginia		Maine (1993-2004)
Nevada (1987-1995)			Maryland
New Hampshire			Massachusetts
New Jersey			Michigan (1990-2004)
New York (1987-1995)			Mississippi (1993-2004)
North Carolina			Missouri
Ohio			Nebraska
South Dakota			Nevada (1996-2004)
Utah			New Mexico
Vermont (1987-1995)			New York (1996-2004)
Wisconsin			Oklahoma
			Rhode Island (1991-2004)
			South Carolina
			Tennessee (1993-2004)
			Washington
			Wyoming

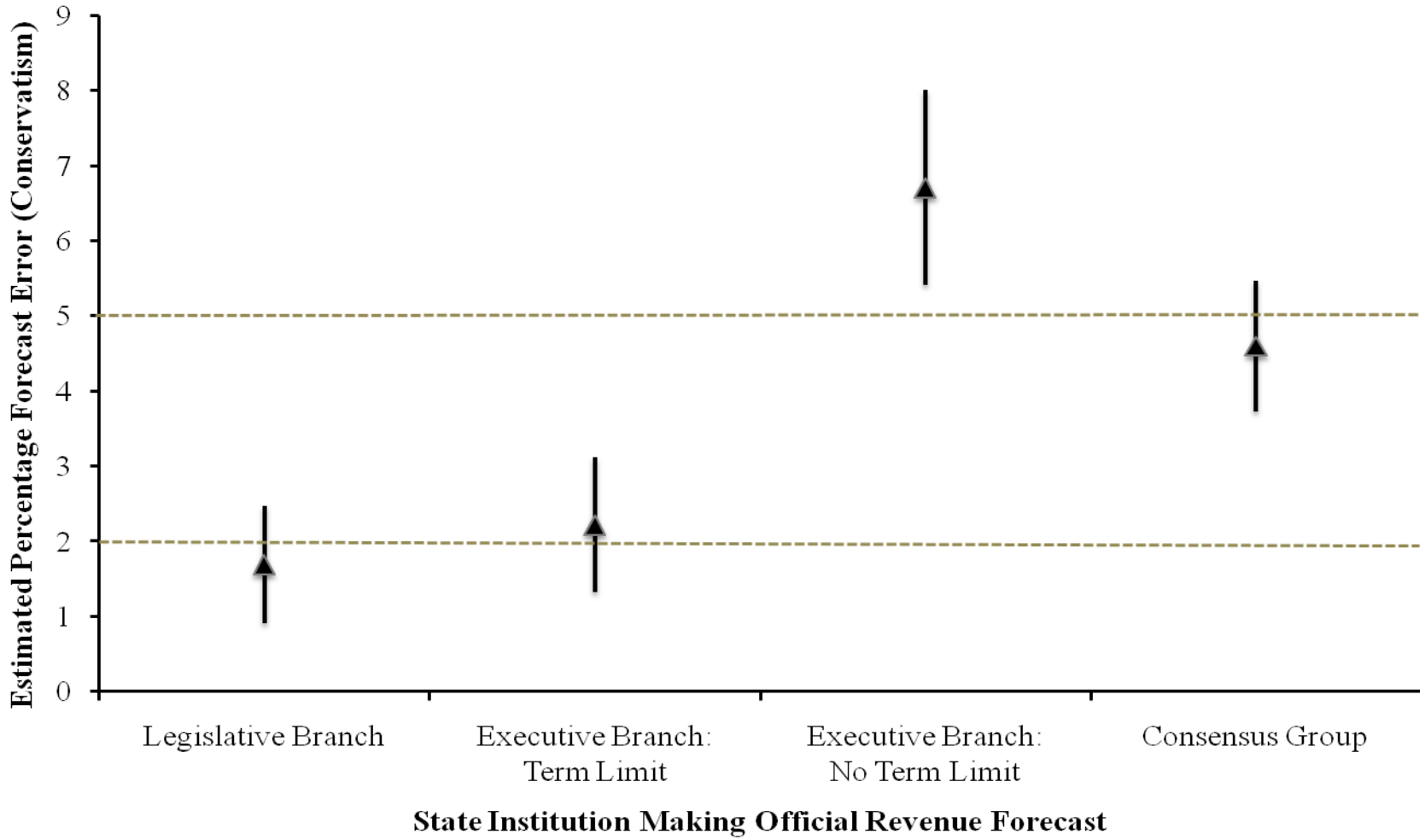
Notes: *Legislative Branch Forecast* refers to state-year observations where the legislative branch is responsible for generating the official general fund revenue forecast. *Executive Branch Forecast: Term Limits* refers to state-year observations where the executive branch operating under the presence of term limits is responsible for the official general fund revenue forecast. *Executive Branch Forecast: No Term Limits* refers to state-year observations where the executive branch operating under an absence of term limits is responsible for the official general fund revenue forecast. *Consensus Forecast* refers to state-year observations where a consensus group is responsible for generating the official general fund revenue forecast.

TABLE 2: State General Fund Revenue Forecasting Bias by Policymaking Venue (1987-2004)

	Model 1		Model 2		Model 3		Model 4	
	Coef	SE	Coef	SE	Coef		Coef	SE
Forecasting Venue								
Legislative Branch	-2.77	0.57**	-2.91	0.58**	-3.55	0.58**	-4.30	0.58**
Executive Branch	-1.07	0.61*	--	--	--	--	--	--
Exec Branch: Term Limit	--	--	-2.38	0.69**	-2.46	0.69**	-2.35	0.69**
Exec Branch: No Term Limit	--	--	2.11	0.96**	2.11	0.96**	2.08	0.96**
Forecasting Venue × Political Fragmentation								
Legislative Branch × Divided Legislature	--	--	--	--	2.26	1.09**	--	--
Legislative Branch × Divided Government	--	--	--	--	--	--	2.32	0.97**
Controls and Ancillary Parameters								
Divided Legislature (0,1)	--	--	--	--	-0.67	0.78	--	--
Divided Government (0,1)	--	--	--	--	--	--	-0.20	0.72
State Government Ideology	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01
|50-State Government Ideology|	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.02
Gubernatorial Election Year (0,1)	-0.81	0.51	-0.81	0.51	-0.82	0.51	-0.85	0.51*
Change in Real Personal Income	0.63	0.10**	0.63	0.10**	0.63	0.10**	0.63	0.10**
Economic Growth Volatility	-0.22	0.19	-0.22	0.19	-0.21	0.19	-0.20	0.19
Fiscal Slack (Rainy Day + Surplus Gen. Funds)	-0.18	0.02**	-0.18	0.02**	-0.18	0.02**	-0.18	0.02**
Appropriation Limit (0,1)	-1.38	0.87	-1.53	0.87*	-1.53	0.87*	-1.50	0.87*
Binding Forecast (0,1)	-1.81	0.49**	-2.07	0.49**	-2.03	0.49**	-2.02	0.49**
Balanced Budget Requirement (0,1)	2.19	0.57**	1.84	0.58**	1.83	0.58**	1.93	0.58**
Biennial Budget (0,1)	-0.76	0.47	-1.18	0.48**	-1.19	0.48**	-1.20	0.48**
Relative Reliance on Sales Tax Revenue	-12.88	2.00**	-13.85	2.02**	-14.03	2.02**	-13.84	2.01**
η	0.86	0.06**	0.86	0.06**	0.87	0.06**	0.86	0.06**
Constant	3.81	0.85**	4.60	0.87**	4.82	0.87**	4.44	0.87**
F-Statistic	24.09**		22.69**		21.07**		22.22**	
Adjusted R^2	0.17		0.17		0.17		0.17	
ρ	0.28		0.28		0.28		0.28	

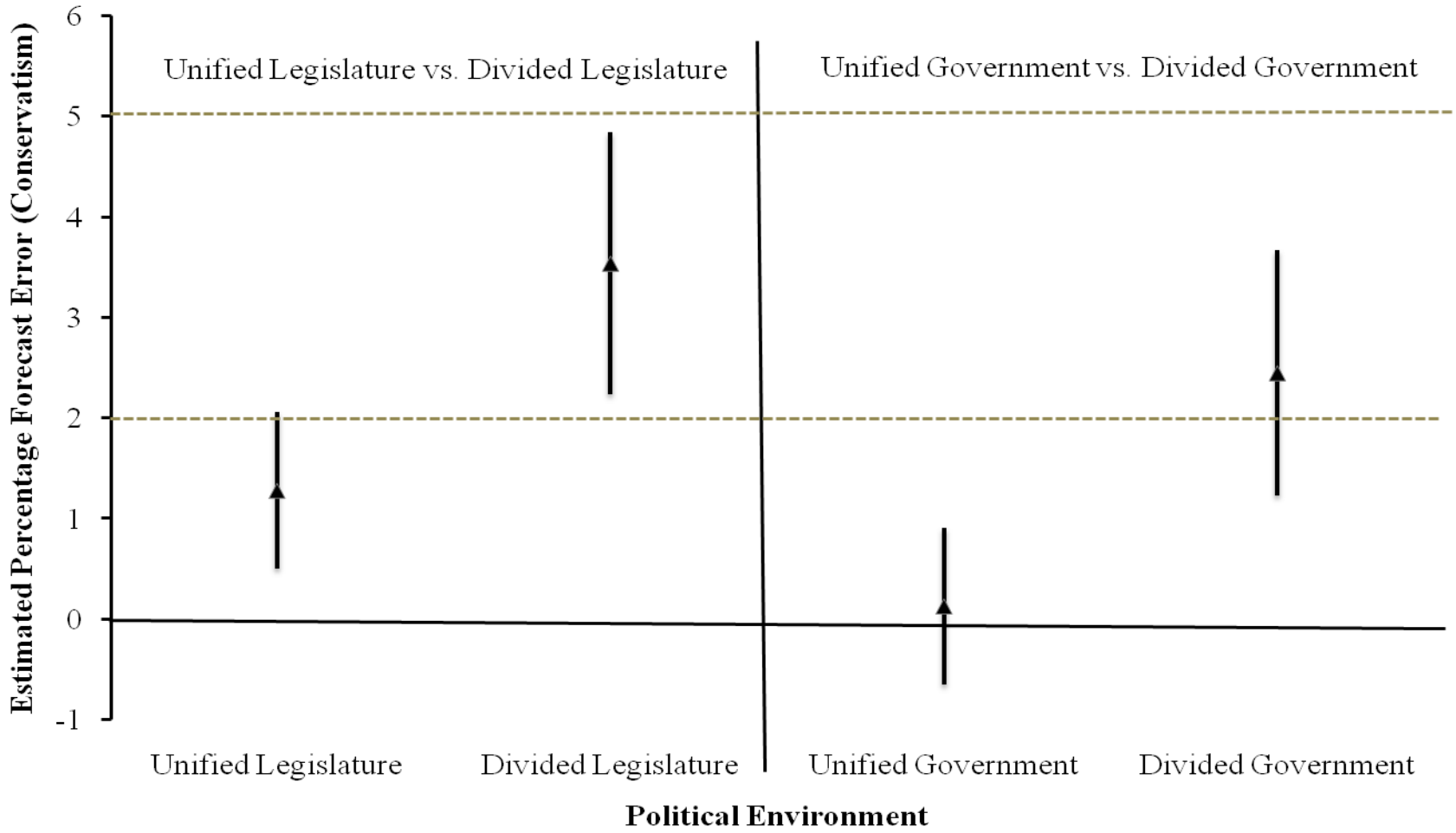
Notes: N=846. Dependent variable is [(actual state general fund revenues – projected state executive general fund revenues) /actual state general fund revenues]*100. Estimates from fixed effects regression with vector decomposition and AR(1) Prais-Winsten transformation. D-W statistics after the transformation are 1.80; 1.80; 1.80; 1.81. *significant at the 0.10 level; **significant at the 0.05 level (two-tailed tests).

Figure 1. Estimated Forecast Conservatism by Forecasting Institution



Note: Estimates and standard errors reflect predicted values from **Model 2** in **Table 2**. Predicted values estimated with all values set at means unless otherwise indicated. Dashed lines reflect the 2-5% professional norm in forecast conservatism.

Figure 2. Estimated Forecast Conservatism in Legislative Branch Forecasts by Political Environment



Note: Estimates and standard errors reflect predicted values from **Model 3** and **Model 4** in **Table 2**, respectively. Predicted values estimated with all values set at means unless otherwise indicated. Dashed lines reflect the 2-5% professional norm in forecast conservatism.

Appendix A: State General Fund Revenue Forecasting Bias by Policymaking Venue (1987-2004), Alternate Model Specifications

	Model A1		Model A2	
	Coef	SE	Coef	SE
Forecasting Venue				
Legislative Branch	-2.92	0.58**	-4.82	0.59**
Exec Branch: Term Limit	--	--	-3.03	0.66**
Exec Branch: No Term Limit	2.13	0.96**	0.08	0.98
Exec Branch: Term Limit (No Lame Duck)	-1.93	0.86**	--	--
Exec Branch: Term Limit (Lame Duck)	-2.92	0.93**	--	--
Forecasting Venue × Political Fragmentation				
Legislative Branch × Divided Government	--	--	2.77	1.05**
Exec Branch: Term Limit × Div Gov	--	--	0.32	1.43
Exec Branch: No Term Limit × Div Gov	--	--	2.51	1.82
Controls and Ancillary Parameters				
Divided Government (0,1)	--	--	-0.73	0.86
State Government Ideology	0.02	0.01	0.03	0.02
|50-State Government Ideology|	0.02	0.02	0.03	0.02
Gubernatorial Election Year (0,1)	-0.83	0.51	-0.85	0.51*
Change in Real Personal Income	0.63	0.10**	0.63	0.10**
Economic Growth Volatility	-0.22	0.19	-0.21	0.19
Fiscal Slack (Rainy Day + Surplus Gen Funds)	-0.18	0.02**	-0.17	0.02**
Appropriation Limit (0,1)	-1.50	0.87*	-1.85	0.88*
Binding Forecast (0,1)	-2.12	0.50**	-1.95	0.49**
Balanced Budget Requirement (0,1)	1.78	0.58**	2.08	0.58**
Biennial Budget (0,1)	-1.17	0.48**	-1.20	0.48**
Relative Reliance on Sales Tax Revenue	-13.85	2.02**	-14.64	2.03**
Republican Governor (0,1)	--	--	0.74	0.87
η	0.86	0.06**	0.86	0.06**
Constant	4.62	0.87**	4.13	0.87**
F-Statistic	21.44**		19.19**	
Adjusted R^2	0.17		0.17	
ρ	0.28		0.27	

Notes: N=846. Model A1 accounts for the distinction between lame-duck and non lame-duck governors for states in which the executive branch is responsible for making official revenue forecasts, plus controls for gubernatorial partisanship. Model A2 accounts for the distinction between unified and divided partisan branch government for all official revenue forecast institutions, plus controls for gubernatorial partisanship. Dependent variable is [(actual state general fund revenues – projected state executive general fund revenues) /actual state general fund revenues]*100. Estimates from fixed effects regression with vector decomposition and AR(1) Prais-Winsten transformation. D-W statistics after the transformation are 1.81. *significant at the 0.10 level; **significant at the 0.05 level (two-tailed tests).

Endnotes

[1] See Kydland and Prescott (1977) and Persson and Tabellini (2000) for more general treatments of credible commitment dilemmas in modern positive political economy.

[2] An extant literature on consensus group forecasts exists (e.g., Bretschneider and Gorr 1992; Deschamps 2004; Smith 2007; Voorhees 2004). These studies, however, examine only a limited number of states and number of years. Most importantly, our study departs from past research by specifically considering how legislative delegation affects policy performance, conditional on varying political conditions.

[3] More specifically, 49 states have some form of legal requirement to balance their budgets, and all states share the concern that deficit spending can harm their bond ratings.

[4] Revenue forecasts are not disaggregated by revenue source since such data from all the states or years analyzed in this study are unavailable. General sales, personal income, and corporate income taxes constitute 76% of all state general fund revenues (NASBO 2004: 94). We do not analyze estimates of total state revenues since earmarked funds are forecasted by several line agencies obtaining such funds (see Franklin and Douglas 2003), and are depoliticized as the result of these funds being of a non-discretionary nature (Patashnik 2000).

[5] Our investigation differs from past research analyzing U.S. *federal* macroeconomic forecasts to answer questions regarding whether institutional design affects bureaucratic policy outputs both in the immediate sense (Krause and Douglas 2005), as well as for the future (Krause and Corder 2007). Although these articles report few differences in current year forecasts across agencies regardless of the degree of insulation from politics, there are several reasons that make direct comparisons between our study and past research rather difficult. First, the forecasting environment at the federal level is different than at the state level since multiple U.S. federal agencies make forecasts, there is no one official federal forecast, and these particular agencies make forecasts in a competitive environment. Second, there are a limited number of cases from which to make inferences at the federal level. For example, there is one legislature (Congressional Budget Office) that makes forecasts at the federal level compared to 20 across the 50 states. Further, there is one independent commission (Federal Reserve) making forecasts at the federal level compared to 25 at the state level. Finally, revenue forecasts at the federal level are less meaningful for analyzing credible commitment problems since there is neither an explicit nor implicit binding balanced budget constraint as is the case for U.S. state governments.

[6] Official forecasts are those adopted for the basis of fiscal policy deliberations, and thus constitute the official anticipated revenues for a given state in a fiscal year. Unofficial forecasts are those generated by a particular agency or institution, but can only be used to further the policy agenda from the source generating such numbers.

[7] Of course, institutional design choices are not always driven by performance concerns. Instead such choices often reflect political struggles among competing factions (Moe 1989), and hence, may not yield effective government programs or agencies. Nonetheless, our aim is to assess whether these performance-based rationales for delegation choices contain any empirical merit.

[8] Legislative delegation is also posited to improve policymaking competence since it exploits the technical expertise of policymakers residing within non-legislative institutions (Bawn 1995; Bendor and Meirowitz 2004; Epstein and O'Halloran 1999; Huber and Shipan 2002; Volden 2002). This issue is beyond the scope of the present manuscript's focus.

[9] See Krause and Corder (2007) for a theoretical elaboration of this logic applied to bureaucratic policy decision-making in the realm of U.S. federal executive agency macroeconomic forecasts.

[10] Governments' ability to attain their desired policy targets is much easier when political fragmentation is low. For instance, Alt and Lowry (1994) show that policymakers both come closer to meeting their desired partisan revenue and spending targets, and are also more nimble in responding to fiscal shocks, under unified government vis-à-vis divided government.

[11] One may counter that legislators may actually be more inclined to engage in opportunistic policymaking behavior in a fragmented institutional environment (i.e., divided partisan legislature) compared to a unified one since it is harder for voters to assign responsibility to political actors through electoral sanctions and rewards (Powell and Whitten 1996). For example, Lowry, Alt, and Ferree (1998) find that politicians are more heavily sanctioned for deviating from partisan fiscal goals under unified government vis-à-vis divided government. Yet, this alternative logic is much less applicable to legislatures since they incur weak electoral sanctions because of collective decision-making and plurality of interests (Bendor and Meirowitz 2004; Falaschetti and Miller 2001); whereas, governors are quite susceptible to electoral sanctions for opportunistic policymaking behavior (Lowry, Alt, and Ferree 1998; Niemi, Stanley, and Vogel 1995).

[12] In 30.55% of the state-year observations, official revenue forecasts are over-predicted (i.e., negative forecast errors), and in roughly 18% of all state-year observations actual revenues fall at least two percent below projected revenues. This suggests that while it conservative forecast errors are more commonplace in absolute terms, it is hardly rare for state governments to produce optimistic official revenue forecasts in absolute terms.

[13] In this study, we generally treat institutional structure as being exogenous to policy performance both theoretically and empirically. A practical challenge with relaxing this exogeneity assumption on a theoretical level is that dynamic claims corresponding to coalitional drift may mean that the original intent of the enacting coalition creating the structure of the delegatee institution may have changed through time (Horn and Shepsle 1989; Moe 1989). We deal with the empirical issues surrounding this assumption later (see Note 29).

[14] Texas, Delaware, and Michigan possess unique institutional structures. Texas is unique because the executive office responsible for making official revenue forecasts is not the governor, but instead the state Comptroller General. Delaware is unique case since it has a consensus group possessing 30 members – all whom are non-partisan appointees. This structure for a limited partisan consensus group deviates greatly from the norm of three to nine member consensus groups that contain between one to four non-partisan members. Maryland is a unique case since it is classified as a Consensus Group, yet requires formal approval of the forecast by the governor. We have also estimated models where we drop Texas, drop Delaware, or change the classification of Maryland to an executive branch forecast and the effects are inconsequential to the testing of

our theoretical hypotheses outlined in the manuscript. These auxiliary analyses are both presented and discussed in the Supplementary Appendix document submitted with this manuscript to *JOP*.

[15] To be more exact, in all such states possessing this institutional structure, both the executive branch and legislature make competing revenue forecasts. Yet, legislative branch forecasts constitute official state policy since this branch possesses sole legal authority to select which forecast to adopt – and they always choose to adopt their own as the state's official forecast.

[16] These legislative branch controlled forecasts are either produced by relevant committee staff members or legislators. In all but two instances (Michigan and New York), a single forecast is generated from the legislature. In Michigan, each legislative chamber provides a separate forecast and the final institutional figure is based on some combination of these two forecasts (Gary Olson, Director of the Michigan State Senate Fiscal Agency, phone communication with third author on May 21, 2004). In New York, the legislature generates four independent forecasts - one each from the majority and minority members of the House and Senate fiscal committees (Robert Megna, Director of the Revenue Division of the New York Division of the Budget, phone communication with third author on May 21, 2004).

[17] The "official" forecast is employed by the legislature when making the budget. These data came from both data reported to the National Association of State Budget Officers and personal interviews with state officials. These data can be obtained from the authors.

[18] It is rare for elected officials to serve on consensus groups. For example, out of the eleven states during our sample period that had a limited partisan consensus group (i.e., one with at least one non-partisan member), only Louisiana has elected officials (House Speaker and Senate president) serving on this independent commission. Given both the consensual nature of such boards and the paucity of elected officials serving on them, it is implausible to infer that elected officials can directly determine policy via consensus groups.

[19] The subsequent policy-specific information was culled from interviews with state government fiscal policy officials from each of the consensus group states. A detailed list and corresponding source references can be obtained from the corresponding author.

[20] All but one of the 26 states possessing a consensus group institution for at least some portion of our sample follow a consensual (i.e., unanimity or near-unanimity) decision rule with a *pro forma* vote after agreement on the revenue forecast has been obtained. Washington is the exception since it uses a formal majoritarian voting rule to approve of the official revenue forecast.

[21] These data come from *The Book of the States*, 1986-2004. Lexington, KY: The Council of State Governments.

[22] In auxiliary models reported in Appendix A: Model A2, we include both measures of gubernatorial partisanship and divided government interactions with executive branch forecasts in model specifications. These results indicate that only legislative branch revenue forecasts significantly differ between periods of unified and divided government. In numerical terms, governors operating under term limit restrictions are less affected by partisan fragmentation

(*Executive Branch: Term Limit × Divided Government* = 0.32) compared to those governors that are not subject to such electoral constraints (*Executive Branch: No Term Limit × Divided Government* = 2.51).

[23] Data for this variable come from the U.S. Department of Commerce, Bureau of Economic Analysis (http://www.bea.gov/regional/statelocal.htm). The mean for change in real personal income is 3.04 (SD = 3.03). The mean for economic growth volatility is 1.85 (SD = 1.67).

[24] This variable is constructed from data in *The Fiscal Survey of States,* 1986-2005. The mean value is 5.53 (SD = 14.23).

[25] Some state constitutions and statutes explicitly prohibit the state from appropriating up to the amount of the forecasted revenue. Delaware's constitution, for example, states, "(b) No appropriation, supplemental appropriation, or Budget Act shall cause the aggregate State general fund appropriations enacted for any given fiscal year to exceed 98 percent of the estimated State general fund revenue for such fiscal year from all sources…" (Art. 8, Sec. 6).

[26] We constructed this variable using the *Budget Processes in the States*, 1987-2002, in conjunction with phone interviews of executive budget agency officials in all 50 states. A list of these individuals and their phone numbers can be obtained from the authors.

[27] Crain's (2003) evidence of sales tax revenue instability is a byproduct of his decision to combine highly volatile *selective* sales tax revenues (applied to goods and services exhibiting high income elasticity) with stable *general* sales tax revenues. These data come from *The Book of the States*, 1986-2004 and the U.S. Department of Commerce, Bureau of the Census (http://www.census.gov/govs/www/state.html).

[28] One feature of state budget processes that may influence the quality of revenue forecasts is the presence of competing revenue forecasts by different actors. Unfortunately, there are no state-years where executives produce the official forecast and there are competing forecasts. Therefore, we cannot empirically assess executive branch effects and competing forecast simultaneously. However, this issue is not problematic for two reasons. First, *all* non-executive branch institutions possessing formal authority to generate revenue forecasts face a competing forecast from the executive branch by definition. In turn, this means that any observed differences among these non-executive branch institutions are attributable to institutional venues, and not the presence of a competing forecast. Second, our decision to break down executive branch institutions possessing formal authority to generate revenue forecasts by whether or not governors are subject to term limit restrictions means that any observed differences between this pair of executive branch forecasts cannot be attributed to the absence of a competing forecast.

[29] Because we do not possess both (1) the timing of when such structures were originally/initially adopted and (2) the data on revenue forecasts sufficiently far enough back in time to assess such propositions, we are only capable of assessing any potential endogeneity in our statistical analysis when the institutional structure changed within our sample period. We performed a series of direct tests to determine whether policy decision quality *systematically* influenced changes to the venue policymaking authority responsible for policy decision-making. This concern was not borne out by

our data when assessing it in terms of whether such institutional changes were the result of either operating within a more difficult policymaking environment, or exhibiting inferior policy performance. The results of these tests and corresponding discussion appear in the Supplementary Appendix document (see section titled "*Addressing a Potential Endogeneity Critique*") that was submitted with this manuscript to *JOP*.

[30] Based upon both substance and empirical scrutiny of the between-within variance of our independent variables, we treat the following variables as being time-invariant in our statistical models (*with between-within standard deviation ratios are reported in parentheses*): Legislative Branch dummy (3.14), Executive Branch dummy (2.51), Executive Branch: No Term Limit dummy (3.26), Executive Branch: Term Limit dummy (2.47), Appropriation Limit dummy (2.23), Binding Legislation dummy (2.63), Balanced Budget dummy (strongly time-invariant), and Bienniel Budget Cycle dummy (3.44), and Relative Reliance on Sales Tax Revenues (6.10). Plumper and Troeger (2007: 136) advocate a conservative 'rule of thumb' of using 2.8 as a between-variance ratio criterion. However, this recommendation is made in relation to their Monte Carlo simulations (137: Figure 4) which posits an overall $R^2 = 0.50$. Because our FEVD statistical models exhibit fairly low overall R^2 in these type of regression models (0.15-0.20 range) the between-within variance ratios for the time-invariant variables are quite reasonable given that the advantages of this estimation technique vis-à-vis a CSFE approach is enhanced when the overall R^2 statistic is low, ceteris paribus (Plumper and Troeger 2007: 125).

[31] In addition, we perform robustness checks on these reported models using both timewise and cross-sectional fixed effects estimation techniques. Some notable differences exist between these alternative fixed effects models' results, and also in relation to those results generated from using the FEVD approach. However, we are confident that the FEVD estimates are more reliable since they produce superior overall model fit to these data, plus they not subject to the severe problems associated with timewise and cross-sectional fixed effects estimators given the nature of our data design. The results of these robustness checks and corresponding discussion appear in the Supplementary Appendix document (see section titled "*Robustness Checks Estimating Timewise and Cross-Sectional Fixed Effects Models*") that was submitted with this manuscript to *JOP*.

[32] We analyze the robustness of this result by distinguishing between Lame Duck and Non-Lame Duck governors in those states where this elected official is subject to term limit restrictions (see Appendix A: Model A1). The results of this robustness check indicates that differences in forecast conservativism between them are not statistically discernible ($p = 0.39$). Consistent with our reported results, the official revenue forecasts produced by governors not subject to term limit restrictions are significantly more conservative than those generated from either lame duck or non-lame duck governors subject to term limit constraints at the $p < 0.01$ level.