ON RENT SEEKING COST UNDER DEMOCRACY AND UNDER DICTATORSHIP

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ABSTRACT

Using an extension of a standard rent-seeking model, this paper argues that "inclusiveness," as defined in the text, is the key property that a polity must have to keep down the costs of rent seeking. The potential for inclusiveness is also related to the nature of a political system, and it is argued that democracies are likely to be more inclusive than dictatorships, although the advantage of democracy is not automatic. Rent seeking can provide a greater benefit at a lower support cost to the government of a less inclusive polity than to one that is more inclusive.

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"Democracy is the worst possible form of government—except of course for all those other forms that have been tried from time to time."

--Winston Churchill

Introduction

Ever since the classic articles by Tullock [1967], Krueger [1974], and Posner [1975], rent seeking has been an important topic for economists. The main conclusion of these papers—that rent-seeking cost equals the amount of rent available—depends on rather special assumptions, however, and tends to ignore the costs and benefits of rent seeking to government. Here we shall generalize these assumptions to get a model in which rents may not be fully dissipated. This will allow us to compare the cost of rent seeking under democracy and under dictatorship, since basic differences between these forms give rise to different parameter values in this model.

Traditionally, dictatorship is seen as a form of government whose ruler (the dictator) can use repression to stay in power [Friedrich and Brzezinsky 1965]. For our purposes, however, it is more important to think of dictatorship as a polity without significant electoral competition between political parties to determine who will govern. There may or may not be widespread suffrage. In a democracy, electoral competition is present, along with widespread suffrage, and more than one party has a significant chance of winning in most elections. A ruler unable to resort to repression is unlikely to rule for long without a political opposition emerging if none exists initially. Nevertheless, a dictator has a political monopoly only when it comes to electoral competition. Other types of competition for power remain.

The Basic Rent-Seeking Model

Rent seeking is defined here as the use of resources to obtain or retain possession of rents, access to which is controlled by the state. Thus we shall deal with what is sometimes called "public" rent seeking, in contrast to "private" rent seeking, such as theft. Public rent seeking involves an exchange in which profit-maximizing special interests purchase rents by making outlays that directly or indirectly benefit a utility-maximizing government. A government gains utility from increases in its support, which translate into increased ability to survive and to achieve its other goals.

We shall focus on rents that can be channeled to narrowly-defined special interests—or even to individuals—each of which embraces a small percentage of the population. (Because of the free rider problem, size is a barrier to organizing groups for effective political action.) In line with most of the literature we also focus on rent-seeking outlays that affect distribution without improving efficiency, excluding outlays that are Pareto-improving. Rent-seeking expenditures are thus considered to be socially wasted, regardless of whether spent directly on rent-seeking resources, such as lobbyists, or given to politicians or other office seekers to spend on efforts to acquire or retain public office. In each case, they are assumed to divert resources from production of useful goods and services.

In the conventional approach, [Tullock 1980], rent seeking is likened to a lottery in which many potential players or rent seekers compete for an indivisible prize of value, V, where V is a flow of rent created by erecting one or more barriers to resource mobility, possibly together with subsidies or price supports, etc. Each rent seeker is assumed to be risk neutral, and N of these players are able to earn non-negative expected profit by actively seeking rent. The probability that any player will win V increases with the amount this player spends to win it—on lobbying and other rent-seeking activities—and decreases with the amount each other player spends.

A second version of the above game allows V to be divisible, in which case P_k is k's expected share of V. If we define V broadly as the sum of all rents made available by a government to special interests, the second version is the more realistic and is the one used here. One implication is that N is then large. These rents can be distributed in many different ways among the players by varying subsidies, protection, and other benefits, and the efficient method of delivering rents may differ from one rent seeker to another. In this context, the government is assumed to be able to channel rents to specific players. Competition among rent seekers is therefore to influence its decisions about the creation and allocation of rents, with the government determining a size and allocation of V that maximizes its utility. The value of each player's expected rent will depend on the value placed by the government on its support, which will depend in turn on how much it spends on rent seeking.

More precisely, if player k spends A_k on rent seeking, for each $k = (1\ldots N)$, and expects to receive the share, P_k, of V in return, the relative expected shares for j and k are assumed to be given by:

$$P_j/P_k = W_j(A_j)^{rj}/W_k(A_k)^{rk}, \tag{1}$$

for k, $j = (1\ldots N)$, where $W_j(A_j)^{rj}$ means W_j times $(A_j)^{rj}$ and likewise for k. W_j and W_k are fixed weights—called "access" weights, which we normalize by setting $\Sigma_j W_j = N$ (since only the relative weights matter)—and r_k measures k's effectiveness in seeking rent. All potential players are assumed to have access weights, with smaller weights indicating more limited access to competition for rent. The formulation in (1) is fairly general, given the key assumption that any ratio, P_j/P_k, is independent of each A_i, $i \neq j$, $i \neq k$.[1] In the lottery analogy, $B_k = (A_k)^{rk}$ is the number of tickets k could buy with A_k, and W_k is N times the probability of drawing one of k's tickets when each player buys the same number of tickets; in a "fair" lottery, each $W_k = 1$. Each k has an expected rent of $V_k = P_k V$.

Since $\Sigma_j V_j = V$ or $\Sigma_j P_j = 1$, where the summation is from one to N, P_k is given by:

$$P_k = W_k(A_k)^{rk}/W, \tag{2}$$

for $k = (1 \ldots N)$, where $W = \Sigma_j W_j(A_j)^{rj}$. For simplicity, each P_k (or V_k) is assumed to be increasing in A_k at a non-increasing rate. Thus if the players reach a unique Nash equilibrium, with positive resource costs, $(A^*_1 \ldots A^*_N)$, in equilibrium, each A^*_k will be set to maximize k's expected profit, $G_k = P_k V - A_k$, for given values of every A^*_j, $j \neq k$—that is, for given rent-seeking costs of the other players—and G^*_k will denote the equilibrium (or maximized) value of G_k.

To derive the first-order condition for maximizing any G_k, let r_{kk} be the derivative of r_k and note that $R_k = r_k + r_{kk}(\ln A_k)A_k$ is k's rent-seeking returns to scale, as well as the elasticity of $(A_k)^{rk}$ with respect to A_k $(= (d(A_k)^{rk}/dA_k)A_k/(A_k)^{rk})$. Suppose for simplicity that a unit of any increase in A_k either raises V_k by increasing P_k or by increasing V, but not both. Then the first-order condition for maximizing G_k is $V_{kk} = f_k P_{kk} V + (1 - f_k)V^{kk} = 1$, where V_{kk} and P_{kk} are the changes in V_k and P_k per unit of a small increase in A_k, V^{kk} is the per-unit increase in V_k owing to any increase in V that results from the increase in A_k, and f_k is the fraction of the increase in A_k allocated to raising k's share of a given V as opposed to increasing V_k by raising V. If f_k is set to maximize the productivity of any increase in A_k and $f_k \neq 0$ at this maximum, equating marginal products gives $V^{kk} = P_{kk}V$ and thus $V_{kk} = P_{kk}V = P_k[(R_k(1 - P_k)/A_k)V] = 1$, or $A^*_k = [R^*_k P^*_k (1 - P^*_k)]V$, for any k, where stars here and elsewhere in this paper denote equilibrium values.

Regarding the access weights, there are two basic cases. In the *symmetrical* case, $W_1 = W_2 = \ldots = W_N = 1$. There is no discrimination between rent seekers. When each r_k is also the same function of A_k, or $r_k = r(A_k)$, this is also the classical case in which all rent is dissipated. To see this, note that $A^*_k = [R^*_k P^*_k (1 - P^*_k)]V$ implies a solution where:

$$P^*_1 = P^*_2 = \ldots = P^*_N = 1/N. \qquad (3).$$

$$A^*_1 = A^*_2 = \ldots = A^*_N = VR^*(N - 1)/N^2. \qquad (4).$$

$$A^* = \Sigma_k A^*_k = VR^*(N - 1)/N. \qquad (5).$$

Here R^* is the common value of $(R^*_1 \ldots R^*_N)$, and A^* is the total cost of rent seeking. In this paper, returns to scale, R_k, are assumed to be non-increasing in A_k, for each k, since P_{kk} is decreasing whenever R_k is constant or decreasing and no greater than one. In equilibrium, the price to k of a unit of rent, defined as A^*_k/P^*_kV, nearly equals R^*_k, since for large N, $(1 - P^*_k) = (N - 1)/N$ almost equals one.

When $R^* = N/(N - 1)$, we get the classical result that total rent-seeking cost equals the capitalized rent, V. Since N is large, nearly constant returns to scale will then prevail, and this is the only possible equilibrium in the symmetrical case. If $R^* > N/(N - 1)$, each player's cost of rent seeking would exceed its expected rent; each G^*_k would be negative. If we take a true *ex ante* view, $G^*_k \geq 0$ or $A^*_k \leq P^*_kV$ must hold because of the option to forego rent seeking. This implies $R^* \leq N/(N - 1)$. However, when $R^* < N/(N - 1)$, rent seeking yields positive expected profit to each player, and without an entry barrier, N will increase indefinitely. This leaves $R^* = N/(N - 1)$ as the only equilibrium with active rent seeking.

Extensions of the Basic Model

Some rent seekers are likely to give the government more valuable support than others, and the government would like to reward those rent seekers with higher rent-seeking profits. This is impossible in the symmetrical case in which all rent seekers have the same effectiveness functions, and we therefore turn to the *non-symmetrical* case in which $(W_1 \ldots W_N \ldots)$ are not all the same. Now expected profit from rent seeking can be positive in equilibrium because relatively small access weights serve as entry barriers. The result is to reduce competition for rents, thereby lowering the equilibrium price of rent and returns to scale below one for any player with positive expected profit. $A^* = \Sigma_k A^*_k$ is therefore less than V, but A^* no longer captures all the costs of rent seeking, since there will also be costs of implementing and enforcing these barriers, which players with small access weights would like to overcome. We shall incorporate these costs shortly. If we order all potential rent seekers by decreasing expected equilibrium profit (G^*_k), player one has the highest expected profit and player N is the marginal rent seeker. For all $k > N$, player k is unable to seek rent in a cost-effective manner—that is, $G_k < 0$ whenever A_k is positive.

For any $k \leq N$, the first-order condition for maximizing G_k is still $[R_kP_k(1 – P_k)/A_k]V = 1$, which again yields $A^*_k = [R^*_kP^*_k(1 – P^*_k)]V$, with $G^*_k = P^*_kV[1 – R^*_k(1 – P^*_k)]$. Also the equilibrium price to k of a unit of expected rent is still approximately R^*_k. Define R^* more generally as a weighted average of the equilibrium values, R^*_k, given by $\Sigma_k[R^*_kP^*_k(1 – P^*_k)] = R^*[\Sigma_k(P^*_k(1 – P^*_k))]$, where the summation is again (and always in this paper) from one to N. The latter term equals $R^*[1 – P^2] = R^*[((N – 1)/N) – N\sigma^2_p]$, where $P^2 = \Sigma_k(P^*_k)^2$ and σ^2_p is the variance of $(P^*_1\ldots P^*_N)$. A^* is then given by:

$$A^* = \Sigma_k(A^*_k) = VR^*[1 – P^2] = VR^*[((N – 1)/N) – N\sigma^2_p]. \qquad (6).$$

Also $G^* = \Sigma_kG^*_k = V – A^* = V[1 – R^*(1 – P^2)]$. As in the symmetrical case, A^* is increasing in R^* and in V, but in the non-symmetrical case, it is also decreasing in P^2 or in σ^2_p. Yet, even when inequality among rent seekers is high, P^2 is small. For example, let the total number of rent seekers (N) be 1000—which would be a low number—and consider the $N(N – 1)$ pairs (P^*_k,P^*_j) for $j \neq k$. If on average the larger of these pairs is 25 times the smaller, we still have $P^2 < .025$. As N or equality increases, P^2 will fall. Within plausible levels of inequality, therefore, A^*/V will be highly correlated with R^*.

Nevertheless, as long as each r_k is the same function of own rent-seeking outlay, $(P^*_1\ldots P^*_N)$, $(A^*_1\ldots A^*_N)$, and $(G^*_1\ldots G^*_N)$ all correlate positively with $(W_1\ldots W_N)$. To see this, note that $A^*_1 = A^*_2 =\ldots= A^*_N$ implies $P^*_k/P^*_j = W_k/W_j$, for $k, j = (1...N)$. However, the first-order conditions for maximizing each G_k then give $P^*_1 = P^*_2 = \ldots = P^*_N$. Under non-symmetrical rent seeking, this can not be the outcome, and we therefore pick any two players with different rent-seeking outlays. The player with the higher outlay cannot have higher returns to scale, by earlier assumption, and the first-order conditions for a profit maximum, together with (1), therefore imply that this player also has the higher expected share (P^*_k), higher expected profit (G^*_k), and higher weight (W_k). Thus ordering rent seekers by decreasing expected profit is the same as ordering them by descending W_k values.

If rent seeking may be taxed or subsidized, each k maximizes $G_k = P_kV + S_k - A_k$, where S_k is its subsidy (with $S_k < 0$ implying a tax). For simplicity, we let $S_k = sA_k$, where $s \leq 1$ is a constant. When $s < 1$, the first-order conditions for a profit maximum become $A^*_k = [R^*_kP^*_k(1 - P^*_k)]V/(1 - s)$. Thus:

$$A^* = \Sigma_k(A^*_k) = VR^*[1 - P^2]/(1 - s) = VR^*[((N - 1)/N) - N\sigma^2_p]/(1 - s) \qquad (6a).$$

replaces (6). By contrast, $G^*_k = P^*_kV[1 - R^*_k(1 - P^*_k)]$ still holds, giving $G^* = V - (1 - s)A^* = V[1 - R^*(1 - P^2)]$. Now A^*/V will correlate highly with $R^*/(1 - s)$. If $s = 1$ (resources are free to rent seekers), each k will set A_k to maximize P_k, continuing to seek rent until returns to scale (R_k) and the marginal productivity of rent seeking fall to zero. For any given N, the value of P^2 or of σ^2_p then has no effect on A^*, which can exceed V, and $V = G^*$ since $R^* = 0$.

The next step is to allow each r_k to be a different function of own rent-seeking outlay. Whereas the access weights reflect rent-seeking opportunities (such as rights to lobby or to hold jobs with opportunities to seek rent), the effectiveness functions reflect government reactions to actual rent seeking. A politician can cause the functions ($r_1 \ldots r_N \ldots$) to vary between players by reacting differently to the rent-seeking efforts of each, rewarding each rent seeker according to the value of its support, which is likely to vary from one to another. The rule for setting these functions—more precisely for setting the functions ($R_1 \ldots R_N \ldots$)—is given below. Variation in ($P^*_1 \ldots P^*_N$) will then reflect variation in these functional forms, as well as in ($W_1 \ldots W_N \ldots$), and relatively low rent-seeking effectiveness can exclude a potential player from rent. An advantage of excluding players on the basis of low rent-seeking effectiveness vs. exclusion by barriers that restrict access to rent is that the former tends to be self enforcing. Players with low rent-seeking effectiveness (and productivity) lack an incentive to seek rent just as high-cost firms lack an incentive to enter a competitive market.

However, a government needs to be able to measure the support it receives from different rent seekers in order to determine ($r_1 \ldots r_N \ldots$). In relatively open societies, with freedom of the press and freedom of information, as well as a comparatively low level of secrecy in government, information has a relatively low cost. In societies that punish criticism of government and maintain a high level of secrecy to protect politicians and public officials, however, accurate information about the willingness and ability of different individuals and groups to support the government is more expensive. To lower the cost of determining rent-seeking effectiveness, government can then restrict access to rents on the basis of factors such as kinship ties, socio-political backgrounds, school ties, etc. that help to predict the ability and willingness of rent seekers to support it. These factors determine ($W_1 \ldots W_N \ldots$).

Let ($W_1 \ldots W_N \ldots$) again be arrayed in descending order of magnitude. Then the government is assumed to set each W_k to index its expected net gain from allowing k an opportunity to seek rent that is optimal from its point of view vs. denying access to rent. The net gain is the expected gross gain from k's support minus the information cost of determining k's rent-seeking effectiveness at each A_k plus any decrease in the cost of implementing and enforcing the entry barriers based on access weights when these are relaxed to allow k to seek rent after having already allowed the first ($k - 1$) rent seekers.

Suppose ($W_1 \ldots W_N \ldots$) have been set, and fix s, V, and N. For any functions ($r_1 \ldots r_N$), there will be a unique profit maximum with unique vectors ($A^*_1 \ldots A^*_N$), ($G^*_1 \ldots G^*_N$), and ($V^*_1 \ldots V^*_N$), where each $V^*_k = A^*_k + G^*_k$. If we ignore the very small terms involving P^2_k, this profit maximum is where each marginal revenue, given by $(R_kP_k)[V/(1 - s)A_k]$, equals one and is falling as A_k increases. Let $S = \Sigma_k(S_k)$ be the total net subsidy to rent seeking. In order to maximize utility, the government must choose each function $r_k(A_k)$ in such a way that ($V^*_1 \ldots V^*_N$) constitute the utility-maximizing allocation of any $S + V = A^* + G^* = \Sigma_k V^*_k$, given that profit-maximizing rent seekers will determine a division of any V^*_k into A^*_k and G^*_k in such a way that $G^*_k/A^*_k = [(1 - R^*_k)(1 - s)]/R^*_k$, if we again ignore terms involving P^2_k.

If $s \neq 1$, the government can do this by choosing each R_k in such a way that the marginal utility provided by a unit increase in A_k, together with the associated change in G_k, always equals $(R_kP_k)(V/(1 - s)A_k)$. This also sets the marginal utility of a unit increase in V_k equal to one. Maximizing U subject to $\Sigma_k V_k = V + S$ then gives a outcome (point of tangency) where each $(R_kP_k)[V/(1 - s)A_k] = 1$, keeping in mind that $G_k/A_k = [(1 - R_k)(1 - s)]/R_k$. This is also the unique all-around profit maximum. If $s = 1$, the functions $(r_1 \ldots r_N)$ must be set in such a way that each $R^*_k = 0$ at the utility maximum and only there. Once again, the maximum of U is also the all-around profit maximum at any given s, V, and N.

Suppose then that an increase in s or V occurs. This will raise the marginal revenue of each A_k at the old profit maximum, provided $R_k \neq 0$ at that point, and A^*_k will therefore increase, as will $W^* = \Sigma_k W_k(A^*_k)^{rk}$, since a unit increase in any A_k raises W by $R_kA_k^{(rk-1)}$. The only exception arises when $s = 1$ and $R^* = 0$ at the old equilibrium, in which case W^* is maximized there, as is U. The new all-around profit maximum is also the new utility maximum, implying that utility is lower at the old profit maximum after the increase in s or V. However, this increase also raised U at the old profit maximum (since it increased the marginal utility of each V_k at every A_k). As a result, U is increasing in W^*.

Costs and Benefits to Government of Rent Seeking

Government is assumed to maximize U, subject to its budget constraint, written as $S + E = (T - O)$, where O is public expenditure on everything except rent seeking, E is the cost of implementing and enforcing entry barriers and other restrictions embedded in $(W_1 \ldots W_N \ldots)$ plus the information cost of determining rent-seeking effectiveness for active rent seekers, and T is net revenue from every source except rent seeking. $A^* + E$ is the broad measure of rent-seeking cost, and $A^* + G^* = V + S$, allowing us to rewrite the budget constraint as:

$$A^* + G^* + E - V = (T - O). \qquad (7).$$

Besides W^*, U is a function of $(T - O)$, or $U = U(W^*, (T - O))$. Associated with increases in s, V, and N are benefits to the government in the form of increases in support from those who receive the subsidies and rents. However, there will also be costs in terms of loss of support owing to the increases in $(T - O)$ which are required to finance increases in $S + E$—and which are also increases in the tax prices of government-supplied goods and services—and to the product price increases, input price decreases, tax increases, etc. that finance increases in V. The functions, $(r_1 \ldots r_N \ldots)$ are assumed to be computed net of non-budgetary financing costs, but not of those that go through the budget and are part of $(T - O)$. For any given total costs imposed on the public by increases in s and V, the loss of support will be greater, the more aware is the public of these costs and of their source and the better able it is to punish the government for imposing these costs.

From what was just said, we can write each $r_k = q_k - c_k$, where q_k indexes k's gross rent-seeking effectiveness, or the effectiveness that would occur with zero non-budgetary financing costs, and c_k indexes the offsetting loss of effectiveness owing to these costs. Likewise $R_k = Q_k - C_k$, where Q_k is gross returns to scale—or the elasticity of $(A_k)^{qk}$ with respect to A_k—and C_k is the elasticity of $(A_k)^{ck}$ with respect to A_k. Also $R^* = Q^* - C^*$. In addition, $E = E(G^*, I, N)$, where I is the cost of a unit of information—assumed to be determined by the nature of the political system (and for simplicity to be the same over different types of information). E is increasing in each argument—in G^* because this is the attraction to rent seeking, in I because the cost of determining rent-seeking effectiveness for given N increases with I, as does the likely severity of the entry barriers and other restrictions embedded in $(W_1 \ldots W_N \ldots)$, and in N because for given I, the greater is N, the greater will be the total cost of determining rent-seeking effectiveness for active rent seekers. However, if I is low, E will be relatively low as well for any given N, even if G^* is high. Exclusion from rent seeking then results mainly from low rent-seeking effectiveness and is self enforcing, as noted above. Changes in G^* caused solely by changes in $(r_1 \ldots r_N \ldots)$ do not affect E.

Suppose the functions $(r_1 \ldots r_N)$ and weights $(W_1 \ldots W_N)$ are set as above for any given s, V, and N, and consider maximizing U over s, V, and N, subject to (7). Maximizing U with respect to $(T - O)$ reveals that $-U_{(T-O)}$) is the Lagrangean multiplier and marginal cost of $(S + E)$—the cost in lost support to the government (the reduction in U) from raising $(T - O)$ by a unit to finance a unit increase in $S + E$. We shall call this marginal cost MC_S; thus $MC_S = -U_{(T-O)}$. For any given $(T - O)$, maximizing U over s, V, and N subject to (7) is the same as maximizing W^*.

In order to make the maximization of W^* more manageable, we make four simplifying assumptions. First, suppose that inside some small neighborhood of the utility maximum, each r^*_k does not depend directly on s or V and also that each R^*_{kk} is small enough to ignore, where R_{kk} is the derivative of R_k with respect to A_k. These results do not necessarily hold everywhere. The basic idea is that the *level* of each R^*_k at the utility maximum is more important than the rate at which it changes in response to changes in s, V, or A^*_k.

Second, suppose that the main effect of a percentage point increase in s is its direct effect on A^*_k and G^*_k. There will also be indirect effects on A^*_j and G^*_j, for any $j \neq k$, since the increase in s will raise A^*_k, which in turn lowers P_j at any A_j. However, the resulting decreases in each A^*_i for $i \neq k$, $i \neq j$, will boost P_j at any A_j, thereby offsetting the original downward pressure on A^*_j. Third $\Sigma_k P^*_k R^*_k$ is assumed to be a close enough approximation to R^* that the difference between the two can be ignored, the reason being the very small size of each $(P^*_k)^2$. Given this, define R^{**} by setting $\Sigma_k P^*_k[(R^*_k)/(1 - R^*_k)] = (R^*)R^{**}$. Keeping in mind that $(1 - R^*_k)^{-1} = [1 + R^*_k + (R^*_k)^2 + (R^*_k)^3 + \ldots]$, we have $R^{**} \geq 1$, equality holding if and only if $R^* = 0$. R^* approaches zero and R^{**} approaches one as $(R^*_1 \ldots R^*_N)$ approach zero. Finally, it is assumed that N can be treated as a continuous variable—on grounds that the total number of rent seekers is large—and also that the marginal benefit (increase in W^*) from adding an Nth rent seeker is to a close approximation $W_N[(R^*_N P^*_N)V/(1-s)]^{rN} = P^*_N W^*$.

Given these assumptions, let A^*_{ks} and G^*_{ks} be the increases in A^*_k and G^*_k per unit of a small increase in s, with V and N constant, and A^*_{kV} and G^*_{kV} be the increases in A^*_k and G^*_k per unit of a small increase in V, with s and N constant, and ignore the very small terms with $(P^*_k)^2$. Suppose $s < 1$. Then if $R^*_k > 1$, G^*_k will be negative if k actively seeks rent. If $R^*_k = 1$, $A^*_{ks}(1 - R^*_k) = A^*_k/(1-s)$, again implying that $A^*_k = 0$. Therefore, $R^*_k < 1$ if k actively seeks rent, with $A^*_{ks} = A^*_k/[(1 - R^*_k)(1 - s)]$ and $G^*_{ks} = A^*_k$. Also $A^*_{kV} = A^*_k/V(1 - R^*_k) = R^*_k P^*_k/[(1-s)(1-R^*_k)]$ and $G^*_{kV} = P^*_k$. Using $A^*_k = [R^*_k P^*_k(1 - P^*_k)]V/(1-s)$ and equating the marginal benefit and marginal cost to the budget of a unit increase in s, with V and N constant, gives (after dividing through by $(R^*)R^{**}$):

$$W^* = [1 + (1/R^{**})(1 + E_G)]V(1 - P^2)MC_S. \qquad (8).$$

Similarly, equating the marginal benefit and marginal cost of a unit increase in V gives:

$$W^* = [((1 - P^2)/(1 - s)) + (E_G/(R^{**}R^*))]VMC_S. \qquad (9).$$

In (8) and (9), E_G is the increase in E caused by a unit increase in G^*. When (8) and (9) hold, $MC_S > 0$, since W^* is positive. Given this, equating the marginal benefit and marginal cost to the budget of adding the Nth rent seeker, with no change in s or V, yields:

$$W^* = [(V(1 - sR^*_N)/(1 - s)) + (E_N/P^*_N)]MC_S, \qquad (10).$$

where E_N is the resulting increase in E.

However, if rent seeking cost is fully subsidized ($s = 1$ at the maximum of W^*), each A^*_k will be set where $R^*_k = 0$, and both A^*_{ks}, and G^*_{ks} will be positive. The marginal benefit to government of a unit increase in s will be zero, which must also be the marginal cost of this increase to the budget. This requires $MC_S = 0$; the budget does not constrain the maximization of W^*. Either the public is unaware of the costs imposed on it by increases in s or is unable to punish government for imposing these costs. For sufficiently low values of MC_S, rent seeking will be subsidized and for higher values it will be taxed.

Let A^*_U, s_U, V_U, and N_U be the utility-maximizing values of A^*, V, s, and N, with $A^*_U(V)$, $N_U(s,V)$, etc. denoting utility-maximizing values of these variables for fixed values of the variables in brackets. A basic assumption made here is that s_U is determined by the values of W^* and the right-hand side of (8) at each s, V, and N. Likewise, V_U is determined by W^* and the right-hand side of (9), and N_U by W^* and the right-hand side of (10). This implies (eg.) that the effects on s_U of shifts in the right-hand sides of (9) and (10) are relatively small. Thus if two polities, A and B, with W^* higher in A, and the right-hand side of (8) lower in A at each s, V, and N, s_U will be higher in A. If W^* and the right-hand side of (10) is higher in A and the right-hand side of (8) is lower at each s and N for a given value of V in each polity, $s_U(V)$ will be higher in A, and $N_U(V)$ may be either higher or lower in A than in B.

The key parameters in (6a), (8), (9), and (10) which ultimately determine total rent-seeking cost, ($A^* + E$), are W^*, R^*, R^{**}, I, and MC_S. Our next task is to examine how democracy and dictatorship affect these parameters and what this implies about rent seeking and rent-seeking cost.

Rent Seeking Under Democracy

The most important forms of rent seeking under democracy are lobbying and transfers (campaign contributions, bribes, etc.) from interest groups seeking favors to politicians and other candidates for public office [Mbaku 1991], when these transfers are used in competition for office. Lobbying helps a politician or public official by supplying useful information and information-related services, such as drafting legislation [de Figueiredo 2002].[2] However, the ability of rent seeking to sustain a government in power also depends on how well informed the public is and on its ability to change the government.

In this context, it is sometimes useful to think of the economy as a "firm" owned by its citizens and managed, at least to a degree, by its government. In a democracy, each citizen has a vote in choosing this "management," and although it may be an oversimplification, it is also useful to think of utility maximization (or maximization of support) by government as translating into maximization of votes. Suppose that the menu of policies and programs, including creation and allocation of rents, that maximizes the government's expected vote in absence of rent seeking is unique. Suppose further that voters have enough information to correctly evaluate the alternatives facing them and government has enough information to correctly perceive which menu is vote-maximizing, regardless of rent-seeking outlays. Then destructive rent seeking will be ineffective, since it will change neither the vote-maximizing menu nor government's perception of which menu this is.

Effective rent seeking therefore requires either that government lack information about which menu will maximize its vote or that voters lack enough information about the welfare implications of alternative government policies and programs to be able to vote according to their true preferences. The well-known reason for this "rational ignorance" is that voters may lack incentives to obtain costly information about the welfare implications of alternative government policies and programs; a single vote rarely determines an election outcome. Potentially this makes it possible for special interests to obtain favors from government that reduce the welfares of most voters, since the latter may be unaware of these favors or of the resulting burdens imposed on them, including the associated deadweight losses.

But rational ignorance can also be over-rated since utility-maximizing voters will be willing to bear some costs of obtaining information that provides them with utility, and both profit-maximizing media and vote-maximizing opposition parties have incentives to uncover instances where costs have been imposed on voters by government actions and to publicize these. Empirically, voting appears to be efficient in rewarding or punishing politicians according to their performance in office, possibly mainly because swing voters are well informed [Peltzman 1990; Silva and da Silva Costa 2006]. This suggests that the survival-ability of politicians and of policies depends on their net benefits to voters.

In this context, let the "inclusiveness" of a political system be measured by the sensitivity of government support to changes in tax prices of public consumption goods, as well as to changes in prices of private consumption goods and input prices at any given *s*, *V*, and *N*, when these changes result from government decisions. A highly-inclusive polity is one in which this sensitivity is relatively high and in the "right" direction. That is, government support reacts negatively to increases in prices of public and private consumption goods and to decreases in input prices.

An increase in the tax prices of government-supplied goods and services, with no change in quantities supplied, shows up here as an increase in $(T - O)$. Thus in a completely *non*-inclusive polity, $MC_S = -U_{(T-O)} = 0$. The ruler of such a polity—for example, McGuire and Olson's [1996] autocrat—can supply public goods (order, protection, infrastructure, etc.) that make its people more productive and then tax what they produce, thereby increasing $(T - O) = S + E$. This limits his incentive to exploit them. But if increasing $S + E$, and thus the income available to reward the small elite on whom the ruler relies to sustain his grip on power is the only contribution of most citizens to government support, the autocrat will set $s = 1$ and $R^* = 0$ to get a simple maximum of W^*. Such an ability to partition the population into non-intersecting groups of insiders and outsiders is a hallmark of a society with low inclusiveness; hence the use of the term, "inclusiveness," to describe sensitivity of government support to prices that affect citizen welfare. When inclusiveness is high, $-U_{(T-O)} = MC_S$ will also be high at any given *s*, *V*, and *N*. *U* will be sensitive to increases in $(T - O)$, which are also increases in tax prices.

Likewise, a high level of inclusiveness directly implies a relatively high loss of support from non-budgetary financing of rents and thus relatively high values of $(C_1 \ldots C_N)$ at any given $(A_1 \ldots A_N)$. As will be argued, a high level of inclusiveness also implies a democracy and a relatively open and transparent society, hence a relatively low cost of information. Openness makes it harder to steal an election through vote rigging or other fraudulent means. A rent seeker might supply information to a government that changes its perception of which menu of policies and programs will maximize its vote, but a relatively low cost of information also limits the value to government of such information. In short, not only will ($C_1 \ldots C_N$) be relatively high, but ($Q_1 \ldots Q_N$) are likely to be relatively low in a highly inclusive society at any given ($A_1 \ldots A_N$).

Thus the more inclusive a political system is, the higher MC_S and the lower R^* will be at any given s, V, and N. The same factors that make MC_S high—public awareness of the costs imposed on it by increases in s and V and of their source plus an ability to punish government for imposing these costs—also make R^* and R^{**} low. These functions also determine whether a "good" or "bad" rent-seeking equilibrium will be reached.

How might inclusiveness arise? In a democracy, political parties compete for swing voters, which gives these voters leverage over policy, but must also protect their own core voters from exploitation by opposition parties. If Party I aggressively redistributes away from the core supporters of Party II when I is in power, the optimal way for II to protect its core supporters is to reciprocate when it comes to power [Axelrod 2006]. Since swing voters can be made beneficiaries of this reciprocation, it is also likely to be consistent with vote maximization. The result is to limit net redistribution over time and to impose costs resulting from the parties' alternation in power, which causes unstable and hard-to-predict income rights.

In turn, this creates potential efficiency gains from reaching an agreement that keeps property rights more stable and predictable. Such an agreement would maximize an expression—eg., a generalized Nash product [Bishop 1964]—increasing in the welfare of each party and thus in the utilities of the core supporters of each, who would become better off than with no agreement. To ensure this, the agreement would have to contain provisions designed to prevent either party from amassing too much power at the expense of the other, which helps in turn to preserve democracy and inclusiveness. Here reciprocity again rules. Each party would agree to forego opportunities to exploit the core supporters of the other when it is in power, and to give the other party some input into policy formation. This would also transfer wealth from swing to core voters, to an extent limited by the need to enforce the agreement.

The potential for inclusiveness—and for its durability—therefore arises from reciprocity as a potentially optimal strategy for political parties or coalitions, from efficiency gains that limited co-operation between parties can provide, and from the need of a democratic government to appeal to many voters to gain and to stay in power. Dictatorship lacks the third of these conditions. Thus the "strength" of democracy is measured in terms of how inclusive a political system is and how durable is its inclusiveness. The availability of low-cost information to voters from sources outside the control of the current government plays a major part in this. Empirically, the availability of information in digestible form plays a key role in making politicians accountable to voters [Chang, Golden, and Hill, 2008, and references cited on their p. 3].

However, inclusiveness may be limited to those with *de facto* voting rights and may depend on political parties or coalitions actually alternating in power (or being expected to do so). It may also require that the number of political parties be small and that they exercise strong party discipline, since it may only be practical for a small number of political parties or groupings to negotiate and enforce the basic agreement described above. When it is achieved, inclusiveness gives both core and swing voters leverage over policy, including the supply of public goods. In fact, democracies supply public consumption goods at far higher levels than do dictatorships, which often substitute club goods available primarily to the dictator and his key supporters. Provision of public consumption goods is also income elastic in democracies, but not in dictatorships [Deacon 2003].

Inclusiveness is the enemy of destructive rent seeking because it implies a political voice for those who would bear its costs. Inclusiveness may fail because of rational ignorance, but this is potentially prevented by a low cost of and high access to information on the part of voters—which is to say a low value of *I*. Competition for votes can bring this about by loosening the control of any single party or coalition over the media, police, and courts. If one party controls these institutions, that party is likely to amass enough power to become dominant, in which case democracy will give way to dictatorship, and inclusiveness will decline.

Thus if inclusiveness is durable, the police, courts, media, and public and private watchdog agencies will be able to act independently of the current government and to have power to investigate and criticize politicians and public officials. Freedom of the press and freedom of expression are also likely, as is the rule of law, and these are basic public goods. Public officials will be subordinate to the law and will have limited powers to tax and appropriate, since this limits their ability to amass power or to serve some individuals or groups at the expense of others. Since an ability by government or by other powerful entities in society to act in secret is also a potential threat to inclusiveness, such a democracy will be relatively open and transparent, with public auditing of government expenditures. This narrows the sphere of information subject to government control. Even if voters in such a polity are unaware of the welfare burdens imposed on them when favors for special interests are granted, the media and political opposition have an incentive to publicize these favors afterward [Denzau and Munger 1986] in a way that attracts the public's attention.

More generally, if the government is able to increase its vote by exploiting rational ignorance in a polity that is highly inclusive, the media as well as public and private watchdog agencies and political opposition parties will have unexploited opportunities to gain profit or votes by discovering and publicizing government actions that run contrary to the preferences of most voters in a way that makes acquiring this information compatible with voter utility maximization. Freedom of expression reduces these barriers, while independence of police and judiciary potentially gives protection to information suppliers, and these conditions also favor competition between suppliers.

With the above in mind, the first-order conditions for maximizing W^*, subject to (7), with respect to s, V, and N are once again:

$$W^* = [1 + (1/R^{**})(1 + E_G)]V(1 - P^2)MC_S. \quad \text{(8 repeated).}$$

$$W^* = [((1 - P^2)/(1 - s)) + (E_G/(R^{**}R^*))]VMC_S. \quad \text{(9 repeated).}$$

$$W^* = [(V(1 - sR^*_N)/(1 - s)) + (E_N/P^*_N)]MC_S \quad \text{(10 repeated).}$$

These equations determine s_U, V_U, and N_U. Given the basic assumption made at the end of last section, the lower are W^*, R^*, and R^{**}, and the higher is MC_S at each s, V, and N, for given values of the other variables, the smaller s_U, V_U, N_U, and therefore A^*_U, will be.

Low values of $(R_1 \ldots R_N)$ at each vector $(A_1 \ldots A_N)$ also imply a low value of W^*. To see this, note that $R^* = \Sigma_k P^*_k R^*_k$ is the elasticity of W^*, or the percentage increase in W^* when each A^*_k (and therefore A^*) increases by one percent. Fix s, V, and N. Ignoring P^2 (as shown earlier, P^2 is likely to stay within a narrow range), the smaller is R^*, the lower A^* will be, from (6a). At each vector $(tA^*_1 \ldots tA^*_N)$ for all t such that $0 \leq t \leq 1$ there will be a value of W, say $W(t)$, with elasticity, $R(t) = \Sigma_k P_k R_k(t)$. Then if two polities, A and B, such that R^* is higher in A at any given s, V, and N, and $R(t)$ is no lower at any t than in B, both A^* and W^* will be lower in B for that s, V, and N.

By depressing W^*, R^*, and R^{**}, and increasing MC_S at each s, V, and N, a high level of inclusiveness is favorable to small values of s_U and V_U when this inclusiveness is expected to endure. Nonetheless, a high level of inclusiveness also implies a relatively low value of I and thus a relatively small value of E, which could mean small values of E_G and E_N as well. The latter would have an increasing effect on s_U, V_U, and N_U. As E_G is likely to remain well below one, however, (8) implies that a 5-10 percent reduction in MC_S could easily offset a tripling of E_G, in terms of its effect on s_U. From (9), a combination of a decrease in MC_S and an increase in rent-seeking effectiveness (more precisely, an increase in $\Sigma_k P^*_k[(R^*_k)/(1 - R^*_k)] = (R^*)R^{**}$ at any given s and V) could offset a much larger increase in E_G, in terms of its effect on V_U. From (10), however—and keeping in mind that $P^*_N \leq 1/N$ will be quite small—a relatively high value of E_N at each s, V, and N *could* imply a smaller N_U when inclusiveness is low, despite the fact that MC_S is also relatively low and W^* is relatively high.

The amount of rent, V, as well as total rent-seeking cost, $A^* + E$, and the number of active rent seekers, N, will depend partly on the size of an economy, and we can therefore think of these values as being deflated by a measure of size, such as GDP. In addition, we shall focus on how the strength of democracy affects rent-seeking cost for any given V, as well as on the limiting value of V as democracy grows more inclusive.

When democracy is "strong" in this sense, voters will have leverage over policy and will be informed well enough to vote according to their true preferences, regardless of rent-seeking outlays. Government will also be relatively well informed. As a result, it will be reluctant to award rents when this runs contrary to the preferences of most voters, since this will cost it votes. The vote-maximizing distribution of any given V will depend largely on voter preferences and be relatively insensitive to variations in $(A_1 \ldots A_N)$, implying small values of each r_k and R_k at every $(A_1 \ldots A_N)$. Voter awareness and clout at the polls will also cause MC_S to be relatively high at any given s, V, and N.

The end result is relatively low utility-maximizing values of s and of A^* for any given V and N. At the utility maximum, MC_S may be low since S is low, even though MC_S is relatively high at any given s, V, and N. Ironically, rent-seeking profit may take a high share of $V + S$ at this maximum, since $A^* + G^* = V + S$. However, this profit results from low rather than high levels of rent-seeking effectiveness and returns to scale at any given $(A_1 \ldots A_N)$ and thus does not attract a large volume of resources into rent seeking. Along with varying effectiveness from one rent seeker to another plus the likelihood that any given rent seeker will have a limited amount of information to supply whose marginal value exceeds the recipient's marginal cost of utilizing it, this gives an explanation for the apparent high profitability of lobbying outlays, but low commitment of resources to lobbying activity, relative to the value of policy at stake [Tullock 1989; de Figueiredo 2002].

If voters *always* vote their true preferences and government knows which menu will maximize its vote, regardless of rent-seeking outlays, the distribution of any given V will be completely independent of $(A_1 \ldots A_N)$. Voter preferences alone will determine how rents are allocated. This requires each $r_k = 0 = R_k$ at every $(A_1 \ldots A_N)$, which gives $A^* = 0 = V$, since the marginal utility (= $(R_k P_k)(V/(1 - s)A_k)$) of any V_k is zero whenever A_k is positive. Destructive rent seeking disappears. However, a government is likely to award some rents as part of vote maximization, even with no rent seeking. Moreover, rent seeking that is Pareto improving and so not considered in this paper may well generate a smaller value of MC_S and higher value of R^* at any given s, V, and N and therefore be profitable.

In a "weak" democracy, by contrast, voters are less well informed, and their votes are more likely to be over-ruled by vote rigging or fraudulent voting. Because rent-seeking contributions of resources and information are more decisive in determining who will govern, rent-seeking effectiveness and returns to scale (R^*) will be larger at any given s, V, and N than when democracy is strong. As a result, A^* will be higher at any s, V, and N in the weak democracy. Likewise, MC_S will be lower at any s, V, and N than when democracy is strong. The support of special interests is more valuable to government (W^* will be higher at any s, V, and N) in the weaker democracy because these interests can do more to sustain it in power.

Suppose that $R^*_U(V)$ and $R^{**}_U(V)$ are the same in a strong as in a weak democracy for a given value of V in each. Then $A^*_U(V)$ will be higher in the weak democracy because (8) implies that $s_U(V)$ is higher there, since MC_S is lower and W^* is higher at any given s and N. Thus if $A^*_U(V)$ is to be lower in the weak democracy, $R^*_U(V)/(1 - s_U(V))$ must also be lower there for the given V. But since R^* is larger at any given s, V, and N, the only way for this to happen is for $N_U(V)$ to be lower in the weak democracy, and for the average scale of individual rent seeking to be higher there. Fewer active rent seekers could mean a smaller value of $R^*_U(V)$, because each R^*_k is non-increasing in scale. By making democracy strong enough, however, one can make W^* as small as desired at any given s, V, and N, but one cannot do the same to the right-hand side of (10). Thus $N_U(V)$ will be as small as desired if democracy is strong enough, and the same is true of $R^*_U(V)/(1 - s_U(V))$. As a result, $A^*_U(V)$ must be smaller in a sufficiently strong democracy than in a weak one.

Empirical evidence for the United States given in Ansolabehere, de Figueiredo, and Snyder [2003] implies that spending on campaign contributions and lobbying is quite small relative to the value of policy at stake. These authors argue that campaign contributions are a form of consumption rather than investment, which provide utility and are undertaken (or not) by citizens in line with utility maximization. The same would be true of other kinds of political participation by citizens, including acquisition of information relevant to voting and voting itself. Empirical work by Coates and Munger [1995, p. 870] suggests that median voter preferences are better predictors of how legislators will vote than are special interest variables. Given the effect of the former, one can not reject the null hypothesis that the latter have an insignificant further impact on voting—see also Denzau and Munger [1986].

Rent Seeking Under Dictatorship

We next examine the effect of dictatorship on parameter values in (6a), (8), (9), and (10). If we again think of the economy as a "firm," control over this firm is vested with company insiders under dictatorship, namely the dictator and his political elite, who will run it in a way that is consistent with their own perceived best interests. Citizens will have less influence over policy than under democracy since their votes do not count in choosing the government.

Nevertheless, our first thought might be that there would be little rent seeking under dictatorship, because (as it is sometimes put) dictators can simply ignore the demands of special interests. The notion of a dictator who can do this without incurring a cost is more legend than reality, however, and rent seeking has been widely observed in dictatorships, including the former Soviet Union (both during and after Stalin's rule) [Belova and Gregory 2002; Anderson and Boettke 1997; Gregory and Harrison 2005; Hillman and Schnytzer 1986] and Hitler's Germany [Milward 1965].[3] In their study of Uruguay over 1925-83, which alternated between periods of democracy and dictatorship, Calderon and Chong [2006] find rent seeking to be greater in periods of dictatorial rule. Democracy reduced rent seeking and reduced it more, the longer the period of democracy lasted. According to Kimenyi [1987], bureaucrats in dictatorships have more freedom to seek rent and more public resources available for this purpose than do bureaucrats in democracies.

While a dictator has a political monopoly with respect to electoral competition, other types of competition for power are present, including potential competition to be the dictator, and this is why dictators often do not ignore special interest demands. Through history, dictators have had to deal with potential disloyalty, plots against them, the emergence of rivals, the erosion of their power, etc. Because of this competition, a successful dictator needs the backing of an elite which forms his political base of support [Wintrobe 2001, 2004]. This base usually comprises a small percentage of the total population (eg., the *nomenklatura* of the Communist Party in socialist states) and usually includes at least the upper echelons of police and military. In the absence of broadly-based electoral competition, these elements can do more to sustain a dictator in power, but also more to remove him. When dictators lose power, it is usually to members of their own political elites [Svolik 2009], who preserve dictatorial rule. Dictators reward members of their elite bases with access to rents—effectively buying their support in this way—and try to deal with threats to their power by repressing potential rivals or co-opting them into their support bases. Political competition under dictatorship usually does not change the basic determinants of power and thus does not cause these polities to become highly inclusive.

Dictators use the media as a means of strengthening their control and the support for their regimes. The same is true of the judiciary and of control over information generally. The result is a higher cost of information, I, and a lower supply of the information, legal protections, and other public goods that help to keep MC_S high and R^* low in an inclusive democracy. Monopoly control over the supply of information facilitates political control and also makes it easier for a ruler to persuade his subjects to believe in him, in his government, and in his goals, which helps him to gain their compliance and co-operation in achieving these goals [Hayek 1994, ch. 11].

Dictators do not necessarily eschew popularity. However, suppressing political party competition makes popularity among the population at large less important and control over military and police resources more important in determining a ruler's support. Dictatorships spend more than democracies on police and military resources [eg., Mulligan, Gil, and Sala-i-Martin], which protect the power and rents of the political elite. Most rent seeking under dictatorship involves this elite base, including efforts to protect its rents, competition to enter it, competition to improve or preserve one's status (and rent) within it, and attempts to erode the dictator's power or to overthrow him, as well as efforts to suppress any such attempts. Members of the political elite will also be lobbied by economic interests seeking favors in exchange for gifts or bribes.

A dictator can shift the cost of rents and of rent-seeking subsidies onto citizens with a weak political voice. The ability of outsiders to withhold their compliance and co-operation potentially causes

MC_S to be positive at any given s, V, and N, but lower than if they could also change the government just by the way they vote in a society with low barriers to the supply and acquisition of information. A low value of MC_S also makes it more attractive for a dictator to promote rent seeking competition within his support base.

To understand why a dictator would want to do this, let $R^*_{UI}(V)$, $A^*_{UI}(V)$, $N_{UI}(V)$, etc. denote utility-maximizing values of R^*, A^*, N, etc. in a dictatorship for some given V, and let $R^*_{UE}(V)$, $A^*_{UE}(V)$, $N_{UE}(V)$, etc. denote these values in a strong democracy for the same value of V. Dictators gain from prohibiting or limiting criticism of their activities, but because they punish such criticism, they are never sure how much support they really have, either in the population at large or within specific groups that could threaten them. This is the "dictator's dilemma" [Wintrobe 2001, 2004]. Elements of his elite base are often in the best position to overthrow the dictator, and as noted above, when dictators lose power, this is usually how they lose it. But success requires these elements to co-operate against the dictator's system of command and control and to unite around an alternative government, for which they must first build strong mutual bonds of trust. In line with Wintrobe and Breton [1986], we take W^* to be an increasing function of the vertical trust capital, T_V, that the dictator is able to build between himself and elements of his support base and a decreasing function of the horizontal trust capital, T_H, that individuals and groups in this base are able to build with one another.

Because they imply more intense competition for rents between elements of the dictator's elite base, increases in A^* for any given V interfere with trust building between these elements, thereby impeding the accumulation of T_H. Increases in G^* increase the consumption possibilities of the political elite, thereby raising the opportunity cost to them of replacing the dictator, which facilitates accumulation of T_V. Thus an ideal solution for a dictator is to have A^* and G^* both high, in order to keep T_H low and T_V high, especially since marginal damages from T_H are increasing [Wintrobe and

Breton 1986]. From (6a), this implies a high value of $R^*_{UI}(V)/(1 - s_{UI}(V))$ and a low value of $R^*_{UI}(V)$, hence a high value of $s_{UI}(V)$. However, it is precisely when MC_S is relatively low at each given s, V, and N that such a "divide and rule" outcome is consistent with maximizing W^*. A dictator can also try to curb accumulation of T_H by coercive means, but this is a form of rent seeking, part of the costs of which fall on the targets of coercion and thus are not part of E. In short, $A^*_{UI}(V)$ will not be arbitrarily small at the maximum of W^* and is likely to be high.

Let N_0 be the minimum size of a dictator's support base consistent with his survival as dictator. Because it pays a dictator to promote rent seeking within his support base, $N_{UI}(V) \geq N_0$. By making democracy strong enough, however, $N_{UE}(V)$ can be made small as desired, as shown earlier, and thus no greater than $N_{UI}(V)$. Indeed, since I is lower in a strong democracy than in a dictatorship, $E_{UI}(V) > E_{UE}(V)$ whenever $N_{UE}(V) \leq N_{UI}(V)$ and for some higher values of $N_{UE}(V)$ as well when democracy is sufficiently strong. While $G^*_{UE}(V)$ may be either higher or lower than $G^*_{UI}(V)$, exclusion from rent seeking in a strong democracy results mainly from low rent-seeking effectiveness. Excluded rent seekers have productivity that is too low for them to profit from rent seeking and hence no incentive to enter.

Under dictatorship, the elements of a dictator's support base can do more to sustain him in power, but also more to remove him than if government was chosen in a broadly-based election and the value of I was low. As shown above, the value of $A^*_{UI}(V)$ cannot be made arbitrarily small at the maximum of W^*; indeed, as in a weak democracy, $A^*_{UI}(V)$ is likely to be high. By contrast, destructive rent seeking can easily do more harm than good to the re-election prospects of a democratic government that indulges and rewards it. By making democracy strong enough, we saw that $R^*_{UE}(V)/(1 - s_{UE}(V))$, and thus $A^*_{UE}(V)$, can be made as small as desired, which implies $A^*_{UE}(V) < A^*_{UI}(V)$, for any given V. From $E_{UE}(V) < E_{UI}(V)$ above, we then get $(A^*_{UE}(V) + E_{UE}(V)) < (A^*_{UI}(V) + E_{UI}(V))$ for any given V when democracy is sufficiently strong. Total rent-seeking cost is lower in such a political system. By contrast, rent seeking is part of the reason why a “strong” dictator (in the sense of having a high probability of survival) remains strong.

Conclusion

Inclusiveness is the enemy of destructive rent seeking. A highly inclusive society, with the legal and institutional infrastructures to protect and preserve this inclusiveness, will keep rent-seeking cost low in proportion to the amount of rent available by keeping MC_S relatively high and R^* relatively low at any given s, V, and N. In addition, it will create and distribute rents largely in response to voter preferences instead of in response to rent seeking. Rent seeking may be profitable, but profitability results from variable effectiveness across rent seekers plus a low rather than a high marginal productivity of rent seeking at the margin. Thus it does not attract a large volume of resources into rent seeking. Excluded rent seekers are too unproductive to be profitable.

Less inclusive societies are likely to rely more heavily on access barriers to limit competition for rents by limiting the number of active rent seekers, since accurate information is more expensive in these societies, to government as well as to citizens. But the government of such a polity also has a greater incentive to subsidize rent seeking because it is easier to shift rent-seeking cost onto those with a weak political voice and because special interests that benefit from rent seeking can be more effective in sustaining a government in power or in removing it. Under dictatorship, rent-seeking competition within a dictator’s support base can also reduce the latter capacity, since increases in A^* lower T_H.

Generally speaking, the deterrent to rent seeking is stronger, the more aware is the public of the resulting costs and of their source, and the better able it is to punish government for imposing these costs. This gives a net advantage to democracy over dictatorship in controlling rent-seeking cost, since democracies are more inclusive polities. Dictatorships lack the third condition for inclusiveness—the need to appeal to many voters to gain and stay in power. But democracy's advantage is not automatic. The potential for inclusiveness may go unrealized, or a democracy may be unable to build the institutional and legal foundations needed to preserve inclusiveness.

NOTES

1. Let $P_j/P_k = g_j(A_j)/g_k(A_k)$, for $k, j = (1 \ldots N)$, where g_j and g_k are any functions smoothly increasing in A_j and A_k, with each $g_k(A_k) > 0$ whenever $A_k > 0$. Set each $A_k = 1$, $k = (1 \ldots N)$, and define $W_j/W_k = g_j(1)/g_k(1)$, $B_k = g_k(A_k)/W_k$ for all positive $A_k \neq 1$, and $r_k = ln\, B_k/ln\, A_k$ to get $g_j(A_j)/g_k(A_k) = W_j(A_j)^{rj}/W_k(A_k)^{rk}$, which gives (1).
2. The possibility that this information would enable more efficient policy making is ruled out by the assumption that rent-seeking outlays do not improve efficiency. To the extent that they do, however, the social cost of rent seeking is correspondingly reduced.
3. In the former Soviet Union, for example, there was competition for government positions with control over the allocation of scarce, under-priced products or resources and the bribes (scarcity rents) that went with this control [Anderson and Boettke 1997; Hillman and Schnytzer 1986]. In both the Soviet Union and Nazi Germany, government officials often engaged in bribe taking, empire building, and competition to expand their jurisdictions [Gregory and Harrison 2005; Hillman and Schnytzer 1986; Milward 1965]. Hitler deliberately created overlapping jurisdictions [Milward 1965] in order to force bureaucratic units to compete for control. As well, Soviet officials and enterprise directors tried to gain more rent by manipulating the success

criteria that governed access to rent [Nove 1986, 96-102]. To compete for power and rents more effectively, Communist Party members also formed networks of mutual support.

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