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## Who Uses Commercial Lobbying Firms

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## Who Uses Commercial Lobbying Firms

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## WHO USES COMMERCIAL LOBBYING FIRMS

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**ABSTRACT.** This paper explains the type of interest groups that use commercial lobbyists and the types of groups that lobby directly or are excluded from access to politicians. The main results provide evidence that commercial lobbying and donations by these firms to politicians can improve policy outcomes by increasing the number of groups that the politician can trust. Special interest groups come up with policy proposals that may be good or bad for society. They also get a benefit of having their idea implemented regardless of its overall social benefit so cannot be trusted to present their policy only when it is good for society. We show that repeated interaction with a policy maker can incentivize truthful communication. Therefore, interest groups working on highly salient issues or who work on issues with mostly high social benefits, can lobby alone, while interest groups who work on less salient issues or are less reputable need to use a commercial lobbyist to be trusted by the politician. Finally, firms of the lowest quality or salience are excluded from influencing the policy maker.

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## 1. INTRODUCTION

There is a common perception that activity in the commercial lobbying industry is, at best, problematic and, at worst, flagrantly corrupt. Academic discourse, however, is more ambiguous about the welfare effects of interest group lobbying. Commercial lobbying firms, specifically, draw the criticism that they are effectively networks through which to gain access to politicians, has been shown to be an important part of the lobbyist role (Hansen, 1991; Bertrand et al. 2014). Access allows interest groups to gain a policy maker's attention and to convince the policy maker to introduce their policy by sharing information. An alternative role of the lobbying industry is to allow for the aggregation and transmission of valuable policy information (Bauer, 1993; Milbrath, 1960; Rothenberg, 1960; Wright, 1990). In this paper, we focus on each of these functions of lobbying firms. Others have focused on lobbying as an investment which yields a private return (McCarty and Rotheberg, 1996) as well as a signalling device (Hayes, 1981). These two perspectives on access are not present in our framework.

In this paper we show that if policy makers are uninformed, the market for commercial lobbying and the allowance of donations from interest groups and lobbying firms to policy makers help improve welfare. Interest groups, who are specialized and involved in some particular issue come up with new ideas, and understand the current policy weaknesses and so have a need to communicate with the policy makers. However, these interest groups also stand to gain from policy decisions and so they may misinform the policy maker. Truthful communication can be made possible by the threat of future punishment in repeated interaction. Firms that do not interact often with the policy maker have a lower cost to misreporting and therefore are not able to be trusted. To gain credibility they lobby through a commercial lobbyist who interacts repeatedly with the policy maker on behalf of different firms.

We model this problem as a simple repeated game, where the policy maker can commit to exclusion if the interest group suggests a policy that is bad for society to him. Here the interest group knows if their policy is beneficial for

society or not, while the policy maker knows only the probability that a firm has a good policy and the probability that the firm will have another policy idea in the future, with that reflecting the size of the firm, such that big firms need to interact often and small rarely.

We then extend the model to allow for donations or campaign contributions from the lobbying firm or interest group to the policy maker. In that set up the interest group only receives an imprecise signal on the quality of their policy for society. We can think of this signal as the results of their research on the policy. That environment resembles the relational contracting problem of (Levin, 2003). This model can be used to examine the effect of superior information provision by commercial lobbyists.

We show that the commercial lobbyist market increases the ability of interest groups to inform the policy maker on their proposals; especially for smaller firms. The market for donations also allows the policy maker and interest groups to better handle uncertainty in the results of policy implementation. In the presence of donations, policy makers allow firms that have previously conveyed bad information to regain access if they are sufficiently reputable. The simultaneous differences in information known to the two groups and in their incentives creates a difficult environment for eliciting truthful revelation of information, but we demonstrate that lobbying firms and donations to the policy maker improve the transmission of information and the implementation of good policies. The following section describes the most related literature to our analysis. Section 3 presents a simple model which describes the role of information transmission in the repeated relationship between a policy maker, interest groups, with and without commercial lobbying firms. Section 4 extends this framework as a contracting problem to incorporate access fees. Section 5 discusses our main results. Section 6 concludes.

## 2. RELATED LITERATURE

Ellis and Groll (2014) provide a previous analysis of the commercial lobbying industry, which also includes access fees. They divide lobbying activities into direct, or in-house, lobbying and commercial lobbying. They have two markets, one for political access and another for commercial lobbying services. Commercial lobbyists are distinct from citizens in that they have an information technology which allows them to learn about the policy quality, and they are able to offer donations to a policy maker. When a Commercial Lobbyist is hired, there is some probability that he will present the citizens proposal to the policy maker. The commercial lobbyist wants to present good policies due to spillover effects of the policy. Similarly, Ellis and Groll (2017) describe how the allocation of a policy maker's time between interest groups and lobbyists is endogenously determined. The key frictions come from the inability to contract on payments and the fact that lobbyists verification is unobserved. In many cases the spillover effects to the commercial lobbyist and their role verifying are not clear. Our analysis explains the need for commercial lobbyists when interest groups do not possess a verification technology. Our framework is also able to characterize the types of groups that can get direct access to a policymaker and which obtain access via commercial lobbying firms.

In much of the economic literature, policy makers face constraints on their time or attention and consequently impose access fees to hear policy proposals, to offset foregone fund-raising efforts. Early formal analyses find that lobbying can have significant influence in the legislative process and provide an explanation of counteractive lobbying where the firms lobby policy makers that are already in agreement with them (Austen-Smith and Wright, 1992; Austen-Smith and Wright, 1994).

Another literature has focused on the problem of a policy maker optimally allocating their attention to many interest groups with independent policy preferences (Cotton, 2009; Cotton, 2012; Cotton, 2016; Austen-Smith, 1998; Dellis and Oak, 2017). The policy maker in Austen-Smith (1998) faces a time and resource

constraint and sets a price for access, optimally allocating their time across reviewing proposals and other objectives. In ellis and Oak (2017) of these analyze the pareto-improving effect of an agenda constraint which limits the number of proposals the policy maker can review. In each of these information lobbying frameworks, the policy maker sets the rules for interaction such that only interest groups with higher quality proposals or higher willingness to pay will choose to participate.

### 3. A SIMPLE MODEL

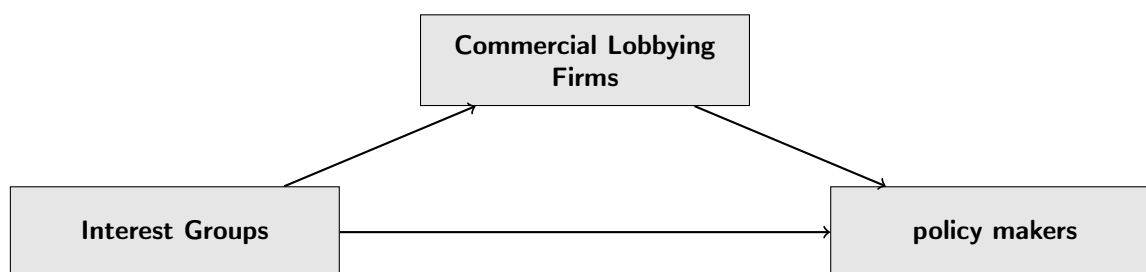


FIGURE 1. The Market for Commercial Lobbying

Figure 1 presents a simple illustration of how the existence of a market for commercial lobbying facilitates the transmission of information between interest groups and policy makers. Consider the problem where an *interest group*  $i$  and a single *policy maker* repeatedly interact over the implementation of some policy  $\rho_i \in \{0, 1\}$ . Policies are either “reform” ( $\rho_i = 1$ ) or “status quo” ( $\rho_i = 0$ ). In each period an interest group must decide whether or not to lobby the policy maker by proposing that they implement their policy. The policy maker can grant access to interest groups and decide whether or not to implement the proposed policy.

Throughout our analysis we restrict our attention to benevolent policy makers. That is, policy makers who do not wish to implement bad policies. This means that the policy maker will not haphazardly implement policies in the hope they will be good. To this policy maker, it is better to let some good policies go missed, then to implement all the policies proposed.

Interest groups are heterogeneous in the *salience* of their policy issues and the *quality* of their proposals. The salience reflects the size of the firm and the importance of the issue. The quality of the proposal is the expectation of their actual quality draws. The issue of concern for an interest group does not change over time, neither does the expectation that the group's policy proposal will have positive social value. That is, interest groups are characterized by the vector  $(\alpha_i, \sigma_i)$ . The salience of an issue,  $\alpha_i \in [0, 1]$ , is interpreted as the probability that an interest group will want to be granted access to the policy maker in each period. We assume  $\alpha_i \sim G(\cdot)$  and is publicly observable. The quality of a proposal  $s_i$  has cumulative density function  $F_i$   $E_F[s_i] = \sigma_i \in [0, 1]$ . Interest groups observe  $s_i$  which is their private information. For now, we assume that the signal is fully informative. We extend this to noisy signals in section 4. We interpret  $\sigma_i$  as the probability that reform  $i$  is good for society. Interest groups value their reform as  $V$  if it is implemented, and 0 otherwise, independent of its social quality.

First, as a benchmark consider a world without commercial lobbying firms. Interest groups must decide to lobby the policy maker, or stay home and not lobby. Assume the policy maker commits to play a trigger strategy. If an interest group convinces the policy maker to implement their policy by misleading the policy maker about its quality, then the policy maker will discover this in the following period and never listen to that interest group again. That is, interest groups must decide if truth-telling is worth maintaining a relationship with the policy maker. Alternatively, if interest groups choose to lie then their policy is implemented today and they receive  $V$  today and 0 in all future periods.

First we will consider the case in which both  $\alpha_i$  and  $\sigma_i$  are public information and policy makers are unable to charge access fees. The interest group knows at the start of the period if his proposal today is good or bad, while the policy maker knows only the value of  $\sigma_i$ . The only punishment strategy that is available to the policy maker is exclusion from future rounds and the choice of exclusion for all future periods allows for the largest set of interest groups to participate. If the realization of the policy next period is poor then the policy maker will effectively end the relationship with the interest group. Interest groups choose their lobbying



strategy by maximizing their expected payoffs;

$$\max_d VI(d = 1) + I(d = 0) \sum_{t=1}^{\infty} \delta^t V \alpha_i \sigma_i \quad (1)$$

and if (2) holds, then the interest group lobbies the policy maker; otherwise they stay home.

$$1 \leq \frac{\alpha_i \sigma_i \delta}{1 - \delta} \quad (2)$$

Only interest groups with  $(\alpha_i, \sigma_i)$  satisfying (2) are expected to truthfully lobby. In the model with public information the policy maker observes the salience and quality parameters of each interest group. Therefore, the policy maker only trusts interest groups for which (2), the truth telling incentive, holds. As shown in Figure 2, the policy maker only trusts interest groups with relatively more salient policy issues, higher  $\alpha_i$ , and greater quality reforms, higher  $\sigma_i$ . When an interest group of that type lobbies the policy maker they will be successful. Since  $\sigma$  is publicly observable, the policy maker knows the policy is good when the group lobbies.

The policy maker may want to implement some policies that are important are less salient, or of lower importance to them. Similarly, the policy maker may also want to consider implementing some policies that have lower expected social value - that is, smaller  $\sigma_i$  - and the corresponding interest groups would surely want their proposals considered. This motivates the existence of a market for commercial lobbyists; interest groups with a lower  $\alpha_i$  or  $\sigma_i$  seek out commercial lobbying services. The commercial lobbyist takes on a set of interest groups, and presents this policy portfolio to present to the policy maker.

The commercial lobbyist faces a similar problem to the interest group where he chooses whether or not to maintain a credible portfolio. An interest group that cannot satisfy equation (2) cannot credibly communicate and their proposal will not be implemented regardless of its quality. This set of interest groups may choose to hire the commercial lobbyist to lobby on their behalf. Interest groups that are included in a commercial lobbyist's portfolio have a positive expected

payoff, a strict improvement over the world with no commercial lobbying market. The commercial lobbying market also increases the number of proposals the policy maker hears and, consequently, the amount of information received by the policy maker.

We add the market for commercial lobbyists into the model with public information. Interest groups for which (2) is not satisfied have a positive demand for commercial lobbyists. We introduce the commercial lobbyist in the following way. Define  $L$  as the set of policy proposals in the commercial lobbyist's portfolio. Then  $\alpha_L = \sum_{j \in L} \alpha_j$  is the salience of the commercial lobbyist's portfolio, which is simply a sum over the issue salience of each interest group included in the portfolio. Similarly, the quality of the commercial lobbyist's policy portfolio is defined as the weighted sum of the quality of proposals included in the portfolio:

$$\sigma_L = \frac{\sum_{j \in L} \alpha_j \sigma_j}{\sum_{j \in L} \alpha_j}$$

A commercial lobbyist will truthfully lobby the policy maker if the inequality in equation (3) holds.

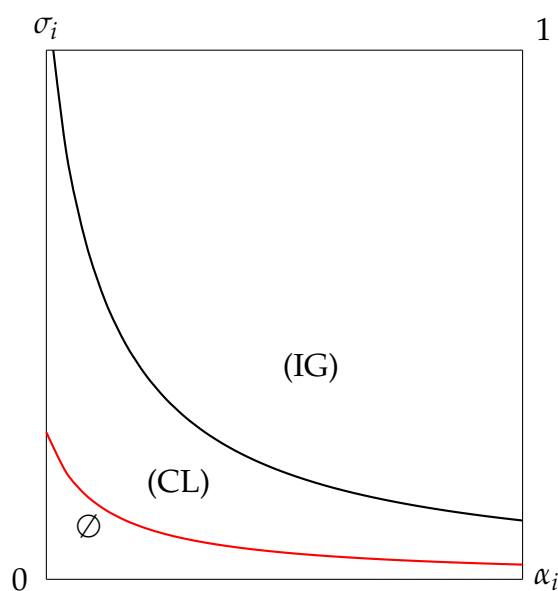
$$\frac{1 - \delta}{\delta \alpha_L} \leq \sigma_L \quad (3)$$

By using the commercial lobbyist's policy parameters and substituting for  $\alpha_L$  and  $\sigma_L$  in the above inequality we obtain equation (4):

$$1 \leq \frac{\delta}{1 - \delta} \sum_{i \in L} \alpha_i \sigma_i \equiv \lambda_L \quad (4)$$

Inequality (4) describes the type of clients a lobbyist of type  $\lambda$  will take on. Figure 2 illustrates the set of interest groups that will directly lobby and the set of interest groups that will choose to hire a commercial lobbyist. If the market for commercial lobbyists did not exist then the policy maker would not hear any of the policy proposals from the interest groups hiring lobbyists because these interest groups are discouraged from lobbying under the truth-telling incentive.

In this environment, lobbyists increase the transmission of information between the interest groups and the policy maker. Comparing to a first best outcome

FIGURE 2. Who Lobbies and How?  $\delta = 0.9$ 

where the policy maker receives the signals directly and so is fully informed, the policy maker simply excludes some of the lowest salience and quality policies. After this they will remain fully informed about all policies that meet a threshold of quality and salience as pictured in Figure 2. Excluding the market for commercial lobbyists decreases welfare since the policy maker will receive less information, hear fewer proposals, and will implement fewer positive policies.

#### 4. ACCESS FEES

Now suppose the policy maker can charge a fee for access and suppose the interest group no longer receives a signal that is fully informative. That is, in each period each interest group comes up with a new policy idea, while developing their new policy idea, the interest group learns information about the quality of the policy idea, which informs them of its expected social value. In other words, by learning about an idea, an interest group receives a signal of the policy's true quality. Let's assume that a good signal is correct with probability  $\gamma$  and a bad

signal is correct with probability  $\tau$ . Finally, let  $S$  denote the probability that the signal is good. The parameters  $\gamma$ ,  $\tau$ , and  $S$  vary across interest groups and are observable by the policy maker.

Previously in equilibrium, interest groups and lobbyists truthfully lobbied the policy maker and this result relies on the policy maker playing a trigger strategy; lying once will cause the policy maker to reject forever. A relational contract wherein the policy maker charges the interest group or commercial lobbyist a fee for continued access is a special case of a repeated game with punishments. Allowing for an access fee simplifies the equilibrium and elicits a contract where agents choose to settle up each period. These contracts are self enforcing - an interest group that provides bad information to the policy maker will not reliably pay a fine  $b$  afterwards unless the possibility of exclusion from future transactions is possible. Explicit contracting on policy outcomes would also constitute vote-buying which belies the policy maker's role as a welfare maximizer.

Our model is as follows. Policy makers and interest groups are both risk neutral and so we look for the stationary contract as in ?. A policy maker maximizes their benefits by setting the access fee as high as possible subject to two incentive compatibility constraints and a dynamic enforcement condition. The first incentive constraint, (5), ensures that conditional on access fee  $b$  and a good signal the interest group has a greater expected present value of lobbying over walking away. On the other hand, the second incentive constraint, (6), ensures that, conditional on a bad signal and the access fee, an interest group has a greater expected present value from walking away over lobbying.

The probability that a signal is correct conditional on its type is either  $\gamma$  for a good signal or  $\tau$  for a bad signal. The access fee  $b$  acts as a punishment for poor policy realizations, the probability of which depends on the type of signal the interest group receives.

$$V - b(1 - \gamma) + \frac{\delta}{1 - \delta} \alpha_i (V - b(1 - \gamma)) S \geq S \frac{\delta}{1 - \delta} \alpha_i (V - b(1 - \gamma)) \quad (5)$$

$$V - b\tau + \frac{\delta}{1-\delta}\alpha_i(V - b(1-\gamma))S \leq \frac{\delta}{1-\delta}\alpha_i(V - b(1-\gamma))S \quad (6)$$

$$b \leq \frac{\delta}{1-\delta}\alpha_i((V - b(1-\gamma))S) \quad (7)$$

The incentive compatibility constraints, equations (5) and (6), can be solved for the bounds on  $b$ .

$$\frac{V}{1-\gamma} \geq b \geq \frac{V}{\tau} \quad (8)$$

The dynamic enforcement condition, (7), requires the access fee be no larger than the present value of all future policies. This condition can be solved for an upper bound on  $b$  after which interest groups would not participate in lobbying, regardless of their type.

$$\frac{\alpha_i V S \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta}\alpha_i(1-\gamma)} \geq b \quad (9)$$

Therefore, given some range of reasonable parameter values that satisfy the three constraints, there exists a contract over the access fee. In equilibrium, interest groups with bad policy signals will abstain from lobbying and interest groups with good policy signals and facing an access fee  $b$  will lobby the policy maker.

A lobbying firm is different from an interest group only in their salience parameter,  $\alpha_L$ . The commercial lobbyist's salience,  $\alpha_L$  is the sum of all  $\alpha_i$  in their portfolio so it will be relatively large by construction. The lobbying firm learns the policy in the same way as the interest group. Alternatively, the commercial lobbyist could be better at learning the social benefit of a policy and then possess more reliable signals.

The commercial lobbyists role in this model will continue to provide access to the policy maker for interest groups who otherwise would not participate in lobbying. Interest groups with a relatively small  $\alpha_i$  will not lobby on their own behalf because there does not exist an access fee  $b$  for which the equilibrium conditions (8) and (9) are both satisfied. Since all parameters are public information, the policy makers will not trust any interest groups that choose to lobby when their incentive compatibility constraints and dynamic enforcement condition are not satisfied.

That is, if equation 10 holds for some interest group, then there is no fee the policy maker can set that satisfies truth telling and dynamic efficiency for that interest group.

$$\alpha_i \leq \frac{\tau(1-\delta)}{\delta S(1-\tau(1-\gamma))} \quad (10)$$

This is a necessary but not sufficient condition for access. This result is very similar to the condition on  $\sigma_i$  in the previous model with no signal. In the model with policy signal  $\sigma_i$  is replaced by the informativeness of a bad signal,  $\tau$ . This results demonstrates again the need for a commercial lobbyist, who can pool together  $\alpha$  for all non-salient firms to create sustained interaction for credible communication.

In equilibrium the access fee is equal to the minimum of the two upper bounds on  $b$  described on (8) and (9). First, the upper bound on the access fee derived from the dynamic efficiency condition (9). Second, the upper bound in (8) is derived from the incentive compatibility constraint for interest groups with good signals.

$$b = \min\left\{\frac{V}{1-\gamma}, \frac{\alpha_i V S \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_i (1-\gamma)}\right\} \quad (11)$$

Suppose not, let  $b = \frac{V}{1-\gamma}$  and let  $\frac{V}{1-\gamma} \geq \frac{\alpha_i V S \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_i (1-\gamma)}$  then condition (9) is violated. Condition (9) is derived from the dynamic enforcement condition and if it does not hold, then the interest group will choose not to participate in lobbying. Alternatively, suppose  $b = \frac{\alpha_i V S \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_i (1-\gamma)}$  and let  $\frac{V}{1-\gamma} \leq \frac{\alpha_i V S \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_i (1-\gamma)}$ . Under these conditions (9) will hold and the interest groups would like to participate in lobbying. However, the incentive compatibility constraint of interest groups with good signals does not hold. This access fee is too high to guarantee truth-telling. Therefore, only an equilibrium access fee satisfying (11) will ensure truth-telling, participation of interest groups with good signals, and maximize the policy makers fees.

## 5. DISCUSSION

A prominent conclusion of our analysis is that binding regulations on lobbying firm sizes would exclude more small players from being able to enter the market. Restrictions on access fees to politicians would also end up excluding more participants and preventing good policies from being implemented. This would disproportionately impact smaller interest groups - contradictory to the notion that restricting such fees would equalize opportunities for access across firms. Similarly, consider the case where policies differ in  $V$ . With a fee limit we would exclude the biggest impact policies first, but could still have accurate information on small impact policies. This model thus suggests that there may be strong negative impacts from imposing a fee limit which is too low, although one which is above the limit, could be useful if lobbying firms have monopoly power. Additional effects of market power are considered briefly in the appendix.

The addition of access fees pushes a larger set of firms to use commercial lobbyists. We describe the access fees charged by a policy maker as the solution to an agency problem which involves constraints on the quality of information a policy maker receives from lobbyists and on the dynamic stability of the relationship. A commercial lobbying firm with a good reputation and large size faces a lower access fee paid when a signal was good but the project results in a bad outcome. Therefore, for a larger set of interest groups using a commercial lobbyist is beneficial which helps improve the quality of their pool of proposals. The imposition of fees also avoids exclusion of a good interest group, when they receive a signal that their project is beneficial and it turns out to harm society.

Another implication of our analysis is that if lobbying firms also provide useful information they would be subject to a lower fee. The smallest possible  $\alpha$  for an interest group to gain access would decrease, leading to more small commercial lobby firms. Unfortunately for the excluded participants, there is no change in the set who are able to lobby directly since the information advantage is for the firm.

In practice, large firms are more likely to maintain in-house lobbyists where as small firms will hire an external lobbyist firm on an ad hoc basis. Our model also predicts that large firms will not hire a commercial lobbyist because they are able to effectively lobby on their own behalf, only small firms will hire a commercial lobbyist. This is consistent with empirical analysis of the lobbying industry that finds that lobbyists serve a dual purpose of providing access and transmitting information (Broscheid and Coen, 2007). Smaller firms do not interact with the policy maker as often so they do not maintain a relationship.

## 6. CONCLUSION

In this paper we propose a model where special interest groups must first decide whether or not to hire a commercial lobbyist or lobby a policy maker directly. The framework is such that some interest groups will be excluded, these groups find it optimal to abstain from lobbying activities. Then a policy maker must decide whether or not to implement the special interest group's policy, given the information provided. We demonstrate that a market for commercial lobbying facilitates the transmission of good information between the small interest groups and the policy maker and the policy maker will implement more good policies from small interest groups.

In this model, we establish conditions under which truth-telling is the optimal strategy for a lobbyist interacting with the policy maker. The policy maker can leverage the repetitive nature of the lobbying process to punish lobbyists that are not truthful by denying future access. Policy makers will only accept policies from interest groups with a high enough combination of salience and good information. As a result lobbyists will only truthfully interact with the policy maker and the policy maker implements all their policies.

An extension of this model allows for a noisy signal on the policy quality and allows policy makers to charge an access fee. We establish a set of incentive compatibility constraints and a dynamic enforcement condition over which the policy maker can enforce a contract describing access fees. Their must be an



upper and lower bound on the access fee in equilibrium, nonetheless there exists a subset of interest groups with a salience measure so small that it is never optimal for them to lobby directly.

The commercial lobbyist creates an important informational link between the special interest group and the policy maker by increasing the transmission of good information, especially for small interest groups. Lobbying is more efficient when a market for commercial lobbyists exists. Our model also creates a role for access fees, such as campaign contributions, in the lobbying process. When the policy maker is able to charge access fees they receive better information and can implement more good policies.

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#### APPENDIX A. FIRM SIZE AND THE EFFECTS OF COMPETITION

In the setting with access fees only policies with good signals are presented to the policy maker. As a result, excluding a set of interest groups from lobbying, based on  $\alpha_i$ , decreases the number of good policies that the policy maker will here. In other words, there exists a set of good policies within the excluded set that the policy maker would like to implement but will never be informed about. As a result, the commercial lobbyist can ameliorate welfare by increasing the number of good policies that the policy maker becomes informed about. Let's allow the commercial lobbyists to set a client-specific lobbying fee, which is an increasing function of  $\alpha_i$ .

Now that the commercial lobbying firm is charging a fee, we must make some assumption on the market structure of the commercial lobbying market. We first consider the monopolist then contrast with the case of perfect competition.

If both the interest group and commercial lobbyist are risk neutral, and there is a single commercial lobbyist, then the lobbyist's fee extracts all the surplus from the interest group's policy whenever they produce a good signal. If the interest group produces a bad signal, then the commercial lobbyist will not include their policy in the portfolio. Proposals from the excluded interest groups do not reach the policy maker because they have a bad signal. Of course, this result relies on a market with a single lobbyist.

Let's recall that the client-specific lobbying fee is a function of  $\alpha_i$  since the policy maker's access fee is also increasing in  $\alpha$ . Therefore, the decision problem of the commercial lobbyist is to choose a set of interest groups for their portfolio subject to client-specific fees described by  $l(\alpha_i, \gamma_i, S_i, \tau_i)$ . The commercial lobbyist chooses a set of interest groups  $\{L\}$  for their portfolio and the corresponding fees

$l$  to maximize profits:

$$\Pi = \max_{\alpha} \begin{cases} \int_L l(\alpha_i, \gamma_i, S_i, \tau_i) - \alpha_L S_L (1 - \gamma_L) \frac{\alpha_L V S_L \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_L (1 - \gamma_L)} dF(\alpha_i, \gamma_i, \tau_i, S_i) & \text{if } \alpha_L < \frac{(1-\delta)}{\delta(1-\gamma)(1+S)} \\ \int_L l(\alpha_i, \gamma_i, S_i, \tau_i) - \alpha_L S_L V dF(\alpha_i, \gamma_i, \tau_i, S_i) & \text{if } \alpha_L \geq \frac{(1-\delta)}{\delta(1-\gamma)(1+S)} \end{cases}$$

Subject to

$$\int_L \alpha_i d(\alpha_i) = \alpha_L$$

$$\int_L S_i d(S_i) = S_L$$

$$\int_L \gamma_i dF(\gamma_i) = \gamma_L$$

$$\int_L \tau_i dF(\tau_i) = \tau_L$$

$$\tau_L \geq \frac{1}{\min\left\{\frac{1}{1-\gamma_L}, \frac{\alpha_L S_L \frac{\delta}{1-\delta}}{1 + \frac{\delta}{1-\delta} \alpha_L (1 - \gamma_L)}\right\}}$$

(12)

Alternatively, let's consider a perfectly competitive market for lobbying wherein the commercial lobbyists charge interest groups a fee subject to the zero profit condition. Under this market structure there exists a threshold  $\underline{\alpha}$ , which is the minimum fee commercial lobbyist's charge interest groups; under  $\underline{\alpha}$  lobbyists face negative profits. Then suppose that each commercial lobbyist has some ability to investigate the quality of an interest group's proposal. The signals received by commercial lobbyists will be exogenous and fixed across interest groups  $\gamma_l, \tau_l, S_l$ . Interest groups with larger  $\alpha_i$  will not choose to hire a commercial lobbyist because the fee they will be charged is weakly greater than their expected payoffs from lobbying alone. The set of interest groups that would like to hire a commercial lobbyist is described by the inequality in equation 10.

Manipulation of equation 13 shows that a commercial lobbyist with profits given by case 1, where  $\alpha_L < \frac{(1-\delta)}{\delta(1-\gamma)(1+S)}$ , has a cost advantage over a commercial

lobbyist in case 2, where  $\alpha_L \geq \frac{(1-\delta)}{\delta(1-\gamma)(1+S)}$ . Since the cost is increasing in  $\alpha_L$  interest groups want to hire the lobbyist with the smallest  $\alpha_L$  possible. All interest groups with small  $\alpha_i$  will hire a lobbyist from case 1. Furthermore, in equilibrium equation 10, the necessary condition for access to the policy maker, must hold. Therefore, all commercial lobbyists will set  $\underline{\alpha}_L = \frac{\tau(1-\delta)}{\delta S(1-\tau(1-\gamma))}$ . Perfect competition implies that commercial lobbyists with  $\underline{\alpha}_L$  will charge a fee  $l(\underline{\alpha})$  described in equation 13.

$$l(\underline{\alpha}) = \frac{\tau^2(1-\gamma)V}{(1-\tau(1-\gamma))((1-\tau(1-\gamma))^{\frac{1-\delta}{\delta}} + \frac{\delta(1-\gamma)\tau S}{1-\delta})} \quad (13)$$

Any interest group with  $\alpha_i > \underline{\alpha}$  will not hire a lobbyist and prefer to lobby alone because the expected return is greater. There is also a set of interest groups for which  $\alpha_i S V \leq l(\underline{\alpha})$ , these groups will be excluded from the market because the commercial lobbyists fees are weakly greater than if they did not lobby at all.

The amount of surplus captured by the lobbying firm should fall as the market moves toward perfect competition and profits converge to zero. While, further research on this dynamic is interesting, it is also outside the scope of this paper. In any case, interest groups that can lobby alone would never strictly prefer to hire a commercial lobbyist because the fee is weakly greater than the expected fee from lobbying the policy maker directly when they have a good signal. We can also consider the case where some parameters are unobservable to the commercial lobbyist at the time of fee negotiation. Another interesting dynamic that arises when the lobbyist is not willing to take on another client, as that will raise  $\alpha_L$ , which increases the access fee for the lobbyist when they are not truthful. However, for a lobbyist with a large enough  $\alpha$  they will already be subject to an access fee around  $\frac{V}{1-\gamma}$ .

These effects are also important for policies such as a fee limits on access fees. Such a limit shifts the surplus to go to large firms when lobbying firms have some market power. If the fee limit was set too low, such that  $\bar{b} \leq \frac{V}{\tau}$  then even the market for truthful policy proposals can no longer function. Therefore the policy

maker would not be able to get any reliable information on the quality of reforms before implementing them.