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The Determinants of Success of Special Interests in Redistributive Politics

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We examine what determines whether an interest group will receive favors in pork-barrel politics, using a model of majority voting with two competing parties. Each group's membership is heterogeneous in its ideological affinity for the parties. Individuals face a trade-off between party affinity and their own transfer receipts.

The model is general enough to yield two often-discussed but competing theories as special cases. If the parties are equally effective in delivering transfers to any group, then the outcome of the process conforms to the "swing voter" theory: both parties woo the groups that are politically central, and most willing to switch their votes in response to economic favors. If groups have party affinities, and each party is more effective in delivering favors to its own support group, then we can get the "machine politics" outcome, where each party favors its core support group. We derive these results theoretically, and illustrate their operation in particular examples.

Introduction

Economic redistribution occurs at two very distinct levels in the political process. The first kind is grand or programmatic redistribution. This reflects the prevailing ideological beliefs about equality and is carried out using income taxes (sometimes and in some countries wealth taxes) and the general social welfare system. These redistributive programs are relatively fixed for large periods of time and change only when there is a major ideological shift in the population. In the United States, for example, a relatively egalitarian phase lasted from the 1930s through the 1970s and reversed only in the early 1980s. In the United Kingdom, a similar center and moderate-left consensus prevailed after World War II until the Thatcherite shift of 1979.

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A second kind of redistribution, which might be called tactical, goes on continuously even while a given policy of grand redistribution remains unchanged. This takes a variety of forms: subsidies or tariff protection to particular industries, location of military bases and construction projects in particular districts, and other schemes commonly labelled "pork barrel." In the United States, and elsewhere too, such tactical redistribution is much more the subject of everyday policymaking than the grand programmatic kind, and it is the main focus of our article.[1]

Previous theoretical research on such tactical redistribution has adopted one of two competing models. This diversity in perspective is perhaps due to the heterogeneity of redistributive politics itself. Sometimes, politicians appear to "take care of their own"; consider the disproportionate share of patronage benefits provided during the first half of the twentieth century by the Chicago political machine to its loyal Irish supporters (Rakove 1975). In other cases, loyal supporters appear to be taken for granted, while redistributive benefits are targeted at groups of "swing voters." This form of redistributive politics recently became the target of complaints from New York Democrats disappointed by the sparse share of the particularistic benefits being channeled to their state, which had favored Clinton by a wide electoral margin in 1992, while the Clinton White House gives priority to the "political feeding and care" of California, even though that state favored the president by a much narrower margin; see Purdum (1994).

In this article we develop a more general framework that allows us to encompass both considerations and determine when the one or the other will dominate. We construct a model of political competition in which two parties vie for voters' electoral support.[2] Voters are heterogeneous in their affinities for the two parties. In addition, they care about particularistic benefits, and this interest tempers their basic party loyalties. The willingness of voters to compromise their party affinities in response to offers of particularistic benefits gives rise to redistributive politics in our model. Differences in the parties' abilities to deliver such benefits to different groups are what generate different outcomes.

If the parties are equal in their abilities to allocate redistributive benefits to all groups, then the outcome of tactical redistribution is governed by the different political positions of the groups, and their different responses to the promises of economic benefits. Both parties favor groups of voters with relatively many political "moderates" who are indifferent between the two parties and groups with relatively high willingness to abandon their ideological preferences in exchange for particularistic benefits, namely excludable consumption, in the form of individual transfers of income or in the form of spending on projects which only benefit members of the target group. The result that both parties may compete for the votes of

[1] The distinction between the two types of political processes is well recognized in the literature, but there is no unanimously agreed terminology to express it. Some have called the ideological kind "redistributive politics," and the tactical or pork barrel kind "distributive politics."

[2] See Shepsle (1991) for a recent general survey of the literature on such models.

the same moderate blocs of voters was noted by Lindbeck and Weibull (1987), but they did not obtain all the implications of this case. We do so, and find some other attributes of voting groups that are conducive to their success in the game of tactical redistributive politics.

In this setting, largesse for some minority interest groups enjoys bipartisan support—both parties compete for the title of "farmers' best friend"—while other groups face equally dismal prospects for taxation in the postelection programs of both parties. Moreover, the net recipients of redistributive benefits need not constitute a majority of the electorate. In fact, the sheer number of members in a group turns out not to affect the power of the group in the game of redistributive politics.

A very different picture emerges when the blocks of voters are identical in their ideological affinities for the parties and in their willingness to "sell" their votes in exchange for particularistic benefits. In this setting differences in the parties' abilities to target redistributive benefits to different groups are the key determinants of the outcomes. Such differences can arise when each party has its core groups of constituents whom it understands well. This greater understanding translates into greater efficiency in the allocation of particularistic benefits: patronage dollars are spent more effectively, while taxes may impose less pain per dollar. Here our definition of "core" constituents resembles that used by Cox and McCubbins (1986). A party's core constituencies need not prefer its issue position. It is the party's advantage over its competitors at swaying voters in a group with offers of particularistic benefits that makes the group core.

If parties are equal in their abilities to levy taxes but are better able to spend patronage benefits within "core" constituencies, then we find the classic pattern of machine politics—parties favor their own core constituencies most, while targeting taxes at groups of "outsiders" such as the core constituents of the other party. This was the case analyzed by Cox and McCubbins (1986). If parties differ as well in their abilities to levy taxes, the matter becomes more complicated. If the taxing advantage dominates, parties may adopt a strategy of efficiently taxing their "core" constituents and using the proceeds to buy the loyalties of more distant groups.

We illustrate our model using some examples from U.S. pork barrel politics during the last century. In each case we examine how well the example meets the assumptions of our model, as well as how well it bears out the outcomes predicted by the model. Protection of the garment industry offers a good example of the "swing voter" case, while many episodes from city governments of a century ago conform to the "machine politics" view.

Relation to the Literature

The model developed here acknowledges three important factors at work in redistributive politics. First, voters care about the redistribution to themselves of private, divisible consumption benefits. These might include tax relief, block grants to one's local government, or an invitation from the boss of the local party machine to a Sunday evening feast. Secondly, voters are attached to parties for reasons other than their own receipts from tactical economic redistribution. For some, the reason is a strong attachment to a party's issue positions, including such matters as international diplomacy and defense, or the balance between citizen's rights and the needs of law and order; for others there are personal loyalties to the parties themselves. We refer to all such attachments to parties as ideological preferences or affinities. Third, redistribution plans must recognize resource constraints.

Some models of political competition emphasize the redistributive questions in isolation, considering how a pie is likely to be divided under majority rule (e.g., Shepsle and Weingast 1981). Other models emphasize primarily the position-issue aspect of political competition (e.g., Downs 1957). Another strain of analysis, of which this article is a part, considers individuals who care both about redistribution and position issues. For example, a person with strong views on abortion will weigh these when comparing offers of redistributive benefits from competing candidates.

For a political moderate, relatively indifferent between the political programs of the parties, differences in redistributive policies become decisive in the voting decision. In contrast, individuals with strong attachments to the parties' issue positions will be very reluctant to trade their votes for redistributive benefits. As Riker (1982) put it, these people want to apply putatively universal values to all. This means enforcing their religious affiliations or beliefs about legal abortion on all of society, including "nonbelievers." To live under policies that contradict these values "is much worse than to lose in the market" (204). For strong political adherents, losing means being "emotionally deeply deprived" (206).

In our stylized model of political competition, parties (and their candidates) draw on personal loyalties and take issue positions in ways that change slowly over time. We focus on interparty competition over tactical redistribution, holding issue positions as fixed for a given election campaign. This is realistic. For example, it has taken a generation for the Democratic party in the southern United States to complete the shift of its issue positions on civil rights. On the other hand, there is considerable flexibility in making campaign promises regarding tactical redistribution of private benefits. Politicians can raise a tariff here, subsidize the price of a crop there, and channel money for highway construction almost anywhere. Thus, in our model, redistributive benefits may be thought of as "soft money": the supercollider project in solidly Republican Texas suddenly lost federal funding if not scientific merit when the Clinton administration took office, while resources quickly moved to the Fusion Project at Livermore Labs in the swing state of California.

While politicians can relocate redistributive private consumption benefits from one set of recipients to another, and do so relatively quickly, they are subject to an overall resource constraint. For many state governments whose constitutions contain balanced budget provisions the budget constraint is obvious. For other governments, such as the U.S. Federal Government, the resource constraint is a bit more complicated: the government might raise money by taxing, or it might borrow from those who believe they will subsequently be repaid. However, taxpayers are not infinitely rich nor potential lenders infinitely credulous, so even governments without explicit balanced budget provisions are still bound by resource constraints. We keep the determination of the resource constraints in the background and take as given the sum that is available for tactical redistribution. Others including Cox and McCubbins (1986) and Lindbeck and Weibull (1987) have studied tactical redistribution under budget constraints; we will discuss their models in greater detail below.

Myerson (1993) has examined the incentives for candidates or parties to favor a subset of the voters at the expense of the rest. In his model, all voters are identical to start with and do not have any ideological affinities. All that matters to them is the tax they pay or the transfer they receive. Correspondingly, all that matters to parties is the size of their electoral coalition. They can gather the right amount of support by picking voters at random and targeting the chosen ones for benefits. But in reality, tactical redistribution does not proceed by such random selection of beneficiary groups of the right size. The electorate consists of identifiable distinct groups, some of whom receive benefits because their group characteristics are conducive to success in the political game, while others lose because their groups are less well placed. Our model focuses on such differences and helps us understand why certain groups come to be favored. In this respect we modify, generalize, and enrich Myerson's analysis.

We are thus asking how short-run political competition will take place in a setting in which parties' issue positions are relatively fixed and tactical reallocations of the budget are relatively flexible. We ask what determines the recipients' success in this process.

The Model

We consider electoral competition between two parties, labelled left L and right R for mnemonic convenience. The two can differ from each other in their issue positions (ideology) and their tactical redistributive promises to the voters. Recall that we are assuming the parties' ideologies to be fixed within the time-horizon of interest. Promises of tactical redistributive benefits are very much a matter of choice and the focus of our analysis.

The voters are numerous and distinguished by the degree of their ideological affinity to one party or the other.[3] We model the voters as a continuum distributed along the real numbers; a voter located at X has an ideological preference X for party R over party L. The voters also care for economic material benefits, measured by consumption C. Finally, the voting population consists of G identifiable groups, distinguished by their occupation, geographic location, or some such char-

[3] We have no better solution than does anyone else to the question of why people vote at all when they are individually so unlikely to affect the outcome, so we simply follow the literature in assuming that everyone votes.

acteristic. People within each group are heterogeneous in their ideological affinities, and the groups differ in their willingness to compromise the political preferences in return for economic benefits. Most importantly, the parties' redistributive policies can link taxes and transfers to the membership of one of these groups; for example, each farmer or senior citizen can be promised so many dollars. We will label the groups by the subscript i ranging from 1 to G. We denote by $U_i(C_i)$ the utility of a member of group i with consumption C_i, and assume that U_i is an increasing and strictly concave function, that is, the marginal utility of consumption $U'_i(C_i)$ is decreasing.

Suppose a member of group i, with the ideological preference X for party R, will enjoy consumption C_{iL} if party L wins and implements its promised policies, and likewise C_{iR} from party R. Then we assume that this voter will vote for party L if his or her extra utility of consumption from L's victory exceeds his or her ideological preference for R, that is,

$$U_i(C_{iL}) - U_i(C_{iR}) > X.$$

Define the critical value or "cutpoint" X_i for group i by

$$X_i = U_i(C_{iL}) - U_i(C_{iR}). \tag{1}$$

Then all the members of group i with values of X less than X_i will vote for party L, and all the rest for party R. We denote by $\Phi_i(.)$ the cumulative frequency distribution of members of group i over the range of X, so the proportion to the left of X_i is $\Phi_i(X_i)$.[4] If the total number of voters in group i is N_i, then the number from this group voting for party L will be $N_i\,\Phi_i(X_i)$. Adding over groups, the total vote V_L for party L is then given by

$$V_L = \sum_{i=1}^{G} N_i \Phi_i(X_i). \tag{2}$$

Similarly, the numbers voting for party R are

$$V_R = \sum_{i=1}^{G} N_i [1 - \Phi_i(X_i)] = \sum_{i=1}^{G} N_i - V_L. \tag{3}$$

Within each identifiable group, individual voters vary in their affinities for the political parties. We find Millian conservatives among the poor and socialists among the rich. However, the *distribution* of political preferences is likely to differ systematically across groups. We allow for these differences by letting the whole functional form of the distribution $\Phi_i(.)$ depend on i. Of course it is permissible for these distributions to be identical for two or more groups; that is a

[4] Some readers may prefer to interpret this as Hotelling-type spatial model. The ideological preference X for the R-party forms the one-dimensional space, and voters of each group are distributed along it. Figure 1 will make this interpretation more explicit.

special case of our analysis. The possible differences of ideological affinity distributions across groups will have important implications for the outcome of political redistribution.

We will often find it useful to derive detailed results and interpret them by choosing a special form for the utility function:

$$U_i(C) = \kappa_i \, C^{1-\epsilon}/(1-\epsilon)\,, \tag{4}$$

where $\epsilon > 0$. Then the marginal utility of an extra dollar of consumption is

$$U'_i(C) = \kappa_i \, C^{-\epsilon}. \tag{5}$$

As C increased from 0 toward ∞ the marginal utility falls from ∞ toward 0. A one percent increase in C causes an ϵ percent fall in the marginal utility. If party L promises to deliver an extra dollar to each member of group i, it will shift the cutpoint X_i in its favor by

$$U'_i(C_{iL}) = \kappa_i \,(C_{iL})^{-\epsilon}. \tag{6}$$

The great merit of this form of the utility function is that it lets us capture the voters' trade-offs between political ideology and economic benefit in terms of two simple parameters. We now explain this.

The ϵ parameter captures the degree of diminishing returns to private consumption. Note that a dollar of extra consumption shifts a group's cutpoint by an amount equal to the marginal utility of consumption of each of its members. If ϵ is small, marginal utility of consumption falls slowly as the level of consumption rises. Therefore values of ϵ near zero imply that even wealthy individuals remain very sensitive to offers of income redistribution. For large values of ϵ the willingness to compromise one's party affinities for more private consumption benefits falls rapidly with increased income. Thus, with large ϵ, the parties can attract the votes of the poor relatively more easily by offering them small economic benefits. We use the same ϵ for all groups because differences only serve to make the notation more complex without changing the basic intuition.

The parameter κ_i measures the relative importance of consumption as against the ideological position, and here possible differences across groups do make an important difference to the analysis. A higher κ_i means that an extra dollar of consumption offered to group i shifts its cutpoint by a greater magnitude. In other words, group i is more responsive to promises of economic benefits. Thus, we may think of κ_i as measuring how "apolitical" (or greedy) the voters of a group are. An example will show the nature of this effect. Newly arrived immigrants in a southern state may care little whether the confederate flag flies over the state university and so may be relatively willing to vote for the candidate promising more generous subsidies for their industry regardless of his or her position on the flag question. The low salience for the immigrant of the issue position on the flag corresponds to a high value of κ_i. However, a long-time resident of the state, whose grandfather was denied the vote by segregationist election laws, may vote for the candidate promising to rid the state university flagpole of the "stars and bars" even if that candidate offers no redistributive subsidies. This differing depth of political conviction is represented in the model by differences in values of κ_i across groups.

It remains to specify how the parties' policies translate into consumption benefits or losses for different groups. We suppose that the incomes of workers in the absence of any redistributive policies are exogenous to our analysis and write Y_i for the income of each member of group i before any tactical redistribution. Thus, we are leaving out of the analysis the possibility that the taxes and transfers used for redistribution also have efficiency effects on the economy, for example by distorting resource allocation and lowering the aggregate national product. But we do allow some effects of this kind in an indirect manner as indicated below. Also, we are leaving grand or programmatic redistribution in the background, so the Y_i should be thought of as the result after any general income taxes, positive or negative, have been levied.

Let $(T_{iL}; i = 1, 2, \ldots G)$ denote the transfers promised by party L to each member of the different identifiable groups of voters, and similarly let (T_{iR}) be the corresponding transfers offered by party R. As noted in the introduction, some parties' issue positions, such as the Democrats' stand on programmatic income redistribution to the poor, have substantial budgetary implications, but we are leaving these in the background, and taking the amount available for tactical redistribution as given. Therefore larger subsidies to some voting blocks must be balanced by smaller subsidies or larger taxes levied on others. Writing B for the available budget,[5] we have the budget constraint that restricts the policies of each party:

$$\sum_{i=1}^{G} N_i\, T_{ik} = B \text{ for } k = L, R. \tag{7}$$

We allow the transfers to occur via a leaky bucket—of the T_{ik} dollars offered by party k to each member of group i, only a fraction may get through. Moreover, the fraction may depend on the identity of the group and the party; this captures the possibility that each party has some "core support groups" it understands better, and it can deliver benefits to them with greater efficacy. Letting t_{ik} denote the consumption benefit the group members actually receive, we write

$$t_{ik} = (1 - \theta_{ik})\, T_{ik} \text{ if } T_{ik} > 0\,, \tag{8}$$

where θ_{ik}, which we assume lies between 0 and 1, is the fraction lost during transport in the leaky bucket. In the machine politics model, if group i is a core group for party k, it will be able to target the benefits more effectively and θ_{ik} will be small. In the swing voter model, benefits are determined by the political process but delivered by an impersonal bureaucracy, so the identity of the party is immaterial.

There is also a possibility of leakage in raising taxes, and it can in principle depend on the relationship between group and party. Thus, a party may be able to

[5] Cox and McCubbins (1986) and Lindbeck and Weibull (1987) require exact balance: $B = 0$. This is not necessary for our purpose.

extract revenues from its core support group more efficiently because the surveillance needed to attain compliance is easier given the community connection. Then the party may persuade its core support groups to make sacrifices for political gain—pay more taxes so the proceeds can be used for pursuit of votes of other groups in order to attain or retain power. In this case we can write

$$t_{ik} = (1 + \gamma_{ik})\, T_{ik} \text{ if } T_{ik} < 0. \tag{9}$$

Here γ_{ik}, which we assume to be positive, is the excess cost of raising a dollar of tax. It will be smaller if i is a core support group of party k. We regard this case as relatively unlikely; core supporters will not long tolerate a party that delivers benefits to outsiders. But we will include some analysis of this case for sake of logical completeness.

The consumption promised by party k to each member of group i is

$$C_{ik} = Y_{ik} + t_{ik}. \tag{10}$$

Let us recapitulate the structure of the model. Given the parties' tax and transfer strategies, the consumption quantities implied for the various groups are determined by equations (8), (9), and (10). These in turn fix the groups' voting cutpoints according to equation (1), and therefore their votes for the two parties as in equations (2) and (3).

We assume that each party seeks to maximize its vote. The parties' competition for votes is a constant-sum game, and we look for its Nash equilibrium, namely a configuration of strategies such that neither party can do better by unilaterally deviating from it.

The Analysis

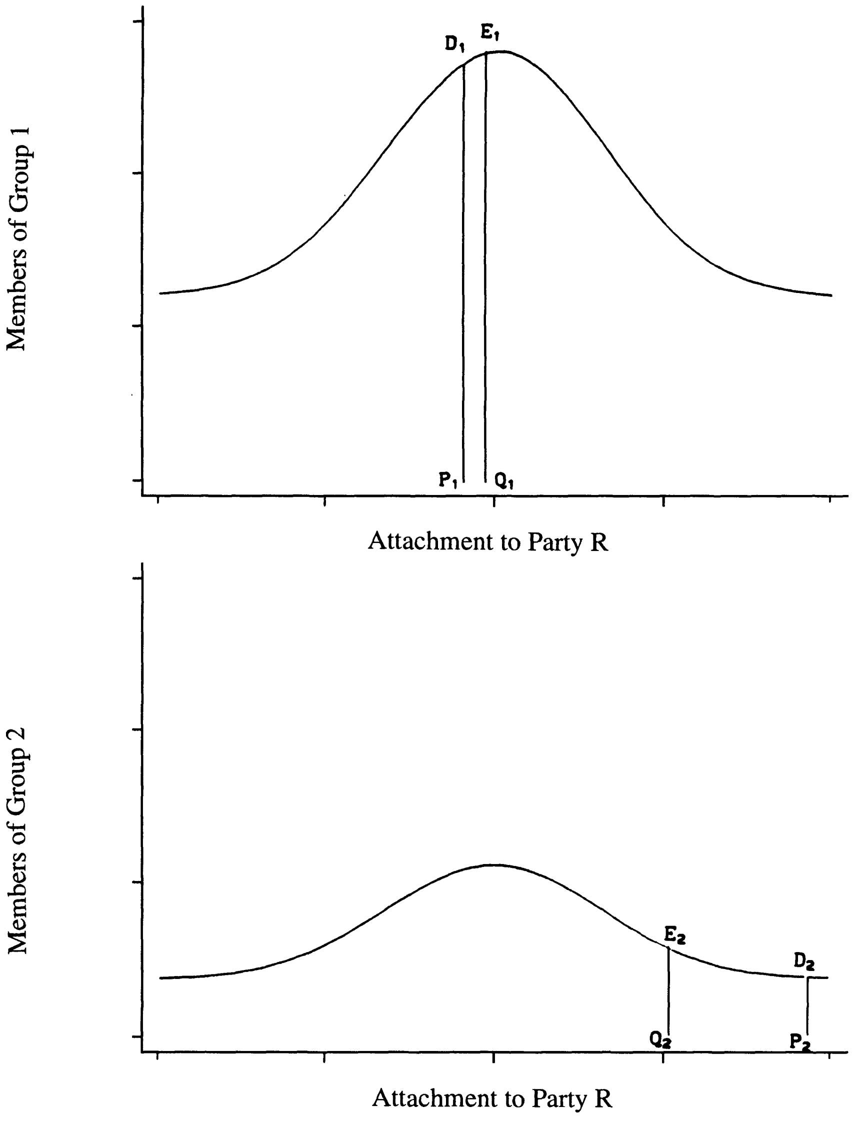
The intuition behind the working of the model can be developed very simply by considering what one party gains or loses by making a small marginal change in its transfer policies. We do this using a simple diagram and relegate the formal algebraic analysis of the equilibrium to the appendix.

Consider party L's decision of whether to offer a little more to one group, say 1, at the expense of offering a little less to another, say group 2. This is illustrated in figure 1. The variable on the horizontal axis (in both the top and the bottom halves of the figure) is the extent of ideological preference X for party R. The upper half shows the population density $N_1\ \phi_1(X)$ of voters in group 1 at X; similarly the lower half shows the density $N_2\ \phi_2(X)$ the for group 2. Initially, suppose the parties' strategies are such that the cut-point X_1 for group 1 is at point P_1 shown in the upper half of the figure; similarly the cutpoint X_2 for group 2 is at P_2 in the lower half. The density of population of group 1 at P_1 is the height P_1D_1; this equals $N_1\ \phi_1(X_1)$. Similarly $P_2D_2 = N_2\ \phi_2(X_2)$ for group 2.[6]

[6] In technical terms, the density functions $\phi_i(X)$ are the derivatives of the corresponding cumulative distribution functions $\Phi_i(X)$.

Figure 1

Favoring Group 1 at the Expense of Group 2



Now suppose party L decides to spend a small incremental sum, say \$1, on each member of group 1. Because the fraction θ_{1L} leaks, each member actually receives only $(1 - \theta_{1L})$ dollars. This causes some group-1 individuals who were close to the cutpoint shift their votes to party L; this shifts the cutpoint X_1 to the right. The magnitude of the shift is found using equation (6); it equals the extra consumption multiplied by the marginal utility of consumption, namely $(1 - \theta_{1L})\, \kappa_1\, (C_{1L})^{-\epsilon}$. In the figure the new cut-point is at Q_1. Writing E_1 for the point on the density curve vertically above Q_1, the number of voters who switch to party L as a result of the inducement is the area $P_1 D_1 E_1 Q_1$. Since the increment in consumption is small, the width $P_1 Q_1$ is also small, so the area can be well approximated by the product of the height $P_1 D_1$ and the width $P_1 Q_1$, namely

$$(1 - \theta_{1L})\, \kappa_1\, (C_{1L})^{-\epsilon}\, N_1\, \phi_1\, (X_1).$$

To obtain the N_1 dollars spent on group 1, party L must raise $(1 + \gamma_{2L})N_1$ dollars from group 2. For this, it must tax each member of group 2 an amount $\$(1 + \gamma_{2L})N_1/N_2$. That shifts groups 2's cutpoint X_2 from P_2 to Q_2, as some group-2 individuals close to the previous cutpoint abandon their support of party L. By calculation similar to that above, we see that the length of $P_2 Q_2$ is $(N_1/N_2)(1 + \gamma_{2L})\kappa_2(C_{2L})^{-\epsilon}$, and the loss of group-2 votes to party L is

$$\frac{N_1}{N_2}(1 + \gamma_{2L})\, \kappa_2\, (C_{2L})^{-\epsilon}\, N_2\, \phi_2\, (X_2) = (1 + \gamma_{2L})\, \kappa_2\, (C_{2L})^{-\epsilon}\, N_1\, \phi_2\, (X_2).$$

This is the area $P_2 D_2 E_2 Q_2$ in the lower half of figure 1.

Comparing the two formulas and canceling the common factor N_1, we see that party L will find the small shift of policy toward group 1 and away from group 2 to its advantage if

$$(1 - \theta_{1L})\, \kappa_1\, (C_{1L})^{-\epsilon}\, \phi_1\, (X_1) > (1 + \gamma_{2L})\, \kappa_2\, (C_{2L})^{-\epsilon}\, \phi_2\, (X_2). \tag{11}$$

We can learn much about the party's incentives to allocate its redistributive favors across groups by examining the various terms in this expression.

First, a higher κ_1 in relation to κ_2 is conducive to group 1 being favored over group 2. A group that is less attached to its political ideology and is more ready to switch its votes in response to promises of economic benefits is treated more favorably. Moreover, this consideration applies to both parties, so we expect such a responsive group to be pursued by both parties and therefore do particularly well as a result of the parties' political competition.

Second, a higher $\phi_1(X_1)$ relative to $\phi_2(X_2)$ is conducive to group 1 being favored over group 2. A group whose voters are relatively numerous at the cutpoint gets favorable treatment. This is because more of its members switch their votes in response to a marginal improvement in the promised benefit. Once again this calculation applies equally to both parties.

If the two parties have equal abilities to give benefits or collect taxes from each group, then in equilibrium the cutpoint will be at the center of the ideology spectrum, namely $X_1 = X_2 = 0$; the appendix offers a formal proof. Then the groups that are densely represented at the center will be beneficiaries of redistributive politics. Groups that are numerous but concentrated at large positive (or large negative) values of X will not partake in this benefit: they will be written off by one party and taken for granted by the other.

Third, if Y_1 is low relative to Y_2, then for equal transfers C_1 is low relative to C_2, and marginal utility of consumption is higher for group 1. Therefore its cutpoint shifts by more per dollar of favors. This tends to favor group 1 in the political game. The effect is stronger the larger is ϵ, and the effect is again equally present in both parties' calculations. Thus, other things equal, we should expect the poor to do well in tactical redistributive politics. However, the reason is not that any ethical considerations enter the parties' calculations. Instead, it is a cold calculation of votes—the poor voters switch more readily in response to economic benefits because the incremental dollar matters more to them.

Fourth, the total population sizes of the two groups, N_1 and N_2 completely cancel out of the calculation. The reason is that to give a dollar to each member of the smaller group, it is necessary to tax each member of the larger group by less than a dollar, and therefore its cutpoint shifts by a smaller magnitude. The effect on the total votes gained or lost at the margin then does not depend on the group size. In figure 1, a change in group size causes proportional and offsetting changes in the vertical and the horizontal dimensions of the areas $P_iD_iE_iQ_i$. Of course a change in the numbers of a group, holding the output per capita constant, changes the total national product and hence the consumption amounts that all voters receive. This effect emerges in the appendix, when we determine the full equilibrium.

In the appendix we also derive a formula that combines all these parameters to provide a quantitative measure π_i of the power of each group to attract tactical redistributive favors; see equation (17) there.

Finally, the "leaky bucket" effects are specific to a party-group pair. When party L is better able to target its benefits to group 1, that is, when θ_{1L} is small, party L is more likely to favor group 1. This conforms to the "core support group" view. However, if party L is less able to raise taxes from its noncore group 2, so γ_{2L} is large, it is less likely to favor group 1. This goes against the "core support group" view; the party might even be driven to tax its core supporters to buy the votes of other groups and get into power. But as we said above, we regard this outcome as unlikely, at least over any appreciable length of time.

Of course all these inferences are based on the examination of just one party's incentive to alter its policy at the margin, given the policy of the other party. Formal proof that the same results also hold in the equilibrium, when each party chooses its strategy as a best response to the other's strategy, can be found in the appendix.

The Outcomes

We now offer some examples to illustrate and elucidate the analytical results in the preceding section.

The "Swing Voter" Outcome

If the political parties are approximately equal in their abilities to redistribute benefits once in office, as might be expected to be the case if policies are administered by an impersonal civil service bureaucracy, our model implies that they will tend to pursue symmetrical strategies. In this setting we saw that the following types of groups will have an advantage in redistributive politics: (i) groups with relatively many moderates whose relative indifference between the ideological programs of the two parties can be resolved by offers of redistributive benefits, (ii) groups that are relatively indifferent to party ideology relative to private consumption benefits, (iii) low-income groups whose marginal utility of income is higher, making them more willing to compromise their political preferences for additional private consumption.

Sheer numbers are relatively unimportant. As the size of a group falls, so does the cost of buying an additional percentage point of vote share among its members. In a way we made more precise in the previous section, these two offsetting effects of group size approximately cancel in equilibrium.

Our model's prediction that groups containing relatively many political moderates will receive largesse is consistent with the unflagging generosity of the Clinton administration toward California. As a "swing" state in presidential politics California contains relatively many voters near the threshold of indifference between Clinton and his potential Republican challengers. In addition to rebuilding schools and freeways, disaster relief for California is geared toward refurbishing the winning vote margin Clinton received in California in the 1992 election.

The result is also consistent with the favorable treatment received by senior citizens who are basically a cross-section of the whole population and therefore are well-represented near the political center of the population, and the unfavorable treatment received by urban minorities who are clearly in the domain of one party and not likely to switch to the other.

Garment workers are another interesting case in point. Their low incomes make them potentially attractive targets for redistributive benefits from both parties. It takes more political "will power" for a member of the garment worker's union earning less than $10 per hour to resist offers of largesse from an anti-union Republican candidate than it does for a high paid member of the airline pilots' association.

Garment workers had a second trait identified by our analysis as important in redistributive politics: they were relatively heavily concentrated in electorally central locations. We see the effect by looking at the 1980 presidential election, and the

Census of Manufactures closest to that year, namely 1982. We compare the share of apparel workers living in a state, with the degree to which the state was "up for grabs" electorally. While the 1.189 million workers who toiled in the apparel industry in 1982 accounted for less than 2% of the labor force, they appear to have been concentrated in what were then electorally pivotal states.

Letting p measure the fraction of the population of U.S. garment workers who were in a particular state, say North Carolina, we can calculate the state's log-odds ratio as

$$l = \ln(p) - \ln(1 - p).$$

This is the log of the odds that a randomly chosen apparel worker lived in the state. The higher the probability, the larger the log odds ratio. Let m denote the absolute value of the state's margin for Reagan versus Carter:

$$m = \left| \frac{\text{Votes cast for Reagan}}{\text{Votes for Reagan plus Votes for Carter}} - \frac{1}{2} \right|$$

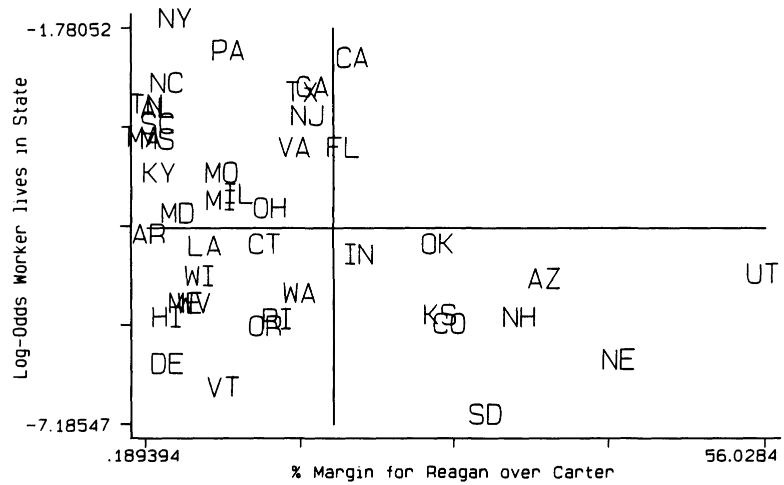
Smaller values of m thus denote states in which the 1980 election was closest. A simple plot of l against m (see figure 2) reveals the tendency for m to be small when l is large—all but two of the states with above-average values of l had closer-than-average margins. A statistical test confirms this: the χ^2 test for independence rejects the hypothesis that the observed association between above average concentrations of textile workers and below average electoral margins is random. Under the null hypothesis the χ^2 statistic has 1 degree of freedom, indicating a 5% critical value of 3.84. The realized value for the statistic is 5.63, well in excess of this threshold.

Our theory tells us that the pivotal location would tend to make apparel workers recipients of bipartisan redistribution. Shifting voters in states with close margins will magnify the effects of any redistributive strategy.

These two attributes, low income and political centrality, offer an explanation for the garment industry's history of receiving tariff protection with bipartisan support. The first Multi-Fiber Arrangement, exempting textiles from many of the provisions of GATT was negotiated during the Republican administration of Richard Nixon at a cost per job saved of \$22,000 during 1974 alone (Hufbauer, Berliner, and Elliott 1986). The second Multi-Fiber Arrangement was reached during the Democratic administration of Jimmy Carter, and it again provided for special protection from imported garments at a cost per job saved of \$36,000 during 1981 alone (Hufbauer, Berliner, and Elliott 1986). Reagan, who is noted for the suspicion with which he viewed any Carter initiative, nevertheless went on to negotiate the third Multi-Fiber Arrangement and to reach bilateral restraint agreements covering textiles and apparel with more than 30 countries, creating over 600 quotas. This protection is estimated to have cost \$39,000 per job saved in 1984 (Hufbauer, Berliner, and Elliott 1986).

FIGURE 2

GARMENT WORKERS' CONCENTRATION AND SWING STATES



Baldwin (1985) in his regression analysis of the Tokyo round of trade negotiations noted that an industry's size was not significant as a predictor of whether it receives tariff protection. Our analysis has a natural explanation for this finding: group size "cancels out" in calculating the gains and losses of votes per dollar transferred. When a small group gets additional redistributive benefits, these are divided among a small number of individuals, shifting the group's cutpoint substantially. The same total transfer, if made instead to a large group, would amount to less per capita, and move the cutpoint of that group by less. The total number of votes shifted is the same in the two cases.

The "Core Support" Outcome

Examples from urban machine politics illustrate the forces pushing political competitors toward asymmetrical strategies. During the nineteenth and early twentieth century urban political machines channeled benefits to "core" constituencies that routinely favored them at the polls by wide margins. The machines appeared to rely on redistributive private benefits rather than issue positions to attract voters. The prototypical machine supporter if polled about his views on the free silver controversy would be likely to agree with Richard Croker's famous remark: "What's the use of discussin' what's the best kind of money? I'm in favor of all kinds of money—the more the better." (Riordan 1963, 88). A machine politician like George Washington Plunkitt of New York was willing to have a Democratic platform that included ". . . some stuff about the tariff and sound money and the Philippines, as no platform seems to be complete without them . . . ," but he regarded particularistic benefits as the key to winning elections (Riordan 1963, 88–89).

The key to the electoral strategies of the urban political machines was their ability to provide "personal services" to their core constituents at lower cost than could their competitors. They did this by knowing their constituents. In New York, Tammany ward leader George Washington Plunkitt (Riordan 1963, 25–28, 90–98) kept track of constituents' likes and dislikes, compulsively participating in a spectrum of social events. He attended baptisms and bar mitzvahs, weddings and funerals, baseball games and dances, and always stood ready to ingratiate himself. Children knew Plunkitt as "Uncle George," a name he sought to make synonymous with "candy" (Riordan 1963, 28). Tammany boss Charles Francis Murphy would hold regular daily meetings with constituents: "Each night after nine o'clock he would station himself by a lamppost outside the Anawanda Club and hear what anyone wished to tell him" (Allen 1993, 209).

The second way services flowed from the machine came in the form of an unwritten insurance contract. George Plunkitt sought to be among the first at the scene of a fire in his district, following the sound of fire engines to the sight of the blaze and finding hotel accommodations, clothes, and food for those who had been burned out until they could find new apartments. He was routinely roused in the middle of the night to bail out loyal constituents arrested for infractions of the law. He would appear in court to arrange for legal counsel for one constituent threatened with eviction or to pay the rent of another. He found jobs for unemployed loyalists and restored them for those who had been fired (with cause) from municipal employment (Riordan 1963, 90–93). By being in touch with his constituency he was able to provide a very narrowly targeted form of social insurance.

In contrast, nonmachine politicians were at a marked disadvantage. Lacking the well-developed support networks they were unable to target redistributive benefits to supporters with the accuracy and effectiveness of the machine. In colorful language Plunkitt describes the failure of reform candidates to distribute patronage benefits once in office, and notes their fundamental informational disadvantage (Riordan 1963, 18–19, 57–60). Despite the rhetorical appeal of a campaign for clean government, nonmachine candidates were handicapped by their inability to compete with the machine at the redistribution of patronage benefits.

We contend that the advantage enjoyed by the machines arose because they were better able to spend within their core than the nonmachine politicians. If this advantage is what stood behind the use of asymmetrical redistributive strategies, we should expect the redistributive strategies used in *internecine* contests between politicians of the same machine to be more symmetrical, and show behavior that conforms to the "swing voter" model. Indeed they do. Consider the primary contest for leadership of New York's Second District between Patrick Diver and Thomas F. Foley (Riordan 1963, 95–96). To capture the Italian ethnic vote, Foley posted spies at City Hall, and whenever Italian couples from the second district arrived to register their marriages Foley's minions would alert him and he would rush to the marriage bureau to present them with a wedding gift. Diver tired of arriving later at the couple's home with his present, and by the end of the campaign had taken to posting his own spy. There were similar races to console newly made widows with money for an undertaker, carriages for the mourners, and coal for the stove.

For the wedding of the daughter of a prominent constituent Foley learned through his spies that Diver was preparing to give silver place settings. He duplicated the gift and trumped Diver with a silver tea set. Rather than pursue asymmetric strategies, these rivals bid against each other for the same voters and with virtually equal offers.

Of course, knowledge of the community may also confer a special ability at extracting revenues. Corruption within the local police department in the management of the public docks and the practice of extracting "dues" from government employees who owed their jobs to the machine also gave machine politicians privileged means of extracting revenue from their core constituencies that would have been more costly to use outside the "core."

The advent of civil service greatly limited the benefits the political machines had available to distribute, making their specialized knowledge of individuals' circumstances less valuable. Other broad-brush means of redistribution were equally available to both parties leading to the use of more symmetrical redistributive strategies.

The examples appearing in this section are provided as illustrations of the logic behind our theoretical results. None is offered as a "test" of our model. Careful testing of the model awaits detailed data on the distribution of political views within and across interest groups, including both the groups that receive subsidies and, very importantly, those that do not. What the examples are designed to provide is some substantive intuition about the theory developed in the preceding section.

Concluding Remarks

This analysis compared the "swing voter" view of redistributive politics with the perspective emphasizing membership in "core" political constituencies as a determinate of success. Swing groups have relatively many political moderates, nearly indifferent between the parties on the basis of policy position and traditional loyalties, and more likely to switch their votes on the basis of particularistic benefits. These groups benefit when the parties have no special skills at conveying benefits to, or taxing, any core support groups. If such advantages exist, the parties have a very real incentive to cultivate core groups with which the parties can use their special understanding of the voting community to target particularistic benefits to maximize their favorable political impact.

In related work, Dixit and Londregan (1995), we generalize the model to a dynamic setting in which political parties' use of redistributive political benefits to attract voters has the unintended effect of impeding the adjustment to economic shocks. The model constructed here could also be generalized to allow for more general, nonlinear, deadweight losses from taxation and subsidy. We suspect that many economically inefficient policies, from the use of import tariffs to protect declining industries, to the payment of agricultural subsidies, to disaster aid for flood victims used to reconstruct housing in areas in peril of reflooding fit within the framework of the model of redistributive politics constructed here.

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Mathematical Appendix

Here we validate the intuition developed in the Analysis section of the text by formally characterizing the Nash equilibrium.

Recall that party L chooses its strategy, namely its transfers (T_{iL}, $i = 1, 2, \ldots G$), to maximize its vote total V_L given by (2), subject to the budget constraint (7), and party R similarly chooses its (T_{iR}) to maximize (3) subject to its budget constraint. A pure strategy Nash equilibrium is defined as a situation where each party's strategy is optimal for it, given the strategy of the other party.

First we examine the existence of equilibrium in our model. The standard sufficient conditions for the existence of Nash equilibrium are given by Glicksberg's Theorem; see Fudenberg and Tirole (1992, 34). These conditions are that each player's payoff is a quasiconcave function of his or her own strategy, and a continuous function of the other player's strategy. In our model, the continuity is obvious. To get the quasi-concavity, note the chain by which the strategies affect the paoyffs. For party L, (8) and (9) define the t_{iL} actually received or paid by each member of group i as an increasing and concave function of the strategy T_{iL}. Next, (10) defines C_{iL} as an increasing linear function of t_{iL}. Then (1) defines X_i as an increasing concave function of C_{iL}. Finally, from (2), V_L is an increasing function of X_i; it is concave if the cumulative distribution function $\Phi_i(X_i)$ is concave. If this last assumption is made, then the chain is complete and V_L is a concave (and therefore quasi-concave) function of (T_{iL}). A similar argument applies to V_R and (T_{iR}), the only difference being that V_R is a decreasing function of X_i and X_i is a decreasing function of C_{iR}.

In previous literature, Cox and McCubbins (1986) assume exactly such concavity of the distribution function. Lindbeck and Weibull (1993) directly assume quasi-concavity of the payoff function, but if one tries to trace this back in their model, it would entail a similar assumption for the distribution function. However, cumulative distribution functions are often not concave; they typically have a convex portion where the corresponding probability density function is increasing. Fortunately, there are other links in the chain that contribute to concavity, and we will assume that the utility function is sufficiently concave to offset any failure of concavity of the distribution function, and ensure quasiconcavity of the payoff function. Moreover, in the special examples of the general model that give us many useful insights, we can calculate a unique equilibrium explicitly, and do not need to rely on a general existence theorem.

Next we consider the conditions that ensure an interior equilibrium. Note that the marginal effect of (T_{iL}) on V_L is

$$\frac{\partial V_L}{\partial T_{iL}} = N_i \, \phi_i(X_i) \, U'_i(C_{iL}) \frac{\partial t_{iL}}{\partial T_{iL}}.$$

As T_{iL} gets negative and large in numerical value, C_{iL} eventually goes to zero. We assume that at this point the marginal utility $U'_i(C_{iL})$ goes to infinity, as is the case in the special form (5). If the density $\phi_i(X_i)$ is positive at this point, then the marginal benefit to party L from making T_{iL} a little less negative will be infinite. Therefore, the party will not drive group i to this low level of consumption. Since we do not expect political redistribution to drive some groups down to zero consumption, this seems a reasonable condition to assume.

At the other end of the spectrum, consider a situation where T_{iL} is so large that all members of group i are voting for party L. If *either* the density $\phi_i(X_i)$ is very small at this point, that is, group i has very few extremists who favor party R, *or* the marginal utility $U'_i(C_{iL})$ is very small, that is, a very high level of consumption must be given to this group to win over the last of them, then the derivative above is very small, and party L would find it desirable to give a little less to group i and use its budget to woo some other group. Of these two conditions, the first (few real extremists) seems reasonable. Also, interior equilibria suffice to bring out the results concerning the determinants of political success. Therefore we assume such a condition, and henceforth treat only interior equilibria.

The constrained maximization problem for party L has the Lagrangian:

$$\mathcal{L} = \sum_{i=1}^{G} N_i \, \Phi_i(X_i) - \lambda_L \sum_{i=1}^{G} N_i \, T_{iL} \tag{12}$$

The Lagrange multiplier λ_L is the value to party L, measured in votes, of an additional dollar available for tactical redistribution. The reciprocal of the multiplier is the marginal cost to party L of "buying" an additional vote. The first order conditions for a maximum are:

$$\frac{\partial \mathcal{L}}{\partial T_{iL}} = N_i \left(\phi_i(X_i) \, U'_i(C_{iL}) \frac{\partial t_{iL}}{\partial T_{iL}} - \lambda_L \right) = 0 \text{ for all } i. \tag{13}$$

We can similarly construct the maximization problem for party R; its first order conditions are just like (13) with the Lagrange multiplier λ_R instead of λ_L. The Nash equilibrium is to be found by solving all the first-order conditions and the budget constraints simultaneously.

Even before we do so, we see one important aspect of the equilibrium emphasized in our intuitive discussion. The group sizes N_i factor out of the first-order conditions. The numbers do affect the total national product $\sum_i N_i Y_i$, and therefore have some indirect effect on what individuals get. But the direct effect via the political process is absent. A larger group has more voters to be won, but the budgetary cost of winning them is also proportionately higher.

More explicit solutions to the model can be derived by specializing the structure to reflect the two cases we discussed above.

The Swing Voter Case

Here we focus on differences across groups in their political preferences distributions $\Phi_i(X_i)$ and utility functions $U_i(C_i)$. Since the leaky bucket aspects are tangential to this, we simplify the algebra by leaving them out. Thus, we assume for the purpose of this subsection that $t_{ik} = T_{ik}$ for all groups and both parties.

This allows us to simplify the budget constraints. Multiplying equation (10) for each group by the group's size N_i, summing across groups and using the budget constraint (7) we have

$$\sum_{i=1}^{G} N_i C_{ik} = \sum_{i=1}^{G} N_i Y_i + B = Y + B, \tag{14}$$

where $Y = \sum_i N_i Y_i$ is the total pretransfer income of all groups.

Consider party L. Its first-order conditions now become

$$\phi_i(X_i)\, U'_i(C_{iL}) = \lambda_L.$$

Dividing by $\phi_i(X_i)$ and solving for C_{iL}, we have

$$C_{iL} = H_i(\lambda_L/\phi_i(X_i)), \tag{15}$$

where H_i is the inverse of the marginal utility function. Multiply these by N_i and add, and use (14) above to get

$$\sum_{i=1}^{G} N_i H_i(\lambda_L/\phi_i(X_i)) = Y + B \tag{16}$$

Since each U'_i is a decreasing function, each H_i is a decreasing function. Therefore the left-hand side is a decreasing function of λ_L, and therefore the equation defines a unique solution for λ_L.

Moreover, the equation does not involve any party-specific information anywhere else. Similar steps for party R will yield an identical equation for λ_R. Therefore the solutions must be equal: $\lambda_L = \lambda_R$. But then the two parties' first-order conditions yield $C_{iL} = C_{iR}$ for all i, and therefore (1) yields $X_i = 0$ for all i.

In other words, the two parties chase the same groups of voters. In equilibrium their promises of transfers cancel each other out, and the vote is exactly what it would have been if neither party had offered any tactical redistributive transfers at all. But zero transfers would not constitute an equilibrium. Starting from such a position, each party has an incentive to try to win over some voters from the groups that are electorally more attractive, and the process drives both parties to the equilibrium described above.

To get a clearer understanding of which groups do well in the equilibrium, it helps to consider the special utility function (4). Using this in equations (15) and (16) and similar equations for party R, and remembering that $X_i = 0$ in equilibrium, we have,

$$C_{ik} = \pi_i/(\lambda_k)^{1/\epsilon},$$

where λ_k is the common Lagrange multiplier for the two parties, and we define

$$\pi_i = [\kappa_i \, \phi_i(0)]^{1/\epsilon}. \tag{17}$$

Using the budget constraint, solving for λ_k, and substituting, consumption C_j of each member of any particular group j (same whichever party the transfer comes from), is given by

$$C_j = \frac{\pi_j}{\sum_i N_i \, \pi_i}(Y + B).$$

The solution is as if the government collects all the output Y that is produced by the whole electorate, adds on the extra budget B (if any) available for tactical redistribution, and divides the result, each person getting a share proportionate to his/her group's π_j. Therefore, the π_j defined in (17) serve as measures of the groups' political power in achieving redistributive benefits. We can get an understanding of the determinants of success in redistributive politics by examining the components that go, or do not go, into the π_j.

Most importantly, π_j is higher when κ_j is higher—group j's vote is more responsive to economic favors—and when $\phi_j(0)$ is higher—members of group j are more densely located at the center of the ideology spectrum between the parties, in the sense that they would be close to indifference if the two parties offered them equal economic favors.

Next, note that the π_j do not involve N_j—group size does not affect political power either way. Group size does affect the total amount available for redistribution, and therefore has a secondary effect on the actual consumption quantities. To see this in the simplest possible way, note that

$$C_j = \pi_j \frac{\Sigma_i N_i Y_i + B}{\Sigma_i N_i \pi_i}.$$

If N_j is very large, then the j-th term dominates the sums in both the numerator and the denominator of the fraction on the right hand side, so the fraction is approximately Y_j/π_j, and C_j approximately equals Y_j. In other words, large groups tend to get tactical redistributive treatment that is closer to being neutral—neither large transfers nor large taxes.

Finally, when ϵ is large, $1/\epsilon$ is small, which tends to make all the π_j close to 1. Then $C_j = (Y + B)/N$, where $N = \sum_i N_i$ is the total population. Thus everyone gets equal consumption—the poorer groups (low Y_j) receive transfers, and the richer ones (high Y_j) pay taxes. The reason is that the parties find the poor voters easier to attract with economic transfers, not that they favor equality on ethical grounds.

The Core Support Case

Now we introduce the parameters θ_{ik} and λ_{ik} that measure differential abilities of parties to deliver benefits to or raise taxes from particular groups. As we stated before, we believe that differences in the ability to deliver benefits (different θ_{ik}) are the more likely situation in reality; differences in the ability to tax are included for logical completeness.

The additional parameters make a general analysis very messy, but sufficient understanding can be achieved by considering just two groups, and the special form (4) of the utility function. We also suppose that the distribution of each group's members is uniform, thus

$$\phi(X) = \begin{cases} \delta_i \text{ when } l_i \leq X \leq r_i, \\ 0 \text{ otherwise.} \end{cases}$$

Of course $\delta_i = 1/(r_i - l_i)$ to keep the total mass equal to 1. When δ_i is large, $(r_i - l_i)$ is small, and group i is ideologically more concentrated. Of course we assume that the range (l_i, r_i) of the distributions of ideological preferences are sufficiently wide to rule out "corner" solutions in which one of the groups is entirely "bought" by one of the political parties.

The derivative of party L's Lagrangian (12) with respect to T_{iL} is

$$\frac{\partial \mathcal{L}}{\partial T_{iL}} = \begin{cases} N_i [\phi_i(X_i)\, U'_i(C_{iL})\,(1 - \theta_{iL}) - \lambda_L] \text{ for } T_{iL} > 0, \\ N_i [\phi_i(X_i)\, U'_i(C_{iL})\,(1 + \gamma_{iL}) - \lambda_L] \text{ for } T_{iL} < 0, \end{cases}$$

Party L will tax group 2 to subsidize group 1 if and only if this derivative is positive as T_{iL} increases starting at 0. The condition for that is

$$\frac{1 - \theta_{1L}}{1 + \gamma_{2L}} > \left(\frac{y_1}{y_2}\right)^{\epsilon} \frac{\kappa_2\,\delta_2}{\kappa_1\,\delta_1}$$

Likewise, the condition for party L to tax group 1, using the proceeds to subsidize group 2, is

$$\frac{1 + \gamma_{1L}}{1 - \theta_{2L}} < \left(\frac{y_1}{y_2}\right)^{\epsilon} \frac{\kappa_2\, \delta_2}{\kappa_1\, \delta_1}$$

If the right hand side expression in these inequalities takes on an intermediate value, party L will not engage in transfers ($T_{1L} = T_{2L} = 0$):

$$\frac{1 - \theta_{1L}}{1 + \gamma_{2L}} < \left(\frac{y_1}{y_2}\right)^{\epsilon} \frac{\kappa_2\, \delta_2}{\kappa_1\, \delta_1} < \frac{1 + \gamma_{1L}}{1 - \theta_{2L}} \tag{18}$$

Similar conditions apply for party R.

These conditions clarify the implications of allowing the parties to differ in their abilities at subsidizing the various voting blocks. The ratio

$$\left(\frac{y_1}{y_2}\right)^{\epsilon} \frac{\kappa_2\, \delta_2}{\kappa_1\, \delta_1}$$

can be thought of as gauging those aspects of the relative political "clout" of group 2 which are the same for both parties. Higher income for group 2 relative to group 1 makes it a more attractive target for redistributive taxes. This is because, all else equal, wealthier individuals are less willing to compromise their ideological views for particularistic benefits.

Group 1 will fare better than group 2 in the game of tactical redistribution if [1] group 1 is more concentrated than is group 2, that is, δ_1/δ_2 is large, and [2] group 1 members have greater intrinsic willingness to compromise on the ideological issue in exchange for particularistic benefits than do members of group 2, that is, κ_1/κ_2 is large.

All the results thus far are the same as in the swing voter case. Machine politics considerations enter through the relative advantages of the parties at subsidizing and taxing different groups. Recall that our concept of a group being a "core group" for a party is measured by the magnitude of the θ and γ coefficients; for a core group these are close to zero. When both groups are close to the "core" of party L, the two expressions on the extreme ends of the chain of inequalities (18) are each close to 1 and therefore the two are close to each other. So party L will only refrain from redistributive transfers when the groups have very similar "clout." If both groups are distant from the core, party L will refrain from redistributive transfers over a wide range of values of political clout.

Being in the core of one of the parties can be a mixed blessing when this entails lower sensitivity to taxes levied by the party as well as greater receptiveness to transfers: parties may find it in their interest to exploit the good will of their "core" constituents by taxing them more heavily, and lavishing the proceeds on less loyal groups of responsive "swing' voters. But in practice we expect the differential sensitivity to taxes to be less than that to transfers.

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