Lobbying and Elections

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Abstract

I analyze the interaction between post-election lobbying and the voting decisions of forward-looking voters. The existing literature has shown that in models with citizen candidates from a dispersed distribution of preferences, lobbying has no influence on implemented policy. In my model with ideological parties, lobbying is shown to have an effect on policy. In terms of welfare, I show that the median voter and the majority of voters can be better off with lobbying. (D72, Lobbying, Elections, Median Voter, Parties, Interest groups)

1 Introduction

The influence of interest groups on decision making within a democratic society is one of the most vibrant fields in political economics. However, most of the existing literature neglects the feedback effects of post-election lobbying on voter behavior. In this paper, I analyze interest group influence on policy in a model with ideological parties and voters who correctly foresee the post-election bargaining outcome.

Specifically, I consider a polity with two ideological parties that cannot commit to policy positions before an election take place and an interest group that can make financial contributions to the party in office (or in some other way influence its decision making). If the party accepts the contribution, it agrees to implement a specific policy in return. In equilibrium, the implemented policy is a weighted average of the bliss

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points of the party in office and the interest group. A voter's utility depends on how close this policy is to her bliss point. Therefore, she does not vote for the party that is ideologically closest to her, but for the party that she predicts will implement the policy closest to her bliss point when in office. Thus, when voting, she must take the post-election influence of the interest group into account.

I show that in many cases, the existence of interest group influence makes the median voter and the majority of voters better off. Even in cases where the median voter is worse off, the negative effects on her welfare are limited as long as the effects of lobbying on party positions are not too large. The reason is that because the median voter's bliss point is located between the parties, at least the policy of one of the parties moves in the direction of the her bliss point in case lobbying takes place. As long as this party's policy does not move too far and ends up on the other side of the median voter's bliss point, it offers the median voter a more attractive position when lobbying takes place compared to the case without interest group influence.

Since voters predict equilibrium policies, the winning party in the case of lobbying is different from the winning party without lobbying if the median voter's bliss point is closer to the implemented policy of the party whose bliss point is further away from her own. The welfare of the interest group will increase with lobbying as compared to the case without lobbying, as long as the winning party does not change. However, the effects of lobbying can easily make the position of the party closer to the interest group less attractive and lead to the victory of the other party. In this case, the interest group will be worse off if its influence is not very large. The interest group can potentially avert this situation by collecting less funds before the election takes place. In this way, the interest group can commit to reduce its lobbying sufficiently to make its favorite party win. Thus, the analysis provides an additional rationale (besides the well-known collective action problems described in the classic treatise of Olson (1971)) as to why general interests are not often organized in interest groups.

My results are in contrast to the findings of Besley and Coate (2001), the first paper in the literature that considers feedback effects of post-election lobbying on voter behavior and election outcomes. They show that as long as sufficiently extreme candidates are available, lobbying has no influence on policy at all. Consequently, it also has no influence on the welfare of voters who neither run as candidates nor contribute to lobbying efforts. The interest group is always worse off in the case of lobbying as compared to the case without lobbying if the implemented policy is the

same, because it must make positive contributions to the winning candidate. The question why an interest group would ever be formed in such a setup is not asked, its existence is taken as given.[1]

The reasons for the differences between my findings and those of Besley and Coate are straightforward. My setup is very similar to theirs with respect to the post-election bargaining between interest groups and parties and with respect to rational expectations of voters. However, they use their own citizen-candidate framework (introduced in Besley and Coate (1997)), while I use a model with ideological parties. Political parties that seem to care at least to some degree about policies are a widely observed phenomenon, while true citizen candidates seem to be the exception rather than the rule. In a citizen-candidate framework with a continuum of candidates, the choice set of voters is a continuum of possible policies (given that a citizen candidate with the policy is willing to run), whereas in my model with political parties, the voters have to decide between two policies only. The influence of post-election lobbying by the interest group alters the implemented policies of each potential citizen candidate as well as those of both political parties. However, if the choice set only contains two policies from the beginning, lobbying changes the policy choice of voters in a significant way. With a continuum of citizen candidates, on the other hand, only relatively extreme policies become unavailable in the case of lobbying. If candidates with sufficiently extreme preferences are available, voters can completely offset the influence of the interest group and equilibrium policy does not change.

1.1 Related literature

A recent overview of the empirical literature focusing on the United States is provided by de Figueiredo and Richter (2013). However, in this overview lobbying is more narrowly defined as the transfer of information, not of money or favors as in the model presented here. An overview of (legal) monetary contributions, focusing on the United States as well, is provided by Ansolabehere, de Figueiredo, and Snyder (2003). I provide some further discussion of the evidence with respect to the model presented here in Section 2.9.

An excellent overview of the theoretical research can be found in Grossman and Helpman (2001). The literature can be divided into two major strands. On the one

[1] For a useful discussion of the Besley and Coate (2001) paper and its contribution to the literature, see also Dewan and Shepsle (2008).

hand, there are models in which lobbies influence policy by providing information to politicians. Examples are Austen-Smith (1993), Bennedsen and Feldmann (2002) and several models discussed in Grossman and Helpman (2001). On the other hand, there are models in which interest groups influence decision makers with the help of monetary contributions. My paper belongs into this category. Two important papers in this strand of the literature are Grossman and Helpman (1994, 1996).

In most models with monetary contributions in return for policy, elections are disregarded and only the post-election bargaining of interest groups with individual politicians (see, for example, Grossman and Helpman (1994)) or several members of a legislature (see, for example, Groseclose and Snyder (1996)) is considered. The models that incorporate interaction of lobbying and elections usually deal with the interaction of campaign contributions and elections (Grossman and Helpman 1996). In these models, politicians accept contributions not as an end in themselves, as in my model, but for the financing of electoral campaigns. The feedback effects of post-election lobbying on election outcomes have received less attention so far. This is somewhat surprising, given that they can be dealt with in a purely rational choice framework. In contrast, the campaign contribution literature needs to rely on a somewhat uneasy mix of a framework that combines standard rational choice elements with an ad hoc assumption of the existence of a group of voters that is not only uninformed about policy but, moreover, impressionable by campaign contributions as in Baron (1994) and Grossman and Helpman (1996). Moreover, Baron (2006) provides evidence from the Center for Responsive Politics that expenditures on lobbying after elections are at least as large as spending on campaign contributions.[2]

The few papers which actually deal with the feedback effect on elections include the already mentioned Besley and Coate (2001) paper and two papers that build further on its citizen-candidate-cum-lobbying framework by Felli and Merlo (2006, 2007). Felli and Merlo (2006) show that the winning candidate is better off when she can exclude some of the interest groups from the post-election bargaining game. In equilibrium, interest groups that are closer to the preferences of the winner of the election are excluded to maximize the bargaining power of the politician. This, in turn, biases the outcome of the policy-making process towards centrist policies. While the result is somewhat similar to the one presented here, the mechanism is very different. In Felli and Merlo (2007), the model is extended to allow for campaign

[2] www.opensecrets.org.

contributions as well. This does not lead to major changes on the lobbying stage of the game. However, they show that interest groups contribute to candidates whose preferences are closer to their own (their friends). These very candidates exclude the interest groups that contributed to their campaigns from the lobbying stage when they are elected. Lobbying takes place only between "enemies".

Acemoglu, Egorov, and Sonin (2013) present a model with post-election lobbying between a politician in office and an interest group. The lobbying stage of their model is very similar to the lobbying stage in the model analyzed here. However, in their model not all politicians accept contributions by interest groups and incumbents who are not corruptible signal this by choosing populist policies before the election takes place.

1.2 General interest versus special interest lobbying

A possible explanation for the neglect of post-election lobbying, especially compared to campaign contributions, consists of the focus of most of the literature on special interest politics. It is not obvious how voters should adjust their voting behavior even if they can predict the influence of post-election special interest lobbying. They can avoid voting for a farmer who prefers very high farm subsidies, but they are unlikely to have a candidate available with a special interest in low subsidies or no subsidies at all whose preferences counterbalance the effect of the special interest lobbying in the post-election lobbying stage. The paper by Besley and Coate, on the other hand, deals with general interest lobbying.[3] Here, the provision of a public good that benefits everybody is influenced by interest groups. The conflict arises because citizens disagree on the exact amount of the public good that should be provided and candidates with very different preferences who can neutralize the effect of the interest group in the post-election lobbying stage are assumed to be available and not inhibited by the ideology of a party. This is somewhat problematic because the candidates in elections in Western democracies usually do not run on their own but for a party.

A further distinction between models of post-election lobbying and models of

[3]That their model is de facto a model of general interest lobbying rather than special interest lobbying is never stated by Besley and Coate. Nonetheless, this difference is of essential importance in explaining why they find that lobbying has no influence on policy, a result that is in sharp contrast with the results in other papers.

campaign contributions is the ability of politicians to commit to policies before the election takes place. If they want to attract campaign contributions in return for their policy announcements, politicians must be able to commit to policies in advance. If, on the other hand, politicians are free to choose policies after the election, there is no reason why an existing interest group would not want to influence them at this point rather than, or in addition to, the campaign stage of the game.

However, the different assumptions on the ability of politicians to commit to policies seem adequate once the differences between general interest and special interest lobbying are taken into account. Parties can more easily commit on special interest issues because they are unlikely to have a strong ideological bias against or in favor of them. On a general interest policy dimension, on the other hand, it seems plausible that commitment is impossible or at least more difficult because political parties are usually defined by their ideologies. It seems unlikely that, for example, a socially conservative party could make a credible commitment to implement socially progressive policies before an election takes place. In the model presented here we have a kind of indirect commitment: Forces that a party cannot influence are known to influence its policies when it wins office. This can be to a party's advantage if it increases its attractiveness (relative to the alternative party) in the eyes of voters who foresee this post-election influence.

Therefore, my model does not provide an alternative theory of special interests with elections and their feedback effects. Instead, it provides a new contribution to the small literature on general interest lobbying.

2 The Model

There is one policy dimension and policy p is given by a point in the interval $[0,1]$. There are two parties, L and R and one interest group. Both parties are policy motivated and have a given ideal policy $b_J \in [0,1]$ that could, for example, reflect the average preferences of their members. By assumption, $b_L < b_R$ and therefore, L is the "left" and R the "right" party. The utility of a party $J = L, R$ is given by:

$$U_J(p,f) = -\alpha_J^{\delta-1} \left|p - b_J\right|^{\delta} + f_J, \tag{1}$$

where $J = L, R$ and $f \geq 0$ are the monetary funds received from the interest group and $\alpha_J^{\delta-1} > 0$ gives the weight that party J attaches to policy relative to monetary contributions. We assume that $\delta > 1$ (utility is concave in distance to the policy bliss point). The utility of the interest group is given by:

$$U_I(p, f) = -|p - b_I|^{\delta} - f, \tag{2}$$

where b_I is the policy bliss point of the interest group. Since the relative weight of policy relative to monetary contributions is normalized to 1 for the interest group, $\alpha_J^{\delta-1}$ also measures how much the parties care about policy relative to monetary payments relative to how much the interest group cares about policy relative to monetary funds. The monetary transfers $f = f_L + f_R$ to the parties in office are costly for the interest group.[4] Therefore, they negatively enter its utility function. The variable b_I denotes the policy bliss point of the interest group.

No commitment to a policy platform is possible in advance of the election. Thus, after the election, the winning party is not bound by any previous announcements. There is an odd number N of voters. Voter n's utility function is:

$$U_n(p) = -|p - \theta_n|^{\delta}, \tag{3}$$

where θ_n is the bliss point of voter n. I order the voters by their preferences from left to right such that θ_1 is the bliss point of the voter with the ideal point closest to 0. θ_m, with $m = \frac{N+1}{2}$, is the bliss point of the median voter. I assume that $b_L < \theta_m < b_R$. After the election, the interest group makes an offer to the party that won. The party accepts or rejects this offer. If it accepts the offer, it implements the agreed policy. If not, it is free to choose any policy and therefore implements its own bliss point. By assumption, the party accepts the offer if indifferent.

To summarize, the order of moves is as follows: First, an election takes place and the party which achieves the majority of votes wins. Second, at the lobbying stage, the interest group makes a take-it or leave-it offer to the party that has won the election, specifying a policy p and a payment f in case this policy is accepted. Third, if the party accepts the payment, it must implement the policy proposed by the interest group. If the party does not accept the payment, it is free to choose any policy. The interest group has no possibility to commit to abstain from lobbying after

[4] In equilibrium, only the party in office will receive any funds.

the election.

2.1 Solving the model

The interest group maximizes its utility subject to making the party in office indifferent between accepting the offer and implementing its favorite policy. A party in office that does not accept monetary contributions would implement its favorite policy and achieve a utility of 0. The resulting policy if party $J = L, R$ is in office is given by:

$$\begin{aligned}
(p_J^*, f_J^*) &= \arg\max_{p,f} \; U_I(p, f_J) \; s.t. \; U_J \geq 0 \\
&\Rightarrow \; p_J^* = \arg\max_{p} - |p - b_I|^{\delta} - \alpha_J^{\delta-1} |p - b_J|^{\delta} \qquad (4) \\
&= \begin{cases} \arg\max_{p \in (b_I, b_J)} - (p - b_I)^{\delta} - \alpha_J^{\delta-1} (b_J - p)^{\delta} & \text{if } b_I < b_J \\ \arg\max_{p \in (b_J, b_I)} - (b_I - p)^{\delta} - \alpha_J^{\delta-1} (p - b_J)^{\delta} & \text{if } b_I > b_J \\ b_I & \text{if } b_I = b_J \end{cases} \\
&= \frac{b_I + \alpha_J b_J}{1 + \alpha_J}.
\end{aligned}$$

Policy is a weighted average of the ideal point of the party in office and the interest group. The larger the relative weight of policy α_J^{δ} in the utility function of the party in office, the closer is the equilibrium policy to the bliss point of this party. This is somewhat similar to the effect of a political support function as explained for example in Hillman (1982) and going back to ideas first explored in Peltzman (1976). The existence of a political support function is usually attributed to electoral motives of the politicians and voters who make their voting decision considering past outcomes. While I assume that the interest group promises a payment to derive this result, any other reason while a party in office might seek compromise with an interest group after an election would lead to very similar results.[5]

Since $b_L < b_R$, it follows that $p_L^* = \frac{b_I + \alpha_L b_L}{1 + \alpha_L} < \frac{b_I + \alpha_R b_R}{1 + \alpha_R} = p_R^*$ as long as the difference in size between α_L and α_R is not too large.[6]

If there is no interest group, party J maximizes its utility by implementing its bliss point b_J when in office. Therefore, if party J is in office, the interest group offers

[5] The main reason that political support functions came out of fashion and are replaced by the assumption of direct financial contributions is probably a desire for explicit microfoundations.

[6] This is the case as long as $\alpha_L > \frac{\alpha_R (b_I - b_R)}{b_I - b_L + \alpha_R (b_R - b_L)}$ if $b_L < b_I$ and $\alpha_R > \frac{\alpha_L (b_L - b_I)}{b_R - b_I + \alpha_L (b_R - b_L)}$ if $b_R > b_I$.

the payment:

$$f_J^* = \alpha_J^{\delta-1} \left| p - b_J \right|^\delta = \alpha_J^{\delta-1} \left| \frac{b_I - b_J}{1+\alpha_J} \right|^\delta \tag{5}$$

for implementing policy p_J^*. Moreover, the utility of the parties and the interest group are (now $O = L, R$ denotes the party in office and $-O$ the party out of office):

$$\begin{aligned} U_O &= 0, \\ U_{-O} &= -\alpha_{-O}^{\delta-1} \left| \frac{b_I + \alpha_O b_O}{1+\alpha_O} - b_{-O} \right|^\delta = -\alpha_{-O}^{\delta-1} \left| \frac{\alpha_O(b_O - b_{-O}) + (b_I - b_{-O})}{1+\alpha_O} \right|^\delta, \\ U_I &= -\left| \frac{\alpha_O(b_I - b_O)}{1+\alpha_O} \right|^\delta - \alpha_O^{\delta-1} \left| \frac{b_I - b_O}{1+\alpha_O} \right|^\delta = -\left(\frac{\alpha_O}{1+\alpha_O} \right)^{\delta-1} \left| b_I - b_O \right|^\delta \end{aligned}$$

The party in office is indifferent between accepting and rejecting the offer and therefore accepts it by assumption. This is a jointly efficient outcome for the interest group and the party, as could be expected in a perfect-information set-up without frictions in the negotiations over the policy. However, the joint efficiency between the party in office and the interest group does not imply Pareto efficiency, because it fails to account for the utility of the voters not organized in the interest group or the party in office and the utility of the party out of office. Voters are assumed to be able to predict the post-election outcome before they cast their ballots. In contrast to most models of interest group influence on policy-making, the effects of lobbying are predicted by the voters who adjust their voting decisions accordingly.

I assume that all voters cast their ballots in favor of the party which they forecast to implement the policy closest to their respective bliss point. This is the only plausible strategy for a voter because it is weakly dominant. If the median voter weakly prefers a policy position, this is also preferred by either all voters with $\theta_n \leq \theta_m$ or all voters with $\theta_n \geq \theta_m$. Thus, the party which implements the policy preferred by the median voter achieves the majority of votes. The winning party in case of lobbying is thus given by:

$$J_I^* = \arg \min_{J \in \{L,R\}} \left| p_J^* - \theta_m \right|, \tag{6}$$

i.e., the party which implements the policy that is most attractive to the median voter. I denote the implemented policy in case lobbying is taking place by $p_I^* = p_{J_I^*}$. If the median voter is indifferent, she is assumed to vote for the left party L.[7] In

[7] Assuming that the median voter supports one of the parties in the case of being indifferent

contrast, if there is no lobbying, a party in office implements its bliss point. Thus, the party with the bliss point closest to the median voter wins:

$$J^*_{-I} = \arg \min_{J \in \{L,R\}} |I_J - \theta_m| . \tag{7}$$

I denote the equilibrium policy without lobbying by $p^*_{-I} = b_{J^*_{-I}}$. Once more, if the median voter is indifferent, she is assumed to vote for the left party L. Thus, J^*_I and J^*_{-I} are different parties if and only if $\left|b_{J^*_{-I}} - \theta_m\right| \leq \left|b_{J^*_I} - \theta_m\right|$ and $\left|\frac{\alpha_{J^*_{-I}} b_{J^*_{-I}} + b_I}{1+\alpha_{J^*_{-I}}} - \theta_m\right| \geq \left|\frac{\alpha_{J^*_I} b_{J^*_I} + b_I}{1+\alpha_{J^*_I}} - \theta_m\right|$, with at least one of the inequalities holding strictly.

Proposition 1 *If both parties have the same trade-off for money versus policy $\alpha = \alpha_L = \alpha_R$, interest group influence either does not change the winner of the election or leads to the defeat of the party with preferences closer to the preferences of the interest group.*

Proof. If interest group influence changes the winner of the election we know that $\left|b_{J^*_{-I}} - \theta_m\right| \leq \left|b_{J^*_I} - \theta_m\right|$ and $\left|\alpha b_{J^*_{-I}} + b_I - (1+\alpha)\theta_m\right| \geq \left|\alpha b_{J^*_I} + b_I - (1+\alpha)\theta_m\right|$, with at least one of the inequalities holding strictly. Multiplying the first inequality with α, taking squares on both sides of both inequalities and then subtracting the second inequality from the first inequality shows that $-2\alpha\left(b_{J^*_I} - b_{J^*_{-I}}\right)(\theta_m - b_I) < 0$. Suppose the right party wins in the case of interest group influence and the left party in the case without ($b_{J^*_I} = b_R$, $b_{J^*_{-I}} = b_L$). In this case, the inequality implies $(\theta_m - b_I) > 0$. By assumption $\theta_m < b_R$. From this together with $|b_L - \theta_m| \leq |b_R - \theta_m|$ follows that the left party's bliss point is closer to the interest group's bliss point. A symmetric argument applies to the case of the right party winning when lobbying is taking place. ■

The intuition for this result becomes clear when considering under what conditions it does not hold when $\alpha_L \neq \alpha_R$. We consider the case with $b_L < \theta_m < b_R < b_I$ so that the right party is preferred by the interest group and $p^*_L > b_L$ and $p^*_R > b_R$. For the left party to win without, but to lose with lobbying we need $\theta_m < p^*_R \leq p^*_L$. The reason is that the policy of the party preferred by the interest group is pulled away from the bliss point of the median voter by the effects of lobbying. The only way

avoids stochastic elements in the model that would lead to some complications without giving any additional insights.

that this nonetheless makes the preferred party of the interest group relatively more attractive for the median voter is that the other party is moved even further in the direction of the interest group. This means the left party becomes the de facto right party under the influence of lobbying, which seems far fetched and can only happen if $\alpha_L < \alpha_R$. The case $b_I < b_L < \theta_m < b_R$ is analogous. When $b_L < b_I < b_R$, we know that the interest group has more influence on the position of the party that is further away because $p_J^* = \frac{b_I + \alpha b_J}{1+\alpha}$. This implies that the policy of the party that is further away from the interest group makes a stronger move in the direction of the median voter. Thus, either the winner of the election stays the same or the party further away from the median voter wins due to the influence of lobbying.

2.2 An example

How important is the influence of general interest lobbying for the outcome of elections that we observe? A historical example for a party that has won elections because voters expected it to compromise with an interest group after winning power are the Swedish Social Democrats. While I am not aware of any evidence for financial contributions or even outright bribes as an explanation for these rather business friendly policies in Sweden, lobbying in the broader sense regularly took place. There is a consensus that the interests of big business influenced the policies of the Swedish Social Democrats whenever they were in office. This is especially clear for the early years of their political dominance. For example, "up to the early 1970s, Sweden did not have a particularly large public sector when compared with other rich industrialized European democracies" (Steinmo 2005, *p.*154). Nor did Sweden have particularly high levels of taxation until the early 1970s, while the Swedish Social Democrats had already been the dominating political force in Sweden since the 1930s (and even when taxes reached their famously high levels in the 1970s, these taxes were on labour rather than on capital).

In contrast, there were the less successful German Social Democrats (SPD) of the Weimar period, just at the time when the Swedish Social Democrats became the dominating force in Swedish politics. The German Social Democrats had the same ideological roots as the Swedish ones and similar policy preferences. However, they had a much worse relationship with big business and were not expected to be successfully lobbied into accepting moderate policies. While often the largest party

in parliament, the German Social Democrats never achieved an absolute majority in Weimar Germany. Centrist voters in Germany, probably correctly, did not expect moderate and business friendly economic policies from a social democratic absolute majority.[8]

The more straightforward explanation for the success of the Swedish Social Democrats compared to the German case is that Swedish voters just had more left-wing preferences compared to the German electorate. But even if one supposes that voters do not, as assumed in the model presented here, immediately realize the influence of interest groups on post-election policy, it is hard to understand why Swedish voters did not switch in larger numbers to the party that is now known as the Left Party if they had been dissatisfied with the rather moderate Social Democratic policies in Sweden. The Swedish Left Party split from the Social Democrats in 1917 and formed a more left-wing alternative, first under the name Swedish Social Democratic Left Party, but the voters continued to show a strong preference for the Social Democrats.

2.3 The welfare of the voters

Lobbying seems to be detrimental to welfare in a democracy because parties do not implement the policies they stand for. However, in the model discussed here lobbying can make the median voter better off. Moreover, whenever it is shown that the median voter is better off this also implies that the majority of voters must be better off. The reason is that if the median is better off, either all voters with a bliss point to the left of the median voter or all voters with a bliss point to the right of the median voter are better off.

One important first observation is that the assumption $b_L < \theta_m < b_R$ implies that at least one of the parties' policies is moved in the direction of the median voter's bliss point by the interest group. The reason is that either the implemented policies of both parties move to the left or both move to the right or, if $b_L \leq b_I \leq b_R$, the implemented policies of both parties are moved in the direction of the median voter. Consequently, at least one of the parties becomes more attractive to the median voter unless we observe large effects of lobbying:

Case 1 (Large effects of lobbying) *Either* $b_I < \max(b_L - \alpha_R(b_R - b_L),$

[8]For an overview of the history of Weimar Germany, see Storer (2013). For an introduction to the political economy of Sweden, see Steinmo (2005).

$2(\alpha_R+1)\theta_m-(2\alpha_R+1)b_R)$ *or* $b_I > \min\left(b_R+\alpha_L(b_R-b_L),\ 2(\alpha_L+1)\theta_m-(2\alpha_L+1)b_L\right)$.

If we observe large effects of lobbying, the interest group influence is so strong that one of the parties implements policies that are not only located on the ideologically opposite side of the median voter (where the bliss point of the other party is located), but moreover further away from the median voter's bliss point than the bliss point of either party. Large effects of lobbying can be observed when the bliss point of the interest group indicates a strong ideology (very small or very large bliss point b_I), the ideological distance between the parties $(b_R - b_L)$ is small and the party that is further away from the interest group cares relatively little about policy (small a_J).

In the case of large effects the median voter must be worse off compared to the case without interest group influence because both parties implement policies that are less desirable for the median voter than the most attractive bliss point of the two parties:

Proposition 2 *If lobbying has large effects, as defined in Case* 1*, then it decreases the utility of the median voter as compared to the case without lobbying.*

Proof. $b_I < \max\left(b_L-\alpha_R(b_R-b_L),\ 2(\alpha_R+1)\theta_m-(2\alpha_R+1)b_R\right)$ implies that either $p_R^* < b_L$ or $p_R^* < 2\theta_m - b_R$ or both. If $p_R^* = \frac{b_I+\alpha_R b_R}{\alpha_R+1} < b_L$, then $p_L^* < b_L < \theta_m$, $p_R^* < b_L < \theta_m$ and thus $|b_L-\theta_m| < |p_I^*-\theta_m|$ and lobbying decreases the utility of the median voter. $p_R^* = \frac{b_I+\alpha_R b_R}{\alpha_R+1} < 2\theta_m - b_R$ implies $|p_R^*-\theta_m| > |\theta_m - b_R|$. If $b_I \geq b_L$ it follows that $p_R^* > b_L$ which implies $p_L^*-\theta_m < p_R^*-\theta_m < \theta_m - b_R < 0$ and it follows that $|p_L^*-\theta_m| > |p_R^*-\theta_m| > |\theta_m-b_R|$ and again lobbying decreases the utility of the median voter. If $b_I < b_L$ it follows that $p_L^*-\theta_m < b_L-\theta_m < 0$ and therefore $|p_L^*-\theta_m| > |b_L-\theta_m|$ in addition to $|p_R^*-\theta_m| > |\theta_m-b_R|$. Lobbying makes the median voter worse off because both parties offer a policy that is less attractive to the median voter than without lobbying. The proof of the case $b_I > \min\left(b_R+\alpha_L(b_R-b_L),\ 2(\alpha_L+1)\theta_m-(2\alpha_L+1)b_L\right)$ is analogous. ■

Because the identity of the winning party can also change as a result of the interest group influence, large effects of lobbying do not necessarily imply large effects on implemented policy.

Large effect of lobbying seem rather implausible for most countries. On the one hand, an interest group might be expected to have rather extreme policy preferences and therefore b_I might be expected to be either very small or very large because

centrist special interest groups would have more problems in solving the collective action problem. On the other hand, for small α_J, the values of b_I that would lead to large effects of lobbying are outside the policy space $[0, 1]$, so that even an interest group with the most extreme possible bliss point $b_I = 0$ or $b_I = 1$ would not have large effects on policy for a given party in office. When we do not observe large effects of lobbying, we talk about small effects:

Case 2 (Small effects of lobbying) $\max(b_L - \alpha_R(b_R - b_L), 2(\alpha_R + 1)\theta_m - (2\alpha_R + 1)b_R) \leq b_I \leq \min(b_R + \alpha_L(b_R - b_L), 2(\alpha_L + 1)\theta_m - (2\alpha_L + 1)b_L)$.

In the case of small effects of lobbying, at least one of the parties offers a position that is closer to the median voter's bliss point when it is influenced by the interest group after the election as compared to the case where no interest group exists. Consequently, the median voter is better off whenever the interest group influence moves the policy of the party whose bliss point is ideologically closer to the median voter further in direction of the median voter's bliss point. This is the case whenever either the interest group's bliss point is located on the same side of the median voter as the party with the larger ideological distance to the median voter or if the interest group's bliss point is located between the two parties' bliss points.

But even if the interest group is located on the same side of the median voter as the party with the larger ideological distance, it can make the median voter better off if its influences on the policies of this party is large enough and it moves its policy in direction of the median voter to such a degree that its post-lobbying policy is closer to the median voter's bliss point than the bliss point of the party that is ideologically closer to the median voter.

Whenever the interest group's bliss point is located between the parties' bliss points the median voter must be better off because both parties implement policies that are more attractive for the median voter when they are influenced by the interest group.

Proposition 3 *If the effects of lobbying are small, as described in Case 2, and the interest group is on the same side of the median voter as the party with the larger distance to the median (that is if either* $b_I \geq \theta_m$ *and* $\frac{b_L+b_R}{2} \geq \theta_m$ *or* $b_I \leq \theta_m$ *and* $\frac{b_L+b_R}{2} \leq \theta_m$*), the median voter is better off as compared to the case without lobbying. If the interest group is located the other side (that is if either* $b_I > \theta_m > \frac{b_L+b_R}{2}$ *or* $b_I <$

$\theta_m < \frac{b_L+b_R}{2}$), *the median voter is better off as compared to the case without lobbying if and only if either the effect of lobbying is sufficiently large* ($b_I \geq (\alpha_L+1)(2\theta_m - b_R) - \alpha_L b_L$ *if* $b_I > \theta_m > \frac{b_L+b_R}{2}$ *or* $b_I \leq (\alpha_R+1)(2\theta_m - b_L) - \alpha_R b_R$ *if* $b_I < \theta_m \leq \frac{b_L+b_R}{2}$) *or the interest group's policy bliss point is located between the two parties' bliss points* ($b_L \leq b_I \leq b_R$).

Proof. Case $b_I \geq \theta_m$ and $\frac{b_L+b_R}{2} \geq \theta_m$:
$\frac{b_L+b_R}{2} \geq \theta_m$ implies $|b_R - \theta_m| \geq |b_L - \theta_m|$. Therefore, without lobbying, the left party wins and $p^*_{-I} = b_L$ is implemented. Because we have small effects of lobbying, it follows from (4) that $p^*_L \leq \min(b_R, 2\theta_m - b_L)$. Together with $|b_R - \theta_m| \geq |b_L - \theta_m|$, this implies that $p^*_L \leq 2\theta_m - b_L$. It follows that $p^*_L - \theta_m \leq \theta_m - b_L$ and the median voter is (weakly) better off with p^*_L than she would be with $p^*_{-I} = b_L$. The proof of the case $b_I \leq \theta_m$ and $\frac{b_L+b_R}{2} \leq \theta_m$ is analogous.

Case $b_I > \theta_m > \frac{b_L+b_R}{2}$:
$b_I > \theta_m > \frac{b_L+b_R}{2}$ implies that $|b_R - \theta_m| < |b_L - \theta_m|$ and without lobbying, the right party wins and $p^*_{-I} = b_R$ is implemented. If $b_I \geq (\alpha_L+1)(2\theta_m - b_R) - \alpha_L b_L$, then $p^*_L = \frac{b_I+\alpha_L b_L}{1+\alpha_L} \geq 2\theta_m - b_R$ and together with $p^*_L \leq b_R$ (what follows from the fact that the effects of lobbying are small) it follows that $|p^*_L - \theta_m| \leq |\theta_m - b_R|$. This implies that the median voter is better off with p^*_L than with p^*_{-I} and therefore must be better off with lobbying. If $b_I < (\alpha_L+1)(2\theta_m - b_R) - \alpha_L b_L$, then $p^*_L < 2\theta_m - b_R$ and $|p^*_L - \theta_m| > |\theta_m - b_R|$. There are two subcases to consider: 1. subcase: If $b_L \leq b_I \leq b_R$, then $b_I \leq p^*_R = \frac{b_I+\alpha_R b_R}{(1+\alpha_R)} \leq b_R$ and the median voter is better off because small effects of lobbying imply that $p^*_R \geq 2\theta_m - b_R$.

2. subcase: If, on the other hand, $b_L \leq b_I \leq b_R$ is not true, then $b_I > \theta_m > \frac{b_L+b_R}{2}$ implies that $b_I > b_R$ and therefore $p^*_R > b_R > \theta_m$ and lobbying must make the median voter worse off because $|p^*_I - \theta_m| = \min(|p^*_R - \theta_m|, |p^*_L - \theta_m|) > |b_R - \theta_m|$.

The proof of the case $b_I < \theta_m < \frac{b_L+b_R}{2}$ is analogous. ■

Proposition 3 implies that if both parties are located symmetrically around the bliss point of the median voter and effects of lobbying are small, lobbying must make the median voter better off. At least one of the parties' policies is moved in the direction of the median bliss point and because of the assumption of symmetry its policy is now closer to the median bliss point than the parties' policy bliss points.

2.4 The utility of the interest group

The interest group must be better off whenever the same party wins with or without lobbying. With lobbying and party J_I^* winning the election, the utility of the interest group is:

$$U_I^*(p_J^*, f_J^*) = -\left(\frac{\alpha_{J_I^*}}{1+\alpha_{J_I^*}}\right)^{\delta-1} \left|b_I - b_{J_I^*}\right|^{\delta}.$$

Without any lobbying and party J_{-I}^* winning the election, the utility of the interest group is:

$$U_I(b_{J_I^*}, 0) = -\left|b_I - b_{J_{-I}^*}\right|^{\delta}. \tag{8}$$

If the same party $J_I^* = J_{-I}^*$ wins with and without lobbying, the welfare effect of lobbying on the interest group is simply the difference:

$$U_I^*(p_J^*, f_J^*) - U_I(b_{J_I^*}, 0) = \left(1 - \left(\frac{\alpha_{J_I^*}}{1+\alpha_{J_I^*}}\right)^{\delta-1}\right) \left|b_I - b_{J_I^*}\right|^{\delta} > 0. \tag{9}$$

When the winner does not change as a consequence of the existence of the interest group, lobbying always makes the interest group better off. This result is not surprising given that the interest group is assumed to obtain the entire surplus from the negotiations with the party in office. If $J_I^* \neq J_{-I}^*$, the difference in utility of the interest group between the two cases is given by:

$$U_I(p_J^*, f_J^*) - U_I(b_{J_{-I}^*}, 0) = -\left(\frac{\alpha_{J_I^*}}{1+\alpha_{J_I^*}}\right)^{\delta-1} \left|b_I - b_{J_I^*}\right|^{\delta} + \left|b_I - b_{J_{-I}^*}\right|^{\delta}. \tag{10}$$

If J_I^* and J_{-I}^* are different parties, lobbying leads to a change of winner of the election and, as was shown in Proposition 1 and the following discussion, leads under some mild conditions to the victory of the party with the bliss point further away from the interest group. Whether the lobby is nonetheless better off depends on $\alpha_{J_I^*}$:

$$U_I(p_J^*, f_J^*) - U_I(b_{J_{-I}^*}, 0) > 0 \iff \alpha_{J_I^*} < \frac{\left|b_I - b_{J_{-I}^*}\right|^{\frac{\delta}{\delta-1}}}{\left|b_I - b_{J_I^*}\right|^{\frac{\delta}{\delta-1}} - \left|b_I - b_{J_{-I}^*}\right|^{\frac{\delta}{\delta-1}}}. \tag{11}$$

Only when the effect of lobbying is sufficiently large because the interest group cares enough about policy compared to the party in office (small $\alpha_{J_I^*}$), lobbying makes

the interest group better off even if it leads to the loss of the party to which it is ideologically closer.

2.5 A numerical example

Two illustrate the results in the last two subsections we look at a simple numerical example. Let $b_{_L} = 0.3$, $b_{_R} = 0.6$, $\theta_m = 0.5$, $b_I = 1$, $\delta = 11$ and $\alpha_R = 1$. We look at the effects of lobbying for different values of α_L. The bliss point of the right party is closer to the median bliss point of the left party, so without lobbying the right party wins. With lobbying $p_R^* = \frac{b_I + \alpha_R b_R}{1+\alpha_R} = 0.8$. Thus, with lobbying the left party wins as long as $p_L^* \leq p_R^*$ because its policy is closer to the bliss point of the median voter. $p_L^* \leq p_R^*$ holds for $\alpha_L \geq 0.4$. What about the utility of the median voter? It decreases when the effects of lobbying on the left party are so small that $p_L^* < 0.4$ (This is the case whenever $\alpha_L > 6$) so that both parties offer policies that are further away from the median voter's bliss point than $b_{_R} = 0.6$. When we have large effects of lobbying on the left party so that $p_L^* > b_{_R} = 0.6$ the median voter is also worse off than without lobbying. This is the case whenever $\alpha_L < \frac{4}{3}$. It remains to evaluate the effects on the interest groups. Clearly, the interest group is ideologically closer to the right party, so we know that it is better off compared to the case without lobbying whenever the right party wins. We have already established that this is the case when $\alpha_L < 0.4$ and $p_L^* > p_R^*$.

However, the interest group can also be better off even when $\alpha_L \geq 0.4$ and the left party wins. This is the case as long as the condition in equation 11 holds and $\alpha_L < \frac{0.1^{1.1}}{0.2^{1.1} - 0.1^{1.1}} \approx 0.874\,47$. In this case, the left party is relatively uninterested in policy and can thus be convinced to implement a relatively right wing policy without a large payment. Consequently, the interest group is better off with lobbying whenever $\alpha_L < \frac{0.1^{1.1}}{0.2^{1.1} - 0.1^{1.1}}$ and worse off whenever $\alpha_L > \frac{0.1^{1.1}}{0.2^{1.1} - 0.1^{1.1}}$.

2.6 Limited funding for the interest group

So far, we have just ignored that the interest groups might face a budget constraint. The model is easily adjusted to the case of an interest group that cannot spend more than a fixed amount B of funds. If $B \geq f_J^*$ for $J = L, R$ nothing changes because the constraint is not binding. When $B < f_J^*$, the best the interest group can achieve is to move implemented policy as far as possible in the direction of its own bliss point

given its budget constraint. Given the utility function $U_J(p,f) = -\alpha_J^{\delta-1}\left|p-b_J\right|^{\delta} + f_J$ of the parties the policy of party $J^* = L, R$ after winning the election is given by:

$$\Rightarrow p_J^*(\alpha_J, B) = \begin{cases} \max\left(\frac{b_I+\alpha_J b_J}{1+\alpha_J}, b_J - \left(\frac{B}{\alpha_J^{\delta-1}}\right)^{1/\delta}\right) & \text{if } b_I < b_J, \\ \min\left(\frac{b_I+\alpha_J b_J}{1+\alpha_J}, b_J + \left(\frac{B}{\alpha_J^{\delta-1}}\right)^{1/\delta}\right) & \text{if } b_I > b_J, \\ b_I & \text{if } b_I = b_J. \end{cases} \tag{12}$$

If the budget constraint is binding for one (or both) of the parties there is always an alternative weighting of policy relative to money

$$\alpha'_J(B,\alpha_J) = \left|b_I - b_J\right| \left(\frac{\alpha_J^{\delta-1}}{B}\right)^{1/\delta} - 1$$

which would lead to exactly the same policy in combination with unlimited funding.[9] Thus, one can simply substitute for any α_J by $\alpha'_J(B,\alpha_J)$ in the analysis provided so far to adjust for binding budget constraints. Consequently, binding budget constraints do not lead to a profound change of the results, but they reduce the influence of lobbying on policy and make large effects of lobbying less likely.

However, from the fact that unrestricted lobbying can lead to a victory the party that is not preferred by the interest group follows that an interest group can be better off if it faces a binding budget constraint instead of unlimited funds. As a consequence, an interest group can use limited funds as a commitment device. This is analyzed in the next subsection.

2.7 Limited funding as commitment device

Now, I consider the possibility that before the election takes place the interest group can deliberately limit the maximum amount of funding B, for example by asking for less money from its donors. This assumes that asking donors for contributions takes to much time to be done after the election. The voters are aware of this and adjust their voting decisions accordingly. The reason to do so is to enable the election victory of the party that is ideologically closer to the interest group. When unlimited

[9] The alternative policy weight $\alpha'_J(B,\alpha_J)$ solves $\frac{b_I+\alpha'_J(B,\alpha_J)b_J}{1+\alpha'_J(B,\alpha_J)} = b_J - \left(\frac{B}{\alpha_J^{\delta-1}}\right)^{1/\delta}$ if $b_I < b_J$ respectively $\frac{b_I+\alpha'_J(B,\alpha_J)b_J}{1+\alpha'_J(B,\alpha_J)} = b_J + \left(\frac{B}{\alpha_J^{\delta-1}}\right)^{1/\delta}$ if $b_I > b_J$.

lobbying does not change the winner of the election, there is no reason to want to limit it because the interest group is choosing the optimal amount of lobbying conditional on the winner by solving the maximization problem in equation 4.

To keep the analysis concise, I restrict myself to the case with an interest group that has a more extreme bliss point than either party, specifically: $b_I < b_L < \theta_m < b_R$ and that the left party wins without lobbying and the right party wins if unlimited funds are available to the interest group. Moreover, to find a simple analytic solution for the optimal limited fund B^* for this section I make the assumption that $\alpha_L = \alpha_R = \alpha$. Let $p_L^{all}(B) = b_L - \left(\frac{B}{\alpha^{\delta-1}}\right)^{1/\delta}$and $p_R^{all}(B) = b_R - \left(\frac{B}{\alpha^{\delta-1}}\right)^{1/\delta}$ denote the policy positions that the parties implement if all of B is used to move policy to the left after the election has taken place. The size of funds B^{indif} used for lobbying that makes the median voter indifferent between the two parties (and thus leads by assumption to the victory of the left party with the leftmost implemented policy consistent with its victory) is implicitly given by:

$$\begin{aligned} p_R^{all}(B^{indif}) - \theta_m &= b_R - \left(\frac{B^{indif}}{\alpha^{\delta-1}}\right)^{1/\delta} - \theta_m \\ = \theta_m - \left(b_L - \left(\frac{B^{indif}}{\alpha^{\delta-1}}\right)^{1/\delta}\right) &= \theta_m - p_L^{all}(B^{indif}) \end{aligned} \tag{13}$$

Solving for B^{indif} and the corresponding policy positions gives:

$$\begin{aligned} B^{indif} &= \alpha^{\delta-1}\left(\frac{b_R + b_L - 2\theta_m}{2}\right)^{\delta}, \\ p_L^{all}(B^{indif}) &= \theta_m - \frac{b_R - b_L}{2}, l \\ p_R^{all}(B^{indif}) &= \theta_m + \frac{b_R - b_L}{2}. \end{aligned} \tag{14}$$

There are two cases to consider. From equation 5 we know that the payments the interest group offers are increasing the ideological distance between a party and the interest group when lobbying is not restricted by limited funds. It follows that if the interest group is willing to use all its budget B^{indif} to influence the closer party L when in office it would also optimally use all its funds to influence the more distant party R when in office.[10] In this case, both parties implement the policies given by

[10]The reason is that $\alpha_J = \alpha$ for both parties and consequently the influence of lobbying has the

equation 14 that are located symmetrically around the median voter. If the fund for lobbying was slightly larger this would lead both parties to implement policy positions slightly further left, the median voter would not longer be indifferent but prefer the right party to win. On the other hand, if the fund was smaller, the interest group would be worse off because it could not influence the left party as much as it would like to conditional on the left party winning the election.

If the interest group would actually use all its funds and implement $p_L^{all}(B^{indif})$ has to be checked applying equation 12. However, even if it turns out that the interest group optimally spends less than B^{indif} because $\frac{b_I+\alpha_L b_L}{1+\alpha_L} > b_L - \left(\frac{B^{indif}}{\alpha_L^{\delta-1}}\right)^{1/\delta}$ when the left party is in office, the limit of funds to B^{indif} can nonetheless be important because it ensures that the right party's implemented policy is not moved so far in the direction of the median voter that it wins.[11] Again, B^{indif} turns out to be optimal because while the left party wins, it also allows for the amount of lobbying that is optimal for the interest group conditioning on the left party winning the election.

However, even if the interest group can prevent the defeat of its favorite party by restricting its funds this does not necessarily imply that this restriction is optimal. The maximum level of utility the interest group can achieve with limited funds of B^{indif} is given by:

$$U_I(p_L^*(B^{indif}), B^{indif}) = -\left|p_L^*(B^{indif}) - b_I\right|^\delta - \min\left(\alpha_J^{\delta-1}\left|\frac{b_I - b_L}{1+\alpha_L}\right|^\delta, B^{indif}\right)$$

And the utility given by unlimited lobbying is given by:

$$U_I(p_R^*, f_R^*) = -\left(\frac{\alpha_R}{1+\alpha_R}\right)^{\delta-1}|b_I - b_R|^\delta.$$

Thus, the interest group restricts its funding before the election if and only if

$$U_I(p_L^*(B^{indif}), B^{indif}) > U_I(p_R^*, f_R^*).$$

same influence on both parties policies. This implies that the interest group is not only constraint when lobbying the left party, but also constraint when lobbying the right party. This follows directly from the fact that the cost of moving either party's policy to the left are the same, but the increase in utility from policy is larger in the case of the right party whose implemented policy is further away from the bliss point of the interest group.

[11] Because for this section we have assumed that right wins without lobbying, this is actually the only possibility that does not lead to a contradiction with our assumptions so far.

In this case the optimal amount of funding is $B^* = B^{indif}$, otherwise no limit to funding is necessary and any $B \geq f_R^*$ is optimal. If α_R is small, moving the right party very close to its bliss point is not very costly for the interest group and consequently the interest group is better off without limited funding even if it leads to the defeat of its favorite party.

The use of funds of size $B^* = B^{indif}$ is the level of lobbying that makes the median voter worst off given small effects of lobbying (Case 2) and the left party winning the election because it is the fund that moves the left party as far away as possible from the median policy bliss point as possible given these two constraints.

This implies that observing less money used for lobbying is not necessarily a reason to belief that the welfare of the voters is increased. Moreover, this result somewhat cautions against the rather positive assessment of the effects of general interest lobbing in Section 2.3. The median voter is actually worse of compared to the case without lobbying.

2.8 Voters as lobbyists

To keep the analysis simple, I have assumed that the voters have no relationship with the interest group. However, usually members of an interest group also have the right to vote. When they make their voting decision, they do not only take into account what policy will be implemented in equilibrium, but also how the identity of the party that wins the election will increase or decrease their lobbying expenditure. However, for several reasons this is unlikely to change the election outcome. First, the number of voters who are engaged in a general interest group constitutes only a small part of the electorate. Second, it is unlikely that the costs of lobbying actually change their voting decisions. Remember that the utility of the interest group, taking the effect of lobbying into account, is given by: $U_I = -\left(\frac{\alpha_J}{1+\alpha_J}\right)^{\delta-1} |b_I - b_J|^{\delta}$ with $J = L, R$. For the case $\alpha_L = \alpha_R$, it can thus be ruled out that the member of an interest group changes her voting decision to decrease the costs of lobbying: The utility of the member is decreasing in distance to the bliss point of the party in office and if $\alpha_L = \alpha_R$, the party with the bliss point closer to the bliss point of the interest group also implements the policy closest to the interest group when lobbying is taking place.

2.9 Some empirical evidence on general interest lobbying

Perhaps the most important empirical finding with respect to the likely effects of general interest lobbying model discussed here is that in the US only a small amount of money (2% on the federal and 7% on the state level) is provided by issue-ideology membership groups (de Figueiredo 2004). These are the interest groups that are most likely to engage in general interest lobbying. This supports the idea that effects of direct financial lobbying on issues of general interest are rather small. Thus, the results for the case of "small effects of lobbying" as described in Case 2 and Proposition 3 are likely to be a good description at least for the United states. The low level of general interest lobbying also indicates that there might indeed be a conscious decision by such interest groups to restrict their funding because a too large degree of influence by them might decreases the electoral prospects of their favorite party as discussed in the previous Section.

2.10 The utility of the majority of voters and the average voter

The utility of the median voter is interesting for the purpose of comparison with standard models of elections without lobbying. Moreover, if lobbying makes the median voter better off this is also true for at least half of the electorate, either everybody to the left or everybody to the right of the median voter. Thus, all results derived for the utility of the median voter also hold for the majority of the electorate.

However, from the perspective of welfare economics, the median voter is not more interesting than any other voter. Consider a utilitarian (Benthamite) social welfare function that gives equal weight to all voters:

$$U_B = \sum_{n=1}^{N} U_n(p) = \sum_{n=1}^{N} - \left| p - \theta_n \right|^{\delta}. \tag{15}$$

In the most often considered case of $\delta = 2$ (or alternatively, when the voters are located symmetrically around θ_m), the welfare of the average voter reaches its unique maximum with policy:

$$p_B^* = \bar{\theta} \equiv \frac{\sum_{n=1}^{N} \theta_n}{N}. \tag{16}$$

Thus, whenever the welfare of the voter with the average bliss point $\bar{\theta}$ is maximized, we

are at the utilitarian maximum and the welfare of the average voter is also maximized. However, this is not true for the general case that allows for any $\delta > 1$. What can be said is that the larger δ, the larger will be the influence of voters whose preferences are are far away from the median voter on average voter welfare.

If $\bar{\theta} = \theta_m$, the results derived for the welfare of the median voter derived in Section 2.3 also apply to the average voter and overall welfare. There is no reason why $\bar{\theta} = \theta_m$ should hold exactly, but it can provide a reasonable approximation if the voters' bliss points are not too asymmetrically distributed around the median voter's bliss point.

In the literature on the determination of tax levels following the pioneering work of Meltzer and Richard (1981)[12], it is often assumed that $\theta_m < \bar{\theta}$ and the larger θ, the lower the implemented tax level.[13]

A modeling alternative would be to take a given distribution of voters and then make some additional assumptions about how they influence the ideologic position of the parties and possibly the interest group. In this way, the parties' policy positions could be endogenized. This is left for future research.

2.11 Alternative surplus sharing rules

How robust are results to the sharing of the surplus between the interest group and the party in office? Due to the assumption that the interest group makes a take-it or leave-it offer to the party in office, the whole surplus is given to the interest group and the party is not better off than it would be without lobbying. An alternative assumption is that the party in office and the interest group share the surplus created by post-election bargaining and therefore:

$$f(p) = (1-\beta)[U_I(p,0) - U_I(b_J,0)] - \beta[U_J(p,0) - U_J(b_J,0)], \tag{17}$$

with $\beta \in [0,1]$ being the interest group's share of the surplus. Then, the interest group wants to maximize its utility over p:

$$p_I^* = \arg\max_p U_I(p, f(p)) = \arg\max_p \beta[U_I(p,0)+U_J(p,0)-(U_J(b_J,0)]+(1-\beta)U_I(b_J,0), \tag{18}$$

[12] For an overview over this literature, see Persson and Tabellini (2000).

[13] Of course, there is no specific reason why low levels of θ should represent high levels of taxation and high levels of θ low levels of taxations and not vice versa, but given that I called party L the left party and party R the right party labeling appears consistent.

while party J wants to implement:

$$p_J^* = \arg\max_p U_J(p, f(p)) = \arg\max_p (1-\beta)[U_J(p,0)+U_I(p,0)-U_I(b_J,0)]+\beta U_J(b_J,0). \tag{19}$$

It is easily verified that the interest group as well as the party in office agree that $p_I^* = p_J^*$ should be implemented and therefore the equilibrium policy given party J in office is the same for all sharing rules. If $\beta = 1$, we have returned to the basic model in Section 2 where the interest group appropriates the entire surplus. If $\beta = 0$, we have the opposite result and the party in office gets the entire surplus from the lobbying negotiations. An alternative model with the same result would be to give the party in office the opportunity to make a take-it or leave-it offer to the interest group. As had to be expected, as long as bargaining is efficient, the sharing rule makes no difference for implemented policy. However, the welfare implications for the interest group as well as the parties are different and this would be important if there were an additional, initial stage where the interest group could commit to not getting involved in lobbying after the election.

3 Conclusion

This paper argues that the interaction of post-election lobbying and elections deserves more consideration. The possibility of voters taking later attempts at lobbying into account when they vote can partly offset the effects of lobbying on policy by changing the winner of the election. In my framework, with parties instead of citizen candidates as in Besley and Coate (2001), lobbying can still influence policy. When parties directly decide over policy, interest group influence changes the policy choice set of the voters. Especially if the effect of the interest group on policy is not large, voters are often better off. This result is due to the fact that if the parties' policy bliss points are located around the bliss point of the median voter, at least one of the parties' policy is moved in the direction of the median voter with lobbying compared to the case without lobbying. Thus, this party becomes more attractive to the median voter and a majority of the electorate as long as the effects of lobbying are not so large that the parties' implemented policy ends up too far on the other side of the median voter's policy bliss point. Because the lobbying of an interest group can lead to the defeat of its preferred party, there are situations in which an interest group

has an incentive to limit its funding as a way to commit to reduced lobbying after the election.

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