

RENT SEEKING CAN PROMOTE THE PROVISION OF PUBLIC GOODS*

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Public officials often have little incentive to spend time and effort proposing policies that benefit others. When, however, some public policies generate rents to these officials, rent seeking in politics can motivate them to provide public goods. We consider the motivational effects of rent seeking on (i) policy, (ii) the role of agenda-setting in social choice theory, (iii) the effects of graft and corruption in government, and (iv) the validity of cost-benefit analysis.

RENT SEEKING is often used in analyses of politics (Tullock, 1967; Krueger, 1974; Posner, 1975; Bhagwati, 1982; Buchanan, Tollison, and Tullock, 1980; Tollison, 1982). Most of the literature discusses rent seeking that benefits firms or special interest groups. But the concept also applies to transfers of wealth to politicians or to their constituents: a politician, for instance, may lobby for a reallocation of federal funds to his district. Economists consider the problem a serious one. Tullock (1967, 1980) shows that in competitive rent seeking the aggregate resources devoted to pursuing redistributions of wealth can equal the value of the rents to be distributed.¹ Buchanan (1980) and others argue that constitutional restrictions on expenditures and taxes are necessary to reduce the resources consumed in seeking transfers of wealth.

Nearly all the public choice literature focuses on these negative consequences of rent seeking. Buchanan's view is typical and influential (1980, p. 359):

Rent seeking involves social waste. Resources that could otherwise be devoted to value-producing activity are engaged in competitive effort that determines nothing other than the distributive results. Rent seeking, as such, is totally without allocative value, although, of course, the initial institutional creation of an opportunity for rent seeking ensures a net destruction of economic value.

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¹ But see Hillman (1989, chapter 6), Ursprung (1990) and references therein for an examination of how free-rider and other problems may limit the amount of rent seeking.

Similarly, the volumes on rent seeking edited by Buchanan, Tollison, and Tullock (1980) and by Rowley, Tollison, and Tullock (1988), say little about the possible benefits by rent seeking.²

This paper argues, in contrast, that rent seeking can increase political effort and thereby increase social welfare. We shall consider public sector agents who may rationally avoid the private costs of implementing policies with public benefits. We also suppose that public officials receive more rents the more they promote policies. If those policies benefit the public, then rents can implicitly compensate officials for their public service efforts.³

1. THE PROBLEM OF MOTIVATION

It is costly for a politician to propose policies. Consider a legislator who can introduce legislation. His staff must spend time researching the topic and drafting legislation instead of raising campaign funds or planning reelection strategies. The legislator must learn the subject area, if only to evaluate the work of his

² Only Rowley (1988) notes the possible benefits of rent seeking in these volumes. In the broader literature, Bhagwati (1980, 1982, 1983) and Bhagwati and Srinivasan (1980) demonstrate that rent seeking may increase welfare in the context of international trade models. See also footnote 3 below. The literature on the economic theory of the state does not recognize the potential efficiency properties of rent seeking. See Whynes and Bowles (1981) and Auster and Silver (1979) for surveys of this field and for examples of representative work. An institutionalist critique of rent-seeking theory is found in Samuels and Mercurio (1984). Ricketts (1987) criticizes the tendency of many theorists to define rent seeking as any activity that has no beneficial effects.

³ Our analysis has a number of less obvious predecessors. Hirschman's analysis of voice (1970) provides examples of beneficial rent seeking. Individuals who use voice in politics may often be seeking rents, but their expression of voice may be part of a discovery process that produces valuable information about political alternatives. Likewise, Milgrom's (1988, p. 56) analysis of the internal organization of firms discusses how the existence of rents can motivate informed individuals to bring their opinions to bear on management issues. Also relevant is Olson's (1965) discussion of selective incentives. Lobbying groups, for instance, produce the collective good of lobbying for their members only if they also offer private goods (such as a trade journal or information clearinghouse service) whose accessibility is linked to the members' contributions to the collective good activity. Frohlich, Oppenheimer, and Young (1971) apply Olson's theory to political organization and argue that the expectation of profit is necessary to induce political entrepreneurs to provide public goods. Similarly, Anderson and Tollison (1985) examine the role of rents in motivating private sector lobbies. Lee (1985) examines the benefits which may result if rent seeking induces lobbying. Also relevant is the work of Shapiro and Stiglitz (1984) on labor markets which emphasizes the effect of wages on effort.

The earliest precursor we have found to our analysis of beneficial rent seeking is Mandeville (1734), who argued that the self-interested behavior of politicians prompts them to produce what we now call public goods, and that the move from the state of nature to civilized society required from individuals the public good of moral behavior. Yet no person has an incentive to act morally if others do not. Politicians thus play the important role of producing the public good of moral behavior among their citizens. Politicians have an incentive to produce "moral" feelings among citizens because it is easier to obtain rents from citizens who offer little resistance to government authority and who are imbued with feelings of morality. Mandeville (pp. 44-45) notes, "it is evident, that the first rudiments of morality broached by skilful (*sic*) politicians to render men useful to each other, as well as tractable, were chiefly contrived, that the ambitious might reap more benefit from and govern vast numbers of them with the greater ease and security."

subordinates.⁴ He must shepherd the bill through committees and subcommittees until it reaches the floor. He must then make speeches and public appearances supporting the bill, persuade fellow legislators, and build a winning coalition. But for nearly all politicians, as Margolis (1974) emphasizes, time and energy are extremely scarce resources.⁵ Similar costs are imposed on a head of an agency charged with proposing and implementing projects.

Since the salaries of politicians are not directly related to effort, politicians may spend too little time on public service efforts. Nor does the desire for reelection or reappointment necessarily elicit such effort. For example, because it is difficult to monitor, verify, and interpret legislative activity, voters are ignorant about their representative's legislative efforts (Stokes and Miller, 1962). And rational voters may avoid rewarding incumbents who spend time on national issues – such efforts reduce the representative's ability to help his constituents in other ways, yet benefit voters in other districts. Each congressman may instead increase his chances of reelection by engaging in constituency service rather than by proposing new legislation: congressmen who track lost Social Security checks or do similar favors for constituents are likely to be remembered in the voting booth.⁶

Finally, reelection incentives may be weak for politicians who expect either easy reelection or little chance of reelection. Most congressional incumbents win reelection, which may imply they have monopoly power. Incumbents can use such an advantage to shirk and spend little effort on producing legislation with public benefits.⁷

⁴ The importance of a politician's knowledge of the issues in influencing other politicians is a common theme in the political science literature. See Kingdon (1973, chapters 3 and 4).

⁵ Margolis (1974) also argues that politicians have private motivations that are unrelated to their reelection efforts. Much of our paper is devoted to analyzing how these private motivations can be harnessed for the public good.

Demands on legislators' time are becoming more pressing. In the 94th Congress [1975–1977], for instance, House committees and subcommittees held 6,875 meetings in comparison to 3,210 during the 84th Congress [1955–1957] (O'Donnell, 1981, p. 127). The number of hours that the House spends in session almost doubled from 937 to 1,789 across the same period (ibid, p. 127) and the increase in congressional workload has continued through the last decade. At the same time, constituents' demands for casework have also become more pressing (Johannes, 1981, p. 80). O'Donnell (1981) discusses the allocation of politicians' time. The average congressman works more than eleven hours a day, spending an average of almost 4½ hours each weekday on the floor or in committee.

⁶ Survey evidence (Cain, Ferejohn, and Fiorina, 1987, p. 39) indicates that one-quarter of the American public considers constituency service to be the most important role of their representatives. One congressional aide (cited in Cain, Ferejohn, and Fiorina, 1987, p. 79) expressed the representative's duties in the following manner: "You're elected to be a legislator, but casework and projects keep you elected. People in the district expect you to represent them in their dealings with the bureaucracy. Our prime responsibility is to see them and attend to their problems." Johannes (1984, *passim*) also offers evidence that voters pressure congressmen to perform constituency service and provide district-oriented effort. He cites (1984, p. 188), for instance, a CBS–*New York Times* poll finding that more people believe it more important for a congressman to "help people in his district who have a problem with the government" than to "work in Congress on bills of national interest."

⁷ The increase in tenure of incumbents is examined in Krehbiel and Wright (1983) and Jacobson (1987). Much of this evidence, however, is consistent with the alternative hypothesis that voters believe incumbents can do a better job than their potential replacements.

The problem of motivating public officials was recognized over a century ago by John Stuart Mill (1866, p. 137):

Look at the whole class of rulers, and ministers of state. The work they are entrusted with, is among the most interesting and exciting of all occupations; the personal share which they themselves reap of the national benefits or misfortunes which befall the state under their rule, is far from trifling, and the rewards and punishments which they may expect from public estimation are of the plain and palpable kind which are most keenly felt and most widely appreciated. Yet how rare a thing is it to find a statesman in whom mental indolence is not stronger than all these inducements. How infinitesimal is the proportion who trouble themselves to form, or even attend to, plans of public improvement, unless when it is made still more troublesome to them to remain inactive; or who have any other real desire than that of rubbing on, so as to escape general blame.

Direct incentives for attention to public affairs are difficult to find. Bonuses tied to effort would not be effective precisely because such effort is difficult to measure and monitor. A congressman's effort on furthering a bill, or an administrator's effort on planning a highway, may not be properly measured by hours of work or other available data. The measurement is especially difficult if an hour of one politician's time is less productive than an hour of another politician's time. Moreover, such promises of bonuses may not be credible – the principal has no incentive to pay the bonus after the agent expended the effort. Neither will simply raising the salaries of all agents work, because this creates no connection between effort and pecuniary return.

Vanity and the desire for fame may motivate some political effort. To the extent that vain politicians seek fame or political advancement, the desire for public recognition could encourage public service efforts. Such recognition, however, may not always be forthcoming, especially because of the problems of measuring and monitoring political effort. Recognition may only be achieved by a few highly visible politicians, such as the President.⁸

2. INSUFFICIENT CORRUPTION?

The usual analysis of corruption in government asks how to limit it. We claim instead that in the absence of corruption agents may have insufficient incentives to propose worthwhile projects. This section illustrates the point with a simple model. The model resembles the standard principal-agent model, but with an

⁸ The problem of motivating public sector participants has also received attention from political views outside the mainstream of modern political thought. The philosophies of both libertarianism (Rothbard, 1978) and participatory democracy (Dahl, 1971), for instance, stress the principal-agent problem of motivating governments to devote effort for public interest purposes. Libertarianism attempts to impose the discipline of competition upon the agent, by allowing citizens to purchase public goods from competing private agencies. In contrast, participatory democracy attenuates or abolishes the principal-agent relationship, as citizens participate directly in government. Both views see constitutional republicanism as an inadequate solution to political principal-agent problems.

important twist. The usual story is that the parties first sign a compensation agreement, that the agent later undertakes his action, and finally gets his reward. An implicit assumption, then, is that the parties can sign binding agreements. The model here supposes otherwise – the bargaining occurs after rather than before the agent chooses his action. In this context, the ability to grab a greater share of the pie will induce more effort.

Let the principal be the mayor. The agent is responsible for devising and implementing projects. The agent must first incur expenses to devise a project. He later proposes the project, and the mayor and agent bargain about how to divide the surplus.

In considering the bargaining problem we follow Rubinstein (1982). The proposed project has benefits exceeding costs of $\$W$ when the project is completed. These benefits are to be divided between the mayor and the agent. The agent first makes an offer about dividing this surplus. The mayor can either accept, or else make a counter offer. The parties alternate. The intertemporal discount factor is δ . For simplicity, we let this factor be identical for the two parties. Rubinstein shows that the unique solution to this game (the unique Perfect Equilibrium Partition) has the agent obtain the fraction $1/(1 + \delta)$ of the surplus.

For proof,⁹ consider periods 0, 1, and 2. Analogous reasoning applies to any other contiguous periods. In periods 0 and 2 the agent makes an offer. In period 1 the mayor does. Let the solution have the agent get a fraction L of the surplus. Then in period 1 the mayor must make the agent just willing to accept this offer instead of rejecting it and making his own offer in period 2. That is, the mayor must offer the agent a fraction f of the gain, where $fW\delta = LW\delta^2$, so that $f = L\delta$. In period 0 the mayor will accept an offer of $(1 - L)W$ only if $(1 - L)W$ is at least as great as $(1 - L\delta)W\delta$. Solving gives $L^e \equiv L = 1/(1 + \delta)$.

The structure of the problem makes L^e the only partition the agent can rationally expect. But L^e may not be optimal for the mayor. The more effort (c) the agent devotes to working on a project, the greater the surplus (W) generated. The agent will choose that value of c which maximizes $LW(c) - c$, so that $W' = 1/L$. The mayor aims to maximize $(1 - L)W(c(L))$, so that $(1 - L)W' - W = 0$. Substituting from the agent's first order condition shows that the optimal L for the mayor must satisfy $(1 - L)/L = W$. This condition can clearly yield a value of L that is either smaller or larger than the Perfect Equilibrium Partition value, L^e , derived above.

The mayor may therefore want to promise the agent a greater fraction of the surplus. It would thereby induce the agent work harder. But how can the mayor make the offer credible? In the model we presented, the fraction given the agent depends on the discount factor δ , and on the order in which proposals are made. We saw that the party that makes the first offer gets a fraction $1/(1 + \delta)$ of the surplus. For values of δ between 0 and 1, this fraction is greater than $1/2$. Thus, the mayor can benefit from letting the agent make the first offer. (The other

⁹ This proof is similar to Sutton (1986).

parameter is the value δ , but here it is difficult to see how the mayor can affect its value.) In other words, we may induce greater effort by giving the agent property rights in a share of the spoils.

We may think that the mayor can increase his gain, $(1 - L)W(c(L))$, by taxing the agent, or by restricting the types of expenditures the agent can make with his share of the surplus. Thus, suppose the mayor taxes the agent's share, at a rate of τ . (A similar analysis applies to a subsidy.) Let the mayor get in return a fraction k of this tax. We can think that the agent must use funds in a way which reduces his own benefit, but increases that of the mayor. Thus, an agent who gets a pre-tax fraction L of the surplus keeps $L(1 - \tau)$ of it. The mayor's share of the surplus is $(1 - L + k\tau L)$. An analysis similar to that given above shows that the Perfect Equilibrium Partition is $L = 1/(1 + \delta - \delta\tau k - \tau k)$. Notice that τ and k always appear in this expression in the form τk . Thus, for a given value of τk we can find a value of τ with $k = 1$ which has the same effect on bargaining power. We henceforth let $k = 1$.

The after-tax share of the agent is $L(1 - \tau)$. Substituting for L and taking the derivative with respect to τ shows that $L(1 - \tau)$ is invariant with respect to τ . That is, the mayor does not gain from a linear tax on the agent's proceeds, and would not benefit from equivalent restrictions.¹⁰

A similar model can be derived which considers a positive probability that one or the other party will lose office and thereby gain nothing when no agreement is reached before then (see Myerson, 1991, pp. 394–399). We may think, for example, of a mayor running for reelection or of an agency head with a fixed term of office. A constitutional rule which lengthens the agent's term of office relative to the mayor's, or which makes his reappointment more likely, would then increase the agent's bargaining power. In equilibrium he would get a larger share of the surplus. Since the increased surplus increases the agent's incentive to propose projects, the public may benefit as well.

The model can also be extended to consider a difference between incentive and selection effects. The incentive effect arises when rents motivate a given politician to work more hours a week on public-interest legislation. That is, the incentive effect operates on the agent's choice of c . Selection effects may appear through changes in the function $W(c)$ available to the agent. Large rents may attract into politics more highly talented persons. In terms of the above model, the selection effect makes it likely that persons with high values of $W(c)$ for a given value of c will hold office. If instead politics offered no rents, many highly talented persons might forego careers in politics for other, more lucrative, opportunities.¹¹

¹⁰ Studies of corruption have not examined its ability to motivate public officials. Rose-Ackerman (1978), for instance, notes this effect only once in her study of corruption. She notes (1978, p. 62n) that allowing policeman to accept bribes may improve law enforcement because the desire to collect bribes can encourage greater police effort.

¹¹ Wilson (1980) offers a general analysis of selection effects. Under some conditions selection effects may work in a direction contrary to that we propose: principled, idealistic, individuals may not wish to identify themselves with a political system in which self interest and rent seeking are rampant.

Robert Caro's book *The Power Broker: Robert Moses and the Fall of New York* (1974) illustrates some of the points made here in a fascinating study. Moses held various public posts in New York State and arguably was the most influential man in New York City politics from 1924 to 1968 (Caro, 1974, p. 9). Moses was instrumental in developing New York City's infrastructure. He built all but one of the major expressways in New York City, and built numerous bridges: the Triborough, Verrazano, Throgs Neck, Marine, Henry Hudson, Cross Bay, and Bronx-Whitestone. In addition, Moses built playgrounds, parks, schools, and hospitals. According to Caro (1974, p. 9), Robert Moses built public works costing, in 1968 dollars, \$27 billion.

Despite these public service efforts, Caro (1974, p. 14) portrays Moses as a power-hungry man who used his position to benefit his friends:

The courtiers and courtesans of this empire wallowed in an almost Carthaginian luxury. Favored secretaries, for example, had not only bigger cars than city commissioners (as well as round-the-clock chauffeurs so that they could be on call twenty-four hours a day) but also higher salaries. As for the men closest to the throne, the cadre of Triborough administrators known as "Moses Men," not even his most suspicious critics ever came close to guessing the extent of the wealth he poured into their hands.

The beneficial and corrupt sides of Moses' career are closely related. The possibility of private gain and power aggrandizement through politics was the primary motivation for Moses' public service efforts: "Increasingly, the (public works) projects became not ends but means – the means of obtaining more and more power . . ." Caro (1974, p. 19).

Moses derived much of his popularity and influence from his public service efforts. Furthermore, his desire to control revenues prompted him to draw up and implement large projects; the public interest component was necessary to gain the approval of other echelons of New York state and city politics.¹²

Moses was a workaholic who devoted his talent and energies to political projects, despite the low salaries associated with public jobs. Had Moses been required to act honestly and selflessly, he would likely have worked less at building public projects. The positive and negative sides of Moses' activities were necessarily related. Moses' lust for power induced a public service career and motivated his specific public sector endeavors. Early American statesman Alexander Hamilton understood this effect well. His contemporary Thomas Jefferson (1818, in Bergh, 1907, pp. 270–9) cites a dialogue between John Adams and Alexander Hamilton which discusses whether corruption is essential to the workings of government: "conversation was begun on other matters and, by some circumstance, was led to the British constitution, on which Mr Adams observed, "Purge that constitution of its corruption, and give to its popular branch equality

¹² Caro's book provides 1200 pages of documentation for this claim. A summary of some of the supporting information can be found in the book's introduction, pp. 1–21.

of representation, and it would be the most perfect constitution ever devised by wit of man.' Hamilton paused and said, 'Purge it of its corruption and give to its popular branch equality of representation, and it would become an *impracticable* government: as it stands at present, with all its supposed defects, it is the most perfect government which ever existed.'

"Hamilton was, indeed, a singular character. Of acute understanding, disinterested, honest, and honorable in all private transactions . . . yet so bewitched and perverted by the British example as to be under thorough conviction that corruption was essential to the government of a nation . . ."

3. FREE RIDING IN LEGISLATIVE WORK

We saw that the order in which offers are made in a bargaining game affects the equilibrium result. Similarly, rent seeking can motivate legislators to propose new policies if the proposer of a policy has power over the agenda. Indeed, if a proposal the politician makes is immune to any amendment that redistributes benefits to others, then the manipulability of social choice mechanisms can enhance the motivation to draft public-interest legislation.

The problem of intransitivity or "cycling" under majority rule cannot be dismissed as a special case (McKelvey, 1976, 1979; Cohen, 1979). Within the cycling set any outcome can be dominated by some other outcome in a pairwise comparison; an agenda-setter may then determine policy. Agenda-setting is especially important for legislation concerning projects with a pork barrel element (Fiorina, 1981). Stable coalitions are then especially difficult to form: the potential losers can induce some members of the previous winning coalition to jump ship by making them a better offer.

Our analysis offers a different perspective, and emphasizes the potential benefits of agenda-setting. Consider legislative activity under two alternative assumptions about the permissibility of pork barrel components in projects, and suppose a project can yield a positive social benefit.

Let the project distribute benefits widely among the legislators or districts. If all pork-barrel provisions are prohibited – perhaps by the constitution, and if all districts would benefit from the project, a representative who drafts the legislation would obtain a smaller net benefit than a representative who made no such effort. Indeed, if the political or personal costs to a legislator of drafting legislation are sufficiently high, then no legislator will propose the policy, even if its aggregate benefits are considerable. In this context there is no disagreement about the optimal policy, no intransitivity, and no benefit to an agenda-setter. Unfortunately, since no legislator has sufficient motive to draft, introduce, and shepherd the bill through passage, the public-interest legislation will not be produced.¹³

¹³ Olson (1965) argues that small benefits distributed across large groups will do little to induce beneficiaries to organize on behalf of such benefits (i.e., to support the politician who produced the benefits). It is not strictly necessary to assume that politicians reap no benefits from expending effort on public interest legislation – only that the benefits do not exceed the effort costs.

More formally, suppose that a bill has sufficient positive benefits to gain majority support if it is introduced by at least one legislator. There exist asymmetric Nash equilibria where exactly one legislator introduces a bill with certainty. But of more interest to us are Nash equilibria with symmetric mixed strategies.¹⁴

Thus, suppose all N legislators can benefit from a particular policy; their aggregate benefit is NB . The cost to any legislators of proposing a bill is c . If each legislator proposes a bill with probability s , then the expected aggregate welfare of the legislators is $NB[1 - (1 - s)^N] - sNc$.

Let the legislator whose bill is adopted gain a rent of D . That is, his total gain is $B + D$. The benefit to each other legislator of having this bill adopted is $B - D/(N - 1)$; the rent to the winning legislator is paid equally by all other legislators. A legislator who does not propose a bill incurs no costs. He will gain $B - D/(N - 1)$ if at least one other legislator proposes a bill. His expected gain is thus

$$\left(B - \frac{D}{N-1}\right)(1 - (1-s)^{N-1}). \quad (2)$$

If he proposes a bill he incurs a cost of c . If his bill is the only one proposed then he also gains the rent D . If i other legislators also introduced a bill, then his bill is adopted with probability $1/(i + 1)$, and he gains the rent D with that probability. Thus, the expected gain from proposing a bill is

$$B - c + \sum_{i=0}^{N-1} \binom{N}{i} s^i (1-s)^{N-1-i} \frac{D}{i+1} \left(1 - \frac{i}{N-1}\right). \quad (3)$$

The Nash equilibrium value of s in a symmetric solution is determined by the condition that expressions (2) and (3) are equal. This equilibrium cannot be determined analytically, though numerical results are easily derived. To give one example, suppose that $N = 3$, $B = 1$, and $c = 0.1$. Then maximizing the expected aggregate benefit to legislators requires that D (the amount of the rent) equal 0.11; this slightly exceeds the cost, c , of making a proposal. When $D = 0$ (no rents are allowed) the equilibrium value of s (the probability of making a proposal) is 0.68. When D is set to its optimal value, the equilibrium value of s is 0.81. Similar results apply for other values of the parameters: rent seeking reduces the free-rider problem inherent in legislation, and can increase the expected welfare of all legislators. The legislators will therefore, in their own interest, encourage some rent seeking among themselves. Of course, if the public's benefit from legislation exceeds that obtained by the legislators, the social benefits of rent seeking will be even greater.

Note that if the proposer of a bill had no power over the agenda, his proposal could be amended by other legislators who seek the political rents. The original

¹⁴ The model extends the one in Glazer and McMillan (1992).

proposer would then have no assurance that his proposal, rather than some amended policy, would be implemented. If he has some power over the agenda, however, the initial proposer may expect to obtain some rents for himself.

Thus, pork-barrel politics and agenda-setting vitiate simple majority rule. Democracy, if interpreted to mean that the policy adopted commands majority support against each alternative, fails. But the existence of pork barrel politics can produce better policies.

Most social choice models disregard motivational effects. Instead, the agenda-setter is viewed as choosing among exogenously specified options and manipulating the agenda to determine the outcome. A potential advantage of democracy, however, lies in the endogeneity of the variables that much of social choice theory takes as given. A politician in a democratic system may earn the right to influence the agenda by drafting legislation, working on committees, and spending time lobbying and persuading his colleagues. A legislator who can set the agenda has extra incentive to work on legislation. In contrast, the relationship between a person's power and his policy accomplishments can be weak in a dictatorship.

Social choice theory need not focus exclusively on collective choice methods among known alternatives. The method itself will determine which proposals will be discovered, worked upon, and made sufficiently specific to become viable alternatives. When choosing amongst known and given alternatives, democratic collective choice rules may do no better than non-democratic forms of government, just as social choice theory claims. Democracies and constitutional republics may still have an advantage, however, at discovering public-interest proposals and making them part of the set of alternatives. Hayek (1978) and Nelson (1981) argue that markets should be judged on their ability to discover new information, rather than to achieve an optimal static allocation of resources when relevant alternatives are treated as given. Our approach to political systems is similar.

4. EVIDENCE FOR THE MOTIVATIONAL EFFECTS OF RENT SEEKING

A congressman's most important activity in promoting legislation lies in committee work: committee members study issues, hold hearings, draft legislation, and steer the legislation on the floor. Considerable evidence indicates that congressmen who spend time on a committee can earn pork barrel projects for their districts.

Several studies support this distributive theory of policy making (Rundquist and Ferejohn, 1975). Goss (1972, p. 219), for instance, finds that members of the House Armed Services Committee had an average of 14,030 jobs at military installations in their districts, as compared with the House average of 6,041.¹⁵ Ferejohn (1974, p. 234), in his examination of water projects, concludes:

¹⁵ Causality, however, may work in the opposite direction: congressmen from districts with military bases are especially keen to join military oversight committees.

(1) members of the public works committees of both chambers get more new projects than nonmembers do; (2) members of the public works subcommittees of the appropriations committees get more new projects than nonmembers do . . . [3] the committee leaders of the public works committees (subcommittee and full committee chairmen and ranking minority members) receive more favorable treatment for their state's budget requests than non-leaders on the committees do in both chambers and for both the authorization and the appropriations committees . . .

Weingast and Marshall (1988, p. 160) summarize the evidence: "committee members gain a disproportionate share of the benefits from their policy area."¹⁶

Fenno's (1966, 1973) analysis of legislative effort is related to our hypothesis of positive-sum rent seeking. His study of the House Appropriations Committee, the most important appropriations committee in the House, demonstrates that committee members work extraordinarily hard (Fenno, 1966, p. 4, *passim*), and that a representative unwilling to put in extra hours and effort will find his preferences ignored by other committee members.

Transition rules in the Tax Reform Act of 1986 further illustrate the relationship between legislative effort and rents. (Transition rules are temporary loopholes in the tax code designed to ease the tax burden of specific firms or persons during the transition from one tax system to another.) The *Congressional Quarterly Weekly Report* (September 20, 1986, p. 2185) noted that "Transition rules tend to be given by the tax committee chairman to the constituents of members who have been helpful in the past." And the *New York Times* (May 9, 1986, section 4, p. 4) noted "All Senate Finance committee members got some favorable treatment for their constituents."

5. COST-BENEFIT ANALYSIS

Cost-benefit studies typically examine a single project and ask whether its costs exceed its benefits (measured by citizens' willingness to pay or to be paid). The motivational effects of rent-seeking behavior, however, restrict the applicability of cost-benefit analysis. The demand curve for the project's services does not reflect the influence of these costs and benefits in motivating public officials.

A new dam in Arkansas, for instance, may provide water services worth \$10 million to Arkansas residents while costing other districts \$15 million. This dam would fail a standard cost-benefit test, but this project should not necessarily be evaluated on a stand-alone basis. The dam in Arkansas may be part of a larger bill designed to solve water pollution problems. An Arkansas senator who knows

¹⁶ The distributive theory has also been tested for military contracts (Maloney, 1982), military employment (Goss, 1972), river and harbor projects (Ferejohn, 1974), urban renewal expenditures (Plott, 1968), a waste treatment program (Strom, 1975), Federal Trade Commission activities (Faith, Leavens, and Tollison, 1982; Weingast and Moran, 1983) and research and development policy (Cohen and Noll, 1986). Ritt (1976) analyzes spending patterns for seven large federal agencies. Tests of the distributive theory, for instance, have ignored congressional ideology or have assumed that all committees yield pork barrel benefits in the same fashion.

that the initiators of a comprehensive bill on water pollution can obtain pork-barrel water projects for their constituents may find it worthwhile to draft and promote such legislation. On the other hand, the dam may also induce legislators to draft bills that benefit only the legislators and not the public. Cost-benefit analyses would then understate the true costs of the dam.

A cost-benefit analysis of a package of projects should consider the motivational effects of its constituent parts. Deleting the parts that fail (or adding parts that would pass) separate cost-benefit tests could make the package worse. Such deletions and additions have side effects upon public sector effort.¹⁷

6. CONCLUDING REMARKS

The view that rent seeking can be efficient offers an interesting twist to the analysis of self-interested behavior in government. The traditional public choice view calls for reducing the size of government, especially if politicians and bureaucrats are selfish (see, for example, Niskanen, 1971). Our analysis points to factors with contrary implications. It may be optimal for the public sector to produce some private goods precisely because politicians are selfish. Governmental provision of private goods may compensate public officials who manage public goods. Such institutions as pork-barrel politics and corruption can offset the selfishness of public sector participants, because they reward political effort.

The mere fact that the state or market can more efficiently provide a particular good or service does not imply that the more efficient sector should produce that good. Switching the provision of a good from one sector to another will affect incentives in the public sector and alter public policies. The scope of government should be determined not only by partial equilibrium conceptions of efficiency, but also by the need to develop rules of the game that motivate public officials to generate positive aggregate benefits.

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¹⁷ Legislators can decide to accept or discard parts of a package once the package is brought to a vote, because at this point the legislative effort has already been invested. It is at the drawing-board stage that the constituent parts of the package cannot be separated.

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