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Competition Among Pressure Groups for Political Influence

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CENTER FOR THE STUDY OF THE ECONOMY AND THE STATE
WORKING PAPER SERIES

A THEORY OF POLITICAL BEHAVIOR,
Part I: Pressure Groups
Part II: The Political Sector

Gary S. Becker

WORKING PAPER NO. 006-1

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A Theory of Political Behavior,

Part I: Pressure Groups

Gary S. Becker

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quoted without permis-
sion of author.

I benefitted immensely from discussions with and suggestions from James Friedman, Bruce Gardner, Richard Posner, Rodney Smith, and George J. Stigler. I also received helpful comments from Sam Brittain, James Buchanan, Jack Hirshleifer, Richard Layard, Sam Peltzman, Russell Roberts, Sherwin Rosen, Lester Telser, and participants in the Industrial Organization Workshop at the University of Chicago. Gale Mosteller provided valuable research assistance. I received support from the Center for the Study of the Economy and the State at the University of Chicago and from the Hoover Institution of Stanford University.

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1. Introduction

Three distinct approaches to the political sector have flourished during the last thirty years. According to welfare economics and the "new" public finance [see Samuelson (1947), Rawls (1971), Mirrlees (1971) or Atkinson and Stiglitz (1980)], the political sector should tax, subsidize and use other instruments to maximize social welfare. This maximization is constrained by the "status quo" distribution of income, the social welfare function considered appropriate, and the effects of different instruments on private incentives and behavior. A second approach considers how to overcome the "impossibility" of obtaining consistent political choices of legislatures, committees or other groups [see Arrow (1963), Black (1958), or Sen (1970)]. The third approach argues that actual political choices are determined by the efforts of individuals and pressure groups to further their own interests [see Downs (1957), Becker (1958), Buchanan and Tullock (1962), Riker (1962), Stigler (1975), Peltzman (1976), Aumann and Kurz (1977a), and Telser (1981)].

This paper builds on the third approach, especially on the work of George Stigler and Sam Peltzman, to develop an analysis of actual political choices. The third approach is linked to the first in an analysis of actual choices by assuming that the political sector maximizes "political utility" with taxes, subsidies, and other available political instruments.

A political "game" is developed to consider competition among pressure groups for political power and favors. Groups are assumed to

cooperate only in setting general rules of the political game. A group may spend resources to raise its political power by shifting the "political influence function" in its favor, recognizing that the political sector is maximizing political utility.

For purposes of exposition, two homogeneous groups are considered first: one pays taxes and the other receives subsidies. I show that the subsidized group is less successful in exerting political pressure, and the taxed group is more successful, when the "deadweight" cost of redistributing income is greater. Indeed, the taxed group has an "intrinsic" advantage when redistribution is costly, and an "intrinsic" disadvantage when "redistribution" raises aggregate efficiency.

These intrinsic advantages and disadvantages can be offset or reinforced by other determinants of political success. A group is more successful when political power is more readily shifted in its favor, and when free riding by members is more easily controlled. A relatively small group also tends to be more successful, for the political assistance it receives imposes smaller costs on each person in the other group.

The generalization from two to many homogeneous groups in section 5 introduces several new considerations. A group may dilute the effect on others of its political assistance by imposing the cost on several groups with many members. Moreover, a group may be both subsidized and taxed when subsidies are obtained from taxes on groups which differ from the groups that benefit from the taxes on this group. These considerations imply a tendency toward increased political activity as the number of distinct groups increases, and especially toward a larger gap between the gross and net subsidy (or tax) to any group.

Instead of ignoring or finessing the reluctance of voters to become informed about political issues, I assume that pressure groups compete to "purchase" votes by influencing the revealed "preferences" of voters with information, propaganda, and other appeals. This approach reduces the importance of large groups and coalitions containing a "majority" of the voters, and thereby differs greatly from median voter, minimum winning coalitions, and other approaches to political choices.

2. The Political Influence Function

The point of departure of the paper is that special interest groups compete for political power and favors, and cooperate to establish efficient rules of the political game that tend to benefit all groups. Efficient rules include the redistribution of income and the provision of public goods with efficient taxes, subsidies, regulations, and other political instruments. In addition, procedures would be established to resolve automatically countless numbers of political issues without inducing expensive lobbying by interested groups. One automatic, simple and attractive procedure would authorize a policy if, and only if, the sum of the weighted effects on each group were positive, where the weights are determined by the political "influence" of the group.

The efficient rules for the political sector in this paper are appealing because the positive theory of political behavior is linked analytically to the normative theories of optimal taxation and welfare economics. The political influence of all groups is assumed to be a stable function of their utilities and political activities, as incorporated into the function

$$P = P(U_1, \dots, U_m; g_1, \dots, g_m), \quad (1)$$

where U_i and g_i are the utility and political pressure, respectively, of the i th group. Political influence at a particular point is defined by the partial derivatives at that point, e.g., by $P_i = \partial P / \partial U_i$. To distinguish movements along P from the properties of P , political power can be defined by these derivatives when utilities are equal (e.g., by P_i and P_j when $U_i = U_j$). The political influence of all groups is non-negative (all $P_i \geq 0$) since other groups are not hurt when one group alone is made better off.

A desirable feature of any model of political behavior is that groups with greater political "influence" should have a greater effect on political decisions than groups with lesser influence. This desideratum is implied by my assumption that the government sector chooses taxes, subsidies, regulations, and other policies to maximize the value of P , called political utility, given the pressures (the g_i) exerted by all groups. We will see that maximizing the value of the stable influence function implies that Pareto-improving policies which make everyone better off would be chosen, that more influential groups tend to benefit from political redistributions of wealth, and that efficient methods implement all public policies.

In this approach, politicians and bureaucrats simply enforce¹ these political rules [for a contrary view, see Niskanen (1971)] in the same way that managers are hired to further the interests of owners. They are fired or repudiated by elections, impeachment, and even rebellion when they deviate excessively from these rules. As custodians of the political process, they do not try to outwit pressure groups, but implement the rules in a straightforward manner.

This approach does not imply that bureaucrats and politicians are unable to form pressure groups to raise their welfare beyond that determined by competitive equilibrium. Perhaps they even are more effective than most other groups since they are involved in the political process and may be helped directly by legislated wage increases.² Nevertheless, bureaucrats and politicians are not a crucial part of my story and receive little attention.

To simplify the analysis of political competition among groups, I assume initially only two homogeneous groups, s and t . Feasible taxes, regulations, and other political instruments determine a political opportunity set relating the utilities of s and t , with a boundary given by

$$F(U_s, U_t) = 0 . \quad (2)$$

The political process would choose points on the boundary because, otherwise both s and t could be made better off and political utility would be increased. Political utility is maximized at the point on the boundary with

$$\frac{\partial F}{\partial U_s} / \frac{\partial F}{\partial U_t} \equiv \frac{-dU_t}{dU_s} = \frac{\partial P}{\partial U_s} / \frac{\partial P}{\partial U_t} \equiv \frac{P_s}{P_t} , \quad (3)$$

where the ratio on the far right-hand side gives the political influence of s relative to t .

This equilibrium is shown graphically in Figure 2.1, where E_0 is the endowment point that gives the utilities of s and t produced by the private sector, P^0 and P^1 are political indifference curves when political pressures are g_s^* and g_t^* , respectively, and FF is the boundary of the political opportunity set. The positive slope of FF near E_0 indicates

that the private sector is not fully efficient because of public goods and externalities; public production of these goods and taxes on externalities change the endowed position from E_0 to \bar{E}_0 . After that, one group can benefit only at the expense of the other group.

Figure 2.1 about here

Since an increase in the utility of both groups always raises political utility, it would never be maximized on the positive section of the boundary. In particular, by moving from E_0 to \bar{E}_0 , both s and t are made better off and political utility is raised. The politically-optimal redistribution of utility away from \bar{E}_0 depends on the slopes of the political indifference curves (i.e., on the influence of s and t) and of the opportunity boundary near \bar{E}_0 . The indifference curves are partly determined by the political activities of s and t , and the boundary is determined by available taxes and other political instruments. In the figure, utility is redistributed from t to s at political equilibrium e_0 .

Essentially the whole analysis in this paper is consistent with general political influence functions, as long as the political opportunity set is well defined in the utility space. However, political opportunities are more sharply distinguished from political influence when opportunities are defined in the resource space rather than the utility space. Total resources can be approximated by the quantity of household commodities produced by market goods and services and own time [see the discussion in Michael and Becker (1973)]. Household commodities measure total services better than market goods and services because commodities also depend on the time not allocated to the market sector.

Since all members of a homogeneous group would receive the same utility in equilibrium, the political influence function in equation (1) would become

$$P = P(\overbrace{U_s(Z_s), \dots, U_s(Z_s)}^{n_s}; \overbrace{U_t(Z_t), \dots, U_t(Z_t)}^{n_t}; g_s^*, g_t^*) \quad (4)$$

where n_s and n_t are the number of identical s and t, respectively, and Z_s and Z_t are the equilibrium household commodities of each member. Envy and altruism are ruled out by the assumption that the welfare of each group depends only on own resources. To simplify further with only minor loss of generality, Z_s and Z_t will be treated as if they are the same aggregate household commodity, and P will be considered a direct (reduced form) function of Z_s , Z_t , n_s , and n_t .

The opportunity boundary can be written as

$$Z_s = F(\bar{Z}_s, \bar{Z}_t, Z_t, n_s, n_t). \quad (5)$$

The redistribution to each s from the point (\bar{Z}_s, \bar{Z}_t) at the edge of the positively sloped section of the boundary is defined by

$$R_s = Z_s - \bar{Z}_s ; \quad (6)$$

similarly, the redistribution away from each t is defined by

$$R_t = \bar{Z}_t - Z_t . \quad (7)$$

These redistributions to s and away from t are related by

$$R_s = \frac{(1-d)n_t R_t}{n_s} , \quad (8)$$

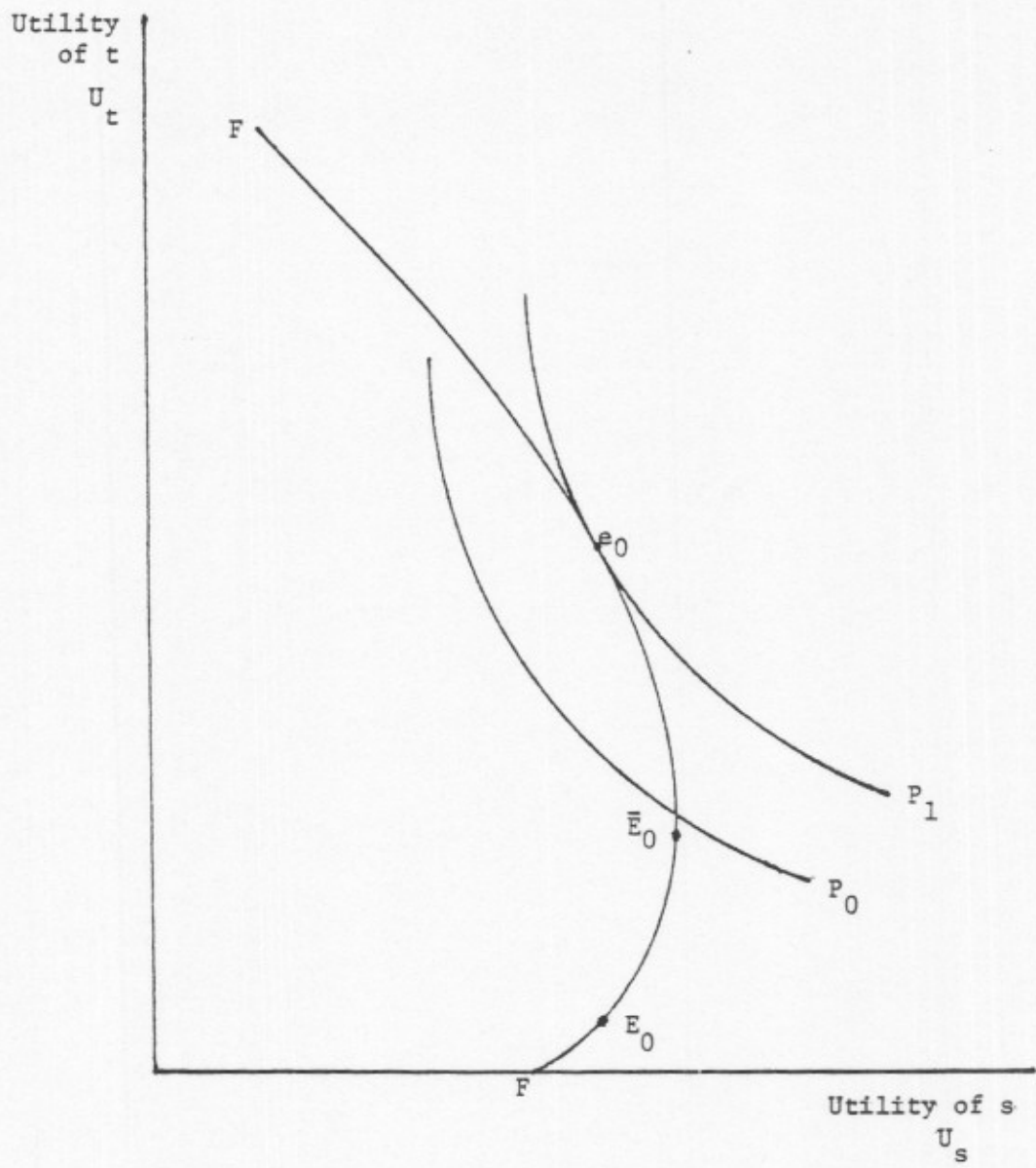


Figure 2.1

where d is the social deadweight loss (or gain) per unit tax imposed on t . This interpretation of d follows from the relation defining total commodity income:

$$Z = n_s Z_s + n_t Z_t = n_s \bar{Z}_s + n_t \bar{Z}_t - dn_t R_t = \bar{Z} - dn_t R_t. \quad (9)$$

Total income is unaffected by redistribution when $d = 0$, rises when $d < 0$, and falls when $d > 0$.

The marginal rate of deadweight loss (d_m), defined by the equation

$$\frac{dR_s}{dR_t} \left(\frac{n_s}{n_t} \right) = 1 - d_m, \quad (10)$$

is not less than and often exceeds the average rate of loss because more efficient taxes and regulations would be used prior to less efficient methods, and because the social cost of a given method tends to rise as more is redistributed.³ Hence the political opportunity boundary between Z_s and Z_t is usually concave, as FF in Figure 2.1.

If the political influence function in equation (4) is maximized with respect to R_s , the first-order condition is that

$$\frac{dP}{dR_s} = 0 = n_s P_s \frac{dZ_s}{dR_s} + n_t P_t \frac{dZ_t}{dR_s}, \quad (11)$$

where $P_s \equiv \frac{\partial P}{\partial Z_s}$, and similarly for P_t .

By substituting from equations (6), (7), and (10), this condition can be written as:

$$\frac{dP}{dR_s} = 0 = n_s \left(P_s - \frac{P_t}{1-d_m} \right); \quad (12)$$

hence

$$(1 - d_m)P_s = P_t . \quad (13)$$

Political equilibrium can also be expressed in terms of basic parameters measuring the level and elasticity of the deadweight loss function. If the cost of redistribution to s were determined by the function

$$n_s R_s = n_t g_0 R_t^{g_1} , \quad (14)$$

where $g_0 > 0$ and $0 < g_1 \leq 1$ are constants, then

$$g_1 = \frac{1-d_m}{1-d} = \frac{dR_s}{dR_t} \frac{R_t}{R_s} \quad (15)$$

is the elasticity relating R_s to R_t , and g_0 ($= 1 - d$ when $R_t^{g_1-1} = 1$) is a measure of the average rate of loss. The equilibrium condition in (13) becomes

$$g_1 g_0 (R_t)^{g_1-1} P_s = P_t . \quad (16)$$

3. Political Pressure by the Subsidized Group

Part II will concentrate on the implications of political equilibrium (given by (13) or (16)) for the trade-off between equity and efficiency, the degree of unanimity, and other political issues. Political equilibrium is only an intermediate stage in the competition among groups to raise their political power and influence, the main topic of this paper. However, two important implications of political equilibrium are useful in analyzing political competition and will be stated for later reference.

Proposition 3.1: A reduction in the average rate of deadweight loss (an increase in g_0) increases redistribution to the subsidized group.⁴

Proposition 3.2: An increase in the elasticity of the deadweight loss function (an increase in g_1) also increases the amount redistributed.⁵

Groups compete for political influence by spending time, energy, and money on the production of political pressure. The production function of pressure for group s can be expressed as

$$g_s = g_s(a_s n_s, n_s), \quad (17)$$

where a_s represents the resources spent per member on maintaining a lobby, attracting favorable votes, issuing pamphlets, contributing to campaign expenditures, cultivating bureaucrats and politicians, and in many other ways.

Presumably, pressure increases at a non-increasing rate when expenditures increase:

$$\frac{\partial g_s}{\partial m_s} > 0 \quad (18)$$

and

$$\frac{\partial^2 g_s}{\partial m_s^2} \leq 0, \text{ where } m_s = a_s n_s. \quad (19)$$

The total effect of an increase in the number of (identical) members, when expenditures per member are held constant, is

$$\frac{dg_s}{dn_s} = a_s \frac{\partial g_s}{\partial m_s} + \frac{\partial g_s}{\partial n_s} \quad (20)$$

The first term is positive by (18), while the second term tends to be negative because of free riding: each person wants to shirk his obligation and impose the cost of producing pressure on the other members of his group [see the pioneering study by Olson (1965)]. Free riding can be partially controlled by policing behavior, punishing deviant members with social ostracism, intimidation and fines, and by implementing rules for sharing benefits and costs that reduce the incentive to shirk [see, e.g., Groves and Ledyard (1977); and Tideman and Tullock (1976)].

Since free riding is usually more easily controlled when the number of members is small, the first term in (20) would tend to dominate the second when n_s is small. As n_s increases, however, and free riding becomes more serious, $\frac{dg_s}{dn_s}$ might become negative because the second term would grow larger (absolutely) and the first term would grow smaller (by (19)). The production of pressure for a given a_s would be maximized when $\frac{dg_s}{dn_s} = 0$, that is, when returns to "scale" are exactly offset by the diseconomies of free riding.

Net commodity income excludes expenditures on political activity:

$$Z_s = \bar{Z}_s + R_s - a_s \quad (21)$$

Income per member of a politically active group ($a_s > 0$) would be maximized when

$$\frac{dZ_s}{da_s} = 0, \text{ or } \frac{dR_s}{da_s} = 1. \quad (22)$$

Political pressure by a group raises its income by increasing its political power. All groups could determine their optimal pressure and expenditure on political activity if they knew how these affected political power and the behavior of the political sector. I assume that groups do not cooperate when competing for power⁷ and act as if the pressure created by other groups is outside their control. Moreover, they know that the political sector maximizes political utility while taking the pressure exerted by all groups as given.

With these assumptions, the effect of a small increase in pressure can be found by differentiating the political equilibrium condition (13) (or (16)) while holding constant the pressure exerted by other groups. In particular, by differentiating (16) with respect to g_s and combining terms, the marginal product of pressure by s is found to be

$$MP_s = \frac{dR_s}{dg_s} = \frac{\tilde{P}_{sg_s} - \tilde{P}_{tg_s}}{-\tilde{P}_{ss} + \tilde{P}_{ts} + \frac{n_s}{n_t} [\tilde{P}_{ts} - \frac{\tilde{P}_{tt}}{1-d_m}] + \frac{1-g_1}{g_1 R_s}} \quad (23)$$

where $\tilde{P}_{sg_s} = \frac{\partial \log P_s}{\partial g_s}$, $\tilde{P}_{ss} = \frac{\partial \log P_s}{\partial Z_s}$, and similarly for the other

notation. The numerator must be positive because pressure by s increases P_s relative to P_t .⁸

The denominator must also be positive by the second-order condition for (16) to maximize political utility. This condition would be satisfied if political indifference curves were convex, or less concave than the deadweight loss function. The very different implications of

convex and concave indifference curves for income inequality are developed in Part II; this paper concentrates on their implications for political power and political competition.

Pressure would be raised until the marginal product of additional pressure no longer exceeded the marginal cost; hence the equilibrium condition

$$MC_s = \frac{1}{n_s \frac{\partial g_s}{\partial m_s}} = \frac{\tilde{p}_{sg_s} - \tilde{p}_{tg_s}}{-\tilde{p}_{ss} + \tilde{p}_{ts} + \frac{n_s}{n_t} [\tilde{p}_{ts} - \frac{\tilde{p}_{tt}}{1-d_m}] + \frac{1-g_1}{g_1 R_s}} = MP_s. \quad (24)$$

Although the second derivatives of the political preference function generally change as Z_s and Z_t change, to simplify the analysis without much loss of generality, I assume that \tilde{p}_{ss} , \tilde{p}_{ts} , and \tilde{p}_{tt} are approximately constant.

According to Proposition 3.1, an increase in the cost of redistributing income (a smaller g_s) would reduce the amount redistributed (R_s) when the pressure by all groups is held constant. A reduction in P_s implies (by (13)) that the equilibrium value of $1-d_m$ would be lower if political indifference curves were convex and higher if they were concave. The term $-\frac{\tilde{p}_{tt}}{1-d_m}$ in the denominator of the marginal product would increase in both cases because \tilde{p}_{tt} tends to be negative when indifference curves are convex and positive when they are concave. Since the last term in the denominator would also increase, we have proven that an increase in the cost of subsidizing s lowers the marginal product of pressure by s , which induces s to exert less pressure. Therefore, an increase in the cost of subsidies not only reduces the subsidy for

a given distribution of political influence (Proposition 3.1) but also reduces the pressure exerted by the subsidized group to raise its influence. We will state this important result as follows.

Proposition 3.3: The gain to a subsidized group from exerting pressure to raise its political influence is greater when the deadweight cost of subsidizing that group is smaller.

The social cost of many programs, such as agricultural price supports or oil entitlements, has often seemed distressingly large. Yet Proposition 3.3 implies that politically successful programs are "cheap", at least relative to the millions of feasible programs that are too costly to muster enough political support.⁹ Some readers would reply that Proposition 3.3 is largely irrelevant to actual political decisions because most programs are excessively expensive because of "irrational" political decisions. For example, aid to farmers or to the railroad industry would become more efficient, it is alleged, if direct subsidies replaced acreage restrictions or restrictions on competition from trucks.

These and similar examples, however, appear to support rather than contradict Proposition 3.3 and the rational approach to politics: new entrants can dissipate the gain from direct subsidies, and the social cost of the taxes used to finance direct subsidies cannot be neglected. Indeed, Bruce Gardner has shown nicely (1981) that acreage restrictions are usually a more efficient way of raising the incomes of farmers, and that direct subsidies tend to be used when they are more efficient: for crops with inelastic supply curves [also see the discussion in Stigler (1975)].

The elasticity of the subsidy function (g_1) is determined by supply and demand functions and by the methods used to redistribute income. Proposition 3.2 implies that an increase in the elasticity of the subsidy function (an increase in g_1) would lead to an increase in the subsidy (R_s) which in turn would raise the marginal product of pressure by the subsidized group (s). Therefore, the argument used to prove Proposition 3.3 also proves that an increase in the elasticity not only raises the subsidy for a given distribution of political influence, but also raises the pressure exerted by the subsidized group to increase its influence. This can be stated as follows.

Proposition 3.4: The gain to a subsidized group from exerting pressure to raise its political influence is larger when the elasticity of the deadweight cost function becomes larger.

Proposition 3.4 implies that highly subsidized pressure groups tend to have more elastic subsidy functions. This implication is used in Part II with the more extreme assumption that $g_1 \cong 1$, or that the marginal cost of a subsidy is constant.

An increase in the political power of the subsidized group is more beneficial to that group when political indifference curves are less convex (or more concave) because then a bigger subsidy would not reduce its political influence by as much. Formally, the marginal product of pressure by s in equation (24) is greater when indifference curves are less convex (or more concave) because the denominator is smaller.

Proposition 3.5: Subsidized groups gain more from political activity when political indifference curves between them and the groups taxed are less convex (or more concave).

This proposition implies that successful pressure groups and groups financing their subsidies tend to be closer substitutes politically than are randomly chosen groups. Indeed, since political indifference curves between heavily subsidized and taxed groups may even be concave (although less so than the subsidy function), the common assumption in welfare economics of convex social indifference curves may only partially apply to political indifference functions and positive political analysis.

Equilibrium in the political sector (given by (13) or (16)) would be independent of the size of the groups taxed and subsidized (n_t and n_s) if the influence of any person (given by P_s or P_t) were independent of size. Such independence may appear surprising because an increase in, say, the number taxed reduces the negative effect ($\frac{n_s R_s}{n_t}$) on each person taxed. However, the negative effect on political utility is also raised because more persons are harmed; in equilibrium, these effects of a change in n_t (or in n_s) exactly offset each other.

A change in n_t relative to n_s changes the marginal product of pressure by s (see equation (23)) because the number in each group is relevant when political equilibrium is disturbed by a shift in the distribution of power.¹⁰ Marginal products depend, however, only on the relative, not absolute, size of groups because equal (percentage) changes in the size of all groups do not affect the cost to each tax-

payer ($\frac{n_s R_s}{n_t}$) of a given subsidy to each recipient. The number subsidized relative to the number taxed has been widely recognized as an important factor in political success. However, the obstacles to organizing taxpayers have been stressed,¹¹ not the effect of size when the pressure exerted by taxpayers is held constant.

The sign as well as magnitude of the latter effect depends on the shape of political indifference curves. If they were convex, then the term $\tilde{p}_{ts} - \frac{\tilde{p}_{tt}}{1-d_m}$ in the function giving the marginal product of pressure by s would be positive, and these marginal products would be raised by a decrease in $\frac{n_s}{n_t}$; conversely, if indifference curves were concave, $\tilde{p}_{ts} - \frac{\tilde{p}_{tt}}{1-d_m}$ would be negative, and these marginal products would be lowered by a decrease in $\frac{n_s}{n_t}$. The shape of indifference curves is important because s is harmed politically by a reduction in the welfare of t when indifference curves are convex, and s is benefitted when they are concave.

Since a change in the number of taxpayers changes marginal products without affecting the cost of producing pressure by the subsidized group, we have proven another proposition.

Proposition 3.6: An increase in the number of taxpayers raises the gain to the subsidized group from exerting political pressure¹² if political indifference curves are convex, and lowers gain if they are concave.

If political indifference curves were convex (concave), the marginal product of pressure by the subsidized group would be maximized (minimized) when one person taxed many others. The equilibrium level of pressure cannot be determined, however, without considering also the effect of size on marginal costs of producing pressure. The discussion of equation (20) suggests that the cost per member declines initially with an increase in size because free riding is limited in small groups, and rises eventually because free riding is difficult to control in large groups.¹³ Although marginal products always decline (or always rise) when a pressure group's size increases, the effects of modest percentage changes in size are negligible when the group is small (relative to the group taxed), and become progressively larger as the group becomes larger.

Consequently, the effect on marginal costs dominates when a group is small, and the effect on marginal products tends to dominate when a group is large. The rapid fall in marginal costs in small groups is perhaps the major reason why effective pressure groups usually have many rather than just a few members. As a result, relevant theories of actual political behavior are theories of group behavior,¹⁴ in contrast to the individualistic "bias" of welfare economics.

Since marginal products fall rapidly (with convex indifference curves) and marginal costs per member may rise as a group becomes larger, the most effective pressure groups are usually not the largest. This would explain why agriculture is often heavily subsidized when a relatively small sector with relatively few "votes" -- as in the United States, Japan,

and Israel --, and is often heavily taxed when a large sector with many "votes" -- as in Poland, Thailand, or China [see Peterson (1979)], It also explains why the smaller capitalist "class" is a more effective pressure group than the much larger worker "class", although small groups of workers such as truck-drivers or Chrysler employees, may be quite effective.

4. Political Pressure by Taxpayers

Taxpayers need not remain passive and can exert pressure to reduce their taxes. The production of pressure by taxpayers depends on their number and their political expenditures, as in equation (18) for subsidy recipients. Since pressure by recipients and equilibrium condition (16) are assumed to be outside the control of taxpayers, the marginal product of their pressure can be found by differentiating (16) with respect to g_t . Their income net of expenditures on political activities is maximized with a pressure that equalizes marginal cost and marginal product:

$$MC_t = \frac{1}{n_t \frac{\partial g_t}{\partial m_t}} = \frac{\tilde{P}_{tg_t} - \tilde{P}_{sg_t}}{-\tilde{P}_{tt} + \tilde{P}_{st} + \frac{n_t}{n_s} [\tilde{P}_{st} - (1-d_m)\tilde{P}_{ss}] + \frac{1-g_1}{R_t}} = MP_t, \quad (25)$$

where $\tilde{P}_{tg_t} = \frac{\partial \log P_t}{\partial g_t}$, $\tilde{P}_{sg_t} = \frac{\partial \log P_s}{\partial g_t}$, and similarly for the other second derivatives. The numerator is positive because the power of t is raised relative to the power of s , and the denominator is positive by the second-order condition for (16) to maximize political utility.

The denominator depends on the convexity of political indifference curves and the relative size of the group exerting pressure in the same

way as does the denominator of the marginal product of s (see equation (24)). Consequently, the arguments used to establish Propositions 3.5 and 3.6 also establish corresponding propositions for taxpayers.

Proposition 4.1: Taxpayers gain more from political activity when political indifference curves are less convex or more concave.

Proposition 4.2: An increase in the number of persons subsidized raises the gain to taxpayers from exerting political pressure¹⁵ if political indifference curves are convex, and lowers the gain if they are concave.

Marginal costs of producing pressure as well as marginal products depend on the number of taxpayers. Whereas an increase in their number would always reduce (or raise) marginal products if indifference curves were convex (or concave), an increase in the size of a small group reduces marginal costs per member. Since the effect on marginal costs dominates in small groups and the effect on marginal products tends to dominate in large groups, generally neither the smallest nor the largest groups of taxpayers are the most effective pressure groups.

Whereas Propositions 3.3 and 3.4 indicate that an increase in deadweight costs always reduces the marginal products of subsidy-recipients, such an increase is likely to raise the marginal products of taxpayers. An increase in deadweight costs (a decrease in g_0 or g_1 in the cost function in (14)) would lower $-(1-d_m) \frac{n_t}{n_s} \tilde{P}_{ss}$ and could raise or lower $\frac{1-g_1}{R_t}$ in the denominator of (25). Hence the marginal product of t would

increase if R_t did, and might increase even if R_t did not. Since t is made worse off by an increase in R_t , an increase in deadweight costs raises the gain to t from exerting pressure when t is made worse off. Deadweight costs have opposite effects on the marginal products of payers and recipients because an increase in these costs raises the harm to payers from a larger subsidy, but lowers the harm to recipients from smaller taxes. The effects on taxpayers will be stated as follows.

Proposition 4.3: The gain to taxpayers from exerting pressure to raise their political influence is likely to be increased by an increase in deadweight costs.

Proposition 4.4: The gain to taxpayers from exerting pressure is likely to be reduced by an increase in the elasticity of the deadweight cost function.

The marginal product function of taxpayers in (25) can be rewritten to facilitate comparison with recipients:

$$MP_t = -\frac{\partial R_t}{\partial g_t} = \frac{\frac{n_s}{n_t} \frac{1}{1-d_m} (\tilde{p}_{tg_t} - \tilde{p}_{sg_t})}{-\tilde{p}_{ss} + \tilde{p}_{ts} + \frac{n_s}{n_t} (\tilde{p}_{ts} - \frac{p_{tt}}{1-d_m}) + \frac{1-g_1}{g_1 R_s}} \quad (26)$$

Since the denominator is the same as the denominator in equation (23), the ratio of the marginal products of payers and recipients is

$$\frac{MP_t}{MP_s} = \frac{-\partial R_t / \partial g_t}{\partial R_s / \partial g_s} = \frac{n_s}{n_t (1-d_m)} \frac{\tilde{p}_{tg_t} - \tilde{p}_{sg_t}}{\tilde{p}_{sg_s} - \tilde{p}_{tg_s}} \quad (27)$$

Hence the ratio of marginal products for equally large and equally effective groups of payers and recipients is simply:

$$\frac{MP_t}{MP_s} = \frac{1}{1-d_m} \quad \text{when } n_s = n_t \quad \text{and} \quad \tilde{P}_{tg_t} - \tilde{P}_{sg_t} = \tilde{P}_{sg_s} - \tilde{P}_{tg_s} . \quad (28)$$

The relation between R_s and R_t implies that the ratio of the marginal effects on the subsidy to s is

$$-\frac{\partial R_s / \partial g_t}{\partial R_s / \partial g_s} = \frac{1}{(1-d_m)^2} \frac{\tilde{P}_{tg_t} - \tilde{P}_{sg_t}}{\tilde{P}_{sg_s} - \tilde{P}_{tg_s}} . \quad (29)$$

The ratio in (28) would equal unity when redistribution is socially costless ("lump-sum" taxes and subsidies), always exceeds unity when redistribution is costly, is always less than unity when redistribution is productive, and is above 1.4 when the marginal deadweight loss exceeds .3. Of course, this "intrinsic" disadvantage of subsidy recipients when deadweight costs are positive can be overcome with a more efficient size or with greater skill at raising political influence. Indeed, the presumption must be that heavily subsidized groups, such as dairy farmers, are able to overcome successfully any "intrinsic" disadvantage. Let us state this important result on the "intrinsic" advantage of taxpayers.

Proposition 4.5: Taxpayers have an "intrinsic" advantage in exerting pressure to raise political influence that is small when the marginal deadweight costs are small, and is sizable even with moderate costs. Subsidy

recipients have the "intrinsic" advantage when redistribution is socially productive.

Since taxpayers only have an "intrinsic" advantage when they reduce their taxes and are at an "intrinsic" disadvantage when they are subsidized by others, they gain more from reducing taxes than from imposing new ones. In other words, they have a selfish incentive to eliminate socially costly "cross-hauling": taxes and subsidies on each group that raise the deadweight cost per net dollar redistributed from one group to the other [see the discussions in Layard (1980) and Gardner (1981)]. Moreover, this incentive to eliminate cross-hauling is greater when its social cost is greater; namely, when taxes and subsidies have larger social costs. Unfortunately, this incentive is much weaker and may be reversed when taxpayers can be subsidized by groups other than those subsidized by its taxes (see section 5).

The noncooperative equilibrium levels of pressure by both s and t are determined from the first-order conditions to maximize their incomes (equation (24) and (25)) and the first-order condition to maximize political utility (equation (13)). The determination of equilibrium can be shown using the reaction curves of s and t , which graph the relation between specified pressure of t (or s) and the optimal pressure of s (or t). The noncooperative equilibrium is at their point of intersection (see points e_0 , e_1 , and e_2 in Figures 4.1 and 4.3) because only then does the optimal pressure equal the specified pressure for both groups. s 's reaction curve tends to be positively sloped because increased pressure by t reduces taxes and marginal deadweight costs, which raises the optimal pressure by s . Similarly, increased pressure

by s raises subsidies and marginal costs, which raises t 's optimal pressure.¹⁶ In Figure 4.2, s does not exert any pressure (although t does) because the gain to s from political activity is too small.

Figures 4.1, 4.2, and 4.3 about here

If marginal costs were reduced by s (perhaps because of improved control over its free riding), its reaction curve would shift to the right (from s^0 to s^1 in Figure 4.1). This induces a "countervailing" increase in pressure by t (from g_t^0 to g_t^1) that raises the pressure by s beyond its initial increase. To take a second example, a reduction in the convexity of political indifference curves raises the marginal products of both s and t , which shifts the reaction curve of s outward and of t upward (from s^0 to s^2 and from t^0 to t^2 in Figure 4.1). Each shift raises the equilibrium pressure by the other group beyond the initial increase. As a final example, an exogenous increase in deadweight costs reduces the marginal product of s and shifts its reaction curve inward from s^0 to s^1 (in Figure 4.3), but raises the marginal product of t , and shifts its reaction curve upward from t^0 to t^1 . Pressure by t is greater and pressure by s is smaller in the new equilibrium (at e_1).

Both s and t would be made better off by appropriate reductions in both their pressures because costs of producing pressure would be reduced without affecting taxes or subsidies. If the equilibrium marginal deadweight cost were .25, and if the equilibrium marginal effects on political power were equal (i.e., $\tilde{P}_{tg_t} - \tilde{P}_{sg_t} = \tilde{P}_{sg_s} - \tilde{P}_{tg_s}$), then equation (29) indicates that one unit of pressure by t has the same effect on the subsidy as 4/3 units of pressure by s . Consequently, a reduction in g_t

political pressure
of taxpayers g_t

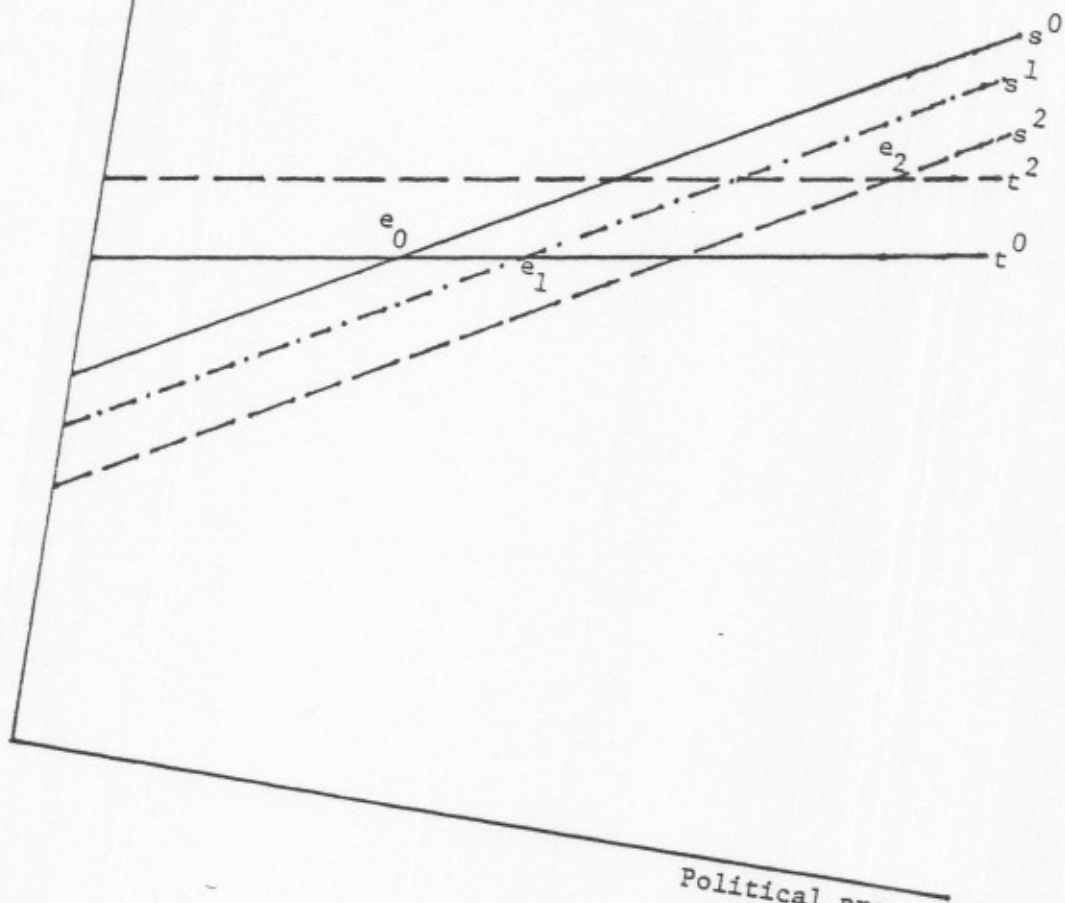
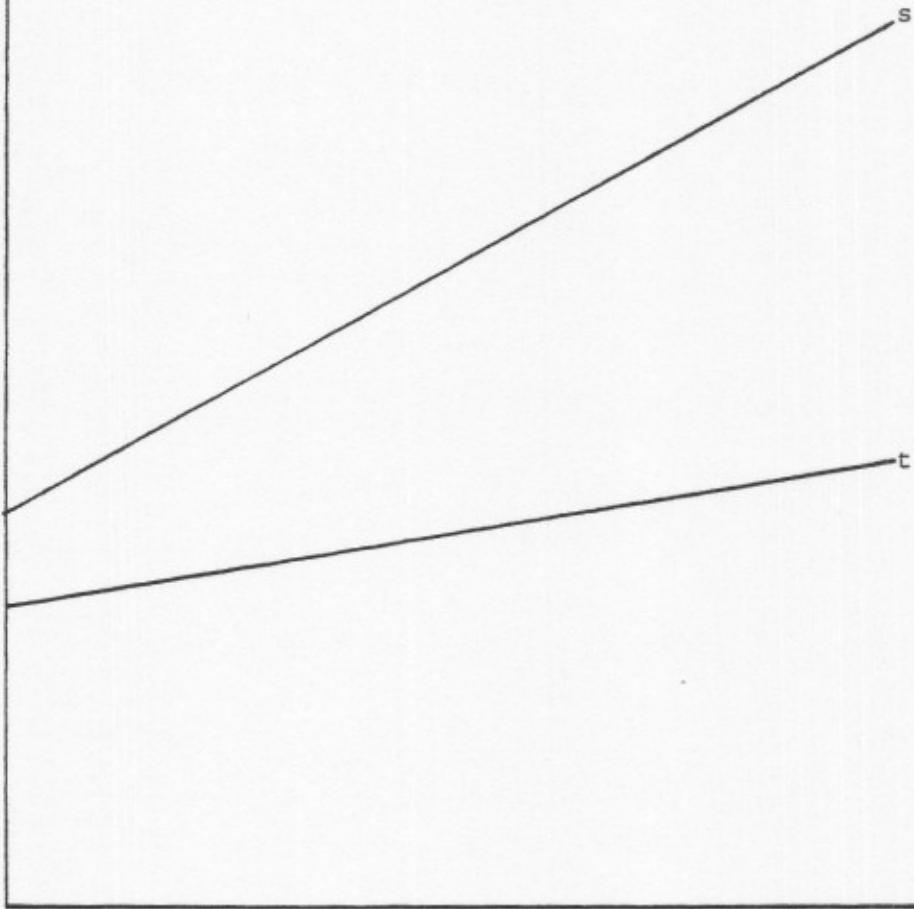


Figure 4.1

Political pressure of
subsidized group g_s

political pressure
of taxpayers g_t



Political pressure of
subsidized group g_s

Figure 4.2

political pressure
of taxpayers g_t

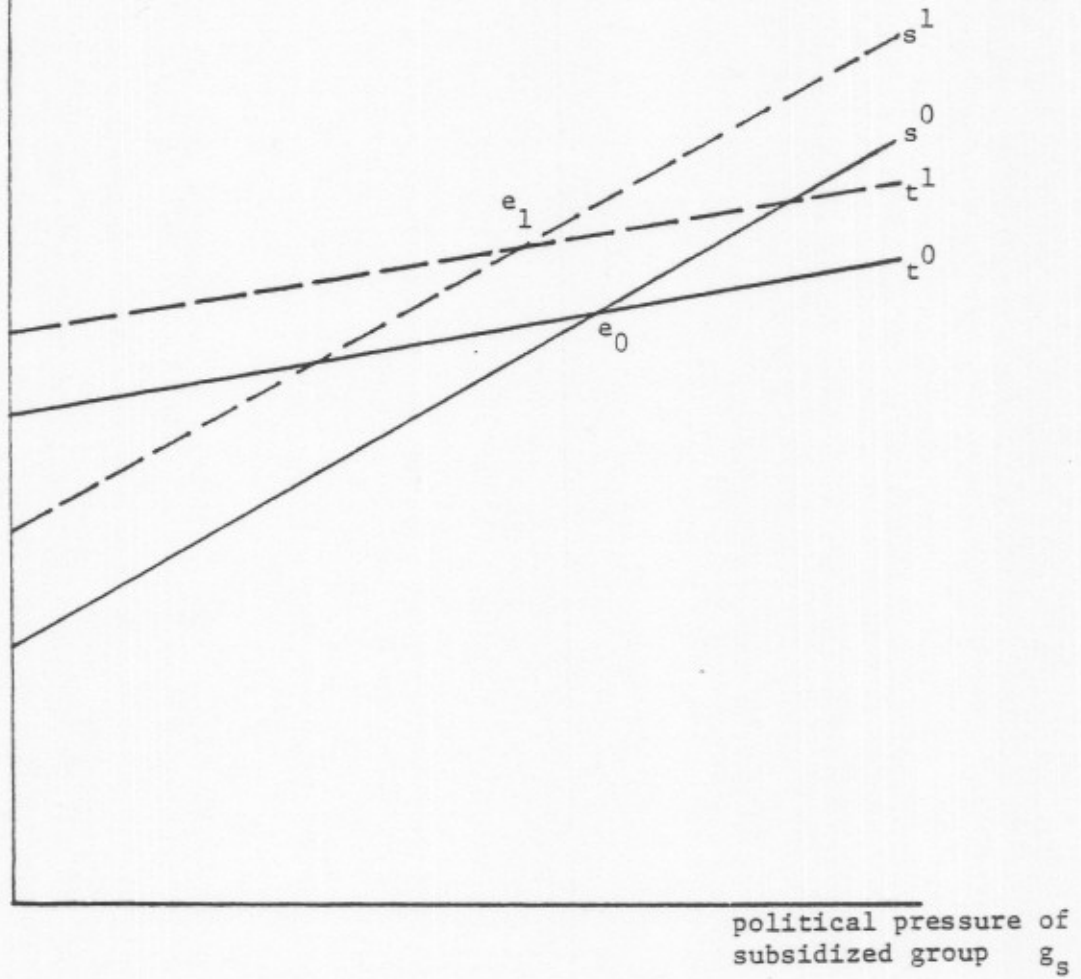


Figure 4.3

combined with $4/3$ as large a reduction in g_s would not affect R_s (or R_t), but would reduce expenditures on producing pressure.

Since I have assumed that political rules are cooperatively determined by pressure groups to improve the efficiency of the political "game", one should expect rules that economize on costs of producing pressure. Restrictions on campaign contributions and on the outside earnings of Congressmen, and the registration and monitoring of pressure groups are examples of these rules. Presumably, such rules would be much more extensive and restrictive if they were not so readily circumvented by pressure groups.

5. Many Pressure Groups

Even small political units typically have many pressure groups. As a start toward generalizing the analysis from two to many pressure groups, write the political influence function as

$$P = P(\underbrace{Z_1, \dots, Z_1}_{n_1}, \underbrace{Z_2, \dots, Z_2}_{n_2}, \dots, \underbrace{Z_m, \dots, Z_m}_{n_m}; g_1^*, g_2^*, \dots, g_m^*), \quad (30)$$

where I continue to assume that all members of a group are identical. The political opportunity set also must be generalized because a subsidy may be financed by taxes on several groups and taxes may be used to subsidize several groups. The function relating a subsidy to taxes on other groups is generalized from (14) to

$$n_s R_s = \sum_{j=1}^k n_j^{-g_0^j} R_j^{g_1^j}. \quad (31)$$

Since the political sector maximizes political utility while taking as given the pressure exerted by all groups, the equilibrium conditions implied by equations (30) and (31) are

$$(1 - d_{m_j}) P_s = P_j, \text{ where } 1 - d_{m_j} = g_0^j g_1^j R_j^{g_1^j - 1} \text{ for } j = 1, \dots, k. \quad (32)$$

If s assumes that the pressures exerted by these k taxed groups are outside its control, the effect of additional pressure by s on the subsidy and the distribution of the tax burden would be found by differentiating equation (32) and solving for $\frac{dR_s}{dg_s}$ and the $\frac{dR_j}{dR_s}$. To simplify the expressions, I assume that $P_{ij} = 0$ for all $i \neq j$, $g_1^j = 1$, and $\tilde{P}_{jg_s} \equiv \tilde{P}_{tg_s}$ for all j . Then

$$\frac{dR_s}{dg_s} = \frac{\tilde{P}_{sg_s} - \tilde{P}_{tg_s}}{-\tilde{P}_{ss} - \frac{n_s}{\sum_{j=1}^k \frac{n_j g_0^j}{\tilde{P}_{jj}}}}, \quad (33)$$

and

$$\frac{dR_i}{dR_s} = \frac{n_s}{\sum_{j=1}^k n_j g_0^j \frac{\tilde{P}_{ii}}{\tilde{P}_{jj}}}. \quad (34)$$

Equation (33) generalizes the marginal product of s in (23) to many groups of taxpayers, and reduces essentially to a single group of taxpayers, t , when $\tilde{P}_{ii} = \tilde{P}_{jj} = \tilde{P}_{tt}$, $g_0^j = 1 - d_m$ for all j , and $n_t = \sum_{j=1}^k n_j$. Similarly, equation (34) generalizes the definition of marginal deadweight loss in equation (10) to many groups of taxpayers.

The propositions derived in section 3 from the equilibrium condition (24) clearly apply also to this generalization of (24). Moreover, Proposition 3.6 and equation (33) indicate that a group should try to finance its subsidy with taxes having a broad incidence rather than

with more specialized taxes on a few groups because the gain from political activity is greater when more persons are taxed. This advantage to subsidized groups of taxes having broad incidence does not depend on whether taxpayers can generate "countervailing political pressure" since the pressure of taxpayers is held constant (see the discussion in section 3).

Each taxed group tries to shift more of the burden to the other groups taxed by exerting pressure that raises its power relative to these groups as well as relative to the subsidized group. Although the deadweight costs of taxation still give taxed groups an "intrinsic" advantage over subsidized groups (Proposition 4.5), a subsidized group could overcome even large costs by imposing taxes on several groups with many members, or by raising its subsidy without raising taxes by reducing the subsidies to other groups.

I showed earlier that if there are only two groups, the group taxed would reduce taxes rather than impose separate taxes on the group subsidized (see section 4). A group that is taxed has an additional incentive to avoid inefficient "cross-hauling" of taxes and subsidies if it can shift more of the tax burden to other groups. However, the incentive to avoid cross-hauling is significantly reduced when it can impose taxes on groups other than those subsidized by its taxes. Therefore, cross-hauling is likely to increase as the number of groups increases; indeed, the net subsidy to different income classes in the United States can be estimated only with heroic assumptions¹⁷ because of the many taxes and subsidies on each class.

I have assumed that all pressures are determined by a Cournot-Nash noncooperative equilibrium. The assumption that each competing group takes the pressure from other competing groups as given is more appealing when there are many groups because the pressure by any single group then has less impact on each of the other groups. However, the assumption that groups do not cooperate is less appealing because several smaller groups may cooperate to take advantage of scale economies in the production of pressure, to form a larger voting bloc, or to be more effective at raising their political power. Therefore, my assumption that groups cooperate only to set efficient rules of the political game should be modified in further work.

The extent of cooperation among distinct groups is severely limited, however, by the reduced political effectiveness of heterogeneous groups. Homogeneous groups (so-called "single interest" groups) are more effective because they can more readily monitor their members to limit free riding and can further their interests with simpler political messages (see the next section on voting).¹⁸ Homogeneous economic interests are especially effective because excise taxes and output and entry restrictions that subsidize or tax persons in similar occupations or industries are more efficient (i.e., involve less deadweight cost) than the methods available for subsidizing persons with unrelated interests, such as those with the same birthday or eye color. I suspect that these advantages, far more than the social significance of productive relations emphasized by Marx, explain the prominence of economic pressure groups in political life.¹⁹

6. Voters

Theories of rational politics usually build on the given political preferences of voters, be they theories of the median voter [Becker (1957, 1971)], constitutional consent [Buchanan and Tullock (1962)], or cooperative political games [Riker (1962) and Aumann and Kurz (1977_a, _b)]. I too claim to have presented a theory of rational political behavior, yet have hardly mentioned voting. This neglect is not accidental because the political preferences of voters are not a crucial independent force in rational political behavior. These "preferences" are manipulated and created through the information and misinformation provided by interested pressure groups, who shape the political influence function partly by changing the revealed "preferences" of enough voters.²⁰

Although choices in the private sector are also influenced and directed by advertising and other "selling" activities, rational individuals have an incentive to become reasonably well informed about most private decisions because they and their families usually bear the full consequences of their mistakes. The incentive to become well informed about political issues is weak because each individual only has a minor effect on political outcomes decided by the majority (or by similar rules).²¹ Hence the average person knows far more about supermarket prices or the performance of cars than about import quotas or public wages. Although rational political behavior has appeared to be contradicted by widespread voter ignorance and apathy, the opposite conclusion is justified because rational voters remain ignorant and do not invest much in political information.

To be sure, members of the pressure groups that are so important to my analysis have incentives to free-ride that are similar in nature to these incentives of voters to remain ignorant. However, pressure groups are frequently successful at limiting free riding because they are relatively small and homogeneous, they do not reach decisions with majority-type rules, and informed members can acquire much greater influence than others.

I have little to say about the productivity of different kinds of expenditures to affect public opinion and voting. Presumably, pressure groups can more readily promote interests which voters believe are bound up with national security, nationalism, conservation, health, and other popular goals. Many groups pretend to seek these goals, and persons who contribute directly to them, including doctors and military officers, frequently can form successful pressure groups. The ignorance of voters and fragility of their political preferences also explains the importance of political form — including political rhetoric, endurance during long campaigns, and an "honest" face — because voters have so little direct knowledge about matters of political substance.

The findings of economists and others — for example, that tariffs and minimum wages reduce aggregate efficiency — seldom have a noticeable effect on public policy because findings that oppose the interests of powerful pressure groups are offset by these groups with selected information and other appeals to public opinion and legislatures. Facts and analyses affect public policy only when they become so familiar that they cannot easily be offset by pressure groups, or when they raise the welfare of the important groups.

The efficient political sector assumed in this paper is compatible with extensive voter ignorance because efficiency can emerge from cooperation among the major pressure groups even when voters are not well informed. Voters are thereby partially protected against excessive manipulation since most benefit from increases in aggregate efficiency. Competition among pressure groups also protects voters because the effects of these groups to influence public opinion and raise their political power are partially offsetting (see equation 29). Of course, the protection afforded by competition and efficiency is limited because some groups do manage to manipulate voters to extract large subsidies.

Pressure groups, in effect, "purchase" favorable votes with their political activities. If votes can be "purchased" from outsiders almost as cheaply as from members,²³ cooperation among pressure groups to form a majority coalition [as in Riker (1962) or Aumann and Kurz (1977a, b)] would not be the sole or even principal method of acquiring political power. Small independent pressure groups, such as the Sierra Club or the population of Greek origin in the United States, can acquire substantial power by influencing legislatures and the electorate.

7. Summary and Conclusions

This paper presents a model of the political process that assumes rational behavior by all participants. The political sector passively implements the political rules; politicians and bureaucrats who fail to implement these rules are presumed to be replaced quickly and "punished". The main activity of the political sector is to maximize "political utility" determined by a political influence function

that depends on the welfare of different groups. Utility is maximized subject to a constraint on feasible taxes, subsidies, and other political projects. By maximizing political utility, the political sector efficiently pursues the goals incorporated into the influence function; what may seem like inefficient political behavior would then really measure the conflict between these goals and "efficiency".

Pressure groups are the active and important participants: they jointly establish the political rules, and compete for political power and political benefits by spending resources to shift the influence function in their favor. Each pressure group seeks to maximize the welfare of its members, subject to competition from other groups and the maximization of political utility by the political sector.

The gain to any group from political activity depends on the number of members and the homogeneity of their interests because these determine how well a group can convey simple political messages and can limit "free riding" and shirking of their members' responsibilities. If political indifference curves were convex, the gain to a subsidized group would be greater when more taxpayers finance its subsidy, for then an increase in the subsidy does less harm to each taxpayer. Similarly, the gain to a taxed group from political activity is greater when more persons are subsidized by its taxes.

Since taxes and subsidies affect hours worked and other uses of resources, they generally reduce efficiency. The gain to a subsidized group from political activity is smaller when such "deadweight" costs of their subsidy are greater because an increase in the subsidy then does more harm to taxpayers. The gain to taxpayers from political activity,

however, is greater when deadweight costs are greater because a reduction in their taxes then does less harm to subsidy recipients. Indeed, payers have an "intrinsic" advantage compared to recipients from political activity that vanishes when deadweight costs are nil (i.e., with lump-sum taxes and subsidies), and increases as these costs increase. Subsidized groups may overcome their "intrinsic" disadvantage with efficient control of free riding, skill at manipulating voters, and in other ways.

The preferences of voters receive little attention in this paper because of my belief that they cannot be a crucial independent force in a rational approach to political behavior. Although many have recognized that the electorate has little incentive to be well informed on political issues because each voter has a negligible effect on political outcomes, this insight is usually ignored or finessed. Instead of doing either, I use this insight to explain why some pressure groups can successfully manipulate the preferences of voters. It also explains why small pressure groups are frequently successful: they influence public opinion and in other ways "buy" the additional votes required to be a majority.

FOOTNOTES

¹Malfeasance of government employees can be deterred by appropriate wage contracts [see Becker and Stigler (1974)].

²Federal employees in the United States seem to earn about 10 percent more than comparable labor in the private sector [see Smith (1977)]. Borjas (1980) develops a model to explain why some federal employee groups are more successful at obtaining higher wages than others.

³For example, the marginal deadweight loss from a larger "distortion" in the j th market for goods or services is approximately

$$\frac{\Delta Z}{\Delta T_j} = d_m \approx \sum_{\text{all } i} T_i \frac{\Delta X_i}{\Delta T_j} + \frac{1}{2} \Delta T_j \frac{\Delta X_j}{\Delta T_j},$$

where T_i is the distortion in the i th market, and ΔX_i is the change in output in this market caused by the increase in T_j . See Harberger (1971), especially equation (5") and footnote 5, for a lucid derivation of this formula and various qualifications and extensions. Note that $d_m \approx 0$ when the $T_i = 0$ and ΔT_j is small, and that d_m increases as the T_i increase unless the $\frac{\Delta X_i}{\Delta T_j}$ decrease sufficiently rapidly.

⁴A similar proposition can be found in Peltzman (1976) and Brock and Magee (1978).

⁵Proposition 3.2 holds as long as $\log R_t > -1$.

⁶If expenditures to limit free riding (a_s^c) were distinguished from expenditures on direct political activity (a_s^d), then

$$Z_s = \bar{Z}_s + R_s - a_s^d - a_s^c, \text{ where } a_s^c + a_s^d = a_s.$$

The equilibrium condition in (22) becomes

$$\frac{\partial R_s}{\partial a_s^c} = \frac{\partial R_s}{\partial a_s^d} = 1 .$$

Expenditures are allocated between direct and "indirect" political activities to equalize their marginal effects on income.

⁷ Noncooperative games among pressure groups are considered by Brock and Magee (1975, 1978) and briefly by Stigler (1975).

⁸ Note that

$$\tilde{p}_{sg_s} - \tilde{p}_{tg_s} = \frac{\partial (\log \frac{p_s}{p_t})}{\partial g_s} .$$

Using the additive influence function $P = \sum \alpha_i Z_j$,

$$\frac{\partial (\log \frac{p_s}{p_t})}{\partial g_s} = \frac{\partial \log \alpha_s}{\partial g_s} - \frac{\partial \log \alpha_t}{\partial g_s} .$$

⁹ This point was already made in Becker (1976).

¹⁰ That is,

$$\frac{dP}{dg_s} = n_s \left(p_s - \frac{p_t}{1-d_m} \right)$$

depends on n_s when

$$P_s \neq \frac{P_t}{1-d_m} .$$

¹¹Many years ago, Pareto wrote

If a certain measure A is the cause of the loss of one franc to each of a thousand persons, and of a thousand franc gain to one individual, the latter will expend a great deal of energy, whereas the former will resist weakly (1971, p. 379).

Simon Newcomb wrote in similar vein,

. . . , let us suppose a company to find that if Congress can be induced to adopt a certain policy, which we shall call policy A, it can collect an extra profit of one cent per annum out of each inhabitant of the country. Not one person out of a thousand would give a moment's attention to the wrong, or indeed ever find it out. Even if he found it out, it would not pay him to protest against the policy merely to save himself from a loss of one cent a year for each member of his family. he could not send a letter, or print a handbill, or call a meeting of his neighbors without spending more time than the question was worth (1886, p. 457, footnote 9).

¹²This proposition assumes that political influence (P_s or P_t) does not depend on the number of taxpayers or subsidy recipients; see the discussion in section 6 of the effect of group size on votes.

¹³In his famous Federalist paper on factions (no. 10), Madison argues that the United States would be less subject to factions than the colonies were, partly because

[in larger groups,] it will be more difficult for all who feel it to discover their own strength, and to act in unison with each other.

and

communication is always checked by distrust in proportion to the number whose concurrence is necessary [Hamilton, Jay, and Madison (1941, p. 61)].

¹⁴The emphasis on political groups was pioneered by Arthur Bentley (1908).

¹⁵See footnote 12.

¹⁶ t 's reaction curve tends to be flatter than s 's (a necessary condition for stable equilibrium) because the change in the optimal pressure of each group tends to be less than the change in the specified pressure of the other group.

¹⁷See, for example, the estimates by Reynolds and Smolensky (1977).

¹⁸Aumann and Kurz (1977_a, _b) apply cooperative game theory to the political redistribution of income. They assume costless redistribu-

tion (aside from intentional destruction of resources), the majority has all the political power, and no free riding or other costs of cooperation. Although they are aware of most of these limitations (see especially section 10 in 1977a) and simplify to push the analysis deeply in certain directions, they attach much less importance to these limitations than is warranted.

Telser uses the theory of the core to analyze political behavior (1981). Among other things he has an interesting discussion of why homogeneous groups are more successful politically (see especially Theorem 4).

¹⁹Long before Marx, Madison wrote in his paper on factions that

. . . the most common and durable source of factions has been the various and unequal distribution of property A landed interest, a manufacturing interest, a mercantile interest, a moneyed interest, with many lesser interests, grow up of necessity in civilized nations, and divide them into different classes, . . . The regulation of these various and interfering interests forms the principal task of modern legislation, and involves the spirit of party and faction in the necessary and ordinary operations of the government [Hamilton, Jay, and Madison (1941, p. 56)].

²⁰Bentley wrote a long time ago,

. . . . It is just this flexibility and accuracy in representing group interests that makes the clever politician under such interest conditions as now prevail in American public life (1908, p. 348).

²¹This argument was made in my 1958 paper on political behavior.

²²Note the insightful comments of Simon Newcomb in 1886:

. . . . One cent per year out of each inhabitant would make an annual income of \$500,000. By expending a fraction of this profit the proposers of policy A could make the country resound with appeals in their favor. At an annual expense of \$20,000 two or three new books could be published every year showing the necessity or advantage of policy A, and a copy of each book could be sent to every member of Congress. Another expenditure of the same amount would suffice for the payment of several lecturers on the subject, and the call of many enthusiastic public meetings to send petitions to Congress. A third instalment would provide a body of able lawyers to plead with individual members of Congress. A fourth would secure a long series of editorial articles, in various newspapers, all favoring policy A, and calling upon the people not to vote for any man who opposed it. Thus year after

year every man in public life would hear what
would seem to be the unanimous voice of public
opinion on the side opposed to the public
interests (p. 457; my italics).

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Recall that many union members voted for Ronald Reagan even though their unions supported Jimmy Carter.

A Theory of Political Behavior,
Part II: The Political Sector

Gary S. Becker

Revised, September 1981

Preliminary; not to be
quoted without permis-
sion of author.

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Introduction

Part I developed a model of competition among pressure groups to raise their political power by shifting the political influence function in their favor. The political sector is assumed to maximize the value of this function, political utility, subject to the opportunities provided by feasible taxes, subsidies, regulations, and other political instruments. Political influence is assumed to depend on the welfare of different groups as well as the pressures they exert. Part I dealt with the competition among pressure groups and paid little attention to the political sector, the subject of this paper.

The political importance of the welfare of different groups is determined from the influence function when utility is maximized and when all groups exert their optimal pressures. Since the welfare of some groups is more important politically than the welfare of others, there is a trade-off between efficiency and political "equity" that has implications for "distributional" weights, supply-side effects on tax revenues, and other issues considered in sections 2 and 3.

Section 4 develops a theorem regarding unanimous approval or disapproval of potential public policies that is largely independent of votes and the political system and is due to compensating political payments to those harmed by any policy. Such payments also induce all groups to take account of the "external" effects of their actions on others.

Section 5 uses the analysis developed in earlier sections to consider the effect of public ownership of an enterprise on aggregate efficiency as well as on the efficiency of the enterprise. This section also contributes to the lively controversy stimulated by Richard Posner concerning whether judicial decisions mainly maximize wealth or promote "equity".

2. Political Influence and Power

If we follow Part I in approximating the utility of a person by his commodity income produced with market goods and nonmarket time, the political influence function can be written as

$$P = P(\overbrace{Z_1, \dots, Z_1}^{n_1}, \overbrace{Z_2, \dots, Z_2}^{n_2}, \dots, \overbrace{Z_m, \dots, Z_m}^{n_m}; g_1, \dots, g_m), \quad (1)$$

where Z_i is the commodity income of each of the n_i identical members of the i th group, and g_i is the pressure exerted by that group. The political sector is assumed to maximize P by changing the Z_i with taxes, subsidies, regulations, and other policies, while taking all pressures as given. Feasible policies determine a political opportunity set that is bounded by

$$F(Z_1, \dots, Z_m, \bar{Z}_1, \dots, \bar{Z}_m, n_1, \dots, n_m) = 0, \quad (2)$$

where the \bar{Z}_i are commodity incomes prior to redistribution.

Political utility would be maximized by moving along the boundary of the opportunity set to the point of tangency between the

boundary and a political indifference curve. If only one homogeneous group is subsidized (s) and another one is taxed (t), then the equilibrium condition is

$$\frac{\frac{\partial P}{\partial Z_s}}{\frac{\partial P}{\partial Z_t}} \equiv \frac{P_s}{P_t} = \frac{1}{1-d_m} \quad , \quad (3)$$

where $P_j = \frac{\partial P}{\partial Z_j}$, for $j = s$ or t , and d_m is the marginal deadweight loss from taxes and subsidies. That is, d_m is defined by

$$1 - d_m = \frac{n_s}{n_t} \frac{dR_s}{dR_t} \quad , \quad (4)$$

where R_s and R_t are the redistributions to each s and away from each t , respectively (e.g., $Z_s = \bar{Z}_s + R_s$).¹ Point E in Figure 1 is the endowment and gives the incomes imputed by the private sector, FF is the redistribution boundary, and P^0 and P^1 are political indifference curves when pressure is fixed at g_s^* and g_t^* . The political sector moves along FF from the endowment to point e, where an indifference curve (P^1) is tangent to FF.

Figure 1 about here

Political influence has been defined (see Part I) by the marginal political utility (e.g., by P_s and P_t), and political power by influence when all incomes are equal (e.g., by P_s and P_t when $Z_s = Z_t$). Groups are subsidized even when redistribution is costly because they have sufficiently greater political influence at the endowment than the groups taxed. Equation (3) shows that subsidized groups continue to have greater influence after

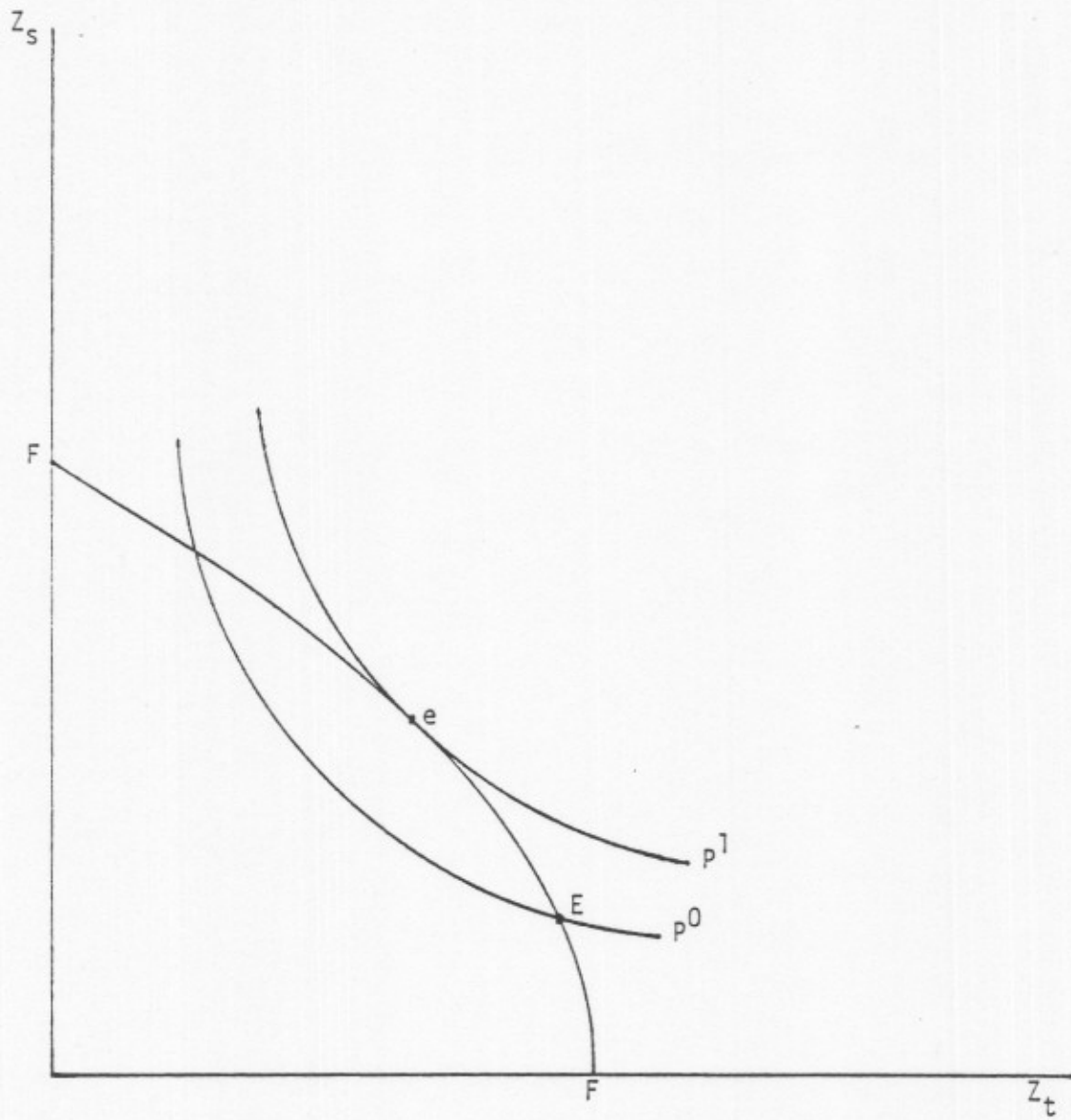


Figure 1

redistribution, and that the equilibrium difference in influence is greater when marginal costs of redistribution (d_m) are greater. Even a subsidized group with much political influence does not want redistribution to continue beyond $d_m = 1$, for then its welfare, as well as political utility, would fall.²

Extreme advocates of "supply-side economics" assume (usually implicitly) that marginal costs of redistribution exceed unity when they argue that a decrease in tax rates would raise tax revenues. Since efficient political sectors do not redistribute beyond the point where marginal costs equal unity, tax cuts would not raise tax revenues if actual political redistributions tend to be reasonably efficient [as suggested by the evidence in Gardner (1981)].

Voters are ignorant about many political issues because they have little incentive to become informed about politics (see Part I, section 6). Therefore, a right to vote is neither necessary nor sufficient for political influence and power: not sufficient because voters may be manipulated by others, and not necessary because political pressure can be exerted by a group without voting. Equation (3) indicates that even highly taxed groups will have political influence, whether or not they vote, as long as the marginal cost of redistribution (d_m) is less than unity.

Many groups who cannot vote apparently manage to acquire political influence and power, including foreign producers who receive preferential quotas, and Southern blacks who were only moderately taxed while whites controlled voting [see Kousser (1980)]. Foreign producers lobby to promote their interests, and Southern blacks boycotted stores, migrated,

and sought support from the North. Indeed, if income were redistributed with lump-sum taxes and subsidies, then $d_m = 0$ and all groups would have equal influence in equilibrium, regardless of whether they can or do vote.

A "pure" democracy will be defined as a political system where all persons have equal power. Then any redistribution in this system would be toward poorer persons if political indifference curves were convex, and toward richer persons if they were concave. Therefore, equal political power alone would not guarantee that political redistributions reduce inequality -- that poorer persons benefit more than richer persons -- even when poor persons are more numerous and have more votes. Moreover, equal power does not imply equal influence, for subsidized persons -- whether rich or poor -- have greater influence unless income is redistributed with lump-sum taxes and subsidies.

The properties of the influence function, including the shape of indifference curves, are affected by the political rules cooperatively established by pressure groups. Perhaps these rules are biased toward equality -- toward declining political influence as incomes increase -- to insure all groups against uncertain events. However, political influence is also affected by competition among pressure groups, and by events that shift the influence of different groups. If richer groups acquire sufficient influence, political redistributions would then increase inequality by subsidizing richer groups and taxing poorer ones.

Although welfare economics and most discussions of "justice" [e.g., see Rawls (1971)] advocate taxes, subsidies, and other policies to reduce private inequality, actual transfers and other policies appear to have had only a modest net effect on inequality in many countries

[see _____].

Therefore, one should be skeptical about applications to actual political systems of convex political indifference curves and other concepts³ suitable to these normative discussions of "justice". Actual and prescribed political behavior are so different partly because more active pressure groups tend to have less convex and even concave political indifference relations with other groups; I have shown in Part I (see Propositions 3.5 and 4.1) that the gain from political activity is greater when political indifference curves are less convex and more concave.

A change in endowed incomes would induce a change in the redistribution of income that would offset partially the increase in private inequality if political indifference curves were convex, and would exacerbate the increase in private inequality if they were concave. The change in marginal deadweight costs as redistribution changed would affect the optimal political pressures; for example, higher costs raise pressure by taxpayers and lower pressure by subsidy-recipients (see Propositions 3.3 and 4.3 in Part I). These induced changes in pressure, in turn, partially offset the effect on inequality of the induced redistribution. To illustrate with a recent example, government assistance to the domestic automobile industry would be increased by larger imports of foreign cars if political indifference curves were convex. However, since increased assistance would raise the marginal deadweight loss and thereby lower the pressure exerted by the industry, imports would raise government assistance not because of greater political pressure by the domestic industry (workers and producers), but despite lesser pressure.

3. Political Equity and Efficiency

Political utility depends on political equity as well as efficiency, and some efficiency would be forfeited for a sufficient improvement in equity. Small changes in the incomes of s and t would raise political utility if

$$dP = \frac{\partial P}{\partial Z_s} (n_s dZ_s) + \frac{\partial P}{\partial Z_t} (n_t dZ_t) > 0. \quad (5)$$

The effects on different groups are weighted by their political influence. Subsidized groups are more heavily weighted because they have greater political influence: a (small) increase in their incomes raises political utility more than does an equal increase in the income of taxed groups.

Replacing these marginal utilities with the deadweight loss in the equilibrium condition (3), we have

$$dP = P_t \left(\frac{n_s}{1-d_m} dZ_s + n_t dZ_t \right) > 0, \quad (6)$$

where d_m is the marginal deadweight loss. Equation (4) implies that (6) can be written as

$$dP = n_t P_t \left(\frac{\partial R_t}{\partial R_s} dZ_s + dZ_t \right) > 0. \quad (7)$$

Clearly, any public project or other policy would be attractive if everyone were better off, and unattractive if everyone were worse off. The decision is less obvious with some benefitted and others harmed, and (6) provides a guide to the evaluation of these cases. The effect on aggregate income or efficiency is not the criterion because the incomes of subsidized groups are more heavily weighted than the incomes of taxed groups, the difference in weight increasing as the marginal deadweight loss increases.⁴

All groups would be weighted equally -- efficiency alone would matter -- only when the marginal loss is zero (i.e., with lump-sum taxes and subsidies).

Policies that raise aggregate efficiency necessarily also raise political utility if subsidized groups are made better off:

$$dP > 0 \text{ if } dZ > 0 \text{ and } dZ_s > 0, \quad (8)$$

where $dZ = n_s dZ_s + n_t dZ_t$. Policies that reduce aggregate efficiency can raise political utility only if they efficiently redistribute income to subsidized groups: that is, only if they improve political "equity" more cheaply than the explicit tax-subsidy system. All public projects and other policies would be part of a total tax-subsidy system that includes these implicit as well as explicit taxes and subsidies.

Part I showed that the gain from political activity by a subsidized pressure group is greater when deadweight costs are less responsive to changes in the subsidy. I build on this result in analyzing large policies by assuming initially that the subsidized group (s) is successful partly because marginal costs of redistributing income to s do not respond to changes in the subsidy, at least in sufficiently large intervals around the equilibrium positions.⁵

Although an increase in s's income by ΔZ_s^1 and a reduction in t's income by ΔZ_t^1 (see points E_1^* and e_0 in figure 2) satisfies the criterion in (8), political utility is reduced, for E_1^* is on a lower indifference curve than the curve (P^0) through the initial equilibrium position (e_0). However, income can be redistributed away from E_1^* on a line ($E_1^*E_1$) above and parallel to the line through e_0 (E_0E_0) because

marginal costs are assumed to be constant. Consequently, the equilibrium level of political utility would be raised because some points on $E_1^*E_1(e_1)$ must be preferred to e_0 . Hence the simple criterion in (6) (or (7)) remains applicable to large projects when marginal costs are constant.

Figure 2 about here

Efficiency is lower at E_1^* but higher at e_1 than at e_0 because the subsidy to s is reduced sufficiently by moving to e_1 . Indeed, if all groups were "superior goods" in the influence function (see section 5), efficiency must be raised when political opportunities increase because everyone would be made better off.

Therefore, policies that satisfy condition (6) and raise political utility may lower efficiency initially (as E_1^* does), but raise efficiency after the optimal redistribution. Conversely, policies that lower utility may raise efficiency initially, but lower efficiency after the optimal redistribution. For example, a policy that lowers the income of s by ΔZ_s^2 and raises the income of t by ΔZ_t^2 raises efficiency initially (E_2^* is to the right of the equal-efficiency line Se_0S). However, efficiency would be lower after the explicit subsidy to s is increased (to offset the project's adverse effect on s) by moving along $E_2E_2^*$ to the maximum utility point e_2 , where both s and t are worse off than at e_0 . Condition (6) but not efficiency is still a valid guide, for (6) correctly indicates that this policy would lower utility.

By weighting the subsidized groups more heavily than taxed groups, condition (7) appears to imply that some policies would raise utility and

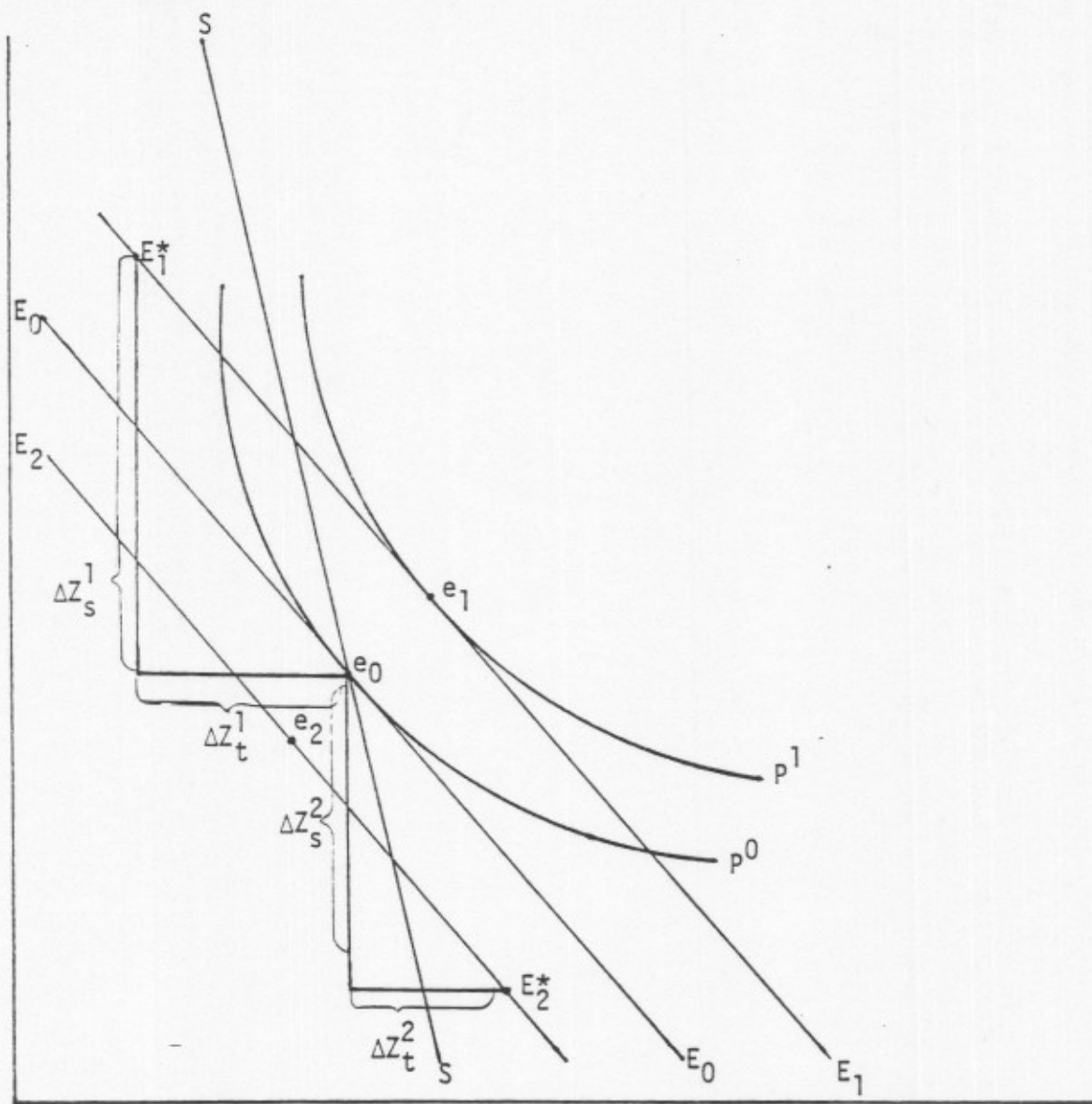


Figure 2

lower efficiency, or would lower utility and raise efficiency. Appearances are deceptive, however, because all policies that raise utility would raise efficiency after politically-optimal changes in explicit taxes and subsidies; similarly, all policies that lower utility would lower efficiency after these changes.

An old controversy in welfare economics debates whether policies raise welfare and are desirable as long as losers could be compensated by winners, or whether actual compensation is necessary [see Chipman and Moore (1978)]. My analysis answers a positive version of this normative question. If the marginal costs of redistributing income are constant, the model of the political process in this paper implies that potential compensation alone is sufficient. However, the potential and the actual criteria do not conflict because losers would be compensated if they could be: "side payments" from winners to losers through the tax-subsidy system would raise the incomes of losers. If losers could not be compensated, these "side payments" would make winners worse off and yet would be insufficient to compensate losers, so that everyone would be worse off. The alleged conflict between potential and actual compensation results from a failure to consider these induced changes in explicit taxes and subsidies.

The weights in condition (7) are in the spirit of "distributional" weights in the project evaluation literature [see Harberger (1978)]. Distributional weights, presumably derived from attractive ethics, guide welfare evaluations of political choices, whereas the weights in this condition (in the optimal tax literature), derived from the cost of redistributing income, guide actual (or optimal) political choices. More importantly,

the alleged conflict between equity and efficiency is largely spurious (when marginal costs are constant) because appropriate distributional weights select all projects that raise efficiency and reject all projects that lower efficiency. The alleged conflict between equity and efficiency, as with the alleged conflict between potential and actual compensation, results from a failure to recognize that efficiency-improving projects induce changes in taxes and subsidies that eliminate any undesirable effects on equity, and hence eliminate conflict between equity and efficiency.

Since the distributional weights in (7) are derived from actual political behavior, not from ethics, they can be estimated from information on the cost of subsidizing different groups. For example, farmers would receive a weight of about $1/(1-.25) = 4/3$ because the deadweight cost of acreage restrictions for different crops appears to be between twenty and thirty cents per dollar of subsidy [see Gardner (1981)].

Although (7) is always a necessary and sufficient condition for small changes in incomes to raise political utility, the evaluation of large changes is more complicated when marginal costs of redistributing income are not constant. For example, the large change in incomes represented by point E_1 in Figures 3 and 4 satisfies condition (7) when the weight for group s is determined by the marginal deadweight loss at the initial equilibrium position (e_0). Clearly, this change would always raise political utility if political indifference curves were concave, as in Figure 4, and some changes in incomes that violate condition (7) would also raise utility. Therefore, (7) is a sufficient but not necessary condition for large changes in incomes to raise political utility when indifference curves are concave.

Figure 3 about here

Figure 4 about here

Necessary or sufficient conditions are more complicated when indifference curves are convex. For example, political utility would then be reduced by the change represented by E_1 even though (7) is satisfied if E_1 were below the indifference curve at $e_0 (P^0)$, if the slope of the opportunity boundary rose sufficiently rapidly as income was redistributed to t , and if indifference curves were sufficiently convex. Moreover, some changes that benefit s might then raise political utility even though they violate condition (7) because the influence function would become more favorable to s as income was redistributed to t . The reduction in marginal deadweight costs raises pressure by s and lowers pressure by t , which shifts the indifference curves in favor of s ; see the analysis in Part I. When costs of redistribution are not constant, the evaluation of large changes in incomes depends on the shape of political indifference curves, the effects of endowments and redistribution on deadweight costs, and the effect of these costs on the political pressure exerted by different groups.

4. Unanimity

The previous section proved the following striking theorem.

Unanimity Theorem: If marginal costs of redistribution were constant, all policies that raised political utility

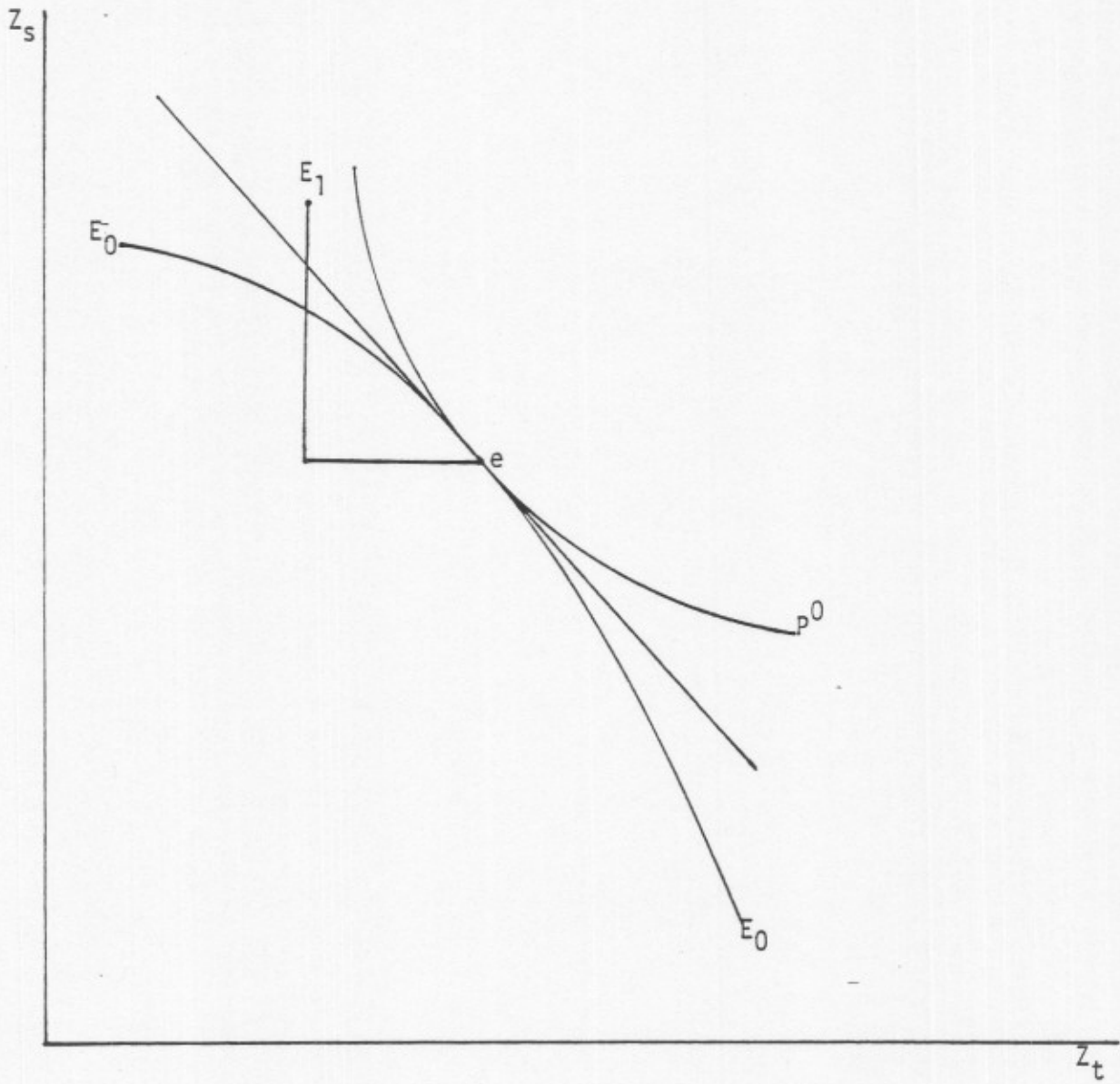


Figure 3

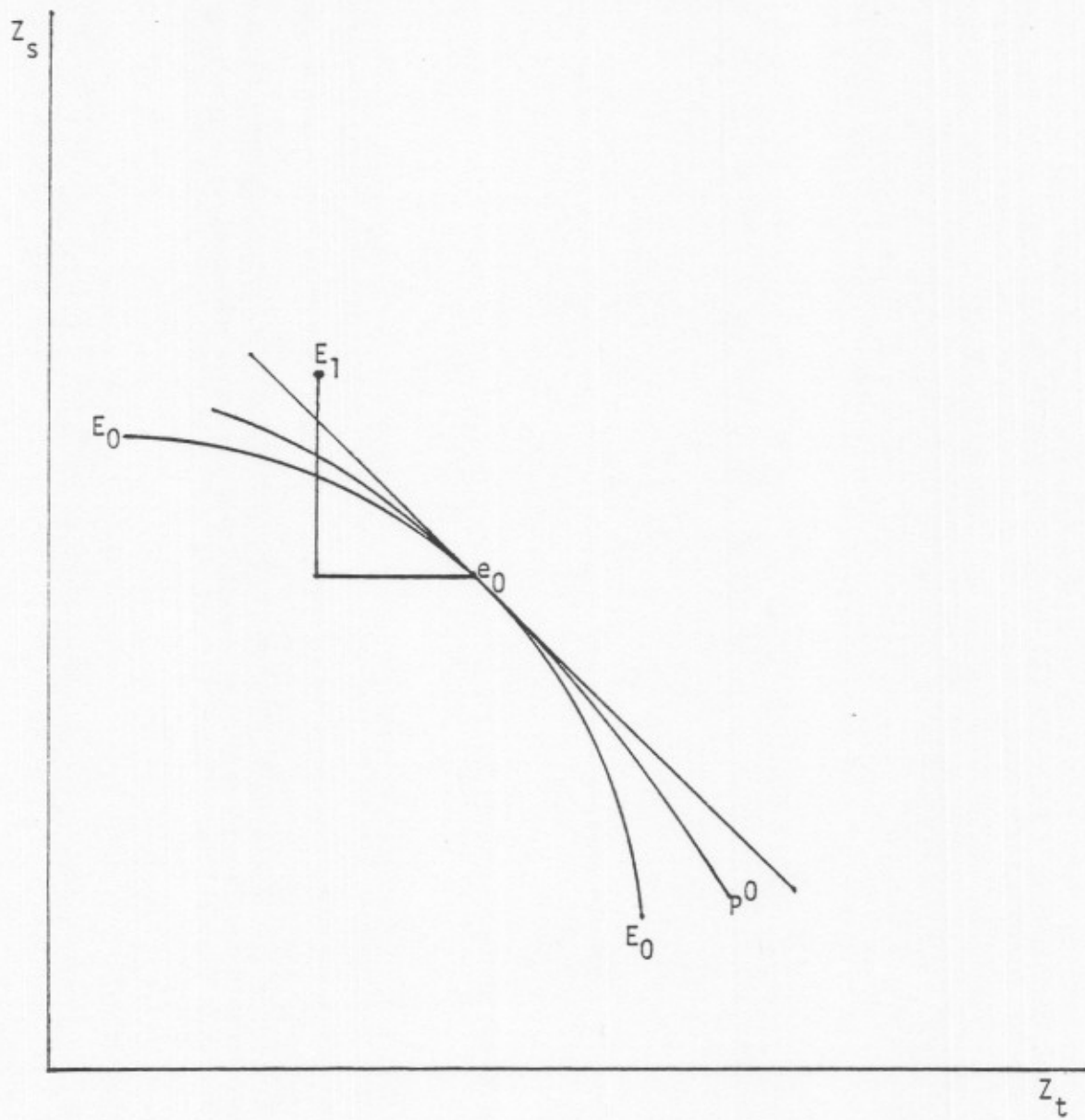


Figure 4

from an initial political equilibrium would raise the welfare of all relevant groups because losers would be overcompensated by taxes and subsidies. Similarly, all policies that would lower political utility would lower the welfare of all groups because winners would be overtaxed.

This theorem implies that potential policies are either unanimously supported or unanimously opposed. Unanimity is here a theorem about political behavior (under certain conditions), not an assumption that political actions must be unanimously approved. Indeed, redistribution of income among groups to arrive at political equilibrium is determined by political power, and obviously would not be approved by heavily-taxed-politically-weak groups. Since the theorem applies to all groups in the political influence function, regardless of whether they have any explicit voice, it applies to radically different political systems, including New England town meetings, representative democracies, oligarchies, and dictatorships.

Groups initially harmed by a policy that increases political utility still support the policy because they receive subsidies and other political "side" payments. These payments are an automatic result of the maximization of political utility by the political sector and do not depend in any direct way on the distribution of votes or other political consent. Therefore, the Unanimity Theorem is simply another way to state that groups initially harmed are overcompensated through political payments.

The widespread ignorance about political issues analyzed in Part I implies that even public policies benefitting everyone may be opposed by significant fractions of the electorate who mistakenly believe they will be harmed. The interests of powerful groups are more accurately measured by the votes of political representatives, and most legislation is approved by large majorities [see _____]. These majorities have been explained by cooperation among groups through "log-rolling", but they may simply result from the maximization of political utility without any direct cooperation among groups.

The proof of the Unanimity Theorem in the previous section assumed that all relevant groups benefit from an increase in political utility, but this is also implied by the assumption of constant costs of redistribution. Any group that is made better off by a reduction in political utility (and worse off by a rise) could increase its welfare through bad investments that induce an overcompensating political response.⁶ Consequently, the welfare of all groups must be positively related to political utility, at least in the vicinity of political equilibrium positions.

The traditional rationale for government intervention in private decisions is that private individuals and groups ignore the "external" effects of their actions on others. For example, selfish group *t* is alleged to ignore the \$800 cost imposed on group *s* from an action that raises *t*'s income by \$1000; even costless bargaining between *s* and *t* a la Coase would not dissuade *t*. The traditional analysis, however, including the important amendment by Coase, commits a serious error by neglecting the interaction between private and public behavior. This

interaction has a remarkable implication.

Big Daddy Theorem:⁷ Constant costs of redistributing income imply that all groups are "altruistically", no matter how selfish they are, and fully consider the external effects on others because they maximize political utility.

To prove this, note that if the political sector maximizes political utility by redistributing income from group t to group s at a constant deadweight cost exceeding, say, $1/5$, an action by t that raised t 's income by \$1000 and lowered s 's income by \$800 would raise efficiency but would lower political utility. The political sector would respond by raising taxes on t by more than \$1000 (using the less than \$800 in proceeds to subsidize s), so that t as well as s would be made worse off. Consequently, even a selfish group would refrain from activities that lower political utility if it correctly anticipated the response of the political sector. Similarly, selfish groups would take actions that initially harmed them but raised political utility since they anticipate political payments to make them better off.

Let me emphasize that the political sector does not "punish": its response would be exactly the same when the cause of the reduction in political utility was not known or was due to earthquakes and other unavoidable acts of nature. Although not intended as punishment, such automatic political responses nevertheless do induce selfish groups to act as if they are "altruists" who care about the welfare of others.

The Big Daddy Theorem does not imply perfect harmony between the public and private sectors; each selfish group exerts pressure to raise its political power, and hence its political favors. What the Big Daddy Theorem implies is that real and bitter conflict over political power -- that is, over the distribution of income -- does not imply any conflict over the production of income, once the distribution of power has been determined. Groups compete fiercely for political power, but act as a "team" and cooperate "altruistically" to maximize political utility after the outcome of their competition for power has been settled.

The Unanimity and Big Daddy Theorems may not be applicable when costs of redistribution increase with the amount redistributed. Although groups harmed by policies that raise political utility may still be compensated with reduced taxes or higher subsidies, the increase in the marginal cost of compensation as the amount of compensation increased would induce a "substitution effect" that could be more powerful than any "income effect" from the increase in political utility.⁸ If so, groups initially harmed would remain worse off after the full political response. A similar analysis implies that groups initially harmed by the actions of other groups may remain worse off in the new political equilibrium.

The Big Daddy Theorem is stated in terms of the behavior of groups, not individuals, because of the conflict between the incentives of a group and the incentives of its members. Unlike the Unanimity Theorem, the Big Daddy Theorem might break down even with constant costs of redistribution when applied to individuals. Suppose that a member (α) of group t could initially benefit from his actions that lower political utility by harming other groups. If the political sector could not dis-

tinguish among members of t (it is too costly), all members would be taxed equally to compensate those groups harmed by α . Although the aggregate income of t would be reduced, α could be made better off because other members would bear most of the burden imposed on t .

Therefore, the Big Daddy Theorem implies that all groups may benefit when the political sector helps each group reduce such "free riding" by its members (free riding is discussed in Part I). One way to help is to give each group control over the distribution of subsidies and taxes to its members⁹ and even control over membership -- many unions and some industries have been given such control -- because free riding could then be more readily punished. Consequently, groups may sometimes be given control over entry and political favors to raise aggregate efficiency and political utility.

5. Public Enterprises and the Judiciary

The analysis in this paper implies that public ownership is mainly determined by political pressure from customers, employees, or managers to redistribute income in their favor through pricing, employment, and other policies. Public enterprises are then likely to be less efficient than private enterprises in the same industry¹⁰ because they are willing to reduce their efficiency for favorable effects on political equity.

Previous sections demonstrated that if the marginal cost of redistributing income were constant, policies that raise political utility but appear to lower efficiency actually raise aggregate efficiency after taxes and other repercussions in the political system. In particular, a public enterprise that reduces its efficiency to raise political utility

by favoring employees or other groups would raise the overall efficiency of the economy because of responses elsewhere in the political system. Consequently, the total effect of public enterprises on efficiency cannot be evaluated in isolation, but only as part of a highly interdependent political system. Each part, including these enterprises, would reduce its own efficiency when the cost of subsidizing a group was justified by the distributional weight attached to that group. Such behavior raises political utility and aggregate efficiency, even though the efficiency of that part is reduced.

Similar considerations clarify the controversy in recent years over whether judicial decisions maximize efficiency (i.e., wealth) or forego efficiency to promote equity.¹¹ A judiciary that is part of the political sector is willing to reduce efficiency for favorable effects on equity and political utility. Note, however, that "equity" here refers to political power, whereas those skeptical of judicial wealth maximization have stressed the equity embodied in attractive ethical principles [see, for example, Kronman (1980)].

More importantly, the effect of judicial decisions on efficiency, as the effect of public enterprises, cannot be evaluated in isolation, but only as part of the interdependent political system. If marginal costs of redistributing income were constant, judicial decisions that reduce efficiency to aid politically powerful litigants would raise aggregate efficiency because of repercussions in the political system; similarly, judicial decisions that neglect political power would lower aggregate efficiency and political utility because of these repercussions.

Consequently, a judiciary that is part of the political sector would tend to promote aggregate efficiency (or aggregate wealth maximization), even when it aids politically powerful litigants.

6. Summary and Conclusions

This paper is the second part of a larger study that develops a model of the political process with competition among pressure groups for political power and favors. Bureaucrats and politicians are assumed to maximize political utility determined by a political influence function that has a stable relationship to the welfare of politically-relevant groups and the pressures exerted by these groups. Political utility is maximized partly by using taxes, subsidies and other political instruments to redistribute income toward groups with greater political influence and away from those with lesser influence.

If the deadweight costs of these instruments were not negligible, subsidized groups would continue to have greater influence even after the equilibrium redistribution of income in their favor, and the equilibrium differences in influence would be larger when deadweight costs were larger. Therefore, public policies that change the political equilibrium by shifting the incomes of different groups are not evaluated solely by their effect on aggregate efficiency because their effect on the distribution of income among groups with different degrees of influence is also important. Clearly, this attention to distribution is not due in any direct way to ethical judgments about equity, for subsidized groups, no matter how wealthy, have greater influence than taxed groups, no matter how poor.

All groups harmed by policies that shift incomes are partly compensated with larger subsidies or smaller taxes. Indeed, if the marginal deadweight costs of redistributing income were approximately constant in a sufficiently large vicinity of the political equilibrium, those harmed by policies that raise political utility would be overcompensated, and those benefitting from policies that lower utility would be overtaxed. Since losers as well as winners benefit from policies that raise utility, aggregate efficiency must also be raised, even when efficiency is apparently sacrificed to improve the political distribution of income, and even with sizable deadweight costs of redistributing income. In particular, public enterprises and judicial decisions that apparently sacrifice efficiency to promote the fortunes of their employees or litigants would then raise aggregate efficiency. Moreover, the potential to compensate losers and actual compensation would then be equivalent criteria because losers would be overcompensated whenever aggregate efficiency was raised.

Obviously, some groups are made worse off when taxed to redistribute income to other groups. Nevertheless, if marginal deadweight costs were constant, all groups would benefit from, and hence would support, policies that raised political utility by shifting incomes. Such unanimity is a consequence only of political utility maximization and constant deadweight costs, and is applicable to very different political systems: to dictatorships as well as to New England town meetings.

Let me conclude by noting that the maximization of political utility can be partly justified by the principle of Pareto-optimality:

that a change is unambiguously desirable or undesirable only if everyone is made better or worse off. Obviously, this principle is not always satisfied when political utility is maximized because some groups are made worse off by redistributions of income that raise political utility. However, utility maximization combined with the assumption of constant marginal deadweight costs of redistributing income would satisfy this principle when evaluating policies that shift the incomes of different groups. We have shown that such policies raise political utility if, and only if, they raise aggregate efficiency and the welfare of all pressure groups after political equilibrium is reestablished.

FOOTNOTES

¹Since equilibrium requires that

$$\frac{dP}{dR_s} = 0 = n_s P_s + n_t P_t \frac{dZ_t}{dR_t} \frac{dR_t}{dR_s} ,$$

then by the definition of d_m :

$$\frac{dP}{dR_s} = 0 = n_s \left(P_s - \frac{P_t}{1-d_m} \right) .$$

²Only envy toward members of taxed groups would encourage redistribution beyond $d_m = 1$.

³Peltzman (1980) does apply these concepts to the growth in government in the United States and Britain during the nineteenth and twentieth centuries. He argues that they grew mainly to offset the growth in private inequality, but the evidence, although ingeniously marshalled, is weak and inconclusive.

⁴This result is well-known in the optimal tax literature, where social welfare replaces political utility; see, for example, the discussion in Layard and Walters (1978, chapter 1).

⁵Then political indifference curves must be convex near these positions.

⁶For a simple proof by contradiction, assume that group k is made better off when political utility declines. Presumably, an unlimited number of bad investments in human and nonhuman capital are available to k that lower its welfare; k could also take actions that lower the welfare

of others. These destructive acts reduce political utility, and hence raise k 's welfare since, by assumption, k is made better off when political utility is reduced. Therefore, k would increase these destructive acts until its welfare became positively related to political utility. Note that the threat of destroying resources is crucial to the political bargaining analysis of Aumann and Kurz (1977a).

⁷This theorem is closely related to the Rotten Kid Theorem in family economics [Becker (1981)]. I owe the name "Big Daddy" to Hirshleifer (1977).

⁸Since increasing marginal costs also generate substitution effects against groups engaging in destructive acts, the welfare of some groups could be inferior political "goods" even in the vicinity of political equilibrium.

⁹This assumption is crucial to the insightful political analysis by Roberts (1981).

¹⁰See the (mixed) evidence in the studies by

¹¹This controversy has been stimulated by Posner's pioneering work (1977).

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