The Timing, Intensity, and Composition of Interest Group Lobbying: An Analysis of Structural Policy Windows in the States

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ABSTRACT

This is the first paper to statistically examine the timing of interest group lobbying. It introduces a theoretical framework based on recurring "structural policy windows" and argues that these types of windows should have a large effect on the intensity and timing of interest group activity. Using a new database of all lobbying expenditures in the U.S. states ranging up to 25 years, the paper shows interest group lobbying increases substantially during one of these structural windows in particular--the budgeting process. Spikes in lobbying during budgeting are driven primarily by business groups. Moreover, even groups relatively unaffected by budgets lobby more intensely during legislative budgeting, consistent with the theory that these interests are attempting to have legislators attach (de)regulatory riders to the budget bills. Overall, the paper demonstrates that these structural policy windows largely determine lobbying expenditures.

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I. INTRODUCTION

One of the primary instruments interest groups use to influence policy is the lobbying of legislators. Lobbying is the direct and private transfer of information to politicians in the legislature. In this sense, lobbying is meant to include reports, arguments, messages, and information that interest groups provide directly and privately to legislators and their staffs. It excludes campaign contributions made to a legislators, public advertising, and grassroots organization of employees or members. Given the importance of lobbying to policy outcomes, groups must decide not only how much effort to exert in the lobbying process, but they must also decide when to lobby to influence the legislature. This then poses interesting questions for scholars: when do interest groups lobby, and what determines the intensity of that lobbying?

We can find some initial traction on this question with an examination of the retrospective voting literature. An oft-documented fact in this literature is that voters return legislators to office who have delivered favorable policy to constituents during their previous term. These backward looking voters are heavy discounters, valuing recent policy-delivery by legislators more highly than those policies passed farther in the past (Fiorina 1981, Downs 1957). Legislators, recognizing this voter behavior, have an incentive and desire to pass legislation for which they can credit-claim close to their impending re-election (Levitt and Snyder 1997, Stein and Bickers 1994, Muthoo and Shepsle 2003).[1] This model would then suggest that interest groups should attempt to influence legislators when these legislators are ready to pass legislation.

[1] This is sometimes called the retrospective voting theory or the WHYDFML (what-have-you-done-for-me-lately) theory.

That is, interest groups increase their lobbying efforts close to elections because this is the time when politicians are trying to credit-claim for legislation that voters will attribute to the legislators.

We can examine this hypothesis by turning to the primary archival dataset that scholars of interest group lobbying have employed—the federal lobbying data. Since 1996, federal law has required lobbyists and clients to report the amount of money they spend on lobbying at the federal level (see Baumgartner and Leech 2000 for a detailed description of the data).[2] In Figure 1, Panel A, we present a time series of aggregate total lobbying using this data. Because this data is only available for a small number of years, it is not possible to conduct a reliable statistical analysis of the results. However, a casual examination of Panel A exhibits a pattern that is consistent with this retrospective voting model. In the 1998 and 2000 election years, there is a jump in lobbying expenditures, preceded by a leveling out in the off-election year. This hypothesis, therefore, seems to find some empirical, if not large-sample statistical, evidence in the most commonly used dataset of lobbying expenditures at the federal level.

****INSERT FIGURE 1 ABOUT HERE****

However, suppose we wish to expand this analysis beyond the five data points and single time series of the federal level. Lobbying expenditures in the states would seem to be a reasonable candidate to for more data. In Figure 1, Panel B, we illustrate total aggregate lobbying expenditures over time in Maryland. Unlike the federal data, we do not see particularly

[2] The data come from the Center for Responsive Politics (www.opensecrets.org) and from Professor Frank Baumgartner's website (lobby.la.psu.edu). The 1996 data have been estimated from Professor's Baumgartner's site, using Baumgartner and Leech (2001) as a guide.

large increases in interest group lobbying expenditures during election years. Rather, there is a steady increase in lobbying expenditures throughout the ten years of data.

We can contrast the timing of lobbying effort in Maryland to Maine. Figure 1, Panel C presents the Maine data, which exhibits a very different pattern of lobbying expenditures over time. Not only is there a "saw tooth" pattern of lobbying effort, the pattern is precisely the opposite of the maintained hypothesis-- there are troughs during elections, but peaks in the off-election year.

This then leads us to revisit the core research question: what drives the intensity and timing of interest group lobbying? Moreover, are particular types of interest groups causing the peaks and troughs in the data observed in Figure 1, Panel C? To answer these questions, this paper develops a theoretical framework based on policy windows and argues that interest groups become active when policy windows arise. Some policy windows emerge endogenously through the work of political entrepreneurs and interest group to create a favorable climate for policy change. Other policy windows open exogenously, because of environmental factors and outside events that bring issues to the attention of voters and legislators, creating a desire for policy change. Finally, we argue that policy windows can also arise because of the structure of the legislature and the legislative process. Many of these "structural policy windows," such as the budgeting process, will recur periodically, drawing interest groups to the process. We will argue it is these structural policy windows that, on the margin, drive interest groups to lobby.

The largest challenge to examining the patterns observed in Figure 1, and the theoretical framework proposed, is that the forum in which scholars have empirically examined lobbying—the federal government—is a single legislative institution (n = 1) with a very short time series of lobbying data. There is not a sufficient cross-section or time-series of data to statistically

examine variation in lobbying expenditures as they relate to the structure of legislatures. To remedy this problem, this paper introduces a dataset of lobbying in each of the states. The paper offers aggregate level data on 33 states, and fine-grained data on nine of those states, covering an average of nine years per state. These states have different legislative features, different electoral features, and different characteristics that allow us to compare the timing and intensity of lobbying by interest groups.

Thus the paper makes a number of empirical contributions. First, it is the first paper to examine lobbying expenditures at the state level. Second, this is also the first paper to conduct a comparative study of lobbying effort across states. Third, this is the first study to examine statistically the timing of legislative lobbying.[3] The panel nature of the dataset enables us to pursue this goal. Finally, the paper refocuses our interest group lens on budgeting, the importance of which we discuss throughout the paper.[4] Building upon a well-documented literature that has examined the micro-foundations of lobbying, this paper examines the sources of institutional variation and features that drive the lobbying effort.

The paper demonstrates that structural policy windows, and the budgeting process in particular, are a magnet for special interests, causing these groups to substantially increase their lobbying effort. Contrary to the initial hypothesis, lobbying actually decreases in election years, relative to off-election years. We find that business groups, which account for 86% of the lobbying expenditures in the nine states for which we have detailed data, are the prime drivers behind the increased lobbying during legislative budgeting. However, business groups have much lower variation in lobbying effort from year to year than any other category of special

[3] There has been one recent statistical study examining the timing of lobbying in administrative agencies (de Figueiredo and Kim, 2004). Stratmann (1998) and Snyder (1992) have examined the timing of PAC contributions.
[4] Baumgartner and Leech (2000), in an unpublished paper, have recognized the importance of budgetary interest group behavior in a cross-section of the federal data.

interests. These latter two results combined suggest that small changes in business group lobbying can have big effects on overall lobbying expenditures. In addition, groups substantially influenced by the state budget and groups substantially influenced by regulation both increase lobbying during budget years. This result is consistent with the view that non-budget groups may be encouraging legislators to attach non-budgetary riders to the budget bill that have higher probability of passage than stand-alone legislation would. Finally, we note that laws governing disclosure of interest group activities show no measurable effect on the total amount of lobbying activity disclosed. Taken together, the statistics demonstrate that the structural features of political institutions that create recurring policy windows, and budgets in particular, have a large effect on the timing and intensity of interest group lobbying, and that businesses drive these patterns.

In the next section, the paper outlines a theoretical framework and discusses why current empirical papers have not yet explored the timing of interest group lobbying. Section III describes the core data, methods, and empirical results. Sections IV examines what types of groups are driving the variation in lobbying effort. The paper concludes in Section V.

II. THEORETICAL AND EMPIRICAL UNDERPINNINGS

A. THEORETICAL FRAMEWORK: TYPES OF POLICY WINDOWS

We begin by developing a framework for understanding the timing of interest group lobbying. Although there are a number of theories of interest group activity, there are no formal or informal theories (of which we are aware) on the timing of interest lobbying [5] There is, however, a common thread in the literature that argues interest groups become active when

[5] Austen-Smith (1993) has developed a model of lobbying for agenda setting and then for votes, however, this is usually considered within the same bill.

policy windows open (Price 1978). Policy windows are those time periods when there exists a favorable climate for changes to legislation. Legislators focus more of their attention on the issue at hand, and are disposed to consider whether and how the policy should be changed (Baumgartner and Jones 1993, Grossman and Helpman 1999, 2001).

In the literature, policy windows arise through two main processes. First, policy windows arise through the political entrepreneurship of legislators and the "offensive" activity of interest groups in creating these policy windows (Wilson 1980, Lowi 1964). Individual legislators are constantly seeking issues with which they can be identified to enhance their re-electability. Interest groups support legislators in these pursuits, creating and disseminating information to create a climate for an opening of the window (Hall and Wayman 1990, Fenno 1973). Through this mechanism, policy windows are created endogenously, through the planning of interest groups and legislators (Kollman 1997). Tax policy, telecommunications bills, and banking deregulation all usually have these types of characteristics. We call these policy windows endogenous policy windows.

A second method by which policy windows arise is through exogenous and or environmental events which refocus legislator attention on a given policy area (Price 1978). For example, the September 11 attacks upon the World Trade Centers created a policy window for the airlines and homeland security, the Enron and MCI accounting scandals created a policy window for "good governance" interest groups, and the eastern seaboard electrical grid failure created a policy window for both the energy industry and environmentalists. In this approach to policy windows, special interests are largely viewed as opportunists, targeting their lobbying efforts when these exogenous events happen (Arnold 1990, Walker 1991). We call these policy windows exogenous policy windows.

However, a third mechanism by which *recurring* policy windows arise is through structural, legislated, or procedural mechanisms. That is, features of political institutions determine the creation of policy windows, and thus the timing of interest group activities. These policy windows may be micro-structural policy windows, usually created legislatively, that pertain to a given piece of legislation or issue area. For example, in the 1990s, the granting of most-favored-nation (MFN) trade status to China required annual renewal, creating a recurring policy window for legislators to act. Likewise, before the advent of automatic cost-of-living-adjustments to Social Security, Congress visited the benefit levels annually choosing how large of a benefit increase to authorize Social Security recipients—creating another particularized structural policy windows. Alternatively, these recurring policy windows may be macro-structural windows, usually determined constitutionally or procedurally, that affect a large number of issues before the legislature. One structural feature of government that create these policy windows is the convening of the legislature. It is not surprising that when the legislature is in session a rise in interest group activity occurs. However, another institutional feature that has received attention in the literature on congressional budgeting, but has been largely overlooked in the interest group literature, is the timing and process of budgeting in legislatures.[6] Special interests can extract favors from the government in the budgeting process through the actual budget itself or the attachment of regulatory and other riders to the budget bill. This suggests that the budgeting process should be particularly susceptible to special interest lobbying (Wildavsky 1979, Wander *et al* 1984) in a periodic and recurring manner. It is during these times that interest groups will become active. We call these recurring policy windows structural policy windows.

[6] There is an extensive literature on budgeting and the determinants of fiscal responsibility in the states. See Alt and Lowry (1993) and Lowry et al (1998) for an example.

B. THE EMPIRICAL LITERATURE AND DATA LIMITATIONS

The empirical studies of interest groups have been centered on an examination of interest group activity at the federal level. Papers that have examined congressional lobbying have focused, generally, on three types of analyses. First, papers have statistically and descriptively examined individual issues to describe how competing interest groups position themselves to lobby over a given issue (Rothenberg 1992, Derthick and Quirk 1985; for an excellent summary, see Smith 1995, Baumgartner and Leech 1998). These studies, however, have a number of limitations because they are generally on single issues and one cannot compare lobbying behavior across issues.

This has led to a second set of papers covering lobbying expenditures at the federal level (Baumgartner and Leech 2001, Ansolabehere *et al* 2003, de Figueiredo and Silverman 2002). The Lobbying Disclosure Act of 1995 provided data to scholars on annual lobbying expenditures at the federal level. While these papers yield results on the make-up of lobbying expenditures, the degree of access accorded to interest groups, and the effectiveness of lobbying effort, the analysis is almost always cross-sectional, based on one year of data. Moreover, because the data is only at the federal level where budgeting, for example, occurs annually, it is difficult to identify any structural, comparative, or timing issues that can be analyzed.

A final important literature this paper speaks to is the literature on lobbying at the state level. Lowery and Gray (2000) have extensively examined the number of lobbyist registrations across the states. Taking registrations at periodic intervals (usually 5-years apart), the authors have developed a theory of interest representation based upon the population ecology variables of competition and legitimation. This data has been used to explore a number of factors affecting

the prevalence of interest groups in states. Complementing their work is a host of case studies that have examined similar issues (Hrebenar and Thomas 1992, 1993). While these papers have extended our comparative work in the area of interest groups, they have generally limited their analysis to the number of lobbying groups, and from that, sometimes make inference about the intensity interest group activity. Whether this latter step is valid is an open question. This paper addresses these three shortcomings.

III. CORE EMPIRICAL ANALYSIS

A. DATA

The panel dataset employed in this section comprises state-year aggregate lobbying expenditures across all states where available. The total aggregate lobbying expenditure by state by year was obtained from each state (either the Ethics Commission or the relevant office). Thirty-three states provided us with the data. The remaining states either did not collect the data or collected but did not keep the data. The range of time periods is 3 years to 25 years of data for each state. All data are converted to 2000 real dollars, deflated by the consumer price index (CPI-U). To create our dependent variable for the statistical analyses, we take the log of the state's per capita lobbying expenditure in a given year.[7] A full description of all the data and the data sources is provided in the Appendix.

There are three sets of independent variables. The first set measures the electoral factors that might affect interest group activity. This includes variables on whether there is an election in the current time period for legislative seats, whether there is unified government, whether there is Democratic unified government (Wiggins et al 1992), and the size of the majorities in the House and Senate of each state.

[7] This further reduces the effect of outliers and other potential anomalies in the data.

A second set of variables includes characteristics of the institutional design and legislative process of each state. These variables measure whether the legislature is required to meet in regular session, whether the legislature is required to meet in special session, and whether the state is required to engage in creating a new budget in a particular year. These are the variables that underlie the structural policy windows we are interested in. We code these as dummy variables with a one if the state is in a regular session in a special session, or in a budget year, and zero otherwise, for the three separate variables.

A third set of independent variables provides controls for the state characteristics that move over time. This includes data on the state's per capita income. We also include variables for the year and the year-squared.

B. DESCRIPTIVE DATA

To capture the variation in the timing of lobbying effort, we analyze three representative states: New York, Wisconsin, and Oregon. These have been chosen because they represent three different institutional structures of the legislative process. New York has annual regular sessions and annual budgeting; Wisconsin has annual regular sessions and biennial budgeting and Oregon has biennial regular sessions and biennial budgeting. We provide the data in Figure 2. What is striking about these three graphs is their responsiveness to the budgeting process. While New York sees a steady increase in real lobbying expenditures, Oregon's and Wisconsin's lobbying expenditures increase substantially in budget years, and drop in off-budget years. In addition, comparing Oregon to Wisconsin, we seem to see a regular session effect as well. This descriptive data provides initial support to the fact that institutional design may affect interest group effort, and in particular, budgeting may be the focal point for interest groups. However, to

more thoroughly examine the structural windows hypothesis in the paper, we turn to a multivariate statistical analysis.

****INSERT FIGURE 2 ABOUT HERE****

C. METHOD

In order to examine the empirical validity of the theoretical framework, we conduct an OLS regression on panel data. One concern that naturally arises in this kind of panel study is that states differ widely in their lobbying disclosure rules. What is considered lobbying in one state is not necessarily considered lobbying in another state, and thus need not be reported. To control for this, we use state fixed-effects in our statistical analyses. The fixed effects estimation method controls for differences across states, and allows us to measure within state variation over time with panel data methods (Hsiao 2002). With state fixed effects, we include a dummy variable for each state. later specifications, we explore random-effects models as well

D. RESULTS

Table 1 provides initial results. The dependent variable is the log of annual, per capita interest group lobbying expenditures. Model 1 includes the control variables (Ln(Per Capita Income), Year, and $Year^2$) with the electoral variables (Election Year, Size of House Majority, Size of Senate Majority, Unified Government, and Democratic Unified). Model 2 includes the control variables with the legislative structure variables (Budget Year, Regular Session, and Special Session). Model 3 includes all three sets of variables. Model 4 includes interaction effects. All models include state fixed effects for the 33 states considered. A positive coefficient

on a variable means an increase in the variable increases the amount of lobbying within a state relative to mean level of lobbying for that state; a negative coefficient means an increase in the variable of interest decreases the amount of lobbying. Standard errors of the coefficients are listed in parenthesis below the coefficient estimates. Statistical significance at the 99%, 95%, and 90% level are noted.

****INSERT TABLE 1 ABOUT HERE****

We begin by discussing the income variable. Per capita income has a large effect on expected lobbying expenditures in all the models. A 1% increase in a given state's per capita income results in an approximately 7.3% increase in lobbying. This result is similar in sign, but greater in magnitude, to a result found for PAC contributions in earlier work (Ansolabehere *et al* 2003), where per capita income has substantial power in explaining the levels of campaign contributions in gubernatorial campaigns.

We turn now to electoral variables. In Model 1, the coefficients on Election Year and the Size of Senate Majority are statistically significant and negative. In this model, an Election Year causes lobbying to decrease by 18%, while each percentage increase in the size of the majority by the majority party in the state senate causes lobbying to decrease by 1.3%. Though the former result is not robust once we include legislative structure variables in Model 3, we will see in Model 4 that this result reappears as statistically significant. The latter result persists in its statistical significance across all models. No other electoral variables are statistically significant in this model.

We then add the institutional structure variables in Models 2 and 3; here we obtain some interesting effects. We discuss the results of Model 3, as it is similar to Model 2. First, when a legislature is in regular session, lobbying skyrockets about 190% over what it would be otherwise. While this is expected, it is interesting to note that this effect holds even when we control for special sessions. In fact, special sessions do not result in more lobbying. In addition, we see a 20% increase in lobbying if during those sessions, the budget is under consideration. That is, lobbying interests increase their efforts substantially during budget years in response to the budgeting process. This is one of the main findings of this paper. Both of these effects, which are statistically significant, cannot be observed in the federal lobbying data because Congress meets and budgets on an annual basis. The budgeting process, a recurring structural policy window, attracts interest groups and results in substantially higher lobbying effort by these groups.

Model 4 includes an interaction term of regular session with election year. Inclusion of this term leaves most coefficient estimates close to their former magnitudes and statistical significance. The interaction term, however, is positive and statistically significant. The results show that while lobbying increases 77% during regular sessions, it increases an additional 145% (total of 222%) during election years if there is a regular session. The coefficient on Election Year is also now negative and statistically significant. It means that lobbying declines substantially (40%) during election years, unless there is a regular session held. If this latter condition holds, however, the total marginal effect of Election Year (the sum of the marginal effects of Election Year and Regular Session*Election Year, holding Regular Session at 1) is almost zero, allowing us to interpret the negative direct effect of elections on lobbying as almost exactly canceling out the positive effect of having a legislature in session during elections.

Taken together, these results suggest that the timing of sessions and budgeting bring out interest group activity in the legislature. While most electoral factors seem to have little effect on the timing of lobbying, there are two exceptions. First, the size of the senate majority has a persistent and statistically significant negative effect on lobbying. In addition, elections tend to decrease lobbying (relative to off-election years) unless the legislature is in session, in which case, the total electoral effect is substantively close to zero.

E. ROBUSTNESS AND EXTENSIONS

In order to check the robustness of the results presented in Table 1, we conduct a number of tests whose results we present in Table 2. First, we explore the possibility that the size of the budget is what drives aggregate lobbying expenditures. To this end, we construct a variable that represents the amount of the budget under consideration in each year.[8] We present the results in Model 5 of Table 2 with caution, only as a robustness check, because the size of the budget may be endogenous to lobbying effort. With that caveat, we note that a 1% increase in the budget results in an 8% increase in lobbying expenditures. This is consistent with results in the earlier models. The effect of Regular Session is slightly less than in previous models. The only electoral variables which have statistically significant coefficients are the Size of Majority variables. The Election Year variable and the interactive variable are not statistically significant, but their magnitudes are almost the same as before.

[8] We take the amount of the budget in any given year. For those with biennial budgets, a problem arises. In the off-years, the budget is zero. We could model this, but then if we take logs, these observations disappear. Moreover the results, if we just use budget levels, are similar to the dummy variable specification. To address this concern, we use 90% of the two-year budget in the budgeted year, and 10% of the budget in the second year. The rationale is that in any given off-year, up to 10% of the budget can be re-budgeted during special session to accommodate fiscal needs. Thus, the amount of budget up for grabs is about 10% of the entire budget. We then adjust the budget for per capita spending then take logs.

****INSERT TABLE 2 ABOUT HERE****

Second, there may be other institutional features that affect lobbying that have been missed in the main analysis. We have catalogued six types of institutional structures that might affect the intensity and timing of lobbying: the presence of budget caps (Primo 2003), legislative term limits (Primo and Milyo 2004), the degree of professionalization of the legislature (Fiorina 1994; Maestas 2000), the number of seats in the state house and senate chambers, the size of the veto-proof majority (Holburn and Vanden Bergh 2004), and the ease with which the legislature can overturn administrative agencies (Weingast and Moran 1983). We measure these variables as noted in the Appendix. One problem with including them in the statistical analysis, however, is that these do not change within state over time. Therefore one cannot used state fixed effects in a regression if one hopes to include these variables. However, one can use a random effects model.

To test the robustness of the random effects model, Model 6 replicates Model 4 using random effects. The coefficient estimates and the statistical significance of those coefficients are very close across the models. A Hausman specification test indicates that we cannot reject the hypothesis that the coefficients of the fixed effects and random effects models are the same at the 95% level of confidence. Having established the comparability of the random effects and fixed effects model, we then include in Model 7 the variables measuring the additional institutional features using random effects. None of the additional institutional structure variables have statistically significant coefficients, suggesting we can reject the hypothesis that they influence total lobbying expenditures at the 95% level of confidence.

A fourth issue is whether lobbying disclosure regulations are driving the result. Some authors have suggested that tighter lobbying disclosure regulations result in less lobbying because disclosure can tarnish the reputation of the lobbyists and the lobbying profession (Brinig *et al* 1994). Other authors have argued that lobbying regulations have little effect on lobbying firms (Lowery and Gray 1997). These papers cite as evidence for these points of view the number of lobbyists registered. In conducting this robustness check, we also hope to settle this argument by employing, as the dependent variable, actual lobbying expenditures.

There are two general types of lobbying disclosure rules. The first are the types that expand the definition of lobbying. These include new rules that include small gifts to legislators as lobbying expenditures, rules that include certain types of events as lobbying expenditures, and rules that expand the definition of lobbying activities (such as to include any meetings with legislators rather than just those to discuss a specific bill). These types of changes in lobbying rules should result in an increase in lobbying expenditures disclosed. A second type of disclosure rule is one that does not expand the definition of lobbying, but requires groups to disclose their lobbying expenditures in a more detailed and refined way. For example, rules that require interest groups to categorize their lobbying expenditures and rules that require lobbying groups disclose their source of funding should not increase disclosed lobbying expenditures per se, but should offer the public more disclosure on the current expenditures.

In Model 8, we replicate the base Model 4 using these variables. Neither type of disclosure law has an effect on the reported amount of lobbying activity by interest groups. This result is consistent with Lowery and Gray (1997) who show that tougher lobbyist registration rules in the state have no effect on the number of lobbying registration, but inconsistent with (Brinig *et al* 1994). We can make a similar statement about the effect of

disclosure laws on the reported amount of lobbying. On the whole, these sets of laws lead to no change in the disclosed aggregate lobbying expenditures. This, however, does not mean that there is no change in lobbyist behavior (as has been argued in earlier work), only that whatever changes there are do not show up in disclosed aggregate lobbying expenditures.

Overall, this section supports the previous results that structural policy windows, as determined by the frequency of sessions and the budgeting process, are the primary drivers of changes in total aggregate lobbying expenditures. Moreover, other factors, such as budget caps, term limits, professionalization of legislatures, and lobbying disclosure rules have little impact on disclosed lobbying expenditures.

IV. UNDERSTANDING THE GROUPS THAT CREATE THIS PATTERN

Having established the empirical fact that budgets draw interest groups to lobby legislatures, we now want to understand which groups create this pattern in the data. To do this, we rely on very fine-grained data for nine states who agreed to provide us with data. These nine states' Ethics Commission keep time-series data on each individual interest group's lobby expenditure each year (for four to ten years). There are over 35,000 interest group-state-year observations of expenditures, covering more than 5,000 separate state-level interest groups.

A. SIMILARITIES TO POLITICAL ACTION COMMITTEES

In order to benchmark the aggregate lobbying data, we begin by comparing the lobbying efforts of interest groups to campaign finance contributions of interest groups. We use the classification system used by scholars of political action committee (PAC) contributions (e.g. Ansolabehere *et al* 2002) and the Federal Election Commission (2001) that categorizes each of

the interest groups into one of four areas: businesses, trade associations, membership/ideological groups, and unions. We have added a "government" category as well because lobbying by state agencies or city governments is required to be reported in many states. This categorization of lobbying expenditures allows us to compare our results to the PAC literature.

First we describe the lobbying data. Reported per capita lobbying expenditures differ vastly by state from $.01 to $18.32, with a mean of $2.44. A variety of reasons exist for this variation, not the least of which is the laws regarding disclosure. Within states, however, there can still be substantial variation in lobbying across different categories of interest groups and across years. Table 3 uses our preliminary categorization of groups to identify the expenditures for each group for all years' data available for the nine states for which we have this data. While one must be careful when comparing amounts across states (because of different disclosure rules), comparisons within state do provide a snapshot of lobbying effort. Here we see that in every state, firms and trade associations account for no less than 80% (86% average) of lobbying expenditure. Unions spend less than 4.2% of total lobbying expenditures in each state. Membership groups account for 3%-15% of total lobbying expenditures.[9]

****INSERT FIGURE 3 ABOUT HERE****

In Table 4, we contrast the distribution of lobbying expenditures with PAC contributions. The data sources are listed in the table.[10] At the federal level, business (corporations and trade

[9] Whether this means that business interests exert more influence in lobbying than do labor and issue groups is unclear. Only future study will allow us to understand this question. Moreover, this preliminary finding helps to explain the findings of earlier studies that document business interests having far more lobbyist registrations than labor and membership groups. This higher number of registrations is manifested in more lobbying expenditures.

[10] The data on state PAC/Special Interest money is approximate. The Institute of Money in State Politics (IMSP) hires contractors to collect data from the states on all state campaign finance contributions. We have checked their data against state records (collected by the state election commissions) against Jensen and Beyle (2003) and find that

associations) comprise 67% of PAC giving, while they comprise 84% of lobbying expenditures. At the state level, these business groups comprise 62% of special interest contributions, but 86% of lobbying expenditures. Labor groups comprise 9% of federal PAC contributions, and 6% of federal lobbying, while at the state level, labor groups comprise 16% of special interest contributions to campaigns and only 2% of lobbying expenditures. Finally, although membership and ideological groups make up a roughly equivalent percentage of campaign finance contributions at the federal and state level (22%-23%), they represent 7% of lobbying expenditures at the state level and only 2% at the federal level. Overall, these results suggest that lobbying is largely a business phenomenon at both the state and federal level, but the business community focuses more on lobbying and less on campaign finance at the state level than the federal level.

****INSERT FIGURE 4 ABOUT HERE****

B. GROUP TYPE AND LOBBYING TIMING

Taking the categorization given above, we examine whether different types of groups time their lobbying in systematically discernible ways. To analyze this question, we sum each category of groups' expenditures, so that we know how much unions are spending in each state by year; how much membership groups are spending in each state by year, etc. From this, we create a set of new dependent variables for the next set of regressions to try to identify the underlying patterns of lobbying. We aggregate the lobbying expenditures by interest group

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they are somewhat close—approximately within 5-10% of each other. We then used the classification system from the IMSP to classify the state PAC data. Ideological and Party Groups were classified as Ideological/Membership. Unions and Civil Service/Retirement groups were classified as Unions. All others were classified as corporations and trade associations collectively. The data in Tables 4 provide the detailed data on the state level for the nine states listed in Table 3.

category by state on a per capita basis and take logs. We now take this as our dependent variable and re-run Model 4 to see if certain groups are driving the aggregate pattern of lobbying observed. In this section, each observation is a state, year, interest-group-type aggregate lobbying expenditure. Again, we use OLS with state fixed effects in the regressions.

Because only nine states are reported here, there are only 53 observations. With 13 explanatory variables and nine fixed effects, there are not many degrees of freedom, meaning that the standard errors are likely to be large. With this caveat, we present our results in Table 5

****INSERT FIGURE 5 ABOUT HERE****

Model 9 includes lobbying by firms, Model 10 includes lobbying by trade associations, Model 11 uses lobbying by unions, Model 12 uses lobbying by government agencies, and Model 13 uses lobbying by membership groups. In all the models the coefficients on Budget Year and Regular Session are positive. In Models 9 and 10 (collectively business), per capita lobbying expenditures are 40% higher for firms and 28% higher for trade associations in budget years than non-budget years. These results are statistically significant at the 95% level of confidence. In Models 11, 12, and 13, we see that per capita lobbying expenditures are 38% higher, 50% higher, and 84% higher for unions, governments, and membership groups, respectively, in budget years relative to non-budget years. These coefficients, however, do not reach the standard levels of statistical significance, perhaps because of the few degrees of freedom. Although a handful of other coefficients are statistically significant, there is no systematic pattern. However, it is worthwhile noting that unions are the only type of interest group that has a positive coefficient

on Election Year and negative coefficient on the interaction term. In addition, government interest groups increase their lobbying substantially during periods of unified government.

Taken together, these results lead us to a number of interpretations of the data. First, all groups lobby at substantially higher levels when the legislature is in regular session, but none of the coefficients are statistically significant at the 95% level. Second, the increase in lobbying expenditures during budget years seems to be driven by business, and not by unions or government agencies. Third, given the relative magnitude of the budget coefficients of the five models, businesses exhibit lower variation in lobbying expenditures from year to year than other organizations. This fact, combined with the fact that business accounts for over 80% of lobbying expenditures (noted in the previous section), suggests that businesses maintain a continued presence in state capitals, lobbying on a regular basis, while other groups maintain a more sporadic lobbying effort. Moreover, when budgets arise, businesses raise their lobbying expenditures somewhat. However, because businesses represent such a large percentage of total lobbying expenditures, the 30-35% increase in lobbying expenditures they engage in during budget years means they create a large increase in aggregate state lobbying expenditures. Fundamentally, the spikes seen in the biennial budgeting states shown in Figures 1 and 2 are generated by business interest groups.

C. ISSUE AREAS AND LOBBYING TIMING

Although businesses are driving the spikes and troughs in lobbying, in a final empirical extension, we examine the extent to which groups affected by different policies of government time their lobbying differentially. We do this by examining the timing of lobbying by issue area. We classify each interest group in these nine states as primarily concerned with one of thirty-two

issue areas. We then create two main "types" of interest group categories: groups which are affected by both budgetary and regulatory rules of the state, and those groups which are affected primarily by regulatory rules.

To implement this, we use a classification system developed by Wolak *et al* (2004). Wolak *et al* obtained the names of every interest group that lobbied at the state level in 1997 (over 34,000 in total). They then categorized each group by topic area they identified. We have taken the Wolak *et al* coding and merged it into our file, adding eight additional categories to obtain more fine-grained detail. However we have panel data, and new interest groups enter every year into each state. We conducted web searches until every interest group was identified using this classification system. Table 6 presents the classification.

****INSERT FIGURE 6 ABOUT HERE****

In addition to the two broad categories we identified above, we also examine issue areas where the lobbying efforts by interest groups which most legislators might like to "hide" from their constituents. These issue areas, such as tobacco firm lobbying, pharmaceutical lobbying, real estate developer lobbying, alcohol lobbying, and gambling industry lobbying, may be particularly problematic for legislators, and we examine this is more detail.

We recognize this classification is somewhat stylized and rough. In reality, there is a continuum between how much an interest group is affected by budgets and how much an interest group is affected by regulation. We do believe to a first approximation, however, that these budget categories reflect where the preponderance of state's influence is on the special interest's business (e.g. education is both budgetary and regulatory, while insurance is primarily

regulatory). That said, we have experimented with a number of reasonable reclassifications and find the results discussed below are robust to these reclassifications.

As before, we sum each topic area's expenditures, so that we know how much agriculture is spending in each state by year; how much health groups are spending in each state by year, etc. for the nine states. We aggregate the lobbying expenditures by issue by state by year on a per capita basis and take logs to create the final dependent variables, and run models similar to the previous section, using OLS with both state and issue area fixed effects.

Given that budgetary issues can only be handled within the budget framework, one would expect that these issues would result in more lobbying within the legislature during budget years than non-budget years. Regulatory issues, on the other hand, do not result in the direct transfer of money from the government to the interest groups in contracts or spending, but are molded by government policies and regulatory power to create the competitive environment. Because these regulations can be passed at any time, there are two factors that affect the timing of regulatory lobbying expenditures. On one hand, it is less costly to pass policy proposals that are attached as riders to the budget, rather than stand-alone bills, because the budget must pass annually, and the process of amending the budget in committee (or on the floor) is generally less onerous than passing a regulation as a stand-alone feature (Oleszek 1996, Krutz 2001). Thus, from a cost perspective, interest groups are more likely to have success passing regulatory rules during budgeting, and therefore we should see an increase in regulatory lobbying during budget years. On the other hand, in a retrospective voting model with heavy discounting, legislators may get more credit for passing legislation close to the election rather than in previous time periods. If this is the case, then legislators benefit more passing legislation close to the election rather than earlier. In a biennial budgeting state, higher benefit would be conveyed in the off-budget year

(or the election year). This would lead to higher incentive to pass bills in the off-budget year. Which effect dominates is an empirical matter. If we see regulatory groups lobbying more heavily in budget years, we assume that the "rider" effect dominates. However, if we see regulatory groups lobbying more heavily in election years, then the "retrospective voting" effect dominates.

Table 7 presents the results. Model 14 presents the results for budgetary and regulatory issues, Model 15 presents the results for primarily regulatory issues, and Model 16 presents the results for "hidden groups." [11] In Model 14, the coefficient on Budget Year is positive and statistically significant. There is, not surprisingly, a 39% increase in lobbying by groups concerned with budgetary issues during budget years. There is a 50% decrease in lobbying by these same groups during election years, though a session during an election year leads to slightly more lobbying on net (through the interactive effect). Unified government of either party leads to 46% more lobbying than during spells of divided government.

****INSERT FIGURE 7 ABOUT HERE****

Many of the results in Model 15 are similar. Groups that are concerned primarily about regulatory issues lobby even more in budget years, on the margin, than those concerned about budgets. There is 49% increase in lobbying for these groups during budget years, an increase which is statistically significant at the 99% level. Special sessions also result in more regulatory lobbying. The Election Year coefficients are not statistically significant. Republican unified government results in 30% additional lobbying than non-unified government, while Democratic

[11] One concern that may arise is that budget years sometimes have longer sessions than non-budget years. To control for this, we replaced the session year variable with short session and long session variables and re-run the regressions. The results are nearly identical.

unified government results in 9% less lobbying than non-unified government. This latter result actually points to groups affected by regulation may be lobbying heavily for deregulation rather than regulation. In sum, despite having fewer budgetary concerns, groups primarily affected by regulations do more lobbying during budgetary years and during Republican unified government.

Finally, Model 16 includes regressions for "hidden groups," those groups that legislators likely wish to hide from the voters. These groups show no discernible pattern of lobbying, as no variable has a coefficient that is statistically significant. These groups seem to spread their lobbying effort evenly across time, political and electoral factors, and institutional structures, which may be a sensible strategy if groups wish to remain hidden.

Overall, these final results paint an interesting picture of the composition of the lobbying effort by interest groups. While groups affected by the budget do increase their lobbying expenditures during budget years, groups not affected by the budget also increase their lobbying expenditures during budget years. One reason for this may be that these latter groups are attempting to create or prevent riders from being attached to the budget that will affect the regulations that govern them. Indeed, given the budget bill must pass on an annual basis, attaching riders to the budget is a less costly mechanism for passing regulations than is passing the bill in stand-alone form. The fact that regulatory lobbying picks up when there is Republican unified government is yet another indication that groups seeking lower hurdles for regulation may be lobbying during this opportune moment—when friends in office are passing must-pass budgetary legislation—offering a good time for attaching riders to the budget bill. Note that controversial groups, whose lobbying efforts legislators might want to hide from the voters, seem to blend into other lobbying efforts, demonstrating no discernible statistical pattern in lobbying.

V. CONCLUSION

This paper complements the extensive micro-oriented (or single vote or single-issue) literature on interest groups by examining the macro-determinants and timing of interest group lobby. In doing so, it has argued that there are three types of policy windows that arise for interest groups: endogenous windows, exogenous windows, and structural windows. The paper argues that structural windows can have a significant effect on the timing of interest group lobbying. Employing a new dataset of lobbying at the state level, the paper exploits cross-state and time-series variation to determine how features of government affect lobbying expenditures. The paper demonstrates that interest groups increase their activities substantially when the legislature is in regular session and when the legislature is engaged in budgeting. It also demonstrates that much of this budget year effect can be explained by business and trade groups expanding lobbying efforts during budget years. Unions and government agencies do not increase lobbying efforts during this time.

Moreover, businesses, which comprise on average 86% of all lobbying expenditures within a given state, have much lower variance in lobbying than other groups. This is consistent with the idea that businesses maintain a steady and continued presence in legislatures, while other types of interest groups expand and contract their lobbying as their resources and the issues that interest them, rise and decline in the legislature. Additionally, interest groups largely unaffected by the budget numbers also lobby during budgetary time periods. One reason for this is that they may be encouraging legislators to use the budget as a vehicle on which to attach non-budgetary riders.

One final result from the paper is that elections have a negative or no (in the interaction term) effect on timing of lobbying, contrary to some received wisdom. It is clear that the

variation in institutional structure of state governments allows us to see structural policy windows that might not otherwise be discernible. Moreover, the data presented here will allow us to explore in more depth the determinants of interest group lobbying effort.

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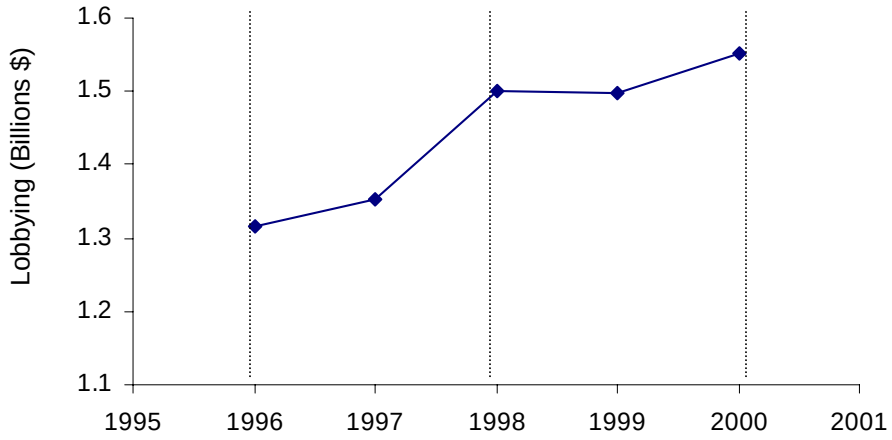
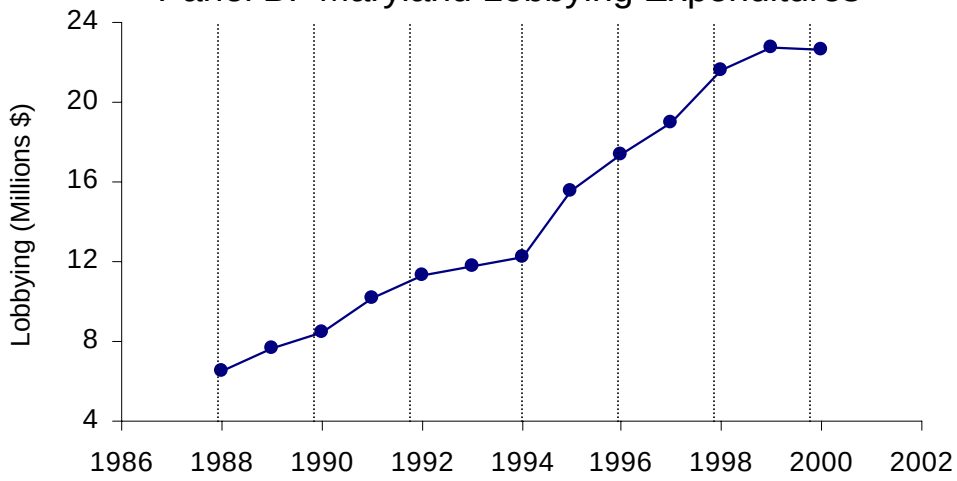
Figure 1

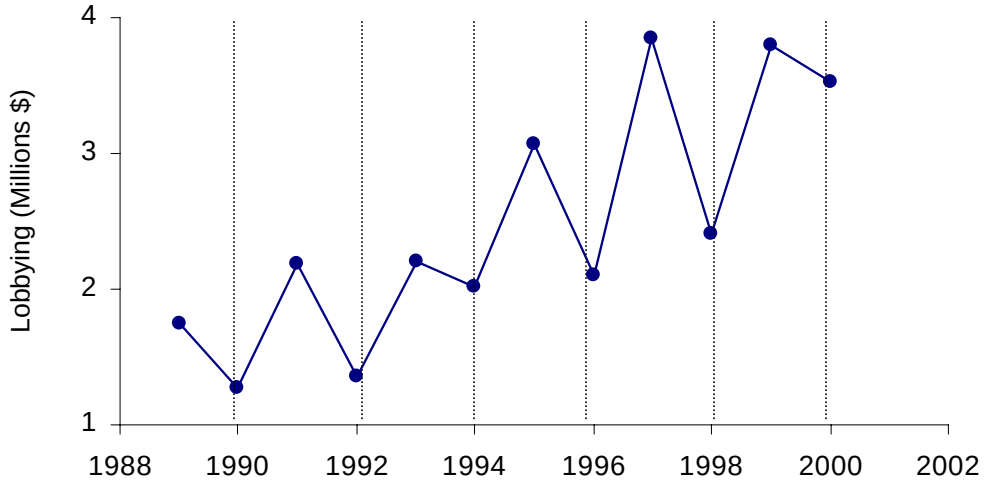
Panel A: Federal Lobbying Expenditures



Panel B: Maryland Lobbying Expenditures



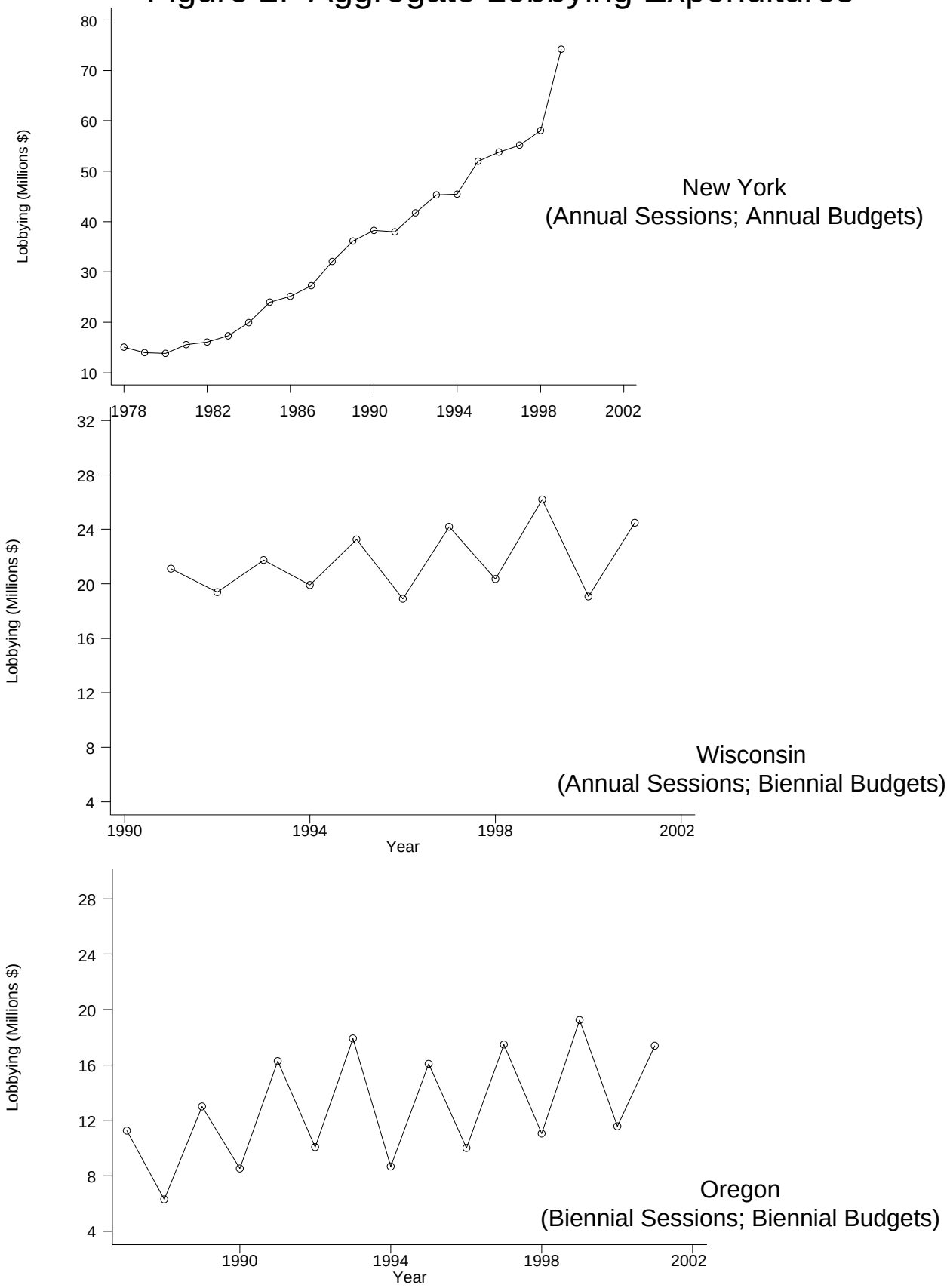
Panel C: Maine Lobbying Expenditures



Legislative Election Year

* All dollar values are in 2000 dollars.

Figure 2: Aggregate Lobbying Expenditures



* All dollar values are in 2000 dollars.

Table 1: Electoral and Institutional Determinants of Aggregate Lobbying Expenditures

Dependent Variable: Log of Total Per Capita Lobbying Expenditures for each state for each year

Variable	Model 1 Electoral Model	Model 2 Legislative Model	Model 3 Base Model	Model 4 Full Model with Interactive Effects
Budget Year		0.215*** (0.067)	0.197** (0.080)	0.231*** (0.081)
Regular Session		1.057*** (0.128)	1.063*** (0.128)	0.575** (0.267)
Special Session		0.051 (0.046)	0.067 (0.047)	0.070 (0.046)
Election Year	-0.188*** (0.046)		-0.023 (0.048)	-0.581** (0.273)
Size of House Majority	0.840 (0.688)		0.960* (0.572)	0.984* (0.568)
Size of Senate Majority	-1.289** (0.620)		-1.427*** (0.518)	-1.407*** (0.515)
Unified Government	-0.009 (0.117)		-0.018 (0.097)	-0.020 (0.096)
Democratic Unified	-0.028 (0.143)		-0.039 (0.119)	-0.029 (0.118)
Ln(Per Capita Income)	2.019*** (0.505)	2.355*** (0.404)	1.997*** (0.419)	1.999*** (0.416)
Year	16.608*** (2.488)	16.354*** (2.071)	16.424*** (2.064)	16.507*** (2.052)
$Year^2$	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Regular Session * Election Year				0.595** (0.287)
Constant	-16,641.48*** (2,475.84)	-16,392.22*** (2,061.20)	-16,460.94*** (2,054.56)	-16,543.26*** (2,042.67)
State Fixed Effects	FE	FE	FE	FE
R-squared	0.713	0.798	0.805	0.808
F-statistic	86.54	184.54	103.35	96.24
n	319	319	319	319

Two-sided t-tests with robust standard errors: *** 99% significance level; ** 95% significance level; *90% significance level

Note: Thirty-three states are included in the analysis, state fixed effects (FE) are used for all Models.

Table 2: Robustness of Determinants of Aggregate Lobbying Expenditures
Dependent Variable: Log of Total Per Capita Lobbying Expenditures for each state for each year

Variable	Model 5 Budget Amount	Model 6 Full Model with RE	Model 7 Structural Measures with RE	Model 8 Lobby Reporting Rules
Budget Year		0.230*** (0.080)	0.229*** (0.081)	0.229*** (0.081)
Budget Amount	0.082* (0.044)			
Regular Session	0.811** (0.391)	0.568** (0.264)	0.565** (0.266)	0.580** (0.268)
Special Session	0.066 (0.060)	0.071 (0.046)	0.070 (0.046)	0.070 (0.047)
Budget Caps			-0.301 (0.735)	
Term Limits			-0.029 (0.133)	
Professional Staff			-0.092 (1.222)	
Senate Size			-0.002 (0.041)	
House Size			0.001 (0.010)	
Veto Override			3.409 (6.583)	
Admin Review Std			0.290 (0.798)	
Election Year	-0.276 (0.393)	-0.586** (0.270)	-0.588** (0.272)	-0.576** (0.274)
Size of House Majority	1.398* (0.751)	0.949* (0.560)	0.939* (0.570)	0.961* (0.572)
Size of Senate Majority	-1.475** (0.656)	-1.378*** (0.508)	-1.379*** (0.512)	-1.410*** (0.519)
Unified Government	0.054 (0.121)	-0.044 (0.095)	-0.044 (0.095)	-0.023 (0.096)
Democratic Unified	-0.127 (0.155)	-0.001 (0.116)	-0.002 (0.117)	-0.029 (0.118)
Ln(Per Capita Income)	1.815*** (0.504)	2.073*** (0.405)	2.037*** (0.410)	1.924*** (0.449)
Year	15.184*** (3.422)	16.649*** (2.036)	16.554*** (2.075)	15.993*** (2.397)
$Year^2$	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)

Regular Session * Election Year	0.252	0.599**	0.601**	0.588**
	(0.409)	(0.284)	(0.286)	(0.288)
Definitional Refinement				0.012
				(0.116)
Definitional Expansion				0.036
				(0.095)
Constant	-15,042.65***	-16,648.32***	-16,592.71***	-16,030.81***
	(3,402.43)	(2,026.30)	(2,064.77)	(2,387.84)
State Fixed/Random Effects	FE	RE	RE	FE
R-squared	0.809	.	.	0.808
F-statistic	64.04	.	.	81.98
n	224	319	319	319

Two-sided t-tests with robust standard errors: *** 99% significance level; ** 95% significance level; *90% significance level

Note: Thirty-three states are included in the analysis, state fixed effects (FE) or random effects (RE) are used for all Models, as noted.

TABLE 3: Total Lobbying Expenditures By Interest Group Category

	Firm	Trade	Union	Government	Membership
Idaho	$633,994 254.30%	$1,485,494 595.83%	$44,107 17.69%	$5,801 2.33%	$199,406 79.98%
Indiana	$22,010,043 465.92%	$16,029,121 339.31%	$1,191,370 25.22%	$2,101,832 44.49%	$1,430,810 30.29%
Kentucky	$15,278,490 567.46%	$14,228,288 528.45%	$939,042 34.88%	$721,506 26.80%	$1,031,886 38.33%
Maryland	$81,621,524 632.19%	$59,099,302 457.75%	$1,798,775 13.93%	$1,688,856 13.08%	$9,423,215 72.99%
Montana	$3,370,952 166.91%	$4,989,198 247.04%	$309,407 15.32%	$664,689 32.91%	$1,045,513 51.77%
Oregon	$41,586,521 179.31%	$55,454,477 239.11%	$4,954,661 21.36%	$10,083,137 43.48%	$8,154,618 35.16%
Virginia	$28,298,970 205.88%	$30,452,100 221.55%	$785,144 5.71%	$6,821,487 49.63%	$6,138,544 44.66%
Vermont	$10,361,286 255.62%	$9,758,959 240.76%	$360,064 8.88%	$44,806 1.11%	$3,648,474 90.01%
Wisconsin	$71,416,329 220.18%	$102,315,604 315.44%	$7,814,127 24.09%	$10,613,263 32.72%	$14,008,523 43.19%

Note: Data is for all available years for each state. Firms and trade associations comprise on average 86% of lobbying expenditures in every state, and no less than 80% of lobbying expenditures in any state.

Table 4: Distribution of Total Lobbying Expenditures and Special Interest/PAC Expenditures at the Federal and State Level

	Federal		State	
	Lobbying	PAC	Lobbying	PAC/Special Interest
Corporations	55%	40%	40%	62%
Trade Associations	29%	27%	46%	
Labor	6%	9%	2%	16%
Issue/Ideology/Membership	2%	23%	7%	22%
Other	7%	0%	4%	0%

Source: FEC (2001); Ansolabahere *et al* (2002); Author (2004), The Institute on Money in State Politics (2004)

Note: All federal lobbying data is for 1997-98 (average) lobbying expenditures. All federal PAC data is for 1996 and 1998 election cycle PAC contributions. State lobbying data is for nine states as described in paper for all years available. All state special interest/PAC data is for the same nine states in the paper for all years available. Totals may not add to 100% because of rounding.

Table 5: State Level Lobby Expenditure by Group Category

Dependent Variable: Log of Total Per Capita Lobbying Expenditures for each grouping for each state for each year

Variable	Model 9	Model 10	Model 11	Model 12	Model 13
	Firms	Trade Associations	Union	Government	Membership Groups
Budget Year	0.356**	0.251**	0.325	0.409	0.612*
	(0.133)	(0.119)	(0.324)	(0.466)	(0.333)
Regular Session	0.122	0.431*	1.588	0.300	0.088
	(0.225)	(0.238)	(1.242)	(1.008)	(0.661)
Special Session	0.098	0.233	0.235	-0.062	0.057
	(0.150)	(0.160)	(0.212)	(0.203)	(0.187)
Election Year	-0.446	-0.251	1.266	-0.636	-0.793
	(0.407)	(0.423)	(1.101)	(0.722)	(0.579)
Size of House Majority	-0.655	-0.645	-1.732	0.471	-0.908
	(1.464)	(1.428)	(2.883)	(5.651)	(2.790)
Size of Senate Majority	-1.256	-0.102	-0.505	1.571	-2.962
	(1.240)	(1.356)	(1.961)	(2.781)	(2.667)
Unified Government	0.157	0.224	0.265	0.810***	0.234
	(0.217)	(0.196)	(0.258)	(0.226)	(0.316)
Democratic Unified	-0.274	-0.387*	-0.051	-0.626	-0.405
	(0.242)	(0.225)	(0.647)	(0.657)	(0.349)
Ln(Per Capita Income)	6.131	1.236	-2.377	-2.548	9.250
	(4.874)	(4.570)	(8.253)	(8.643)	(8.398)
Year	16.282	-20.508	-119.605	-9.621	-25.853
	(34.535)	(34.841)	(79.870)	(95.724)	(56.078)
$Year^2$	-0.004	0.005	0.03	0.002	0.006
	(0.009)	(0.009)	(0.020)	(0.024)	(0.014)
Session Year * Election Year	0.476	0.263	-1.161	0.747	1.005
	(0.424)	(0.441)	(1.224)	(1.073)	(0.768)
Constant	-16,266.07	20,435.98	119,343.70	9,501.36	25,817.80
	(34,502.95)	(34,819.60)	(79,732.60)	(95,595.75)	(56,019.44)
State Fixed Effects	FE	FE	FE	FE	FE
R-squared	0.932	0.905	0.876	0.938	0.883
n	53	53	53	53	53

Two-sided t-tests with robust standard errors: *** 99% significance level; ** 95% significance level; *90% significance level

Note: Nine states are included in the analysis; state fixed effects (FE) are used in all models.

TABLE 6: Classification of Issue Areas

Budgetary and Regulatory	Primarily Regulatory
Agriculture	Banking
Construction	Civil Rights
Education	Communications
Environment	Energy
Health	Gambling*
Indians	Good Government
Pharma*	Guns
Police and Fire	Hotel
Transportation	Insurance
Welfare	Law
	Manufacturing
	Real Estate*
	Religion
	Resources
	Services
	Small Business
	Smokes*
	Spirits*
	Sports
	Utilities
	Women

* indicates also a "hidden" issue (see text for full explanation)

Table 7: State Level Lobby Expenditure by Issue Area

Dependent Variable: Log of Total Per Capita Lobbying Expenditures for each issue area for each state for each year

Variable	Model 14 Budget and Regulatory Issues	Model 15 Primarily Regulatory Issues	Model 16 Hidden Groups
Budget Year	0.331** (0.149)	0.409*** (0.110)	0.386 (0.265)
Regular Session	0.325 (0.391)	0.421 (0.258)	0.055 (0.521)
Special Session	0.145 (0.103)	0.154** (0.069)	0.037 (0.135)
Election Year	-0.683* (0.377)	-0.301 (0.224)	-0.086 (0.379)
Size of House Majority	-0.409 (1.218)	-0.714 (0.963)	-2.578 (2.350)
Size of Senate Majority	-1.483 (1.084)	0.104 (0.874)	-1.199 (1.568)
Unified Government	0.382*** (0.147)	0.265*** (0.089)	0.161 (0.196)
Democratic Unified	-0.398 (0.252)	-0.350** (0.165)	-0.524 (0.337)
Ln(Per Capita Income)	6.637* (3.767)	0.570 (2.714)	4.572 (6.182)
Year	-60.883** (28.655)	-1.692 (21.012)	14.654 (44.034)
$Year^2$	0.015** (0.007)	0.001 (0.005)	-0.004 (0.011)
Session Year * Election Year	0.749* (0.434)	0.383 (0.273)	0.173 (0.522)
Constant	60,789.12** (28,622.71)	1,616.30 (20,981.02)	-14,700.10 (43,984.64)
State or Issue Fixed Effects	State and Issue FE	State and Issue FE	State and Issue FE
R-squared	0.74	0.80	0.63
n	528	1074	261

Two-sided t-tests with robust standard errors: *** 99% significance level; ** 95% significance level; *90% significance level

Note: Nine states are included in the analysis; state fixed effects (FE) and issue area fixed effects (FE) are used in all models.

APPENDIX: Variable Definitions and Sources

Ln(State Lobby Exp Per Capita)	Equal to the Log of Annual Per Capita State Aggregate Lobbying Expenditures (Ethics Commission of Each State where data is available; includes 33 states. Most data is obtain from official disclosures provided.)
Categories	Categorization of each interest group into each of five categories: corporate, trade association, membership organization, union, and government; for each state for each year. (Ethics Commission of Each State where data is available; includes 9 states. Most data is obtain from official disclosures provided. N > 35,000)
Issue Areas	Categorization of each interest group into 24 issue areas as defined by Wolak et al (2004). We create eight additional categories which more finely define the issues. For interest groups with missing data, we conduct a web search to determine to which category the group belongs. (Ethics Commission of Each State where data is available; includes 9 states. Most data is obtain from official disclosures provided. N > 35,000. Professor David Lowery provided the categorization data from this website; used in Wolak et al (2004))
Budget Year	Equal to 1 if the state budget is legally mandated to be created in the year; 0 otherwise. (National Council of State Legislatures (NCSL))
Budget Amount	Equal to Log of the Per Capita amount of budget in years that Budget Year = 1; Equal to 10% of budget in years that Budget Year = 0. See Footnote 9 for a precise definition. (Statistical Abstract of the United States)
Regular Session	Equal to 1 if the legislature is in regular session that year; = 0 otherwise. (NCSL)
Special Session	Equal to 1 if the legislature meets in special session in that year; = 0 otherwise (Book of the States and NCSL)
Long (Short) Session	Equal to 1 if the legislature meets in long (short) session in that year; = 0 otherwise (Book of the States and NCSL)
Election Year	Equal to 1 if the legislature holds regularly scheduled election in that year; = 0 otherwise (NCSL)
Budget Caps	Equal to 1 if the state has budget caps; = 0 otherwise (Professor David Primo, data used in Primo, 2003)
Term Limits	Equal to 1 if the state has legislative term limits; = 0 otherwise (Professor Jeff Milyo, data used in Primo and Milyo 2004)
Professional Staff	Equal to 1 if the legislators in the state have full time professional committee staff; = 0 otherwise (Book of the States)
Senate (House) Size	The number of seats in the state senate (house) (ICPSR and updated by Book of the States)
Veto Override	The percentage of legislators that must vote for an override of the governor's veto in a given state (Book of the States)
Admin Review Std	Equal to 1 if the a statute must be passed to override a regulatory agency in a state; = 0 otherwise (Book of the States)
Unified Government	Equal to 1 if the House, Senate and Governorship is held by the same party in a state; = 0 otherwise (Book of the States)
Democratic Unified	Equal to 1 when the Unified Government variable = 1 AND the it is a Democratic Party unification; = 0 otherwise (Book of the States)
Ln(Per Capita Income)	Log of Per Capita Personal Income of the State in a given year (Bureau of Economic Analysis, Department of Commerce (BEA))
Ln(Population)	Log of Population of the State (Census and BEA)
Year	Year
Expansion	Equal to 1 if the lobbying disclosure law in the state in a given year includes gifts to legislators, non-campaign contributions to legislators, or broad definitions of legislative influence; = 0 otherwise (Book of the States)
Refinement	Equal to 1 if the lobbying disclosure law in the state in a give year includes disclosure of source of funds, source of compensation, or categorization of lobbying activities; = 0 otherwise (Book of the States)