

America's Crowded Statehouses: Measuring and Explaining Lobbying in the U.S. States

State Politics & Policy Quarterly
2019, Vol. 19(3) 351–374
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DOI: 10.1177/1532440019829408
journals.sagepub.com/home/spa



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Abstract

Across the United States over time, numbers of registered interest groups have continued to increase, but these populations mask the total amount of lobbying that is occurring within America's statehouses. Among registered interests, average numbers of hired lobbyists have increased markedly since the late 1980s. This study both quantifies this increase and identifies a set of causal variables. Previous studies have proposed a variety of short-term, political and long-term, institutional factors that govern rates of lobbying. Using a new data set spanning multiple decades, I find that changes in lobbying can largely be ascribed to institutional variables, including the implementation of term limits and regulations on lobbying. Lobby regulations, one-party dominance, and legislative expenditures also appear to play a role in determining rates of multiclient lobbying. Direct democracy and state spending do not affect the hiring of lobbyists by registered interest groups.

Keywords

campaign finance, political behavior, interest groups, parties and interest groups, lobbying, legislative professionalism, legislative politics, term limits

Introduction

Recent reforms to the federal tax code have renewed interest in the influence of lobbyists over national policy. According to reporters, the quick legislative pace of the proposal created a “frenzy” among thousands of registered lobbyists “desperate to preserve prized tax breaks” (Tankersley, Kaplan, and Vogel 2017). According to one

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analysis, more than 6,000 lobbyists had reported that they lobbied on tax-related issues during 2017, which was more than half of all lobbyists registered in the nation's capital that year (see Lincoln 2017). While lobbying activity on tax issues might have spiked, this sort of frenzy is not unprecedented. There have been similar bursts of activity on prior tax bills at both the federal (Birnbaum and Murray 1987) and state levels (see Brasher, Lowery, and Gray 1999).

Such temporary bursts of lobbying activity present several challenges for scholars of interest representation. Scholars have yet to propose a method for measuring intensity of lobbying effort that is applicable to many different political systems, or develop a means for predicting when and where organized interests lobby more intensely. I seek to achieve both goals. I first argue that lobbying intensity, at an aggregated level, can be measured by the average number of lobbyists hired by each interest group. I then measure changes in lobbying intensity in all U.S. states over multiple decades. No other study has examined numbers of lobbyists to such an extent. I review what prior scholars have had to say about lobbying intensity, and I categorize these hypotheses into two competing camps: explanations oriented toward political factors that are focused more on bursts of lobbying activity, and institutional factors that help to explain long-term trends in lobbying. I then subject these different explanations to statistical analysis and find that institutional variables such as legislature expenditures, the implementation of term limits, and regulations on lobbying all affect how many lobbyists interest groups register. In additional tests, I find that two of these factors and one-party dominance also appear to change how often interest groups rely on multiclient lobbyists.

My findings have implications for those interested in representation, policy change, and transparency. Especially since the publication of Schattschneider's (1960) incisive critique of interest pluralism, scholars have been concerned about the influence of money on American politics and policymaking. Interest groups that are able and willing to spend lots of money can hire teams of lobbyists to target legislators in tandem, possibly affecting policy outcomes. At the same time, however, traditional membership groups that seek public goods can also call on members to storm legislative offices and make their desires known. While groups with more resources do not always get their way, and linking money spent on lobbying to policy outcomes has proven elusive (see Baumgartner et al. 2009, 190–214), lobbying is always an ongoing effort. If registered interest groups consistently maintain many lobbyists to maintain existing policies in some political systems, then this suggests that policy change might be more difficult to come by in those systems than in others (Olson 1982). Moreover, particular regulations of lobbying may not necessarily lead to more compliance on the part of lobbyists (see H. F. Thomas and LaPira 2017). The data set assembled for this project allows us to test some of these hypotheses.

Measuring Lobbying

While many scholars have commented on or examined the influence of interest groups on policy outcomes, there has been a shortage of research on group agents or lobbyists (see Lowery and Marchetti 2012). Scholars have tended to assume that lobbyists

successfully convey the interests of their clients without loss of specificity or “energy” (p. 140). This assumption is problematic since lobbyists may not serve the interests of their clients faithfully or exclusively. It is difficult for interest groups either to observe the efforts of their agents or judge their advocacy success (see Schiff et al. 2015, 226–29), and shirking may especially be problematic for the clients of small lobby firms (Whitesell, Schiff, and Lowery 2018). Prior studies have conflated numbers of registered interests with the overall level of interest-group activity. This is also problematic since groups may choose to dedicate more resources to their mobilization effort by hiring multiple lobbyists (Rosenthal 1993, 57). After all, it is *lobbyists* who fulfill the crucial function of linking their clients with policymakers.

Prior studies of interest mobilization have conflated numbers and types of active interest groups with mobilizational intensity. For example, there being less “certainty” over how policy might change can lead to more groups registering to lobby (Lowery and Gray 1995, 12). Indeed, in states dominated by a single political party, there are fewer registered interests (see Strickland 2018a). Boehmke (2008) has also found that in U.S. states with direct democracy techniques, more citizens’ interests register. Residents of these states are also more likely to be members of such groups (Boehmke and Bowen 2010). Certainly, while numbers of interests were shown to fluctuate in response to these factors, these studies missed the second decision facing a group once it chooses to lobby: how many lobbyists to hire. Brasher, Lowery, and Gray (1999) did examine lobbyist numbers across two decades in two states, but the authors were chiefly concerned with how many interest groups those lobbyists represented.

More recent studies have begun to explore the connections between lobbyists and their clients in more detail. Relying on a combination of interviews and lobby transparency data, Drutman (2015) argues that lobbyists are responsible for encouraging firms to support more lobbying efforts, leading to crowdedness and competition. LaPira, Thomas, and Baumgartner (2014) suggest that interest groups will hire different kinds of lobbyists based on how much monitoring of an issue is needed. LaPira and Thomas (2017) have also examined the number of “revolving door” lobbyists active in Washington and how their activities differ based on their prior government experience. These studies are important steps in the development of our understanding of how lobbyists affect the representation of their clients, but they prioritize (as subjects of theory and observation) the actions and characteristics of the lobbyists over those of the clients.

The number of lobbyists a group hires should be interpreted as a function of how intensely the group seeks to engage in lobbying. Just as groups might pay lobbyists to spend additional time advocating for their interests, the number of lobbyists a group hires is also a result of how much lobbying the group seeks to support (once it chooses to lobby). For example, an interest group might choose to hire a “team” or firm of lobbyists, which is not uncommon in the U.S. states (see Rosenthal 1993, 57). This occurs often when legislatures consider controversial issues that pit teams of lobbyists against each other. Interest groups might also engage in “crowd lobbying” where groups of citizen-lobbyists register and storm legislative offices (see Lofland 1982). By contrast, a group may choose to hire a fraction of a lobbyist by retaining a multiclient professional on an hourly basis as needed (see Drutman 2015, 155–67).

Being able to measure the number of lobbyists that interest groups hire allows scholars to capture how vigorously those groups are choosing to lobby, on average. If two political systems each contain roughly equal numbers of registered interest groups but with substantial differences in numbers of registered lobbyists, then this would suggest that groups chose to hire (and register) more agents in one system. Gray and Lowery (1996a, 255) have distinguished this temporary “intensity of lobbying effort” from the interest representation that they aimed to measure. To them, interest populations are different from the “gradations of engagement” that individual groups might employ depending on which issues become part of the “public policy agenda” (p. 7). One might imagine that if legislators in a state were to consider a particularly controversial proposal, then relevant interest groups might seek influence by crowding the statehouse with advocates. Such an event occurred in Florida in 1990 when interest groups registered more than 5,000 lobbyists in response to a fractured budget battle (Brasher, Lowery, and Gray 1999). In contrast to populations of interest groups, lobbyist-client pairings or dyads consist of the individual agreements that link groups with advocates (Hunter, Wilson, and Brunk 1991 referred to these dyads as contracts). For example, whereas there were more than 5,000 lobbyists registered in Florida in 1990, there might have been thousands more lobbyist-client dyads since many of those lobbyists might have been authorized to represent more than one client. Some clients might have also hired teams of lobbyists, thereby increasing numbers of lobbyist-client dyads even further.

Most U.S. states provide lobbyist registration data granular enough to make measuring average rates of lobbying a straightforward task. Historically, the states have provided lists of registered lobbyists that included the individual names of their clients. Totals of lobbyists, clients, and lobbyist-client dyads can be calculated based on these lists. To demonstrate how lobbyist-client dyadic data can be used to measure lobbying intensity, let us turn to a sample of registered lobbyists and clients from Alaska for the year 2000. Figure 1 lists the first twenty lobbyist-client dyads from Alaska’s lobbyist list. There are 15 unique lobbyists and 17 unique clients. On average, each interest group hired 1.18 lobbyists. If these same clients had decided to hire more lobbyists, then this quotient would have increased. Likewise, if the clients had hired fewer lobbyists, then the average number of lobbyists hired per client would have decreased. Complete lists of lobbyist-client dyads from the U.S. states are always much longer than the sample presented in Figure 1.

Figure 2 shows a box plot of interest group populations, lobbyist-group dyads, and dyads per 1,000 groups for nearly all U.S. states from 1989 and 2011. The box plot shows that there are differences between U.S. states not only in numbers of interest groups registered but also in how many lobbyists those groups hired. Whereas group populations have increased over time in the states, state-level totals of lobbyist-client dyads have increased even more. Importantly, the average number of lobbyists hired by groups has increased over time. The average number of lobbyists hired by each interest group is represented by the third and sixth boxes. It has been multiplied by 1,000. In 1989, across all U.S. states, interest groups hired an average of 1.8 total lobbyists. By 2011, across 47 states, interest groups hired an average of 2.1 total lobbyists. These statistics were calculated based on state-level averages.¹

Lobbyist	Client
Don Kublely	Global Seafoods North America, Inc.
Jerome Selby	Global Seafoods North America, Inc.
Linda Anderson	Alaska Visitors Association
Linda Anderson	Fairbanks Native Association
Linda Anderson	Fairbanks North Star Borough School District
Linda Anderson	Utility Services of Alaska
Linda Anderson	Fairbanks Memorial Hospital
Linda Anderson	Coalition of Alaskan Way of Life
Sharon Anderson	Alaska State Hospital and Nursing Home Association
Willie Anderson	NEA - Alaska
Timothy M. Armstrong	American Legion Department of Alaska
Rod Arno	Coalition of Alaskan Way of Life
Tuckerman Babcock	Matanuska Electric Association
Judy Bakeberg	City of Wrengell
John Baker	City of Wrengell
John A. Barnes	Marathon Oil Company
Marie Becker	Alaska Village Electric Cooperative
David G. Bedford	Southeast Alaska Seiners Association
Joel Bennett	Defenders of Wildlife
Nancy Bennett	American Cancer Society

Figure 1. Alaska registered lobbyists in 2000 (excerpt).

Limitations of the Measure

While the average number of lobbyists hired by each interest group provides a measure of how intensely groups are lobbying within a state and year, there are other kinds of political mobilization that this measure does not capture. Many interest groups consist of dues-paying members. These groups might engage in inside lobbying infrequently, preferring instead to engage in outside, grassroots efforts. Such groups include public interest groups and labor unions, and such activities include coordinating protests or letter-writing campaigns (see Kollman 1998). My measure of lobbying mobilization does not reflect these outside activities since the measure relies only on lists of registered lobbyist-client dyads. Moreover, my measure does not consider any aspect of campaign finance activities. In the U.S. states, interest groups often (but not always) give to candidates via political action committees (Benz et al. 2011). Shifts in local policy agendas can sometimes spur more giving (Kirkland, Gray, and Lowery 2010). While my measure focuses exclusively on lobbying, grassroots efforts and campaign finance activities are forms of political mobilization separate from direct, inside lobbying. All these forms of mobilization should be interpreted as techniques that groups

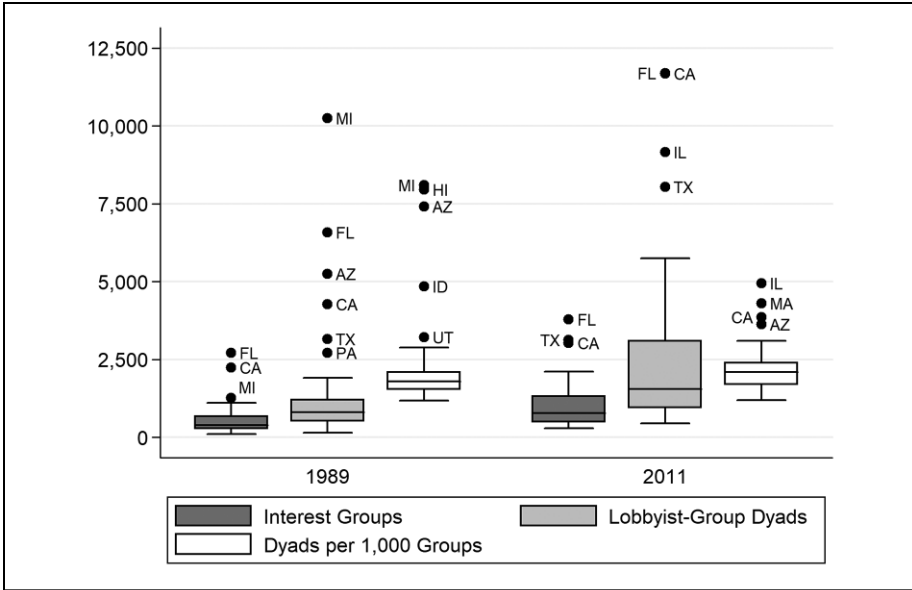


Figure 2. Groups and lobbyist-group dyads for two years.

rely on more or less often depending on political circumstances. Having a more direct measure of *lobbying* mobilization can help shed light on when groups prefer this tactic more often over outside efforts or campaign giving.

Moreover, the average number of lobbyists hired per group masks differences in relationships between lobbyists and clients. Some lobbyists work for individual clients as full-time, in-house counsel. Others not only work on retainer for multiple clients but also work as lobbyists on a full-time basis. Still other lobbyists may not lobby on a full-time basis but instead have other jobs or fulfill other functions for their organizations. Indeed, Milbrath (1963, 117) found substantial differences in the activities that federal lobbyists focused on during each day. He also found that some lobbyists have more prominent roles in managing or leading their client organizations (pp. 145–61). In the U.S. states, contract lobbyists are quite different from in-house lobbyists in terms of hours spent lobbying and quantity of campaign donations given (see Gray and Lowery 1996b; Rosenthal 1993). My measure of overall lobby intensity is not intended to account for lobbyist-level differences in time spent lobbying. More granular data and measurements are needed to determine how often interest groups turn to different lobbyists, or even to other forms of political mobilization.

Despite its limitations, my measure of lobby mobilization is intended to serve more as a proxy for the overall demand for lobbying within a state (see Dusso 2010; Leech et al. 2005), and it can be used to test existing proposals of how politics and institutions affect such demand. Prior studies of lobbying in the states have used imprecise measures. While the Energy-Stability-Area model of Gray and Lowery (1995) captures the dynamics of interest group populations, subsequent scholars have often conflated

interest populations with overall lobbying activity. This is problematic given that the hypothesized effects of various political and institutional factors should chiefly affect the lobbyists of groups. Groups are often credited with seeking access, for example, but it is individual lobbyists who must gain access and communicate with policymakers. In a political system where clients' single-client lobbyists cannot achieve access to incumbents easily, for example, groups might be more likely to retain multiclient contractors who act as *de facto* gatekeepers. Since groups are no longer hiring their own single-client advocates, my measure of overall lobby intensity would decrease and reflect the scarcity of access while interest populations would remain stable (provided that groups do not exit politics altogether). Hence, it is important to test such theories with data that would more precisely capture hypothesized effects.

Scholars of interest groups have proposed several hypotheses about the effects of political and institutional factors on the mobilization of interest groups. Political factors refer to short-term events or circumstances that might energize groups into lobbying more intensely, or dissuade them from lobbying. For example, if legislatures are more evenly split between competing parties, then the resulting policy uncertainty might spur groups to hire more lobbyists as a form of insurance (LaPira and Thomas 2017, 52–58). Institutional factors consist of more long-term features that might affect the expected returns from lobbying, or the cost of lobbying and political access. If a state's constitution allows for direct democracy techniques, then interest groups might focus less on direct, inside lobbying and instead shift towards outside techniques. Government spending, legislative staff capacity, legislator term limits, and formal regulations of lobbying have all also been proposed as possible catalysts or dampers of lobby activity.

Politics, Institutions, and Lobbying

Reduced policy stability can energize groups into hiring more lobbyists. For example, as in Florida in 1990, if interest groups perceive that policy is more likely to shift on issues that they care about, then not only will they be more likely to register lobbyists, but the average number of lobbyists hired per client should also increase. If policy is perceived to be stable, however, then there is little added benefit to crowding a state-house with advocates. Strickland (2018a) found that more interest groups register in states with legislatures that are more evenly divided between political parties. Likewise, there are fewer groups with registered lobbyists in states with legislatures dominated by single parties. To determine whether partisan division affects lobby intensity, I incorporate a folded Ranney index into statistical models that predict lobby intensity (see Ranney 1976). The index ranges from 0 to 0.5, with higher values indicating greater one-party dominance within the legislature over the prior six years.² If partisan competition encourages interest mobilization, then this variable ought to be negatively associated with the average number of lobbyists hired by each interest group.

If a state's constitution allows for direct democracy, then this might affect the strategies of registered interest groups. Boehmke (2002) found that there are roughly 17% more groups with registered lobbyists in states with direct democracy than in other states. The bulk of these additional groups tended to be citizen interests. On average, groups in these states were more likely to rely on outside lobbying tactics instead of on

direct, inside lobbying (Boehmke 2005, 120). Following Boehmke's example, I include a dichotomous indicator within my models for whether a state allowed for direct democracy. It is possible that groups in these states rely less on direct lobbying and more on outside efforts such as coordinating protests and letter-writing campaigns (see Kollman 1998). Accordingly, I expect registered interest groups to engage in lobbying less frequently on average in states with direct democracy.

State spending may energize interest groups into lobbying more intensely. If interest groups lobby to protect particularized benefits enshrined in state budgets, then they have more to lose in case the status quo is disrupted. Multiple Virginia School (i.e., public choice) scholars of lobbying have offered similar hypotheses. Using data from 1970, Mueller and Murrell (1986) found that there were more mobilized interests in countries with larger public sectors. Coughlin, Mueller, and Murrell (1990) further illustrated the logic and comparative statistics of interest-driven government. While these scholars expected interests to seek more state spending, Salisbury (1992, 85–86) instead expected public spending to attract more interest groups. Regardless of the causal direction, both theories suggest there will be more interest mobilization in states that spend more money. Those registered groups might also lobby more intensely. Once a government allocates more resources toward constituencies in various sectors (perhaps public education, health care, or safety services), then groups representing those constituencies will have an added incentive to mobilize both to protect themselves against losses and to seek additional resources. Not only will the groups become active but they will also seek to secure their gains through sustained increased lobbying activity (see Leech et al. 2005 for an examination of how changes in policy activity across issue domains affect lobbying intensity). Recent evidence suggests that this might not be a linear correlation. Drutman (2015, 68) found that the lobbying of a set of companies “level[ed] off” after reaching a threshold. Moreover, when examining lobby activities and government contracts, Ridge, Ingram, and Hill (2017) found that such lobbying returned diminishing benefits. I suspect that lobbying efforts yield state expenditures at a declining marginal rate, or that (equivalently) public spending will generate more lobbying at a declining marginal rate. If spending encourages lobbying, or even if lobbying encourages spending, then logged spending should be positively correlated with numbers of lobbyist-client dyads. General spending statistics were provided by Klarner (2015) and exclude utility, liquor store, or social insurance trust expenditures.

Legislative institutions might also help predict lobbying intensity. Lobbyists often serve as sources of timely and relevant information for lawmakers (see Bauer, Pool, and Dexter 1963; Hall and Deardorff 2006). Berkman (2001) argues, however, that not all lobbying environments are similar in that some legislatures have permanent staff members who can also provide information to lawmakers. Such staff can substitute for lobbyists, thereby discouraging lobbying. Kattelman (2015) approached the relationship differently by expecting such staff to serve as additional access points for lobbyists, thereby increasing lobbying activity. Legislators in more professionalized assemblies would more effectively “capitalize on the information supply that groups provide” (p. 171). Even though both Berkman and Kattelman used Squire's (2007) measure of legislative professionalism to test their theories, both of their theories

hinge on the presence of staff persons in the legislature. Accordingly, I incorporate the total dollars spent on each state's legislature into my models, in terms of dollars per legislator. These figures were provided by Bowen and Greene (2014), who collected the data from the U.S. Census Bureau.

Limitations on how long individuals may serve as legislators has the effect of increasing legislative turnover and reducing institutional knowledge and policy competence among incumbents (Carey, Niemi, and Powell 1998; Moncrief and Thompson 2001). As a result, term-limited legislators are perceived by lobbyists as having to rely more often on staff persons and outsiders (i.e., interest groups) for information. Mooney (2007) proposes that reductions in competence among legislators forces lobbyists to engage in educating incumbents more often. As a result, following the implementation of term limits, lobbyist populations grew more quickly in term-limited states than in other states. Such increases could have been the result of interest groups shifting from multiclient contract lobbyists to single-client in-house advocates whom amateur lawmakers regarded as more trustworthy. To determine whether term limitations truly increase lobbying within a state, I include in my models a dichotomous variable for when such limits went into effect.

Formal regulations of lobbying might also affect the hiring of lobbyists. Strickland (2018a) showed that more interest groups were registered in U.S. states with more lobbyist registration criteria but that this effect was moderated by additional campaign finance regulations that affected only the activities of registered groups and lobbyists. His study examined interest populations and did not explore how registration criteria, campaign finance limits, and reporting requirements affect the hiring of lobbyists. In this study, I adopt a similar model specification to test for whether criteria encourage groups to register more lobbyists, and whether additional laws dampen this effect. When numbers of interest groups are held constant, the number of lobbyist-group dyads within a state should reflect the residual effect of these laws on lobbyist hiring rates. If the number of lobbyist-client dyads is depressed by lobby laws, then this would suggest that more laws encourage clients to hire multiclient contractors (instead of single-client, in-house lobbyists).

I incorporate measures of different lobby laws into my models, as provided by Newmark (2005). As outlined in Table 1, Newmark's scale of lobby laws consists of three types of laws: lobbyist registration criteria, prohibitions on their gift-giving and campaign finance activities, and reporting requirements. Registration criteria range in number from zero to seven. States received an additional point for each criterion they had on the books. Prohibited activities were numbered from zero to four, and reporting stringency was also measured between zero and seven. As with registration criteria, states received higher scores for each additional prohibition or reporting requirement. As Strickland (2018a) did, I use the three components of Newmark's scale as separate independent variables. I expect criteria to be positively associated with lobbyist hiring rates (as least in terms of registered lobbyists), but prohibitions and reporting requirements might each dampen (interact with) this effect. Registered interest groups may prefer not to register additional lobbyists if doing so triggers prohibitions on their political activities, or required reporting of group and lobbyist activities. Table 2 provides summary statistics from each of my model covariates.

Table 1. Newmark’s Measure of Lobby Regulations.

Definitions of lobbyists include:

- Those seeking to lobby the legislature
- Those seeking to lobby administrative agencies
- Elected officials acting as lobbyists
- Public employees acting as lobbyists
- Compensation standards
- Expenditure standards
- Time standards

Prohibited activities involving lobbyists include:

- Making campaign contributions at any time
- Making campaign contributions during legislative sessions
- Making expenditures in excess of a certain dollar amount per official per year
- Solicitation by officials or employees for contributions or gifts

Reporting requirements for lobbyists include:

- Semi-annual or more frequent reporting for lobbyists or their employers
- Name of targeted legislation or administrative action
- Expenditures benefiting public officials or employees
- Compensation received, broken down by employer(s) or employee(s)
- Total compensation received
- Categories of expenditures made
- Total expenditure made

Source. Newmark (2005).

Table 2. Summary Statistics for Model Covariates.

Statistic	Minimum	25%	Median	75%	Max	M	SD
Lobbyist-Client Dyads	147	729	1,301	2,428	43,760	2,431	3,858
Registered Clients	97	417	694	1,142	4,275	892	689
Registered Lobbyists	110	368	555	820	5,727	759	736
One-Party Dominance	0.00	0.046	0.110	0.189	0.374	0.126	0.094
<i>Folded Ranney index.</i>							
Initiative State	0	0	1	1	1	0.534	0.499
State Spending	1	5.4	12	24	230	19.9	26.6
<i>In billions.</i>							
Legislature Expenditures	51	241	437	687	5,521	649	776
<i>In thousands.</i>							
Term Limits	0	0	0	1	1	0.146	0.353
Lobby Definitions	0	2	4	5	7	3.668	1.683
Lobby Prohibitions	0	0	1	2	4	1.016	1.122
Reporting Requirements	0	3	5	7	7	4.666	1.970

Controlling for Interest Populations

When measuring mobilization using the number of registered lobbyist-group dyads within a state, one should control for the number of interest groups registered. The

number of registered groups in a state should be a leading predictor of how many lobbyist-group dyads there are. By holding the number of groups constant, one can isolate the effects of explanatory variables on the mobilizational intensity of the groups. Interest populations are typically correlated with the size of a state's economy (Gray and Lowery 1996a). While it is possible to estimate rates of lobbyist hiring while holding economic output constant, this unnecessarily introduces statistical noise into regression models. Since all registered clients must have at least one registered lobbyist, controlling for client totals most efficiently isolates the effects of other variables on rates of lobbyist hiring. Controlling for group totals also results in more conservative estimates of effect sizes for other covariates. Since totals of registered interests have already been shown to fluctuate in response to political and institutional factors, controlling for their totals will already capture much of the effects of these factors. Any residual variance that my econometric models explain will, therefore, capture the effects of these factors on numbers of lobbyist-group dyads.

Totals of lobbyists, clients, and lobbyist-client dyads were calculated based on more than 600 lists of registered lobbyists spanning all U.S. states between 1986 and 2013. The lists were generated by state authorities typically at the end of each legislative session. The lists were drawn from a variety of sources. These include state libraries and archives that the author visited in 29 U.S. states, online databases maintained by state authorities, a directory (i.e., Wilson 1990) consisting of state lobbyist lists from 1989, and lobbyist lists produced by the National Institute on Money in State Politics (which provided most lists from after 2005). Once the lists of lobbyists-client dyads were located in archives or elsewhere, they were transcribed into spreadsheets by research assistants. The spreadsheets allow for the straightforward calculation of dyad totals, and totals of unique lobbyist and client names. There are missing observations in the sample as many lobbyist lists could not be found. Lists from nearly all states were found, however, for 1989 and years after 2005. For nearly all states in my sample, lobbyists alone were tasked with registering their names and the names of their clients. The lists resemble the lobbyist-client dyads presented in Figure 1 but are significantly longer.

The U.S. states were the first regimes in the world to require lobbyists to register and list client names (see Opheim 1991), and their political and institutional variation allows for statistical inference. Massachusetts was the first state to require lobbyists to register, beginning in 1891. Historically, lobbyists were responsible for registering their names and clients with state authorities. Such authorities included legislative clerks, secretaries of state, or ethics agencies (see Strickland 2018b for a longer history). Lobbyists would typically be required to sign their names in legislative docket books, and record the names of the firms, organizations, or interests they represented. In some states, lobbyists would also be required to provide expense statements. By 1975, all U.S. states required lobbyists to register. By the late 1980s, West Virginia and Arkansas were the last states to delegate lobbyist registration to staff persons or agencies outside of the legislature (C. S. Thomas 1998).

When working with lists of lobbyists from the states, one must control for idiosyncratic registration procedures in some states. For recent years, there are a few states where lobbyist lists do not clearly indicate which lobbyists were authorized to

represent which clients. In these states, lobbyists were allowed to register as members of firms. Representatives of interest groups were also allowed to authorize firms to represent them. Hence, because these states provided only lobbyist-firm matches or client-firm matches, lobbyist-client dyads could be counted only if one assumed that all lobbyists members of firms were authorized to represent all clients associated with their firms. This was the case in California, New Jersey, New York, and Pennsylvania. As a result, lobbyist-client lists from these states provided by the Institute are particularly long and may contain some spurious lobbyist-client dyads. I include a dichotomous control for those four states within my econometric models. Also, beginning in Michigan in the early 1980s, lobbyists were no longer required to re-register for each legislative session. Michigan's lobbyist list from 1989 (provided in Wilson 1990) likely includes numerous lobbyist-client dyads that were active during prior sessions. I include a dichotomous indicator also for this observation. More recent lists from Michigan provided by the Institute are significantly shorter and do not appear to contain outdated dyads.³

Estimation Method and Results

My dependent variable is the total of lobbyist-client dyads registered within a U.S. state. Since this variable is a non-negative count of events, I estimated regression coefficients using the negative binomial variance function. This function helps account for overdispersion where model-conditional variances exceed model-conditional means (see King 1988; Long 1997, 230–41). Moreover, since I am working with multiple observations within each state, my observations are clustered into different political systems. This violates the least squares assumption of independent errors. As a result, I estimated models with standard errors clustered by state (see Primo, Jacobsmeier, and Milyo 2007). These models do not control for the different starting points of states or for national factors that might affect all states similarly. For eliminating the influence of those factors, I estimate models with fixed effects included for each state and year. These models provide more conservative estimates of effect sizes because they rely only on within-state changes (see Allison 2009). Effect sizes in these models may be artificially small for institutional variables that change slowly over time (see Beck and Katz 2001). Models 2 and 4 exclude observations from Nebraska's nonpartisan Unicameral.

Results

We can draw several conclusions based on the results presented in Table 3. The first is that the number of registered interest groups within a state is a leading predictor of how many lobbyist-client dyads there are. This result is robust to the inclusion of state and year fixed effects, which forces my models to rely only on variation that occurs within states but over time. This significant correlation is unsurprising given that all lobbyists must have at least one client. Instead, the other coefficients that partially explain the residual heterogeneity are more interesting. They tell a complex story.

Table 3. Explaining Lobbying in the U.S. States.

	Model 1 Clustered SE	Model 2 Clustered SE	Model 3 Fixed Effects	Model 4 Fixed Effects
Interest Groups 1,000	0.826*** (0.108)	0.833*** (0.100)	0.769*** (0.038)	0.763*** (0.039)
One-Party Dominance	—	-0.627** (0.286)	—	-0.227 (0.137)
Initiative State	0.020 (0.075)	0.042 (0.076)	0.916*** (0.218)	0.877*** (0.220)
Logged State Spending (<i>In \$1,000s.</i>)	0.306*** (0.056)	0.300*** (0.055)	0.034 (0.119)	0.015 (0.120)
Legislature Expenditures	-0.184*** (0.057)	-0.200*** (0.056)	0.113 (0.065)	0.100 (0.065)
Term Limits	-0.010 (0.073)	-0.013 (0.077)	-0.142*** (0.046)	-0.120** (0.048)
Lobby Definitions	0.030 (0.046)	0.025 (0.045)	0.094*** (0.025)	0.087*** (0.026)
Lobby Prohibitions	0.158 (0.081)	0.132 (0.075)	0.078 (0.053)	0.067 (0.054)
Reporting Requirements	-0.007 (0.026)	-0.008 (0.027)	0.049** (0.020)	0.047** (0.020)
Definitions × Prohibitions	-0.032 (0.017)	-0.028 (0.016)	-0.021 (0.012)	-0.019 (0.012)
Definitions × Reporting	-0.003 (0.008)	-0.003 (0.008)	-0.011 (0.005)	-0.010 (0.005)
Constant	1.563 (0.820)	1.757** (0.827)	5.236*** (1.856)	5.606*** (1.875)
ln(α)	-2.396 (0.163)	-2.421 (0.152)	-3.407 (0.058)	-3.399 (0.058)
Observations	630	620	630	620
No. of States	50	49	50	49
Log Likelihood	-4,734	-4,658	-4,418	-4,357
AIC	9,495	9,344	9,015	8,894

Note. Standard errors are in parentheses. AIC = Akaike information criterion.

** $p \leq .05$. *** $p \leq .01$ on two-tailed tests.

When models are allowed to use both across-state and within-state variation to calculate effect (coefficient) sizes, one-party dominance is negatively correlated with numbers of lobbyist-client dyads. Even though partisan dominance has been found to discourage interest groups from registering (see Gray and Lowery 1996a), there appears also to be some effect on the lobbying intensity of registered groups. In models with fixed effects, groups did not mobilize or de-mobilize in response to shifts in partisan dominance. Those models used only variation that occurs within states but over time. The absence of a discernible correlation Model 4 suggests that most heterogeneity in one-party dominance was found between states. The exclusion of client

totals from my fixed-effects models does not alter this result. The differences across models also suggest that party dominance may be correlated with a time-invariant confounder that is not included within the first two models. Models 3 and 4 also suggest that changing a state's initiative status led to more lobbying on the part of registered interest groups. However, this result is due to a single outlier within a state.⁴ Re-estimating my models after excluding this outlier eliminates the statistical significance of initiative state status.

Similar explanations may be applied to logged state spending and legislature expenditures. These variables were also significant predictors of lobby intensity only in models with clustered standard errors. In models with fixed effects, results do not provide evidence that increases in U.S. state spending led to more lobbying within states. This is in contrast to the results of Mueller and Murrell (1986), who identified more interest groups in nations with more state spending. My results also do not suggest that increases in legislative expenditures lead to less lobbying, as Berkman (2001) suggested. This does not mean that these factors have no effects on interest populations. State spending and legislature expenditures might still affect the totals of registered interest groups. If one excludes group totals from my models, then state spending becomes a positive and significant predictor of lobbyist-client pairings. This suggests that most of government spending's effects on lobbying are through the entry or exit of additional groups, and not additional lobbyists. The exclusion of group totals from my models does not alter substantive results for legislature expenditures.

In contrast to the expectations of Mooney (2007), states in which term limits took effect saw a statistically discernible drop in lobbyist hiring. This result persists even when group totals are excluded from my models with fixed effects. This result is likely not due to outliers since term limits went into effect in 16 states throughout my sample.⁵ This does not suggest that Mooney's analysis is flawed. Whereas Mooney explored how lobbyist totals changed over time in states with term limits and in states without limits, my analysis takes into consideration fluctuations in both client and lobbyist totals. According to my results, interest groups in states with limits hired roughly 12.3% fewer lobbyists than groups in states without limits, on average. What might explain this counterintuitive relationship? In models not reported here, term limits are found to be a negative predictor of client totals. Yet, even among registered interests, lobbyist hiring is depressed as well. These trends suggest that term limits might create an environment that discourages lobbying in general. At the same time, however, the effects of term limits are not the same in every U.S. state. States vary in the severity of their term-limits laws (see Sarbaugh-Thompson 2010), and there is substantial variation in legislator turnover even among states without limits (see Moncrief, Niemi, and Powell 2004). Further exploration is needed to help identify the causal mechanism linking term limits with lobbying.

My models also suggest that the implementation of some lobbyist laws affect rates of lobbyist hiring by interest groups. Strickland (2018a) found that more registration criteria get more interest groups to register but that this relationship is moderated by prohibitions on lobbyists giving gifts and campaign donations. Since group totals are already affected by lobby regulations, it is notable that these laws also affect the hiring

of lobbyists among the remaining groups who register. The addition of registration criteria within a state led to more lobbyists registering relative to group totals. The implementation of more reporting requirements also had a positive effect. It was expected that reporting requirements would dampen the influence of definitions in capturing more groups, but the (negative) interactive term between the two variables did not achieve traditional levels of statistical significance. Limits on gift-giving and campaign finance activities were not correlated with lobbyist-client dyads.

Tests for Multiclient Lobbying

While the initial set of regression models with fixed effects show that term limits and lobby laws are correlated with the hiring of lobbyists by interest groups, the measure of overall lobbying does not reflect the popularity of multiclient advocates over single-client ones. Interest groups in some states rely more often on multiclient lobbyists than on single-client ones (see Strickland and Crosson 2016). These differences may prove problematic for measuring the overall level of lobbying. Dyad counts can be influenced by the share of clients hiring multiclient over single-client lobbyists, even when group counts are held constant. While dyad counts would decrease if interest groups shifted (on average) from single-client advocates to multiclient advocates, two states with similar numbers of groups could have similar dyad counts but with different numbers of lobbyists. This is possible so long as lobbyists in one state tend to represent one client each whereas those in the other state each represent multiple clients. Let us imagine two U.S. states with six clients each. In one state, there are 10 lobbyists who represent one client each (some clients hired two single-client lobbyists). As a result, there are 10 lobbyist-client dyads in all. In the second state, there are also six clients and 10 lobbyist-client dyads, but only six lobbyists. That is because four of the six lobbyists represent two clients each. Even though the interest groups in the first state have each hired only single-client lobbyists (with some of those groups hiring two such lobbyists), the state has the same number of dyads and clients as in the second state, where four of the six clients hired multiclient lobbyists. Hence, the dyad count within a state can mask the popularity of multiclient advocates, even when client totals are held constant. This is problematic for my measure since I argue that any group that hires a single-client lobbyist is mobilizing more intensely than a group that shares a multiclient lobbyist with other clients.

In additional model specifications, I test for whether political and institutional variables are correlated with multiclient lobbying. When client and lobbyist counts are held constant, the number of lobbyist-client dyads in a state is a proxy for how much multiclient lobbying is occurring. If client and lobbyist totals are the same in two states, then there is more multiclient lobbying in the state with the greater number of dyads. If a political or institutional variable is correlated with multiclient lobbying (i.e., it predicts dyads in models with both lobbyist and client totals), then it may not affect overall lobbying so much as it affects the balance of multi- versus single-client lobbyists among groups. On the other hand, if a political or institutional variable is not correlated with multiclient lobbying, then the results presented for it in Table 3 are

Table 4. Tests for Multiclient Lobbying.

	Model 5 Clustered SE	Model 6 Clustered SE	Model 7 Fixed Effects	Model 8 Fixed Effects
Interest Groups	0.619*** (0.090)	0.635*** (0.085)	0.524*** (0.051)	0.502*** (0.052)
1,000				
Lobbyists	0.237** (0.102)	0.224** (0.102)	0.294*** (0.042)	0.310*** (0.043)
1,000				
One-Party Dominance	—	-0.418 (0.221)	—	-0.275** (0.131)
Initiative State	-0.010 (0.067)	0.006 (0.067)	0.953*** (0.211)	0.907*** (0.212)
Logged State Spending (In \$1,000s.)	0.298*** (0.056)	0.296*** (0.056)	0.072 (0.115)	0.048 (0.115)
Legislature	-0.148*** (0.048)	-0.160*** (0.047)	0.227*** (0.066)	0.215*** (0.066)
Expenditures				
Term Limits	-0.016 (0.063)	-0.015 (0.068)	-0.068 (0.045)	-0.033 (0.047)
Lobby Definitions	0.050 (0.037)	0.045 (0.037)	0.094*** (0.024)	0.084*** (0.025)
Lobby Prohibitions	0.186** (0.080)	0.166** (0.075)	0.083 (0.051)	0.066 (0.052)
Reporting	-0.002 (0.020)	-0.003 (0.021)	0.049*** (0.019)	0.049** (0.019)
Requirements				
Definitions ×	-0.039** (0.016)	-0.035** (0.016)	-0.018 (0.011)	-0.014 (0.011)
Prohibitions				
Definitions ×	-0.003 (0.007)	-0.002 (0.007)	-0.013** (0.005)	-0.013** (0.005)
Reporting				
Constant	1.584 (0.805)	1.698** (0.821)	4.553*** (1.789)	4.931*** (1.801)
In(α)	-2.550 (0.145)	-2.557 (0.143)	-3.487 (0.058)	-3.487 (0.059)
Observations	630	620	630	620
No. of States	50	49	50	49
Log Likelihood	-4,685	-4,615	-4,393	-4,331
AIC	9,398	9,261	8,967	8,843

Note. Standard errors are in parentheses. AIC = Akaike information criterion.

p* ≤ .05. *p* ≤ .01 on two-tailed tests.

indeed reliable estimates of its effect on rates of overall lobbying. Checking for whether explanatory variables are correlated with multiclient lobbying is a necessary robustness check for determining sources of overall lobbying. I present additional model specifications in Table 4. With the exception of the introduction of lobbyist counts, the model specifications in Table 4 are the same as those in Table 3.

The results presented in Table 4 provide insight into which political and institutional variables encourage multiclient lobbying. Both group and lobbyist populations are significant and positive predictors of lobbyist-client dyads. This is unsurprising

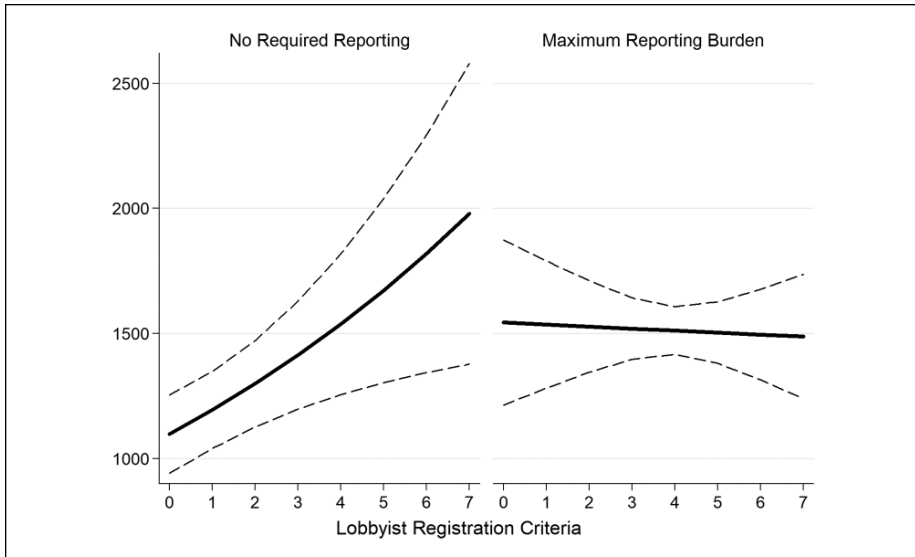


Figure 3. Predicted dyads for two reporting conditions.

given that dyads consist of lobbyist and client pairings. One-party dominance is correlated with more multiclient lobbying. This might be because groups in divided states hire more multiclient lobbyists to appeal to legislators of both parties. In other words, divided government might benefit multiclient advocates by encouraging groups to hire firms with ties to both parties, as a form of hedging bets. Legislative expenditures is a significant predictor of multiclient lobbying, as well. This may be due to spending being correlated with another factor that might influence lobbying, such as legislative institutionalization (see Berry, Berkman, and Schneiderman 2000).⁶ Importantly, the implementation of term limits in a state was not correlated with more or less multiclient lobbying. Term limits did not compel groups to change their choice of lobbyist types. This re-affirms the results originally presented in Table 3. As for lobby laws, the interactive effect between registration criteria and reporting requirements achieves statistical significance in models with lobbyist counts. This suggests that the imposition of registration criteria and reporting requirements got existing groups to register more dyads with multiclient lobbyists in a state but that reporting requirements dampened this trend somewhat. Figure 3 shows this dampening effect under two reporting conditions when all variables (except definitions) are held at their means. The predicted dyad counts are based on the results presented in Model 8.

In general, the results presented in Tables 3 and 4 suggest that the effects of political and institutional factors on lobbying are more complex than originally thought. Scholars of interest representation have proposed a variety of hypotheses for how these factors might influence lobbying. They have also used a variety of measurement scales for their explanatory variables. These variables, however, might affect any one

of at least three aspects of lobbying: interest populations, lobbyist-client dyad counts, and the incidence of multiclient lobbying. Whereas term limits depresses lobbyist hiring and is not correlated with multiclient lobbying, the effects of lobby laws on overall lobbyist hiring may be an artifact of groups shifting to multiclient lobbyists in response to new laws.

Discussion and Conclusion

This study was intended to improve our understanding of lobbying in the U.S. states. Prior studies of interest mobilization in the U.S. states have conflated interest populations with mobilization, or have explored variations in raw totals of lobbyists. To build on these studies, I proposed a simple measure for the average lobbying effort of interest groups in a state. At the group level, the number of lobbyists the group hires can be interpreted as a proxy for its intensity of lobbying effort. When aggregated to the level of states, the total number of lobbyist-client dyads is a proxy for lobby intensity (when client totals are held constant). This measure does not reflect other forms of political mobilization such as outside efforts or campaign finance activities, and it also does not measure the balance of single- versus multiclient lobbyists, but it advances our understanding of lobbying by allowing scholars to test existing hypotheses with greater precision.

Do interest groups mobilize in response to short-term political factors, or are their rates of lobbying generally steady because of long-term institutional features? This study was conducted partly in response to prior studies of interest mobilization in the U.S. states. Others have found evidence that politics and institutions play some part in structuring interest representation. Gray and Lowery (1996a) found that partisan competition spurs more groups to register. In several studies, Boehmke (2002; 2005) found that there are more interest groups in states with direct democracy. Mueller and Murrell (1986) identified more groups in nations with more state spending. Lobbyist totals grew more quickly in states with term limits than in states without them (Mooney 2007). Berkman (2001) found there are fewer groups in U.S. states with more professional legislatures, and Strickland (2018a) found that gift-giving and campaign finance restrictions push down registration totals for groups. All these studies have contributed to our understanding of the mobilization of interest groups, but they focused more on the entry or exit of groups instead of on how many lobbyists, or what kinds of lobbyists, they hired. Interest populations are substantively meaningful, but they mask the true amount of lobbying that occurs within America's crowded statehouses.

By focusing on numbers of lobbyist-client dyads, I found that it is mostly institutional factors that shape the hiring rates of lobbyists. In Models 3 and 4, term limits and lobby laws have the strongest discernible correlations with the hiring of lobbyists. The implementation of term limits in a state was associated with decreased rates of lobbyist hiring, while registration criteria and reporting requirements were associated with more dyads. Once I controlled for lobbyist totals in Models 7 and 8, term limits were no longer a significant predictor of dyad counts, and reporting requirements were found to interact with registration criteria. Moreover, one-party dominance (a short-term, political factor)

and legislature expenditures became significant predictors of dyad counts. The differences in model results across tables were indicated shifts in the balance of single- versus multiclient lobbyists. If both client and lobbyist populations are held constant, then dyads increase in response to more multiclient lobbying.

These findings present several additional questions for scholars of interest representation. To understand better the effects of both political and institutional factors on lobbying, it would be beneficial to examine rates of lobbying by individual sectors or guilds of interests. Legislative activity in specific policy domains may spur more lobbying on behalf of only some sectors of interest groups (see Dusso 2010; Gray, Lowery, and Fellowes 2005). As state economies and interest populations grow, there may also be unequal, long-term growth between sectors in their political mobilization (see Lowery, Gray, and Fellowes 2005). If sectors of interest groups vary the strength of their lobbying efforts in response to policy agenda shifts, then variables such as legislative gridlock and the granting of economic rents may partly be results of differential lobbying efforts across sectors of interests (see Gray and Lowery 1995; Olson 1982). Exploring how state-level partisan competition influences totals of lobbyist-client dyads may also be too broad of an approach for truly capturing the short-term effects of politics on lobbying. Such an approach surely misses granular differences in mobilization across policy domains or sectors. It might also be the case that types of interest groups vary in how often they employ single- or multiclient lobbyists.

My measure of lobbying has limitations and might be most informative when used in conjunction with measures of other forms of political mobilization. Lobbying, as a form of mobilization, is distinct from outside grassroots efforts and campaign finance activities. For interest groups, lobbying should be seen as one tool in an arsenal of political tactics. Groups can vary their use of different tools for strategic purposes. Campaign donations may be used to bolster lobbying efforts (see Hall and Wayman 1990), or groups may shift toward outside lobbying tactics in response to a proposal's status in the legislative process (see Hall and Reynolds 2012). Moreover, groups may choose to pay their lobbyists for more hours of representation. My measure of lobbying does not capture these metrics.

Much work remains to be done on studying the political tactics of interest groups in the U.S. states and the determinants of their lobbying activities. Linking group-level accounts of lobby intensity to system-level changes in politics and institutions is a challenging task that requires granular lobbyist data. Nevertheless, this article was intended to be a step forward in advancing our understanding of interest representation in the U.S. states. I anticipate that others may build on my findings.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. One outlier is excluded from the box plot. In 2011, there were 32,171 lobbyist-client dyads in New York. This state regularly contained more dyads than any other state. In 2010, New York had the longest lobbyist list in my sample at 43,760 dyads. Later on, I explain why New York's lists are significantly longer than those from other states, and I include a control for this state (and a few others) in my statistical models.
2. This measure does not capture polarization between parties. Gray, Lowery, and Fellowes (2015) concluded that polarization within legislatures did not strengthen the relationship between partisan competition and numbers of registered interests.
3. The two coefficients for these idiosyncratic registration procedures are not reported here.
4. Since models with fixed effects rely only on within-state changes to estimate effect sizes, the significance of initiative state status is the result of an outlier. Most states had adopted direct democracy prior to when my sample begins, in 1986. Throughout my sample, only two states (Kentucky and Mississippi) became initiative states. There are no observations from when Kentucky did not allow for direct democracy, and there is only one observation from Mississippi from before that state's change in initiative status. Mississippi became an initiative state in 1992. Mississippi's lobbyist list from 1989 is short compared with its lobbyist lists from after 1993 (when lists were published online). The significance of a state's initiative status change hinges entirely on the one observation from Mississippi.
5. Term limitations were approved in five more states but never went into effect in some due to legal challenges. In Oregon, term limits were briefly in effect between 1998 and 2003. As of 2018, term limits apply to legislators in 15 states.
6. In additional model specifications, I reestimated my models using the raw count of permanent legislative staff persons in each state. These figures were provided by the National Conference of State Legislatures (2016). Such permanent staffers work for legislatures even when they are not in session. Unlike with legislature expenditures, raw staff counts were not significant predictors of dyads in any of the model specifications presented here. This suggests that expenditures (and certainly professionalism) measure much more than merely staff capacity. It also suggests that staff capacity has no effect on the lobbying strategies of registered interest groups.

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