
THE STATE AND THE INVISIBLE HAND

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Economic analysis has always been based on the postulate that people act in their own self interest. Yet, as economists proudly demonstrate, the interaction of selfish individuals in perfectly competitive markets leads, “as if guided by an invisible hand,” to socially beneficial outcomes. Of course, economists recognize that competitive markets cannot solve the problems associated with externalities in production and consumption and with the provision of public goods. This creates a role for the state, which appears as a *deus ex machina* to eliminate whatever deviations from Pareto optimality result from failures of competitive markets. In addition the state may be regarded as also having the duty of redistributing incomes to achieve the targets specified by some social welfare function. In all cases, however, the state is portrayed simply as an instrument to achieve abstract objectives of national welfare.

This standard approach to economic behavior in both its private and public aspects makes two crucial assumptions that have only recently begun to be questioned. First, even though the behavior of private agents is assumed to be selfish, it is taken for granted that the only way they can achieve their aims is to satisfy directly their own wants for goods and services or to satisfy those of others through voluntary exchange. Thus all economic behavior is “useful” or “productive,” in the sense of providing goods and services that enter the utility function of someone in society.

Much economic behavior, however, does not fit into this conventional framework. In the case of theft or robbery, the criminals devote their time and energy, as well as material inputs, to depriving other members of society of their incomes by means of coercion or fraud.

Not all illegal behavior is of this type, of course. Smuggling or black marketeering are examples of illegal behavior that provides goods and services to other members of society. Of course, many perfectly legal economic activities are not directed at producing goods and services. The example we shall explore extensively in this article is lobbying—the use of resources to obtain government regulations that boost the incomes of a particular group by raising the prices of what its members sell or by lowering the prices of what they buy.

Second, it is usually assumed that the state seeks to maximize an objective function of social welfare. This assumption is appropriate for normative analysis, but it either leaves open the question of a positive theory of government behavior or makes the fatal mistake of supposing that governments always do only what they should do.

An alternative approach, which we shall adopt here, is to assume that the government maximizes some objective function of its own interest. But what should that function be? Is it rational for the government to maximize public revenue, or public expenditure, or the difference between the two? By analogy with the theory of the firm it is appealing to begin by thinking of the state as a natural monopoly, the “monopoly of the legal use of force,” in Max Weber’s famous definition, and to conceive of the state as maximizing monopoly profit or “surplus.” Such an objective function seems appropriate for an absolute monarch in early modern Europe or for some of today’s Third World dictators. But in a modern state the power of the ruler (president, prime minister, or junta) is greatly circumscribed and is usually filtered through a bureaucracy that pursues goals of its own. The monopoly model, with its simple beauty, no longer applies directly.

In the case of modern “democratic pluralist” societies the state is better portrayed not as an autonomous decisionmaker, but as a broker or mediator between interest groups, with economic policy resulting from the pushes and pulls of these factions. People with similar interests lobby to obtain favorable legislation, while the government responds by working out compromises acceptable to the various power groups.

This article is concerned with “income appropriation,” that is, with the use of private or state resources to acquire, rather than to generate, income. The traditional term “production” is reserved for activities that generate income. Both appropriation and production can be either legal or illegal, though the bulk of economic literature is concerned only with legal production. Examples of the treatment of illegal production would be the analysis of smuggling by Bhagwati and Hansen (1973) and of the “second economy” in Soviet-type systems by Wellisz and Findlay (1986). The case of legal appropriation is considered in Krueger (1974), where individuals use resources to ac-

quire licenses for quota-restricted imports, and in Bhagwati and Srinivasan (1980), where people strive to divert revenue from the public purse to themselves. Illegal production has been studied by Becker (1968), in his well-known analysis of crime and punishment, and by Tullock (1967) who considers theft as an analogy to lobbying.

Of all the aspects of legal appropriation, rent-seeking has recently attracted the most attention. The term was coined by Krueger to refer to the behavior of people or companies who expend resources to acquire import licenses that command a scarcity premium or "rent" in the form of the excess of domestic over world (tariff-inclusive) prices. The term has subsequently been applied to all types of behavior that we have classified as "appropriation." Bhagwati (1982) proposed the phrase "directly unproductive profit-seeking" activities for the general category, while restricting rent seeking (as we do in this article) to Krueger's original usage.

The economic role of the state can be described in different ways, depending on one's view of the state itself and the motives of the people who exercise sovereign power. Certain extreme cases illustrate the nature of the issues involved. At one extreme there could be a government of Platonic Guardians, who selflessly bring about whatever levels of public expenditure and taxation best serve the collective interests of the citizens. At the other, there is the Hobbesian Leviathan, in which case the government serves the absolute ruler's own ends, subject only to his providing the citizens with the minimal framework of law and order that makes his rule preferable to the state of nature. To isolate the role of the different objectives of the two types of government, we assume the same underlying factor endowments and technology for the public and private sectors of the economy in both cases.¹

The Economy and the State

In the private sector of the economy final goods and services are produced under competitive conditions by applying labor to capital available in fixed supply. We shall make the usual neoclassical assumptions concerning the production function, that marginal products of both factors are positive and diminishing. For the time being, we shall treat the final output as a single composite commodity.

The government sector provides an intermediate, collective good, "law and order," which is factor-augmenting in the private sector or "Hicks neutral" in the sense that it augments the productivity of both factors in the private sector equally. To simplify the analytics we assume that the public good is made by labor alone, though all the qualitative conclusions hold if we make the reasonable assumption that the government sector is less capital-intensive than the private sector. There are diminishing returns at the margin to increased gov-

ernment expenditure. The total supply of labor in the economy is fixed, and workers are free to choose employment in either sector, which means that the government must pay a wage equal to the net private sector wage.

The government has the power to tax. We shall assume for now that a tax t is proportional to the excess of income of each factor in the private sector above a basic level. In the absence of the public good (in the Hobbesian "state of nature") each factor earns its basic

income, and, of course, pays no tax. Given the fixity of factor supply the tax is nondistortionary. We thus leave aside the familiar problems of the "incentive" and "efficiency" aspects of the tax structure to concentrate exclusively on the "political economy" features of the problem.

The economy described above is represented in figure 1. The total labor supply is shown by OO' , with public sector employment measured to the right from O and private sector employment to the left from O' . If all labor is employed in the private sector, no public good is supplied and private output is OA . As labor is transferred to public employment, total output of the final good increases as shown by the rising portion of the ACO' curve.

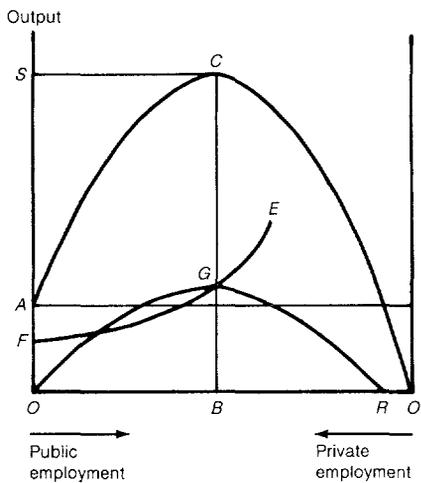
With successive labor transfers fewer workers are left in production. Furthermore, successive additions to public employment have a diminishing effect on private sector productivity.

Output reaches a maximum at BC (equal to OS) when OB workers are in the public, and $O'B$ in the private sector. If public employment increases beyond this point, output declines; output is zero if there are no workers in the private sector.

Government by Platonic Guardians

If the country were guided by selfless Platonic Guardians whose sole aim is to maximize output, the government would impose a tax t^* , yielding just enough revenue to pay the optimal number of public sector workers at the prevailing net-of-tax competitive wage. In figure 1 the curve OGR shows government revenues as a function of employment in the public sector. Since the tax rate is fixed, the tax revenue is directly related to private sector production, upon which the tax is levied. As public employment rises from zero to OB , private income increases, and so does tax revenue. With further increases in government employment, however, income and the tax revenue both decline. The curve FE represents the cost of providing the public good as a function of public employment. When there are no public em-

Figure 1



ployees—and hence no public good—the private sector wage is OF . As the number of public employees rises, so does the wage. This is because of (a) the increasing private sector capital-labor ratio, and (b) the productivity-augmenting effect of public sector employment. Thus the FE curve rises throughout its range. The two curves intersect at G . At this point the budget is balanced, and the public good is provided at the socially optimal level.

The Leviathan

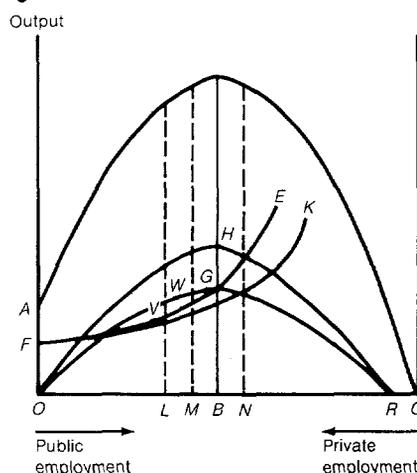
The Guardians' polar opposite is Hobbes's Leviathan, which is entirely selfish but a necessary evil. It alone can provide law and order, without which life is "solitary, poor, nasty, brutish, and short." As payment for this essential public good, the Leviathan extracts income from its subjects, which it puts to its own uses. But the Leviathan, no matter how selfish, does not make its subjects worse off than they would be in the state of nature (hence our assumption that basic income is free of tax).

Unlike the Guardians, whose aim is to maximize income accruing to society, the Leviathan's goal is to maximize the difference between the tax take and the public sector wage bill. A Leviathan with unconstrained ability to tax will, however, provide the same volume of the public good as the Guardians—because the higher the final production, the greater the surplus it can extract.

In figure 1, the Leviathan would tax the private sector to keep wages and capital rental down to the level of the state of nature. The wage would remain at OF and capital rental at FA . Income accruing to both factors would remain at OA , as shown by the horizontal line through point A , while all the benefits of increased production would accrue to the Leviathan. The surplus reaches a maximum AS when OB workers are in the public sector. Thus the structure of employment and the volume of production would be the same under the rule of a perfectly benevolent dictator as under that of an utterly ruthless satrap, though of course income distribution is very different in the two cases.

Historically, the taxing power of the executive branch of the government (monarch, president, or dictator) has been circumscribed by figure 2 tradition or by parliamentary rule. This produces a paradox: if the taxes that the Leviathan is permitted to levy are subject to a limit, the structure of production is less efficient, though the public is better off. To demonstrate this proposition, let us assume that the sovereign is not allowed to tax at more than t^* , the rate just sufficient

Figure 2



to pay for the optimal level of public employment, *OB* (figure 2). Clearly, a constrained Leviathan would have no interest employing *OB* people, for it can generate a surplus only if public employment is lower. The surplus is shown as the vertical distance between the tax revenue curve, *OGR*, and the cost-of-public-employment curve, *FE*. From the Leviathan's point of view *OL* represents the best level of public employment. At this point the slopes of the *FE* and *OGR* curves are equal, which means that the marginal cost of public employment equals the marginal tax yield from public employment, so the surplus is maximized.

No matter how high the tax rate, the Leviathan will supply a suboptimal amount of the public good as long as the tax limit is binding. Suppose that the tax limit is raised from t^* to t^+ . Since t^+ is higher than t^* , the new tax revenue curve, *OHR*, lies above the *OGR* curve, but both curves reach a maximum at *B*, at which point the marginal tax revenue is zero for any tax rate (figure 2). By the same token, net-of-tax private sector wages are lower under the t^+ than under the t^* regime. The curve representing public expenditure on wages, *FK*, lies below, and is flatter than, *FE*, but both curves have a positive slope throughout the range. The level of public employment that maximizes the surplus, *OM*, will therefore be higher than *OL*, but since the slope of *FK* is positive, point *M* will lie to the left of *B*. Points *M* and *B* would coincide only if the tax rate is high enough to make the *FK* curve horizontal, that is, high enough to keep the population at the state-of-nature income level after tax.

It is easy to find cases in which the tax-constrained Leviathan supplies too little of the public good and extracts a surplus for its own purposes. Well into the eighteenth century European kings maintained great palaces, but did not adequately provide for the safety of the highways. Recent events in the Philippines and elsewhere provide contemporary examples. The prevalent complaint, however, is not that governments are venal, but that they are too big and thus threaten to cramp, rather than assist, private production. How can the excessive size of government be accounted for in our model?

The answer is that the assumption of "one man government" is inapplicable to the modern world. Alfred Jarry's *Ubu Roi* personally extracted taxes from his subjects by beating them with his finance stick. A real life sovereign, whatever his title and whatever his power, has a vast hierarchy of tax collectors and other bureaucrats.

One of the few legitimate ways in which a bureaucrat can enrich himself is by expanding his bureau. To organize large teams efficiently, supervisory hierarchies are needed. For them to be efficient, supervisors must be paid more than those supervised (see, for instance, Calvo and Wellisz 1979). A larger bureau therefore means higher pay.

It also brings more power and prestige, an important consideration to many people, as emphasized by Niskanen (1971) and before him, of course, Parkinson. But the need for staff can be justified only in terms of the bureau's service to the community, as measured by the output of the public good. So bureau heads have an incentive to maximize output subject to the budgetary constraint.

Let us assume again that t^+ is the historically given tax. If the Guardians were running the government, they would employ *OB* workers at the competitive wage and return to the public the excess of tax revenue over expenditure. The Leviathan would collect the tax and spend a suboptimal fraction of it on the public good. The bureaucracy would spend the full amount to employ *ON* workers.

The bureaucratic monster, unlike the Leviathan, can be made to serve the public interest if an appropriate limit is put on the government's power to tax. If the tax rate were t^* and the government were required to balance its budget, it would hire exactly the same number of public sector employees and provide the same volume of public goods as one directed by the Guardians.

We have been using the term "social optimum" to refer to the maximum output of the final, private good. Labor, however, would wish to maximize wages, and capital to maximize profits. Under our assumption that the intermediate public good is relatively labor-intensive, labor would favor an extension of the public sector and capital a contraction, relative to the social optimum.

The production of public goods benefits society by raising private sector productivity. At the social optimum the marginal gain in productivity just equals the marginal product of a private sector worker. If the public sector expands any more, the production loss caused by withdrawing workers from the private sector would outweigh the productivity gain from the corresponding increase in public employment, so that final output would decline. However, the withdrawal of labor from private production increases the capital-labor ratio and raises wages independently of the productivity effect. It follows that labor benefits if private sector employment is reduced by raising public employment above the socially optimal level. By the same token, capitalists would favor a socially suboptimal level of public goods. These results are in line with the tendency of labor-oriented political parties to favor extensions of government activity and for capitalistically oriented ones to resist them.

Revenue and Protection: A Government-Capitalist Alliance

In many developing countries governments rely heavily on import duties as a source of finance. These duties favor import-substituting industries. The state's desire for revenue, and local industry's desire

for protection, can result in a mutually beneficial regime of high tariffs, even though it is obviously inimical to economic efficiency. We demonstrate the possibility of this outcome, under plausible conditions, in the context of a simple model.²

Since we are considering international trade, it will be convenient to assume that the private sector produces two goods, the relative prices of which are fixed on the world market, a labor-intensive export and a capital-intensive import substitute, as in the familiar Heckscher-Ohlin model.³ Both sectors of private industry draw on the same pool of capital, in fixed supply, which is freely transferable and malleable, so that all capitalists form a single interest group. There is also a fixed labor pool, which can be competitively hired by private employers or by the government. For the sake of simplicity, we shall ignore, in this section, the effect of government output in enhancing the productivity of factors hired by the private sector.

We assume that the objective of the government is the “bureaucratic” one of maximizing public employment, according to the Parkinson-Niskanen “law” of the previous section, subject to the requirement that the budget be balanced, with tariff proceeds being the sole source of revenue. A tariff, in conjunction with the given relative price of the two goods on the world market, would determine the real wage by the familiar Stolper-Samuelson theorem, as well as the level of imports and government revenue, assuming initially that the entire labor force is employed in the private sector. The government now uses the revenue to hire workers at the tariff-determined wage until expenditure is equal to revenue. Note that as labor is withdrawn from the private sector total revenue will fall, since production of the capital-intensive import substitute will rise according to the Rybczynski theorem, which thus implies a reduction in the volume of imports and hence in the tariff proceeds.

If the initial tariff is sufficiently small, an increase in the tariff level, at constant public employment, would raise total revenue and also reduce total expenditure, since the higher tariff would lower the real wage, by the Stolper-Samuelson theorem. Thus if the tariff rate is below the maximum revenue level, it would be to the government’s advantage to raise the tariff still further since doing so would both increase revenue and reduce the cost of public employment. At the maximum revenue point itself a further small increase in the tariff would leave revenue unchanged, by the definition of a maximum, while it would still lower the real wage so that public employment could be increased further. Thus the optimum for the bureaucratic government must be at a tariff level that is *beyond* the maximum revenue point or to the right of the peak of the Laffer curve.

In order to determine the tariff that maximizes public employment subject to a balanced budget, we first observe that maximizing public

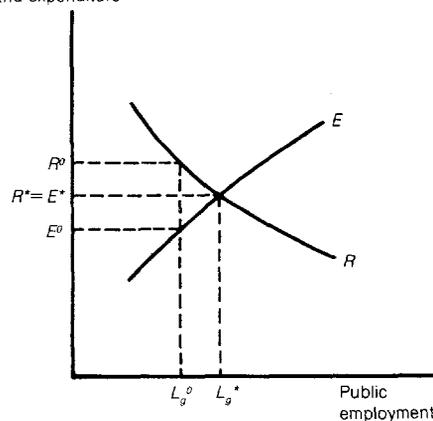
employment subject to a balanced budget is logically equivalent to maximizing the budget surplus (or minimizing the budget deficit) for a given level of public employment. The premise is that maximizing the surplus for given public employment makes possible the biggest increment in public employment and so best contributes to the sole objective of government policy in the model. At the optimum any change in the tariff level will result in a deficit, while any higher level of public employment must result in a deficit even if the tariff rate is adjusted in such a way as to minimize it.

In figure 3 we depict government revenue R and expenditure E as functions of the level of public employment L_g . For each value of L_g , such as L_g^o , the tariff t^o is chosen in such a way as to maximize the surplus S^o , equal to the difference between revenue R^o and expenditure E^o . Revenue and expenditure each depend on the tariff rate and level of public employment since these variables determine the wage rate and the level of imports. As L_g is increased the tariff is altered appropriately at each value of L_g to maximize the vertical distance between the R and E curves, thus maximizing the budget surplus. At the intersection point corresponding to the optimal level L_g^* of public employment the budget is exactly balanced and so the corresponding tariff rate t^* is the optimal one for the government's objective. Employment levels to the right of L_g^* correspond to deficits and hence are not feasible. The R function slopes downward since higher public employment reduces the volume of imports, as explained earlier, and hence of tariff proceeds. The E function slopes upward since the greater volume of public employment results in a higher level of government expenditure.

Since the return on capital is an increasing function of the tariff, capitalists would ideally desire the tariff to be prohibitive. Thus capitalists, who would already be benefiting from the tariff set above the maximum revenue level, might even be able to persuade the government to raise it still higher than t^* . Labor would, of course, exert pressure in the opposite direction and attempt to move the economy toward free trade. If labor and other interests are weak, the result will be a high protective wall for import substitution in industry, sustained by the implicit alliance of private capitalists and the bureaucratic state. Thus what appears to be irrational from the politically naive perspective of neoclassical trade theory is perfectly explicable from the perspective of "political economy." It should be said, however, that in this case to understand is not necessarily to forgive.

Figure 3

Government revenue and expenditure



***Pressure Group
Policymaking
and
Trade Barriers***

Thus far the analysis has paid little attention to the influence of conflicting pressure groups on policy formulation. This section concentrates on this issue, without forgetting that, powerful as such groups may be, the will of the government also matters. The state may be regarded as an autonomous decisionmaker, or as an arbitrator among opposing interest groups. The latter role is especially important in modern democracies, where, typically, economic groups and factions strive to obtain legislation favoring their particular interests.

James Madison held economic factionalism to be inherent in pluralistic, democratic societies; thus the role of the government is to find compromises acceptable to the divergent economic interests. This view has found wide acceptance among political scientists, such as Bentley (1908) and Truman (1951). In their studies of the determinants of political action, economists initially did not consider the role of pressure groups. Instead, they concentrated on the analysis of elections and on the role of politicians and parties (see Schumpeter 1947, Downs 1956, Buchanan and Tullock 1962, and Riker 1962). By the 1970s, however, the pressure group approach to policymaking, stimulated by Olson's *Logic of Collective Action* (1965), gained wide currency (see also Posner 1974, Stigler 1975, and Brock and Magee 1978). Other analyses taking this approach included Becker's formalization of pressure group theory (1983), Brock and Magee (1978) and Findlay and Wellisz's (1982) general equilibrium politicoeconomic models with endogenous trade barriers, and Bhagwati's (1980) and Bhagwati and Srinivasan's (1980 and 1982) analyses of lobbying costs.

The idea behind the pressure group approach to policymaking is simple. People or enterprises with similar economic interests realize that, by organizing, they can exert greater pressure on the government than they can individually. These organizations must persuade the potential beneficiaries to share in the cost of lobbying: the political effectiveness of interest groups depends, in part, on how effectively the "free rider" problem is solved. The lobbies incur expenditures to further their cause; the government responds to pressures and counterpressures and designs compromise policies. Such policies may not be to the advantage of the nation as a whole, so neoclassical analysis would term them irrational from a social point of view. Yet the policies are rational in the sense that they serve the interests of the relevant groups that lobby for them.

The pressure group approach is consistent with, but broader than, the analysis of preferences expressed through votes. The latter cannot be used to analyze policymaking in pluralistic societies that lack effective formal mechanisms for the expression of public opinion. And even where voting is the decisive factor, organized lobbies make their influence felt through propaganda, campaign contributions, and other

means. Many election results are incomprehensible unless one is aware of the influence of groups.⁴ Thus, if policies reflected only the self-interest of the majority of voters or their view of the good society, special interest legislation would not exist. It does exist, for example, when a few producers are protected at the expense of many consumers. The phenomenon can readily be explained in terms of the disproportionately large influence exerted on policymakers by small, concentrated interest groups (for a proof of this proposition, see Wellisz and Wilson 1986).

Factions and Tariff Policy

The essential features of the endogenous determination of tariffs may be seen in a simple Madisonian model with two politically active factions: landowners and capitalists. Farm goods are produced by applying labor to land, and manufactures by applying labor to capital.⁵ Capitalists and landlords hire workers from a common pool. Part of the farm production is consumed domestically, and the rest is exported at fixed terms of trade in exchange for manufactured goods that compete with those produced domestically.

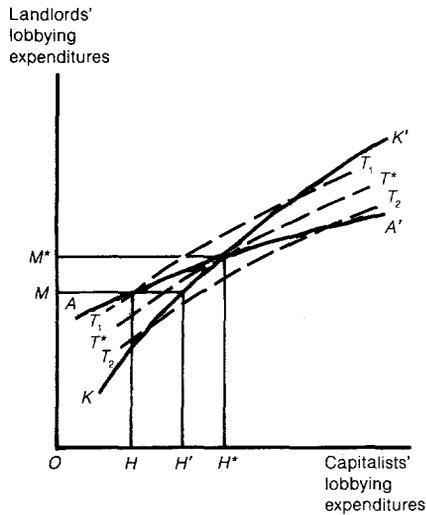
We assume that production is carried on under competitive conditions, but that, for political purposes, individuals organize lobbies to foster their common interests. The capitalists, whose manufactured goods compete with imports, form a protectionist faction. Since landlords would be hurt by a tariff on manufactures, their faction favors free trade. Where the interests of labor lie is less clear. A tariff on manufactured goods lowers the wage in terms of such goods, but raises the wage in terms of the exportable farm product. Depending on the proportion in which workers consume agricultural and industrial goods, a tariff may therefore raise or lower real wages. We shall assume for now that workers remain politically neutral.

In choosing its policy the government takes into account the pressure exerted by the opposing lobbies. How much weight is attached to each depends, of course, on the government's ideology, as well as internal and international obligations. The government's preferences and constraints determine the "tariff formation function," which has, as its arguments, the pressures exercised by the opposing lobbies. The strength of a lobby's pressures may be measured by how much it spends. The tariff rate is thus an increasing function of the political expenditure of the manufacturers and a decreasing function of that of the landlords.

To promote rationally the aims of its faction, each lobby spends resources on the basis of its perception of the actions of its opponent. The political struggle to determine the tariff level can be thought of as a Cournot-Nash process in which each faction, taking the actions of

the other side as given, calculates the optimal level of its own spending in the light of the tariff formation function and of the structure of the economy. In figure 4, the capitalists' and landlords' lobbying expenditures are indicated, respectively, along the horizontal and the vertical axes. The reaction functions KK' and AA' represent the optimal behavior of each of the two lobbies, given the other one's expenditure. For instance, if the capitalists' lobby spends OH to promote tariffs, the landlords' lobby will react by spending OM to fight them. The capitalists will then react by raising their spending to OH' , and so on. The dotted lines show equal tariff contours, with T_1T_1 indicating a lower tariff level than T^*T^* , which, in turn, is lower than T_2T_2 .

Figure 4



When capitalists increase their spending on tariff promotion, it is likely that landlords will respond by spending enough to lower the tariff from the level that would obtain if they had done nothing, but not enough to return it to its initial level. For the capitalists, symmetric behavior is assumed. It follows that the tariff rises as one moves from left to right along AA' , the landlords' reaction function, and falls as one moves from left to right along KK' , the manufacturers' reaction function. It also follows that KK' is steeper than AA' , which is a sufficient condition for the stability of the equilibrium tariff t^* (corresponding to the line T^*T^* in figure 4) endogenously determined by the intersection of KK' and AA' , yielding OH^* and OM^* as the optimal levels of political expenditure by capitalists and landlords, respectively.⁶ At the equilibrium point for each faction, the marginal cost of political expenditure equals marginal revenue, which is the benefit that would be derived from the change in the tariff resulting from the marginal increase in political spending.

In real life, of course, political behavior is more complicated. But the simple model brings out the essential features of policymaking. Lobbying determines the tariff rate. The tariff influences the returns to the productive factors, hence income distribution. If lobbies simply bribe decisionmakers, then from a social point of view lobbying constitutes an income transfer. Government officials get richer at the expense of the lobbying interests, but except for transaction costs no real resources are used up in the process. In the past, societies took a permissive attitude toward influence-buying. Many government posts could be bought (in Europe the practice of buying military commissions persisted until well into the nineteenth century), and their occupants were expected to further their own interests or those of their backers. Today, it is more expensive for interest groups

to influence policymakers. As a result, total spending on lobbying is reduced (see Becker 1983). Paradoxically, however, rules limiting influence-buying raise the resource cost of lobbying, though only up to a point.⁷ Legitimate lobbying activities, such as publicity campaigns and election contributions, do use economic resources. In the limiting case there is no transfer element, so the social and private costs of lobbying are equal.⁸

Insofar as lobbying uses real resources, these are withdrawn from production. Conventional economic analysis does not consider the policy formation process, hence it fails to take into account that over and above the costs of tariff distortions, there are the real resource costs of lobbying for and against tariffs. Conventional analysis also holds that a lowering of trade barriers always increases welfare. There is the possibility, however, that the costs of a struggle for trade liberalization might outweigh the benefits of the more liberal policies.⁹ As in war some victories might be Pyrrhic ones.

Quotas, Domestic Content Rules, and Voluntary Restraints

National interest arguments can be made for the imposition of moderate tariffs to protect infant industries, to exploit a country's monopoly power, and (especially in the case of developing countries) to raise fiscal revenue. Standard economic analysis fails, however, to explain the proliferation of quantitative trade restrictions that create more distortion (or bring in less fiscal revenue) than do equivalent tariffs that give the same degree of protection.

To be sure, there are pragmatic reasons why governments may resort to quantitative restrictions. The freedom to manipulate tariffs is limited by international treaties; these typically permit quotas for specific purposes—for example, to correct a temporary trade imbalance. The use of quotas also gives power to government officials by enabling them to reward friends through generous allocations and to punish enemies. But to reach a fuller understanding of the selection and use of quantitative restrictions one must turn, once again, to interest group considerations.¹⁰

The introduction of import quotas, as compared with a regime of pure tariffs, strengthens protectionist forces. To understand this tendency, let us begin from the tariff equilibrium of the previous section. Consider the introduction of an import quota that would further reduce the import volume. This quota would raise the domestic price of the imported commodity and would provide further protection for domestic manufactures. If the tariff rate were held constant a rent would emerge to the holders of the import licenses equal to the difference between the domestic price and the world price plus tariff. The potential holders of these licenses, let us call them “traders,”

would therefore be willing to join the protectionist group. Government revenue would fall if tariff rates remained unchanged. If, however, the initial tariff were set at less than the maximum revenue level, the tariff rate could be raised to restore the initial revenue while still leaving a margin for rent.

In figure 4 the protectionist reaction function KK' would shift to the right, since the traders would be willing to contribute to the war chest of the lobby in the expectation of obtaining rents. The antiprotectionist landlord faction would have the same reaction function as before. The new equilibrium would therefore be to the right along AA' , implying a higher degree of trade restriction *and* greater expenditure of resources on lobbying by both factions. We have therefore shown that the possibility of using import quotas in addition to tariffs makes for an unambiguously more restrictive and wasteful trade regime than one limited purely to tariffs.

Domestic content rules lay down a specified proportion of a product (by quantity or value) that must be produced with domestic inputs in order to be sold on the domestic market. They are a way of shielding domestic producers from foreign competition without arousing the wrath of powerful antiprotectionist groups.¹¹ A domestic firm that does not meet the rules has to pay a higher duty on the imported content or obtains lower protection on the final product or both.¹²

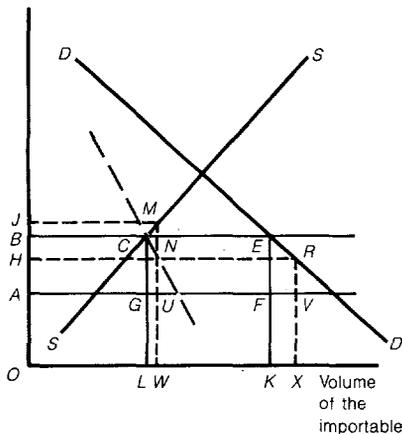
This type of protection is popular in industries where the final product is assembled from different parts, which may be imported or manufactured domestically. It has been used in Australia for automobiles, tractors, industrial machinery, petrochemicals, and various consumer nondurables (see Lloyd 1973). In many developing countries domestic content rules are weak for newly established industries, then gradually tightened so as to promote local production of parts and components.

The essential aspects of domestic content rules can be seen in the following example. Consider a commodity such as milk, which can be produced by domestic dairy farmers or imported at a fixed world price.

In figure 5 demand and supply curves DD and SS are depicted, with OA indicating the world price. If a tariff of AB is imposed, the domestic price will be OB , the quantity demanded will be OK , domestic production will be OL , and imports will be LK . Tariff revenue of $GCEF$ accrues to the government.

If the regime is changed to a domestic content rule in place of the tariff, how can the same import-production ratio be preserved? The solution is indicated in figure 5 by the dotted line through point C .

Figure 5
Price of the importable



We shall now assess the repercussions of this change on domestic prices, output, and imports.

If the domestic price remained unchanged at OB , importers, whose cost under the new regime would be only OA , would receive rents equal to $GCEF$, the tariff revenue previously accruing to the government. As a result, importers would try to increase the supply of milk to domestic consumers. The imported component is available freely at the world price, but importers must increase their purchases from domestic producers in the same proportion. This process will lower the price paid by domestic consumers below OB but raise the price received by domestic producers above OB . Equilibrium will be achieved when all the rents have been competed away.

At equilibrium the price paid by domestic consumers is OH . The total quantity demanded is OX , with OW supplied domestically and WX imported. The price received by domestic producers is OJ , the level necessary to induce them to supply OW . The area $HJMN$, the premium to domestic producers, is equal to $UNRV$, the rents on the imported component, so that sales to domestic consumers break even.

Compared with the tariff regime both consumers and producers appear to be better off. Consumers pay a lower price and consume a greater quantity. Producers benefit from the rise in domestic supply price. However, the additional production of LW increases the domestic resource cost to society by $GCMV$, the excess of domestic opportunity cost of the resources involved over the cost LW at the world price. The government, of course, loses the entire tariff revenue.

As can be seen from figure 5, the more inelastic is the supply, the greater is the gain to domestic producers. In the limiting case of zero elasticity the replacement of a tariff by an equivalent domestic content scheme would transfer the entire tariff revenue to the domestic producers, while consumers would suffer equally in either situation.

It is therefore not surprising that pressure for domestic content protection frequently arises in industries where there are either natural or artificially created barriers to the expansion of output. Examples would be industries where there are extensive economies of scale, government licensing of entry, or "closed shop" labor unions.

Analytically identical to domestic content rules for commodity imports are schemes that specify numerical ratios between domestic and foreign workers in employment, either explicitly or implicitly through manipulation of job specifications, seniority rules, and so forth. Findlay and Lundahl (1987) develop a model along these lines to apply to racial discrimination between white and black labor in contexts such as South Africa.

Of all the trade restrictions, voluntary export restraints (VERs) appear to be the most irrational. The imposition of VERs raises prices to the consumers, without yielding any revenue either to the government

or to the importers. Yet in advanced industrial countries VERS are rapidly becoming the favorite form of trade restraint. They are sometimes imposed in circumstances where international treaties, such as the General Agreement on Tariffs and Trade, prohibit the tightening of mandatory import restrictions. VERS may also be represented as a mild measure, to be followed by compulsory import barriers in case of noncompliance (see Jones 1984).

To understand VERS we must take into account the interaction between domestic and foreign interest groups. Consider the relations between two countries, which we shall call "United States" and "Japan," with goods manufactured in the latter being exported to the former, while agricultural products move in the opposite direction. The U.S. manufacturers would want to erect trade barriers to protect their interests, while Japanese manufacturers would favor free trade. So would U.S. farmers, but, for the sake of simplicity we shall assume that they remain politically passive.

In this model, the terms of trade are determined by the general equilibrium of the world economy. The tariff level that emerges from international negotiations reflects the relative amount of resources committed by both sides to further their respective causes, as in the Madisonian model presented earlier.

Suppose that, under the resulting tariff treaty, total imports are greater than the level that would prevail under an optimum tariff regime. A further restriction of U.S. imports would give increased protection to the import-competing industry and would also increase government revenues. An equivalent reduction of Japanese exports would have the same protective effect on U.S. industry. In this case, however, the revenue would accrue to the Japanese exporters, who would sell less, but who could, therefore, charge a higher price. Thus VERS work in favor of both parties: U.S. manufacturers receive more protection, while Japanese exporters are able to charge higher prices. Domestic consumers lose; so do the specific factors in the domestic export sector; but they are also passive actors in the game.¹³

Lobbying and Democracy

In a struggle among interest groups, who is likely to win, and who to lose? Concentrated interest groups seem to carry more weight than diffuse ones. The latter do not have much incentive to form a lobby. Collectively, the millions of shirt-wearers in the United States lose more through restraints on shirt imports than is gained by U.S. shirt-makers. Individually, however, each of the consumers has little at stake, but for each of the producers the matter is of crucial importance. It is therefore easier to organize the few makers into a lobby than the many wearers. There is also a question of group discipline.

Small groups are virtually self-policing; the larger the group, the more severe the problem of free riders.

As a second generalization, reallocative rules usually favor small groups over large ones (size being measured by income rather than membership). Distortions that reallocate income impose a deadweight loss on society—that is, they reduce the total availability of goods and services. A large group carries a larger part of the burden than a small group does.

The advantages of smallness and of concentration are reflected in the prevailing pattern of distortion. Industrial countries subsidize and protect agriculture, whereas many developing countries favor their relatively small industrial sectors. Within each group there are small but highly organized special interests receiving privileged treatment.

The results of group action thus run counter to the principles of majority rule and social justice. The minority often wins, and income is not necessarily redistributed from rich to poor. But group action also has positive effects. Like advertising, lobbying spreads misinformation, but it also provides information that would otherwise not be available. Lobbies make people more aware of the issues and presumably increase the rationality of choices made by the voters. Most important of all, group action protects minority interests against the potential dictatorship of the majority. Defeat at the polls does not put minorities completely at the mercy of those who win. The political strength of small groups gives them a countervailing power essential for the existence of a democratic society.

The distortions caused by the lobbying of interest groups may have a potentially valuable by-product that each group does not initially appropriate for itself. For instance, import quotas may be imposed to protect local manufacturers, or to defend the currency, without there being an advance plan on how to allocate the consequent rents. This situation promotes rent-seeking—activities intended to capture the rents (see Krueger 1974). A similar phenomenon, called revenue-seeking by Bhagwati and Srinivasan (1980), may occur if the government fails to allocate in advance the fiscal revenues generated by a tariff.

Rent-Seeking

In contrast to political lobbying, which is inherently a group activity, rent-seeking may take the form of individuals competing against each other. For example, import license petitioners may have to queue up, with rewards going to those who do not get discouraged or who fill out the numerous documents needed to get a license. Individuals engaged in rent-seeking cannot also do productive work at the same time, so rent-seeking, like lobbying, shrinks the production possibility frontier of the economy.

To explain the reasoning underlying the rent-seeking analysis con-

sider a country that completely specialized in the production of a single good, wheat, which can be exported in exchange for cloth at fixed terms of trade of a bushel of wheat for a yard of cloth. There are 12 million workers engaged in wheat production, in which they have a constant average (and marginal) product of one bushel per worker, so that labor is the only scarce factor of production. We assume that under initial free trade conditions the country consumes 6 million bushels of wheat and exports the remaining 6 million in exchange for 6 million yards of cloth.

Suppose now that an import quota of 4 million yards of cloth is imposed. The terms of trade are still one for one, so exports of wheat will decline to 4 million bushels. With all workers continuing to produce wheat the domestic market will now have to absorb 8 million bushels of wheat and 4 million yards of cloth. With more wheat and less cloth available the domestic relative price of cloth in terms of wheat will rise, say, to two bushels per yard. Importers will reap a "scarcity rent" of a bushel of wheat per yard of cloth imported, in total equal to 4 million bushels of wheat. This rent is a pure transfer, the gain to the importers coming directly at the expense of consumers. By forcing consumers to buy less cloth and more wheat than they would like, at world prices, the quota also imposes an additional welfare loss.

All this is standard analysis. Krueger's innovation was to observe that import quotas would be sought after: a production worker could quit his job and spend his time writing petitions to get an import license entitling him to buy the foreign good and sell it at the higher home price. The quota thus imposes an extra cost: the output lost when people devote themselves to rent-seeking rather than production.

Consider an eminently "fair" system of license allocation: the quota will be divided equally among all applicants. How many will apply? Quite obviously, as the number of applications grows, the quantity of cloth for each license decreases. Furthermore, as workers withdraw from production to become rent-seekers, less and less wheat is produced, so the domestic price of cloth falls relative to the price of wheat. At some point rent-seeking and wheat production will be equally profitable, and labor transfers will cease. For example, equilibrium may be reached when the domestic price of cloth is 1.5 bushels of wheat, so that the scarcity rent on cloth imports equals 2 million bushels of wheat. At equilibrium the rent to each rent-seeking individual equals the wage that the same person could earn in production—that is, one bushel of wheat a year. It follows that at equilibrium there must be 2 million rent-seekers, so that the country produces 2 million bushels of wheat less than before the imposition of the quota. The economic cost of rent-seeking, as measured by the loss of production, is equal to the value of the rent created by the quota.

How important are such rents in a developing country? Krueger (1974) estimated that they amounted to 7 percent of India's income in 1964 and to 15 percent of Turkey's in 1968. By including financial market distortions (which were ignored by Krueger), Mohammad and Whalley (1984) raised the estimate of rents in India to between 30 percent and 45 percent of the gross national product.

These figures suggest that the social cost of rent seeking is staggering. But is it conceivable that a third (or more) of a country's population is engaged in rent-seeking? True, in India and other developing countries there are endless lines of petitioners at every office, but virtually all villagers, who make up 80 percent of the population, and most urban dwellers perform their usual productive tasks.

A closer look at the analysis reveals that the cost of rent-seeking cannot be higher than the value of the rents, but it can be lower. In Krueger's words, the estimates of rents "may be interpreted as the deadweight costs from quantitative restrictions in addition to the welfare costs of their associated tariff equivalents if one believes that there is competition on rents" (1974, p. 301).

The qualifying clause is extremely important: rent-seeking is eliminated, or at least greatly reduced, if the division of the spoils is decided upon in advance. For instance, it is common practice to allocate quotas as a function of imports in a base year. Rent-seekers may try to change the allocation, but there is no presumption that the entire rent will be competed away. Barriers to entry are likely to be particularly severe in the market for influence.

Even if competitive rent-seeking does occur, the cost to society is likely to be much smaller than the size of the rents. The Krueger hypothesis is that competition means standing in line or filling in forms. But competition can also mean bribing officials, a socially reprehensible act but one that in economic terms represents a pure transfer. We have here yet another example of the difference between private and public virtues. A fair system of free competition for rents, administered by incorruptible public servants, paradoxically imposes the greatest social cost.

It remains true, nevertheless, that, by ignoring rent-seeking, conventional measures of welfare underestimate the cost of quotas. Moreover, unlike lobbying, which in a pluralistic society may play a positive role, rent-seeking has no redeeming social virtues: it is sheer waste. Thus the rent-seeking analysis carries an important policy message: avoid, if you can, the imposition of quantitative restrictions; if you cannot, make sure that the rents will not be competed away.

This article's objective has been to bring out the implications for economic analysis of two crucial departures from traditional assump-

Conclusion

tions. One is that self-interested individual behavior in the economy is not confined to the provision of directly useful goods and services for oneself or others through exchange. Such behavior can also be intended, through group action, to influence government rules and policy to favor the group at the expense of the rest of society. The other is that the government cannot always be regarded as either a selfless guardian of the public interest or as an impartial mediator between different parts of society.

Once this perspective is adopted, many aspects of economic life that are deemed irrational by traditional neoclassical analysis—such as high tariffs in small open economies or heavy public expenditure—become explicable as expressions of the interests of the relevant groups. In a world of oligopolistic group interests in the private sector and an autonomous state in the public sector, the “invisible hand” is not always benign: self-seeking does not necessarily promote the common good.

Abstract

This article discusses the consequences for resource allocation of the behavior of self-interested groups within and outside the government. The power groups that are considered are the state as a surplus-maximizing monopoly, the self-aggrandizing bureaucracy, and private lobbies with divergent interests. The article uses the analytic tools of neoclassical political economy and discusses recent writings in the field.

Among the problems dealt with are the supply of public goods, the severity of trade barriers, and the choice of tariffs, quotas, domestic content rules, and voluntary export restraints as instruments of commercial policy. The discussion takes into account the cost of lobbying and rent-seeking, the competition for spoils resulting from government-imposed restrictions on the free allocation of resources. The article shows that for society as a whole the outcome of group rivalries is, in general, less favorable than outcomes based on atomistic individual behavior and benign government, which is the framework adopted in most standard economic analysis.

Notes

1. The analysis in this and the next two sections draws on the model developed in Findlay and Wilson (1987).
2. For further details on the material in this section, see Findlay and Wellisz (1983).
3. This case applies to a developing country that both exports and imports manufactured goods. We later discuss a specific factors model, more appropriate for the case where primary commodities are exported and manufactures imported.
4. Mayer (1984) elegantly integrates the pressure group and voting approaches.
5. We assume, for simplicity, that agriculture does not require capital and that manufacturing does not require land. Our results could be generalized by assuming that that ratio of capital to land were lower in agriculture than in industry.
6. Multiple equilibria are, of course, possible, but we shall assume that the equilibrium is unique.
7. It is clear that a Draconian law prohibiting all forms of lobbying would eliminate all lobbying expenditure, so there could be no resource cost.
8. The relation between private and social cost of lobbying is discussed at greater length in Wellisz and Findlay (1984).

9. Bhagwati (1980) and Bhagwati and Srinivasan (1980) point out that an evaluation of the economic costs of lobbying must take into account the distortion of the economy caused by existing trade barriers. The greater the degree of distortion the lower the opportunity cost (at world prices) of the factor favored by the distortion. In an economy so grossly distorted that the accumulation of the protected factor is "immiserizing," lobbying can increase welfare by absorbing enough of the factor that has a negative shadow price as a result of the distortion.

10. This section summarizes Findlay and Wellisz (1986).

11. For a discussion of the effect of domestic content rules on resource allocation, see Corden (1971, pp. 45–50), and Grossman (1981), as well as Findlay and Wellisz (1986).

12. Domestic content requirements may also be imposed by the importing country wishing to limit preferential treatment granted to specific countries, as in the case of the European Community's imports of textiles from developing countries under the Lomé Convention.

13. See Feenstra (1984) for an analysis and measurement of the welfare costs of VRS to the U.S. market for automobiles.

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