# Competitive Proposals to Special Interests

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**Abstract**

We consider electoral competition between two political candidates. Each can target private benefits to some groups. A candidate has an incentive to offer high benefits in the initial period, to deter the other candidate from offering yet higher benefits to the same group in a later period. We describe the equilibrium strategies of the candidates, showing that candidates will intend to target different groups, that groups targeted in the initial period gain larger benefits than groups targeted later, and that the benefits to special interests vary with their number and size.

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# 1 Introduction

Candidates often seek the support of special interest groups. One motive is to elicit campaign contributions. A large literature considers such implicit or explicit bribery. A seminal work in this approach is Grossman and Helpman (1994), who show that organized special interest groups get tariff protection or export subsidies, whereas diffused interests do not. Another reason to seek the support of special interests is votes: members of some groups may be single-minded, caring deeply about some issue which little concerns most other voters. One may think of pro-Israeli voters, or pro-Armenian voters, or sympathizers with Catholics in Northern Ireland, or patients ill with some uncommon disease, who will favor the candidate supporting their views on this issue, with little regard for other issues. Such behavior raises several questions that this paper examines. Will different candidates appeal to the same groups, or instead to different ones? How does the size of a group affect the benefits it is promised, and how does an increase in the size of some group affect the benefits other groups are promised? How does an increase in the number of special interest groups affect the benefits a candidate offers each of them?

# 2 Literature

## 2.1 Agenda setting

Seeing proposals as made over multiple periods, and seeing different politicians able to offer different proposals, builds on studies of agenda setting in legislatures, and more particularly on papers by Baron and Ferejohn (1989), Baron (1989), and Harrington (1990). They assume that any legislator can make a proposal, but that proposals are considered in a random order. In proposing and voting on policies a legislator therefore compares the benefits from the proposal to the status quo, and to a future proposal.

## 2.2 Special interests

The literature on special interests is vast. Much of it centers on how a special interest group attempts to influence legislatures. Our focus differs, looking at how candidates appeal to special interest groups.

In a study of voting, a puzzle is why people vote at all. One justification, consistent with our model, is that leaders of a special interest group offer benefits to individual voters, inducing them to vote. As Uhlaner (1989) and Morton (1991) note, a group leader can induce turnout among his members only if the candidates offer different policies (so that the election of one candidate over another affects policy), and if the group a candidate targeted is sufficiently large to affect the election. Both conditions hold in our model.

The paper closest to ours is Glaeser et al. (2004), who ask why parties make proposals that differ from each other, with a focus on issues with religious content. Their explanation relies on the ability of candidates to target political

messages towards core constituents—the partisan base favors the candidate who targets them, while other voters are unaware of what has been promised.

Many authors note that electoral competition can cause governments to favor small groups, at the expense of the public at large or of aggregate welfare. Lizzeri and Persico (2005) ask why many democracies have few political parties. In a theoretical model of party competition they show that an increase in the number of parties increases the incentive of each party to offer particularistic benefits. The effect arises from the incentive of a party to focus its electoral promises on a narrower constituency as the number of parties increases.

Persson and Tabellini (1999, 2000a, 2000b) give empirical evidence on the provision of public goods in different political systems. Milesi-Ferretti et al. (2000) report on data suggesting that an increase in the number of parties increases the fraction of public spending on transfers. Cox (2001) discusses two sources of a political party's bias towards targetable policies: to appropriate surplus for itself, and to buy electoral support from pivotal groups. Coate and Morris (1995) focus on how voters' imperfect information affects government policy.

# 3 Assumptions

Each voter belongs to at most one of $s$ different special interest groups. We mostly suppose that the special interest groups are identical in size, with each controlling $n$ votes. Each of two candidates aims to maximize the difference between the number of votes he wins and the number of votes his opponent wins. The amount of benefits candidate $i$ offers in period $t$ to the group he targets in that period is $x_{it}$. Where it causes no confusion, we use the simpler notation $x$. This offer is a binding commitment, which cannot be amended in a later period. Members of a group vote for the candidate, if any, who proposed the most benefits to that group. The gain in votes is $n$, regardless of the level of $x$ proposed. We thus implicitly assume that a member of the special interest group values the benefit a candidate offers by more than the voter's share of the cost.

# 4 Sequential moves

The simplest case to consider has candidates moving sequentially. Suppose the incumbent, Candidate $A$, targets special interest group $A$. Then the second mover, the challenger, or candidate $B$, will also target group $A$: a challenger who outbids the incumbent both gets the extra votes from the group targeted, and reduces the votes the incumbent would otherwise win from that group. A challenger who instead made an offer of the same size to a different group would leave unchanged the votes the incumbent gets from the special interest group he targeted. Foreseeing this effect, the incumbent may choose such a high level of benefits as to make the challenger indifferent between targeting the same

special interest or a different one. The incumbent may therefore be strongly disadvantaged. That disadvantage is not surprising, since we find the same in a multi-dimensional voting model—the challenger can always find a position that defeats the incumbent.

More specifically, suppose candidate $A$ moves first, offering a group $x_1^A$. Candidate $B$, having observed candidate $A$'s offer, moves next. If Candidate $B$ offers a bit over $x_A^1$ to the group candidate $A$ had targeted, then candidate $B$ gains $-x_A^1 + 2n$. If candidate $B$ targets a new group, he gains $n$. Therefore, to deter entry, candidate $A$ will offer $x_1^A$ to satisfy $-x_A^1 + 2n = n$ or $x_1^A = n$. His net gain of votes is $-x_1^A + n = 0$. Candidate $B$, who moves second, can offer a small benefit to a different interest group, gaining close to $n$ votes. Here then is an advantage to the second mover, resembling that which appears in a spatial model of voting with multiple dimensions, where the second mover can generally find a position that defeats the first mover.

# 5 Simultaneous moves

Consider next simultaneous moves in each of two periods. The time line is as follows.

1. In period 1, each of two candidates proposes a benefit to a special interest group. The proposals are made simultaneously

2. Each candidate observes the proposal the other candidate made.

3. In period 2, a candidate is active with probability $\pi$; with probability $1-\pi$ a candidate makes no offer in period 2, but the offer he made in period 1 still stands.

4. A candidate active in period 2 can propose in that period a benefit to a special interest group. In period 2 a candidate cannot revise a proposal he had made in period 1. Candidates make proposals simultaneously.

5. At the end of the period, each person votes for the candidate giving him the highest net benefits.

## 5.1 Strategies in period 2

To determine the strategies of the candidates, we work backwards, looking first at the candidates' strategies in period 2. Two cases must be considered. Either in period 1 both candidates targeted the same group, or else they targeted different groups. If they targeted the same group, then under our simplifying assumption, in period 2 each must target a new group.

So consider candidate $A$, who in period 2 targets a group that was not targeted by either candidate in period 1. Suppose candidate $A$ makes an offer of $x$, randomly chosen from a uniform distribution on $(0, M_2)$, with $M_2$ to be determined below. (We shall see that this uniform distribution is consistent with

an equilibrium). Suppose candidate $B$ adopts the same strategy. The expected gain in plurality to Candidate $A$ consists of the following terms.

1. Candidate $A$ offers $x$, and Candidate $B$ offers, on average, $\pi M_2/2$. These offers generate an expected gain in votes to Candidate $A$ of $-x + \pi M_2/2$

2. With probability $\pi$ Candidate $B$ targets some group. With probability $1/s$ both candidates target the same group. With probability $x/M_2$, Candidate $A$'s offer is greater, and so he wins the support of that group, winning $n$ votes.

3. With probability $\pi$ Candidate $B$ targets some group. With probability $1/s$ both candidates target the same group, and with probability $1-x/M_2$ Candidate $A$'s offer of $x$ is lower than Candidate $B$'s. Candidate $B$ gains $n$ votes from the special interest group.

4. With probability $\pi(1-1/s)$ the candidates target different groups. Each gains $n$ from the special interest group he targets, but the effect is a wash.

5. With probability $1-\pi$ Candidate $B$ makes no offer, and so Candidate A wins $n$ votes from the group he had targeted in period 1.

Thus, the expected gain in plurality when a candidate targets a group that had not been targeted in period 1 is:

$$-x + \pi M_2/2 + \pi/s(nx/M_2 - n(1-x/M_2)) + (1-\pi)n. \tag{1}$$

The gain given in equation (1) can appear in equilibrium only if the derivative with respect to $x$ is zero. Solving yields the solution

$$M_2 = 2\pi n/s. \tag{2}$$

The corresponding gain in plurality (compared to making no offer) is

$$(n/s)(1-\pi)(s-\pi). \tag{3}$$

We must also check the conditions under which Candidate $A$ will want to target a new group, given that Candidate $B$ targets a new group. Suppose instead that in period 2 Candidate $A$ targets a group that Candidate $B$ had targeted in period 1, with $B$ having offered $x_1^B$. Then in period 2 Candidate $A$ would offer that group a bit over $x_1^B$. (Recall that a candidate cannot revise an offer he had previously made). Candidate $A$'s gain is $n - x_1^B$. Candidate $A$ will not make such an offer if $n - x_1^B \leq (n/s)(1-\pi)(s-\pi)$, which is satisfied as an equality if $x_D \equiv x_1^B = (n/s)(1-\pi+s)$.

## 5.2 Period 1

Consider next strategies in period 1. In period 1 a candidate must consider what will happen in period 2. Let $F(x)$ be the cumulative probability distribution

function of an offer made in period 1. With probability $(1/s)$ the two candidates target the same group in period 1. With probability $(1 - 1/s)$ they target different groups. For the moment suppose that in period 2 a candidate will not target the group the other candidate had targeted in period 1. Then an offer by Candidate $A$ of $x_1^A$ to some group gives him an expected gain of $-x_1^A + (1/s)nF(x_A)$ votes.

We saw above that if in period 1 a candidate offers a targeted group $x_D \equiv x_1^B = (n/s)(1 - \pi + s)$ or more, then in period 2 the other candidate will avoid targeting the same group. In equilibrium, for sufficiently large $\pi$, the offer $x_1^A$ must exceed $x_D$; for otherwise, in period 2 Candidate $B$ would make a larger offer to that group and win its support. (If $\pi$ is small, that $x_1^A$ will be infinitesimally greater than zero). For the moment, guess that the equilibrium has a uniform distribution over $(x_D, M_1)$, with $M_1$ to be determined. The expected benefit to Candidate $A$ when he offers $x$ is

$$-x + (x_D + (M_1 - x_D)/2) + n(1/s)(x - x_D)/(M_1 - x_D). \tag{4}$$

For this uniform distribution to be an equilibrium, the derivative with respect to $x$ must be zero, or

$$\frac{sM_1 + n(\pi - s - 2}{sM_1 + n(\pi - s - 1} = 0. \tag{5}$$

The solution is

$$M_1 = (n/s)(2 - \pi + s). \tag{6}$$

Thus, in period 1 a candidate makes an offer to a special interest group which follows the uniform distribution on $(0, (n/s)(2-\pi+s))$. Recall that in period 2 a candidate makes an offer which follows the uniform distribution on $(0, (n/s)2\pi)$. And so the average offer made in period 1 will exceed the average offer made in period 2 if 2-$\pi$+s¿2$\pi$, which holds whenever $s > 1$. In short, we would expect interest groups getting offers early in the campaign to do better than interest groups getting offers late.

## 5.3 Comparative statics

### 5.3.1 Increase in size of country

Suppose the country expands, with the number of special interests increasing and the size of each group constant. Say the proportion factor is $k$. Then appealing to a special interest groups costs a candidate $kx$ instead of $x$ from non-targeted voters, and so reduces the benefits of targeting a special interest group. And the probability of two candidates targeting the same group declines from $1/s$ to $1/(ks)$. That reduction reduces the benefits of appealing to special interests.

### 5.3.2 Probability of competition

What happens as we reduce $\pi$, the probability that a candidate can target a new group? The direct effect is to make candidates target fewer groups. A second

effect is that in period 2 the candidates make smaller offers. Both of these effects increase social welfare. The third effect is that an increase in $1 - \pi$ increases a candidate's benefits from targeting a new group in period 2, and so reduces offers made in period 1. That further reduces benefits to special interests.

### 5.4 Heterogeneity in groups

Under our story, we would not expect both the Republicans and the Democrats to appeal to the elderly year after year. But candidates may target the same group if the groups differ in size: the large group can then attract both parties.

Consider then a large group and fewer small groups. Three effects appear. First, with fewer small groups, there is a greater probability that in period 2 the two candidates will target the same group. That increases the $x$ offered each small group. Second, the higher $x$ reduces a candidate's gain from targeting a small group in period 2. The smaller gain makes it harder to deter entry, and so increases $x^*$ in period 1. The higher $x^*$ means a higher average $x$ in period 1. Third, the gain from winning the support of a large group increases. And so $M_1$ increases in period 1, or targeted benefits increase. Thus, the formation of a large group benefits the small groups.

As an extreme case, suppose there is only one special interest group. Then in period 1 both candidates will appeal to that group. The situation is identical to a sealed bid auction, in which the highest bidder wins the prize, and pays the amount he bid. In equilibrium each candidate offers the one special interest group a benefit of $n$. Thus, no candidate obtains any net benefit from appealing to the special interest group.

## 6 Conclusion

We find that under plausible assumptions different candidates aim to target different interest groups. This is an equilibrium result, not a result that appears in the absence of strategic considerations. We also find that offers made to special interest groups will be more generous to them when made early in the campaign than late in the campaign. Nevertheless, the generous offers made early will generate less political support to a candidate than will the smaller offers made later.

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# 7 Notation

$x$ Benefits proposed by candidate to interest group

$n$ Number of voters in each special interest group

$S$ Number of special interest groups

$M_t$ Upper bound of probability density function for offers made in period $t$

$x_D$ Deterrence level of $x_1^A$

$\pi$ Probability candidate is active in period 2