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The University of Michigan
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Explaining the Role of Interest Groups in United States Trade Policy

Alan V. Deardorff and Richard Hall
University of Michigan

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Alan V. Deardorff
Richard Hall

The University of Michigan

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ABSTRACT

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Alan V. Deardorff
Richard Hall

The University of Michigan

This paper provides an alternative analytical view of the mechanism by which interest groups influence trade policy. In contrast to other economic models in which trade policy is essentially "bought" by industrial interests, this model views interest groups and legislators as possibly sharing the same objectives, which they then work together to pursue. The legislators have a limited budget of their own and their staff members' time to work on many issues, and the interest groups influence the process by helping with the work. By selecting legislators who are in closest agreement with their own objectives and then by assisting them in a way that, in effect, subsidizes their efforts, interest groups achieve a role in policy making that is potentially more important than if they merely used financial transfers. In the context of international trade policy, we view this model as applying not only to industries seeking protection, but also to many other interest groups who view restrictions of imports or other trade intervention as useful for their purposes. The latter need not have abundant financial resources in order to be effective, since their assistance can consist primarily of their members and volunteers' time, as well as the expertise that they have accumulated from experience in dealing with an issue.

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Correspondence:

Alan V. Deardorff
Department of Economics
University of Michigan
Ann Arbor, MI 48109-1220

Tel. 313-764-6817
Fax. 313-763-9181
E-mail: alandear@umich.edu

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Alan V. Deardorff
Richard Hall
The University of Michigan

I. Introduction

In their exhaustive case study of the tariff legislation in the 1950s, Bauer, Pool, and Dexter (1963) concluded that the influence of industry groups on U.S. trade policy was modest at best. Legislators were not captured by protection-minded industries. If anything, the reverse was closer to the truth. Trade lobbyists mostly provided information to legislators, which legislators then selectively applied to their own purposes. Lobbyists served as "adjuncts to congressional staff," acting as "service bureaus" to the legislative principal (1963, 442).

Recent work in the political economy of trade presents a very different view. Constituency representation in trade policymaking is, for all intents and purposes, the representation of organized economic interests, and their influence is thought to be quite powerful. In models of the politics of international trade, in particular, import-restricting and export-enhancing policies flow directly from the local power of affected industries. The most sophisticated models capture a process whereby private groups provide valuable resources to legislators to help them win reelection, in return for legislators'

support for policies that will favor industry. A manufacturing group seeking to add a protectionist provision to a trade bill, say, would offer campaign contributions to legislators in exchange for their votes when the amendment comes up on the chamber floor.

We think this model captures only one, perhaps not very important part of the process by which groups influence legislators, and we elaborate a different approach. Following recent work by one of the authors (Hall and Wayman 1990; Hall 1995), we will model interest groups not as subsidizers of legislators' reelection efforts but as subsidizers of legislators' policymaking efforts on issues where the policy agreement between group and legislator is already strong. This approach, we argue, more accurately comports with the best scholarship on legislators' voting decisions. It helps to explain what would otherwise appear to be striking empirical anomalies in the political activities of interest groups. And it better comprehends the activities and effectiveness of resource-poor public interest groups, whose role in trade policymaking has been largely neglected to date. The main implication is that groups may have little effect on legislative elections and may rarely buy roll call votes, but they influence trade policy through different mechanisms and with different means.

In the paper that follows, we will briefly review the work by political scientists and economists doing research on interest group influence in legislative policymaking. We find in the empirical literature some consistent results that appear anomalous if one models the legislator-group interaction as an exchange of electoral resources for

* We have benefited from the helpful comments of Robert Stern on the topic of this paper, as well as from discussions at the conference, Representation of Constituent Interests in the Design and Implementation of U.S. Trade Policies: The Sweetland Conference, Ann Arbor, MI, November 8-9, 1996.

legislative votes. In Section III we develop a different but still simple model of the legislator-lobbyist interaction and explore its properties. In this model, the only resource that is relevant for legislative progress on an issue is the time devoted to it by the legislator's enterprise and the time provided by a lobbyist, which are viewed as perfect substitutes. We develop this as a general model of the lobbying process, with no particular attention to any type of policy or type of interest group. However, the motivation of the present paper is to understand how both private and public interest groups influence international trade policy, and in Section V we turn our attention to that application of the model. Section VI concludes by suggesting how empirical work based on the model might proceed.

II. Background

Three related trends in the American political economy have become increasingly visible over the last three decades: the proliferation of industry groups with representatives in Washington; the rapid growth in the number of political action committees (PACs) affiliated with these groups; and the burgeoning cost of running for federal office. Since 1975, the first of these has grown by a factor of x; the second by a factor of y, and the third by a factor of z.

The logic underlying these patterns has received considerable attention in political science and economics. Early models posited that the connection was one of simple exchange. Reelection-minded legislators sought substantial campaign funds with the advent of high-priced broadcast media campaigns. Private groups, through legally sanctioned PACs, helped to provide them. Private groups sought public policies that

awarded, say, federal contracts, trade protections, or regulatory relief. And legislators helped to provide them.

Subsequent theoretical work has elaborated the simple vote-buying model along several lines (e.g., Austen-Smith 1987; Snyder 1990). Numerous empirical studies have attempted to assess when and how much legislative influence groups could purchase with their election-relevant resources. Almost all of these studies have focused on the effects of campaign contributions on legislators' voting behavior. Economists (e.g., Kau and Rubin 1982) and political scientists (e.g., Grenzke 1989) provided comprehensive attempts to test the vote-buying hypothesis. Other works focused on business and union influence in particular areas of legislation, including agriculture (Welch 1982), energy (Evans 1988), and labor law (Silberman and Durden 1976; Wilhite and Theilmann 1987), though to our knowledge none have focused specifically on the effects of industry campaign contributions on legislative voting in the area of international trade.

For the most part, however, evidence that campaign money matters to members' voting decisions is simply weak. Reviewing the research on this question, one of the leading authorities in the field concludes:

> Clearly, it is one thing for journalists and pundits to make far-reaching claims about vote-buying, honest graft, and so forth... (but) the upshot is that no matter which approach one prefers, there still is no compelling evidence that PAC contributions have any direct influence on the legislative behavior of members of Congress. (Wright 1996, 148-149).

In general, we find that empirical work has generated more anomalies for the prevailing account of group influence than confirmations of its principal hypotheses. Groups may be getting nothing for their money, yet they raise and disburse ever larger

sums of money to congressional candidates nonetheless. Related work on PAC allocation strategies and elections has uncovered several consistent patterns that appear anomalous against the theoretical backdrop of the donations-for-votes account. Consider:

1. Groups give most to candidates whose reelections are least in doubt.

2. Groups give most to candidates whose policy preferences are already strongly aligned with the group for reasons independent of group contributions.

3. Once the two party's candidates are chosen, levels of campaign spending have indiscernible effects on incumbents' reelection probabilities. Yet industry groups give overwhelmingly to incumbents.

While the data are not nearly as plentiful on lobbying as contributing, similar patterns appear for this type of group activity. In their study of tariff legislation in the 1950s, for instance, Bauer, Pool, and Dexter found that "lobbyists tended to establish liaison only with the congressmen and senators on their own side." In contrast, "direct persuasion of uncommitted or opposed congressmen and senators was a minor activity" (1963, 353). We are currently gathering data on group lobbying strategies and, as a central tendency, this pattern still holds. Press accounts in the last few days have focused on lobbying efforts to persuade a handful of swing voters from nay to yea on legislation expanding President Clinton's fast-track authority. But such accounts may lead one to mistake a minor behavioral pattern for the major one: Throughout the process, we should find that lobbyists have invested far more time talking to members with protectionist impulses than to members thought to be near the median voter.

The vote-buying model likewise appears puzzling in light of a now well-developed literature on legislators' voting decisions. Members' votes on particular measures are overwhelmingly overdetermined by more far more powerful considerations

of party, personal ideology, and geographic constituency (see esp. Kingdon 1989). Only rarely are even a few members' votes so close to the threshhold between yea and nay that a marginal investment of group lobbying effort or campaign money might push them one way or the other. The rational group strategist could reasonably expect no effect. And even if a few individuals' votes were changed, their effect on the collective choice of the chamber would only arise in razor thin votes. As we have noted, in any case, the huge bulk of interest group contributions and lobbying investments is targeted elsewhere -- not on likely fence-sitters but on almost certain supporters.

Although presented here in somewhat stylized form, the literatures on legislators' voting decisions, PAC allocations strategies, and legislative elections lead us to suspect either that (1) reputedly astute group strategists are patently irrational, or (2) the conventional vote-buying model is wrong. We will assume (2) and proceed to develop an alternative model of interest group influence that we believe will prove theoretically more coherent and empirically more accurate.

Our model bears some similarity to that of Denzau and Munger (1986), who also modeled the allocation of legislative effort to issues. Their objective function was the legislator's chance of re-election (number of votes in the next election), and that depended on campaign resources that were provided by interest groups in return for "policy services," which is comparable to what we will refer to as a legislator's efforts toward "legislative progress." Their legislators allocated their own scarce effort to providing these services, taking as given assumed response functions indicating the campaign resources that interest groups would provide in return. The authors' main focus was on how legislators would choose among various constituencies for whom to

provide services. Our model, in contrast, focuses on the shared goals of legislators and interest groups in promoting various objectives, rather than strictly on re-election, although that certainly can be one of the objectives. Rather than having the interest groups provide resources directed toward reelection, we have them work together with the legislator toward their shared goals involving legislation. And, perhaps most importantly, we focus on the choice by interest groups of which legislators to support.

Our model differs markedly from most of the theoretical literature that has appeared recently on the political economy of trade policy. As reviewed in Deardorff and Stern (1997), these models have tended to focus on the policies selected by the political process, usually levels of trade protection. Some of these models (Mayer 1984, Magee, Brock, and Young 1989) have focused on voting behavior as it would be influenced by the choice of policy. Others have made the policy the outcome of a choice by industries of levels of support given the willingness of legislators to provide protection on the basis of that support (Findlay and Wellisz 1982), or a choice by policy makers of levels of protection given the willingness of industries to provide resources in exchange for it (Hillman 1989). The latter is similar to the assumption in Denzau and Munger (1986) that interest groups provide resources in response to policies. These two approaches – industries responding to policy maker offers of protection, and policy makers responding to industry offers of support – are combined by Grossman and Helpman (1994), who solve the difficult problem of obtaining both of these offer functions as endogenously optimal responses to the other.

This literature has been very useful in identifying the determinants of protection, but it does not address other dimensions of the linkage between trade legislation and the

many issues that motivate interest groups. Nor does it seem to allow any role at all for interest groups that are not well heeled with resources that they can contribute to a legislator's political campaign. Finally, although this political economy literature does not really address the issue of which legislators will receive support from industries seeking protection, the focus on electoral politics would seem to suggest that resources would go only to those legislators whose election and/or position on protection are most in doubt. As we have noted, that does not seem to concord well with the facts.

III. The Model

We model both legislators and lobbyists as interested in "issues" on which they wish to make "legislative progress," and we presume that this progress can in principle be quantified and represented by a variable P_i, the progress on issue i, even though we recognize that actually measuring this is difficult.

Lobbyists typically care about only a single issue, and we model them as allocating their scarce resources so as to maximize in any time period the progress that is made on their issue of interest. Since they will accomplish that by influencing legislators, we will come back to them after we have fist modeled the legislators.

Legislator Choice

Legislators, unlike lobbyists, care about a wide variety of issues, and for a variety of reasons, all of which we summarize in a utility function very much like that of a consumer in consumer theory. The reason that a legislator cares about an issue may be direct, in that she herself believes the issue to be important for moral, ethical, or

ideological reasons, or it may be indirect because she knows that the issue is important for her constituents and she can improve her chances for reelection by pursuing it. For our purpose, the distinction does not matter. The point worth emphasizing here is that we do not assume that all legislative and lobbying activity is motivated by reelection. Indeed we think that lobbying often has little to do with a legislator's reelection calculation.

One complication, however, is that many issues of importance have (at least) two sides, and one person's view of progress may be another's view of regress. We therefore include a parameter, b_i^ℓ, in legislator ℓ's determination of utility that records her attitude toward issue i – a negative b_i^ℓ indicating that she prefers to work against the issue, not for it. In addition, since this parameter is available, we also take its size to represent the strength of the legislator's concern about the issue. With completely arbitrary utility functions, of course, this would be meaningless, since a large b_i^ℓ could be undone by a low marginal utility. However, to give the model some structure we will assume that all legislators share the same form of the utility function, with positive marginal utilities on every issue, the variation across legislators being captured entirely by their b_i^ℓ parameters.

Specifically, we will let $U^\ell = U(P^\ell, b^\ell)$ for every legislator, ℓ, with P^ℓ a vector recording the progress made on all issues by that legislator and her staff in a period of time, and b^ℓ being the corresponding vector of parameters these parameters. Since this is very general and admits the possibility of outcomes that might be viewed as implausible, we will normally restrict this function further to take the following "additively separable" form:

$$U^{\ell} = \sum_{i=1}^{n} b_i^{\ell} u_i(P_i^{\ell}) \qquad (1)$$

where $u_i(\cdot)$, common to all legislators, is the utility derived from issue *i* except for scaling by legislator *i*'s preference parameter. This issue sub-utility function needs to be defined on both positive and negative progress, taking on negative values for negative progress so that multiplication by a negative b_i^{ℓ} will contribute positively to total utility.

Each sub-utility function will also have a slope at the origin that we represent $u_i^{0\prime}$ that may be either infinite or finite. If it is infinite, as we shall see, then every legislator will devote at least a little time to it. If it is finite, then it may be ignored by some or all legislators. Finally, we assume positive but diminishing marginal utility for each issue, $u_i' > 0, u_i'' P_i < 0, \forall P_i$.

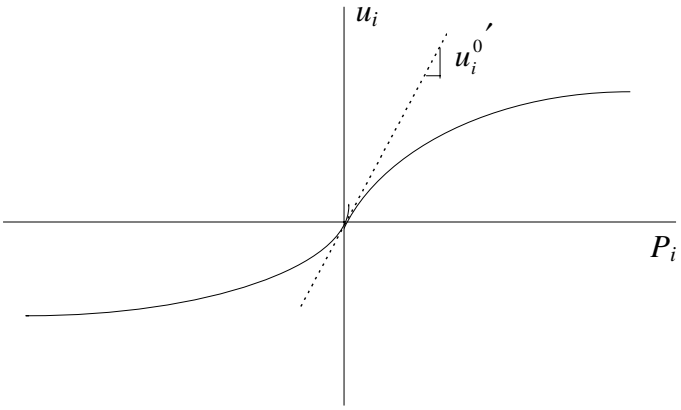


Figure 1

Together these assumptions imply that the u_i functions look something like Figure 1.

In the absence of lobbying, a legislator has only her own time and the time of her staff to allocate toward pursuing each of the issues. We take these time constraints to be fixed and binding, specifically *not* allowing a legislator to use money to purchase additional time. In this section we also regard staff time as a perfect substitute for the legislator's own time, an assumption that we drop in the next section.

In order to translate time into progress on the issues, we need to specify the technology of producing "progress." Of course a wide variety of activities go on in a legislator's day and in their office, and one can imagine that some are far more productive than others. However, for simplicity we shall assume that progress on any issue requires a constant amount of time per unit, so that, say, doubling the amount of time devoted to an issue also doubles the progress made on it. This assumption of constant costs (or constant returns to scale) can be very important for the results of our model, as we know from analogous models of economic theory, and we have no particular justification for the assumption except simplicity. Therefore it is an obvious place to look for changes in the model that might be able to make it accord better with reality. In any case, we define parameters a_i^ℓ as the amount of time per unit of progress on issue *i* required by legislator ℓ.

With these assumptions, the legislator's problem is simply to allocate the available time of herself and her staff across the issues so as to maximize the utility she derives from the progress achieved on all of them together. Letting *T* be the amount of time available per period, she seeks to

$$\underset{P^\ell}{\text{maximize}} \quad U(P^\ell, b^\ell)$$
$$s.t. \quad \sum_i a_i^\ell P_i^\ell = T^\ell \quad .$$

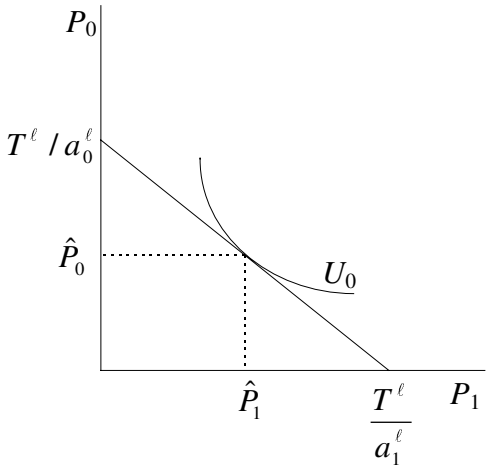


Figure 2

The solution to this problem is familiar from consumer theory and is represented in Figure 2. The legislator faces a budget constraint imposed by the time available and the time required to make progress on each issue, the latter being the parameters a_i^ℓ, which serve as prices. She selects the optimum identified by a tangency between the budget line and an indifference curve.

With the utility function from (1) the maximization problem becomes

$$\begin{aligned} &\underset{P^\ell}{\text{maximize}} \quad U^\ell = \sum_{i=1}^{n} b_i^\ell u_i(P_i^\ell) \\ &s.t. \quad \sum_i a_i^\ell P_i^\ell = T^\ell \end{aligned}, \tag{2}$$

the first order conditions of which require

$$\frac{u_i'}{u_j'} = \frac{a_i^\ell}{a_j^\ell}\frac{b_j^\ell}{b_i^\ell}, \tag{3}$$

which is the condition of tangency in Figure 2. Since u_i' is monotonic, it can be inverted to yield the chosen levels of progress as

$$P_i^\ell = u_i'^{-1}\left(\lambda \frac{a_i^\ell}{b_i^\ell}\right), \tag{4}$$

where λ is a Lagrange multiplier measuring how binding is the time contraint. It will vary somewhat as conditions facing the legislator change, but not enough to interfere with the main implications of (4): that the chosen level of progress is a decreasing function of its time cost to the legislator, a_i^ℓ, and an increasing function of how much the legislator cares about the issue, b_i^ℓ. Hardly surprising, of course, but reassuring that the model generates plausible results.

This solution has all of the familiar properties of consumer demand functions in response to changes in the time-requirements parameters serving as prices and time endowment serving as income. Most straightforward is an increase in income, which in this case would occur if the legislator were allowed more staff, increasing the time T that she has to allocate to all issues. This shifts the budget line outward from the origin without changing its slope, as shown in Figure 2. I higher tangency with an indifference curve is found at higher utility, but it could in general involve either an increase or a decrease in the time allocated to any particular issue. Goods whose consumption drop when income rises are called "inferior goods," and are not uncommon – low quality varieties are routinely replaced by higher quality ones, for example. In spite of this it is customary to assume away such inferior goods except when their presence is the center of attention, and we will do the same here with inferior issues. That is, we will assume, as is true in the additively separable function (1), that all issues are "normal," in that legislators allocate at least a little bit of any increase in time resources to each. Hence the arrows in Figure 3 show progress on both issues increasing.

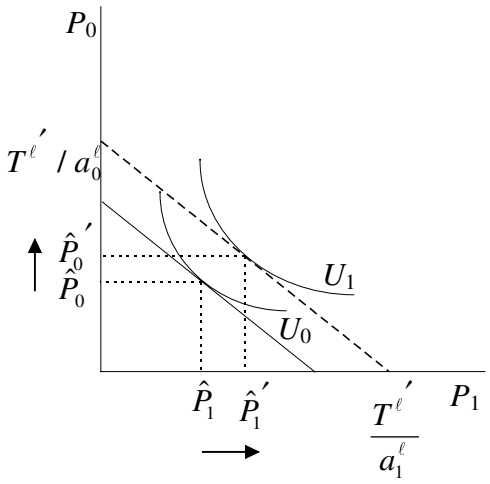


Figure 3

Similarly, the model can illustrate the effects of a change in "prices." For example, a drop in the time required for a legislator to make progress on an issue, a_1^ℓ, rotates the budget line counterclockwise, pivoting on its vertical intercept as shown in Figure 4. This permits the legislator to make more progress on both issues, if she chooses. But because progress on issue 1 has become cheaper, there is a substitution effect favoring more progress on issue 1 and less on other issues, represented here by issue 0. At the same time, because the lower cost of pursuing issue 1 could free up time for other issues, there is also an income effect favoring greater progress on both issue 1 and issue 0. With normal issues, then we will see greater progress made on issue 1, as shown, while the progress made on other issues may rise or fall, depending on how these income and substitution effects balance out in preferences. With the stronger assumption of additively separable preferences as in (1), the substitution effect must dominate the income effect and progress on other issues falls.

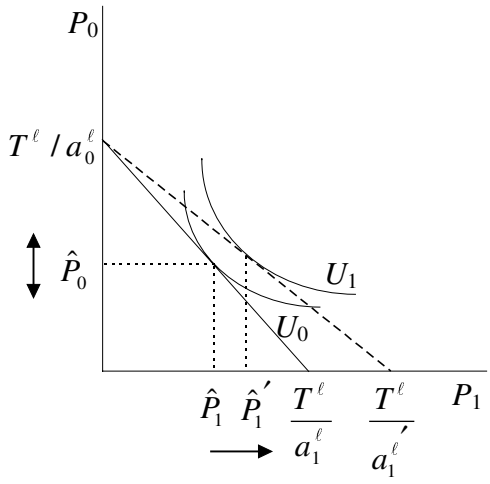


Figure 4

Suppose finally that the legislator's preferences over the issues change, or equivalently that we compare to another legislator whose preferences are different but who faces the same constraints on time requirements and availability. Suppose legislator A has preferences that lead her to equilibrium *A* in Figure 5 on indifference curve U_0^A. If another legislator B cares more about issue 1 than does A, so that $b_1^B > b_1^A$, then their respective optimal indifference curves will appear as shown.

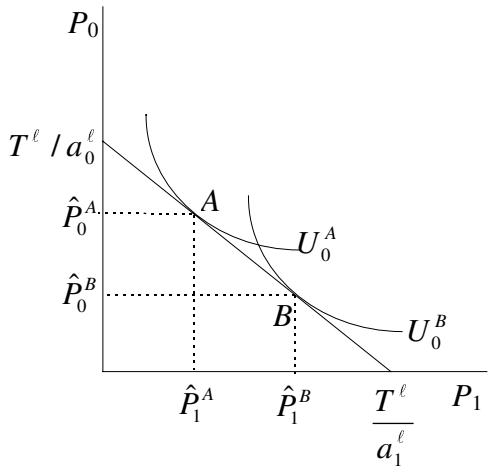


Figure 5

Lobbying Activity

In the context of this model, a lobbyist seeks to use her resources to influence the resource allocation choices made by a legislator. This could perhaps be done by changing the legislator's preference, using the force of argument to persuade her to increase her level of concern about the lobbyist's issue, but that will not be our focus. It could also be done by altering the "technology" of the legislator, showing them how to use their time more cost effectively an behalf of the cause, but while closely related to the mechanism we do assume, this would require a dynamic model and seems unnecessarily cumbersome.

Instead, what we assume is simply that the lobbyist is able to provide the equivalent of additional staff time to devote to the issue. This might be done indirectly by making available resources (results of research, for example) that will save the

legislator's staff from having to do something they might otherwise have done. Or it may be done quite directly, having someone from the lobbyist's organization join the legislator's staff to help them will their activities.

Either way, the effect of this lobbyist support is to alter the constraints facing the legislator, most obviously relaxing the constraint on time available for this and perhaps other issues. We will work through several ways that this support might be provided, in terms of the commitments that the lobbyist and legislator might make to each other, to see how each might affect behavior and therefore how attractive each option might be to both parties.

Consider first a simple grant of time. That is, the lobbyist contributes a worker to the legislator's office, leaving the legislator free to use that worker any way she wishes. We have already seen the effects of such a grant, in the form of the increased time analyzed above in Figure 3. With our assumption that no issues are inferior, this does increase the progress that the legislator makes on any issue that she cares about positively, so there is a positive benefit to the lobbyist from this kind of activity. It is a small one, however, compared to the progress that could have been made if all of the extra time had been used for the lobbyist's issue. In our model, an extra hour of unconstrained staff time will be spent by the legislator on a mix of issues, and only a fraction of it will go toward increasing progress in the lobbyist's issue of concern. Indeed, none of it may be used for that issue. Without the lobbyist's contribution the legislator might have chosen to devote no time at all to the issue, which she would do even with a positive concern for the issue if her time was worth more working on other issues than she could accomplish on this

one,[1] then a small contribution of unconstrained time by the lobbyist will be used entirely for other issues. Only if the contribution of time is large enough to bring the cost of time down significantly may the lobbyist get any return on their contribution at all in that case.

Consider, therefore, a constrained grant of time. That is, suppose that the lobbyist makes available some staff time that she requires be used only on the lobbyist's issue. That does not seem too difficult to do, since the worker assigned to provide that assistance will likely know what they are being asked to work on. In fact, however, while they can know what they are doing, they cannot necessarily know what others are doing, or – more importantly – what others would have been doing in their absence. Thus, if the legislator would have been using her staff anyway to work on the lobbyists issue, then she can simply shift her own workers to other tasks and enjoy an effectively unconstrained increase in staff time. Only if more hours are contributed than she would have devoted to this issue before will there be a greater increase in progress than could have come from an unconstrained grant.

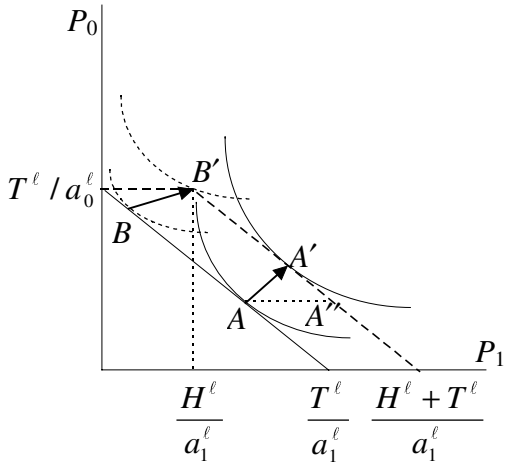


Figure 6

Both possibilities are illustrated in Figure 6. The grant of H^ℓ hours by the lobbyist, constrained to be used on issue 1, shifts the budget line horizontally to the right by the amount of progress those hours can achieve alone, H^ℓ / a_1^ℓ, producing a new budget line with a kink at B'. For a legislator whose preferences have her already devoting a good deal of attention to issue one, at *A*, the constraint is not binding and she

[1] Formally, if $\lambda^\ell a_i^\ell > b_i^\ell u_i'^0$.

spreads the extra hours between both issues. For a legislator who is initially less involved in the issue, however, starting at point *B*, the constraint is binding and the grant has greater success in steering resources toward issue 1.

A final possibility, only hinted at in the figure, may be possible if the lobbyist is able to know what the legislator would do in the absence of her intervention. This may be possible to learn from a sympathetic (or compensated) member of the legislator's staff, or by observing what was done before and assuming that it would not have changed. In any case, if this is possible, then the lobbyist may be able to require that the extra hours be used only for net additional effort towards the issue, with other efforts not being reduced. In that case, the new budget line coincides with the old one down to the initial choice, then extends horizontally to the right to the shifts line in Figure 6. For legislator *A* in that figure, the budget line includes the horizontal segment, *AA″*. In this case, by construction, the new choice is at *A″*, and the lobbyist gets a one-for-one return on her contribution.

All of these outcomes are somewhat unsatisfactory for the lobbyist, however, and one would expect her to be more creative in trying to achieve some sort of leverage over the choice of the legislator. After all, the legislator may herself have a strong interest in the issue, and in any case may be gaining significantly from the help. For both reasons there ought to be scope for offering her a deal that would be more favorable to the lobbyist and would be accepted by the legislator.

One possibility would be a matching grant. Suppose, for example, that the lobbyist offers to provide a staff member to work directly with a member of the legislator's own staff on the issue. The legislator would be free to set the number of hours these two would work together. Assuming first that the legislator makes sure that all work done on the issue would be done by this team, including any that would have been done before, the new budget line now becomes the one in Figure 7. What the lobbyist has done is in effect to subsidize work on the issue. The effect is exactly like a reduction in the cost of working on the issue, and the outcome is the same. The legislator moves from point A to point A', increasing progress on the issue.

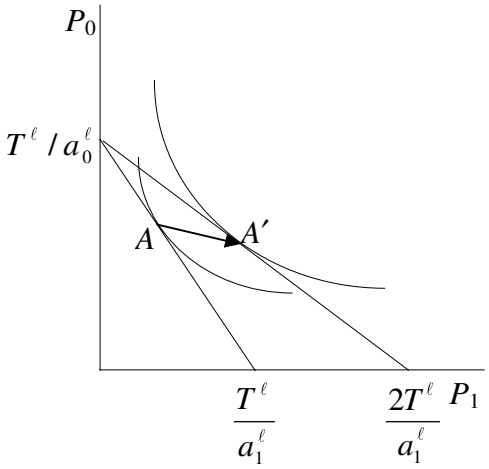


Figure 7

With general preferences, as noted above for the price change, progress on other issues may rise or fall depending on the interaction of income and substitution effects. Therefore it is possible that the lobbyist will do worse under this scheme than if she had been able to provide the help with an effective constraint on the legislator not to reduce other effort on the issue. However, without that constraint, this matching grant will achieve greater progress on the issue than an unconstrained grant, since the substitution effect augments the income effect of an unconstrained grant. Furthermore, if the substitution effect is stronger than the income effect, as it must be under our assumed additively separable utility function of (1), the lobbyist must do better than even a constrained grant. In this case, since the legislator actually reduces progress on other

issues, diverting staff time toward this issue in response to the subsidy, the increase in progress on issue 1 is more than one for one with the time provided by the lobbyist.

Interestingly, one can imagine that a matching grant might not match only one person from the legislator's staff with a person from the lobbyist's. This ratio could go either way, and the model can suggest how the choice will influence both the progress achieved toward the issue and the resources devoted to it by the lobbyist. We leave this as something to be explored in further research.

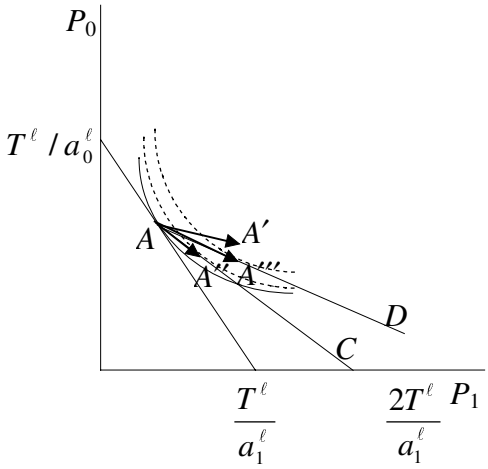


Figure 8

Another possibility that is more cost effective for the lobbyist, if she can manage it, is to provide a matching grant but restrict its use to efforts that would not have been undertaken in its absence. In that case the new budget line coincides with the old down to the old choice, then angles off to the right as additional hours from the legislator are matched by the lobbyist. Figure 8 starts from Figure 7, reproducing points A and A' that were chosen initially and with the unconstrained matching grant of one for one. With a constrained matching grant of one for one, the budget line kinks at A and extends down to point C. The optimum for that budget line is at A'', and involves much less progress, but also much less of the lobbyists time, on issue 1 than with the unconstrained matching grant. To get the same amount of progress as at A', the lobbyist must provide a larger subsidy, as shown in the budget line that kinks from A to D, and yields a choice at point A'''.

There are no doubt many other possibilities that could be considered, and one interesting question for further research would be to look for optimal contractual arrangements between lobbyists and legislators that would maximize the benefits to one, the other, or both. However we will not pursue that issue here. Rather, for the remainder of the paper we will consider only the two simplest arrangements that we have mentioned so far, the unconstrained simple grant of Figure 6 (A to A') and the unconstrained matching grant of Figure 7. The question will be, within the context of this model and from the perspective of the optimizing lobbyist, how big will these grants be and to whom will they be given.

Optimal Lobbying

Suppose, then, that we have a lobbyist concerned only with promoting progress on issue 1, and that the lobbyist has total resources $\overline{H}$ available to be contributed to various legislators. There is a finite number of legislators, each with their own parameters b_i^ℓ indicating their concern for the lobbyist's issue. She must choose how much of a grant to offer to each, either simple or matching, so as to maximize the total progress made on the issue.

A first concern is whether this problem has a solution. With finite $\overline{H}$ and a finite number of legislators, it seems that it must, although the solution may be to give all of $\overline{H}$ to one legislator. That would be interesting in itself, perhaps, but it is unlikely. We have assumed that time requirements of progress are constant, so there is no diminishing returns on the production side to limit how much is given to one legislator. However we

have assumed diminishing marginal utility on the part of the legislators themselves, and this will induce them to devote less and less of additional grants to the favored cause.

IV. Implications for Trade Policy

We are not in a position now to identify the implications of this model for trade policy. But we can offer some speculations about how our model might comprehend the role of public interest groups in trade policy, which have been largely neglected in work to date.

At least since Olson published *The Logic of Collective Action* in 1965, the origins and maintenance of public interest groups have been something of a mystery for economic theory. But as Walker has shown, since about 1965 the number and political strength of public interest groups in the United States have boomed. In international trade, for instance, environmental and human rights groups have played important legislative roles in recent years -- testifying at hearings, lobbying legislators, sometimes negotiating side agreements as a condition for allowing trade agreements to move forward.

In light of the conventional vote-buying model, these are unhappy facts. Groups poor in resources ought to fare poorly in the market for legislators' votes.[2] How might we explain this? One line of argument holds that, while short on money to finance campaigns or hire high-priced lobbyists, many public interest groups have other reelection-relevant resources, most notably, the ability to mobilize voters around issues

[2] Of course, not all public interest groups are resource-poor. The NRA and anti-abortion groups come immediately to mind as groups that donate substantial campaign funds to candidates, finance independent political advertisements, and retain their own Washington lobbyists. In this respect, the logic underlying their influence should differ little from private groups, save for the additional advantage that such public

that the group cares about and otherwise communicate reelection-relevant information. In this way, mass membership groups might enhance legislator responsiveness to interested subsets of voters, consistent with Denzau and Munger's model (1986) of how unorganized interests get represented. According to the standard account, after all, group donations merely provide the legislator with the financial means to advertise, so that he ultimately might sell himself to enough voters to win (re)election. If membership groups can deliver votes through more direct means, so much the better.

This undoubtedly characterizes the means by which many public interest groups exert leverage over legislators much of the time. But this account leaves unresolved several other puzzles. First, it doesn't account well for the important legislative roles played by groups that have no PACs and few members, such as groups pushing for international improvements in human rights. In fact, most do not have PACs. The memberships of most are modest in size. And their memberships tend to be geographically dispersed. These factors limit the extent to which public interest groups can make credible threats (or promises) regarding electorally significant voter retributions (or rewards).

Second, many groups do not have and cannot credibly claim nontrivial influence on the vote choices of their members.[3] Olson has taught us that the basis for recruitment and maintenance of large membership organization lies in the provision of selective benefits, not the promotion of public goods. Except on the most salient issues and on

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groups have in organizational resources to mobilize large numbers of members in letter-writing campaigns or elections.

[3] Of course, one can point to some prominent public interest groups that sometimes exert such influence. Again, the NRA and the anti-abortion groups come to mind. Whether these and other organizations can in

carefully selected occasions, a large group should find it difficult to mobilize members whose association with the group is motivated only weakly by their preferences for the public goods that the public lobby seeks to promote in the legislative process. To the extent that this is true, groups organized around public goods (human rights, environmental protection) should lack electoral leverage compared to groups organized around private benefits (agricultural subsidies, Medicare premiums).

Our model, however, allows for conditions under which public interest group lobbying can matter in spite of these groups' relative electoral irrelevance. They target legislators who, for whatever reason, hold policy positions similar to their own, and they subsidize their efforts toward achieving progress on issues that the group cares about. Public interest groups, like private interest groups, may serve as service bureaus or support staff for members of Congress, but this is not evidence of their unimportance, as Bauer, Pool, and Dexter (1963) inferred. Rather, it reveals the mechanisms through which they are important, and in ways similar to private industry groups.

In sum, our model is general with respect to both private and public interest groups in trade policymaking. It should help us to explain why, say, human rights and environmental issues occupy space on the agendas of trade policymakers and sometimes affect the provisions that ultimately get negotiated.

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fact deliver many votes on more than rare occasions, their reputation for doing so undoubtedly enhances their influence over legislators who are risk-averse with respect to reelection.

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