

# Programmatic Targeting\*

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## Abstract

We present a model of electoral politics in which incumbents gain votes by targeting government spending to specific groups of voters at the expense of other voters or other expenditures. Targeting serves the purpose of signaling the policies the incumbent would enact if re-elected, in absence of credible platforms. Each rational voter faces a signal extraction problem: being targeted with expenditure before the election may reflect opportunistic manipulation, but may also reflect a sincere preference of the incumbent for the types of spending that voter prefers. We show the existence of a political equilibrium in which rational voters support an incumbent who targets them with spending before the election even though they know this targeting is electorally motivated. In choosing which groups to target, the incumbent trades-off mobilizing its core voters to turn out to vote with targeting swing voters who are willing to shift their candidate preferences. The paper contributes to the literature by proposing the use of pre-electoral spending as a programmatic tool; by studying the trade-off between targeting core voters who are unsure of whether to show up to vote and targeting swing voters; and by providing a framework that accommodates at once programmatic targeting and clientelism, as well as special interest political budget cycles.

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“The patterns of flow of the major streams of shifting voters graphically reflect the electorate in its great, and perhaps principal, role as an appraiser of past events, past performance, and past actions. It judges retrospectively; it commands prospectively only insofar as it expresses either approval or disapproval of what has happened before. Voters ... are not likely to be attracted in great numbers by promises ...” V. O. Key, Jr. *The Responsible Electorate*, p. 61

## 1 Introduction

Special interest politics – policies and benefits directed to specific constituencies – is central to elections in most if not all countries. We see many examples of spending apparently targeted to specific groups before elections, suggesting that incumbents view such spending as a worthwhile election strategy (Case [2001], Dahlberg and Johansson [2002], Johansson [2003]). Targeted spending has been the object of a large literature, one of whose objectives has been to explain why it is an effective electoral strategy. That is, when benefits are directed towards specific groups, what ensures that those who are targeted will actually deliver their votes?

One strand of this literature assumes that politicians can credibly commit to post-election policies, so that those who are targeted by a politician want her to be elected. Before the election, a candidate commits to policies benefiting specific groups after the election, with the focus of this literature being on what characteristics of voting groups lead them to be targeted. These include, for example, a group’s susceptibility to targeting (their “swingness”) and the group’s potential to be decisive in the outcome of an election. This is the emphasis, for example, in the work by Lindbeck and Weibull (1987), Cox and McCubbins (1986), Myerson (1993), Dixit and Londregan (1996), Schultz (2007), and Hirano, Snyder, and Ting (2009). As useful as this approach has been in understanding the incentives for politicians to court specific groups, its key assumption of the credibility of pre-election promises is questionable. Once the election is over, the candidate who was elected will do what is optimal for her from that point forward, independent of any campaign promises she may have made.

Another strand of the literature addresses the question posed in the first paragraph by considering more closely the details of the exchange of policies or benefits for votes. More specifically, we are referring to “clientelism”, the exchange of material favors (or policies) by politicians for political support at the polls by the recipients. It is the specific material nature of the reward for political support that is often taken as defining clientelism, as well understanding by both sides of the nature of the deal, characterized as “direct, contingent exchange” (see Kitschelt and Wilkinson [2007] for an overview). As Kitschelt and Wilkinson (2007, p 10) write, “Thus it is the contingency of targeted benefits, not the targeting of goods taken by itself, that constitutes the clientelistic exchange.” A key focus is on the mechanics of how it can be made credible that each side will fulfil its side of the bargain.<sup>1</sup>

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<sup>1</sup>So, for example, Stokes (2005) considers how repeated interaction and social networks may make clientelism work, while Robinson (@@@@) focusses on provision of public sector job that are contingent on a candidate’s victory but can

In this paper we present a different argument to explain the use of targeted spending to gain votes, one which we think is implicit in the quote above by Key but, to our knowledge, unmodeled and perhaps understudied in the literature. This is the use of *spending in specific areas to communicate to voters an incumbent's priorities*. Specifically, they observe the incumbent's expenditures in her current term, and use those to try to infer what she will do if reelected. That is, rational voters vote retrospectively on the basis of observed policies as a prospective indicator of what the government will do. Pre-electoral targeted spending, rather than being simply group-specific material "handouts" consistent with simple clientelism, may be indicators of future policy directions. In this interpretation, targeted spending may itself be a "programmatic" appeal to voters indicating a party's platform far more credibly than a stated "platform", consistent with Key's argument above.

Under programmatic targeted spending, there is no assumption of commitment to policies by politician's, nor of voters voting on the basis of promises. Unlike the commitment approach, it is policies rather than promises before an election that indicate what a candidate will do if elected. Since the effectiveness of targeted spending depends on its role in conveying information to voters about an incumbent's true preferences, we can move away from the technical question of what ensures that each side fulfills its part of the bargain in the standard clientelistic approach – voters are acting in their best interests before the election based on the signals they receive of what a politician will do if elected; politicians act according to their preferences once elected.

Our approach begins with the observation that voters have less-than-perfect information what a candidate will do if elected. Campaign statements or formal platforms are quite imperfect indicators at best. Nor do we assume, as in the "citizen-candidate" model (Osborne and Slivinski [1996], Besley and Coate [1997]), that candidates' preferences are known *ex ante*. However, voters do observe policy choices of candidates before elections. Hence, the incumbent may try to signal her policy preferences by her choice of composition of spending before the election. The known desire of the incumbent to win re-election means that the signal may not be fully credible – politicians have the incentive to "pander" to what they believe voter's preferences are in order to win election. We show, however, that there is an equilibrium where incumbents credibly reveal their policy preferences (or at least a range of policy preferences) via choice of pre-election spending composition. Credible signaling of post-election programs occurs because of the cost a politician assigns to enacting programs too far from his policy preferences. Voters will read these signals correctly and vote accordingly.

Targeted spending can refer to a number of phenomena. It can mean "pork barrel" projects that are geographically targeted. It can also refer to spending targeted to interest groups that are not geographically determined, for example in democracies where electoral rules encourage seeking votes from constituencies at large, such as certain proportional electoral rules (Persson and Tabellini, 2003).

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be taken away.

It may also refer to spending in specific areas (the environment, defense, education, etc.) which are valued differently by different voters. This last type may be most consistent with the programmatic interpretation we advance in this paper, but, as we note below, our general approach is consistent with many types of targeting.

We further consider the implications of programmatic targeting for a number of issues related to electoral targeting. These include: whether “swing” or “core” voters are targeted in the attempt to gain votes; the related question of whether more attention should be paid to convincing likely voters to change their votes or to mobilizing one’s “base”; the relation of programmatic targeting to clientelism; and, the implications programmatic targeting for the existence of political budget cycles.

On the question of who gets targeted, “swing” voters are those who are close enough to “indifference” between two candidates that they may be swayed for whom to vote. “Core” voters have been defined in different ways in the literature. Dixit and Londregan (1996) define a party’s core voters as those for whom it has a comparative advantage in materially influencing via targeted benefits. Hence, targeting one’s core supporters is worthwhile because the party is effective in doing so in terms of “bang for the buck”. (Under this definition a voter could be simultaneously swing and core). The question of who to target is then a question of where a marginal dollar of targeting will yield the most votes.

A more common definition of “core” voter is someone who is so predisposed to vote for a candidate that targeted spending is unlikely to convince him or her otherwise. As Stokes (2005) and others argue, the very “core-ness” of these voters means it is a waste to target them, but only if they are *certain* to come out and vote. In fact, Cox (2009) argues that targeting core voters makes sense if it increases their turnout, that is, mobilizes the candidate’s or party’s “base”. (He goes on to argue that doing so is often more important to maximizing a party’s vote than is trying to attract swing voters.)

Following these observations, our model of targeting as a programmatic signal is one where not only voting choices but also turnout depend on the incumbent’s pre-election policies. This allows us to capture simultaneously both the incentive to target swing groups who can be convinced to vote for the incumbent, and a potential incentive to target the incumbent’s core group to mobilize it to vote. As we shall see, there is a tension between targeting the two groups in that an incumbent cannot target swing groups so much that his core voters are discouraged from turning out to support him in the election, nor can he target his core voters so much that swing voters or his opponent’s core voters are encouraged to turn out to vote for his opponent.

Another application of our model is to the political budget cycle. While in the baseline model we simply study targeting over the term of an incumbent politician seeking reelection, the setup can be easily extended to differentiate parts of an incumbent’s term that are closer or further apart from the upcoming election. Note that targeting shifts the focus from a cycle in the level of spending to one in

the composition of spending. This is consistent with some recent findings for advanced democracies, which find evidence of the former but not the latter. (See, for example, Drazen and Eslava [2010] or Brender and Drazen [2012] and the references therein.) We explore these and other applications and extensions of the model in the final section of the paper.

Three main results are obtained from our model. First, incumbents may use distributive policies to signal to voters what are the programs they would enact if re-elected. In particular, there is an equilibrium in which “re-electable types” of incumbents (those that would be re-elected if voters were perfectly informed) target public spending to issues most pressing to crucial groups of voters. Second, “crucial” groups are defined in terms of group size and swingness. In particular, the incumbent has incentives to target large groups and those where voters are less pre-committed to a given candidate, in an effort to signal that, if re-elected, he would target those same groups and issues. Finally, when voters are not sure to show up to vote we obtain results that challenge the idea that the necessity to mobilize voters to support the incumbent generally implies he will target his core voters. On the one hand, signaling an inclination to favor one’s core with distributive policies not only mobilizes them to vote but may also generate large incentives for the core voters of the challenger to show up to vote. On the other, an incumbent trades-off his incentive to mobilize his base with his incentive to target swing voters. As a result, unless the distribution of voters’ political preferences is extreme, in the sense of most voters being pre-committed to voting for one candidate or another, public spending will be at least partially targeted at groups with large masses of swing voters.

The paper is organized as follows. Section 2 discusses the related literature. Section 3 presents the model, including a general characterization of the solution. Section 4 examines the question of which groups get targeted. Some applications and extensions are discussed in section 5, while section 6 concludes.

## 2 Literature on Signaling Preferences to Voters

The literature on special interest politics, or even more narrowly on targeted spending to special interests, is extensive. We concentrate simply on those most directly related to our concept of programmatic targeting, that is, the use of pre-election policy or other campaign behavior to signal a candidates policy preferences.

A central motivation for our interest in this question stems a key assumption in the citizen-candidate model, namely that a policymaker’s preferences – and hence her post-electoral policy choices – are identical to those she had as a citizen. Underlying the model in this paper (though not modeled specifically here) is the assumption that the fact of being a leader may imply preferences “wider” or more inclusive than one had as a citizen. This is consistent with some conventional wisdom, as well as supported by experimental work by Drazen and Ozbay (2012) suggesting that

elected leaders follow policies between their own pre-electoral optimum and those of the median voter who elected them.

We view our approach as a complementary to the basic citizen-candidate approach rather than overturning it. An important motivation for the citizen-candidate model is that pre-electoral commitments will not bind politicians once in office – they will do what they find optimal. Platforms have little predictive power for post-electoral policies; preferences do, and voters will base their choices on what they believe politicians will find in their own (perhaps broadly-defined) best interests to do. Our approach is based on the same premise, but with the caveat that a policymaker’s preferences are *not* perfectly known by voters. They may know the broad outlines of a policymaker’s preferences, but this is a less-than-perfect indicator of actual behavior once in office.

This caveat to the basic citizen-candidate, however, is quite important. In choosing how to vote, the voter does not know with certainty what a candidate will do if elected, and forming expectations on this is central to voters’ decisions and hence candidate’s election strategies. A central question is how these expectations are formed, with our approach stressing the role of what a policymaker has already done.

There is a significant literature in which pre-electoral fiscal policy or campaign behavior is used to signal a valence good, such as a candidate’s competence or ability. For example, Rogoff (1990) and Rogoff and Sibert (1989) considered the use of pre-electoral fiscal expansions to signal an incumbent’s ability to deliver high total expenditure. Prat (2002) and Coate (2004) consider informative campaigning regarding candidate competence. None of these are models explaining the use of special interest politics as an effective electoral tool. Nor do they concern signaling of a candidate’s *policy preferences* via actions before the election, which is surely an important component of the voter’s decision process. In terms of signaling via policy, the Rogoff model is the closest to ours, but the differences are crucial not only for the relevance to special (as opposed to general) interest politics in elections, but also to the ability to empirically explain political budget cycles as observed in developed countries. We return to this point in section 5.2 below.

Schultz (2007) presents a model of the informativeness of *campaign spending* for voter knowledge of a candidate’s distributive preferences. He considers elections in which candidates are differentiated by an proposed division of the budget across different goods. In contrast to our model, it is exogenous, and, moreover, candidates can commit to this proposal. Hence, choice of policy before the election can provide no signal of candidate preferences or policy choice after the election. The focus instead is how targeted campaign spending to different groups will make them differentially informed about the candidate’s or party’s (exogenous and binding) platform which is not known ex-ante. The focus of the paper instead is allocation of the campaign budget to provide information to different groups by various means. This is an important question, but doesn’t address a number of the questions we have highlighted and is conceptually quite different than what we do here. Strömberg (2004) also considers

implications of media transmission of information in elections to interest groups. Effect policy because mass media provide most of the information people. Characteristics of the technology of transmission affects which groups are targeted by the media and hence introduces a bias in political competition and ultimately in public policy. There are many other papers considering the effect of media on voting behavior. In all of these papers the focus is on transmission via “normal” information outlets rather than via policy itself. .

Stromberg (2008) presents a novel model of targeting, focusing on the allocation of campaign visits across states in a U.S. presidential campaign. He leaves open the question of why more campaign visits increase a candidate’s vote in a state, which is our focus here in looking at voting groups, but his model is consistent with the idea that they provide information about a candidate’s priorities.

Finally, we note that in the clientelistic literature, policies, rather than material goods, may be used to get votes, but it is the material implications of the policy per se, rather than as a signal of preferences and future policy, that matters.

### 3 A Model of Politicians With Unobserved Preferences

#### 3.1 Set-up

This section sets out the model and provides the basic characteristics of an equilibrium. Subsequent sections fully characterize equilibria for special cases, with an emphasis on identifying the features that make a given group a likely target of government spending.

For simplicity, we assume that there are only 2 interest groups,  $h = A, B$ , where voters in each group value a publicly provided good  $g^h$ . This good could capture either spending that directly benefits the group’s members (for example, schools in their district; social programs targeted at the group’s members; etc.) or spending on public goods or issues members of the group value relatively more than members of other groups (e.g., spending on defense; spending on education; etc.). The choice of fiscal policy in each period is the choice of composition of the government budget, which comprises expenditures that can be targeted to specific groups of voters. Total expenditures equal fixed total tax revenues in a period (so that all politicians are identical in terms of *total* spending), which for simplicity we set equal to 1 in each period. Since taxes are assumed fixed, we abstract here from private consumption, which could be affected by tax policy. In each period  $s$ , the government faces the budget constraint:

$$g_s^A + g_s^B = 1 \tag{1}$$

Politicians have preferences over the distribution of tax revenue across types of public goods as well. However, these preferences are unknown to voters. Politicians cannot commit to a post-election allocation of spending. Instead, voters use pre-election spending to form expectations of the

post-election allocation the incumbent would choose if re-elected.

In addition to their preferences over publicly supplied goods, voters may differ in two other dimensions. First, we introduce an additional policy dimension,  $\pi$ , over which both voters and politicians have known preferences. Second, there is a fixed cost  $c$  that a voter pays if he turns out to vote. These characteristics will allow us to characterize whether “swing” or “core” voters are targeted.

The known component of politician  $P$ 's preferences is denoted  $\pi^P$ . For ease of exposition, we sometimes refer to  $\pi^P$  as politician  $P$ 's “platform” – in the sense that it is known and immutable – but remind the reader that it is not a fully comprehensive platform since it contains no information per se about the post-election distribution of spending. We assume that each individual  $j$  has an observed most preferred policy in this dimension, denoted  $\pi^j$ , where for voter  $j$  in group  $h$ ,  $\underline{\pi}^h \leq \pi^j \leq \bar{\pi}^h$ . In group  $h$ ,  $\pi^j$  has a density function  $f^h(\pi)$ , with associated CDF  $F^h$ .

We choose the simplest time structure that accommodates an incumbents' concern about the influence his policy choices may have on his chances of re-election: a two-period setting, with periods  $t$  and  $t+1$ , and an election at the beginning of period  $t+1$ .<sup>2</sup> In the election, the incumbent competes with a challenger. We examine the allocation of government spending in period  $t$  by an incumbent who is seeking re-election, and voting rules relating votes to pre-election government spending for voters in each group.

### 3.2 Objective functions

The single-period utility of a voter  $j$  in group  $h$  if policymaker  $I$  is in office is

$$U_s^{h,j}(I) = \ln g_s^h(I) - (\pi^j - \pi^I)^2 \quad (2)$$

where  $g_s^h(I)$  is public good spending provided by policymaker  $I$  to group  $h$  in period  $s$ . We have abstracted from private consumption, where we have implicitly assumed that individual income, and hence consumption is independent of which policymaker is in office. Voters care about the present discounted value of utility, and hence, about expected future values of  $g_s^h$ . (Since  $g_s^h(I)$  does not depend on the individual  $j$ , we ignore the index  $j$  in discussing the central problem of inferring  $g_{t+1}^h$  from  $g_t^h$ .) They also care about policy  $\pi$ , with their utility decreasing with the distance between their preferred policy  $\pi^j$  and the observed policy position of the incumbent. Furthermore, as mentioned, there is a cost  $\gamma$  that individual voter pays in the second period if and only if he shows up to vote at the beginning of that period, where we initially assume that this cost is identical across voters (see footnote 6 and section 4.3.1 on  $\gamma$  differing across voters).

The utility of an individual, therefore, depends on the policy-maker in power: the level of spending

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<sup>2</sup>Similar results are obtained results in multi-period settings with persistence of politicians' preferences.



the policy-maker targets to the voter's group, the  $\pi$  platform  $I$  holds. The only choice this individual makes is whether to vote for the challenger, vote for the incumbent, or not vote at all, in the election held at the beginning of  $t + 1$ . We assume that, absent voting costs, the individual would vote for the politician he expects would leave him with higher  $t + 1$  utility. He may, however, abstain from voting if voting costs outweigh the difference in utility expected from the two candidates.

As discussed in section 2 above, elected leaders give weight to the utility from government spending of voters of each group. This may be represented by a weight  $\omega_P$  that politician  $P$  puts on utility from public goods of members of group  $A$  (with weight  $1 - \omega_P$  on the utility of members of group  $B$ ), that is, on  $\ln g_t^A$ . The weight  $\omega$  is fixed and known to a candidate but not observed by voters.<sup>3</sup> The distribution of  $\omega_P$ , which is assumed to be the same for both incumbent and challenger, is represented by the CDF  $\Psi(\omega)$ . This distribution is defined over  $(\omega^l, 1 - \omega^l)$ , where  $0 \leq \omega^l \leq \frac{1}{2}$ , and is symmetric around its mean  $\frac{1}{2}$ , so that the unconditional expectation of  $\omega_P$  (and  $1 - \omega_P$ ) is  $\frac{1}{2}$ .

A politician  $P$ 's single-period utility in period  $s$  may be written, using (1), as

$$U_s^P = \omega_P \ln g_s^A + (1 - \omega_P) \ln(1 - g_s^A) - (\pi^P - \pi^I)^2 + \chi D_s^P \quad (3)$$

where  $\chi > 0$  is a parameter capturing rents to holding office, and  $D_s^P$  is an indicator variable with a value of 1 if  $P$  is in office in period  $s$ , and 0 otherwise. Note that an incumbent derives utility from being reelected even if  $\chi = 0$ , since he values being able to implement his preferred policy (on both policy dimensions,  $g$  and  $\pi$ ) over being subject to his opponent's. The voter's problem is to infer the unobserved weight  $\omega_P$  from the incumbent politician's observable choice of  $g_t^h$ , and use that inference in deciding whether or not to vote and for which candidate. If pre-electoral  $g_t^A$  contains information about  $\omega_P$ , it provides information about  $g_{t+1}^A$ , and  $g_{t+1}^B$ , inducing forward-looking voters to respond to pre-electoral fiscal policy.

The incumbent politician  $I$  chooses the allocation of the budget to maximize a stream of expected utility, given by the discounted expected sum of expressions such as (3) over the two periods. Given voters' inference problem, the incumbent's choice of  $g_t^A$  in the election period  $t$  will affect not only his period  $t$  utility, but also potentially his chances of being reelected, and thus his expected utility for  $t + 1$ .

### 3.3 Solution: a general characterization

Total expenditures are fixed by assumption, so that an incumbent can use fiscal policy to obtain votes only by increasing expenditures to some groups at the expense of others. Hence, we ask, under what conditions does electorally-motivated special interest targeting exist when voters are rational?

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<sup>3</sup>Bonomo and Terra (2005) consider politicians who have preferences over sectors, but where these preferences are known.

Since an election at the beginning of the second period is what makes period  $t$  different from period  $t + 1$ , we define special interest electoral targeting as a situation in which  $g_t^A(\omega_I) \neq g_{t+1}^A(\omega_I)$  for at least some values of  $\omega$  (where  $g_{t+1}^A(\omega_I)$  is the level of spending the period  $t$  incumbent would allocate to group  $A$  if re-elected.)

In this section, we present some general features of the solution. Subsequent sections will then characterize different cases regarding the presence or absence of core voters and/or costs to voting.

We consider Perfect Bayesian Equilibria characterized by:

1) A choice of  $(g_t^A(\omega_I), g_{t+1}^A(\omega_I))$  for each possible type of incumbent politician (that is, each possible  $\omega_I$ ), such that the expected utility of the incumbent politician is maximized given the voting rule chosen by voters;

2) A conditional probability distribution assigned by voters in each group to the incumbent's  $\omega_I$  given the choice of  $g_t$ , where that conditional distribution is rational given the incumbent's optimal rule for  $(g_t^A(\omega_I), g_{t+1}^A(\omega_I))$ ; and,

3) A voting rule relating a voter's choice (voting for the incumbent, voting for the challenger, or not showing up to vote) to the incumbents' choice of  $g_t$ , where that voting rule maximizes the voter's expected utility given the voter's rational beliefs about the incumbent's  $\omega_I$ .

We solve for these equilibria backwards, beginning with the post-election period.

### 3.3.1 The politician's decision in $t + 1$

A politician  $P$  who was elected at the beginning of  $t + 1$  has an objective function  $\Omega_{t+1}^{IN}$  in  $t + 1$  of

$$\Omega_{t+1}^{IN}(\mathbf{g}_{t+1}^h(P), P) = \omega_P \ln g_{t+1}^A(P) + (1 - \omega_P) \ln(1 - g_{t+1}^A(P)) + \chi \quad (4)$$

where  $\mathbf{g}_{t+1}^h(P)$  denotes the vector of public goods expenditure chosen by  $P$ . (Since in  $t + 1$   $\pi^P = \pi^I$ , the second-to last term in (3) is zero.)

The first-order conditions for the  $P$ 's post-election period problem may be solved to yield:

$$g_{t+1}^h(P) = \omega_P^h \quad h = A, B \quad (5)$$

(where  $\omega_P^A = \omega_P$  and  $\omega_P^B = 1 - \omega_P$ ) so that the period  $t + 1$  expenditure on (and hence the expected utility from electing politician  $P$  for a voter in) each group is increasing in the weight the elected politician puts on that group.

The elected politician's utility in  $t + 1$  can now be calculated as a function of his  $\omega_P^A$ :

$$\Omega_{t+1}^{IN}(P, \omega_P) = \omega_P \ln \omega_P + (1 - \omega_P) \ln(1 - \omega_P) + \chi \quad (6)$$

which is a known (to the politician) constant.

The expected value to  $P$  of his opponent being in office at  $t + 1$ , denoted  $E_t^P \Omega_{t+1}^{OUT}(P, \omega_P^A)$ , may be written

$$E_t^P \Omega_{t+1}^{OUT}(P, \omega_P) = E_t^P (\omega_P \ln \omega + (1 - \omega_P) \ln(1 - \omega)) - (\pi^L - \pi^R)^2 \quad (7)$$

$$= \omega_P E(\ln \omega) + (1 - \omega_P) E(\ln(1 - \omega)) - (\pi^L - \pi^R)^2 = W - (\pi^L - \pi^R)^2 \quad (8)$$

In the last row, we denote the expectation about the utility from public goods to group  $h$  if the challenger is elected,  $E_t(\ln \omega)$ , by  $W \left( \equiv \int_{\omega=\omega^t}^{1-\omega^t} \ln \omega d\Psi(\omega) \right)$ . We also make use of the fact that the distribution of types  $\omega$  is symmetric around its mean for both group and any politician, so that  $E(\ln \omega) = E(\ln(1 - \omega)) = W$ . (Note that as specified  $W$  is independent of party affiliation, and the expected utility from public goods for *both* groups equals  $W$ ). Given concavity of voter's utility,  $W$  is below  $\ln E(\omega) (= \ln \frac{1}{2})$ .

The cost to the politician of losing reelection and being out of office is the cost of having a policymaker in office with different spending and ideological preferences, plus the cost of failing to receive  $\chi$ . The value of re-election to a politician  $P$  of preference type  $\omega_P$  is  $\Delta^\Omega(P, \omega_P) \equiv \Omega_{t+1}^{IN}(P, \omega_P) - E_t^P \Omega_{t+1}^{OUT}(P, \omega_P)$ .

### 3.3.2 The election

Let us denote the two candidates by  $L$  and  $R$  (where  $\pi^L < \pi^R$ ) and suppose, without loss of generality, that  $L$  is the incumbent in period  $t$ . During the election held at the beginning of  $t + 1$ , voter  $j$  in group  $h = A, B$  will prefer the incumbent to be re-elected if  $j$ 's expected utility in  $t + 1$  is (weakly) higher under  $L$  than under the challenger  $R$ , that is,

$$E_t \left[ \ln g_{t+1}^h(L) \right] - (\pi^j - \pi^L)^2 \geq E_t \left[ \ln g_{t+1}^h(R) \right] - (\pi^j - \pi^R)^2 \quad (9)$$

Using (5), voter  $j$  votes for the incumbent when

$$E_t \left( \ln \omega_L^h | g_t^h(L) \right) - (\pi^j - \pi^L)^2 \geq W - (\pi^j - \pi^R)^2 \quad (10)$$

where  $\omega_L^h$  is the incumbent's type ( $= \omega_L$  for  $h = A$  and  $1 - \omega_L$  for  $h = B$ ) and  $\omega_R^h$  is the challenger's type. Concavity (and thus  $W < \ln \frac{1}{2}$ ) implies that a risk-averse voter in group  $h$  who is ex-ante indifferent between the two candidates will favor reelecting an incumbent whose known preference for the group is slightly below  $\frac{1}{2}$  to a challenger whose preferences are uncertain.<sup>4</sup>

Assuming  $\pi^L < \pi^R$ , a simple manipulation of expression (10) characterizes the circumstances under which voter  $j$  in group  $A$  prefers the incumbent to be elected over the challenger for period

<sup>4</sup>This is the case, for example, of voter  $j$  with  $\pi^j = 0$  when  $\pi^L = -\pi^R$ . It is also the case if ideology is unimportant:  $\pi^L = \pi^R = \pi^j = 0 \forall j$ .

$t + 1$  as

$$\pi^j \leq \frac{\pi^L + \pi^R}{2} + \frac{(E_t(\ln \omega_L^h | g_t^h(L)) - W)}{2(\pi^R - \pi^L)} \quad (11)$$

For a voter who is indifferent between the two platforms  $\pi^L$  and  $\pi^R$ , characterized by  $\pi^j = \frac{\pi^L + \pi^R}{2}$ , this occurs when his expectation of  $t + 1$  utility from public goods to his groups is higher under the incumbent than the challenger.

In order to focus on voting decisions as a function of the incumbent's expenditure policy for now, we make the simplifying assumption that each individual acts as if he were pivotal, and postpone till section 5 discussion of turnout when the probability of being pivotal becomes small. Individual  $j$  only turns out to vote for the incumbent if the cost of voting is less than the difference in utility he would enjoy from having the incumbent rather than the challenger elected:

$$\gamma \leq \left[ E_t(\ln \omega_L^h | g_t^h(L)) - (\pi^j - \pi^L)^2 \right] - \left[ W - (\pi^j - \pi^R)^2 \right] \quad (12)$$

or, written slightly differently:

$$\pi^j + \frac{\gamma}{2(\pi^R - \pi^L)} \leq \frac{\pi^L + \pi^R}{2} + \frac{(E_t(\ln \omega_L^h | g_t^h(L)) - W)}{2(\pi^R - \pi^L)} \quad (13)$$

Conversely, he turns out to vote for the challenger if the gain from having the challenger elected rather than the incumbent is larger than the cost of voting:

$$\pi^j - \frac{\gamma}{2(\pi^R - \pi^L)} \geq \frac{\pi^L + \pi^R}{2} + \frac{(E_t(\ln \omega_L^h | g_t^h(L)) - W)}{2(\pi^R - \pi^L)} \quad (14)$$

Finally, voter  $j$  may simply not vote. This occurs if the difference in his utility under incumbent versus challenger is less than the voting cost  $\gamma$  so that:

$$\pi^j - \frac{\gamma}{2(\pi^R - \pi^L)} < \frac{\pi^L + \pi^R}{2} + \frac{(E_t(\ln \omega_L^h | g_t^h(L)) - W)}{2(\pi^R - \pi^L)} < \pi^j + \frac{\gamma}{2(\pi^R - \pi^L)} \quad (15)$$

Voting costs imply that a voter must sufficiently prefer one candidate over the other – due either to his most preferred position  $\pi^j$  being sufficiently closer to that of one candidate or to that candidate's expected public goods expenditure being sufficiently more favorable to the voter – to convince him to pay voting costs and actually turn out to support that candidate in the election. This compresses the range of  $\pi^j$  voters who vote for the incumbent (challenger) further to the left (right) of what it would be if voting were costless. In summary, a voter turns out to vote for the incumbent if either he has a strong ex-ante preference for the incumbent's credible platform, or if the incumbent's fiscal preferences are expected to favor sufficiently the voter's group.

We can now characterize the fraction of voters in each group that vote for each of the candidates.

From here on we make the additional assumption that  $\pi^R = -\pi^L = 0.25$ , to simplify our calculations by getting rid of several terms in the last few expressions. The only important implication of this assumption, in terms of interpretation, is that the non-fiscal platforms of the candidates are centered around zero, so that a  $\pi^j = 0$  voter is ex-ante indifferent between the two candidates.

With these simplifications, the following voting rule for voter  $j$  emerges:

$$\begin{aligned} \text{Vote for the incumbent if } \pi^j &\leq E_t \left( \ln \omega_L^h | g_t^h(L) \right) - W - \gamma & (16) \\ \text{Vote for the challenger if } \pi^j - c^j &> E_t \left( \ln \omega_L^h | g_t^h(L) \right) - W + \gamma \\ \text{Do not vote if } \pi^j + \gamma &> E_t \left( \ln \omega_L^h | g_t^h(L) \right) - W > \pi^j - \gamma \end{aligned}$$

The fraction of voters in group  $h$  that shows up to vote for the incumbent, which we denote as  $\phi_h^L$ , is then given by

$$\phi_h^L \left( g_t^h(L) \right) = F^h \left( E_t \left( \ln \omega_L^h | g_t^h(L) \right) - W - \gamma \right) \quad (17)$$

while the corresponding fraction of voters who vote for the challenger is given by

$$\phi_h^R \left( g_t^h(L) \right) = 1 - F^h \left( E_t \left( \ln \omega_L^h | g_t^h(L) \right) - W + \gamma \right) \quad (18)$$

In turn, the total number of votes to politician  $P$  ( $P = \{L, R\}$ ) is given by

$$N^P(g_t^A) = N_A \phi_A^P(g_t^A(L)) + N_B \phi_B^P(1 - g_t^A(L)) \quad (19)$$

where  $N_h$  is the number of voters in each group. The incumbent wins the election if he receives more votes than the challenger. Note that the electoral return to the incumbent from targeting group  $h$  with high spending depends on the relative number of voters in the group, on how such targeting affects expectations of future spending devoted to the group, and on the distribution of ex-ante preferences between the two candidates in the group. Notice also that a voter's preference for the incumbent over the challenger is affected by his expectation of spending targeted at his group by each candidate. Moreover, larger expected spending by voters in group  $A$  implies smaller expected spending by group  $B$  voters, so that a candidate knows that his targeting of one group may bring costs in terms of votes from the other group.

@@Two elements of our modeling of voting decisions are worth discussing before we move on to the rest of the analysis. First, we are simplifying the model by assuming that voting costs are identical for all voters. This assumption could be easily relaxed without changing our basic results, as discussed in the footnote.<sup>5</sup> Second, we are making the assumption that an individual votes for a

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<sup>5</sup>In this version of the model the voter would vote for the incumbent if  $\pi^j + \gamma_j$  were sufficiently low; he would vote

candidate if his excess expected utility from that candidate compared to the other is large enough to overcome voting costs. In other words, we assume that an individual is inclined to vote for his preferred candidate and would do it unless it finds voting too costly. We argue that this is a quite reasonable assumption.<sup>6</sup> However, under the “calculus of voting” rationale, a voter only shows up to vote if his vote can affect his expected utility from public policy (and, again, if voting costs do now exceed this incentive to vote). From that perspective, one could say that we are assuming voters believe they are pivotal. Though our preferred interpretation is that voters in our model are naturally inclined to vote unless this is too costly, in section 5 we explore an extension where group behavior makes our model compatible with individuals only voting when they are pivotal.

### 3.3.3 The incumbent’s decision in $t$

For ease of exposition, from here on we refer to  $g_t^A(L)$  simply as  $g_t$  and  $\omega_L$  simply as  $\omega$ . The incumbent  $L$ ’s problem in the election year may be written as

$$\max_{g_t} \Omega_t^{ELE}(\mathbf{g}_t, L) = \omega \ln g_t + (1 - \omega) \ln(1 - g_t) + \chi + \rho(N^L) \beta \Delta^\Omega(L, \omega) + \beta E_t^L \Omega_{t+1}^{OUT}(L, \omega)$$

where  $\Omega_{t+1}^{OUT}$  and  $\Delta^\Omega$  were defined in the solution for  $t + 1$ , and  $\rho(N^L)$  is the probability that  $L$  is re-elected as a function of the number of votes he obtains, given his choice of  $g_t^A$ . We assume the incumbent is re-elected if  $N^L(g_t) > N^R(1 - g_t)$ , that is, if

$$N_A \phi_A^L(g_t) + N_B \phi_B^P(1 - g_t^A) > N_A \phi_A^R(g_t) + N_B \phi_B^R(1 - g_t^A). \quad (20)$$

Given that the value of re-election,  $\Delta^\Omega$ , is positive, the incumbent chooses  $g_t$  balancing the goal of maximizing his current-period utility with that of maximizing his chances of re-election.

## 3.4 Equilibrium

We will focus on possible equilibria where the incumbent distorts his choice of spending allocation away from the post-election rule, in order to maximize his chances of reelection by signaling that his  $\omega$  type is such that he should be re-elected.

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for the challenger if  $\pi^j - \gamma_j$  were sufficiently high; and the mass of voters supporting each candidate would depend on the joint distribution of  $\pi$  and  $\gamma$  in each group. An incentive for the incumbent to target the group with lower voting costs would emerge.

<sup>6</sup>Many casual observations square with this assumption. For instance, turnout is relatively high in sunny days and relatively low in rainy ones, at least in countries where voting by mail is not possible.

### 3.4.1 Asymmetric semi-revealing equilibrium: spending allocation

We investigate the existence of a semi-revealing equilibrium where voters are able to infer whether  $\omega \leq \hat{\omega}$ , and where group sizes and  $\pi$  distributions are such that, given this inference outcome, the incumbent wins the election if  $\omega > \hat{\omega}$ . That is, we assume that group sizes and  $\pi$  distributions are such that the incumbent relies on group  $A$  votes to win the election. In a world without voting costs, this may be the case, for instance, if voters have no ex-ante ( $\pi$ ) preferences across the candidates, and group  $A$  outnumbered group  $B$ . Another example is the case where it is ex-ante known that all voters in group  $B$  will effectively vote for the incumbent, but the number of voters in that group is insufficient to get the incumbent re-elected. Some of these examples are explored further in section 4.

Consider the following pre-electoral allocation rule for the incumbent,

$$g_t(\omega) = \left\{ \begin{array}{l} \omega \text{ if } \omega < \hat{\omega} \\ \hat{g} \text{ if } \hat{\omega} \leq \omega < \hat{g} \\ \omega \text{ if } \hat{g} \leq \omega \end{array} \right\} \quad (21)$$

If the incumbent allocates spending according to rule (21), then only an incumbent with  $g \geq \hat{g}$  wins the election. For this to be an equilibrium strategy,  $\bar{g}$  must be the value that makes an incumbent with  $\omega = \hat{\omega}$  indifferent between choosing his preferred allocation  $g = \omega$  and losing the election, and distorting his choice to  $g = \hat{g}$  but winning the election. That is, the value of  $\hat{g}$  is such that no type  $\omega < \hat{\omega}$  finds the electoral incentive large enough to prefer mimicking the “re-electable” types rather than choosing  $g = \omega$ . Notice that rule (21) implies special interest targeting in the sense defined above: the allocation of spending is distorted away from its  $t + 1$  allocation, reflecting the incumbent’s electoral incentives. In this asymmetric semi-revealing equilibrium the distortion favors one particular group ( $A$ ), so that the ex-ante expectation of spending directed at that group is higher than in the post-election allocation. In this sense, group  $A$  gets targeted.

Figure 1 depicts (solid line) this spending allocation in an Edgeworth-box-style, to emphasize the fact that in our model increasing spending to one group comes at the expense of the other.  $\omega$  is represented in the bottom x-axis and increases from left to right, and  $g_t$  is represented in the left y-axis and increases from bottom to top. Meanwhile, the equivalent spending rule for group  $B$  is represented in the opposite corner:  $(1 - \omega)$  is captured by the top x-axis, increasing from right to left, and  $(1 - g)$  is shown vertically on the right, increasing from top to bottom. Types with  $\omega$  in the  $\hat{\omega} \leq \omega \leq \hat{g}$  range distort their choice of  $g_t$  upwards to  $\bar{g}$ . Note that this is an equilibrium strategy only if  $\hat{\omega} < \hat{g} < 1$ , that is, if the value  $\hat{g}$  that makes a type  $\hat{\omega}$  incumbent indifferent between choosing  $g_t = \hat{g}$  and choosing  $g_t = \hat{\omega}$  falls in the  $[\hat{\omega}, 1]$  range. The latter condition holds if the value of reelection for a  $\hat{\omega}$ -type politician,  $\Omega_{t+1}^{IN}(\hat{\omega}, \chi) - E_t^L \Omega_{t+1}^{OUT}(\hat{\omega}, L)$ , is large enough to overcome the costs of moving away from  $\hat{\omega}$ ’s preferred policy, but not so large that a  $\omega < \hat{\omega}$ -type would be willing to move as far from his preferred policy as  $g = 1$  in order to get re-elected. This implies a given range that the value

of reelection must fall in for an equilibrium of this type to exist.

This result is summarized by Proposition (1)

**Result 1** *Asymmetric semi-revealing equilibrium: Under conditions such that securing a minimum fraction  $\overline{\phi}_A^L$  of votes from group A is necessary for the incumbent to win the election, there is an equilibrium where strategy (21) for the incumbent holds, where  $\bar{g}$  is such that:*

$$\hat{\omega} \ln \hat{g} + (1 - \hat{\omega}) \ln(1 - \hat{g}) + \beta \Omega_{t+1}^{IN}(\hat{\omega}) = \hat{\omega} \ln \hat{\omega} + (1 - \hat{\omega}) \ln(1 - \hat{\omega}) + \beta W \quad (22)$$

*This equilibrium exists as long as the  $\hat{g}$  that solves equation (22) satisfies  $\hat{g} < 1$ .<sup>7</sup> An incumbent is re-elected if and only if he provides  $g_t \geq \hat{g}$ .*

The fact that a targeting electoral equilibrium of this type only exists if the value of re-election is large enough to make re-election worth, but not so large that bad types would mimik the good ones, has interesting implications. Note that a larger  $\pi$  distance between the two candidates, which one could term polarization (an observable distance between the candidates), increases this value. Since larger polarization increases the value of being in office, it brings about greater incentives to stay in power, and thus more targeting. In this sense, our model is related to others in the literature where more polarization affects the strategic policy choices of incumbents facing possible defeat by an opponent (Persson and Svensson, 1989; Alesina and Tabellini, 1990; Alt and Lasen, 2006). Unlike those models, however, ours makes the chances of upturn endogenous to those policy choices. Moreover, beyond a given point, larger polarization actually implies a lower probability of seeing targeting, as a too high value of re-election would make signaling by the policy maker non credible to voters.

The value of  $g_t$  at which marginal types pool,  $\hat{g}$ , depends on the value of  $\hat{\omega}$ , which in turn depends on specific assumptions about group sizes; the candidate's credible platforms,  $\pi^L$  and  $\pi^R$ ; and the distributions of  $\pi$ -preferences in the two groups. We fully characterize these elements for some specific cases in section 4.

### 3.4.2 Symmetric semi-revealing equilibrium: spending allocation

Consider now the case in which, in order to get re-elected, the incumbent focuses on getting at least a given fraction of voters from each group to show up to vote for him. We denote these minimum fractions  $\overline{\phi}_A^L$  and  $\overline{\phi}_B^L$ . The fraction of group A voters that vote for him is equal to or larger than  $\overline{\phi}_A^L$  if the incumbent is revealed of type  $\omega \geq \underline{\omega}$ . Similarly, to obtain the needed votes from group B the

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<sup>7</sup>It's also worth pointing that two different values of  $\hat{g}$  satisfy equation (22). Only one, however, lies above  $\hat{\omega}$ . This is the value  $\hat{g}$  takes in the incumbent's strategy.



incumbent must be revealed of a type  $\omega \leq \bar{\omega}$ .<sup>8</sup> The following is an equilibrium strategy (also depicted in figure 2):

$$g_t(\omega) = \left\{ \begin{array}{l} \omega \text{ if } \omega < \underline{\omega} \\ \underline{g} \text{ if } \underline{\omega} \leq \omega < \underline{\bar{\omega}} \\ \bar{\omega} \text{ if } \underline{g} \leq \omega \leq \underline{\bar{g}} \\ \bar{g} \text{ if } \underline{\bar{g}} < \omega < \bar{\omega} \\ \omega \text{ if } \bar{\omega} \leq \omega \end{array} \right\} \quad (23)$$

The result is summarized in Proposition (2):

**Result 2** *Symmetric semi-revealing equilibrium: Under conditions such that securing votes from minimum fractions  $\bar{\phi}_h^L$  of voters in each group  $h = \{A, B\}$  is necessary for the incumbent to win the election, there is an equilibrium where strategy (23) for the incumbent holds, where  $\bar{g}$  and  $\underline{g}$  are such that:*

$$\underline{\omega} \ln \underline{g} + (1 - \underline{\omega}) \ln(1 - \underline{g}) + \beta \Omega_{t+1}^{IN}(\underline{\omega}) = \underline{\omega} \ln \underline{\omega} + (1 - \underline{\omega}) \ln(1 - \underline{\omega}) + \beta W \quad (24)$$

and

$$\bar{\omega} \ln \bar{g} + (1 - \bar{\omega}) \ln(1 - \bar{g}) + \beta \Omega_{t+1}^{IN}(\bar{\omega}) = \bar{\omega} \ln \bar{\omega} + (1 - \bar{\omega}) \ln(1 - \bar{\omega}) + \beta W \quad (25)$$

*This equilibrium exists as long as the  $\underline{g}$  and  $\bar{g}$  that solve equations (24) and 25 satisfy  $0 < \underline{g} < \bar{g} < 1$ . An incumbent is re-elected if and only if his type  $\omega$  falls in the  $[\underline{\omega}, \bar{\omega}]$  range.*

This general characterization of the symmetric equilibrium highlights a basic feature of our model: the incumbent can only win the election with votes from both groups if his fiscal preferences are sufficiently central that neither group wants to block his re-election. In these circumstances, the pre-electoral spending rule distorts the allocation of spending in favor of one group or the other depending on the type of the incumbent. In particular, group  $h$  receives greater spending than in the post-election period from re-electable incumbents whose fiscal preferences marginally favor the group. As will become clear later, which group is targeted in the sense of facing an ex-ante higher expected value of spending, depends on the distribution of sizes and  $\pi$  preferences across the groups.

In the following sections we characterize the “re-electable” types of incumbents, and the resulting optimal policy rule for the pre-election period, for different combinations of  $\pi$  distributions and presence of voting costs. The aim is to find out when is it that a group is likely to be targeted with government spending at the expense of other groups of voters.

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<sup>8</sup>There may be more than one combination of  $\bar{\phi}_A^L$  and  $\bar{\phi}_B^L$  that make incumbent  $L$  win the election. This will be dealt with for specific cases in section 4. For the time being, we undertake an analysis that works for each such combination of  $\bar{\phi}_A^L$  and  $\bar{\phi}_B^L$ .

## 4 Targeting special interests

In this section we identify the characteristics of groups that make them more or less likely target of pre-electoral government spending. Consistent with the previous section, we state that a group is being targeted when the ex-ante (i.e. before the incumbent's type has been semi-revealed) expectation of spending for that group is higher for the pre-election than the post-election period.

Size is an obvious dimension that may matter in making a group more or less attractive to the incumbent from an electoral point of view, and we start by examining that dimension. However, the key focus in this section is identifying whether swing or core groups of voters are more likely targets of pre-electoral government spending. This is motivated by a large literature on distributive public spending, where some authors argue that it is swing groups that should be targeted whereas other argue that core groups are more likely targets (Cox, 2009 summarizes both arguments). Thus, a clear-cut definition of swingness and coreness is crucial in this section.

We think broadly of swing voters as those who could be swayed to support either of the candidates. By contrast, core voters are those who could be never convinced to vote for a given candidate, given that his preferences bring him closer to the other. Note that this notion of swingness/coreness relies on some ex-ante degree of closeness to one of the two candidates, and recognizes that something could be potentially done to convince the voters who are not close enough to either of the two to change their preferences. In the context of our model, the ex-ante degree of closeness to the candidates is defined over the  $\pi$  dimension, while the “something” that could be potentially used to shift the preferences of less decided voters is the allocation of public spending. In this sense, we define as core voters of the incumbent those whose  $\pi$ -positions are such that they prefer the incumbent over the challenger independent of  $g_t$  (i.e. independent of  $\omega$ ). Similarly, voters for whom  $\pi^j$  is such that they would not vote for the incumbent, independent of  $g_t$ , are the challenger's core voters. By contrast, swing voters are those for whom  $\pi^j$  is sufficiently close to  $\frac{\pi^R + \pi^L}{2}$  that the incumbent's  $\omega$ , (semi-)revealed by  $g_t$ , determines ex-post whether they prefer the incumbent or the challenger to win the election. More simply, core voters are those whose preferences between the two candidates are fixed from the beginning, while swing ones only decide who they prefer to win the election after  $g_t$  has been observed.

In notation, and using the fact that  $\omega^l$  is the lower bound of the  $\omega$  distribution, and  $(1 - \omega^l)$  its upper bound, an incumbent's core voter is one for which:

$$\pi^j \leq \ln \omega^l - W \tag{26}$$

A challenger's core voter, by contrast, is one for which,

$$\pi^j \geq \ln(1 - \omega^l) - W \tag{27}$$

A swing voter is one for which neither (26) nor (27) are satisfied, so that for some values of  $\omega$  he would prefer the incumbent, and for others he would prefer the challenger, to win the election. The “most swing” voter is one for which  $\pi^j = 0$  ( $= \frac{\pi^L + \pi^R}{2}$ ). Note that even a core voter of a candidate may not show up to vote for him, given voting costs. What is crucial for the definition of coreness, however, is that that voter would never support his candidate’s opponent, no matter what  $g_t$  and  $\gamma$  are.

A single group may be comprised of both swing and core voters. To keep a clear-cut contrast, in some of our examples below we define as swing a group that only has swing voters. Similarly, an incumbent’s (challenger’s) core group will be one that only has incumbent’s (challenger’s) core voter. We examine polar cases where groups fit one of these definitions. Those cases also illuminate what happens in less extreme scenarios, some of which we also look at directly.

#### 4.1 Equally swing groups

We first characterize the solution in a case where voters decide their votes solely on the basis of expectations about  $\omega$ . We do this by abstracting from costs of voting and from observed policy positions by politicians ( $\gamma^j = 0$ , and  $\pi^j = 0$  for all  $j$ , including  $j = L$  and  $j = R$ ).<sup>9</sup> There are substantive implications of these assumptions. First, groups are equally (and fully) swing: all voters are ex-ante indifferent between incumbent and challenger, given identical unconditional distributions of  $\omega^h$  for both candidates. Second, even though voters care about post-election policy when deciding their votes, formal campaign platforms and party affiliations are completely irrelevant for election results. A specific situation that is well represented by this case is one where committing to implementing any policy after the election fully lacks credibility. Finally, without positions over  $\pi$  or differential costs of voting, all voters within a group are identical. While we abstract here from some of the main dimensions we want to explore, the focus on the fiscal dimension that this case brings about is useful to develop a basic intuition about the rationality behind targeting in the presence of imperfect information about politicians’ fiscal programs.

Voters in group  $h$  vote to reelect the incumbent if

$$E_t \left( \ln \omega_L^h | g_t^h(L) \right) \geq E_t \left( \ln \omega_R^h \right) \equiv W \quad (28)$$

The incumbent obtains no votes if (28) holds for no group, obtains  $N_h$  votes if the condition only holds for group  $h$ , and obtains all the possible votes if it holds for both groups. With unequal groups, the incumbent is re-elected only if condition (28) is satisfied for the larger group, which we assume is

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<sup>9</sup> Alternatively, one could assume  $\pi^j = \frac{\pi^L + \pi^R}{2}$  for all voters, rather than assuming voters and candidates share the same ideology.

A. In a revealing equilibrium, where voters can correctly infer the value of  $\omega$ , this condition holds for group  $A$  if  $\omega \geq \exp(W)$ . The equilibrium allocation thus looks like that in Figure 1 and Proposition (1), with  $\hat{\omega} = \exp(W)$ . Group  $A$  is targeted, because being larger makes it more attractive from an electoral point of view.

If groups were equally sized, both groups would be equally important from an electoral point of view, and there would be no reason to expect that either is targeted. The model reflects this fact. The incumbent only wins the election if (28) holds for both groups, which may indeed be the case, since concavity implies  $\exp(W) < 0.5$ . The equilibrium allocation looks like that in Figure 2 and Proposition (2), with  $\underline{\omega} = \exp(W)$ ,  $(1 - \bar{\omega}) = 1 - \exp(W)$ , and  $\underline{g} = (1 - \underline{g})$

In sum, when fiscal policy is the only dimension relevant to voters, incumbents have incentives to target the largest group with more government spending than it would receive if there were no elections. Were both groups equally sized, incumbents would distort the allocation of spending from its post-election rule, but no group would be targeted, in the sense that the ex-ante (before the incumbent's type is revealed) expected value of spending would be identical for both groups. It is worth pointing that our results for different-size groups rest on the assumption that each voter cares about the overall amount of spending targeted at its group (for instance,  $g_t^h$  is spending on public goods that  $h$  members can access without restriction). If transfers are personal, then naturally targeting a larger group is more costly, potentially to the point that the incentive to target larger groups fully disappears. This is the case, for instance, in Dixit and Londregan's (1996) model.

## 4.2 Swing and core groups

Our results from the previous section indicate that, to win the election, the incumbent may decide to target the large group with more spending than he would find optimal in absence of a re-election concern. But size is not the only feature that potentially makes a group attractive for targeting by an incumbent trying to get re-elected; in fact, it is probably the least interesting of the relevant dimensions. The literature has rather focused on the question of whether it is “swing” or “core” groups that politicians target to get their votes.

To address this debate, we now bring back into play two additional features of the model. First, both politicians and voters have observable preferences over dimensions other than public provision of goods, which we summarize in policy  $\pi$ . This opens the possibility that groups are swing or core, in the precise sense defined above. Second, in a later subsection we consider the possibility that voters face costs for showing up to vote, the potential implication being that an incumbent politician may partly use spending to mobilize voters to turn out to vote. From now on we assume that groups are equally-sized to focus on the swing-core debate. Each of the upcoming subsections (without and with turnout costs) considers first the case of two core groups and then the case of a (more) core and

a (more) swing group.

### 4.3 No turnout costs

We ignore turnout costs for the moment, both to simplify the analysis and to zoom into the effects of the introduction of preferences over platforms by themselves. We start with an extreme assumption about the distribution of positions along the  $\pi$  dimension: all voters within a group share the same ideology. Moreover, group  $B$  is composed of incumbent's core voters, who share  $\pi^B < \ln \omega^l - W$ .

If group  $A$  is composed of challenger's core voters, so that the society is divided into incumbent supporters and challenger supporters, the model trivially ends up with the incumbent losing the election (remember that we are assuming that, to win the election, the incumbent must get strictly more votes than the challenger), and no signaling taking place. This is because, in absence of voting costs, a core group always shows up to support his leader in the election. The equilibrium pre-election distributive policy is characterized by  $g_t = \omega$ .

The more interesting case is that where  $A$  is a swing group. We focus on the simplest and most extreme characterization of swingness by a group, where all voters share  $\pi^A = 0$ . These assumptions imply that all members of a group arrive at the same voting decision. Given the absence of voting costs, group  $B$  voters vote for sure for the incumbent, while group  $A$  voters may end up voting for either of the candidates. With all group  $B$  votes secured, a sufficient and necessary condition for the incumbent to win the election is to get the votes of group  $A$  voters. We thus arrive at an asymmetric semi-revealing equilibrium such as that in Proposition 1, where  $\hat{\omega} = \exp(W)$ . That is, the swing group  $A$  is targeted with more spending before the election. This is what Cox (2009) denominates the ‘‘persuasion’’ result: redistributive policy is targeted at swing voters to persuade them to vote for the incumbent, given that the votes of core supporters.

The result that swing voters are the target of redistribution, in the absence of voting costs, extends to cases where the  $\pi^j$  distributions are non-degenerate for both groups (i.e. there may be swing voters in both groups). Suppose that the  $\pi^j$  positions follow uniform distributions in both groups. In particular,  $\pi^j \sim U[-\pi^h, \pi^h]$  (with  $\pi^h > 0$ ) in group  $h$ , so that both groups are centered around  $\frac{\pi^L + \pi^R}{2}$ . The group with smaller  $\pi^h$  has more voters concentrated around ideological indifference, and is thus ‘‘more swing’’. Finally, we also assume  $\omega \sim U[\omega^l, (1 - \omega^l)]$  to arrive at closed-form solutions.

Given these assumptions and equations (17), (18), and (20), in a perfectly revealing equilibrium, the incumbent wins the election if:<sup>10</sup>

$$\left(\frac{1}{2}\right) \left( \frac{\ln \omega - W + \pi^A}{2\pi^A} + \frac{\ln(1 - \omega) - W + \pi^B}{2\pi^B} \right) > 0.5 \quad (29)$$

<sup>10</sup>For simplicity, we abstract from corner solutions. However, note that these solutions may arise since  $(\ln \omega - W)$  may fall outside  $(-\pi^A, \pi^A)$ , and  $(\ln(1 - \omega) - W)$  may fall outside  $(-\pi^B, \pi^B)$ . One extreme example of a corner solution, in which all voters in a group always vote together, was considered above.

The left hand side of expression (29), corresponding to the fraction of total votes that goes to the incumbent, is a concave function of  $\omega$  that takes its maximum value at  $\omega = \frac{1}{1 + \frac{\pi^A}{\pi^B}}$ . That is, the range of  $\omega$  such that the incumbent wins the election is a potentially “intermediate” range (in the sense of possibly not including one of the extremes of the  $\omega$  distribution), centered around  $\omega = \frac{1}{1 + \frac{\pi^A}{\pi^B}}$ . If  $A$  is the more swing group ( $\pi^A < \pi^B$ ), then the value of  $\omega$  that maximizes the fraction of votes to the incumbent falls above  $\frac{1}{2}$ . Put differently, with equally sized groups in a perfectly revealing equilibrium, the range of  $\omega$  (preferences toward the swing group,  $A$ ) such that the incumbent wins the election is some range centered above  $\frac{1}{2}$ . Figure 3 represents the fraction of votes that goes to the incumbent, assuming  $\pi^B > \pi^A$  (group  $A$  is the swing group), and letting  $\pi^B$  take two different values. The dashed line represents the case where the two groups differ only slightly, while the solid one represents the case where groups differ more importantly in terms of their respective masses of swing voters.<sup>11</sup> Note that the fraction of voters that vote for the incumbent is above 0.5 for values of  $\omega$  closer to the upper end of the distribution, but, for at least one of these cases (dashed line, indicating weaker differences between the two groups), not including this limit. That is, if groups are not sufficiently different in terms of how swing they are, extreme values of  $\omega$  lose the election. A crucial difference with the no ideology case, however, is that preferences toward the more swing group (group  $A$  in this case) play a more important role in winning the election, potentially to the point that an incumbent that gives the minimum possible weight to the other group may still win the election.

### 4.3.1 Introducing costs of voting

Cox (2009) has argued that, if voting is costly, politicians should rather target their core voters to “mobilize” them to vote. We now bring voting costs back into the model to examine this argument.

To abstract from the incentive to target swing voters, and simply focus on the hypothesis of the mobilization of a politician’s base, Cox (2009) assumes that each group is core of one candidate. We take the same starting point by assuming that  $B$  is the incumbent’s core group while  $A$  is the challenger’s. In particular, all voters in group  $h$  are characterized by  $\pi^j = \pi^h$ , with  $\pi^B < \ln \omega^l - W$  ( $< 0$ ) and  $\pi^A > \ln(1 - \omega^l) - W$  ( $> 0$ ). For the incumbent to win the election it must be the case that group  $B$  voters show up to vote while group  $A$  voters (who would never support the incumbent)

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<sup>11</sup>The solid line assigns a value of  $\pi^B$  twice as large as that assumed for the dashed line. This particular figure was generated assuming  $\omega^l = 0.4$ ,  $\pi^A = 0.5$ , and letting  $\pi^B$  take either a value of 0.55 (dashed line) or 1.1 (solid line).

stay at home in election day. That is, the incumbent is reelected if his  $\omega$  is such that

$$\begin{aligned} \ln(1 - \omega) - W &\geq \gamma + \pi^B \\ &\text{and} \\ \ln \omega - W &\geq -\gamma + \pi^A \end{aligned}$$

In other words, only incumbents with  $\omega$  low enough to mobilize their base to vote, but not so low that the opponent's base would be mobilized to block them, win the election. As a result, in the semi-separating equilibrium the allocation of spending is characterized by Proposition 2, with  $\underline{\omega} = \exp(W - \gamma + \pi^A)$  and  $\bar{\omega} = 1 - \exp(W + \gamma + \pi^B)$ . That is, it is not clear that the incumbent can simply focus on trying to mobilize his core group to vote, as showing “too much” inclination to favor that group with redistributive policies may mobilize the opponent's base to block his re-election. Cox' argument that introducing voting costs leads to the conclusion that incumbents should target their bases, therefore, does not extend without qualification to a world where targeting one group may end up raising votes for one's opponent from the other group. For it to hold it must be the case that the combination of voting costs and ex-ante preferences between the candidates in the two groups is such that the incumbent's core are more easily mobilized to vote than the challenger's.

What if the tension is not between two groups of core voters but the incumbent's core and a group of swing voters? Consider again the polar swing-core divide exemplified in section 4.3: group  $A$  is a “fully swing” group, while group  $B$  is composed of incumbent's core supporters. In particular, all voters in group  $h$  are characterized by  $\pi^j = \pi^h$ , with

$$\begin{aligned} \pi^B &< \ln \omega^l - W \\ &\text{and} \\ \pi^A &= 0 \end{aligned} \tag{30}$$

This means that group  $B$  voters would never vote for the challenger, but may not show up to vote for the incumbent either. On the other hand, group  $A$  voters may not vote at all, or vote for either of the candidates.

There are now two scenarios, given by different combinations of group voting, in which the incumbent wins the election. First, getting group  $A$  to vote for him is a sufficient condition for the incumbent to get reelected. This happens if  $\omega$  is such that  $\ln \omega - W > \gamma$ . Second, the incumbent may rather get his core supporters to effectively show up to vote (for him), and this would get him reelected as long as group  $A$  voters are not moved to vote for the challenger. This occurs when  $\omega$  is such that  $\ln(1 - \omega) - W \geq \pi^B + \gamma$ , while  $\ln \omega - W \geq -\gamma$ .

Two semi-revealing equilibria in which the incumbent correctly signals whether his type is in the re-electable range arise in this world. In the first, incumbents with  $\omega \geq \exp(W + \gamma) = \hat{\omega}$  win the election, and the spending allocation looks like that shown in Proposition 1 and Figure 1. Voters in group  $A$  vote for the incumbent if  $\omega \geq \hat{\omega}$ . This is an equilibrium where the swing group is targeted, as it is enough to persuade this group's voters to vote for the incumbent to get him re-elected.

Alternatively, the equilibrium may be such that the incumbent wins the election if his  $\omega$  falls in the  $[\exp(W - \gamma), 1 - \exp(W + \pi^B + \gamma)]$  range. The equilibrium spending allocation is characterized by Proposition 2 with limits  $\underline{\omega}$  and  $\bar{\omega}$  given by the interval just mentioned. If the incumbent's type falls in this re-electable range, voters in group  $B$  vote for him while group  $A$  voters abstain from voting. Note that, while in this equilibrium the pre-electoral allocation of spending is distorted from its post-electoral analogue, the distortion favors the swing group for some types of incumbent and the core group for others. In particular, the re-electable range of incumbents, some of whom move away from their optimal redistributive policy in order to get reelected, may fall towards the lower or upper limits of the  $\omega$  distribution, depending on the size of voting costs and the degree of ex-ante commitment of the core voters to their leader. Higher voting costs make the core group relatively more important for the incumbent's re-election (move the re-electable range of types to the left). The reason is that it is harder to convince them to overcome voting costs. On the other hand, a stronger pre-commitment of these voters to the incumbent (lower  $\pi^B$ ) has the opposite effect.

Which of these two equilibria is more likely to hold depends on the size of voting costs and the degree of ex-ante commitment of group  $B$  voters to the incumbent. Small enough voting costs and core enough group  $B$  voters make the swing group the only target of distributive spending (the first type of equilibrium). Low voting costs make the incumbent fearful of sending the swing voters to vote for his opponent. This creates an incentive to signal a high  $\omega$  type. This incentive is even more likely to guide the incumbent's choices if highly committed core supporters reduce the risk that such strategy would make him lose the votes of those supporters. If, on the other hand, voting costs are high and there is a high chance that the incumbent's core voters may not show up to vote, the incumbent may have to tailor distributive policies in favor of his core group, but never to an extreme that swing voters will be motivated to block the incumbent's reelection.

## 5 Some applications and extensions

The model presented above shows that, in the absence of binding electoral platforms, distributive policies may be powerful campaign tools for incumbent politicians. Not necessarily because they buy votes, but because they can provide signals about the incumbents preferred policies, and thus those he plans to implement in the future. It also characterizes special interest targeting in this context, considering both the issues of swingness and electoral turnout. These contributions make the model



useful in other contexts as well: it can be used to explain other political phenomena, and extended to allow for other issues likely to influence special interest targeting in public policy. This section presents three specific applications and extensions of the model, both because they are interesting in their own right, and to highlight the types of additional issues that the model can illuminate. Specifically, we now show how the model can be used in the contexts of clientelism and political budget cycles, and how it can be extended to account for voting by “calculator” voters who know each of them is not pivotal in the election.

## 5.1 Clientelism

Clientelism could be defined as the hand-out of benefits to individuals in exchange for their votes. The technology of clientelism has been the object of much debate. A fundamental puzzle underlies the discussion: if handouts are given to individuals before the election, then it is hard to understand why the votes would be actually delivered; if, in turn, they are promised for delivery once votes are made effective, then how can voters believe the promised benefits will indeed be handed out. The question is particularly relevant in contexts where the vote is secret, and ballots are directly managed by the electoral authorities, rather than the candidates themselves. For these contexts, Stokes (2005) has argued that one reason voters and candidates abide by their promises to one another is the fact that electoral politics is a repeated game: you deliver your promises to be able to credibly promise in the future. Our model provides an additional, complementary, explanation.

Though we stress the programmatic interpretation of the model, whereby politicians use policy today to credibly signal their future programs, the inference problem we study could be applied to more narrowly-defined clientelistic policies as well. Distributive spending in our model could refer to material handouts to specific individuals rather than public goods preferred by specific groups. In turn, the distribution of benefits that an incumbent hands out before the election may serve to signal the distribution of benefits he or she will hand out after the election as well. Linkage via inference explains why those targeted with favors may deliver their votes even if voting can’t be monitored<sup>12</sup> and commitment by politicians is not possible.<sup>13</sup> Since pre-electoral targeted spending appears to be widely used even in established democracies lacking mechanisms by which standard clientelistic exchange may be enforced, the alternative explanation presented here for the effectiveness of targeted spending may be important even for clientelistic electioneering.

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<sup>12</sup>Stokes (2005) suggests that even with a secret ballot a political machine’s knowledge of social networks may allow it to infer individual votes.

<sup>13</sup>Robinson and Verdier (2003), for example, consider public sector employment as a *form* of clientelistic benefits that act as at least a partial commitment device on the part of politicians. Specific legislation aimed at a narrow constituency may also allow some degree of commitment. See the studies in Kitschelt and Wilkinson (2007) for some examples. Such examples do not however address the question of commitment for spending in general.

## 5.2 Political budget cycles

Brender and Drazen (2011) find that in established democracies — where increases in *total* expenditures or deficits appear neither to be widely used nor generally effective in gaining electoral support at the national level (Brender and Drazen [2005, 2008]) — changes in the composition of government expenditure is relatively large in election years. This fits with findings at the subnational level, where in individual countries, election years are often characterized by changes in the composition of spending (e.g. Eslava and Drazen, 2010; Khemani, 2004.) While changes in spending composition in election years is not evidence *per se* of targeting special interests, it seems to us likely that such targeting lies behind at least some of the observed changes.

A very rich literature has been devoted to the existence of political budget cycles: the use of the budget to influence an approaching election. Our model can be easily modified to show that, depending on the evolution of politicians’ preferences over time, programmatic special interest politics could look more like “special interest cycles,” where the targeting of electorally attractive groups at the expense of others is most likely right before an election.

Suppose, for instance, that a distinction is made between the first and second halves of an incumbent’s term in office. At each of those periods the incumbent chooses the current allocation of distributive spending. An election is held at the end of the second half (which we thus term the “pre-election period”), with the incumbent running in that election. Suppose also that the fiscal preferences of incumbents evolve over time with some degree of persistence. That is, for any politician  $P$   $\omega_P^A$  changes over time, but the value it takes at any given point in time depends on its past values, specially the most recent ones. When trying to extract information about the incumbent’s  $\omega$ , voters thus pay special attention to his most recent policy choices. Incumbents are aware of this fact and, as a result, are most inclined to distort distributive policies with electoral purposes in the periods that precede the election.<sup>14</sup>

Some interesting substantive implications arise. First, our model of distributive policies makes it clear that electoral targeting of specific groups may be done at the cost of losing votes from other groups. For the same reason, it makes more sense for a candidate to show more centrist positions on distributive issues.

## 5.3 Group voting

Our model addresses the possibility that voters may find voting too costly, and decide to abstain. Our assumption has been that voters have a natural inclination to vote for their preferred option, and decide not to exercise that right only if voting costs are sufficiently high. But what if votes are

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<sup>14</sup>In Drazen and Eslava (2010) we present a political budget cycle model similar in structure to the one we are suggesting in this section. While that model focuses on the provision of valence goods rather than deciding on distributive policies, it is easy to see that a similar logic would apply to the types of policies this paper deals with.

of the “calculator” type, and only vote if by doing so they effectively affect public policy. From that perspective, one of the greatest puzzles regarding voter turnout is that any individual voter should in principle see his own vote as undecisive. Why would anyone vote, then?

Probably the most plausible answer the “calculator” voter literature has come up with is group utilitarian voting: while an individual is unlikely to be pivotal, a group is not. Individuals within a group could thus organize to make sure enough of them show up to vote to ensure that their preferred option wins the election. Uhlaner (1989), Morton (1991) and Coate and Conlin (2004) present models of group turnout, where members of a group follow the voting rule that maximizes their group’s expected utility. That rule implies that group members with the highest preference toward that option or the lowest voting cost are sent to vote for the group’s preferred option, in numbers such that they are indeed pivotal. In Morton’s and Uhlaner’s approach, those voters are given transfers by their group’s “leader” that make it worth for them to mobilize. In Coate and Conlin’s model, meanwhile, individuals simply follow their group’s rule (which, in equilibrium, turns out to be compatible with their own utility maximization). In all of these models, candidates are assumed to make fully credible promises, and it is on the basis of these promises that groups decide which candidate to support. Those positions are generally assumed fixed. The exemption is Morton’s (1991) model, where candidates are allowed to choose those positions taking into account the group voting rule that the combination of platforms will deliver. The result is somewhat discouraging for the idea that positive turnout is explained by group voting: in equilibrium, fully office-motivated candidates converge to the same platform, leading to zero turnout.

Though not straightforward, an extension to incorporate group utilitarian voting is a promising avenue to provide full foundations for a “calculator” individual’s decision to vote in our model. Beyond enriching the model, this extension would bring with it contributions to the group utilitarian voting literature. First, group voting in our context would coexist with lack of credible platforms over at least some dimensions. Second, by considering politicians who do seek office but also have policy preferences, one could potentially study how policy reacts to voting and turnout incentives without arriving at zero turnout and perfect platform convergence.

Though a full extension of the model to account for this possibility demands much more space and thought than we can provide in this paper, we sketch here the simplest possible such extension to illustrate how group voting would work in our context. Take, for instance Coate and Conlin’s (2004) approach: voters determine the voting rule that would maximize the utility of each group (corresponding to the sum of its members’ utilities), and vote according to their respective group’s optimal rule. Moreover, focus on the specific example where group  $B$  is composed solely by incumbent core voters, and group  $A$  voters are all challenger’s core voters, and simplify even further to assume all voters within a group  $h$  share the same  $\pi$  position,  $\pi^h$ .<sup>15</sup> Finally, assume voters face some additional

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<sup>15</sup>Imposing that each group is composed solely by core voters of one candidate simplifies the presentation. On the

source of uncertainty such that they cannot determine for sure the outcome of the election for any given pair of turnout ratios for the two groups, but know chances of their candidate winning the election grow with their turnout (e.g. Coate and Collin’s assumption that voters ignore the size of each group but know the distribution from which those sizes are drawn).<sup>16</sup>

Groups can now determine which fraction of voters to send out to vote. The incumbent wins the election if more  $B$  than  $A$  voters turn out on election date. Moreover, for each group  $h$  and each incumbent type  $\omega$ , there is a limit fraction of voters the group would be willing to send to vote,  $f_h$ , characterized by:

$$p [\ln(1 - \omega) - W - \pi^B] = \gamma f_B \text{ for group } B$$

and

$$(1 - p) [W + \pi^A - \ln \omega] = \gamma f_A$$

where  $p$  is the probability that the incumbent wins if  $f_h$  voters from group  $h$  turn out to vote rather than all staying home, given the other group’s turnout.<sup>17</sup> This set of equations can be solved to obtain  $f_A$  and  $f_B$ . The solution involves each of the two groups sending out to vote a fraction  $f_h$  of its voters, to maximize the chances that its candidate wins, and the incumbent winning the election if  $N_B f_B > N_A f_A$ .<sup>18</sup> This determines a set of expected re-electable types given by:

$$p [\ln(1 - \omega) - W - \pi^B] > (1 - p) [W + \pi^A - \ln \omega] \tag{31}$$

where we have assumed that in expectation the groups are equally sized. That is, consistent with our central results in the rest of the paper, to win the election the incumbent must signal that he has fiscal preferences sufficiently close to those of his core group to get them out to vote in enough numbers, but not so much that a large enough fraction of opposers will show up to block his election.

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other hand, it erodes one of the advantages of using our model to analyze group utilitarian voting: the fact that we could present group voting in full absence of pre-fixed platforms. We stick to that extreme assumption since our purpose here is to merely illustrate that our approach does not hinge on the assumption of pivotal individual voters, but point that an interesting future extension of our model is the analysis of group voting without pre-set platforms.

<sup>16</sup>In Morton’s (1987, 1991) and Uhlaner’s papers the analogous assumption is that there is a random shock to the effective number of votes for each candidate. To keep the incumbent’s signaling problem as simple (and as close to our baseline presentation) as possible, our discussion here assumes that incumbents, unlike voters, do not face this source of uncertainty.

<sup>17</sup>To derive this expression, assume each group compares its expected utility if choosing  $f_h > 0$  to its utility if  $f_h = 0$ , where the latter implies the group’s preferred candidate loses the election. The group is willing to send out to vote up to the fraction of voters that makes those two utilities identical.

<sup>18</sup>Given the assumption of within-group homogeneity, the  $f_h * N_h$  voters who turn out are chosen randomly within each group (alternatively, each voter turns out with a probability  $f_h$ ). Heterogeneity in the  $\pi$  positions of voters within a group would yield a natural ordering of preferences such that the  $f_h * N_h$  voters who turn out are those for which  $\pi^j$  is closest to the  $\pi^P$  of the politician preferred by the group. In Coate and Conlin’s model, within group heterogeneity comes from differential voting costs, which could also be included in our model.

The equilibrium spending allocation will be given by that in Proposition 2, with threshold levels  $\underline{\omega}$  and  $\bar{\omega}$  determined by (31).

## 6 Conclusion

We have provided a simple framework to understand the electoral use of public spending to target special interests in absence of pre-commitment to future distributive policy. Our framework shows that incumbents may use distributive policy to send signals about the programs they would enact if re-elected. In particular, there is an equilibrium in which “good types” of incumbents (those that would be re-elected if voters were perfectly informed) target public spending to issues most pressing to key groups of voters. This view of the electoral use of targeted policies warns against jumping to interpret targeted spending on electorally valuable groups as evidence of inappropriate manipulation of public policy.<sup>19</sup> Distributive policies used as signals may in fact have the role of ameliorating the costs of informational asymmetries about the true policy preferences of candidates. One of the great challenges this alternative explanation of electoral targeting brings about is how to distinguish between rightful targeting that simply reflects the true preferences of an incumbent for a given type of policy and purely office driven targeted policies.

The model also shows that “key” groups (those most likely to be targeted) are defined in terms of group size and swingness. In particular, incumbents face incentives to target large groups, and those where he is most likely to convince voters to go out and vote for him. Swing voters are likely targets because they are willing to react to policy when deciding whether to vote and who to vote for. Moreover, when voters are not sure to show up to vote we obtain results that challenge standard models of targeting to mobilize the incumbent’s vote. An incumbent trades-off his incentive to mobilize his base with his concern about mobilizing his opponent’s, as well as with his incentive to target swing voters. As a result, incumbents will in general abstain from showing extreme fiscal preferences toward their core voters.

The inference problem we study could be applied to more narrowly-defined clientelistic policies as well. With respect to the existing literature on clientelism, we add by modeling clientelism in the absence of commitment devices to ensure either that voters will indeed give their votes to an incumbent that previously handed goodies to them, or that a re-elected incumbent will deliver promised benefits to voters who supported him. Our framework can also be use to explain political budget

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<sup>19</sup>Such interpretation is prevalent and has had huge consequences for public policy in some contexts. Recently, there has been heated debate in Colombia around a program that granted subsidies to agricultures. The Minister who launched the program subsequently received electoral support from several beneficiaries of the program. While some analysts have read this sequence of events as implying outright vote buying by the Minister, others have pointed it is natural that those beneficiaries see the head of the program as someone whose policy preferences favor agriculture, and who would thus deliver further support. The Minister and several officials who worked with him are facing jail as a result of the scandal. Some trained technocrats are staying away from public office as a result of what they see as witch hunting.

cycles in the form of special-interest, rather than general-interest, electoral spending.

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Figure 1: Spending allocation, “asymmetric” semi-separating equilibrium

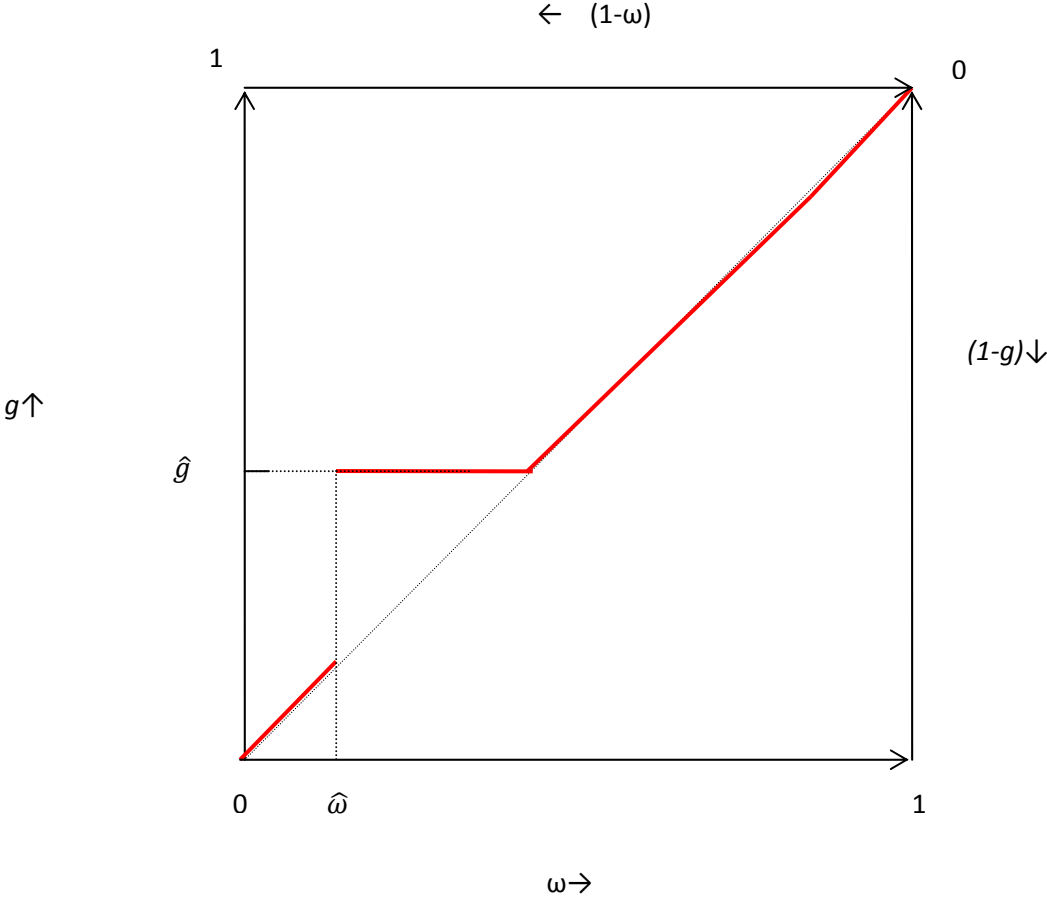




Figure 2: Spending allocation, “symmetric” semi-separating equilibrium

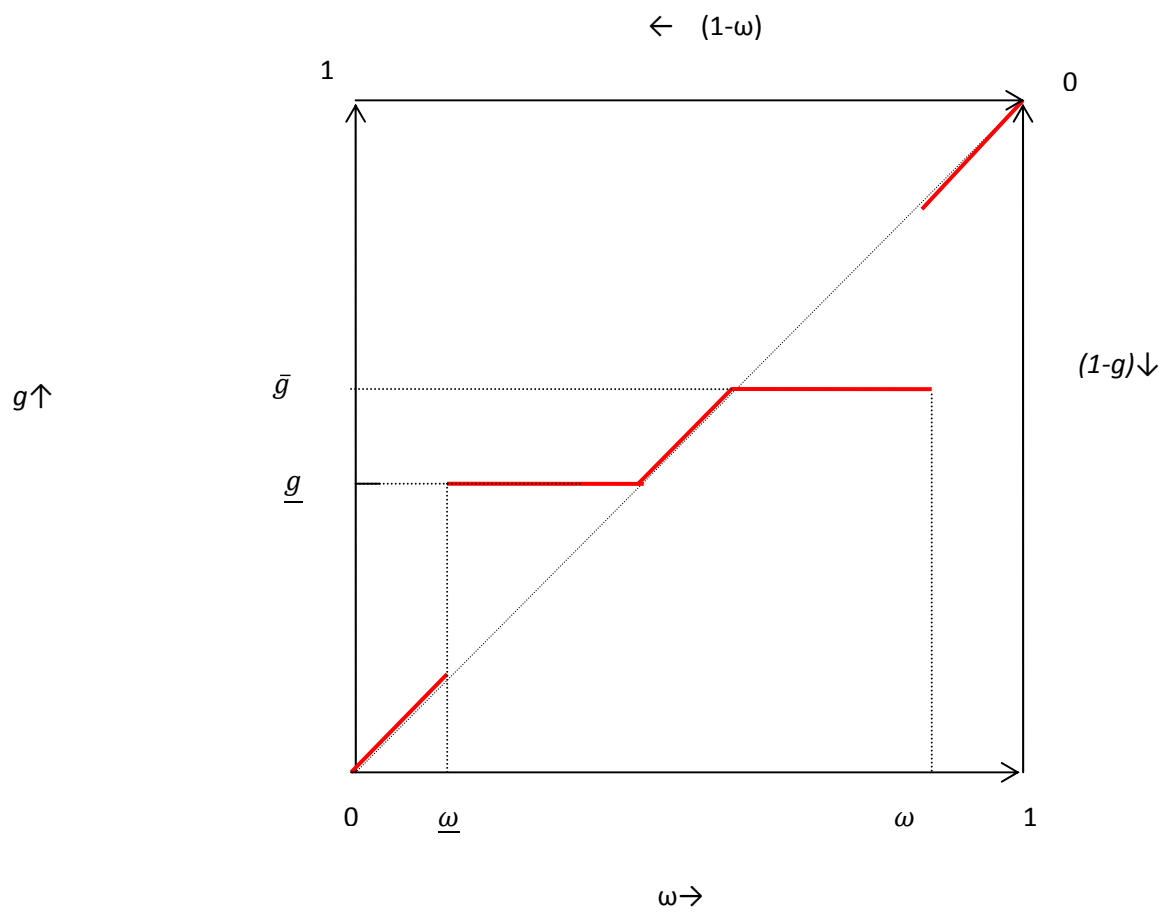


Figure 3: Fraction of votes that goes to the incumbent ( $p^A=0.5$ ,  $w^l=0.4$ )

