Interest Groups and Legislative Ideology: Who Influences Whom?

Thomas T. Holyoke
Department of Political Science
California State University, Fresno
2225 E San Ramon, MS MF19
Fresno, California 93740-8029
tholyoke@csufresno.edu.

Forthcoming in
American Politics Research

Earlier versions of this paper were presented at the Annual Meeting of the Midwest Political Science Association in 2021 and at the Annual Meeting of the Southern Political Science Association in 2025. I would like to thank Tristan Hightower, James Strickland, and Alixandra Yanus for comments on these versions of the paper.

Abstract

What is the relationship between the ideological positions of state legislatures and interest groups in that same state, assuming there is one? Using data on the counts of group populations along with data on the ideological leanings of state legislative majority parties, I find that while variation in group populations does not affect legislative ideology, the ideological positions of legislative majority parties does influence group numbers, though the relationship is nonlinear. Liberal legislatures are particularly influential on the number of groups in a state. It also turns out that legislative party ideology has a conditional effect on the number of cause-oriented advocacy groups and business-oriented associations in a state, mitigating the effect of associations on advocacy groups while enhancing the effect of advocacy groups by business associations. Overall, though, the data show that it is legislative parties that influence group population sizes and compositions, not the other way around.

Do more interest groups in a state shape the ideological leanings of political parties in that state's legislature, or is the reverse true? In a time of greater ideological polarization between the parties in Congress and in the legislatures of many states (see Shor and McCarty 2022), the question is worth studying. We know that parties and interest groups are joined in a number of ways, but how and which is more influential on the other? Past research has found only ambiguous influence either way (e.g., Grossman and Hopkins 2016; Furnas, Heaney, and LaPira 2019; Fagan, McGee, and Thomas 2021), but with political partisanship increasing in Washington, DC, and the states, a nuanced analysis might uncover evidence of more interest groups as the moderators or inflamers of partisan tensions. Or perhaps it is the partisan leanings of lawmakers in legislatures that are, in some way, encouraging, or discouraging, the mobilization of new organized interests.

In this paper I use data on the size and composition of state interest group communities along with the state legislative ideology scores of Shor and McCarty (2011) to study the linkage between group populations and party ideology, at least in states' lower legislative chambers. I find a nonlinear relationship exhibiting a connection between liberal legislatures and larger group communities, but one which diminishes when majority party median ideology is moderate. The relationship strengthens a little when legislatures are more conservative, though the effect is not as great on the ideological right as on the left. I also find that liberal legislatures spending more money are especially conducive to group mobilization, perhaps to support larger regulatory states and social programs. Exploring further, I find that some of this majority party influence is conditional, influencing and influenced by the number of business-oriented associations and more left-leaning advocacy groups competing with each other in a state. Finally, I conclude by speculating on what this means for the development of interest group theory.

Groups and Parties

Scholars have become interested in whether cross-pollinating relationships exist between interest groups and political parties. That mass social movements in US history significantly influenced the compositions and agendas of the parties has long been appreciated. One can see it in the way organized labor re-made the Democratic Party in the early 1900s (Greenstone 1977), though the emergence of the environmental, new civil rights, and anti-war movements in the later 20th century loosened labor's hold (Heaney and Rojas 2015; Francia 2016). The profound influence of Christian fundamentalists on the Republican Party in the 1970s and 80s is another example (Wilcox and Robinson 2010). Yet while many social movements transformed into interest groups rather than be absorbed by the parties (McFarland and Costain 1998), only recently have scholars started asking if this means there must also be linkages between the ideological dispositions of parties and the number of groups in a political system. If there are, is it party ideological preferences that influence the number of interest groups or is it the other way around? Research by Gray et al. (2018) looked at party influence on group populations (without really finding any) but did not examine the reverse. Holyoke and Cummins (2020) found that group influence on state spending was filtered through legislative parties, but did not explore whether groups actually influenced party ideology or whether parties shaped interest group formation rates.

A few scholars, though, have started to articulate linkages between interest groups and parties. Some even see them as two sides of the same coin, two forms of political mobilization joined at the hip. Heaney (2010) argues that groups and parties co-evolved in American history, feeding off the same sources of popular passions and ambitions, even though their purposes are different – parties influence policy by winning elections while interest groups typically (though not exclusively) shape it by influencing lawmakers already in office. But they are not mutually

exclusive. Bawn et al. (2012) argue that parties evolved out of bargains over policy priorities made by interest groups representing small but highly vocal slices of the American electorate. Party platforms and ideological positions thus reflect the negotiated priorities of however many groups existed at the time while party candidates became agents committed to enacting these group-driven policies once elected. Groups whose demands are so different from the others that they cannot be accommodated by one party instead form an opposing party, creating an ideological division. It therefore would be the number of interest groups, and the diversity of their organizational types, that influence the ideological positions of, and therefore divisions between, the parties in a political system. The more groups there are of different types in the population, the more pressure on the parties to take more partisan positions.

If so, it is not surprising that Garlick (2022) finds that the more lobbying there is from more advocacy groups in state legislatures, the more polarized roll-call voting becomes on bills (nearly all in one-party voting for it and nearly everyone in the other against it). Bawn et al.'s perspective also arguably fits the work of Anzia and Moe (2015) on how public sector unions elect Democrats to increase pension spending, arguably because unions use low voter turnout in mid-term elections to get their supporters elected to local political positions (Anzia 2011). Hartney (2022) similarly finds laws protecting K-12 teachers in state and local school districts to be the result of union influence.

If it is true that the number and diversity of interest groups influence the ideological positions of political parties, including those of lawmakers in state legislatures, then drawing deeper on the group literature should make it possible to deduce hypotheses predicting how this influence manifests. For instance, the last few decades have shown fairly clear evidence of business communities in many political jurisdictions becoming more closely aligned with conservative

lawmakers (Waterhouse 2015; Drutman 2016). Businesses themselves may only lobby sporadically (Brasher and Lowery 2006), but their trade associations are established presences in national and state capitals with conservative lawmakers often taking policy positions to attract their support (Hansen 1991). Yet Bawn et al. suggest that what makes these organizations influential is the people they represent, each association representing a slice of private sector employment (even if the association technically represents just the employing company), whose votes put business-supportive allies in office. In other words, the more private sector workers there are, and the more associations there are, the more conservative-leaning lawmakers there should be in elected legislative office so that the majority party will be right-leaning. Thus, my first hypothesis:

Hypothesis 1a: The more trade associations there are in an interest group system, and the larger the private sector workforce, the more likely the majority legislative party will lean conservative.

The other major type of organized interest is the advocacy group. Sometimes called citizens or public interest groups, they are frequently established to push back against the influence of business in American politics, often (though not universally) by pushing more ideologically liberal policy positions (Berry 1977; McFarland 1984). Over the 20th century, though, advocacy groups changed so that they relied less on highly active members and more on people simply supporting them financially so that the ability of these often left-leaning groups to influence the positions of lawmakers became increasingly tied to people's disposable income (Berry 1999; Skocpol 2002). Therefore:

Hypothesis 1b: The more advocacy groups there are in a group system, and the higher the level of median income, the more likely the majority legislative party will lean liberal.

One more hypothesis is suggested by Berry's and Skocpol's research. Financial supporters of advocacy groups tend to be attracted by the opportunity to meaningfully influence public policy, responding to what are called purposive incentives, or opportunities to support policy change (McFarland 1984). By contrast, trade associations recruit members by offering tangible, material incentives which generally do not attract politically passionate supporters. Consequently:

Hypothesis 1c: The observable effect of advocacy groups on the position of the majority legislative party should be greater than the observable effect of trade associations.

The alternative perspective is that it is party lawmakers who are influencing interest groups. Grossmann and Hopkins (2016) argue that while uneasy interest group partnerships may be the foundation of the Democratic Party, Republicans, at least by the 21st century, appear to have become more of a cohesive movement where members are required to adhere to ideological orthodoxy or find themselves shut-out. This suggests that, at least on the right, the factional interests of groups have little influence over parties. If anything, it suggests the opposite, that it is parties, especially policy agenda-controlling parties in legislatures, that stimulate or constrain the emergence of interest groups. This arguably fits with findings by Furnas, Heaney, and LaPira (2019) that, increasingly, lobbyists in Washington, DC (who are advocates for interest groups) are being pressured by party leaders to align with congressional Democrats or Republicans.

A line of research in sociology also supports this idea of parties driving interest group formation, groups only mobilizing to push new policies or create new public programs when inspired to do so because political leaders from one party or the other signal their willingness to champion those issues (e.g., Tilly 1978; Meyer and Minkoff 2004). By taking a clear partisan position with an agenda distinct from its opponents, party lawmakers might spur the formation of new groups, or draw them in from other political systems or levels higher or lower in the American

federal system (Leech et al. 2005; Baumgartner, Gray, and Lowery 2009). In other words, it is party agendas that drive group mobilization. O'Connor and McFall (1992), for example, even find a few conservative advocacy groups emerging at the urging of Ronald Reagan in the 1980s.

This view is arguably consistent with the cartel theory of legislatures, though in a negative sense with constraints on new group mobilization. Here majority party leaders use their control of legislative agendas to protect their members from issues divisive to their party's cohesion or threatening to its majority status (Cox and McCubbins 2007). Interest groups supporting the majority are allowed to be influential, while those unwilling or unable to be loyal are denied access (or just ignored). Lawmakers connect loyal interest group-allies to their leaders (Schnackenberg 2017) and work only with those contributing to fellow party members (Selling 2023). This appears especially true with the Republican Party where in the 1990s House Majority Leader Tom DeLay (R-TX) was known for only giving access to lobbyists faithful to the Republican agenda (Kaiser 2009). This pressure to support the party explains why Fagan, McGee, and Thomas (2021) found lawmakers able to push interest groups into lobbying for policies outside of their normal member or client-driven issue-niches. This also suggests that potential groups unable to adhere to party ideology are unlikely to mobilize or choose to become active in a different political system. Cartel theory has also been found to be true of state legislatures (Cox, Kousser, and McCubbins 2010, though see Jackman 2013), and perhaps even more so since voters rarely hold state legislators accountable for their actions (Rogers 2017).

Overall, this suggest that Democratic controlled legislatures are more likely to lead to more active interest groups while Republican domination results in fewer. As Baumgartner, Gray, and Lowery (2009) found that more groups mobilize to help defend public programs after lawmakers enact them, then to the extent that liberals support more public programs and a stronger regulatory

state, several hypotheses can be deduced. Since Strickland (2020) finds that more spending is associated with more interest groups, and since government programs and social services require a greater level of public spending typically supported by left-leaning parties (Smith and Lipsky 1993; Salamon 1995), a hypothesis:

Hypothesis 2a: The more left-leaning is the majority legislative party, and the more spending the legislature approves, the more interest groups there will be.

As for greater regulatory power, Elling (2006, 262-263) argues that "the scope of state administration is reflected in the size of the state workforce" (also see Holyoke and Cummins 2020) so assuming that more liberal parties and many (though certainly not all) interest groups support greater government regulation, a second, similar hypothesis is:

Hypothesis 2b: The more left-leaning is the majority legislative party, and the more people are employed by government, the more interest groups there will be.

Finally, since Grossmann and Hopkins argue that the Democratic Party is composed more of interest groups than is the Republican Party, if there is empirical evidence that party ideological positions influence interest group populations, then the effect of liberal parties should be greater than that of right-leaning majority parties. In other words:

Hypothesis 2c: The magnitude of the effect of more liberal majority party positions on interest group numbers should be greater than the effect of more conservative party positions.

Research Design

Rather than study the potential influence of interest groups on party positions (and vice versa) at the national level where Congress presents only a single case, I opt for a stronger research design by studying the link between ideological positions of parties in state legislatures and state

interest group populations. This makes it possible to employ a cross-sectional analysis in panels of fifty observations each. Data on the ideological positions of state lawmakers across twenty years comes from Shor and McCarty (2011; 2022), which they aggregate into legislative chamber or legislative party median positions.[1] My focus, though, is on the positions of the majority party in each state's legislature because it is the majority that controls the agenda and thus largely determines levels of state spending and even influences state employment. I also focus on just the lower chamber of each legislature, houses of representatives or assemblies, because lawmakers there often represent smaller districts with shorter terms that arguably keep them closer to the passionate political constituencies who often mobilize as interest groups. I do include Nebraska's senate as it is the state's only legislative body and appears in the dataset (Masket and Shor 2015). For ease of interpretation later, I rescale this variable so instead of ranging from −1.73 to 1.42, it goes from 0 to 3.15 (larger values are still more conservative).

The second main dataset is the number of organizations lobbying in the states. This originally comes from the National Institute for Money in State Politics, but I use the version cleaned by Holyoke (2019) for 2006 to 2020. Interest group populations are composed of trade associations (representing businesses and professions), advocacy groups (open membership organizations representing passionately felt interests), labor unions, and inter-governmental groups (representing counties and other government agencies).[2] The number of interest groups in the states is very negatively skewed, so I compensate by using the measure's natural log, as I also do for trade associations (71% of the group data) and advocacy groups (28%) which are identified in Holyoke's data and used in the analyses below. Descriptive statistics on this data is in Table 1. Also, since West Virginia is missing legislative ideology data in 2009, North Dakota in 2010, and

Indiana in both, by combining these two datasets I have 746 observations in fifteen panels from 2006 to 2020.

---- Table 1 ----

Data on levels of private sector employment in each state, needed for Hypothesis 1a, comes from the US Census Bureau and is a per capita measure (employment divided by state population).[3] A state's median income, required for Hypothesis 1b, comes from the Federal Reserve Bank of St. Louis.[4] For state spending needed for Hypothesis 2a, this comes from annual editions of the *Fiscal Survey of the States* published by the National Association of State Budget Officers.[5] Hypothesis 2b requires the number of state employees, which comes from the Census Bureau and is also a per capita measure.[6] Several control variables are also used. First, while my focus is on legislative ideology, broader state ideology might also matter and should be controlled for. I do this using the state policy mood measure developed by Enns and Koch (see Lagodny et al. 2023) where larger scores represent a more liberal public sentiment. Lowery and Gray (1993) found gross state product (GSP) to be associated with group population sizes, so I control for this with GSP data from the US Bureau of Economic Analysis.[7] A Democratic governor might also create circumstances conducive to interest group formation, so I code a binary variable 1 if the governor is a Democrat (0 otherwise) using information from annual editions of the *Book of the States*. Since the data panels are observed from 2006 to 2020, and this includes the Great Recession and the beginning of the Covid-19 pandemic, I code a binary variable 1 for 2008 and 2009 for the recession and another variable 1 for 2020, the only Covid year in my dataset.

Data Analysis

First Look

A good first step in assessing whether there is a relationship between legislative majority party medians and interest groups is to graph a scatterplot of the two variables (using the original group count, not its natural log) to assess whether there is any evidence of it. Using Wei's curve-fit nonlinear regression procedure, I model state group populations as a function of median party ideology and plot the relationship.[8] It turns out to be nonlinear, as seen in Figure 1a. That itself is not a surprise as Lowery and Gray (1993; also see Lowery, Gray, and Cluverius 2015) also found nonlinear relationships when group populations were modeled as a quadratic function (a concave curve with a single bow) of GSP. In this case, though, it is a convex cubic curve that fits better than a quadratic. The adjusted-R^2 for this fit is 0.34.[9] This is not outstanding but it becomes more interesting when I refit the cubic curve for the same variables in just 2006 and then again in 2020. In 2006 the cubic fit has a strong R^2 of 0.50 but falls to 0.04 by 2020 where the cubic curve reduces to a quadratic (see the online appendix). Figure 1b for 2010 is the clearest example of the cubic fit, with a downward bow on the far-right side. The take-away is that a cubic specification fits the data, but the effect appears to diminish over time. Furthermore, and arguably a more important point, the fit appears tighter on the liberal side than on the conservative.

---- Figures 1a and 1b and Figure 2 ----

Since this R^2 statistic is generated by modeling the size of group communities as functions of median party ideology, I also try it the other way around where majority party ideology (now on the vertical axis) is a function of group population size. Fitting a cubic curve, seen in Figure 2, produces an adjusted-R^2 of 0.09, indicating essentially no relationship at all. A linear trend produces the same result. The tentative conclusion, then, is that it is legislative party ideology,

more clearly on the ideological left than the right, that leads to fewer or more state interest groups and not the reverse (suggesting evidence supporting hypothesis 2c). Moreover, although there is some evidence that this relationship weakens as the years pass, the crucial variation is state-to-state, not within states over time. Indeed, the number of interest groups does not change much from 2006 to 2020, the mean in 2006 being 389 and only 425 in 2020. In California, the state with the most, there are 1,196 in 2006 and 1,117 in 2020. The Shor-McCarty party median scores also do not change dramatically over time, except a few times when majority status shifted from Democrats to Republicans or vice versa. With all of this in mind, I turn to testing the hypotheses.

Multivariate Analysis

Figures 1a and 1b arguably reflect Grossmann and Hopkins' argument that the Democratic Party is an alliance of left-leaning groups, but less so Republicans. Whether driven by Democratic legislative leaders urging the mobilization of new constituencies to push for new programs, just the natural emergence of such constituencies, or even pre-existing groups shifting their efforts from other states, the further left a majority party median is on the horizontal axis, the more groups appear on the vertical. Moderate-to-conservative majorities appear associated with modestly more groups, there are not that many moderate majority parties. Conservative majorities appear associated with somewhat more groups, though the curve, after trending up a little, starts to move down again. More importantly, the fit of the curve here is less than on the liberal side. So, the analysis of the influence of legislative parties on interest groups must account for the fact that the connection appears stronger on the left but reflects a cubic pattern.

Modeling nonlinear relationships must be done carefully when using linear methods. Since the lower chamber majority party score is positively skewed, both this and the nonlinear issue can

be handled with polynomials. I thus include in models (where interest groups is the dependent variable) the majority party medians measure along with its squared and cubed versions as key independent variables. The original measure should exhibit a negative effect capturing the downward slope of the curve in Figure 1b when the majority party median shifts from liberal to moderate, then there should be a positive coefficient for the squared term reflecting the median's mid-range values where the curve starts to go up. Finally, the cubed term captures the conservative side where the curve starts to edge down slightly. Consistent with Hypothesis 2c, because the conservative median's negative slope is gentle in Figure 1b, this coefficient should be smaller than the others, and even the positive coefficient of the squared term should be smaller than the original variable. As for testing the influence of interest groups on majority party ideology, since a cubic fit here is no better than a linear one (and neither are good, recall Figure 2), I do not use squared or cubed versions of the group variables.

Hypotheses 1a, 1b, 2a, and 2b are all tested using interactions. Hypothesis 1a is the natural log of associations multiplied by state private sector employment and should have a positive (more conservative) effect on party medians. Hypothesis 1b is the log of advocacy groups multiplied by state median income and should exhibit a negative effect. For the next two hypotheses, because both the party median measure and the measures of state spending and state employment should be in the same direction, *just for these interactions* I reverse the median measure so that higher scores represent more liberal parties. For hypothesis 2a, the location of the party median (I do not interact the squared or cubed versions) is interacted with state spending, and for hypothesis 2b party medians is interacted with state employees. Both should produce positive coefficients.

Panel data observed over time is often estimated with fixed-effects models to focus the analysis on within-case temporal variation while controlling for cross-case variation. However, as

noted above, the interest group population and legislative party ideology variation is across states more than over time. I therefore estimate a mixed-effects model that controls for the passage of time by estimating a unique slope for each year (a random-effects method) while using fixed-effects to estimate independent variables of interest (Rabe-Hesketh and Skrondal 2012, 85-86).[10] Because the Recession and Covid controls only change over time, they are just used to estimate the steepness of the year-slopes to control for these influences (neither show any significant effect). The Wald χ^2 statistics (at the bottom of Table 2) indicate that the mixed-effects models improve significantly over ordinary OLS regression. Finally, because of multicollinearity, I cannot have state spending and state employment in the same model, nor associations and advocacy groups. I therefore use separate models to test hypotheses 1a, 1b, 2a, and 2b, all shown in Table 2.[11]

---- Table 2 ----

The results are mixed, but arguably clearer for the models where legislative parties are influencing interest group numbers. In both of these models (Table 2's first two results columns), the lower chamber majority party median is negative and significant while its square is positive and significant. The cubed version is again negative and significant in both. Furthermore, the coefficients in the squared versions are smaller than the original, and smaller yet in the cubed versions. It means the largest effect of partisan ideology on state interest groups is with more liberal legislatures (the policy mood variable also shows that a more liberal public also increases the number of interest groups). As ideology shifts towards the moderate middle, the resulting positive effect is significantly less. While the effect of legislatures shifting from moderate to conservative is also significant, its substantive negative effect is much smaller. All this is expected since in the cubic curve pattern in Figure 1, the data fits better on the left-hand side than the right and confirms hypothesis 2c.

Assessing hypotheses 2a and 2b is a little more complicated. The interaction of the majority party median score (reversed so that higher values are liberal) and state spending per capita is positive as predicted by hypothesis 2a, but the independent effect of spending is negative. To get a sense of what this means, I graph in Figure 3, panel 3a, the predicted number of groups (still using the natural log) for all values of the reversed party median score along with the predicted number of groups from the interaction of ideology and spending. Then, in panel 3b I graph the predicted number of groups for all values of state spending along (again) with the interaction's predictions. Taken together, it appears that as legislatures become more liberal *and* appropriate more money, there is an initial decline in the number of interest groups, but then the prediction turns positive. In other words, more liberal legislatures that spend significantly more lead to more interest groups. About 80 more (using original group numbers) predicted on the right end of the interaction curve than on the left. So, confirming hypothesis 2a, ideology and spending have a joint positive effect on group populations. Unfortunately, this is not the case with the state employment interaction. Government employment also has a negative independent effect and a positive interactive effect, but while higher party medians (still reversed) mitigate the negative effect of state employment on group numbers, it is not enough to turn it positive. Hypothesis 2b cannot be confirmed.

---- Figures 3 and 4 ----

Turning to the alternative hypotheses regarding the effect of interest groups on party median positions, hypothesis 1a regarding trade associations and private sector employment is clearly rejected since both variables and the interaction are insignificant. However, results appear to confirm hypothesis 1b regarding advocacy groups and state median income. Even though the independent effects of advocacy group numbers and median income are positive, so that more of

both appear to be associated with more conservative majority parties, the interaction operationalizing hypothesis 1b is significant and negative as predicted. As Figure 4 shows, plotting the predicted ideological position of the majority party for the interaction at initial levels for both component variables exhibits a positive effect. Yet it quickly bends into negative territory as both variables increase, showing that from moderate to high levels of advocacy groups and income, this combination appears to push majority legislative parties to be increasingly liberal, presumably responding to policy demands from these often left-leaning public interest and citizen groups. Finally, given that the liberal advocacy group-based effect exists, but the conservative effect from more associations and employment does not, the result for hypothesis 1c is indeterminant.

Another Look at Causality

Why is there support for hypothesis 1b, given that Figure 2 seems to show no influence of interest groups on majority legislative party ideology? One answer is simply that this initial finding was driven by the fact that trade associations constitute about 71% of all state interest groups, thus masking the influence of the much smaller proportion of advocacy groups. Remember that the associations variable used for hypothesis 1a was not statistically significant. Nonetheless, there is another test that may shed more light on who is really influencing whom. This uses a version of the Granger causality model developed by Xiao et al. (2023) which handles datasets with more cross-sectional observations than time observations, handles potential heteroskedasticity in cross-sectional panel data errors, and allows for several independent variables to be included. I therefore test the effect of majority party ideology on group populations using the three ideology measures (simple, squared, and cubed) along with the other independent variables but no interactions. Because the model must be very strongly balanced, North Dakota, Indiana, and West Virginia,

which did not have complete Shor-McCarty scores for every year, are dropped. The results are in Table 3's first results column.

---- Table 3 ----

Simple majority party ideology is again negative and significant, though squared is also negative and cubed is positive rather than positive and negative respectively.[12] This may simply reflect the fact that the curves at these points in Figure 1a were not overly strong, though it does cast some doubt on hypothesis 2c. More importantly, though, the test of the null hypothesis of no causality is rejected. Party ideology has a causal influence on interest groups. Is the reverse true? For this I estimate the natural log of interest groups (and the independent variables) on simple majority ideology, along with similar models where all interest groups is replaced with associations and then with advocacy groups. Only advocacy groups is shown in Table 3 since it's the advocacy group effect that was the important finding in the earlier analysis (other results are in the online appendix). In all cases, though, while all variables taken together have a causal effect on majority party ideology, *none* of the group variables are statistically significant. Interest groups have no causal effect on party.

Mobilization and Counter-Mobilization

Even though trade associations did not exhibit a significant effect in the above analyses, they are linked in the literature to advocacy groups in the sense that the latter often mobilize to oppose business association influence (McFarland 1984; Berry 1999). And advocacy groups do show an influence on parties, even if a direct causal connection was not supported by the Granger tests. It is therefore worth pushing a little further to learn more about the role played by advocacy

groups, to learn more about how they and trade associations influence each other even as their numbers are influenced by legislative majority parties.

---- Table 4 ----

To do this I estimate two models shown in Table 4. The first applies the model used in Table 2 to the natural log of just advocacy groups but also includes state associations both independently and interacted with the reverse of majority party ideology. Perhaps unsurprisingly, of the three party median measures, only the first, capturing more liberal legislatures, is significant, leaving no direct effect by moderate and conservative legislative parties on the number of advocacy groups. Association numbers, however, exhibit the expected positive effect. In states with more business associations, more advocacy groups have also mobilized to compete. The interaction of associations and party ideology (again reversed), however, is negative, but this does not mean liberal legislatures and more associations lead to fewer advocacy groups. As Figure 6 shows, it is only the rate of the positive influence of associations on advocacy group numbers that is mitigated – in states with more liberal legislative majorities and associations the corresponding rate of increase declines in the predicted number of advocacy groups. So, if advocacy groups formed to counter business influence, then perhaps in states with very liberal legislatures left-leaning advocates feel less need to mobilize quite so many new organizations to compete.

---- Figure 6 ----

It also appears that, as expected, more advocacy groups in a state are associated with more associations, as seen in Table 4's second model. Not only does the advocacy groups variable have a direct positive effect, it also has a positive effect when interacted with more liberal legislative majority party medians. Interestingly, the ideological effect only appears in conjunction with advocacy groups, having no independent effect. In other words, more liberal legislatures do not

spur more association formation, and neither do conservative ones, but when a legislature is controlled by a liberal party *and* there are more left-leaning advocacy groups, then there are more business associations. Left-leaning legislatures perhaps make it less necessary for new advocacy groups to counter-mobilize to resist more associations (seen in model 1), but when there are more advocacy groups in states with left-leaning legislatures (model 2), associations counter-mobilize to resist, though the data cannot fully support this conclusion.

What is the overall takeaway from all of this? There is evidence of mobilization and counter-mobilization in state interest group systems, with more advocacy groups stimulating the formation of more associations and vice versa. To the extent that business-support associations and more left-leaning advocacy groups represent two different sides in many political contests, what we are seeing may be the result of interest group competition. Interestingly, the political ideology of legislatures may only play a contingent role here, with little independent effect on the number of advocacy groups or associations, but a significant role in conjunction with these group types. A liberal legislative majority seemingly mitigates the influence of associations on advocacy group formation, perhaps by making it perhaps less necessary for these left-leaning groups to form.

Conclusion

That there are links between interest groups and political parties has become fairly clear in recent years. What has been murky is whether parties are influencing interest group development or does the mobilization of more political groups influence the ideological positioning of the parties. My findings here tend to support the former view, though with nuances and caveats. I found evidence that in the American states from 2006 to 2020 the size of group communities was influenced by the ideological disposition of majority parties in the lower chambers of state

legislatures, but the effect is curvilinear rather than linear. More liberal majority legislative parties are associated with larger interest group systems, but only somewhat so with more conservative state legislative majorities. Liberal legislatures, it seems, are especially conducive to group mobilization. Not only because of the general political environment they create, but also because left-leaning legislatures are willing to spend more taxpayer money on public programs that many advocacy groups desire and are willing to mobilize to support and protect. To the extent that legislators in Democratic majorities represent factions of the public also represented by these interest groups, especially advocacy groups, my findings are consistent with the work of Grossmann and Hopkins (2016). Less so with Bawn et al. (2012) where groups are portrayed as having a more influential role on party positions.

Breaking down interest groups by a simple, though fundamental, distinction between business-oriented associations and activist-oriented advocacy groups, more of one type in a state is associated with more of the other, perhaps suggesting mobilization and counter-mobilization to compete, though the data does not have enough of a time-element to draw clear conclusions. What is important, though, is the influences group type have when interacted with majority party ideology. Although it is not clear whether competition between group types was being enhanced or mitigated by legislative ideology, it is somewhat clear that much of the ideological influence of parties in legislatures is wrapped-up with interest groups. This could be construed as consistent with cartel theory (Cox and McCubbins 2007), with liberal legislative party leaders perhaps suppressing association formation since those groups are less likely to support Democratic agendas, though it is too great a stretch to say these results truly support that conclusion.

More broadly, my results appear to support the idea of what is sometimes called demand-side advocacy (e.g., Baumgartner, Gray, and Lowery 2009) as well as opportunity theory from

sociology (e.g., Tilly 1978). These hold that ambitious policy entrepreneurs will form advocacy groups to lobby for new policies when they believe that lawmakers are willing to support such policies, or are even themselves demanding them. Since this tends to be more true of the political left (though not exclusively), it fits well with the results here, that more spending by the state on public programs leads to more interest groups, especially advocacy groups. Conservative majority parties appear to play little to no role, though. Again, this also appears to support Grossmann and Hopkins' (2016) argument that the Democrats are an amalgamation of interest groups, and may fit with their argument that Republicans are more ideological. It would be valuable for new research to continue exploring the direct and conditional effects of legislative ideology on interest groups and lobbying and get a better sense as to whether legislative parties really can stimulate the mobilization of allied interest groups and suppress those they oppose.

Table 1: Descriptive statistics

Variable	Mean	Standard deviation	Minimum value	Maximum value
Log of all interest groups	5.89	0.55	3.87	7.14
Log of all advocacy groups	4.57	0.63	1.79	6.12
Log of all associations	5.57	0.54	3.69	6.85
Lower chamber majority median (re-scaled)	1.79	0.96	0	3.15
State spending per capita (adjusted to 2020 values and re-scaled)	2.62	1.46	0.07	11.72
State employment per capita (re-scaled)	15.12	5.73	7.61	42.35
Private-sector employment per capita	5.02	0.34	4.08	5.85
Median income (2020 values)	6.25	1.04	3.60	9.68
State policy mood	0.48	0.07	0.33	0.65
Democratic governor	0.43	0.49	0	1
Gross state product	52.35	21.43	30.02	546.50

Figure 1a: Cubic fit of majority party medians and interest groups, R-sq = 0.34

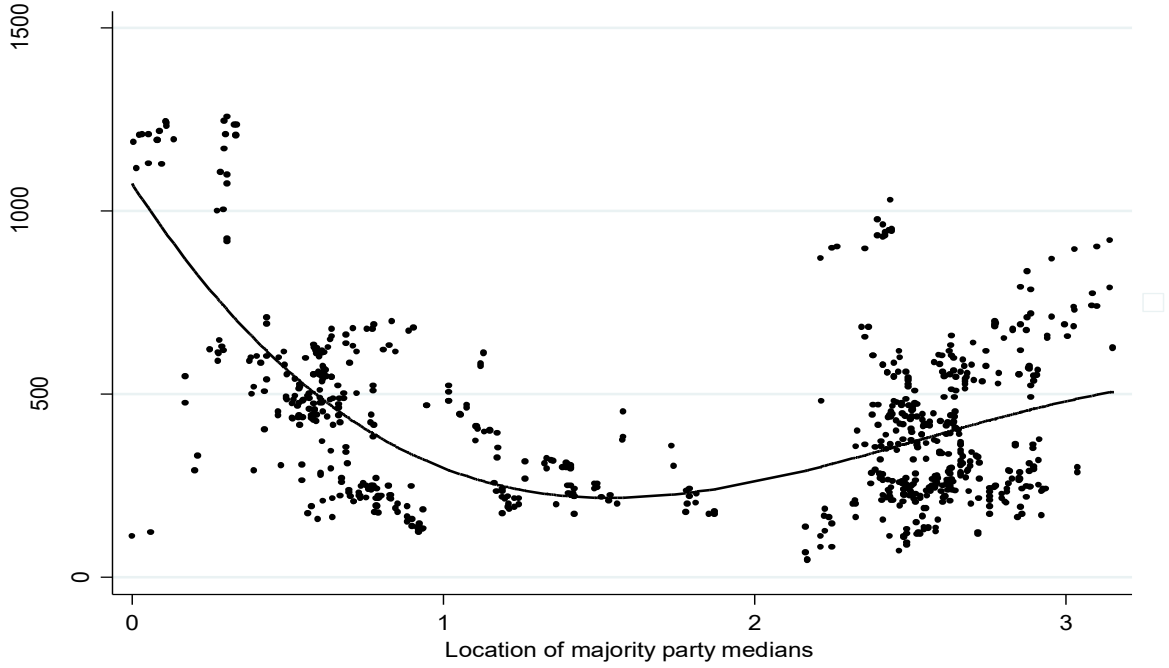


Figure 1b: Cubic fit of majority party medians and interest groups in 2010, R-sq = 0.43

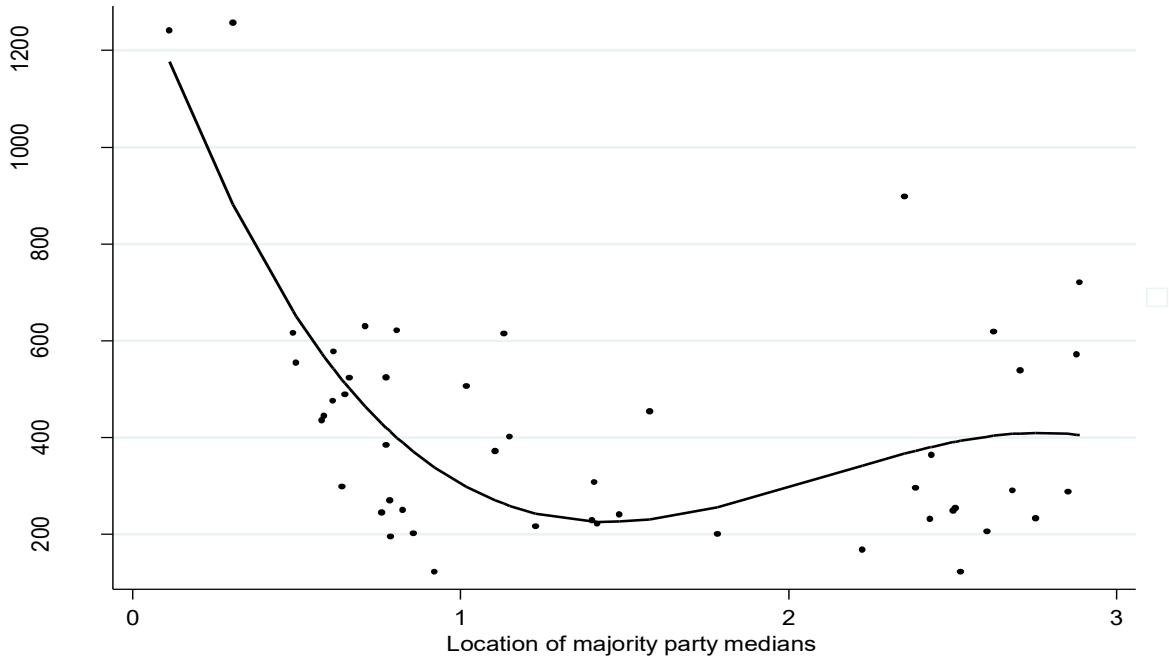


Figure 2: Cubic fit of interest groups and majority party medians, R-sq = 0.09

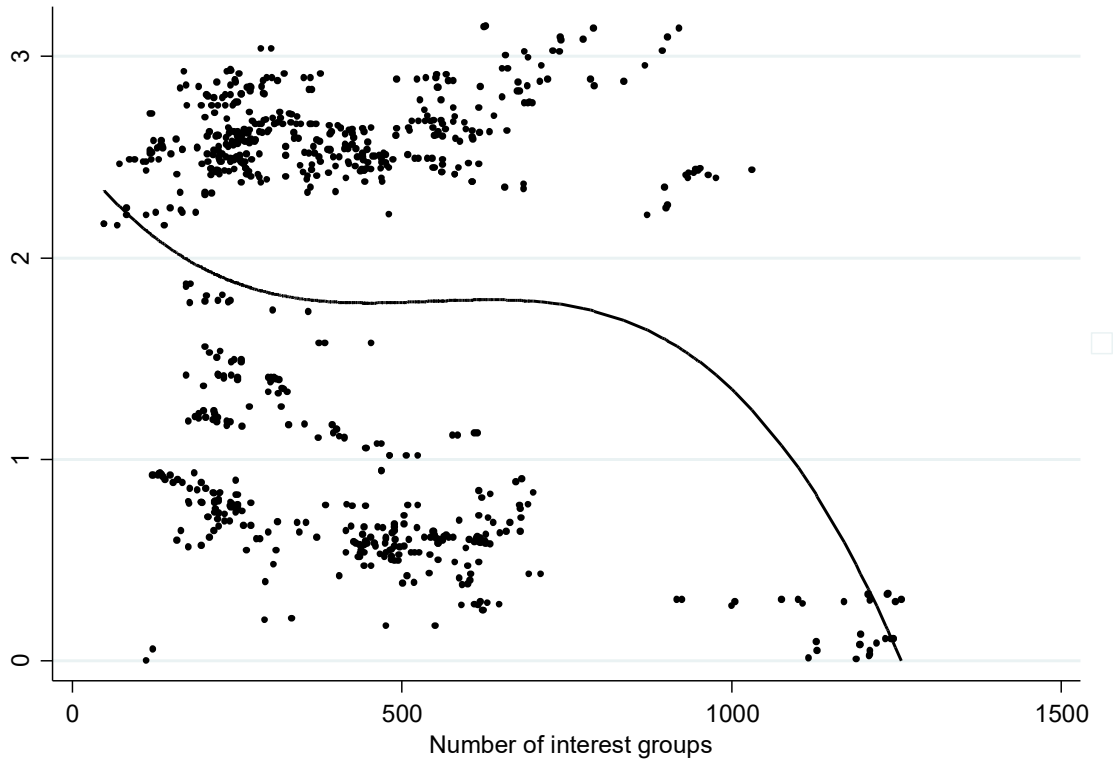


Table 2: Estimation of multivariate models (mixed-effects model, *N*=746)

Independent variable	Interest groups with state spending	Interest groups with state employment	Party median with associations	Party median with advocacy groups
Lower chamber majority party median	–1.96*** (0.23)	–1.06*** (0.18)	–	–
Majority party median squared	0.97*** (0.16)	0.54*** (0.13)	–	–
Majority party median cubed	–0.12*** (0.03)	–0.06* (0.03)	–	–
Log of trade associations (or advocacy groups)	–	–	–0.44 (0.92)	1.58*** (0.27)
State spending per capita (or state employment in second model)	–0.19*** (0.02)	–0.09*** (0.00)	–0.06*** (0.02)	–0.10*** (0.02)
Private-sector employment	–0.02 (0.06)	–0.35*** (0.05)	–0.63 (0.97)	–0.25** (0.09)
Median income	0.04 (0.02)	0.10*** (0.02)	–0.15*** (0.04)	1.11*** (0.20)
Associations *x* private-sector employment (or advocacy groups *x* median income)	–	–	0.07 (0.18)	–0.27*** (0.04)
State spending (or state employment) *x* reversed majority median	0.06*** (0.01)	0.02*** (0.00)	–	–
State policy mood	1.78*** (0.29)	0.80*** (0.22)	–5.81*** (0.40)	–5.24*** (0.40)
Democratic governor	–0.01 (0.04)	0.05 (0.03)	–0.37*** (0.06)	–0.32*** (0.05)
Gross state product	0.00 (0.00)	0.00* (0.00)	–0.00 (0.00)	–0.00 (0.00)
Constant	5.87*** (0.35)	7.81*** (0.27)	7.74 (4.94)	–1.94 (1.31)
Wald χ^2 (fit of model)	428.88***	1368.30***	647.03***	737.58***
χ^2 test of mixed-effects model improving over OLS regression	10.62*	18.19***	16.59***	20.29***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.005$

Figure 3, panel 3a: Predicted number of state interest groups by party median position interacted with state spending per capita (not shown)

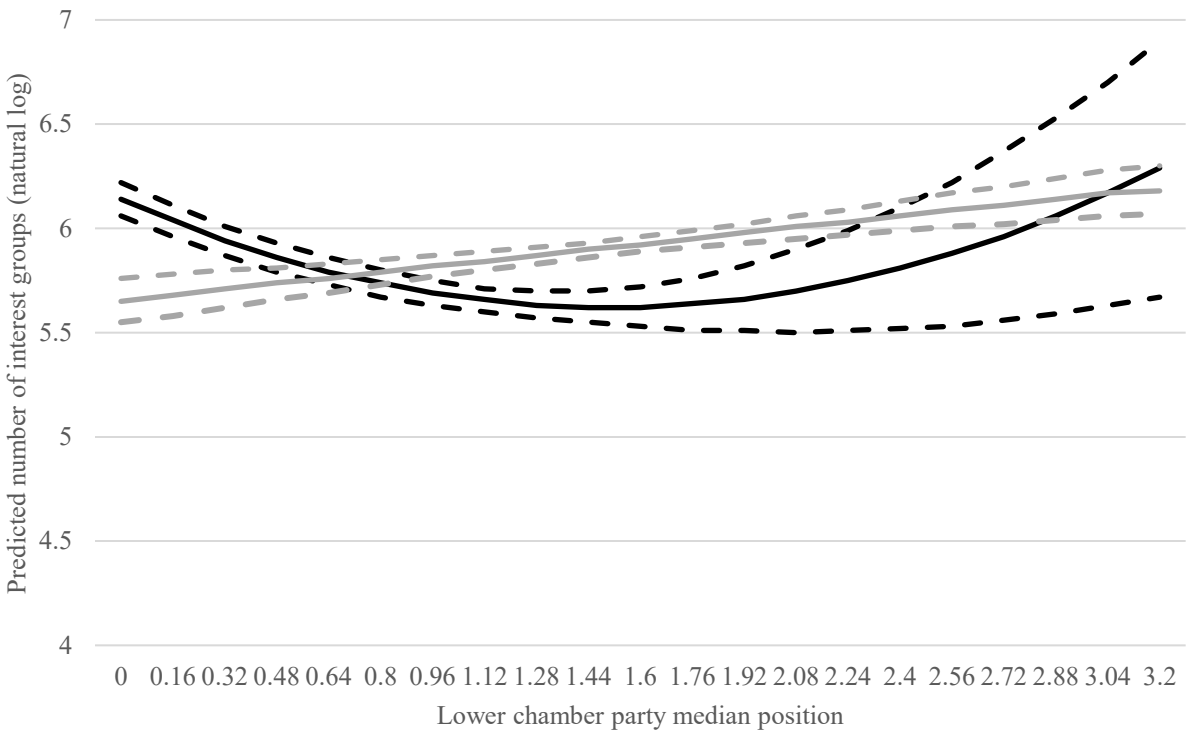


Figure 3, panel 3b: Predicted number of state interest groups by state spending per capita interacted with party median position (not shown)

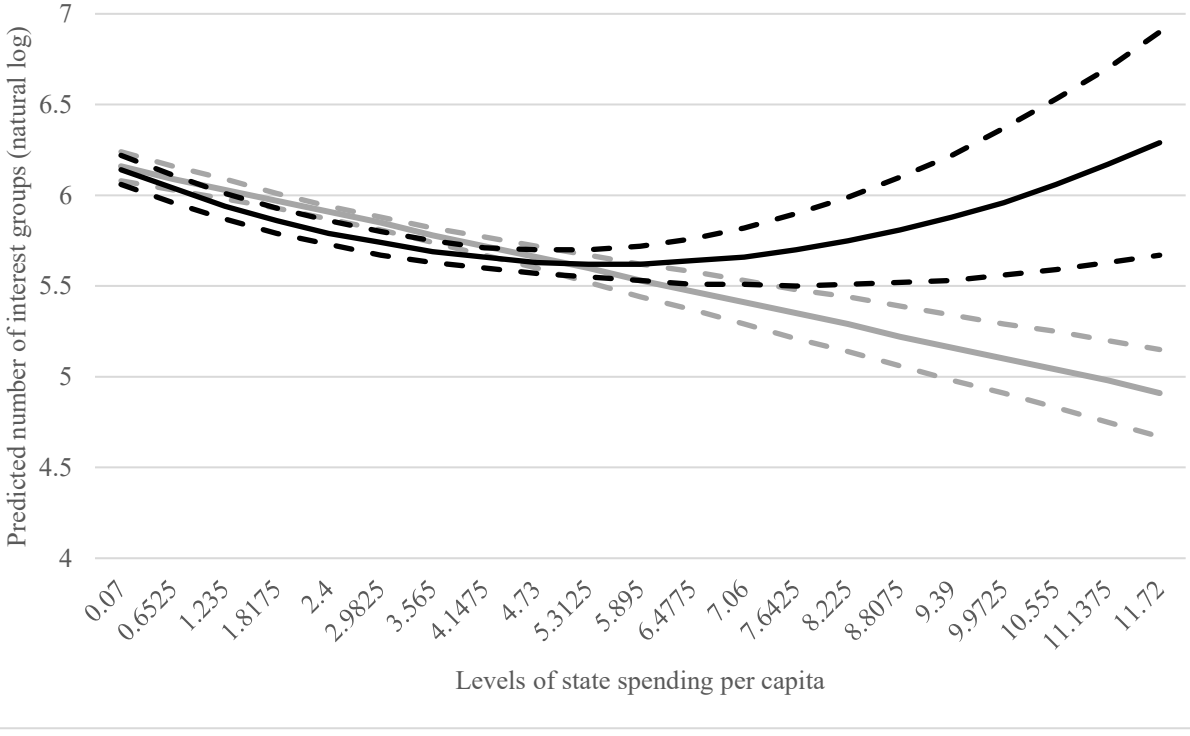


Figure 4: Estimated majority party median position for the number of advocacy groups and state median income

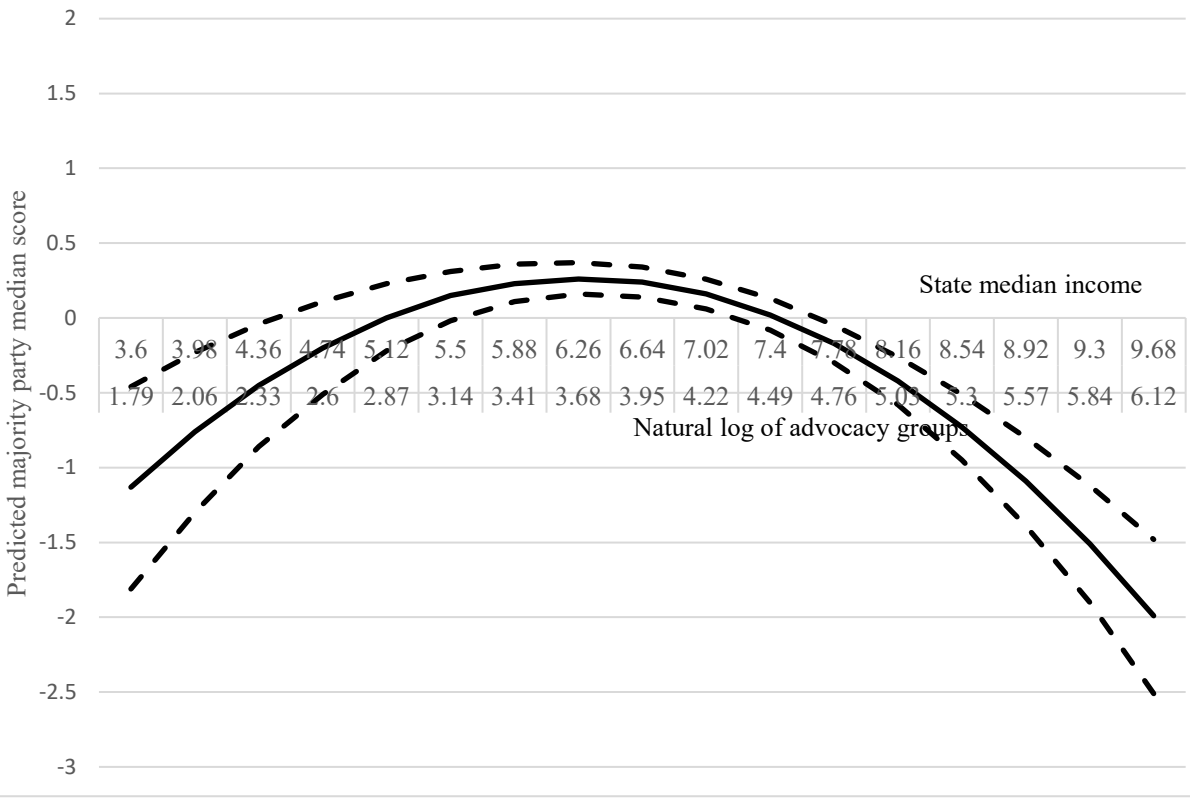


Table 3: Granger causality tests

Independent variable	Interest groups (natural log)	Majority party ideological position
Majority party median	–0.18*** (0.03)	–
Majority party median squared	–0.09*** (0.03)	–
Majority party median cubed	0.17*** (0.02)	–
Advocacy groups (natural log)	–	–0.18 (0.10)
State spending	0.02 (0.02)	0.13** (0.05)
Private-sector employment	–0.30*** (0.05)	–0.50*** (0.17)
Median income	0.05*** (0.01)	0.00 (0.04)
State policy mood	–0.61* (0.30)	–4.22*** (1.02)
Gross state product	0.01*** (0.00)	–0.02*** (0.00)
Democratic governor	0.01 (0.01)	–0.07 (0.04)
Great Recession	–0.06*** (0.01)	0.11* (0.04)
Wald test of model fit	678.75***	351.57***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.005$

Figure 5: Advocacy groups as a function of majority party medians, R-sq = 0.34

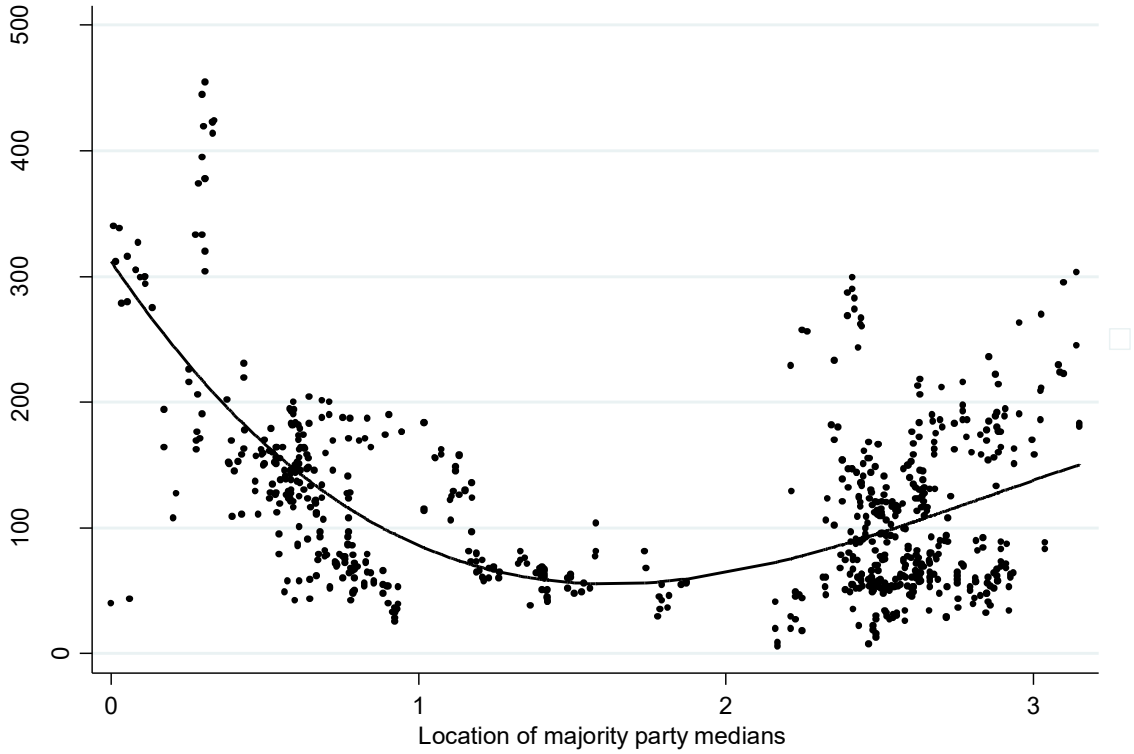
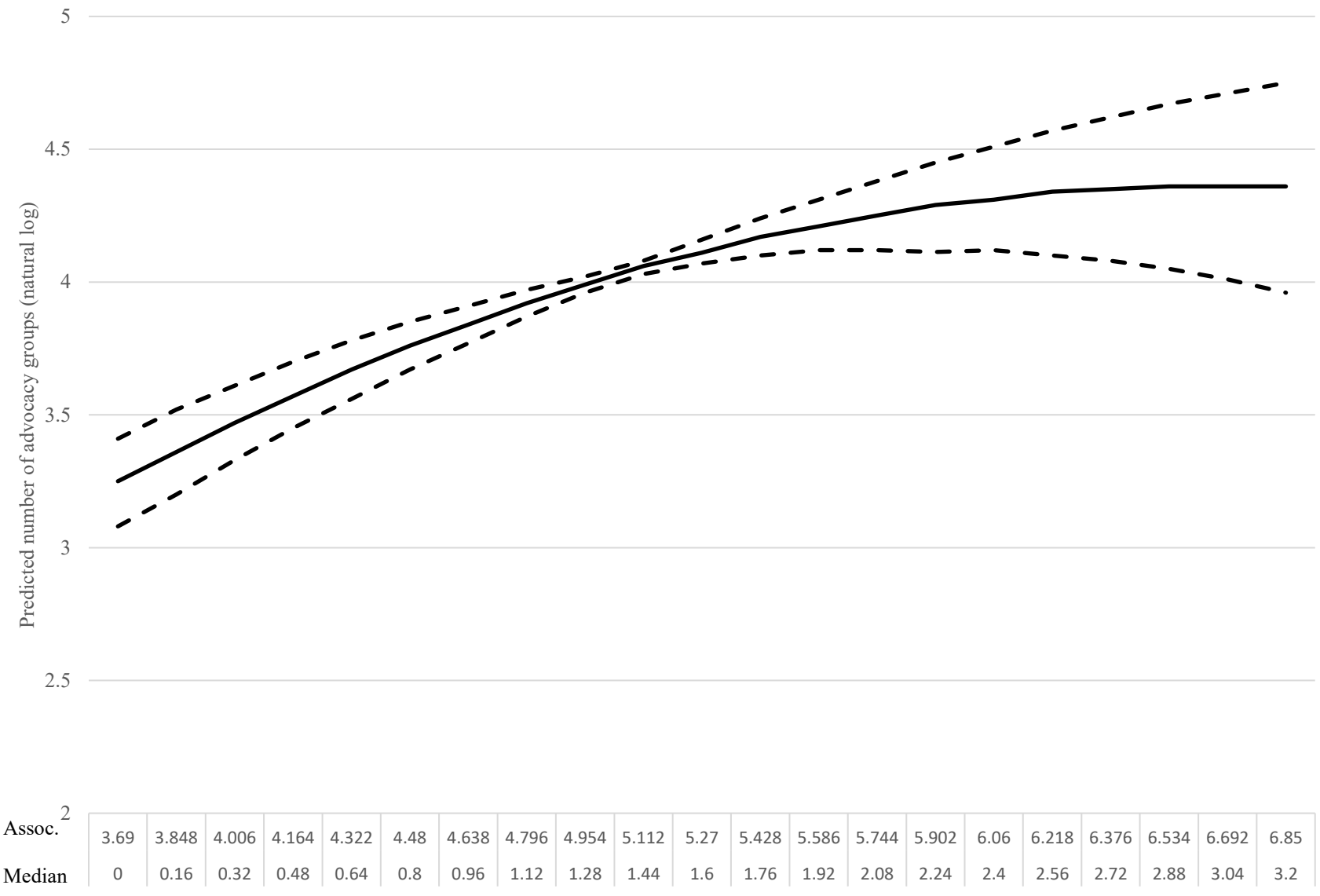


Table 4: Estimates of legislative ideology and types of interest groups (*N*=746)

Explanatory variable	Advocacy groups	Associations
Lower chamber majority party median	–1.02*** (0.19)	0.26 (0.16)
Majority party median squared	0.08 (0.08)	0.11 (0.07)
Majority party median cubed	–0.00 (0.02)	–0.02 (0.01)
Log of associations (model 1) or advocacy groups (models 2)	1.21*** (0.03)	0.71*** (0.02)
Associations (model 1) or advocates (model 2) x reversed majority median	–0.12*** (0.02)	0.08*** (0.01)
State spending	–0.01 (0.01)	–0.01* (0.01)
Private-sector employment	0.03 (0.03)	–0.06* (0.03)
Median income	0.03*** (0.01)	–0.01 (0.01)
State policy mood	0.29* (0.13)	0.02 (0.12)
Democratic governor	–0.01 (0.02)	0.00 (0.01)
Gross state product	0.00 (0.00)	–0.00 (0.00)
Constant	–0.21 (0.26)	1.52*** (0.21)
Wald χ^2	6945.97***	6468.95***
χ^2 test of mixed-effects improving over OLS regression	1.03	12.37**

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.005$

Figure 6: Predicted number of advocacy groups (natural log) for interaction of party median positions and natural log of associations



References

Anzia, S.F. 2011. "Election Timing and the Electoral Influence of Interest Groups." *Journal of Politics* 73(2): 412-427.

Anzia, S.F. and T.M. Moe. "Public Sector Unions and the Costs of Government." *Journal of Politics* 77(1): 114-127.

Baumgartner, F.R., V. Gray, and D. Lowery. 2009. "Federal Policy Activity and the Mobilization of State Lobbying Organizations." *Political Research Quarterly* 62(3): 552-567.

Bawn, K., M. Cohen, D. Karol, S. Masket, H. Noel, and J. Zaller. 2012. "A Theory of Political Parties: Groups, Policy Demands, and Nominations in American Politics." *Perspectives on Politics* 10(3): 571-797.

Berry, J.M. 1977. *Lobbying for the People.* Washington, DC: Brookings Institution Press.

Berry, J.M. 1999. *The New Liberalism: The Rising Power of Citizen Groups.* Washington, DC: Brookings Institution Press.

Brasher, H., and D. Lowery. 2006. "The Corporate Context of Lobbying Activity." *Business & Politics* 8(1): 1-23.

Cox, G.W., and M.D. McCubbins. 2007. *Legislative Leviathan: Party Government in the House,* 2nd edition. New York: Cambridge University Press.

Cox, G.W., T. Kousser, and M.D. McCubbins. 2010. "Party Power or Preferences? Quasi-Experimental Evidence from American State Legislatures." *Journal of Politics* 72(2): 799-811.

Drutman, L. 2016. *The Business of America is Lobbying.* New York: Oxford University Press.

Elling, R.C. 2006. "Administering State Programs: Performance and Politics," in *Politics*

in the American States: A Comparative Analysis, eds. Virginia Gray and Russell L. Hanson. Washington, DC: CQ Press, 261-289.

Fagan, E.J., Z.A. McGee, and H.F. Thomas. 2021. "The Power of the Party: Conflict Expansion and the Agenda Diversity of Interest Groups." *Political Research Quarterly* 74(1): 90-102.

Francia, P.L. 2016. "Organized Labor: Adaptive Strategies in Challenging Times" in *Interest Group Politics,* 9th edition, eds. A.J. Cigler, B.A. Loomis, and A.J. Nownes. Washington, DC: Congressional Quarterly Press, 37-53.

Furnas, A.C., M.T. Heaney, and T.M. LaPira. 2019. "The Partisan Ties of Lobbying Firms." *Research & Politics* 6(July-September): 1-9.

Garlick, A. 2022. "Interest Group Lobbying and Partisan Polarization in the United States: 1999-2016." *Political Science Research and Methods* 10(3): 488-506.

Gray, V., J. Cluverius, J.J. Hardin, B. Shor, and D. Lowery. 2015. "Party Competition, Party Polarization, and the Changing Demand for Lobbying in the American States." *American Politics Research* 43(1): 175-204.

Gray, V., D. Lowery, M. Fellowes, and A. McAtee. 2004. "Public Opinion, Public Policy, and Organized Interests in the American States." *Political Research Quarterly* 57(3): 411-420.

Greenstone, J.D. 1977. *Labor in American Politics.* Chicago: University of Chicago Press.

Grossmann, M., and D.A. Hopkins. 2016. *Asymmetric Politics: Ideological Republicans and Group Interest Democrats.* New York: Oxford University Press.

Hansen, J.M. 1991. *Gaining Access: Congress and the Farm Lobby, 1919-1981.* Chicago: University of Chicago Press.

Hartney, M.T. 2022. *How Policies Make Interest Groups: Governments, Unions, and American Education.* Chicago: University of Chicago Press.

Heaney, M.T. 2010. "Linking Political Parties and Interest Groups" in *The Oxford Handbook of American Political Parties and Interest Groups,* eds. L.S. Maisel and J.M. Berry. New York: Oxford University Press, 568-589.

Heaney, M.T., and F. Rojas. 2015. *Party in the Street: The Anti-War Movement and the Democratic Party after 9/11.* New York: Cambridge University Press.

Holyoke, T.T. 2019. "Dynamic State Interest Group Systems: A New Look with New Data." *Interest Groups & Advocacy* 8(4): 449-518.

Holyoke, T.T., and J. Cummins. 2020. "Interest Groups and Political Party Influence on Growth in State Spending and Debt." *American Politics Research* 48(3): 455-466.

Jackman, M.C. 2013. "Parties, Median Legislators, and Agenda Setting: How Legislative Institutions Matter." *Journal of Politics* 76(4): 259-272.

Kaiser, R.G. 2009. *So Damn Much Money: The Triumph of Lobbying and the Corrosion of American Government.* New York: Vintage Books.

Lagodny, J., R. Jones, J. Koch, and P.K. Enns. 2023. "A Validation and Extension of State-Level Public Policy Mood: 1956-2020." *State Politics & Policy Quarterly* 23(4): 359-372.

Leech, B.L., F.R. Baumgartner, T.M. LaPira, and N.A. Semanko. 2005. "Drawing Lobbyists to Washington: Government Activity and the Demand for Advocacy." *Political Research Quarterly* 58(1): 19-30.

Lowery, D., and V. Gray. 1993. "The Density of State Interest Group Systems." *Journal of Politics* 55(1): 191 – 206.

Lowery, D., V. Gray, and J. Cluverius. 2015. "Temporal Change in the Density of State Interest

Communities: 1980 to 2007." *State Politics & Policy Quarterly* 15(2): 263 – 286.

Masket, S., and B. Shor. 2015. "Polarization without Parties: Term Limits and Legislative Partisanship in Nebraska's Unicameral Legislature." *State Politics & Policy Quarterly* 15(1): 67-90.

McFarland, A.S. 1984. *Common Cause.* Chatham: Chatham House.

McFarland, A.S., and A.N. Costain. 1998. *Social Movements and American Political Institutions.* New York: Rowman and Littlefield.

Meyer, D.S., and D.C. Minkoff. 2004. "Conceptualizing Political Opportunity." *Social Forces* 82(4): 1457-1492.

O'Connor, K., and B.S. McFall. 1992. "Conservative Interest Group Litigation in the Reagan Era and Beyond." In, *The Politics of Interests,* ed. M.P. Petracca. Boulder: Westview Press, 263-281.

Rabe-Hesketh, S., and A. Skrondal. 2012. *Multilevel and Longitudinal Modeling Using Stata, Volume I,* 3rd ed. College Station: Stata Press.

Rogers, S. 2017. "Electoral Accountability for State Legislative Roll Calls and Ideological Representation." *American Political Science Review* 111(3): 555-571.

Salamon, L.M. 1995. *Partners in Public Service: Government-Nonprofit Relations in the Modern Welfare State.* Baltimore: Johns Hopkins University Press.

Schnakenberg, K.E. 2017. "Informational Lobbying and Legislative Voting." *American Journal of Political Science* 61(1): 129-145.

Selling, N. 2023. "Either with Us or Against Us: Business Power and Campaign Contributions in an Age of Hyper-Partisanship." *Political Research Quarterly* http://DOI: 10.1177/10659129231176820.

Shor, B., and N. McCarty. 2011. "The Ideological Mapping of American Legislatures." *American Journal of Political Science* 105(3): 530-551.

Shor, B., and N. McCarty. 2022. "Two Decades of Polarization in American State Legislatures." *Journal of Political Institutions and Political Economy* 3(3): 343-370.

Skocpol, T. 2002. *Diminished Democracy.* Norman: University of Oklahoma Press.

Smith, S.R., and M. Lipsky. 1993. *Nonprofits for Hire: The Welfare State in the Age of Contracting.* Cambridge: Harvard University Press.

Strickland, J.M. 2020. "A Quiet Revolution in State Lobbying: Government Growth and Interest Populations." *Political Research Quarterly* 74(4): 1181-1196.

Tilly, C. 1978. *From Mobilization to Revolution.* Reading: Addison-Wesley.

Waterhouse, B.C. 2015. *Lobbying America: The Politics of Business from Nixon to NAFTA.* Princeton: Princeton University Press.

Wei, L. 2010. "CURVEFIT: Stata Module to Produce Curve Estimation Regression Statistics and Related Plots Between Two Variables for Alternative Curve Estimation Regression Models." Boston College Department of Economics, https://ideas.repec.org/c/boc/bocode/s457136.html.

Wilcox, C., and C. Robinson. 2010. *Onward Christian Soldiers? The Religious Right in American Politics,* 4th edition. UK: Routledge.

Xiao, J., Y. Karavias, A. Juodis, V. Sarafidis, and J. Ditzen. 2023. "Improved Tests for Granger Noncausality in Panel Data." *Stata Journal* 23(1): 230-242.

[1] From https://research.bshor.com/.

[2] They also contain corporations and even government agencies, but these are not true interest groups and the results are indeterminant when they are included. See the online appendix.

[3] Built from https://data.census.gov/table/NONEMP2023.NS2300NONEMP?q=private+sector+employment+by+state. Employment is then divided by population for a per capita measure and then multiplied by 10,000 to make the coefficient easier to interpret.

[4] See https://fred.stlouisfed.org/release/tables?rid=249&eid=259515&od=#. Median income (2020 values) is divided by 10,000 to make the coefficient easier to interpret.

[5] The data are set to 2020 values and then divided by 1,000 to make coefficients easier to interpret.

[6] See https://www.census.gov/library/stories/state-by-state.html. It is divided by 1,000 to make the coefficients easier to interpret.

[7] See https://www.bea.gov/data/gdp/gdp-state.

[8] The "curvefit" command for Stata 14.2 developed by Wei (2010).

[9] In the online appendix I present several additional scatterplots, including the quadratic curve fit of group populations and party ideology.

[10] Done with Stata's "mixed" command after assigning ("xtset") states as panels as years as time.

[11] The correlation of associations and advocacy groups is a disqualifying 0.90. State spending and state employment is 0.56, which is less clear. The variance inflation test cannot be used with mixed-effects models, but *p*-values for many variables change significantly when both are included, which is a danger sign, and each variable predicts a significant amount of the other in regression tests. The safer rout, then, is to not use them together.

[12] I use the original Shor-McCarty measure, not standardized.