

**The Demand Side of Lobbying:
Government Attention and the Mobilization of Organized Interests**

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Abstract

Using data from Lobbying Disclosure Reports filed in 1996 through 2000, and linking these data with indicators of federal government attention, government spending, and the size of the business population, we are able to show a strong demand effect of government activity on lobbying. We test a variety of theories about group mobilization and lobbying by analyzing how our measures vary across 56 separate issue areas during the five-year period. Congressional hearings, an indicator of the level of government activity, explains the mobilization of groups more than federal spending or levels of economic activity in the sector. We note the importance of government in defining what is an interest, the growth in the range of government activities over time, and the linkage between the growth in the size and scope of government and the “interest-group explosion” that many other authors have noted. Theories of group mobilization should include a prominent role for the demand effect of government attention.

Government Agendas, Interests, and Mobilization

Why some interests mobilize to petition the government and others do not goes to the heart of questions about representation and lobbying.¹ Interest-group scholars since Schattschneider (1935) have looked to see whose voices are represented in the halls of government and have worried that some types of groups and some interests are heard more often and more clearly than others. Studying which interests are represented before government and tracking the size and shape of the interest-group system have thus become central concerns of research in the field.

In this paper we argue that to understand the overall distribution of lobbying in Washington—or before any level of democratic government—knowledge about the activities of that government is as important as knowledge about the organizations themselves. Who lobbies depends in part on the areas in which government is active. To make this point, we link the study of agenda setting to the study of interest mobilization, showing how the degree of government involvement in an issue area contributes to the size of the populations of organized interests in those areas. This, essentially, is the demand side of why interest groups become active in particular areas of public policy. While the existing supply of organized interests and potential constituents in an issue area is certainly important, so too is the governmental demand for attention to that area. In any given issue area, then, we should expect trends in interest mobilization to parallel trends in governmental activity. While government may grow as a result of interest-group demands, government activity itself has a strong effect in mobilizing interests to create a Washington presence.

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The traditional approach to explaining differentials in mobilization has been to consider the organized interest itself. Numerous scholars have analyzed internal organizational characteristics—size, goals, resources—and have repeatedly come to similar conclusions. These studies depict a world in which concentrated interests are advantaged, where businesses and trade associations dominate numerically, and where truly “public” interest groups whose goals are unrelated to occupation are relatively rare (see, e.g., Schattschneider 1960, Walker 1983, 1991; Schlozman and Tierney 1983, 1986; Leech 1998; Baumgartner and Leech 2001).

While internal characteristics of organizations are clearly important factors in mobilization, an emerging synthesis within the study of political behavior encourages us to look beyond these internal questions toward the political context in which individuals and organizations find themselves. Huckfeldt and Sprague (1987) pioneered the self-conscious inclusion of community as a variable in voting behavior studies. The social movement literature has turned its attention away from grievances and resources and toward such issues as political opportunities and framing structures (McAdam, McCarthy, and Zald 1996). Gray and Lowery’s (1995, 1996) population ecology approach shifted the focus to the energy, stability, and area within an interest-group environment, while a series of scholars has begun considering the issue context in which particular organized interests make lobbying decisions (Hojnacki 1997; Hojnacki and Kimball 1998; Kollman 1998; Leech 1998; Baumgartner and Leech 1998, 2001). Finally, in the study of policymaking more generally, scholars have moved beyond the consideration of resources and individuals in policy outcomes to also consider the broader effects of agenda setting and issue definition (e.g. Baumgartner and Jones 1993; Jones 1995, Leech et al. 2002).

To explain why we see the numbers and types of interest groups that we do before a particular government, considering the political context or environment in which interest groups find themselves is essential. Even in a hypothetically ideal pluralist world in which all points of view were represented fairly, there would be no reason to expect that all points of view would mobilize and lobby equally. If government had no authority or involvement on an issue, then there would be little point in lobbying on that issue. This suggests, therefore, that we should expect mobilization to occur not when an opinion or need exists in the world, but when that opinion or need *and the possibility of government action* intersect. This, indeed, is the definition of “interest” presented by Heinz et. al (1993, 24):

It is at the intersection of public policy and the wants and values of private actors that we discover interests. What we call the interests of the groups are not simply valued conditions or goals, such as material riches, moral well-being, or symbolic satisfaction. It is only as these are affected, potentially or in fact, by public policy, by the actions of authoritative public officials, that the valued ends are transformed into political interests that can be sought or opposed by interest groups.

If “interests” are created by the actions of government, then interest-group mobilization must be affected as well. As government becomes more active in a particular area, so to will the interest groups that correspond to that area. That is, we should expect government activity to affect lobbying activity. If it does not—or if it does so for some types of interests but not for others—then representation is threatened. For this reason, studying populations of interest groups and their policy context is equally as important as studying individual interest groups and their resources.

Gray and Lowery (1996) explicitly focus attention on these processes by adopting the ESA—energy, stability, area—theory from population ecology. They argue that the number of interest groups in a population will be dependent not only on the number of potential members

and other resources organizations have (the area), but also on the interests created by potential government goods, services, and regulations (the energy).

In this paper, we focus on the political environment aspect of mobilization—a concept that corresponds closely with Gray and Lowery’s energy term. We predict that levels of lobbying will increase as government activity increases, but we expect these processes to be issue-specific rather than general. Government involvement in regulation of transportation should not be expected to increase lobbying on trade policy; proposals to end tariffs on textiles should not be expected to raise the level of lobbying on welfare policy. In essence, a governmental decision to become involved in an issue area sets the agenda for existing and potential organized interests, who are thus encouraged to come to the capital to defend their interests and advocate particular solutions to perceived problems. As government has grown over the decades, it has not grown equally in all issue-areas. We take advantage of these unequal patterns in government activity to demonstrate the links between government attention and the mobilization of interests: The demand side of lobbying.

To test these ideas, we link two large data sets that previously have not been used in tandem: (1) the Lobbying Disclosure Data Set (Baumgartner and Leech 2001) and (2) the Policy Agendas Project (Baumgartner and Jones 2002). The first data set allows us to identify the number of organizations active in Washington in 74 government-designated issue areas, the number of issues lobbied on, and the amount spent on lobbying. We can also trace, over eight successive six-month reporting periods, fluctuations in the number of organizations filing lobbying reports in each of the 74 areas. The second data set, which contains numerous indicators of government attention to more than 200 distinct policy areas since World War II,

allows us to assess the degree of government activity in each issue area, as well as the number of different congressional committees active in each.

Measures and Data

We make use of data collected from the U.S. Senate under the Lobby Disclosure Act of 1995. As two of us have described in detail elsewhere (Baumgartner and Leech 2001), the Disclosure Act requires organizations or individuals spending more than about \$20,000 on lobbying activities within any six-month period to file a report indicating the areas in which they lobbied, the issues on which they were active, and the amount of money spent. There are 74 pre-defined areas of lobbying activity, and lobbyists must file reports in each area in which they are active.

Baumgartner and Leech previously reported detailed information from an exhaustive analysis of every report filed for the December 31, 1996, filing period. In this paper we make use of those data as well as summary data collected from the Senate Office of Public Records consisting of the number of filings in each of the 74 issue areas in seven additional time periods: December 31, 1997, and in each six-month filing period through December 31, 2000 (the last reports available at the time of writing). The reports indicate the number of organizations filing in each issue area as well as the number of hired lobbyists and/or public relations firms who lobby on behalf of paying clients. Before turning to our analysis of what brings these groups to Washington in the first place, we first explain in some detail the nature of our disclosure report data.

Measures of Lobbying Activity

Table 1 shows the number of lobbying reports filed by interest groups by time period for each of the 74 issue areas defined by Congress for the purposes of the Act. We present the issue areas in alphabetical order, with all those areas where a corresponding set of congressional hearings is

available through Baumgartner and Jones' Policy Agendas Project (see Baumgartner and Jones 2002) listed first. The later part of the table lists those areas where we have lobby disclosure data but where there are no corresponding topic codes in the Agendas Project. Fifty-six of the 74 areas can be linked to the congressional hearings data, whereas 18 areas (advertising; apparel/textiles; arts and entertainment...) do not correspond to the topic and subtopic definitions used by Baumgartner and Jones in their compilation of congressional hearings and laws. (Table A-1, in the Appendix, presents the full names of the 74-issue areas and also presents the Agendas Project topic and subtopic codes to which they correspond, if applicable.)

(Table 1 about here)

Two important features are apparent from the data presented in Table 1. First, reading across the rows in the table, it is apparent that most areas of public policy are home to quite stable patterns of interest-group involvement. There is little time-series variation in the lobbying reports. To take the example of banking (area 10, BAN in Table 1), a minimum of 107 and a maximum of 135 groups filed lobbying reports in that area during the eight reporting periods. In the case of Medical and Disease Research (area 48, MED), between 62 and 83 groups filed lobbying reports in each period. Looking down the columns, one can see that there is great and consistent cross-sectional variation in the data: some areas were home to much greater activity than others. For example, Taxation issues (TAX) show an average of 563 groups whereas Unemployment (UNM) has an average of just eight lobbying reports. So the first striking feature of the data presented in Table 1 is that there is much greater variation in lobbying activity across the 74 issue areas than there appears to be across the eight reporting periods. Comparing the means and standard deviations in the last two columns of the table confirms the cross-sectional dominance of the variation. On average, for all 74 issue areas combined, the average number of

lobbying reports is 16 times greater than the standard deviation over the eight reporting periods. That is, very few issue areas show large changes in the number of lobbying reports over time compared to their average.

The second important feature of Table 1 is that the bulk of the lobbying activity occurs in areas that can be linked to other measures of congressional activity through the Policy Agendas Project. In each of the eight reporting periods, close to 85 percent of the lobbying reports are in areas that can be linked. Table A-1 in the Appendix shows the details of these linkages, but suffice it to say that two completely independent lists of topic areas may not be expected always to mesh. Because the Baumgartner-Jones dataset includes a much more detailed set of 226 subtopics of public policy, in most cases we are able to aggregate these more detailed topic areas to correspond with the more general issue areas as defined for the purpose of the disclosure reports. Of course, some Lobbying Disclosure categories areas, such as Budget/Appropriations, are too broad and cross into too many Agendas Project categories, and other areas, such as Beverage Industry, are too narrow and would be coded in different ways in the Agendas Project. In any case, we can link about 85 percent of the lobbying activity to measures of congressional activity through the Agendas Project consistently in each of the reporting periods.

Table 2 is similar to Table 1 but reports data on hired lobbyists (public relations firms, law firms, and others lobbying on behalf of paying clients).

(Table 2 about here)

These data show very similar patterns to those in Table 1 except that there is greater variability over time in the number of lobbying reports. Since these data represent the decision of a given client (e.g., General Motors) to hire a given public relations firm, some of these may be long-term relationships, but others may be ad-hoc decisions based on a single or a small number

of lobbying campaigns for a limited period of time. In any case, we observe, as in Table 1, much greater variation across issue areas than across time—Taxation and Budgeting have sometimes more than 1,000 lobbying reports, whereas areas such as District of Columbia Affairs, Unemployment, and a few others typically attract fewer than 10 reports. While the average number of lobbying reports remains greater than its standard deviation over time, this ratio is only 5:1 here while it was 16:1 in Table 1.

What do these counts of lobbying reports represent? We can use our more detailed analysis of all 19,692 reports filed in 1996 to address this question in some detail. This reassures us that simple counts of the number of reports are valid and useful measures of the amount of lobbying activity in these 74 issue areas. Our 1996 database (Baumgartner and Leech 2001) allows us to count the number of interest groups, lobbying firms, registrations, issues mentioned, and money spent by each registered organization and each contract lobbyist. Comparison of these various indicators of levels of lobbying activity shows the striking similarities of estimates of activity levels when aggregated to the 56 issue areas that we analyze in this paper. Figure 1 shows the relation between the number of registered groups active in the 56 areas and two other indicators of activity: the number of lobbying reports and the number of issue-mentions.

(Figure 1 about here)

The number of lobbying reports filed in an issue area is the sum of the number of direct filings by organizations (e.g., Proctor and Gamble) and the number of filings on behalf of clients by hired public relations or lobbying firms. Many large organizations hire multiple lobbying firms over the course of a reporting period and maintain their own government relations staffs as well. Each must file a separate report if they both lobby (only the PR firm must file if it lobbies on behalf of a client which itself has no lobbying presence). The top part of Figure 1 indicates

that the total number of lobbying reports in an issue area equals 1.4 times the number of groups registered, and that this equation fits the data with a level of accuracy rarely observed in the social sciences.

The number of issue-mentions is perhaps a better indicator of levels of activity by an interest group, but it is time-consuming and difficult to gather these data because the records are not computerized. For each issue area in which they file a report, filers must list the issues, by name, on which they were active. Of course, there is some variation in how detailed the registrants are in listing their concerns (some may simply record “energy issues” whereas others list several bill numbers or specific texts and amendments in which they were interested), but overall we consider that these counts of issues mentioned in each area to be a more nuanced indicator of level of effort. As a group may itself list several issues within each area, and may also hire one or more firms to help it in lobbying on those same issues, these multiple reports reflect greater intensity of lobbying activity. While not perfect, there is good reason to think that this is a stronger measure than the simple counts as we will use here. Fortunately, the data presented in the lower half of Figure 1 show that the number of issues mentioned in these reports can be predicted with 96 percent accuracy by the simple equation that each group, on average, mentions 3.5 issues. While this equation would not be as accurate at the individual level, when we aggregate to the issue area as we do in this paper, we find an extremely robust set of relations among these three indicators of levels of lobbying activity.

Our 1996 database includes data on the aggregate spending by groups, since each group must report its total spending. Whereas the number of lobbying reports and the number of issue-mentions is specific to an issue area, the spending figures include activities in other issue areas. That is, consider a group like General Motors that may spend millions of dollars in lobbying

activities, but which is active in perhaps 15 of the 74 different issue areas. We can accurately distill their activity levels across the issue areas in which they file lobbying reports by looking at each report separately, but each time they file a report they will list the same aggregate spending level, and this spending cannot be broken down into how much was spent in the various different areas. Therefore when we analyze the spending data we find that we must be extremely cautious. Certain areas may attract groups that, on average, spend more than groups involved in other areas, but we cannot say for certain that the spending was actually linked to the activities in this or that issue area, and if we aggregate the spending we find that we are double- and triple-counting the spending by groups that file lobbying reports in two or three issue areas. Since the typical group files a report in more than one issue area, and the largest groups may file reports in 10 or more areas, we treat the aggregated spending data with considerable caution. In any case, when we correlate the number of groups active in an issue area with the aggregate spending of groups active in that area, we find that the correlation is over .94, and the scatter plot indicates that, as in the data presented in Figure 1, the relationship is perfectly linear. We do not present these data because they over-count spending and we cannot be certain that the spending is in the issue area in question as opposed to other areas where the groups are also active. In any case, as Figure 1 and our discussion of the spending figures shows, an analysis of several different indicators of levels of lobbying activity, drawn from a detailed and time-consuming analysis of the full set of reports filed in a single reporting period lends credence to the idea that the simple count of lobbying reports filed in each issue area is a robust and reliable measure of total lobbying activity in that area.

Linking Lobbying Activity Levels to Other Indicators

We want to test a series of hypotheses about what brings groups to Washington, both with their own government relations departments, establishing a relatively permanent presence in the capital, and by hiring firms to represent them in Congress and before the executive branch. As described in the introduction, we need indicators of economic activity as well as governmental action. In this section we provide a brief description of the indicators we have developed for these other variables and note the bivariate relations between these indicators and our measures of lobbying activity. The next section moves to a more complete multivariate, pooled time-series analysis.

As discussed in the previous section, about 85 percent of the lobbying occurs in areas where we can link to the data collected as part of the Policy Agendas Project. Appendix Table A-1 lays out the details of these links. Since the Agendas Project codes each congressional hearing since 1947 into one of 226 detailed subtopics, we were able to match the majority, but not all, of the disclosure report areas to some combination of these subtopics. In some cases it fits neatly and easily with a single major topic (for example, issue 3, AGR, Agriculture, with Topic 4, also called Agriculture). In other cases more detailed codes provided single fits (issue 24, DOC, District of Columbia affairs, with subtopic 2014, part of the Agendas Project governmental affairs major topic 20, subtopic 14, District of Columbia affairs). In still other cases, such as Clean Air and Water Quality, a combination of two or more Policy Agendas subtopics corresponds to this issue area. In this way, we can establish links between 56 of the 74 areas. Once this is done we have a variety of measures at hand, aggregated from the Agendas Project. That includes the number of hearings on the topic in a given year and the number of committees and subcommittees active in the area.

The Policy Agendas Project also provides information on government spending, taking the annual budget of the United States and creating a consistently defined and inflation-adjusted time series for each OMB-defined category of spending. Appendix Table A-2 presents the linkages between the Disclosure Report data and the budget spending areas. Using the same conservative approach as we used with the congressional hearings, but being limited by the smaller number of OMB categories in the budget dataset, we can establish links in 27 out of 74 areas, or about 36 percent of the cases. Using the data from Table 1 to measure the degree of lobbying in these 27 areas indicates that these areas together account for almost exactly one-half of the lobbying activity. While not perfect, these data will allow us to analyze the degree to which lobbyists are drawn to Washington because of the level of government spending in various areas.

Finally, we have information on the number of firms active in different parts of the economy. Because this paper investigates the political demands that attract interest groups to Washington, we were obliged to also explore the supply of groups available to lobby the federal government. We know that those groups fortunate enough to overcome Olson's collective action dilemma and enter the political fray represent only a fraction of all the groups that could possibly be in Washington. Any organization—regardless of its primary purpose or method of attracting members, employees, followers, or patrons—has the potential to be politically active depending on its internal motives and on the political context. Accordingly, groups active in a Washington policy community are simply a subset of groups that could be active in that community, which begs the question: Does the size and shape of a Washington lobbying community depend on the size and shape of the set of groups available to lobby? To tackle this question, we first needed to identify a theoretical universe of “groups available to lobby.” We use economic census data

measuring the numbers of firms active in the United States as an indicator of this concept in each of our lobbying issue areas. While this measure does not attempt to include the number of non-economic organizations potentially available to lobby, it does provide an indicator of the level of economic activity, which allows us to test whether it is the supply effect of the number of firms that determines the mobilization, rather than the demand effect of the level of government activity. Using data from the U.S. Census Bureau and in particular its classification of all areas of economic activity, we count the number of firms in each issue area that can be linked to the lobby disclosure data; we are successful in establishing these links in 48 areas, representing 62 percent of the lobbying activity. Because of changes in the way the Census Bureau counts these firms, these data are available for only two of our five years. Appendix Table A-3 presents the linkages between the two variables, and a discussion of the composition of this variable is included in the Appendix.

Analyzing the Decision to Come to Washington

The demand theory of interest-group lobbying that we propose here leads us clearly to a simple hypothesis: As government attention to an issue area increases, so too will lobbying in that issue area. However, as we have noted above, government attention can be conceptualized and measured in multiple ways; not every type of attention should be expected to have the same effect on levels of lobbying. In this paper we consider the agenda effects of general government attention to an issue area in the short and long term, the opportunity effects of an issue area in which there are many venues of attention, and the rent-seeking effects of an issue area that involves proportionally large amounts of the federal budget. We will discuss each of these types of government attention—and our expectations regarding each type—in turn.

First, we consider general government attention to an issue area as measured by the number of congressional hearings held in that area. We expect lobbying to increase as the number of hearings increases; however we expect the effects to be different in the short and long term and for the short-term effects to be more pronounced for contract lobbyists than for organizations lobbying on their own behalf. It is important to remember that an organization's decision to lobby may be time consuming and expensive, especially if it involves setting up an office in Washington (or Brussels or a state capital, for that matter) or adding permanent staff to that office. In addition, organizations are not unitary actors—there may be multiple constituencies within the organization to convince, and organizational actors may not immediately recognize that their interests have been threatened or that an opportunity has arisen because of government action (see Martin 1995). For these reasons we expect long-term changes in government activity to be more important than short-term changes in attention, and for the level of lobbying by contract lobbyists to be more sensitive to short-term changes in government attention.

To measure these concepts, we have two variables—one that measures government attention in the short term and one that measures government attention in the long term. The short-term variable consists of the number of hearings that took place during the same six-month period for which lobbying is reported in the Disclosure Reports. In other words, this variable is designed to test whether increases and decreases in a lobbying area are primarily immediate reactions to particular bills and other actions by members of Congress. The long-term variable reflects a 10-year moving average, lagged one year, of past congressional hearings in that issue area.

Second, we consider the opportunity effects of an issue area. We expect that greater lobbying activity will occur in those issues with more greatly dispersed governmental venues of decision-making because of the greater opportunities those simultaneous venues offer to the lobbyist. While in this paper we consider only the affects of dispersal across Congress, if an issue area involved multiple decision-making venues outside of Congress—court proceedings, regulatory activity, state and local authorities—we would expect lobbying in those areas to increase accordingly. We measure this concept using a 10-year moving average, lagged by one year, of the number of distinct congressional committees holding at least one hearing in the issue area (see Baumgartner, Jones, and MacLeod 2000).

Finally, we expect that issue areas representing relatively greater proportions of the federal budget to also experience greater-than average levels of lobbying, as rent-seeking interest groups vie to attract direct subsidies and contracts from the federal government. This variable is measured by the amount of the federal budget, in billions of dollars, attributable to each issue area during the contemporaneous year.

Bivariate relationships

Before turning to our multivariate analysis, we first will consider a series of bivariate relationships between our indicators. Figure 2 shows the bivariate relation between the number of hearings in a ten-year period before the lobby disclosure reports filing date and the number of organizations and lobbyists filing reports in that area.

(Figure 2 about here)

Some areas, clustered in the upper-left corner of the figures presented, show great group activity but little legislative action as measured by hearings. These are such issue areas as Taxation, where major decisions are made and massive numbers of lobbyists are active, but

where few hearings are scheduled. Others, at the bottom-right, are home to considerable legislative activities but not much lobbying. This includes Government Operations, which includes ethics investigations, oversight, nominations, claims against the US government, and other routine topics that require legislative activity and generate hundreds of congressional hearings each year but are not home to the equivalent level of lobbying intensity. All in all, the data presented in Figure 2 show that the level of government activity can explain about one-half of the variation in lobbying reports by issue area as measured by the number of congressional hearings in the previous ten years. For every 10 hearings over the period (or one hearing per year), we expect an increase of about two lobbying reports. The data for hired lobbyists, in the lower part of the figure, show a similar relationship with these long-term trends in government attention. However, because the variance for hired firms is greater overall, we see an average increase of more than three lobbying reports for every 10 hearings on a topic over the ten-year period considered here. Since these reports are cumulative, Figure 2 indicates that, on average (and with some notable exceptions because hearings are not a perfect indicator of congressional attention), each hearing in Congress is associated with five additional lobbying reports: Two direct reports and three by contract lobbyists.

The more short-term effects of government attention are seen in Figure 3. While the relationship is still generally linear and moderately strong, with an R^2 of over .34 in both cases, it is less strong than the long-range hearings, as we predicted. However, contrary to our expectations the relationship is roughly equally strong for direct lobbying by groups and for hired PR firms. Each congressional hearing is related to an increase in almost 2 groups and just over 3 hired firms, the same relation as we saw in Figure 2 based on long-term effects.

(Figure 3 about here)

The same committee holding a great number of hearings on a topic may represent increased attention to the issue, but if the same actors are involved it may not be necessary for more groups to lobby. As an increasing number of distinct committees become involved in the issue, we expect lobbying activity to increase, even holding constant the total number of hearings. Figure 4 shows the relation between the number of distinct committees active in the area in the period from 1986 to 1995 and the number of groups and lobbyists filing lobbying reports.

(Figure 4 about here)

Figure 4 shows that there is a stronger relation between the number of committees and lobbying effort than there is when we look only at the raw number of hearings, either in the long term or in the short term. Clearly, there is an opportunity effect as well as a demand effect. In addition, the simultaneous activity of more than one committee active in a given issue-area may mean that the issue is home to potentially different constituencies. Baumgartner and Jones (1993) showed that many issue-areas previously home to a monopolistic policymaking process were broken up when committee jurisdictions became more malleable; this process provides openings for a greater range of interests to be represented, and it may force groups to register and to be active in more issue-areas as well. In any case, we see a relatively strong relation between the spread of committee activity and lobbying activity here.

Figure 5 shows the bivariate relationship between federal spending and lobbying activity.

(Figure 5 about here)

Compared to the relatively strong relation between the number of hearings and lobbying activity that we saw in Figures 2 through 4, it may seem surprising that Figure 5 shows a more modest relationship concerning government spending. There are several reasons for this. First,

lobbying is not only about gaining government procurement contracts or encouraging greater spending (though it often is, to be sure). Areas with extremely high government spending include retirement issues (Social Security); while there is certainly a lot of lobbying activity in this area, it is not proportionate to the level of spending. Similarly at the other end of the spectrum, trade issues can generate considerable lobbying, but government spending on trade is not an important factor. Certainly there are areas such as Medical Research, Defense, and Agriculture where we see both a large number of lobbyists and considerable federal spending, which explains the clusters of cases that show at least some relation between federal spending and lobbying activity. As the figure shows, there is a weak linkage between spending and lobbying. However, a complete model of what brings groups to Washington would certainly have to consider not only direct government spending but also and probably especially government involvement in and regulation of the private economy. This is why our measure of long-standing government attention, the number of hearings in the previous ten years, seems better suited to explain this process.

Our multivariate model also includes a control variable that measures the overall size of an industry in the U.S. economy. Since a plausible rival hypothesis is that the level of lobbying in Washington is simply a reflection of the number of pre-existing organizations available to lobby, Figure 6 presents the simple relationship between the number of firms involved in a particular issue area and the number of lobbyists.

(Figure 6 about here)

Compared to the effect of federal spending, Figure 6 shows a slightly clearer relation between the number of firms in a given issue area and the number of lobbying reports filed. Clearly, one reason why more groups are active in some areas rather than others is simply that

some areas are home to more economic activity. Still, as was also apparent with the budget data presented in Figure 5, this is not a complete picture of what brings groups to Washington. In the next section, we turn to a multivariate analysis of these various hypotheses, and we take advantage of the time-series elements of the data we have collected in order to present the most complete model possible of this process. Since we have several indicators that each are related to the number of lobbyists in each issue-area in a bivariate analysis, we turn to multivariate and time-series analysis to see which relations are the most robust, controlling for the effects of the others.

Lobbying in Time and Space

When it comes to data collection, interest-group scholars have historically been on their own. With the exception of data on campaign contributions, there have been no pre-existing sources of data that would be possible to analyze across time. Our data set therefore offers an unprecedented opportunity to examine the relationship between U.S. government activity and interest-group mobilization across issue areas and over time. As such, it also poses several challenges. Time series cross-sectional models face not only the traditional time series problem of serial autocorrelation—in which the errors at one point in time are likely to be related to errors at another point in time—but also the problem of spatial correlation and error heteroskedacity—errors from one unit at one point in time are likely to be related to the same unit at another point in time, and the errors of the different units may have unequal variances (see Stimson 1985, Sayrs 1989). To address these issues we adopt the approach recommended by Beck and Katz (1995, 1996): OLS with panel-corrected standard errors, used with a lagged dependent variable.

As we noted earlier, however, variation across time in our data is clearly swamped by the degree of variation across issues. In fact, because of this inherent stability in the data, our

measures of long-term hearings and short-term hearings are highly collinear (Pearson's $r = .9071$) and cannot be used together in the same analysis. Likewise, since the number of hearings in an area is dependent in part on the number of committees available to hold such hearings, our measures of attention and dispersal are also highly correlated (Pearson's $r = .9115$). As a result, we will consider short- and long-term effects of both hearings (attention) and committee dispersal in separate models.

Our first set of models, shown in Table 3, are simple models showing the relationship between the short-term effects of government attention—as measured by the number of congressional hearings held in an issue area in the current year—and the number of Lobbying Disclosure Reports filed by organizations on their own behalf and by contract lobbyists. Missing data in several of the years for these variables prevents us from presenting the full multivariate model here, but we can see from the table that congressional hearings in the contemporaneous year do indeed have an effect on the degree of lobbying. The relationship is stronger for contract lobbyists than for organizational lobbyists.

(Table 3 about here)

Looking first at Model 1, the coefficients indicates that for every additional hearing in a year, we see one additional lobbying report by organizations and 1.6 additional reports by contract lobbyists. Since the number of hearings in an issue area in a given year range from zero to 119 during the five years we consider, the potential effects of this approximately one-to-one relationship with lobbying is far from negligible. Moving to Model 2, the coefficients for the short-term hearings become slightly larger once the amount of federal spending in each issue area is considered. Budget size (measured in billions of dollars) does not have a statistically significant impact on the amount of lobbying by organizations, but does have an impact on

contract lobbying. The effect of federal spending is quite small, however, even when it does pass levels of statistical significance: for each \$10 billion the government spends in an issue area, we would expect to see less than one additional report by organizations and two additional reports by contract lobbyists.

The next set of models, shown in Tables 4a and 4b, tests the relationship between the long-term effects of government attention—as measured by the number of congressional hearings held in the previous 10-year-period—and the number of lobbying reports filed by organizations and contract lobbyists. Model 1 here shows a somewhat stronger relationship for long-term hearings and lobbying than we saw for short-term hearings. For every 10 hearings (the equivalent of one per year), we see 1.2 additional reports for organizations and 2.2 additional reports for contract lobbyists. In Model 2 we add in the budget variable and see that—as was the case for contemporaneous hearings—the coefficients are negative and not statistically significant when considering organizational lobbying, but positive and significant when we consider lobbying firms. Model 3 adds the variable measuring the number of firms in existence nationally in that issue area, and we see that for each additional 10,000 firms in an area, we should expect two additional lobbying reports by organizations and by lobbying firms.

(Table 4a-b about here)

The complete government attention model in Tables 4a and 4b is Model 4. Here we add a lagged dependent variable, controlling for serial autocorrelation. In all of our data, the number of lobbyists and organizations active at one point in time is a strong predictor of the number of lobbyists and organizations active in the next point in time. This has the effect of diminishing the observed effect of the other independent variables and of driving the R^2 statistics into the .90+ range. After the lagged dependent variable is included, there is relatively little variance left

to explain. Since the process we are explaining is highly inertial, however, it is appropriate to control for past behavior (in this case, lobbying reports); in effect, we then model the degree to which change in each independent variable affects change in the dependent variable. The results show that our measures of government attention are consistently robust (though they change in magnitude, as is expected), but the signs and levels of significance for the budget and firms data are not. In Table 4, our final model, controlling for previous levels of lobbying activity, shows that long-term hearings have a significant effect as predicted, federal spending has a positive effect on lobbying, and that the number of firms has no significant effect.

In the next two tables—5 and 6a-b—we turn our attention from the effect of government hearings on lobbying to the effect of the dispersal of committee jurisdiction on lobbying in particular issue areas. The results are similar to those of the hearings models. In Table 5, Model 1 indicates that the number of committees active in an area in a given year increases the amount of lobbying by approximately 10 reports by organizations and 16 reports for organizations for every additional committee involved. The coefficient for budget, shown in Model 2, is negative in the case of organizations and positive in the case of contract lobbyists—clearly the amount of federal spending is a more important determinant of contract lobbying than of lobbying by staff lobbyists employed by organizations.

(Table 5 about here)

Tables 6a-b show the effects of committee dispersal in the long term. Model 1 indicates that for every additional committee involved, we see slightly less than 5 additional reports by organizations and slightly more than 8 additional reports by contract lobbyists. Size of federal budget again is not a significant factor in the models in the case of organizational lobbying but does have a statistically significant effect on contract lobbying. Models 2 and 3 indicate that for

every \$10 billion in spending in an issue area, we should see approximately two additional lobbying reports. The number of firms has an impact on the number of lobbying reports in Model 3. For each 10,000 firms, we would expect to see two additional organization reports and three additional contract lobbying reports.

(Table 6a-b about here)

As was the case with the government attention (hearings) models, the addition of a lagged dependent variable in Model 4 greatly reduces the amount of potential variance left to explain. As with the hearings models, the number of committees active during the past ten years still has a statistically significant effect on the amount of lobbying by organizations, although the magnitude of the effect is lower. In the case of contract lobbying, the number of committees involved has a statistically significant effect only in a one-tailed model, while the size of the federal budget remains a significant factor. The firms variable is no longer a significant variable for either organizational or contract lobbying. Table 6 presents a set of findings very similar to those in Table 4. Controlling for past behavior, spending has a moderate effect, the number of firms has no discernable effect, and congressional attention has a positive and significant effect on the numbers of groups and lobbyists.

Taken as a whole, these models paint a picture of a lobbying world in which government attention is a more important determinant of lobbying than government spending, and in which the size of the business population is not a consistent predictor of the size of the lobbying population. The spread of committee jurisdictions has an effect, as does the general level of government attention to an issue area as measured by the simple count of hearings in the area. (Since the number of hearings and the number of committees holding them is highly related, we cannot distinguish statistically between the two. There are strong theoretical reasons to believe

that each has a separate impact, however. The range of committees involved provides greater opportunities for lobbying, holding levels of attention constant.) There also are important differences in terms of organizational lobbying and contract lobbying and these effects hold true across the models. There is greater variance in the number of contract lobbying reports over time than in the number of organizational lobbying reports, and we see that reflected in the effect sizes. The number of hearings, the number of committees, the size of the federal budget, and the number of firms all have a greater effect on contract lobbying than on organizational lobbying, both in the short and long term.

Competition, Demand, and Opportunity

Two of us have previously discussed the importance of considering the political context in which interest groups make lobbying decisions (Baumgartner and Leech 1996, 1998, 2001). This context is the political environment in which organizations operate, and includes the “energy” term in Gray and Lowery’s ESA theory of interest-group mobilization. We conceive of this political environment as being composed of three general processes: a competition factor, demand factor, an opportunity factor.

In the first place, mobilization cascades take place because groups lobby in the issue areas where everyone else is lobbying—this is the competitive aspect of the political environment for organized interests. It is important to remember that lobbying in most cases is defensive, consisting of reactions to the agendas set by the confluence of actions of many other political actors (Baumgartner and Leech 1996, 1998). We have documented this tendency previously using data from the 1996 Lobbying Disclosure Reports, in which 60 percent of the lobbying that took place in Washington in a six-month period took place on just 10 percent of the total issues (see Baumgartner and Leech 2001). In the short term, each year a small number of

issues in Congress become the objects of veritable frenzies, where hundreds of lobbyists become involved, some hoping to gain new advantages, some seeking to avoid disaster, and many becoming involved simply because they know that something is going to happen and they cannot sit out the debate on the sidelines. Such cascades tend to take place at the level of a particular issue, and are not our primary focus in this paper. However, we can see a similar process in the longer term. Just as many groups become involved in a given legislative debate because they see others being involved and fear that action will be taken with or without their participation, so too may groups come to Washington and establish long-term lobbying capacity simply because they see that the government is active in the issue-areas that matter to them, that their rivals, partners, and colleagues are establishing offices, and because they feel that they must.

In the second case, as we have documented in this paper, government activity creates a demand effect in which organizations find it necessary to lobby because of the increased importance of government activity in their issue area, especially over the long term. This government activity could include many things. It might mean direct subsidies or payments to an organization or the members and potential members of the organization. More often it might include laws and regulations that affect the lives and businesses of members and potential members. We have documented the effects of both short- and long-term agenda effects, in the form of congressional hearings, on the level of lobbying in Washington. We also have shown that the amount of government spending on an issue area is a contributing force, although the effects are more attenuated than the effects of the hearings, in part because the budget variable only captures the effects of direct subsidies—leaving aside the effects of regulation.

Finally, as demonstrated in part by our analysis of the effects of the number of different committees active in a given area, there is greater lobbying activity in those issues with more

greatly dispersed governmental venues of decision-making. Not only does this represent a greater range of activity and perhaps different foci of attention, but a greater range of committees also provides a greater number of opportunities for access. If some groups are denied privileged access to certain committees, as new committees become involved in the area different groups may be favored. As jurisdictions are more broadly shared, a greater range of interests finds a place at the table (see Baumgartner, Jones, and MacLeod 2000).

Establishing a Washington presence is not an automatic outgrowth of the development of a business, a trade group, or a non-profit. There is no reason to do it if government activities are not an important concern for the organization. As government has become more active in a greater range of issue-areas in the last fifty years, a greater range of groups have found it important to be present, permanently represented, in Washington. While our paper here has focused on cross-sectional variation in mobilization in different issue-areas during a five-year period, our findings can also help explain some longer term trends. There is no mere coincidence in the fact that the “interest-group explosion” occurred after the 1960s. Not only were there important social movements, entrepreneurs, and a growing economy; there were important changes in the structure of government. Government grew larger, of course, over the decades from World War Two to the present. However, there mere size of government is not the most important driving force in fostering the growth of groups. Our analysis here showed that federal spending per se is not the most important, or even a very important, determinant of lobbying activity. Rather than spending, it is the dramatic increase in the *range* of government activities that has been most important in causing the group explosion. Baumgartner and Jones’ analysis of the federal agenda shows not just a growth in government, as many have shown, but a dramatic increase in the numbers of distinct policy areas in which the federal government is involved (see

Baumgartner and Jones 2002; Baumgartner, Jones, and MacLeod 2000). As the government becomes more involved in new areas where it previously had not been an important player, new interests are created. Recall Salisbury and colleagues' definition of an interest from the introduction to this paper: A concern or a desire only becomes an interest when it intersects with the actions of government. As public policies have become important in a greater range of areas, interests have become more numerous. As interests have grown, so too has the interest-group system.

Our argument here is not to suggest that internal factors do not matter; they do. Interest communities with money and other resources are more likely to organize than those without. Businesses and trade associations organize much more easily and in greater numbers than non-occupational groups do. Selective incentives tend to trump purposive goals as a mobilization tool. These processes have long been understood and remain important to any understanding of who mobilizes. Resources and selective incentives matter; not all potential groups are even close to equal in their capacity to mobilize. Alongside these tendencies that stem from internal characteristics, however, other forces are at work. The political environment in which organizations and potential organizations find themselves is a powerful determinant of who will lobby and how much they will lobby. All things being equal, an organization with many resources will mobilize and lobby more easily and often than an organization with few resources. Considering the important role of government, however, it is clear that *all things are not equal*. Government not only subsidizes, regulates, and differentially promotes and disadvantages various types of interest groups. More broadly than that, it affects the size and shape of the group system by its own activities. Our analysis shows that increased government activity in a given issue area itself is a driving force in the subsequent mobilization of interest groups. Groups do

not automatically form and come to Washington; there must be a demand for them. Government creates that demand.

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Table 1. Registered Interest Groups by Time Period and Issue Area

Code	Policy Area		Time Period						Ave.	St. Dev.		
	Abbreviation		1996b	1997b	1998a	1998b	1999a	1999b			2000a	2000b
Part A: Issue Areas with Links to the Policy Agendas Hearings Dataset												
2	AER		30	20	20	22	27	27	34	32	26.5	5.4
3	AGR		158	120	129	132	139	147	166	153	143.0	15.7
4	ALC		21	17	25	22	27	29	23	23	23.4	3.7
9	AVI		76	60	59	62	73	68	76	66	67.5	6.9
10	BAN		135	107	123	122	133	132	121	114	123.4	9.8
11	BNK		17	55	82	93	104	110	105	95	82.6	31.7
15	CIV		54	61	57	47	53	58	62	56	56.0	4.8
16	CAW		199	180	156	169	153	139	152	141	161.1	20.4
17	CDT		7	7	11	8	8	8	9	6	8.0	1.5
18	COM		78	59	53	64	63	71	71	67	65.8	7.8
19	CPI		40	41	55	70	81	71	63	65	60.8	14.5
20	CSP		110	96	104	105	91	84	102	99	98.9	8.4
22	CPT		150	135	154	160	140	144	131	120	141.8	13.1
23	DEF		188	150	152	165	181	179	167	160	167.8	13.9
24	DOC		10	8	5	8	6	6	9	7	7.4	1.7
25	DIS		28	21	17	26	28	32	30	35	27.1	5.8
27	EDU		175	147	169	166	168	173	192	195	173.1	15.2
28	ENG		208	146	155	156	152	159	179	174	166.1	20.2
29	ENV		377	330	296	327	316	298	310	292	318.3	27.6
30	FAM		41	40	37	42	47	46	45	43	42.6	3.3
32	FIN		124	121	135	137	125	131	128	116	127.1	7.1
33	FOO		79	56	53	69	73	79	72	75	69.5	9.9
34	FOR		92	94	95	95	99	98	99	100	96.5	2.9
35	FUE		62	40	46	46	49	55	57	56	51.4	7.3
36	GAM		9	4	10	10	13	10	19	17	11.5	4.8
37	GOV		223	165	192	190	182	183	164	155	181.8	21.3
38	HCR		482	339	386	412	442	448	471	440	427.5	47.0
39	HOU		68	64	62	66	62	63	69	62	64.5	2.8
40	IMM		177	69	156	147	92	111	154	147	131.6	36.9
41	IND		20	18	15	18	22	20	18	16	18.4	2.3
42	INS		139	91	106	106	116	107	101	86	106.5	16.2
43	LBR		381	271	244	259	263	296	309	293	289.5	42.8
44	LAW		84	67	77	72	89	101	92	79	82.6	11.1
48	MED		83	62	76	71	74	78	73	74	73.9	6.0
49	MMM		210	193	181	199	233	227	249	233	215.6	23.5
50	MON		7	3	3	3	4	6	6	6	4.8	1.7
51	NAT		121	93	100	106	97	93	97	91	99.8	9.8
52	PHA		46	35	31	32	36	42	52	51	40.6	8.3
53	POS		35	23	29	38	39	36	38	38	34.5	5.6
54	RRR		35	32	36	44	58	55	58	55	46.6	11.1

57	RET	67	53	62	75	81	89	103	100	78.8	17.9
58	ROD	32	36	41	38	25	24	29	23	31.0	6.8
59	SCI	106	88	114	113	114	116	120	114	110.6	9.9
60	SMB	73	45	46	46	54	56	64	56	55.0	9.8
62	TAX	573	535	512	524	617	581	592	566	562.5	36.0
63	TEC	178	117	117	136	139	139	144	140	138.8	19.0
64	TOB	24	46	85	73	40	37	37	31	46.6	21.2
65	TRD	335	343	322	349	360	352	402	372	354.4	24.5
66	TRA	168	206	230	221	181	190	221	207	203.0	21.6
67	TOU	13	6	8	10	7	7	9	10	8.8	2.3
68	TRU	34	27	37	33	23	29	39	37	32.4	5.6
69	URB	11	7	12	8	8	8	9	9	9.0	1.7
70	UNM	3	8	10	9	7	9	7	8	7.6	2.1
72	VET	40	32	45	37	35	38	34	36	37.1	4.0
73	WAS	126	76	31	76	77	82	76	77	77.6	25.5
74	WEL	95	51	39	39	39	39	34	30	45.8	20.8
Subtotal (N)		6457	5316	5603	5873	5965	6016	6293	5949	5,934.0	359.7
Subtotal (%)		85.1	85.3	85.6	85.5	85.6	85.8	86.2	86.4	85.7	

Part B: Issue Areas without Links to the Policy Agendas Hearings Dataset

1	ADV	32	21	18	18	10	10	10	10	16.1	7.9
5	ANI	51	29	28	29	29	28	24	23	30.1	8.8
6	APP	13	14	14	9	12	16	15	13	13.3	2.1
7	ART	16	17	21	22	24	29	25	26	22.5	4.4
8	AUT	37	36	33	31	40	34	34	39	35.5	3.1
12	BEV	13	11	13	11	9	12	13	9	11.4	1.7
13	BUD	502	449	446	478	475	474	495	468	473.4	19.6
14	CHM	44	22	25	34	37	33	33	29	32.1	6.9
21	CON	26	1	1	23	26	26	26	23	19.0	11.2
26	ECN	35	20	28	31	38	31	32	29	30.5	5.3
31	FIR	17	13	12	15	17	16	17	13	15.0	2.1
45	MAN	58	48	53	39	48	37	24	23	41.3	12.9
46	MAR	77	70	70	77	65	64	65	59	68.4	6.4
47	MIA	11	6	7	3	9	7	6	7	7.0	2.3
55	RES	41	25	29	32	29	39	45	37	34.6	6.9
56	REL	11	14	17	17	15	13	17	16	15.0	2.2
61	SPO	5	2	1	1	4	3	6	5	3.4	1.9
71	UTI	139	121	126	128	115	120	122	107	122.3	9.4
Subtotal (N)		1128	919	942	998	1002	992	1009	936	990.8	65.3
Subtotal (%)		14.9	14.7	14.4	14.5	14.4	14.2	13.8	13.6	14.3	

Total		7585	6235	6545	6871	6967	7008	7302	6885	6924.8	416.0
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Table 2. Registered Lobbyists by Time Period and Issue Area

Policy Area		Time Period								Ave.	St. Dev.
Code	Abbrev.	1996b	1997b	1998a	1998b	1999a	1999b	2000a	2000b		
Part A: Issue Areas with Links to the Policy Agendas Hearings Dataset											
2	AER	45	52	58	51	66	59	167	55	69.1	40.0
3	AGR	328	212	240	220	278	277	382	251	273.5	57.4
4	ALC	30	27	42	37	37	41	56	32	37.8	9.0
9	AVI	166	154	185	171	224	229	375	217	215.1	70.5
10	BAN	272	208	234	219	226	255	286	215	239.4	28.5
11	BNK	17	36	70	92	72	107	122	110	78.3	37.0
15	CIV	18	29	24	16	14	20	33	18	21.5	6.6
16	CAW	234	182	179	166	167	184	265	171	193.5	36.2
17	CDT	6	6	9	7	11	8	9	3	7.4	2.4
18	COM	116	117	128	112	146	148	243	136	143.3	42.5
19	CPI	52	62	92	108	129	115	238	107	112.9	57.0
20	CSP	126	106	120	97	104	90	151	100	111.8	19.8
22	CPT	167	172	185	184	180	184	258	165	186.9	29.8
23	DEF	614	563	639	617	751	778	1081	746	723.6	164.0
24	DOC	16	11	8	7	8	6	6	7	8.6	3.4
25	DIS	48	38	57	58	49	54	70	47	52.6	9.5
27	EDU	242	238	300	256	281	289	458	340	300.5	71.9
28	ENG	299	296	334	301	339	359	594	381	362.9	98.2
29	ENV	614	546	554	521	574	576	809	840	629.3	123.7
30	FAM	9	14	12	12	13	11	11	8	11.3	2.0
32	FIN	208	139	157	147	176	196	285	189	187.1	46.4
33	FOO	100	82	82	78	99	101	166	131	104.9	29.9
34	FOR	102	114	109	96	104	127	182	106	117.5	27.7
35	FUE	103	56	73	72	84	89	186	83	93.3	39.9
36	GAM	55	49	64	62	65	64	131	76	70.8	25.6
37	GOV	274	209	250	210	223	215	300	211	236.5	34.6
38	HCR	720	540	648	604	684	696	1046	739	709.6	150.6
39	HOU	165	139	132	123	151	151	245	164	158.8	37.8
40	IMM	127	75	95	77	69	84	121	86	91.8	21.4
41	IND	180	148	166	172	162	160	238	168	174.3	27.4
42	INS	128	98	111	91	109	100	107	86	103.8	13.1
43	LBR	253	178	193	164	171	176	306	185	203.3	49.9
44	LAW	132	114	114	102	130	150	233	131	138.3	41.0
48	MED	133	135	136	126	119	119	162	106	129.5	16.6
49	MMM	345	333	318	270	346	438	577	467	386.8	99.9
50	MON	18	13	12	13	15	20	66	15	21.5	18.2
51	NAT	277	214	240	232	233	269	453	273	273.9	75.9
52	PHA	78	62	64	58	67	68	117	68	72.8	18.8
53	POS	42	35	44	44	59	56	78	49	50.9	13.4

54	RRR	80	65	84	66	64	64	150	70	80.4	29.1
57	RET	55	32	43	50	50	50	105	69	56.8	22.1
58	ROD	85	74	80	59	68	61	93	49	71.1	14.7
59	SCI	122	106	135	122	143	138	236	131	141.6	39.9
60	SMB	60	47	53	42	49	48	109	63	58.9	21.4
62	TAX	1103	933	971	844	1003	1009	1207	920	998.8	113.1
63	TEC	345	255	319	313	394	401	567	374	371.0	92.6
64	TOB	51	119	192	153	99	77	86	56	104.1	48.6
65	TRD	471	441	504	456	510	514	808	502	525.8	117.2
66	TRA	469	553	625	513	551	561	822	572	583.3	106.4
67	TOU	26	32	36	31	29	32	45	32	32.9	5.7
68	TRU	22	22	32	26	29	26	26	29	26.5	3.5
69	URB	66	61	73	76	80	100	178	95	91.1	37.5
70	UNM	8	1	2	4	0	0	1	3	2.4	2.7
72	VET	29	27	21	12	21	23	31	32	24.5	6.6
73	WAS	159	97	118	97	108	104	127	83	111.6	23.4
74	WEL	108	46	53	41	40	49	63	39	54.9	22.9
Subtotal (N)		10118	8713	9819	8898	9973	10326	15267	10401	10439.4	2048.8
Subtotal (%)		84.6	84.0	84.0	83.4	83.2	83.1	83.5	82.2	83.5	

Part B: Issue Areas without Links to the Policy Agendas Hearings Dataset

1	ADV	36	57	38	26	22	19	32	16	30.8	13.2
5	ANI	22	21	21	21	21	28	36	22	24.0	5.4
6	APP	16	25	19	19	23	22	35	20	22.4	5.8
7	ART	42	51	56	45	51	61	57	60	52.9	6.9
8	AUT	41	36	36	37	28	32	52	33	36.9	7.2
12	BEV	28	28	28	16	24	24	45	41	29.3	9.4
13	BUD	954	878	985	993	1,183	1,213	1,644	1,385	1,154.4	258.7
14	CHM	31	27	28	25	29	33	36	29	29.8	3.5
21	CON	12	0	1	9	12	19	26	12	11.4	8.6
26	ECN	94	73	105	97	125	137	258	124	126.6	56.9
31	FIR	22	17	19	19	24	28	22	21	21.5	3.4
45	MAN	85	53	53	42	47	48	70	47	55.6	14.5
46	MAR	180	140	176	165	148	150	210	141	163.8	24.1
47	MIA	17	12	12	12	14	13	27	11	14.8	5.3
55	RES	104	67	91	82	83	89	184	110	101.3	36.0
56	REL	2	6	4	4	2	0	4	1	2.9	2.0
61	SPO	23	16	20	18	22	19	30	27	21.9	4.7
71	UTI	133	149	180	144	153	158	252	146	164.4	37.9
Subtotal (N)		1,842	1,656	1,872	1,774	2,011	2,093	3,020	2,246	2,064.3	428.9
Subtotal (%)		15.4	16.0	16.0	16.6	16.8	16.9	16.5	17.8	16.5	

Total		11960	10369	11691	10672	11984	12419	18287	12647	12503.6	2467.3
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Table 3. Short-term Government Attention and Lobbying

	<u>Organizations</u>		<u>Contract Lobbyists</u>	
	Model 1	Model 2	Model 1	Model 2
Short-term Hearings	0.929** (0.144)	1.032** (0.191)	1.575** (0.193)	2.005** (0.273)
Budget		-8.63e ⁻⁶ (8.43e ⁻⁶)		0.00019** (1.36e ⁻⁵)
Intercept	77.953** (4.39)	87.89** (8.41)	123.253** (6.013)	124.83** (12.53)
	R ² = 0.10 N=56, T=3 Total obs: 168	R ² = 0.11 N=26, T=3 Total obs: 78	R ² = 0.10 N=56, T=3 Total obs: 168	R ² = 0.15 N=26, T=3 Total obs: 78

Notes: Coefficients computed using OLS with panel-corrected standard errors. PCSEs appear in parentheses. *p ≤ .05, ** p ≤ .01, two-tailed test

Table 4a. Long-term Government Attention and Lobbying by Organizations

	Model 1	Model 2	Model 3	Model 4
Long-term Hearings	0.121** (0.005)	0.171** (0.008)	0.172** (0.009)	0.014** (0.003)
Budget		-2.75e ⁻⁵ (1.56e ⁻⁵)	-2.01e ⁻⁵ (3.96e ⁻⁶)	3.19e ⁻⁵ ** (4.29e ⁻⁶)
Firms			0.00021** (.00000117)	2.83e ⁻⁵ (2.56e ⁻⁵)
Organizations, t - 1				0.967** (0.02)
Intercept	51.842** (2.169)	38.9981** (2.2293)	21.553** (10.15)	-1.545* (0.684)
	R ² = 0.21 N=56, T=5 Total obs: 280	R ² = 0.39 N=26, T=5 Total obs: 130	R ² = 0.64 N=21, T=2 Total obs: 42	R ² = 0.98 N=21, T=2 Total obs: 42

Table 4b. Long-term Government Attention and Lobbying by Contract Lobbyists

	Model 1	Model 2	Model 3	Model 4
Long-term Hearings	0.225** (0.021)	0.334** (0.035)	.396** (0.03)	0.017 ⁺ (0.009)
Budget		0.00017** (3.35e ⁻⁵)	0.00012** (2.55e ⁻⁵)	6.11e ⁻⁵ ** (1.54e ⁻⁶)
Firms			0.00020** (4.8e ⁻⁵)	-3.74e ⁻⁵ (3.86e ⁻⁵)
Lobbyists, t - 1				1.065** (0.012)
Intercept	100.884** (6.48)	46.099** (7.245)	5.344 (3.245)	-4.594** (0.522)
	R ² = 0.21 N=56, T=5 Total obs: 280	R ² = 0.41 N=26, T=5 Total obs: 130	R ² = 0.66 N=21, T=2 Total obs: 42	R ² = 0.99 N=21, T=2 Total obs: 42

Notes: Coefficients computed using OLS with panel-corrected standard errors. PCSEs appear in parentheses.

*p ≤ .05, ** p ≤ .01, two-tailed test; +p ≤ .05, one-tailed test.

Table 5. Short-term Opportunities and Lobbying

	<u>Organizations</u>		<u>Contract Lobbyists</u>	
	Model 1	Model 2	Model 1	Model 2
Short-term Committees	9.985** (1.196)	13.432** (1.82)	16.419** (1.507)	23.279** (2.332)
Budget		-5.69e ⁻⁵ ** (2.11e ⁻⁵)		0.00011** (3.43e ⁻⁵)
Intercept	48.283** (5.992)	30.072* (12.268)	72.509** (8.337)	33.264 (17.435)
	R ² = 0.18	R ² = 0.25	R ² = 0.16	R ² = 0.27
	N=56, T=3	N=26, T=3	N=56, T=3	N=26, T=3
	Total obs: 168	Total obs: 78	Total obs: 168	Total obs: 78

Notes: Coefficients computed using OLS with panel-corrected standard errors. PCSEs appear in parentheses. *p ≤ .05, ** p ≤ .01, two-tailed test

Table 6a. Long-term Opportunities and Lobbying by Organizations

	Model 1	Model 2	Model 3	Model 4
Long-term Committees	4.658** (0.205)	6.378** (0.007)	5.485 (0.227)	0.437** (0.158)
Budget		-6.87e ⁻⁶ (1.23e ⁻⁵)	4.33e ⁻⁶ (1.48e ⁻⁶)	3.38e ⁻⁵ ** (3.63e ⁻⁶)
Firms			0.00023 (1.16e ⁻⁵)	2.48e ⁻⁵ (2.69e ⁻⁵)
Organizations, t - 1				0.98** (0.016)
Intercept	5.821* (2.275)	-45.22** (3.224)	-41.698 (4.539)	-7.659** (2.546)
	R ² = 0.22 N=56, T=5 Total obs: 280	R ² = 0.34 N=26, T=5 Total obs: 130	R ² = 0.52 N=21, T=2 Total obs: 42	R ² = 0.98 N=21, T=2 Total obs: 42

Table 6b. Long-term Opportunities and Lobbying by Contract Lobbyists

	Model 1	Model 2	Model 3	Model 4
Long-term Committees	8.217** (0.536)	11.696** (0.79)	10.94** (0.613)	0.287 ⁺ (0.175)
Budget		0.00022** (2.88e ⁻⁵)	0.00019** (2.74e ⁻⁵)	6.18e ⁻⁵ ** (1.41e ⁻⁶)
Firms			0.00030** (4.02e ⁻⁵)	-3.87e ⁻⁵ (3.97e ⁻⁵)
Lobbyists, t - 1				1.083** (0.015)
Intercept	6.385** (2.004)	-97.162** (7.217)	-101.056** (8.122)	-7.603** (-2.287)
	R ² = 0.19 N=56, T=5 Total obs: 280	R ² = 0.33 N=26, T=5 Total obs: 130	R ² = 0.44 N=21, T=2 Total obs: 42	R ² = 0.99 N=21, T=2 Total obs: 42

Notes: Coefficients computed using OLS with panel-corrected standard errors. PCSEs appear in parentheses.

*p ≤ .05, ** p ≤ .01, two-tailed test; ; +p ≤ .05, one-tailed test.

Appendix

Table A-1. Conversion between Lobby Disclosure and Agendas Project Categories.

Lobby Disclosure Reports			Agendas Project
Code	Abbreviation	Title	Topic and Subtopic Codes
1	ADV	Advertising	-
2	AER	Aerospace	1701, 1704
3	AGR	Agriculture	4
4	ALC	Alcohol and Drug Abuse	331, 332, 334
5	ANI	Animals	-
6	APP	Apparel/Clothing Industry/Textiles	-
7	ART	Arts/Entertainment	-
8	AUT	Automotive Industry	-
9	AVI	Aviation/Aircraft/Airlines	1003
10	BAN	Banking	1501, 1504
11	BNK	Bankruptcy	1507
12	BEV	Beverage Industry	-
13	BUD	Budget/Appropriations	-
14	CHM	Chemicals/Chemical Industry	-
15	CIV	Civil Rights/Civil Liberties	2
16	CAW	Clean Air and Water (Quality)	701, 705
17	CDT	Commodities (Big Ticket)	1502
18	COM	Communications/Broadcasting/Radio/TV	1707
19	CPI	Computer Industry	1709
20	CSP	Consumer Issues/Safety/Products	1525
21	CON	Constitution	-
22	CPT	Copyright/Patent/Trademark	1522
23	DEF	Defense	16
24	DOC	District of Columbia	2014
25	DIS	Disaster Planning/Emergencies	1523
26	ECN	Economics/Economic Development	-
27	EDU	Education	6
28	ENG	Energy/Nuclear	8
29	ENV	Environment/Superfund	7
30	FAM	Family Issues/Abortion/Adoption	1208
31	FIR	Firearms/Guns/Ammunition	-
32	FIN	Financial Institutions/Investments/Securities	1501, 1502
33	FOO	Food Industry (Safety, Labeling, etc.)	403
34	FOR	Foreign Relations	19
35	FUE	Fuel/Gas/Oil	803
36	GAM	Gaming/Gambling/Casino	1526
37	GOV	Government Issues	20

38	HCR	Health Issues	3
39	HOU	Housing	1400, 1401, 1404, 1406-1410, 1499
40	IMM	Immigration	529, 530
41	IND	Indian/Native American Affairs	2102
42	INS	Insurance	1505
43	LBR	Labor Issues/Antitrust/Workplace	5, 1520
44	LAW	Law Enforcement/Crime/Criminal Justice	1200-1207, 1209-1211, 1299
45	MAN	Manufacturing	-
46	MAR	Marine/Maritime/Boating/Fisheries	-
47	MIA	Media (Information/Publishing)	-
48	MED	Medical/Disease Research/Clinical Labs	300, 306, 349, 398, 399
49	MMM	Medicare/Medicaid	303
50	MON	Minting/Money/Gold Standard	104, 2006
51	NAT	Natural Resources	709, 710, 711, 2101, 2103
52	PHA	Pharmacy	306
53	POS	Postal	2003
54	RRR	Railroads	1005
55	RES	Real Estate/Land Use/Conservation	-
56	REL	Religion	-
57	RET	Retirement	503
58	ROD	Roads/Highway	1002
59	SCI	Science/Technology	1700, 1701, 1704, 1705, 1798, 1799
60	SMB	Small Business	1521
61	SPO	Sports/Athletics	-
62	TAX	Taxation/Internal Revenue Code	107, 2009
63	TEC	Telecommunications	1706
64	TOB	Tobacco	333
65	TRD	Trade	18
66	TRA	Transportation	10
67	TOU	Travel/Tourism	1524
68	TRU	Trucking/Shipping	1006, 1007
69	URB	Urban Development/Municipalities	1400, 1401, 1403, 1406, 1409
70	UNM	Unemployment	103
71	UTI	Utilities	-
72	VET	Veterans	315, 601, 1409, 1609
73	WAS	Waste (Hazardous/Solid/Interstate/Nuclear)	703, 704
74	WEL	Welfare	13

Disclosure Report categories with no corresponding Agendas Project subtopics are marked with a "-".

Number of policy areas with associated congressional hearings data available: 56 out of 74 (75.7%)
Percent of lobbying activity in these areas: 85.7%

Note: For a full description of the Agendas Project codes, see
<http://depts.washington.edu/ampol/topicindex.shtml>.

Table A-2. Conversion between Lobby Disclosure and Budget Functions.

Lobby Disclosure Reports			Budget
Code	Abbreviation	Title	Topic Codes
1	ADV	Advertising	-
2	AER	Aerospace	252
3	AGR	Agriculture	350
4	ALC	Alcohol and Drug Abuse	-
5	ANI	Animals	-
6	APP	Apparel/Clothing Industry/Textiles	-
7	ART	Arts/Entertainment	-
8	AUT	Automotive Industry	-
9	AVI	Aviation/Aircraft/Airlines	402
10	BAN	Banking	373
11	BNK	Bankruptcy	-
12	BEV	Beverage Industry	-
13	BUD	Budget/Appropriations	-
14	CHM	Chemicals/Chemical Industry	-
15	CIV	Civil Rights/Civil Liberties	-
16	CAW	Clean Air and Water (Quality)	304
17	CDT	Commodities (Big Ticket)	-
18	COM	Communications/Broadcasting/Radio/TV	-
19	CPI	Computer Industry	-
20	CSP	Consumer Issues/Safety/Products	-
21	CON	Constitution	-
22	CPT	Copyright/Patent/Trademark	-
23	DEF	Defense	50
24	DOC	District of Columbia	-
25	DIS	Disaster Planning/Emergencies	453
26	ECN	Economics/Economic Development	-
27	EDU	Education	501, 502, 503, 504, 702
28	ENG	Energy/Nuclear	270
29	ENV	Environment/Superfund	300
30	FAM	Family Issues/Abortion/Adoption	-
31	FIR	Firearms/Guns/Ammunition	-
32	FIN	Financial Institutions/Investments/Securities	-
33	FOO	Food Industry (Safety, Labeling, etc.)	-
34	FOR	Foreign Relations	150
35	FUE	Fuel/Gas/Oil	-
36	GAM	Gaming/Gambling/Casino	-
37	GOV	Government Issues	-
38	HCR	Health Issues	550
39	HOU	Housing	371, 604, 704
40	IMM	Immigration	-

41	IND	Indian/Native American Affairs	-
42	INS	Insurance	-
43	LBR	Labor Issues/Antitrust/Workplace	504, 505, 554
44	LAW	Law Enforcement/Crime/Criminal Justice	750
45	MAN	Manufacturing	-
46	MAR	Marine/Maritime/Boating/Fisheries	301, 303, 403
47	MIA	Media (Information/Publishing)	-
48	MED	Medical/Disease Research/Clinical Labs	552
49	MMM	Medicare/Medicaid	-
50	MON	Minting/Money/Gold Standard	-
51	NAT	Natural Resources	300
52	PHA	Pharmacy	-
53	POS	Postal	372
54	RRR	Railroads	-
55	RES	Real Estate/Land Use/Conservation	-
56	REL	Religion	-
57	RET	Retirement	601, 602, 651
58	ROD	Roads/Highway	-
59	SCI	Science/Technology	251
60	SMB	Small Business	-
61	SPO	Sports/Athletics	-
62	TAX	Taxation/Internal Revenue Code	-
63	TEC	Telecommunications	-
64	TOB	Tobacco	-
65	TRD	Trade	155
66	TRA	Transportation	400
67	TOU	Travel/Tourism	-
68	TRU	Trucking/Shipping	-
69	URB	Urban Development/Municipalities	451
70	UNM	Unemployment	504, 603
71	UTI	Utilities	-
72	VET	Veterans	700
73	WAS	Waste (Hazardous/Solid/Interstate/Nuclear)	-
74	WEL	Welfare	506, 604, 605, 609

Disclosure Report categories with no corresponding OMB functions are marked with a "-".

Number of policy areas with associated budget codes: 27 out of 74 (36.5%)

Percent of lobbying activity in these areas: 50.3%

Note: For a full description of the OMB functions, see
<http://depts.washington.edu/ampol/navResearch/budauth.shtml>.

Table A-3. Conversion between Lobby Disclosure and North American Industry Classification System.

Lobby Disclosure Reports			NAICS Categories
Code	Abbreviation	Full Fits	Partial Fits
1	ADV	-	-
2	AER	336414, 336415, 336419, 334511, 51334	334220 (5/31), 339113 (1/69), 421860 (1/19), 481212 (1/9), 513210 (1/8), 513210 (4/10), 513390 (2/5), 541710 (2/30)
3	AGR	111, 112, 1151, 1152, 333111, 4225, 42291, 49313	332420 (1/26), 484220 (4/24), 484230 (4/24), 493120 (1/9), 532490 (5/26), 811310 (3/33), 813410 (3/44), 813910 (3/39), 92614
4	ALC	31212, 31213, 31214, 4228, 4453, 7224	492210 (1/7), 622210 (9/14), 623220 (4/14), 624190 (5/29), 621420 (7/10), 813319 (4/19)
5	ANI	-	-
6	APP	-	-
7	ART	-	-
8	AUT	-	-
9	AVI	334511, 336411, 336412, 336413, 481, 4881, 611512	324110 (1/39), 326211 (1/8), 331491 (1/59), 332510 (1/23), 334519 (1/91), 336311, 336321 (1/6), 336360, 421860 (5/19), 441229 (1/6), 532411 (2/11), 561599 (3/22), 713990 (1/103), 722310 (1/7), 813319 (1/19), 92612
10	BAN	521, 522, 551111, 926	-
11	BNK	54111	525920 (1/6), 92211
12	BEV	-	-
13	BUD	-	-
14	CHM	-	-
15	CIV	54111	813311 (2/6), 813319 (2/19), 92
16	CAW	22131, 22132, 23491, 23511, 2358, 333411, 333415, 334512, 336111, 54162, 56291, 813312	33319 (3/45), 336399 (6/25), 421730 (2/15), 421830 (3/74), 541380 (1/33), 541710 (1/30), 561990 (2/24), 811198 (1/10), 924
17	CDT	52313, 52314, 52392, 52393	522298 (1/13), 523210 (4/7), 541990 (1/17), 92614
18	COM	23492, 3342, 3343, 33592, 512, 513, 811213	331422 (1/21), 421690 (4/43), 711510 (29/71), 92613
19	CPI	334, 42143, 44312, 5112, 5415, 61142, 811212	541710 (1/30)
20	CSP	31-33, 54111	524126 (1/22), 813319 (2/19)
21	CON	-	-
22	CPT	-	-
23	DEF	336112, 3364, 3366, 336992, 4211, 42186,	334220, 541710 (2/30), 813319 (4/19), 92314

		483111, 483113, 4883	
24	DOC	?, 92	-
25	DIS	524, 624221, 62423, 621493, 6219, 622, 922	-
26	ECN	-	-
27	EDU	61	813211 (3/10), 92311
28	ENG	211, 2121, 213111, 213112, 213113, 2211, 2212, 486, 813312	234910 (9/17), 234920 (9/16), 541990 (1/17), 92613
29	ENV	562, 54162, 813312	235110 (1/25), 541330 (1/27), 541380 (1/33), 541710 (1/30), 924
30	FAM	62141	541110 (1/23), 624110 (4/13), 624190 (2/29), 92312
31	FIR	-	-
32	FIN	523, 525	-
33	FOO	311, 3121, 322215, 333294, 4224, 4228, 445, 446191, 62421, 722	322212 (3/7), 322299 (7/24), 325132 (1/30), 326140 (8/14), 541710 (1/30), 9261
34	FOR	?, 92812	-
35	FUE	211, 213111, 213112, 2211, 2212, 486, 813312	234910 (9/17), 541990 (1/17), 92613
36	GAM	7132, 72112	-
37	GOV	?, 92	-
38	HCR	3254, 334510, 3391, 42145, 4222, 524114, 621, 622, 623, 813212	541710 (8/30), 611310 (1/21), 813920 (6/24), 92312
39	HOU	23311, 2332, 53111, 62422	813319 (2/19), 81399 (7/9), 82511
40	IMM	1151, 1152, 81393	62423 (4/7), 92212, 92812
41	IND	?, 92115	-
42	INS	524, 5251	-
43	LBR	115115, 115116, 541612, 55, 5611, 5613, 81393	541311 (7/10), 32134 (1/21), 81392 (1/24), 92313
44	LAW	5411	911310 (1/21), 813311 (2/6), 813319 (2/19), 9261
45	MAN	-	-
46	MAR	-	-
47	MIA	-	-
48	MED	3254, 334510, 3391, 42145, 4222, 413212	541710 (8/30), 611310 (1/21), 813920 (6/24), 92312
49	MMM	524114, 621, 622, 623, 6232, 6233, 62412	62399 (4/17), 813311 (1/6), 92312
50	MON	521, 522, 9261	-
51	NAT	113, 114, 1153, 21, 2331, 487, 712, 7212, 813312	71399 (15/103), 9241, 92613
52	PHA	3254, 3391, 42145, 4222, 446, 621991, 92312	-
53	POS	491, 492, 561431	-
54	RRR	3365, 482, 485111,	23499 (4/63), 42186 (2/19), 92612

		485112, 485119	
55	RES	-	-
56	REL	-	-
57	RET	5251, 81393	541612 (5/13), 9231
58	ROD	2341, 484	235210 (3/10), 235310 (1/13), 332312 (2/23), 332322 (1/44), 92612
59	SCI	336414, 336415, 336419, 334511, 51334, 54138, 5417	334220 (5/31), 339113 (1/69), 421860 (1/19), 481212 (1/9), 513210 (1/8), 513220 (4/10), 513390 (2/5), 611310 (13/21), 81392 (12/24), 92613, 927
60	SMB	?, 92512	-
61	SPO	-	-
62	TAX	541213	52391 (1/7), 54111 (2/23), 561440 (1/7), 813319 (1/19), 92113
63	TEC	5133, 56142	234920 (4/16), 53249 (1/36), 23531 (2/13), 514199 (1/6), 541618 (1/2), 92613
64	TOB	11191, 3122, 42294, 453991	115114 (1/42), 422590 (2/34), 92312, 92614
65	TRD	?, 92812	
66	TRA	2341, 334511, 336, 4211, 42186, 441, 481, 482, 483, 484, 485, 487, 488	23499 (4/63), 235210 (3/10), 235310 (1/13), 324110 (1/39), 326211 (1/8), 331491 (), 332312 (2/23), 332322 (1/44), 332510 (1/23), 334519 (1/91), 336311, 336321 (1/6), 336360, 532411 (2/11), 561599 (3/22), 713990 (1/103), 722310 (1/7), 813319 (3/19), 92612
67	TOU	5615, 56192, 721, 92612	-
68	TRU	-	-
69	URB	233, 624221	813319 (3/19), 92512
70	UNM	?, 92313	-
71	UTI	-	-
72	VET	61131, 624221	813311 (1/6), 813410 (1/44), 92314
73	WAS	562, 54162, 813312	235110 (1/25), 484220 (3/24), 484230 (7/24), 541330 (1/27), 541380 (1/33), 541710 (1/30), 924
74	WEL	624	813319 (8/19), 9231

Disclosure Report categories with no corresponding NAIC codes are marked with a "-".

Number of policy areas with associated NAIC codes: 48 out of 74 (64.9%)

Percent of lobbying activity in these areas: 62.1%

Note: For a full description of the North American Industry Classification System, see <http://www.census.gov/epcd/www/naics.html>.

Constructing a Measure of Industry Size

In order to link areas of economic activity with areas of lobbying activity, we use the newly published North American Industrial Classification System (NAICS)

(<http://www.census.gov/epcd/www/naics.html>). As agreed to in NAFTA, Canada, Mexico, and the United States created the 6-digit NAICS codes to standardize industries, to provide more detail than its predecessor, the 4-digit Standard Industry Classification (SIC), and to modernize the data to account for technological innovations. The NAICS is useful to our analysis because it defines the parameters of specific industries according to the principle of production-orientation, and classifies them in hierarchical order. In other words, companies, non-profit organizations, and government agencies are grouped together if they use similar production methods. When classifying a firm into its proper industry, the NAICS considers what good or service the firm is “primarily engaged in producing.” For example, the NAICS would categorize a missile guidance system research and development contractor as follows:

<u>NAICS Category</u>	<u>NAICS Code</u>	<u>NAICS Title [index entry]</u>
Sector	54	Professional, Scientific, and Technical Services
Subsector	541	Professional, Scientific, and Technical Services
Industry group	5417	Scientific Research and Development Services
Industry	54171	Research and Development in the Physical, Engineering, and Life Sciences
U.S. Industry	541710	Research and Development in the Physical, Engineering, and Life Sciences
U.S. Index Entry		[guided missile and space vehicle engine research and development]

The SIC system would likely have categorized this company as an R&D firm in the aviation manufacturing industry even though the company does not *manufacture* anything. While both methods may be meaningful, the NAICS has the advantage of applying one common technique across industries. As can be seen, the first five digits are uniform for all three participating NAICS countries and the sixth digit is reserved for nation-specific industries.

Additionally, the U.S. version includes specific U.S. Index Entries that more precisely capture the goods and services commonly produced by firms in an industry.

Following the production-orientation principle, we developed a coding process to match 6-digit NAICS codes and NAICS Index Entries with the Lobbying Disclosure Act Issue Area codes defined by House and Senate clerks (see Table A-3: Conversion between Lobby Disclosure and North American Industry Classification System). Consider the search for the TAX Issue Area to more clearly understand how a search was completed. The TAX area is illustrative because the results of the operational definition may seem counterintuitive to what industries might otherwise be expected to have an ex ante political interest in tax policy, even though selecting which industries “primarily engaged in producing” tax services is relatively straightforward.

In the first step, a keyword search was conducted in the online 1997 NAICS index (<http://www.census.gov/epcd/naics/framesrc.htm>) for each word found in the issue area description and for related words found in the corresponding Policy Agendas subtopic codes. The NAICS index entries are designed to make it easier to search the Economic Census database for specific industries, as well as for industries related to the search term. All search terms were recorded for each issue area because this method is in essence a textual analysis of the NAICS index. This search produced a list of NAICS codes, index entries and titles, and links to their operational definition in the database. For example, the search for the word *tax* produced the related index entries “Offices of Lawyers,” “Tax Preparation Services,” and “Taxpayers' Advocacy Organizations,” as well as “Taxi and Limousine Service,” “Taxidermy Supplies Wholesaling,” and several others.

After this initial step, the coder examined each industry's methods of production—as defined by the NAICS—to determine whether or not it may be substantively germane to the issue area. The purpose of this second step was to distinguish between an industry's common production-oriented interest and all other social, economic, and political questions that may or may not be of interest to firms in the industry. Additionally, the jurisdictional descriptions found in the Agendas subtopic codes previously identified for the 74 issue areas were used to minimize subjectivity when making these elimination decisions. If it was clear that the industry's production-orientation did not match the issue area's jurisdiction, then the search for that index entry was terminated; for all others, the search continued. In the case of TAX, the search continued for tax accountants, attorneys, collection agencies, and taxpayer advocates. Conversely, the searches for taxi drivers and taxidermy suppliers were suspended, even though the cliché about death and taxes would suggest that cab drivers and taxidermy wholesalers should care about tax policy. If they are concerned about taxes, then, should we not expect them to register to lobby in the TAX Issue Area? Perhaps, but there is no theoretical reason that would definitively answer this question. Therefore, the search procedure was designed to err on the side of caution by underestimating the number of industries concerned with any individual issue area. Then why continue the search for attorneys—who may or may not practice tax law—but discontinue the search for the taxidermists? Simple. Taxidermists are not “primarily engaged in producing” tax services, whereas *some* lawyers who specialize in federal taxes are engaged in the activity. By the end of the second step, a manageable list of NAICS categories that may possibly fit the issue area remained for further inquiry.

After having filtered the list down to the relevant index items, the third step was to decide how well each NAICS category fit the Issue Area in question. The industry was operationalized as a perfect fit, a partial fit, or no fit as follows:

Perfect Fit: If (1) all firms primarily engaged in the NAICS production activity were to register lobbyists and (2) the entire set could reasonably be expected to select the pre-defined Issue Area being searched, then they were coded as a perfect fit.

Partial Fit: If (1) some, but not necessarily all, firms primarily engaged in the NAICS production activity were to register lobbyists and (2) the identified subset could reasonably be expected to select the LDA Issue Area being searched, then it was coded as a partial fit and weighted for the proportion of relevant entries to all entries

No Fit: If none of the firms primarily engaged in the NAICS production activity could reasonably be expected to register lobbyists in the issue area, then they were coded as no fit.

Because the NAICS is a hierarchical classification system, perfect fits were recorded at the highest categorical level possible to save coding time. However, partially fitting industries were always recorded at the U.S. Index Entry level. To determine the proportion of firms in a partially fitting industry would register in a given issue area, the coder simply counted the number of index entries that would fit the issue area, and then divided by the total number of index entries for the industry. For instance, U.S. Industry 813319, “Other Social Advocacy Organizations,” was coded as a partial fit with a 0.053 proportional weight because “Taxpayer Advocacy Organizations” was only one of nineteen Index Entries listed for the industry.

This three-step process was repeated for each search term until all perfect and partial fits for an issue area were identified. While there may be many ways to have linked industries with their respective Washington policy communities, we concluded that the process’ advantages of objectivity and precision outweighed the disadvantages of subjectivity and underestimation. Of the 56 Lobby Disclosure Issue Areas previously determined to match the Agendas Project policy

topics, 48 issue areas could successfully be linked to corresponding economic sectors.² The remaining eight Issue Areas were unsuitable because topics tended to be government issues that would chiefly attract the attention of bureaucrats who need not register to lobby, no industries other than governments could be reliably matched, or no industries could reliably be excluded according to the both the concept of industry size and the coding procedure. For instance, the District of Columbia (DOC) Issue Area was eliminated because the issues tend to be intergovernmental concerns that could not be intuitively matched to any one industry.

Ultimately, the concept of industry size is operationally defined as the variable *Number of Firms*, or how many individual firms existed in the industry or industries that could reasonably be expected to attend to an issue area because they are primarily engaged in producing the good or service that is the subject of the issue area's jurisdiction. The 1997 Economic Census was the first to use NAICS codes to organize data for all US industries. These data are updated annually with a sample survey. Unfortunately, only the data for 1998 and 1999 are complete because the Census Bureau only published data on firms for four of twenty sectors for the full census. As a result, *Number of Firms* was only included in the analysis for the four 6-month Lobbying Disclosure reporting periods for 1998 and 1999.

² The eight Lobby Disclosure Issue areas excluded from this portion of the analysis are FOR, DOC, IND, GOV, URB, SMB, TRD, UNM, and VET.

Figure 1. Relationship of Indicators from the 1996 Lobby Disclosure Reports

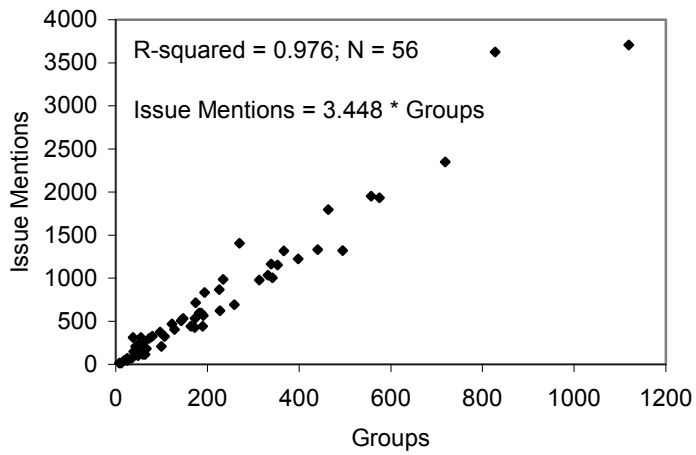
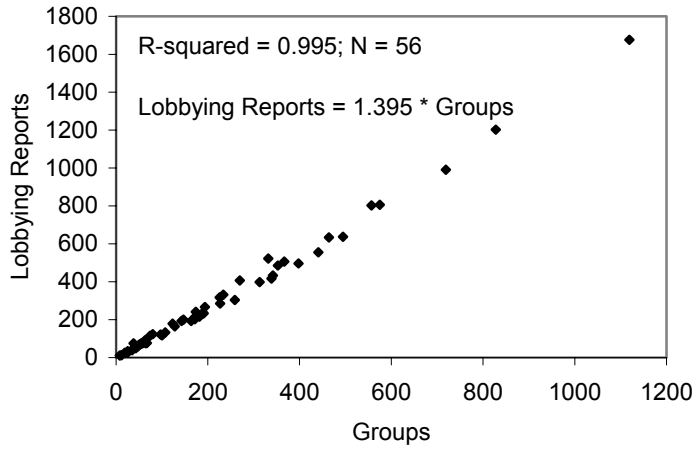


Figure 2. Long-term Congressional Attention and Lobbying Activity

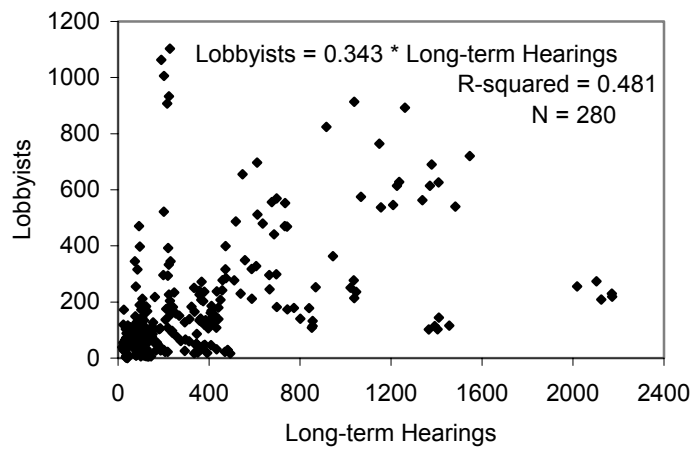
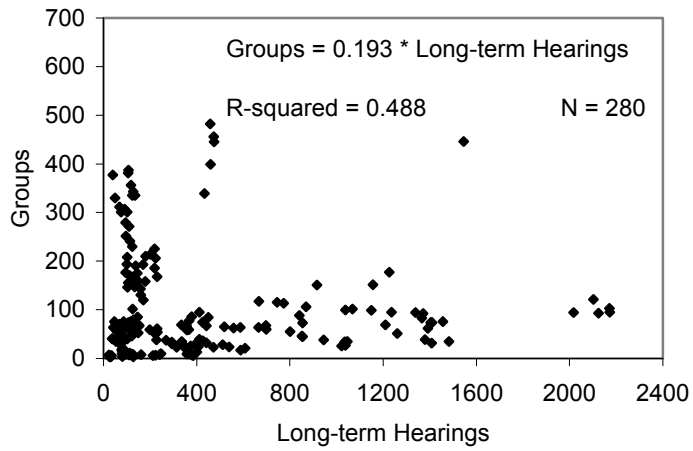


Figure 3. Short-term Congressional Attention and Lobbying Activity

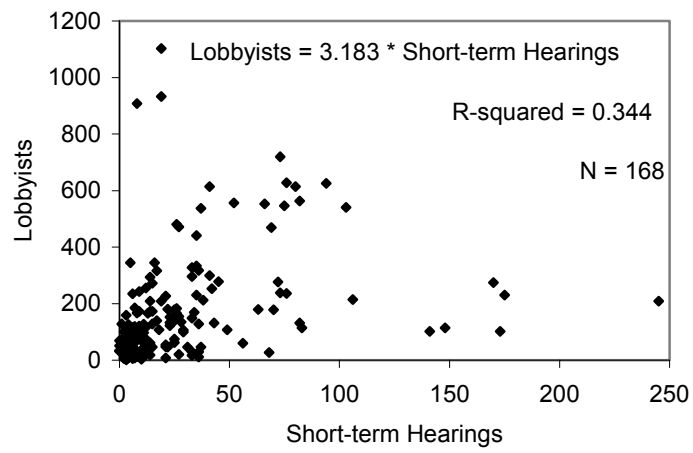
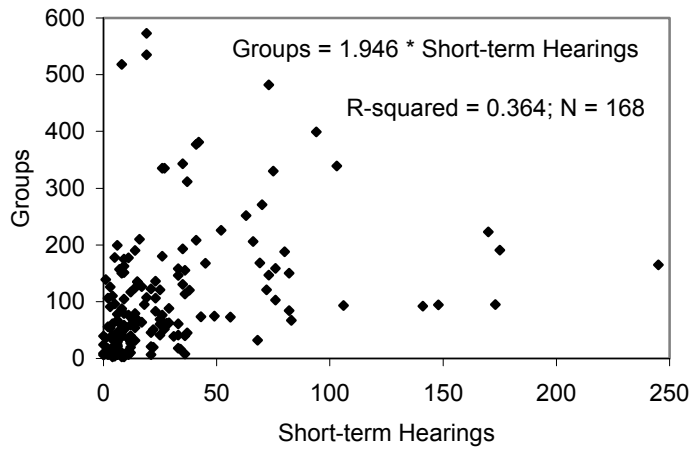
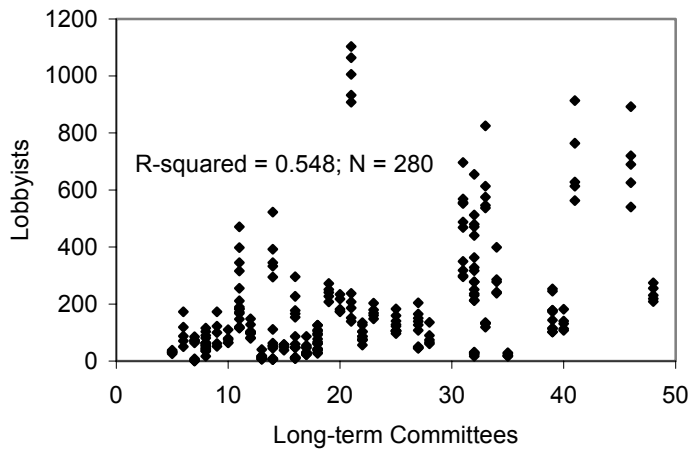
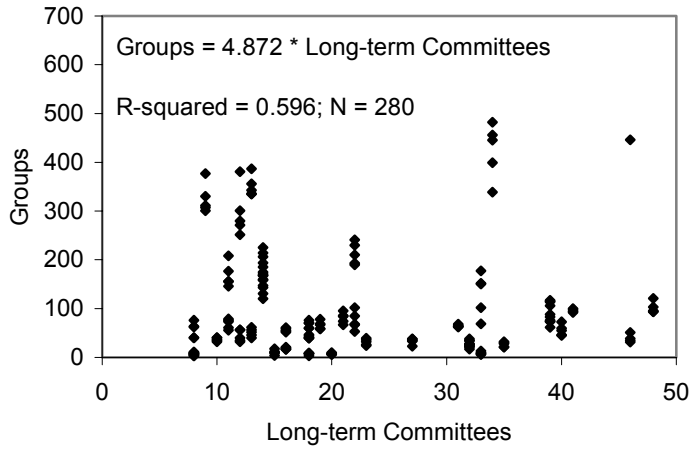


Figure 4. Long-term Spread of Congressional Attention and Lobbying Activity



Lobbyists = 8.453 * Long-term Committees

Figure 5. Federal Spending and Lobbying Activity

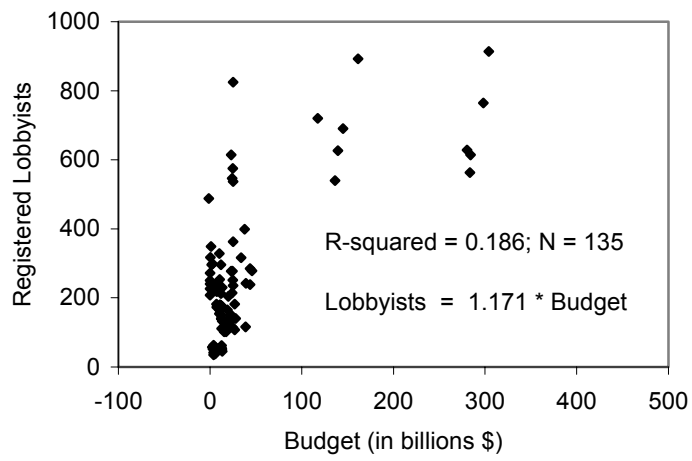
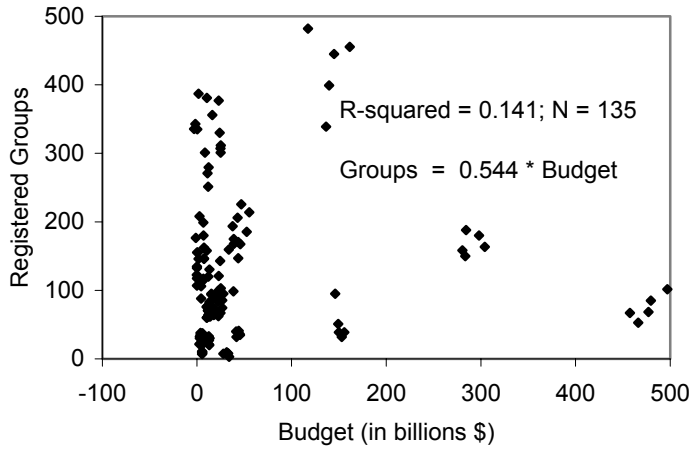


Figure 6. Industry Size and Lobbying Activity

