Selection and Influence: Interest Groups and Congressional Voting on Trade Policy

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Even though most scholars would probably acknowledge that constituency economic interests play an important role in shaping the votes of members of Congress on economic policy, these interests play only a marginal role in some of the most influential empirical models of roll-call voting. For example, Poole and Rosenthal find that models stressing economic interests perform poorly compared to alternatives stressing ideology.[1] We believe the apparently marginal role of constituency economic interests stems from the highly simplified treatment of these interests in most empirical research. We employ a more detailed specification of these interests to investigate congressional roll-call votes on foreign trade legislation, and find that they have more impact than commonly thought. Our intention is not to replace more parsimonious treatments of congressional voting for all purposes, but rather to suggest that constituency economic interests play a more complex and more important role than hitherto described.

What Are Constituency Interests and How Do They Influence Congressional Voting?

Accounts of constituency economic interests and congressional voting suffer from three problems. First, discussion is often restricted to the interests of constituents

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1. Poole and Rosenthal 1997, 122–37.

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within a member's geographic district, with the assumption that this constituency implies a single set of issue positions for legislators. Second, these accounts often define economic interests in terms of either the portfolio of factors constituents possess or the industrial sectors in which they invest or work, but seldom consider the impact of both.[2] Third, they often examine only a single pathway through which interests may influence votes.

In this section we review the problems with these explanatory strategies. In the next section we present an alternative approach to congressional voting that addresses these problems as much as available data allow. The resulting model is far from parsimonious, but it clarifies the multiple pathways through which these interests affect legislation.

Geographic and Non-Geographic Constituencies

Constituencies are usually understood in geographic terms in studies of Congress or U.S. trade politics.[3] This approach is intuitive because the electorate for members of Congress is defined geographically. Even when one considers the influence of interest groups, it is reasonable to expect that, ceteris paribus, those in the representative's district exercise more influence than those found elsewhere. These economic interests may control jobs and working conditions in the member's districts, choose to invest or disinvest, and hold other politically relevant assets (for example, an ability to shape local media content) that make their interests particularly important to the local representative.

Unfortunately, equating geographic interests with constituent interests in general suffers from at least two problems. First, the mere presence of an industry or a group of voters in a district does not necessarily mean that its interests are influential. Members of Congress may view only a part of their district as electorally relevant.[4] Members might view other voters in their district as irretrievably committed to their political opponents, or as having interests that are incompatible with important elements of the member's coalition. As Goff and Grier note, the practice of writing regressions to model legislators' votes in terms of constituency characteristics and then treating the residual as a measure of "shirking" effectively assumes that there is a Condorcet winning platform—a single set of positions that beats any other set in a pairwise competition. In a sufficiently heterogeneous district, many possible winning coalitions of interests (and thus of winning candidate positions or voting records) are possible. This suggests that models of congressional voting should be "thick"—they should represent district interests in a fine-grained fashion to capture the possibility that different combinations of

2. Kaempfer and Marks 1993; and Baldwin and Magee 2000 are exceptions, but neither attempts an extensive treatment of sectoral interests.

3. See Kalt and Zupan 1984 and 1990; Fleisher 1985; Cassing, McKeown, and Ochs 1986; Anderson and Baldwin 1987; Lindsay 1990; Trubowitz 1998; Fordham 1998; and Irwin and Kroszner 1999.

4. See Fenno 1978; Goff and Grier 1993; and Fordham 1998.

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interests can create distinct winning coalitions within the district. Only some of these interests—those that belong or could be induced to belong to the representative's electoral coalition, or that could be induced to exit the opponent's coalition—should have a significant relationship to the representative's voting record.

Second, even though members of Congress formally represent geographic districts, their actual constituency can be much broader. Interests outside the district's boundaries often devote resources to influencing outcomes in its elections. The involvement of outside forces is unsurprising, because a legislator can influence the content of legislation that affects interests nationally or even internationally. Especially in small states, electoral contests may attract very substantial outside resources. Treating constituency simply in geographic terms could produce highly misleading conclusions.

Defining Constituency Interests: Sectoral and Factoral Approaches

Writings on the political economy of trade politics provide two explicit theoretical frameworks for understanding how economic stakes translate into political activity.[5] The first framework rests on neoclassical assumptions about factor mobility and treats factors of production as frictionlessly entering and exiting various economic activities in response to changing market conditions. In the simplest case, these analyses consider merely labor and capital, but more complex treatments are possible.[6] The second framework treats one or more factors as relatively immobile, at least in the short run. Immobility implies that the effects of legislation or other disturbances are sector-specific: if either capital or labor face barriers to entry or exit, then such an asset can experience sizeable gains or losses in income as a result of a disturbance before entry and exit finally equalize returns across sectors. Thus firms' investments in political effort rather than in changes in product or production process are a function of their asset specificity.[7] In either the neoclassical or the immobile factors case, the theory connects the nature of asset markets to the empirically relevant measures of economic interests expressed in the political system.

The assumption that the most common political cleavage on congressional issues is along sectoral rather than factoral lines is supported by previous research. Observers of Congress have long argued that class (factoral) politics is observed in that institution relatively infrequently, and that most congressional politics in-

5. Alt and Gilligan 1994.

6. See Leamer 1984. Midford 1993 uses such a multiple factors approach to model asset holders' positions on protection from imports.

7. Alt, Carlsen, Heum, and Johansen 1999.

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volves interest group (sectoral) cleavages.[8] Studies of trade politics in legislatures also provide empirical support for this approach.[9]

Extant studies using factoral treatments of interests to estimate legislative voting have produced unimpressive empirical results. Poole and Rosenthal note the weak performance of several such models, all of which rely primarily on measures of constituent economic interests such as per capita income, farm income, and education.[10] Although the relationship between factoral interests and personal preferences on trade policy or voting for candidates has been shown to be statistically significant in a number of studies, these studies do not carefully control for sectoral effects.[11] We hope that by including both sectoral and factoral variables in the same model, we can isolate more carefully the effects of each.

The presence of sectoral effects is not inconsistent with the presence of factoral effects. The standard neoclassical theory holds that countries export goods that intensively employ their abundant factors. If so, in the United States the geographic distribution of skilled (unskilled) labor would be correlated with that of exporting (import-competing) sectors. If exporters employed no unskilled labor, and import-competing firms employed no skilled labor, the correlation would be perfect. An analysis of home ownership and its relation to trade policy preferences faces the same challenge.[12] Because most people live close to their place of employment, one would expect returns to sectors and returns on personal real estate to be correlated; if they own rental property, it is probably located nearby and its returns are similarly correlated.[13] A third correlation between asset portfolios and sector affiliation is provided by pension funds that invest heavily in the employees' own company. For these reasons, factoral and sectoral effects may be observationally equivalent.

Multiple Pathways for the Influence of Constituency Interests

Various attempts to capture the influence of sectoral interests on floor votes are suggestive but incomplete. These attempts typically concentrate on the sectors most directly affected by the vote, and then only in terms of whether the vote is related to the presence of the interest group in a constituency or in the list of contribu-

8. Lowi 1964.

9. See Magee, Brock, and Young 1989, 101–10; McKeown 1989; Schonhardt-Bailey 1991; Irwin 1994 and 1996; and Brawley 1997.

10. Poole and Rosenthal 1997, 122–37. The models they singled out were Gilligan, Marshall, and Weingast 1989; Ferejohn 1986; Krehbiel and Rivers 1988; Bloch 1980; Silberman and Durden 1976; Kalt and Zupan 1984; and Peltzman 1984.

11. See Balistreri 1997; Scheve and Slaughter 2001; and Mayda and Rodrik 2002.

12. Scheve and Slaughter 2001.

13. Cassing, McKeown, and Ochs 1986.

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tions received by the legislator. For example, district exports or imports can be shown to influence trade legislation.[14] Others adopt a similar approach to test the linkage between military spending and the presence of military industries in members' districts.[15] Party and ideology are typically shown to capture parsimoniously a good deal of variation in floor voting, and such results are often viewed as suggesting the relative unimportance of interest group effects. But if party and ideology explain floor votes, then what explains party and ideology? This question leads us to examine whether part of the answer might be the sectoral composition of legislators' districts and support coalitions.

We postulate that constituencies shape legislative voting through two mechanisms, which we term the *selection* effect and the *influence* effect. Selection refers literally to candidate recruitment, nomination, and election (though here we focus only on the last part of the process). Influence refers to actions by interest groups to affect the votes of sitting legislators. It encompasses lobbying or bargaining. There are several reasons for separating these two mechanisms. First, if a candidate already holds the values that an interest group holds, then no persuasion may be necessary. At most, the interest group might have to ensure that the legislator understands that the vote does indeed support those values, and that casting such a vote is not so politically costly that it would pose an unacceptable risk of electoral defeat. As succinctly summarized by Austen-Smith, "[I]f legislators know the preferences of the prospective lobbyists, they will, ceteris paribus, choose to listen to those lobbyists whose underlying preferences most closely reflect their own."[16] In his model, they learn the preferences of lobbyists by observing their campaign contributions. Thus apparent public inactivity at the time of the consideration of legislation (as measured, for example, by nonappearance at legislative hearings or noninvolvement in public campaigns) can hardly be taken as a sign of interest group indifference or lack of influence. It might simply be a sign of previous interest group success in influencing the selection of members of Congress and signaling the group's preferences.

Another reason for the distinction is that interest groups may have a comparative advantage in one or the other mechanism. A group may intervene at the selection stage but not at the lobbying stage, or vice versa. For example, a group that had a reputation for providing detailed and accurate information, but had little wealth, would probably reap more gains at the lobbying stage than via attempts to influence the selection of legislators.

A final reason is that there are probably fewer groups actively lobbying on any single bill than are involved in shaping the selection of the representative. Thus empirical studies of legislative voting on one or a small number of bills will under-

14. See Irwin and Kroszner 1999; Coughlin 1985; McArthur and Marks 1988; Tosini and Tower 1987; and Ellison and Mullin 1995.

15. See Fleisher 1985; and Lindsay 1990.

16. Austen-Smith 1995, 566.

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estimate both the activity and the effects of interest groups on legislative voting if they consider only lobbying or testimony tied directly to the bill.

Although there is no obvious reason to believe they are less important than influence effects, selection effects are often ignored. For example, party and ideology are often treated as if they competed with constituent interests in influencing members' voting records. Of course, constituents may use a candidate's party affiliation and ideological position as a way of predicting whether that individual is likely to adopt future positions that will support their interests. To the extent that constituents pay attention to these factors, their interests may influence whether a member with a particular ideology and party affiliation is selected in the first place. Thus the selection effects of geographic and non-geographic constituents may actually magnify the effects of ideology and party. We present evidence that ignoring such selection effects can lead to underestimation of the role of constituent interests.

Selection Effects on Party

Interest groups face a political system in which legislative activity is conducted through parties. Though party and ideology can be highly correlated, it is important to identify what is distinctive about the selection effects for each, because sometimes results are not understandable in terms of ideology or party alone.

Interest groups have an incentive to support a political party to the extent that the party takes more congenial positions on issues of concern to the groups than do the other parties. Because the institutional structure of Congress advantages the majority party, an interest group might invest in a candidate simply because that candidate's victory could affect which party has a majority. Thus interest groups might tolerate candidates that are ideologically marginal from their standpoint in situations where the candidate's electoral success tips the balance in the legislative chamber in favor of the preferred party.[17] On the other hand, if the parties did not take positions that were strongly divergent on issues of concern to a given interest group, then the ideology of individual candidates would dominate decisions about whom to support.

Selection Effects on Ideology

Interest groups may be concerned about many issues, and they might not know which ones will be salient during a representative's term. Their uncertainty about

17. For example, a logit analysis of the campaign contributions of the auto industry in this sample reveals that they are related to party affiliation of the candidate and the closeness of the race; D-NOMINATE A affects contributions only when it interacts with political party. These results suggest that having the "correct" ideology does not aid in attracting contributions from this industry if one is in the "wrong" party. Within the "correct" party, the industry is more likely to aid those whose ideology is more congenial to the industry.

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the future limits the usefulness of extracting specific commitments from representatives when they commit political resources to their election. Even if they could extract commitments on a range of potential issues, it is not clear that these commitments would be binding.

One way interest groups can solve this problem is to seek out candidates committed to a general perspective likely to be congenial to their interests. For example, firms with global trade and investment interests might search for candidates committed to a broad internationalist perspective on foreign policy that defines the preservation of U.S. access to international markets and sites for investment as a "national interest." Frieden suggests that firms with investments in extractive industries in less-developed countries are more likely to benefit from military intervention than are firms invested in manufacturing.[18] If Frieden is correct, such firms might support candidates committed to an assertive U.S. military posture in the less-developed world as a matter of principle. Interest groups may be able to identify such candidates on the basis of a very small number of votes, but if the published ratings of various interest groups are any indication, they have at least an intuitive awareness of the risks of relying on small samples.[19] (Typical scales use eight to twelve floor votes as the basis for an index of legislative support.)

Of course, supporting candidates expressing general principles likely to favor their interests does not preclude interest groups from lobbying on specific issues. It might even make lobbying more likely on issues where the interests of a particular set of constituents diverge from the broad perspective that representatives and constituents generally favor. For example, industries that support winning candidates broadly opposed to government intervention in the economy might have to lobby these legislators to secure a specific subsidy or tariff helpful to their interests. (If their desire for such interventions grows, these interests might consider supporting a candidate committed to a different broad position on government intervention.) In any event, influence on specific issues is analytically distinguishable from influence over broad policy perspectives.

Influence Effect

Interest group lobbying occurs because legislators are not fully informed about the preferences and resources of their constituents or the impacts of proposed laws. Even if interest groups and candidates contract with each other before elections, the contract must be incomplete because the future is only imperfectly known. Interest groups then supply more information to legislators about legislative impacts, their response to those impacts, and the broader public effect of those impacts.

18. Frieden 1994.

19. This general perspective is very similar to what Hinich and Munger 1994 mean by ideology, although their conception of it covers all issue areas considered by the government.

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The existence of multiple pathways for the influence of constituency economic interests has important implications for empirical research. A group might influence the content of legislation by shaping the selection of legislators without influencing legislators' positions on each specific floor vote. No single group would lobby intensively on every issue, so efforts to influence specific legislation will vary. Even among the measures of most concern to the group, its decision about whether to reward or punish an incumbent arguably depends on the member's performance across the entire set of votes. If the interest group cannot rationally expect the member to vote with its position every time, then the member will have some leeway about when to vote with the interest group and when not to. It is thus possible that on any single vote, the influence effects of a given interest group might appear weak, even though selection effects are not.

Model Specification and Interpretation

The problems discussed here have several important implications for empirical models of congressional voting on foreign policy and other issues. First, models of constituent influence should disaggregate the geographic constituency as well as include non-geographic constituents. Second, constituent interests should be understood in sectoral as well as factoral terms. Finally, the effect of constituency interests on the ideology and party of a legislator should be considered when assessing the influence of these interests on congressional voting.

We can investigate in a limited way the relative impact of factoral interests by including information on the proportion of residents of a district who have attained various education levels. Formal education is a reasonable proxy for human capital; on the assumption that the distribution of other types of capital is correlated with it, the education variables provide a rough-and-ready picture of factor endowments in the districts. Models that are purely factoral provide a benchmark for assessing the performance of sectoral and joint sectoral-factoral models.

We hope to avoid the implication that geographic constituency interests imply a single Condorcet-winning platform by using a relatively fine-grained sectoral representation of the economy. The more elemental the building blocks used to assemble winning coalitions, the more possible combinations of constituency interests are available to form such coalitions. This is a signal advantage of a sectoral approach. However, the regressions we present can only detect a linkage between interest group and legislator if, at the time the interest group is observed, it has a strong preference for one party, ideology, or floor vote, regardless of the nature of the district and of the opposition candidate. The preference must also be "effective"—the group must influence (or at least its behavior must postdict) the outcome of interest so that one can observe a link between interest group activity and a subsequent outcome in its favor.

These are not innocent assumptions, and we recognize that at the limit they could be false. For example, imagine an industry that typically supports Republi-

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cans in most congressional races, but has a factory in a district where the Republicans are simply not competitive. It is easy to imagine that, in such a situation, the industry would not even bother to intervene in the general election, and would instead intervene in the Democratic Party primary to influence candidate selection. (There may be consistency constraints on the interest group if the Republicans who are aided and then elected decide to punish the interest group for such behavior.) Or consider the possibility that two economic activities are geographically close and have rival preferences on party, ideology, or legislation. Suppose that one of the two activities is dominant, getting its way most of the time. The group that seldom wins will appear to "prefer" outcomes that it actually dislikes, because its presence is statistically associated with those outcomes. Campaign contributions given with an eye toward making a hostile legislator less hostile might also appear perverse from a statistical standpoint, even if they actually accomplish their objective. Because we usually have no way of observing the legislator's behavior in the absence of the contributions, it will simply appear that the interest group is supporting the "wrong" candidate or position. Finally, a regression approach typically fails to differentiate between interest groups that aid both parties or both sides, on a floor vote, and those that aid neither. (However, further analysis of groups campaign contributions or other supporting activities could detect this, at least in principle).

Members from similar districts—or even a new representative within the same district—might focus their attention on different elements of their constituency. Ideally, we would collect data on the relative importance members of Congress attach to each interest, then weight each interest by this variable. Because such data are impossible to gather, we will adopt a simpler approach, assuming that members of different parties weigh interests differently. Ferguson and Frieden have argued that Democrats and Republicans embodied the interests of opposing sectoral interests during the 1930s and 1940s.[20] Fordham found that in 1949–51, several sectors had a greater influence on floor votes by members of one party than of the other.[21] If this were true in the 1980s, then a regression in which party interacts with the interest variables ought to yield nonzero coefficients on those variables.

As Fiorina noted, any judgment about the substantive importance of constituency characteristics is heavily dependent on how carefully they are measured.[22] Our approach is constrained by the necessity of relying on data sets that are not ideal for the task at hand. Our data on geographic interests uses the Census of Manufacturers and the Census of Agriculture, which are undertaken every five years and which provide observations at the county level. Apart from the omissions created by confidentiality restrictions, research is also limited by the relatively course-grained nature of the observations. Most of it is at the two-digit

20. See Ferguson 1984 and 1995; and Frieden 1988.
21. Fordham 1998.
22. Fiorina 1974.

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Standard Industrialization Classification (SIC) level, which, as we discuss below, sometimes aggregates industries whose political behavior is quite different. These limitations create a trade-off between geographic and industrial detail. Disclosure restrictions have less effect in state-level data, but such an analysis yields only fifty possible geographic constituencies. Although state-level data present fewer disclosure problems, there would be no chance of going beyond two-digit SIC data when modeling 100 senators' votes on a single bill in any event. Even at the two-digit level, it is easy to write models with more than 100 variables. Using industries at the three- or four-digit level would allow finer distinctions among interests, but the data requirements would be enormous, and confidentiality restrictions would become even more problematic at a more disaggregated level. In addition, the one published study that reports using three-digit SIC groups to predict floor votes found that they rarely had large impacts on votes.[23]

Our way of representing non-geographic interest groups employs Federal Election Commission (FEC) data on campaign contributions by corporate political action committees (PACs). Each such contribution has been coded by the SIC sector from which it originated, producing data on the amount contributed by representatives of a particular sector to each member of Congress. Because the data do not reflect "soft money" and other contributions not linked to particular political candidates or reported to the FEC, and because they do not aggregate the reported contributions made by individuals—in their own name—who are associated with a given industry or factor without identifying themselves as such, these data are incomplete. However, it is not obvious that this incompleteness has a relevant systematic component. Besides, there really is no single alternative indicator of these extra-geographic constituency ties that does not possess even more severe disadvantages.

Although the argument that the interests of geographic and non-geographic constituencies shape congressional voting is conceptually quite simple, it does not suggest a parsimonious empirical model. Using data on as many sectors as possible for both geographic and non-geographic constituents results in a model with a very large number of independent variables. Poole and Rosenthal argue that most congressional votes can be understood in terms of conflict between flexible coalitions divided along one or two dimensions.[24] We do not intend our specifications to replace this simple model for all purposes. Instead, we argue that the apparent simplicity of the congressional coalition structure does not mean that constituency interests are unimportant. Although they treat them as indicators of ideology, the dimensions Poole and Rosenthal find in roll-call voting also embody constituent interests, party, and coalition-building efforts. Poole and Rosenthal show that a simple economic model of congressional voting based on constituency interests performs poorly. One point of our results is that a more complex model of eco-

23. Baldwin and Magee 2000.
24. Poole and Rosenthal 1997, 4–5.

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nomic interests performs well, and that these interests play an important role in shaping the flexible coalitions found by Poole and Rosenthal.

Because we begin with the presumption that party and ideology are at least partly endogenous to constituency interests, our voting models are based on a two-stage procedure.[25] We first estimate equations for party and ideology to test the argument that constituency interests influence these considerations. The two ideology equations—one for each dimension of Poole and Rosenthal's ideology scores—generate fitted values we use in the second stage of the model.[26] As the argument in the preceding section suggests, constituency interests provide good instruments for these ideology scores. The use of these fitted values in the second stage gives a better estimate of the effect of ideology apart from the influence of constituency interests. Although party, like ideology, is also partly endogenous to economic interests, we do not construct an instrument for it. Following the procedure suggested by Winship and Mare, we consider the effect of economic interests on party, although we use the dummy variable for party in the vote models. An instrument based on the predicted probability of party membership would be appropriate if we understood observed party membership as a realization of a continuous underlying attitude, perhaps an ideology. Although this interpretation is plausible in other contexts, ideology is already represented in our model through the Poole and Rosenthal scores. Our party variable is intended to reflect a discrete choice about coalition membership that influences voting directly, rather than through an underlying ideology.[27]

The data used here include the value of annual contributions by corporate political action committees linked to each sector of the economy, as well as information on the size of many of these sectors in the home district of each member of the U.S. House of Representatives. The voting scores used as dependent variables, as well as the party affiliation and Poole and Rosenthal ideology scores for each member, are observed in the Congress beginning in the session after the election for which the contributions were given. For example, we use data on contributions in 1979 and 1980 to predict the party chosen in the 1980 elections, and representatives' ideology scores and voting record on foreign economic policy in the 97th Congress, which convened in 1981. We realize that the reverse causal pathway certainly merits attention as well—as we suggest below, past votes are expected to affect present contributions.[28] Floor votes signal a general ideological

25. In this we follow the lead of Conybeare and Zinkula 1996, who also used a two-stage procedure to analyze floor votes on the North American Free Trade Agreement (NAFTA).

26. For the period covered by this study, dimension A is generally viewed as capturing ordinary "left-right" political differences, while dimension B is usually understood as capturing the impact of race and civil rights.

27. Ours is a case of Winship and Mare's 1983 Model III, which is estimated with single equation probit and ordinary least squares (OLS) models.

28. Baldwin and Magee 2000 follow this strategy, but they consider only aggregate labor and business contributions rather than contributions by sector, which simplifies the task considerably at the cost of being unable to study sectoral differences.

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predisposition, but also have sector-specific effects when bills of particular interest to a sector are considered on the floor.[29] Because extant empirical studies of the votes/contributions nexus suggest that the ideology of candidates does not affect election outcomes,[30] our selection equation for party of the legislator omits ideology and treats party as if it were chosen solely on the basis of the district's partisan complexion, constituents' economic interests, and the campaign contributions received.

We have pooled information on contributions for 1978–88 and floor votes for 1979–90. Because representatives may serve in more than one Congress, heterogeneity among members could bias our coefficient estimates.[31] For this reason, we estimated a fixed effect for each Congress as well as robust standard errors. For our purposes, however, the standard error of individual variable coefficients is less important than the overall performance of models that include different classes of independent variables.

Because interest group behavior is typically modeled as being influenced by partisan sentiment among the voting public, we include a simple measure of that sentiment—the percentage of voters in the district who voted for the most recent Democratic Party presidential candidate, minus the national percentage.[32] This is a rough indicator of relative partisan strength in each congressional district and allows for the fact that interest groups will have a greater chance of altering outcomes if the previous balance of partisan sentiment in a district is relatively even.

Results

The Selection Effects of Interests on Party

Our first set of models treats a legislator's party affiliation as a function of geographic and non-geographic interests. We do not mean to imply that these interests influence members' choice of party affiliation, although at the limit this might occur when members or candidates change parties. Members usually make a choice of party relatively early in their careers, probably before they interact with interest groups. Instead, the regressions test two general arguments. First, if there is a strong relationship between members' party affiliation and the contributions or

29. Although we use Poole and Rosenthal's 1997 D-NOMINATE scores to represent ideology, we are agnostic about arguments over whether they are a completely satisfactory representation of the dimensionality of congressional roll-call votes. (See, for example, the criticisms by Koford 1989; Poole, Rosenthal, and Koford 1991; and Heckman and Snyder 1997.) Scholars such as Hinich and Munger 1994, who insist that ideology is important generally, support the use of D-NOMINATE scores rather than interest group ratings, the only obvious alternative.

30. See Gerber 1998; and Erickson and Palfrey 1998.

31. Stimson 1985.

32. See Denzau and Munger 1986; Baron 1989; Snyder 1990; and Grossman and Helpman 1994. We are indebted to Gary Jacobson for sharing these data with us.

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presence of particular sectors, then previous studies that treated party as if it were a competing explanatory variable are mistaken. Indeed, to the extent that interests "explain" party, it can be viewed as a product of interest group effects on the selection process. Second, districts in which certain industries are heavily represented in the local economy may be more likely to elect members of one party than the other. Our argument here is similar to the claim that the strength of the two parties varies in different regions of the country. Because regional differences are most often explained in terms of variations in economic structure,[33] our approach can be viewed as a more direct and theoretically explicit way of investigating these differences than using dummy variables for region.

Because of the large number of coefficients needed to model campaign contributions and geographic interests by sector, presenting the full results of several models of party is not practical. Moreover, our theoretical argument addresses the overall influence of these interests rather than the effect of particular sectors. For these reasons, Table 1 presents only goodness of fit statistics for several models of party affiliation covering the pool of six congresses we studied (96th through 101st). We examined models that used each set of variables separately and then in combination with other sets. Models including sectoral contributions performed best. A model including contributions alone predicts about 91 percent of the cases in our sample correctly. The comparable figures for the other models examining single sets of variables—education and income, previous presidential vote, and geographic sectoral constituency interests—are 60, 75, and 70 percent, respectively. The accuracy of these models in predicting party affiliation out of the sample was roughly the same. Neither the education and income variables nor the geographic constituency variables added much to the predictive power of the model. The performance of Model (5), which included only sectoral contributions and prior presidential vote, was roughly the same as Models (6) to (8), which added geographic constituency, education, and income.

Because many of our models are extremely large, and because merely adding irrelevant variables could improve the goodness of fit of the model by chance, we assess goodness of fit with the likelihood ratio test and the Bayesian information criterion (BIC). These two measures take the number of parameters estimated into consideration. Models (1) to (7) are nested within Model (8), since it includes all sets of variables. The likelihood ratio test assesses whether the coefficient estimates included in the full model, but omitted from each of the restricted models, are equal to zero. The null hypothesis is that these restrictions on the full model are true. The test statistic follows a chi-squared distribution with degrees of freedom equal to the number of restrictions.[34] In each case, the full model is supported over the restrictions embodied in Models (1) to (7).

33. See Bensel 1984; Agnew 1987; and Trubowitz 1998.
34. Long 1997, 93–94.

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TABLE 1. *Goodness of fit of pooled logit models of party of representative*

Independent variables included	*Bayesian Information Criterion*	*Percent correctly predicted out of sample**	*Percent correctly predicted in sample*	*Likelihood ratio test against full model*
1. Education and income**	−16650	61.0	60.4	χ^2 (119) = 2789 $p < .00$
2. Previous presidential vote***	−17371	72.8	74.8	χ^2 (121) = 2083 $p < .00$
3. Geographic constituency interests	−16821	71.0	70.4	χ^2 (83) = 2335 $p < .00$
4. Contributions	−18486	87.9	91.0	χ^2 (48) = 395 $p < .00$
5. Sectoral contributions, previous presidential vote	−18653	92.1	92.9	χ^2 (47) = 220 $p < .00$
6. Geographic constituency interests, contributions	−18426	90.9	94.3	χ^2 (4) = 109 $p < .00$
7. Geographic constituency interests, contributions, previous presidential vote	−18518	90.6	95.1	χ^2 (3) = 10 $p < .02$
8. All variables	−18504	90.6	95.1	

Notes: All models were estimated using the logit function in Stata 7 SE and included dummy variables for each congressional session. The null hypothesis in the likelihood ratio test is that the restrictions on the full model are true and the coefficients on the omitted variables are equal to zero. The Bayesian information criterion (BIC) was calculated using the fitstat function developed by J. Scott Long and Jeremy Freese. In all cases, the number of observations was 2,567. There were 125 independent variables in the final model: 80 indicating contributions by corporate PACs from two-digit SIC industrial sectors, 39 indicating the proportion of wages, farms, and employment in the district in various economic activities, 5 session dummy variables, and 1 for the district's previous presidential vote.
*Out-of-sample predictions were made by estimating the model using a randomly selected 75 percent sample of the original data, then generating predictions using the remaining 25 percent.
**Education was indicated by the proportion of high school and college graduates in the district. Income was indicated by median income in the district. Both variables were drawn from the Census Bureau.
***Previous presidential vote is the difference between national and local percentage of voters supporting the Democratic party candidate in the most recent presidential election.

The BIC permits the comparison of both nested and non-nested models.[35] As Long describes it, the criterion "assesses whether [a model] performs well enough to justify the number of parameters that are used."[36] A lower BIC indicates better performance; if it is greater than zero, a null model is preferable. The difference between the BIC of the models in Table 1 can be used to assess their relative

35. See Long 1997, 110–13; Clarke 2001; and Raftery 1995.
36. Long 1997, 111.

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performance. Long and Clarke both use Raftery's criterion for assessing relative performance.[37] Differences of 0 to 2 weakly support the lower scoring model, differences of 2 to 6 indicate positive support, 6 to 10 indicate strong support, and differences of greater than 10 indicate very strong support. Based on this criterion, Model (5), which includes only sectoral contributions and previous presidential vote, is strongly supported against all other models, including those that include these as well as other variables. Among models including only a single set of variables, one based on sectoral contributions is strongly preferred. Overall, a member's portfolio of contributions is the best predictor of his or her party. Treating contributions and party as competing explanations is questionable.

It is not surprising that the geographic constituency variables have a weaker relation to party than do the sectoral contribution variables. While contributors can select the party to which they give money, geographic constituents cannot control the party of their representative. Although economically similar districts might be expected to elect members of one party, studies of split Senate delegations show that this is often not the case.[38] In diverse districts, industries with different interests may have to compete to select a representative from the party they prefer. They may lose this battle often enough to eliminate any statistically significant relationship between their presence in the district and their representative's ideology. In fact, if they lose consistently, the relationship between their presence in the district and the representative's ideology will take the opposite sign from what one would otherwise expect.

A consideration of the sectors associated with each party offers additional support for models including interest group variables. If the partisan preferences of individual industries revealed in the regressions did not accord with what is already known about those preferences, or if the industries supporting each party fluctuated greatly, one would suspect that our constituency variables are proxying other considerations merely by chance, an obvious potential problem in models with a large number of independent variables. However, an examination of the sectors associated with each of the two parties provides no support for this interpretation. Table 2 presents a list of the sectoral contributors associated with each party in the full model of all six Congresses. Table 3 presents a similar list of geographic sectors.

The results for geographic and non-geographic interests were not dominated by industries making only a few contributions that happened to be to candidates of the same party. In fact, variables representing the industries that gave the most money were more likely to have low standard errors on their coefficients. Of the eleven two-digit sectors giving more than an average of $2,500 to victorious candidates in every election, six were significantly associated with one party or the

37. Ibid., 112; and Clarke 2001, 738.
38. See Goff and Grier 1993; and Poole and Rosenthal 1997, 118–21.

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TABLE 2. *Party associations of sectoral contributors*

Democratic Party	*Republican Party*
23 (Apparel and other textile products)	07 (Agricultural services)
33 (Primary metal industries)	12 (Coal mining)
37 (Transportation equipment, except motor vehicles and equipment)	17 (Special trade contractors)
41 (Local and suburban transit and inter-urban highway passenger transportation)	25 (Furniture and fixtures)
44 (Water transportation)	26 (Paper products)
49 (Electric, gas, and sanitary services)	31 (Leather and leather products)
54 (Food stores)	32 (Stone, clay, and glass products)
56 (Clothing stores)	35 (Industrial machinery and equipment)
73 (Business services)	36 (Electronic and other electric equipment)
75 (Auto repair, services, and parking)	37 (Transportation equipment, except motor vehicles and equipment)
78 (Motion pictures)	46 (Pipelines, except natural gas)
81 (Legal services)	50 (Wholesale trade—durable goods)
82 (Educational services)	59 (Miscellaneous retail)
	65 (Real estate)
	80 (Health services)
	93 (Public finance, taxation, and monetary policy)
	96 (Administration of economic programs)

Note: SIC 83 (Social services) and SIC 86 (Membership organizations) made no contributions greater than $1,000.

other at the .05 level.[39] The associations of three others were nearly significant. Overall, while not every industry's contribution pattern is clearly partisan, most of the largest sectoral contributors are.[40]

Our findings generally match conventional wisdom and previous research about industries associated with Republicans and Democrats. The entertainment indus-

39. The two-digit sectors giving in excess of $2,500 per candidate per election were:
80 (Health services): $7,342
37 (Transportation equipment): $5,173
65 (Real estate): $5,006
67 (Holding and other investment offices): $3,959
63 (Insurance carriers): $3,509
49 (Electric, gas, and sanitary services): $3,217
51 (Wholesale trade—nondurable goods): $3,148
45 (Transportation by air): $2,902
34 (Fabricated metal products): $2,869
60 (Depository institutions): $2,750
36 (Electronic & other electric equipment): $2,718

40. Analyzing sectoral support for parties at the two-digit SIC level misses important differences within industry groups. The best example of this, which we included in the models in Table 1, is the transportation equipment sector (SIC 37). The automobile industry (SIC 371) strongly supported Democrats during the 1980s, while the rest of this sector, which includes the aircraft industry (SIC 372), as well as manufacturers of guided missiles and space vehicles (SIC 376), strongly supported Republicans. There were other cases of different components of the same industry supporting opposite parties that we did not explicitly model.

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TABLE 3. *Party associations of geographic constituents*

Democratic Party	*Republican Party*
0131 (Cotton)	0115 (Corn)
0132 (Tobacco farms)	024 (Dairy farms)
021 (Livestock, except dairy and poultry)	28 (Chemicals and allied products)
32 (Stone, clay, glass, and concrete)	36 (Electronic and other electrical equipment and components except computers)
49 (Public utilities)	39 (Miscellaneous manufacturing industries)

try, including motion pictures and advertising (SIC 78 and 73, respectively), as well as lawyers and educators (SIC 81 and 82), back the Democrats. Certain labor-intensive industries, such as furniture and miscellaneous retail (SIC 25, 56, and 59) back Republicans. The electronics industry (SIC 36) also supported Republicans. Although there are a few surprises, our findings concerning the partisan preferences of major industry groups generally match what is already known about them.[41]

The geographic sectoral constituencies associated with each party in Table 3 also make sense. Districts dominated by cotton and tobacco farming, as well as textile mills, all concentrated in the South, and those with high employment in public utilities, concentrated in urban areas, were more likely to elect Democrats in the 1980s. Districts with relatively high concentrations of corn and dairy farms, characteristic of the rural Midwest, were more likely to elect Republicans.

The Selection Effect on Ideology

Table 4 presents goodness of fit statistics for several different regression models of each House member's score on the two primary dimensions of Poole and Rosenthal's D-NOMINATE scales. The results suggest that the geographic constituency had a selection effect on member ideology, and that contributors considered this when making contributions. As was the case with party, the model fit statistics indicate that, even when one considers the large number of coefficients used to estimate the effect of geographic and non-geographic sectoral interests, models including these variables perform as well as, or better than, the alternatives. For both D-NOMINATE scores, geographic constituency interests produced stronger models than any other single set of variables [Models (1) to (3) and (5) to (8)].

41. One mild surprise is that real estate (SIC 65) tended to back Republicans during this period. Ferguson and Rogers 1986, 225 found that real estate interests in large urban areas tended to back liberal Democrats in the 1984 elections. That may be so, but it appears that the larger industry has a more Republican coloration.

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TABLE 4. *Goodness of fit of pooled OLS models of Poole and Rosenthal's ideology scores*

	D-NOMINATE (A)			D-NOMINATE (B)		
Variables included	*Adj. R^2*	*BIC*	*Error of out-of sample prediction*	*Adj. R^2*	*BIC*	*Error of out-of sample prediction*
1. Education and income	.010	−17254	mean = .004 std. dev. = .342	.013	−19103	mean = .045 std. dev. = .342
2. Previous presidential vote	.297	−18094	mean = .011 std. dev. = .284	.010	−19109	mean = .046 std. dev. = .328
3. Party	.594	−19421	mean = .006 std. dev. = .216	.052	−19214	mean = .045 std. dev. = .383
4. Education and income, previous presidential vote, and party	.324	−18163	mean = .009 std. dev. = .198	.057	−19199	mean = .047 std. dev. = .376
5. Geographic constituency interests	.203	−17534	mean = .006 std. dev. = .304	.304	−19701	mean = .045 std. dev. = .347
6. Geographic constituency interests and party interactions	.738	−19958	mean = .003 std. dev. = .180	.360	−19642	mean = .048 std. dev. = .375
7. Contributions	.588	−18849	mean = .002 std. dev. = .221	.258	−19273	mean = .055 std. dev. = .361
8. Contributions and party interactions	.655	−18742	mean = .006 std. dev. = .209	.405	−19270	mean = .059 std. dev. = .379
9. Geographic constituency interests and contributions	.638	−18895	mean = .001 std. dev. = .208	.412	−19567	mean = .052 std. dev. = .363
10. Geographic constituency interests and party interactions, contributions	.805	−20129	mean = .002 std. dev. = .158	.483	−19617	mean = .053 std. dev. = .377
11. Contributions and party interactions, geographic constituency interests	.703	−18845	mean = .004 std. dev. = .196	.510	−19477	mean = .055 std. dev. = .377
12. All variables	.842	−20069	mean = .003 std. dev. = .147	.541	−19341	mean = .057 std. dev. = .382

Note: All models were estimated using the regress function in Stata 7 SE. Models of the two D-NOMINATE scores were estimated independently. In all cases the number of observations was 2414. The mean and standard deviation given are for the difference between the predicted and observed values of the D-NOMINATE scores. Unbiased predictions should produce a mean error near zero. More precise predictions have a smaller variance and thus a smaller standard deviation. BIC = Bayesian information criterion. The fitted value of party was calculated using Model (8) in Table 1.

Using Raftery's standards, the BIC provides very strong support for Model (6) of D-NOMINATE A and Model (5) of D-NOMINATE B. These models also produced relatively high adjusted r-squared statistics, indicating better linear fit, and more precise out-of-sample predictions, as indicated by smaller standard deviations. By the same standards, the models that included only contributions (7 and 8) also performed relatively well. While other variables also help shape members' ideological positions, economic interests are very important. Under the circumstances, it would be a mistake to view ideology, as expressed by D-NOMINATE A,

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as a competing explanation for voting behavior, since it is endogenous to the interest group environment. However, D-NOMINATE B is less well explained by that same environment.

The results in Table 4 also indicate that geographic constituency interests can shape member ideology both directly and through their interaction with party. As we noted earlier, it is possible that some economic interests can only influence members of a particular party. This effect is evident in the results for D-NOMINATE A. All three of the statistics presented in Table 4 indicate that model (6), which used interaction terms to allow the effect of geographic constituency to vary with the party of the member, performed far better than did model (5), which did not include this interaction effect. Including interaction terms for the contribution variables did not substantially improve the performance of the model. [The BIC indicates that Model (7), which does not include these interactions, performs somewhat better than Model (8), which does.] Unlike contributors, who can always choose not to give money to candidates whose ideology they dislike, geographic constituents are unlikely to leave a district simply because that district elects a member of Congress whose ideology they dislike.

Selection and Influence Effects in Trade Policy Voting

Having examined the selection effects of constituency interests on party and ideology, we turn our attention to the influence of these interests on particular foreign policy votes. Table 5 presents model fit statistics from logit regressions on the pool of five trade policy votes. Coefficient estimates and robust standard errors for Model (12) (the full model) are given in the appendix. As with the models of party affiliation and ideology, our purpose is to compare the influence of several different sets of explanatory factors, especially constituency interests, rather than to assess the effect of specific sectoral interests. The statistics in Table 5 permit these comparisons.

All of the considerations we have discussed—the partisan complexion of the district, the party and ideology of the legislator, the sectoral geographic and contributor interests, and education and income—affect voting patterns. The models that include all of these considerations attain the highest levels of accuracy. Moreover, the likelihood ratio test supports the full model.

On the other hand, the BIC supports some models with fewer independent variables. The BIC provides strongest support for Model (4), which uses the fitted ideology scores. Models including larger sets of independent variables provide more predictive accuracy, but they are far from parsimonious. If our analysis were restricted to a single equation for floor votes, and if we followed the widespread practice of treating party and ideology as exogenous, our results would appear to have improved little on previous, less extensive treatments of sectoral and factoral interests. However, as the results in Tables 1 and 4 indicate, these interests play a role in selecting members of Congress based on their party and one dimension of their ideology long before any floor vote occurs. Because the party and

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TABLE 5. *Goodness of fit of pooled logit models of five trade policy votes*

Independent variables included	*Percent correctly predicted in sample*	*Percent correctly predicted out of sample*	*Likelihood ratio test against full model*	*Bayesian Information Criterion*
1. Education and income	61.0	61.7	χ^2 (237) = 1020 $p < .0001$	−7631
2. Previous presidential vote	68.8	73.1	χ^2 (239) = 850 $p < .0001$	−7816
3. Party	74.4	75.4	χ^2 (240) = 715 $p < .0001$	−7950
4. Fitted ideology scores	76.7	78.1	χ^2 (38) = 631 $p < .0001$	−8027
5. Geographic constituency interests	70.3	72.8	χ^2 (201) = 766 $p < .0001$	−7626
6. Geographic constituency interests and party interactions	82.5	78.7	χ^2 (162) = 382 $p < .0001$	−7731
7. Contributions	78.6	74.6	χ^2 (161) = 427 $p < .0001$	−7679
8. Contributions and party interactions	82.3	74.0	χ^2 (84) = 239 $p < .0001$	−7307
9. Geographic constituency interests and contributions	82.2	74.0	χ^2 (122) = 297 $p < .0001$	−7529
10. Geographic constituency interests and party interactions, contributions	85.0	74.6	χ^2 (83) = 171 $p < .0001$	−7375
11. Contributions and party interactions, geographic constituency interests	85.7	76.9	χ^2 (45) = 128 $p < .0001$	−7137
12. All variables	88.8	75.4		−6936

Notes: All models were estimated using the logit function in Stata 7 SE. The fitted values of the Poole-Rosenthal ideology scores were calculated using model (12) in Table 4. The votes, taken from Congressional Quarterly compilations of key votes, are:

1. Amendment to H.R. 3398, an omnibus trade bill, dropping Taiwan, Hong Kong, and South Korea from the generalized system of preferences permitting some exports to enter the U.S. duty-free (3 October 1984, ICPSR variable V0886).
2. Passage of H.R. 1562, a bill imposing limits on textile imports from Taiwan, South Korea, Hong Kong, and other Third World nations (10 October 1985, ICPSR variable V0330).
3. Motion to override the presidential veto of H.R. 1562, a bill imposing limits on textile imports from Taiwan, South Korea, Hong Kong, and other Third World nations (6 August 1986, ICPSR variable V0714.)
4. Amendment to H.R. 3, an omnibus trade bill, providing for government action to reduce the Japanese trade surplus with the United States (29 April 1987, ICPSR variable V0078).
5. Passage, over presidential veto, of H.R. 4328, a bill limiting the growth of imports of textiles and apparel to 1 percent annually, and establishing quotas for nonrubber footwear (10 October 1990, ICPSR variable V0796).

D-NOMINATE A ideology variables already embody the influence of constituency interests, it is not surprising that the explicit inclusion of constituency interest variables in the voting equation produces only modest gains in predictive accuracy, at the expense of a considerable reduction in parsimony. If we follow

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the standard interpretation of D-NOMINATE A and treat it as capturing conventional left-right cleavage centered on economic issues, then that ideological cleavage is so much a product of the interest group environment that it plays no independent role in the floor votes. (It is not statistically significant in a model that includes our constituency interest variables, like the one presented in the appendix.)

Interestingly, the "social issue" dimension of ideology represented by D-NOMINATE B does play an independent role in influencing these votes. One possible explanation for this is that there is relatively modest difference between the parties in terms of their average D-NOMINATE B scores,[42] and that party discipline binds each end of the D-NOMINATE B scale to its respective party on floor votes. Another possibility is that the procedure Poole and Rosenthal used to compute the ideology scores captures many untheorized factors that create "closeness" between members' voting records. Coalition-building is a complex process likely to be influenced by many idiosyncratic considerations in addition to the ideological considerations Poole and Rosenthal associate with these two dimensions and the constituency economic interests examined here.

Conclusion

The models presented here are strongly consistent with both selection and influence effects of geographic and non-geographic constituencies. Both as contributors and as constituents in members' home districts, economic interests play a major role in shaping the party composition of Congress, as well as the ideology of its members. Thus these interests affect congressional floor votes on trade policy not only directly, by shaping the outcomes of floor votes, but also via their impacts on the characteristics of the pool of successful candidates for Congress.

Although they underscore the importance of economic interests in shaping congressional voting, our results do not support a simple, purely economic theory of the effects of lobbying by constituents on issues where their interests are at stake. Although our results show that party and ideology independently influence floor votes, even after constituent interests are taken into account, the improved goodness of fit obtained with a comprehensive approach to modeling constituency interests suggests that extant assessments of the importance of "shirking" exaggerate its effects. In any case, it is better to model the effects of ideology directly, by including it as an independent variable, than to treat it as simply a new name for the residual.

Because districts may be diverse, often containing constituents with conflicting interests, more than one winning coalition of constituent interests may be possi-

42. The means (standard deviations) for D-NOMINATE A by party are Democrats: 0.204 (0.116); and Republicans −0.261 (0.227). For D-NOMINATE B, they are Democrats: 0.0253 (0.242); and Republicans: −0.083 (0.183).

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ble. Our results for the regressions modeling D-NOMINATE scores and those for trade policy floor votes indicate that some sectors may influence the ideology or floor votes of members of one party but not the other. This suggests that constituents whose interests are very important to a Democratic or "liberal" representative might not be important to a Republican or "conservative" from the same district, and vice versa. Under these circumstances, constituents might well be just as interested in ensuring that the party with which they have the greater influence wins the next election as they are in lobbying on particular issues. Of course, party is not the only basis on which electoral coalition-building within a congressional district might occur. Individual candidates might face some constituency preferences that differ from other members of their party. The larger point is that previous models that used features of the economic structure of legislative districts to explain voting may not perform well, not because the interests these variables indicate are not important, but because their effects vary with some characteristic of that member.

Our findings also suggest that constituent interests may influence congressional voting patterns even if they do not lobby on specific issues. Economic interests may have strong incentives to underwrite parties and ideologies rather than simply lobbying on individual votes. Indeed, for some interests these broader efforts may well be more important. Constituents and contributors do not know precisely what issues Congress will face in the future. Lobbying members of Congress on each new issue as it arises would tax the resources of the wealthiest organized interest. These considerations suggest that constituents should find members whose party affiliation or ideological orientation makes it most likely that the member will usually come to an acceptable position without direct intervention by the constituent. Those who successfully shape the selection process may not need to lobby legislators very aggressively or often.

Although most of our attention has been focused on the role of constituent interests, we have avoided framing our argument in terms of interest-based explanations being competitive with those based on party and ideology, or on mass partisan leanings. Instead, we suggest that all of these factors are better viewed as nested within a larger explanatory framework. For the reasons set forth above, both geographic constituents and contributors may have good reasons to promote parties and ideologies rather than simply lobby on issues that concern them. Given these relationships, it is a mistake to treat constituent interests, the electorate's partisan leanings, party, and ideology as if they represented competing explanatory factors. If party and ideology are endogenous with respect to the set of societal pressures, then the common practice of inserting these variables into roll-call regressions, as if they represented an influence that is wholly distinct from the influence of these societal interests, produces results that are substantively misleading, even if there do not seem to be any obvious statistical problems with such an approach.

The inclusion of a limited measure of factor endowments—education levels as a proxy for human capital—allows us to assess factoral and sectoral influences simultaneously. In general, factoral effects accounted for relatively little variance.

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Although this result may be partly because of the crude and incomplete measures of factoral endowments we possess, it is also consistent with previous findings and with some simple theoretical arguments. Although the relationship between factoral interests and personal preferences on trade policy or voting for candidates has been shown to be statistically significant in a number of studies, the regression coefficients in these studies typically are small and their overall explanatory power is quite modest.[43] The most comprehensive analysis to date, Mayda and Rodrik's study of public opinion in twenty-two countries, reveals that only about 5 percent of the variation in opinion about free trade is captured by standard demographic variables such as age, sex, income, occupation, education, and social class.[44] (Since they are working with sample sizes in the neighborhood of 10^4, statistical significance is unremarkable in any case.)

The linkage between voters' factor endowments and policy outputs is further weakened by the mapping of trade policy preferences onto a continuum of voters. In the Organization for Economic Cooperation and Development (OECD) countries, capital is relatively abundant; factoral models predict that capitalists there ought to favor free trade. If, as Mayda and Rodrik's results suggest, the median voter is protectionist, then the greater the proportion of income obtained by returns on capital, the further the voter is from the median. Because income is typically distributed in an inegalitarian way, the density of voters declines as incomes rise. Thus elected politicians should be responsive to such voters only if they were able to influence electoral outcomes by means of campaign contributions and other assistance to candidates. Because we already incorporate campaign contributions into our model, we are already capturing any variation in legislative floor votes that is due to those contributions. At the other tail of the voting distribution, voters with negligible asset holdings, who in wealthy countries have the strongest motivation for protectionist preferences, have little or no wealth to contribute and vote less frequently than higher-income voters. Unless the distribution of income is extremely inegalitarian, this suggests that the more unambiguous one's interest in protection, the less influence one will have with elected politicians.

Although it is easy to show that interests shape congressional voting patterns, it is more difficult to explain how they exercise this influence. Our results do not paint a simple picture. Personal ideology, party membership, constituent characteristics and actions, and public opinion must be modeled in a multistage process that extends backward from floor votes to the selection mechanisms that place members in their legislative seats. Introducing this broader view of the possibili-

43. See Balistreri 1997; Scheve and Slaughter 2001; and Mayda and Rodrik 2002.

44. Admittedly, assessing factor endowments by observing formal education, wages and salaries, and ownership of housing is a highly imperfect procedure, but the lack of data on individuals' ownership of securities, commercial real estate, or privately held businesses that cannot be tied to geographic locales, means that a more precise test of a factor endowments model of public opinion is currently not possible.

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ties for interest group influence also implies that research into the different instruments that interest groups use to shape outcomes at each stage of the process merits attention. This implies following the lead of Hansen and Mitchell, who expand the scope of inquiry into interest group instruments of influence to include lobbying and charity expenditures, and of Baron, who views the corporate decision-making problem to be the fashioning of an integrated strategy of market and nonmarket activities.[45] We have initiated an integrated consideration of selection and influence, but clearly much more needs to be done to complete such a model. This is a challenging task, but one that promises substantial improvements in our understanding of congressional actions on foreign policy and legislation in general.

Appendix: Results of Pooled Logit Model with Robust Standard Errors, Five Trade Policy Votes

A. Coefficients for sectoral PAC contributions (thousands of dollars)

Standard industrial classification sector	*Coefficient*	*z*
01 Agricultural industries: crops	−0.139	−1.06
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.165	−0.78
02 Agricultural industries: livestock and animal specialties	−0.193	−0.57
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.014	−0.04
07 Agricultural services	0.934	0.06
Interaction with party (Republican = 1; Democrat or independent = 0)	0.061	0.10
08 Forestry	**12.541**	**2.13**
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.015**	**−2.78**
09 Fishing, hunting, and trapping	0.403	0.34
Interaction with party (Republican = 1; Democrat or independent = 0)	**−4.567**	**−2.52**
10 Metal mining	1.181	1.53
Interaction with party (Republican = 1; Democrat or independent = 0)	−1.866	−1.62
12 Coal mining	**−0.608**	−1.86
Interaction with party (Republican = 1; Democrat or independent = 0)	1.097	2.46
13 Oil and gas extraction	−0.361	−1.32
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.036	−0.13
14 Mining and quarrying of nonmetallic minerals, except fuels	0.098	0.66
Interaction with party (Republican = 1; Democrat or independent = 0)	**3.202**	**2.33**
15 Building construction, general contractors, and operative builders	0.383	0.92
Interaction with party (Republican = 1; Democrat or independent = 0)	**1.954**	**2.97**
16 Heavy construction other than building construction contractors	**−0.448**	**−2.71**
Interaction with party (Republican = 1; Democrat or independent = 0)	0.035	0.21
17 Construction special trade contractors	0.104	1.08
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.209**	**−1.99**
20 Food and kindred products	0.098	0.95
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.221	−1.17

45. See Hansen and Mitchell 2000; and Baron 1997.

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21 Tobacco products	−1.155	−1.86
Interaction with party (Republican = 1; Democrat or independent = 0)	0.030	0.04
22 Textile mill products	**−0.897**	**−2.74**
Interaction with party (Republican = 1; Democrat or independent = 0)	0.156	0.31
23 Apparel and other finished products made from fabrics and similar materials	−0.007	−0.03
Interaction with party (Republican = 1; Democrat or independent = 0)	0.526	0.72
24 Lumber and wood products, except furniture	−0.122	−0.20
Interaction with party (Republican = 1; Democrat or independent = 0)	0.013	0.02
25 Furniture and fixtures	0.662	0.60
Interaction with party (Republican = 1; Democrat or independent = 0)	0.393	−0.43
26 Paper and allied products	3.165	0.39
Interaction with party (Republican = 1; Democrat or independent = 0)	*	*
27 Printing, publishing, and allied industries	**−1.100**	**−2.03**
Interaction with party (Republican = 1; Democrat or independent = 0)	**1.279**	**2.57**
28 Chemicals and allied products	0.080	0.51
Interaction with party (Republican = 1; Democrat or independent = 0)	**0.513**	**2.07**
29 Petroleum refining and related industries	−0.102	−0.56
Interaction with party (Republican = 1; Democrat or independent = 0)	0.162	0.37
30 Rubber and miscellaneous plastics products	1.138	1.76
Interaction with party (Republican = 1; Democrat or independent = 0)	**2.161**	**−2.30**
31 Leather and leather products	1.352	0.35
Interaction with party (Republican = 1; Democrat or independent = 0)	−1.124	−0.40
32 Stone, clay, glass, and concrete products	−0.366	−0.85
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.391	−0.80
33 Primary metal industries	−0.044	−0.46
Interaction with party (Republican = 1; Democrat or independent = 0)	0.229	1.22
34 Fabricated metal products, except machinery and transportation equipment	**−0.135**	**−2.14**
Interaction with party (Republican = 1; Democrat or independent = 0)	0.018	0.12
35 Industrial and commercial machinery and computer equipment	−0.091	−0.57
Interaction with party (Republican = 1; Democrat or independent = 0)	**0.567**	**2.08**
36 Electronic and other electrical equipment and components, except computers	**0.284**	**2.27**
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.210	−1.46
371 Motor vehicles and motor vehicle equipment	**−0.500**	**−2.11**
Interaction with party (Republican = 1; Democrat or independent = 0)	0.131	0.85
37 Transportation equipment, except SIC 371	0.282	1.50
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.170	−0.92
38 Measuring, analyzing, and controlling instruments; photographic, medical and optical	−0.140	−1.00
Interaction with party (Republican = 1; Democrat or independent = 0)	0.231	1.11
39 Miscellaneous manufacturing industries	−0.067	−0.25
Interaction with party (Republican = 1; Democrat or independent = 0)	0.249	0.66
40 Railroad transportation	−0.300	−1.13
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.928**	**−2.06**
41 Local and suburban transit and interurban highway passenger transportation	−0.287	−0.61
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.673	−1.04
42 Motor freight transportation and warehousing	0.180	1.45
Interaction with party (Republican = 1; Democrat or independent = 0)	0.789	1.85
43 United States Postal Service	−0.871	−1.15
Interaction with party (Republican = 1; Democrat or independent = 0)	**−4.668**	**−2.01**
44 Water transportation	0.228	1.45
Interaction with party (Republican = 1; Democrat or independent = 0)	0.211	1.21
45 Transportation by air	−0.026	−0.27
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.080	−0.65

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46 Pipelines, except natural gas	−0.131	−0.60
Interaction with party (Republican = 1; Democrat or independent = 0)	0.635	1.56
47 Transportation services	0.156	0.89
Interaction with party (Republican = 1; Democrat or independent = 0)	0.832	1.20
48 Communications	0.008	0.10
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.219**	**−2.01**
49 Electric, gas, and sanitary services	0.153	1.44
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.212	−1.00
50 Wholesale trade-durable goods	−0.072	−0.27
Interaction with party (Republican = 1; Democrat or independent = 0)	0.036	−0.13
51 Wholesale trade–nondurable goods	−0.025	−0.29
Interaction with party (Republican = 1; Democrat or independent = 0)	0.030	−0.14
52 Building materials, hardware, garden supply, and mobile home dealers	1.049	0.56
Interaction with party (Republican = 1; Democrat or independent = 0)	**−7.169**	**−2.23**
53 General merchandise stores	−0.017	−0.05
Interaction with party (Republican = 1; Democrat or independent = 0)	0.632	1.00
54 Food stores	0.078	0.76
Interaction with party (Republican = 1; Democrat or independent = 0)	0.022	0.19
55 Automotive dealers and gasoline service stations	**0.498**	**2.15**
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.268**	**−2.19**
56 Apparel and accessory stores	0.838	0.91
Interaction with party (Republican = 1; Democrat or independent = 0)	3.413	1.94
57 Home furniture, furnishings, and equipment stores	−0.702	−1.25
Interaction with party (Republican = 1; Democrat or independent = 0)	1.906	1.33
58 Eating and drinking places	0.636	1.72
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.615	−1.39
59 Miscellaneous retail	−0.264	−0.74
Interaction with party (Republican = 1; Democrat or independent = 0)	0.615	0.97
60 Depository institutions	−0.015	−0.21
Interaction with party (Republican = 1; Democrat or independent = 0)	**0.340**	**3.06**
61 Nondepository credit institutions	−0.032	−0.24
Interaction with party (Republican = 1; Democrat or independent = 0)	0.073	0.36
62 Security and commodity brokers, dealers; exchanges; and services	**0.132**	**3.23**
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.586**	**−2.30**
63 Insurance carriers	−0.039	−0.62
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.252**	**−2.00**
64 Insurance agents, brokers, and service	−0.139	−0.66
Interaction with party (Republican = 1; Democrat or independent = 0)	0.119	0.56
65 Real estate	**0.112**	**2.28**
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.207**	**−3.26**
67 Holding and other investment offices	−0.054	−1.01
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.018	−0.20
70 Hotels, rooming houses, camps, and other lodging places	**−0.406**	**−2.13**
Interaction with party (Republican = 1; Democrat or independent = 0)	**0.849**	**2.19**
72 Personal services	3.126	1.17
Interaction with party (Republican = 1; Democrat or independent = 0)	1.810	0.94
73 Business services	0.218	1.33
Interaction with party (Republican = 1; Democrat or independent = 0)	**−0.341**	**−2.30**
75 Automotive repair, services, and parking	0.272	0.61
Interaction with party (Republican = 1; Democrat or independent = 0)	1.764	1.69
76 Miscellaneous repair services	−0.604	−1.79
Interaction with party (Republican = 1; Democrat or independent = 0)	**4.291**	**3.31**
78 Motion pictures	0.798	1.82
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.772	−0.69
79 Amusement and recreation services	−0.353	−0.77
Interaction with party (Republican = 1; Democrat or independent = 0)	1.417	1.34
80 Health services	0.077	1.63
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.011	−0.21

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81 Legal Services	−0.314	−1.15
Interaction with party (Republican = 1; Democrat or independent = 0)	0.037	0.18
82 Educational service	−0.141	−0.88
Interaction with party (Republican = 1; Democrat or independent = 0)	**−1.025**	**−2.61**
83 Social services	63.765	0.68
Interaction with party (Republican = 1; Democrat or independent = 0)	*	*
87 Engineering, accounting, research, management, and related services	0.494	0.94
Interaction with party (Republican = 1; Democrat or independent = 0)	−1.909	−1.84
89 Miscellaneous services	0.014	0.20
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.202	−0.77
92 Justice, public order, and safety	1.221	1.53
Interaction with party (Republican = 1; Democrat or independent = 0)	−2.007	−1.53
93 Public finance, taxation, and monetary policy	0.078	0.57
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.090	−0.52
94 Administration of human resource programs	0.381	1.95
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.502	−1.89
95 Administration of environmental quality and housing programs	−0.106	−0.28
Interaction with party (Republican = 1; Democrat or independent = 0)	0.114	0.35
96 Administration of economic programs	−0.297	−1.67
Interaction with party (Republican = 1; Democrat or independent = 0)	0.021	0.09
97 National security and international affairs	−1.322	−1.79
Interaction with party (Republican = 1; Democrat or independent = 0)	**2.350**	**2.75**

B. Geographic sectoral constituency data

Geographic sectoral constituency	*Coefficient*	*z*
Proportion of district employment in finance, insurance, and real estate	−42.328	−1.53
Interaction with party (Republican = 1; Democrat or independent = 0)	**123.723**	**2.68**
Proportion of district employment in retail trades	−11.242	−0.60
Interaction with party (Republican = 1; Democrat or independent = 0)	−17.627	−0.79
Proportion of district employment in public utilities	**21.136**	**1.99**
Interaction with party (Republican = 1; Democrat or independent = 0)	**−42.588**	**−2.25**
Proportion of district employment in wholesale trade	**11.965**	**2.28**
Interaction with party (Republican = 1; Democrat or independent = 0)	−11.307	−0.89
Hay farms, as a proportion of all farms in district	−5.420	−1.16
Interaction with party (Republican = 1; Democrat or independent = 0)	**−24.471**	**−2.11**
Hog farms, as a proportion of all farms in district	−19.357	−1.71
Interaction with party (Republican = 1; Democrat or independent = 0)	**−41.682**	**−2.21**
Dairy farms, as a proportion of all farms in district	−14.520	−1.54
Interaction with party (Republican = 1; Democrat or independent = 0)	7.484	1.20
Cattle ranches, as a proportion of all farms in district	18.081	1.74
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.747	−0.17
Corn farms, as a proportion of all farms in district	**12.778**	**2.08**
Interaction with party (Republican = 1; Democrat or independent = 0)	7.683	0.73
Cotton farms, as a proportion of all farms in district	16.969	1.27
Interaction with party (Republican = 1; Democrat or independent = 0)	−26.522	−1.35
Poultry farms, as a proportion of all farms in district	11.385	1.51
Interaction with party (Republican = 1; Democrat or independent = 0)	**−28.333**	**−2.55**
Soybean farms, as a proportion of all farms in district	3.661	0.93
Interaction with party (Republican = 1; Democrat or independent = 0)	−0.660	−0.12
Tobacco farms, as a proportion of all farms in district	5.005	0.93
Interaction with party (Republican = 1; Democrat or independent = 0)	−9.431	−1.40
Wheat farms, as a proportion of all farms in district	−3.496	−0.91
Interaction with party (Republican = 1; Democrat or independent = 0)	8.022	1.71
Wages in SIC 20, as a proportion of total wages in the district	−20.067	−1.21
Interaction with party (Republican = 1; Democrat or independent = 0)	**75.935**	**2.54**

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Wages in SIC 21, as a proportion of total wages in the district	−16.142	−0.66
Interaction with party (Republican = 1; Democrat or independent = 0)	−14.225	−0.43
Wages in SIC 22, as a proportion of total wages in the district	−5.021	−0.51
Interaction with party (Republican = 1; Democrat or independent = 0)	−33.678	−1.59
Wages in SIC 23, as a proportion of total wages in the district	62.768	1.86
Interaction with party (Republican = 1; Democrat or independent = 0)	−42.900	−1.29
Wages in SIC 24, as a proportion of total wages in the district	−12.235	−1.49
Interaction with party (Republican = 1; Democrat or independent = 0)	**74.737**	**1.98**
Wages in SIC 25, as a proportion of total wages in the district	−19.655	−0.70
Interaction with party (Republican = 1; Democrat or independent = 0)	61.104	1.44
Wages in SIC 26, as a proportion of total wages in the district	43.240	1.69
Interaction with party (Republican = 1; Democrat or independent = 0)	−7.285	−0.36
Wages in SIC 27, as a proportion of total wages in the district	**−59.969**	**−2.45**
Interaction with party (Republican = 1; Democrat or independent = 0)	−30.903	−0.68
Wages in SIC 28, as a proportion of total wages in the district	1.583	0.09
Interaction with party (Republican = 1; Democrat or independent = 0)	30.049	1.45
Wages in SIC 29, as a proportion of total wages in the district	29.213	0.73
Interaction with party (Republican = 1; Democrat or independent = 0)	3.672	0.08
Wages in SIC 30, as a proportion of total wages in the district	1.283	0.06
Interaction with party (Republican = 1; Democrat or independent = 0)	**89.818**	**2.78**
Wages in SIC 31, as a proportion of total wages in the district	*	*
Interaction with party (Republican = 1; Democrat or independent = 0)	−27.460	−0.54
Wages in SIC 32, as a proportion of total wages in the district	107.909	1.73
Interaction with party (Republican = 1; Democrat or independent = 0)	**−222.84**	**−2.54**
Wages in SIC 33, as a proportion of total wages in the district	−5.180	−0.51
Interaction with party (Republican = 1; Democrat or independent = 0)	9.028	0.79
Wages in SIC 34, as a proportion of total wages in the district	−11.026	−0.80
Interaction with party (Republican = 1; Democrat or independent = 0)	26.970	0.70
Wages in SIC 35, as a proportion of total wages in the district	−17.776	−1.47
Interaction with party (Republican = 1; Democrat or independent = 0)	12.975	1.24
Wages in SIC 36, as a proportion of total wages in the district	29.900	1.67
Interaction with party (Republican = 1; Democrat or independent = 0)	−7.730	−0.39
Wages in SIC 37, as a proportion of total wages in the district	1.330	0.21
Interaction with party (Republican = 1; Democrat or independent = 0)	**60.394**	**3.44**
Wages in SIC 38, as a proportion of total wages in the district	−53.163	−1.43
Interaction with party (Republican = 1; Democrat or independent = 0)	62.080	1.52
Wages in SIC 39, as a proportion of total wages in the district	−45.201	−1.38
Interaction with party (Republican = 1; Democrat or independent = 0)	8.731	0.26
Wages in construction, as a proportion of total wages in the district	**−22.736**	**−2.20**
Interaction with party (Republican = 1; Democrat or independent = 0)	37.279	1.34
Wages in fishing, as a proportion of total wages in the district	−8.780	−0.61
Interaction with party (Republican = 1; Democrat or independent = 0)	−6.534	−0.36
Wages in forestry, as a proportion of total wages in the district	7.077	0.45
Interaction with party (Republican = 1; Democrat or independent = 0)	43.532	1.75
Wages in government sector, as a proportion of total wages in the district	**11.158**	**2.15**
Interaction with party (Republican = 1; Democrat or independent = 0)	12.931	1.45
Wages in mining, as a proportion of total wages in the district	−13.875	−1.83
Interaction with party (Republican = 1; Democrat or independent = 0)	36.435	1.68

C. Coefficients for other variables

Variable	*Coefficient*	*z*
Median per capita income in district (thousands of dollars)	0.215	0.81
Percent of district with 12 years of education	−11.431	−1.37
Percent of district with 16 years of education	7.200	1.51
Party (Republican = 1; Democrat or independent = 0)	6.072	2.49
Fitted value of D-NOMINATE A	−23.534	−0.97

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Fitted value of D-NOMINATE B	**−37.494**	**−2.09**
Deviation of district's vote for the president in the last election	−0.293	−1.92
Dummy for 98th Congress	**1.608**	**3.55**
Dummy for 99th Congress	**−1.692**	**−3.06**
Dummy for 100th Congress	0.187	0.30
Dummy for 101st Congress	−0.881	−1.26
Constant	−7.466	−1.49

Notes: Missing coefficients marked with asterisks were omitted due to collinearity. N = 1311. Log-likelihood = −351.14. Coefficients significant at the $p < .05$ level are in bold.

References

Agnew, John A. 1987. *The United States in the World Economy: A Regional Geography*. New York: Cambridge University Press.

Alt, James E., Fredrik Carlsen, Per Heum, and Kare Johansen. 1999. Asset Specificity and the Political Behavior of Firms: Lobbying for Subsidies in Norway. *International Organization* 53 (1):99–116.

Alt, James E., and Michael J. Gilligan. 1994. The Political Economy of Trading States: Factor Specificity, Collective Action Problems, and Political Institutions. *Journal of Political Philosophy* 2 (2):165–92.

Anderson, Kym, and Robert E. Baldwin. 1987. The Political Market for Protection in Industrial Countries. In *Protection, Cooperation, Integration and Development: Essays in Honour of Professor Hiroshi Kitamura*, edited by Ali M. El-Agraa, 20–36. London: Macmillan.

Austen-Smith, David. 1995. Campaign Contributions and Access. *American Political Science Review* 89 (3):566–81.

Baldwin, Robert E., and Christopher S. Magee. 2000. Is Trade Policy for Sale? Congressional Voting on Recent Trade Bills. *Public Choice* 105 (1–2):79–101.

Balistreri, Edward J. 1997. The Performance of the Hecksher-Ohlin-Vanek Model in Predicting Endogenous Policy Forces at the Individual Level. *Canadian Journal of Economics* 30 (1):1–17.

Baron, David P. 1989. Service-Induced Campaign Contributions and the Electoral Equilibrium. *Quarterly Journal of Economics* 104 (1):45–72.

———. 1997. Integrated Strategy, Trade Policy, and Global Competition. *California Management Review* 39 (2):145–69.

Bensel, Richard F. 1984. *Sectionalism and American Political Development, 1880–1980*. Madison: University of Wisconsin Press.

Bloch, Farrell E. 1980. Political Support for Minimum Wage Legislation. *Journal of Labor Research* 1 (1):245–53.

Brawley, Mark R. 1997. Factoral or Sectoral Conflict? Partially Immobile Factors and the Politics of Trade in Imperial Germany. *International Studies Quarterly* 41 (4):633–54.

Cassing, James, Timothy J. McKeown, and Jack Ochs. 1986. The Political Economy of the Tariff Cycle. *American Political Science Review* 80 (3):843–62.

Clarke, Kevin A. 2001. Testing Nonnested Models of International Relations: Reevaluating Realism. *American Journal of Political Science* 45 (3):724–44.

Conybeare, John A. C., and Mark Zinkula. 1996. Who Voted Against the NAFTA? Trade Unions Versus Free Trade. *The World Economy* 19 (1):1–12.

Coughlin, Cletus C. 1985. Domestic Content Legislation: House Voting and the Economics of Regulation. *Economic Inquiry* 23 (3):437–48.

Denzau, Arthur T., and Michael C. Munger. 1986. Legislators and Interest Groups: How Unorganized Interests Get Represented. *American Political Science Review* 80 (1): 89–106.

Ellison, Sara F., and Wallace P. Mullin. 1995. Economics and Politics: The Case of Sugar Tariff Reform. *Journal of Law and Economics* 38 (2):335–66.

https://doi.org/10.1017/S0020818303573076 Published online by Cambridge University Press

Erickson, Robert S., and Thomas R. Palfrey. 1998. Campaign Spending and Incumbency: An Alternative Simultaneous Equations Approach. *Journal of Politics* 60 (2):355–73.

Fenno, Richard F. 1978. *Home Style: Members in Their Districts*. Boston: Little, Brown.

Ferejohn, John. 1986. Logrolling in an Institutional Context: A Case Study of Food Stamp Legislation. In *Congress and Policy Change*, edited by Gerald C. Wright Jr., Leroy N. Rieselbach, and Lawrence C. Dodd, 223–53. New York: Agathon Press.

Ferguson, Thomas. 1984. From Normalcy to New Deal: Industrial Structure, Party Competition, and American Public Policy in the Great Depression. *International Organization* 38 (1):41–94.

———. 1995. *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*. Chicago: University of Chicago Press.

Ferguson, Thomas, and Joel Rogers. 1986. *Right Turn: The Decline of the Democrats and the Future of American Politics*. New York: Hill and Wang.

Fiorina, Morris P. 1974. *Representatives, Roll Calls, and Constituencies*. Lexington, Mass.: Lexington Books.

Fleisher, Richard. 1985. Economic Benefit, Ideology, and Congressional Voting on the B-1 Bomber. *American Politics Quarterly* 13 (2):200–11.

Fordham, Benjamin O. 1998. Economic Interests, Party, and Ideology in Early Cold War-Era U.S. Foreign Policy. *International Organization* 52 (2):359–96.

Frieden, Jeffry A. 1988. Sectoral Conflict and U.S. Foreign Economic Policy, 1914–1940. *International Organization* 42 (1):59–90.

———. 1994. International Investment and Colonial Control: A New Interpretation. *International Organization* 48 (4):559–93.

Gerber, Alan. 1998. Estimating the Effect of Campaign Spending on Senate Election Outcomes Using Instrumental Variables. *American Political Science Review* 92 (2):401–11.

Gilligan, Thomas W., William J. Marshall, and Barry R. Weingast. 1989. Regulation and the Theory of Legislative Choice: The Interstate Commerce Act of 1887. *Journal of Law and Economics* 32 (1):35–61.

Goff, Brian L., and Kevin B. Grier. 1993. On the (Mis)Measurement of Legislator Ideology and Shirking. *Public Choice* 76 (1–2):5–20.

Grossman, Gene M., and Elhanan Helpman. 1994. Protection for Sale. *American Economic Review* 84 (4):833–50.

Hansen, Wendy L., and Neil J. Mitchell. 2000. Disaggregating and Explaining Corporate Political Activity: Domestic and Foreign Corporations in National Politics. *American Political Science Review* 94 (4):891–903.

Heckman, James J., and James M Snyder. 1997. Linear Probability Models of the Demand for Attributes with an Empirical Application to Estimating the Preferences of Legislators. *Rand Journal* of *Economics* 28:S142–89. Special Issue.

Hinich, Melvin J., and Michael C. Munger. 1994. *Ideology and the Theory of Political Choice*. Ann Arbor: University of Michigan Press.

Irwin, Douglas A. 1994. The Political Economy of Free Trade: Voting in the British General Election of 1906. *Journal of Law and Economics* 37 (1):75–108.

———. 1996. Industry or Class Cleavages Overtrade Policy? Evidence from the British General Election of 1923. In *The Political Economy of Trade Policy: Papers in Honor of Jagdish Bhagwati*, edited by Robert C. Feenstra, Gene M. Grossman, and Douglas A Irwin, 53–75. Cambridge, Mass.: MIT Press.

Irwin, Douglas A., and Randall S. Kroszner. 1999. Interests, Institutions, and Ideology in Securing Policy Change: The Republican Conversion to Trade Liberalization after Smoot-Hawley. *Journal of Law and Economics* 42 (2):643–73.

Kaempfer, William H., and Steven V. Marks. 1993. The Expected Effects of Trade Liberalization: Evidence from United States Congressional Action on Fast-Track Authority. *World Economy* 16 (6):725–40.

https://doi.org/10.1017/S0020818303573076 Published online by Cambridge University Press

Kalt, Joseph P., and Mark A. Zupan. 1984. Capture and Ideology in the Economic Theory of Politics. *American Economic Review* 74 (3):279–300.

———. 1990. The Apparent Ideological Behavior of Legislators. *Journal of Law and Economics* 33 (1):103–31.

Koford, Kenneth. 1989. Dimensions in Congressional Voting. *American Political Science Review* 83 (3):949–62.

Krehbiel, Keith, and Douglas Rivers. 1988. The Analysis of Committee Power: An Application to Senate Voting on the Minimum Wage. *American Journal of Political Science* 32 (4):1151–74.

Leamer, Edward E. 1984. *Sources of International Comparative Advantage: Theory and Evidence*. Cambridge, Mass.: MIT Press.

Lindsay, James M. 1990. Parochialism, Policy, and Constituency Constraints: Congressional Voting on Strategic Weapons Systems. *American Journal of Political Science* 34 (4):936–60.

Long, J. Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, Calif.: Sage Publications.

Lowi, Theodore J. 1964. American Business, Public Policy, Case Studies, and Political Theory. *World Politics* 16 (4):677–715.

Magee, Stephen P., William A. Brock, and Leslie Young. 1989. *Black Hole Tariffs and Endogenous Policy Theory*. New York: Cambridge University Press.

Mayda, Anna M., and Dani Rodrik. 2002. Why Are Some People (and Countries) More Protectionist Than Others? Unpublished manuscript, Harvard University, Cambridge, Mass. Available from ⟨http://ksghome.harvard.edu/~.drodrik.academic.ksg/TradePref.PDF⟩.

McArthur, John, and Stephen V. Marks. 1988. Constituent Interest vs. Legislator Ideology: The Role of Political Opportunity Cost. *Economic Inquiry* 26 (3):461–70.

McKeown, Timothy J. 1989. The Politics of Corn Law Repeal and Theories of Commercial Policy. *British Journal of Political Science* 19 (3):353–80.

Midford, Paul. 1993. International Trade and Domestic Politics: Improving on Rogowski's Model of Political Alignments. *International Organization* 47 (4): 535–64.

Peltzman, Sam. 1984. Constituent Interest and Congressional Voting. *Journal of Law and Economics* 27 (1):181–210.

———. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford University Press.

Poole, Keith T., Howard Rosenthal, and Kenneth Koford. 1991. On Dimensionalizing Roll Call Votes in the U.S. Congress. *American Political Science Review* 85 (3):955–75.

Raftery, Adrian E. 1995. Bayesian Model Selection in Social Research. *Sociological Methodology* 25:111–63.

Scheve, Kenneth F., and Matthew J. Slaughter. 2001. What Determines Individual Trade Policy Preferences? *Journal of International Economics* 54 (2):267–92.

Schonhardt-Bailey, Cheryl. 1991. Specific Factors, Capital Markets, Portfolio Diversification, and Free Trade: Domestic Determinants of the Repeal of the Corn Laws. *World Politics* 43 (4):545–69.

Silberman, Jonathan I., and Gary C. Durden. 1976. Determining Legislative Preferences on the Minimum Wage: An Econometric Approach. *Journal of Political Economy* 84 (2):317–29.

Snyder, James M. 1990. Campaign Contributions as Investments: The U.S. House of Representatives, 1980–1986. *The Journal of Political Economy* 98 (6):1195–227.

Stimson, James A. 1985. Regression in Space and Time: A Statistical Essay. *American Journal of Political Science* 29 (4): 914–47.

Tosini, Suzanne C., and Edward Tower. 1987. The Textile Bill of 1985: The Determinants of Congressional Voting Patterns. *Public Choice* 54 (1):19–25.

Trubowitz, Peter. 1998. *Defining the National Interest: Conflict and Change in American Foreign Policy*. Chicago: University of Chicago Press.

Winship, Christopher, and Robert D. Mare. 1983. Structural Equations and Path Analysis for Discrete Data. *American Journal of Sociology* 89 (1):54–110.

https://doi.org/10.1017/S0020818303573076 Published online by Cambridge University Press