CHAPTER

24

THE NEW POLITICAL ECONOMY: PUBLIC CHOICE AND REGULATION

INTRODUCTION

The great classical writers, such as Adam Smith and Jeremy Bentham, considered economics to be a social science in the broadest possible sense. Political economy, with the adjective given as much weight as the noun, was an inquiry into analysis, institutions, policy, and policy formation. As economics progressed through the nineteenth and twentieth centuries, however, the scope of its inquiry gradually narrowed. Indeed, we have now come to the point that in some graduate institutions in the United States and abroad, economics is seen more as a branch of applied mathematics than as a social science. In the quest to formalize the subject, political and institutional concerns, in spite of Veblen's influence, have often been relegated to second-class status within economics curricula.

But there have always been economists who have maintained an interest in the interface between "politics" (political behavior and institutions) and the motives of self-interested economic actors. In the broader view of these economists, there is no such thing as strictly "economic behavior." Politicians are not regarded as selfless lawgivers, exogenous to the economic happenings in society. They are seen, rather, as self-interested competitors maximizing returns (power, position, votes, etc.) under certain constraints (reelection, for instance). The important point is that in seeking to optimize their own interests, politicians impact upon the entire economic system, for example, through fiscal policy or through the supply of industrial regulation. The germ of these notions—especially that of endogenous politicians—has always been present in economic literature, but in the past twenty or thirty years a veritable revolution has taken place. In this modern development, economics has been re-

The purpose of this chapter is to show how the self-interested economic motives postulated by classical and neoclassical economists are being applied and extended to an analysis of the modern world. Two major contemporary themes—public choice and the economic approach to regulation—are treated. Even a cursory investigation of these two important and developing areas reveals a fundamental continuity in economic analysis stretching from Adam Smith to the present. In addition, such active concerns on the part of prominent modern writers are evidence that, despite the recent surge of mathematical formalism in the discipline, economics is not down at the heels as a *social* science.

PUBLIC CHOICE: CONTEMPORARY POLITICAL ECONOMY

Modern public choice is a study of the political mechanisms or institutions through which taxes and expenditures are determined; that is, it is a study of the demand for and the supply of *public* goods. Further, public choice is the use of the simple analytics of competition to make positive statements concerning institutions and events in the public sector. Although the economics of the *private* sector has been well developed over the last two centuries, until recently an analysis of how social goods are supplied and demanded took a back seat to the central concerns of most economists.

Some classical and neoclassical writers, such as Alfred Marshall and A. C. Pigou, always paid attention to public finance. However, the Marshallian-Pigovian approach to public finance, antedated as we have seen by the French engineers, focused on "problem solving" in the provision of *specific* public goods. Moreover, its concern was almost exclusively on the tax side of the fiscal equation. The welfare and efficiency effects of various types of taxes were stock-in-trade for neoclassical (Marshall-Pigou) analysis; but it never occurred to writers in this somewhat insular Anglo-Saxon tradition that fiscal decisions were the result of choice on the part of both demanders and suppliers acting through a process of political filtration.

Modern research has demonstrated conclusively that intellectual efforts to place fiscal theory on more broad-based interdependencies were emerging in Italian and Scandinavian writings. James M. Buchanan, Nobel laureate and founder-pioneer of modern public-choice theory, investigated the classical, Italian tradition in public finance (1880–1940) and contrasted it to the Anglo-Saxon (Marshallian-Pigovian) development.[1] Buchanan noted:

As early as the 1880s, Mazzola, Pantaleoni, Sax, and De Viti De Marco made rudimentary efforts to analyze the public economy within an exchange framework. Sax and Mazzola discussed the demand side of public goods by identifying collective as distinct from private wants. Pantaleoni extended the marginal calculus to apply to collective

the legislator who makes choices for both sides of the budget. De Viti De Marco explicitly constructed a model in which the consumers and the suppliers-producers of public goods make up the same community of persons ("Public Finance and Public Choice," p. 384).[2]

In addition, the Swedish economists, Knut Wicksell (1851-1926) and Erik Lindahl (1891-1960) were hard at work developing a holistic approach to the public sector, one that included a public budget determined within a political process rather than as the endogenous dictates of Platonic philosopher-kings. Contemporary movements among public-choice theorists to establish the entire fiscal sector of the economy within a general-equilibrium theory owe much to the efforts of these continental economists.

As a matter of doctrinal development, we must agree with Buchanan's assessment that the real surprise is not the emergence of continental contributions to public-sector equilibrium—these could be expected as somewhat straightforward extensions of the emergent neoclassical (marginalist) theory of *private* markets in the 1870s (see Chapters 13 through 16). Rather, the riddle for the historian of thought is to explain "the long-continued failure of English-language economists to make comparative extensions of their basic framework or to acknowledge an interest in the continental efforts" ("Public Finance and Public Choice," p. 384). The bridge between these early continental contributions and the emergence of modern public-choice theory is a long one that has, in the main, spanned the Atlantic and reached American economists. Contemporary public-choice theory is essentially an ongoing American achievement, originating in the late 1930s and the 1940s.[3] The content of this achievement is both extensive and detailed. Voting theory, for example, is an integral and complex part of public choice. Space constraints in a book such as this prohibit a detailed account of the entire field. We therefore confine our discussion to some simple concepts and areas of concern in public-choice theory so that we might provide the reader with an overview of this developing paradigm in contemporary economics.

Public-Goods Demand and the Median-Voter Model

The theory of public-goods demand is an integral aspect of contemporary public-choice theory. Further, it is a good example of how economic analysis

[2] Buchanan's essay "Public Finance and Public Choice" (see References) provides a fine introduction to contemporary public choice and its history, as does Randall G. Holcombe's "Concepts of Public Sector Equilibrium" (see References). With permission, the spirit of our discussion, as well as some details, follows these two papers closely.

[3] The early, seminal American contributions were those of Musgrave ("The Voluntary Exchange Theory of Public Economy," 1938), Bowen ("The Interpretation of Voting in the Allocation of Resources," 1943), and Buchanan ("The Pure Theory of Government Finance: A Suggested Approach," 1949), all cited in the References at the end of this chapter. This ongoing tradition in contemporary American economics is exemplified in the work of

developed to handle one problem can often be applied to new problems. In this case the theory of public-goods demand is analogous in most respects to the Mill-Marshall joint-supply theory developed to analyze simultaneous production of such items as beef and hides; mutton and wool, and so on (see Chapter 8 for this discussion). Originally articulated by Howard Bowen in 1943, the necessary conditions for allocative efficiency in the provision of a public good were developed by Paul Samuelson in 1954 in a classic paper "The Pure Theory of Public Expenditures." A public good in this context may be distinguished from a private good in that, in the public-good case, an individual's consumption of the public good does not reduce all other individuals' *simultaneous* consumption. In the private-good case, if X_T is the total consumption of shoes, then $X_T = x_1 + x_2 + \ldots + x_n$, where x_1, x_2, etc., is the sum of all individuals' consumption of shoes. In the public-goods case, X_p may be total all individuals consume of, say, national defense, and $X_p = x_1 = x_2 = \ldots = x_n$, where individual's consumption of the *same* amount of defense. In the latter case, one individual's consumption of defense does not detract from another's, and all consume the *same quantity* of defense.

Here, units of measurement are important. A "unit" of a good is defined as the minimum quantity of that good required to provide more than one consumer simultaneously with that particular bundle of services that serves to distinguish the good in question from all other goods. Accordingly, a dozen pencils would not be considered a unit of a public good even though twelve individuals could consume this good simultaneously. The reason is that one pencil is capable of providing the unique bundle of services (writing, erasing, etc.) usually associated with the term "pencil." A unit of pencils would be a private good because its services are provided to only a single individual.

A Polaris submarine, on the other hand, can be viewed as a unit of a public good because it provides "safety from nuclear attack" simultaneously to more than one individual. While the provision of "safety from nuclear attack" as a private good might be possible (individual concrete underground silos, for example), the cost per individual presumably is less when the service is provided as a public good.

Some other characteristics of public goods are important though they are not unique to public goods. For instance, in the public-good case described by Samuelson, the *marginal* cost of supplying additional users would be negligible—sometimes zero—and the exclusion of nonpaying consumers would be impossible. Some goods in the private sector approximate the above cost conditions (a bus trip for a particular journey, perhaps). Moreover, it may always be possible to exclude consumers. Even in the case of national defense it would theoretically be possible to remove nonpayers to (nonprotected) islands in the Pacific Ocean although such exclusion would be costly. The conceptual difficulties of defining a *pure* public good are many, therefore, but these matters need not detain us here. Let us assume that joint-consumption, zero mar-
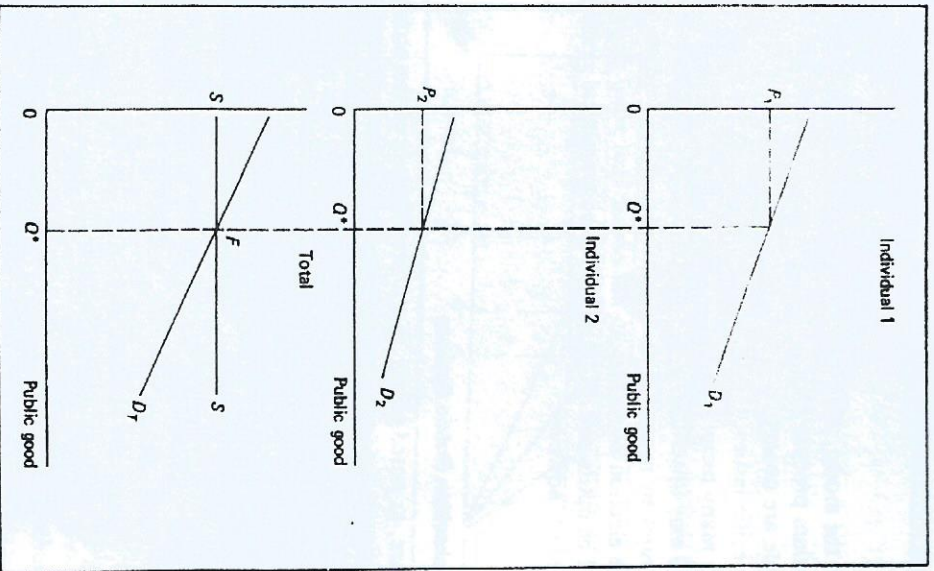
FIGURE 24-1

Individual 1 — P_1 — Q^* — D_1 — Public good

Individual 2 — P_2 — Q^* — D_2 — Public good

Total — S — F — Q^* — D_T — S — Public good

The total demand for the public good is the vertical sum of individual demands D_1 and D_2, with each demander consuming Q^* quantity of the good.

analogous to Mill's model of joint supply for jointly produced private goods [such as steers] depicted graphically in Figure 8-1.

The two upper quadrants of Figure 24-1 depict the demands for a public good (education, Polaris submarines, etc.) on the part of a closed community of two individuals. These demands are summed vertically in order to get the total demand for the public good shown (with a constant-cost supply curve) in the lowest quadrant of Figure 24-1. Vertical summation of individual demand indi-

does not compete with individual B's. Consumption is simultaneous and "complementary." Most importantly, note that the equilibrium described in the public-goods case with simultaneity of consumption requires (in exact contrast to the private-goods example) that the *same* quantity of the good be consumed by *each* consumer (quantity Q^* in Figure 24-1). Different prices are required in equilibrium to get different individuals with different demand to hold Q^* of the commodity. The equilibrium prices would not be equal except in the unlikely event that the two individuals' demands are identical.

Samuelson's description of the demand for public goods is perfectly abstract and general, but in fitting the principle to real-world applications several difficulties emerge. When the good in question is not *purely* public in Samuelson's sense, the optimal size of the consuming group will not be known, and the question that begs answering is: What quantity should be produced (i.e., what Q^*)? In his 1943 paper, Howard Bowen reviewed this last issue and answered: "It is, of course, no more difficult to obtain information on the cost of producing social goods than to get data on individual goods; but to estimate marginal rates of substitution [public-goods demands] presents serious problems, since it requires the measurement of the preferences for goods which, by their very nature, cannot be subjected to individual consumer choice" ("The Interpretation of Voting in the Allocation of Resources," pp. 32–33).

Some sort of proxy for public-goods demands is needed, in other words, and Bowen suggested that, under certain conditions, voting (in a democratic setting) is the closest substitute for consumer choice.[4] This so-called *median-voter model* (actually a whole set of models) became the major tool of public-choice theorists in the 1960s and 1970s owing in large part to the pioneering efforts of Duncan Black and Kenneth Arrow. While this literature is central to modern public-choice theory, it is fairly technical and would take us too far afield.[5] Nevertheless, the Bowen model and its variants (along with possible complications and problems) may be presented in simple terms.

Any individual's demand for public goods will be determined by two things: (1) the satisfaction he or she expects to receive from various amounts of it, and (2) the cost to the *individual* of alternative amounts of the public good. In order to look at even a basic model of voting behavior, we must invoke simplifying assumptions. First, assume that all members of a community actually vote and thereby correctly reveal their individual preferences for the social good. Sec-

[4] Bowen was not the first economist, and certainly not the last, to deal with this general problem. Harold Hotelling broached the issue of the median voter in 1929 (see References)

[5] The interested reader should consult two works central to the argument, Duncan Black's *The Theory of Committees and Elections* (1958) and Kenneth Arrow's *Social Choice and Individual Values* (1951) (see References and Notes for Further Reading). These works faced the question of the efficiency and workability of majority rule through the median voter in registering individual preferences for social goods. The fascinating intellectual history of the efficiency of voting rules is

ond, suppose that the total and average cost of the good to the community is known and that it is divided equally among all citizens. Finally, assume with error." ("The Interpretation of Voting." p. 34. This simply means that there are a large number of demand curves and that, for any quantity of the public good provided, there will be demands clustered symmetrically about a mode. Such a community may be illustrated easily in terms of Figure 24-2, which shows the clustering of demands about the demand of the median voter. The pro rata tax share (AC/N) is the same for each voter-consumer. Now consider a provision of some quantity of the public good Q_1 in Figure 24-2. Clearly for the same quantity of the good, different demanders would be willing to pay different tax shares. Thus, for Q_1, those who value the good highly would be willing to pay D_7, those placing little value on the public good would be willing to pay D_1, and so on. The median voter, however, values Q_1 at some rate D_4, which is higher than the pro rata tax share to all taxpayers who receive the public good AC/N (MC/N). Thus in, say, a town-meeting process employing majority rule, any Q proposed above Q_1 will win approval; any Q proposed above Q^*, such as Q_2, will fail to carry. In this process, the quantity preferred by the median voter, Q^*, will always defeat any other motion. The median-voter process, under certain circumstances, can yield similar

FIGURE 24-2

At quantity Q_1 of a public good, the median voter values Q at some rate D_4 which is higher than the pro rata tax share. Thus, with majority rule, any Q proposed above Q^* will fail to carry.

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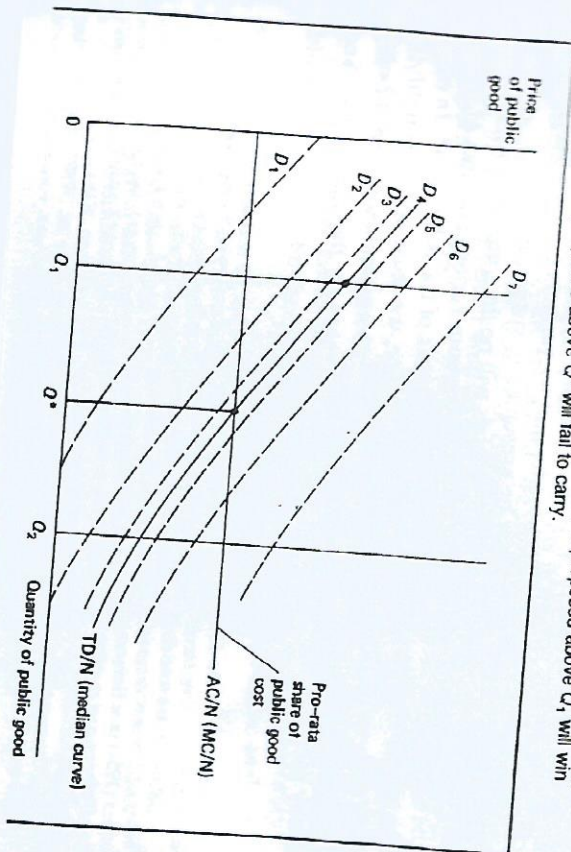
results in other variants of the model, such as voting for marginal increases of a public good in a referendum process or through elected representatives. In the latter case, if the people are consulted on *particular* policies and if representatives identify with specific issues, the results of the process can approximate those of Figure 24-2. Many factors affect voting. Public officials working through certain institutions may upset the results of Bowen equilibrium by manipulating the agenda or simply by representing and voting on a large variety of issues. Thus, majority-rule election processes do not ensure that voter preferences for public goods will be optimized. It does seem to be a practical system for approximating preferences, however.

Lindahl Tax Prices and Wicksellian Public Finance

Distribution of the tax share, as noted above, is a crucial feature in the provision of public goods, since any individual will demand a good both on the basis of its (marginal) value and on the basis of its cost. The "marginal cost" is simply the share of taxes that the citizen-consumer pays for his or her portion of the output. A major problem in public choice, then, is to devise a means for providing an optimal quantity of any public good such that, for the *single* quantity produced, some distribution of the tax burden may be found that equates the marginal valuation of the good to the marginal tax share for each citizen-consumer. Two early writers on public choice, Erik Lindahl and Knut Wicksell, were interested in different aspects of this question and originated different paths of analysis in modern public-choice theory.

Lindahl Equilibrium
Positive Solution In his 1919 contribution entitled "Just Taxation—A Positive Solution" (a part of his book *Die Gerechtigkeit der Besteuerung*), Lindahl treats the problem of tax-share determination as one of bilateral exchange in an "isolated" community with two categories of taxpayers, one "well-to-do" and the other "relatively poor." The problem of the distribution of the tax shares is then considered to be one settled by free argument, or "a kind of economic exchange." (Lindahl of course recognized that this process was filtered through protagonists in a political process and that resultant tax-share distributions assigned would be influenced by their relative power, but he assumed initially that such political "blocs" did not influence the model under free exchange.)

Lindahl's solution is straightforward. In a "solution in which both parties have equally safeguarded the economic rights to which they are entitled under the existing property order," the price of the collective good "tends to correspond to marginal utility for each interested party" ("Just Taxation," pp. 172–
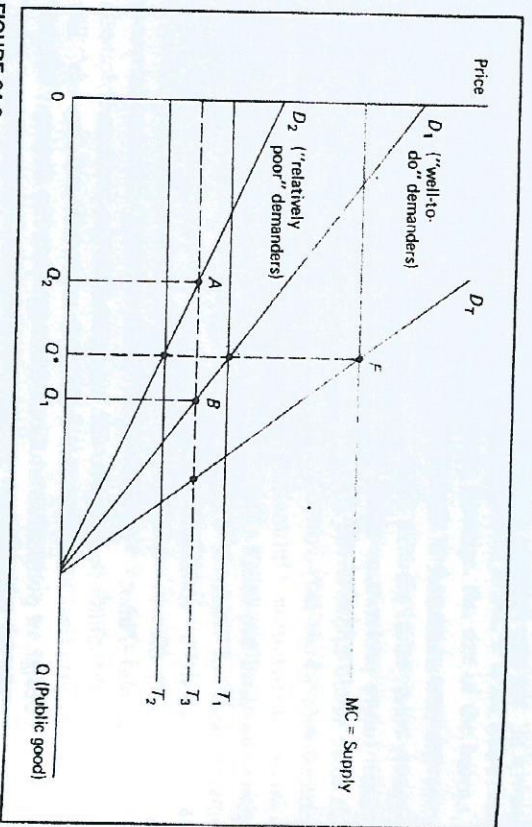
Lindahl equilibrium is achieved when well-to-do demanders are charged a marginal tax rate T_1 for Q' and relatively poor consumers are charged a lower tax rate T_2. At a tax rate of T_3 the poor will prefer Q_2, a less-than-optimal quantity, and the rich will prefer Q_1, a more-than-optimal quantity.

FIGURE 24-3

Consider the modern adaptation of Lindahl equilibrium in Figure 24-3 (Figure 24-3 is constructed in the same manner as Figure 24-1, except that the two demand curves and their summation are contained in one graph in Figure 24-3.)[6] In Figure 24-3, D_T is the *vertically* summed demand curve for the public goods, with D_1 and D_2 being the separate demand curves of the two groups. Lindahl equilibrium would occur, through voluntary exchange, when for quantity Q^*, well-to-do demanders are charged a marginal tax rate T_1 and the relatively poor consumers are charged a lower tax rate T_2. Under this tax system, each group is paying a marginal cost (T_1 and T_2, respectively) equal to its marginal valuation of the public good. Efficiency is achieved in the Bowen-Samuelson sense because a single quantity of the good is produced, Q^*, which corresponds to the equation of total demand D_T and marginal cost of production (at point F in Figure 24-3).

The establishment of Lindahl prices is *not* necessary in order to obtain efficiency in the production of public goods in the Bowen-Samuelson sense. All that is required for efficiency is that total output of the good be established at point F (producing Q^*) in Figure 24-3. In order to understand this fact, consider the imposition of some ''average,'' ''average'' tax rate T—one that would be imposed on both groups of demanders and that would cover the costs of producing Q^*.

It is easy to see that the well-to-do demanders would prefer this system and would, if possible, foist it on the poor through a political process (Lindahl considered this case). Note, however, that at tax rate T_3 the poor would prefer Q_2, a less-than-optimal quantity of the public good. If the poor were politically powerful, they might force society to take a less-than-optimal quantity of the good.[?] In general, however, a system of Lindahl tax prices would produce Bowen-Samuelson efficiency—everyone would agree on how much of the public good should be produced. While a Lindahl system is not the only one capable of producing this result, it is also the case that a Lindahl model features *unanimous* agreement of the taxed parties in voluntary exchange given differential tax rates. Probably this feature of Lindahl's work is very strong because his conception of public finance was deeply influenced by his mentor, Knut Wicksell.

Wicksell and Wicksellian Extensions Swedish economist and reformer Knut Wicksell was probably the most important early progenitor of contemporary public choice. In his long essay of 1896, ''A New Principle of Just Taxation.'' Wicksell attacked the orthodox approaches to public finance and simultaneously laid the groundwork for both normative and positive public choice. In a concern for how decisions in the public sector are reached, Wicksell emphasized the dual nature of the fiscal side of the economy. In his view, normative comments concerning the welfare effects of alternative tax systems were of no value unless the expenditure side of the fisc (benefits to taxpayers) was simultaneously considered. ''Most importantly,'' as Professor Buchanan has pointed out. ''Wicksell admonished economists for their failure to recognize the elementary fact that collective or public-sector decisions emerge from a political process rather than from the mind of some benevolent despot'' (''Public Finance and Public Choice,'' p. 385).

As the title of his famous paper suggests, Wicksell was most concerned that a fiscal system conform to justice and efficiency. In his view justice and efficiency demanded *unanimity* among all parties that participate in public-sector decisions. Wicksell was clear on this matter:

When it comes to benefits which are so hard to express numerically, each person can ultimately speak only for himself. It is a matter of comparatively little importance if perchance some individual secures a somewhat greater gain than another so long as everyone gains and no-one can feel exploited from this very elementary point of view. But if justice requires no more, it certainly requires no less. In the

[7] In a most ingenious extension based upon the above problem, Charles M. Tiebout noted in 1956 that people may ''vote with their feet'' in choosing local communities (''A Pure Theory of Local Expenditures''). In other words, local communities may be thought of as offering a continuum of public-service quantities. In terms of Figure 24-3, given that both groups of demanders face tax rate T_3, the poor would move to a local community offering quantity Q_2 and the well-to-do

final analysis, unanimity and fully voluntary consent in the making of decisions provide the only certain and palpable guarantee against injustice in tax distribution. The whole discussion on tax justice remains suspended in mid-air so long as these conditions are not satisfied at least approximately ("A New Principle," p. 90).

State activity in Wicksell's view must thus be of general usefulness, and more, the sacrifice must be weighed against the expected utility of the project. Whether individuals favor a project or not depends on a number of variables, e.g., one's position in the income distribution, relative tastes for private versus public consumption, and subjective evaluation of the public project. The tax-price distribution of the costs will determine whether the project would be approved or not. Some distributions of costs would win majority approval and others would not. In a slap against "authoritarian" tax allocations, Wicksell argued that alternative financing and spending proposals should be submitted to the public for vote. Wicksell then argued that it would be possible, theoretically, to find a distribution of the costs that would produce *unanimity*. Any other results would provide, in Wicksell's words, "the sole possible proof that the state activity under consideration would not provide the community with utility corresponding to the necessary sacrifice and should hence be rejected on rational grounds" ("A New Principle," p. 90).

Although no other principle would be "just" in Wicksell's positive notion, he did recognize that unanimity, though ideal, was not to be expected in any practical circumstance. Society is then faced with a set of voting-rule options, none efficient in Wicksell's ideal sense. This apparent impasse set the stage for a notable development in the modern literature on public choice. In *The Calculus of Consent*, published in 1962, James Buchanan and Gordon Tullock analyzed less-than-Wicksellian-optimal rules within a framework of methodological individualism. Within this positive (value-free) framework, Buchanan and Tullock modeled the calculus of a utility-maximizing, rational individual as he or she faces the choice of constitutional design. In their model, a "constitution" is simply a set of rules decided upon in advance that determines the manner in which future action will be conducted.[8]

The institutions of collective choice making in the Buchanan-Tullock conception are themselves variables. Buchanan and Tullock argue that:

The constitutional choice of a rule is taken independently of any single specific decision or set of decisions and is quite rationally based on a long-term view embodying many separate time sequences and many separate collective acts disposing of economic resources. "Optimality" in the sense of choosing the single "best" rule is something wholly distinct from "optimality" in the allocation of resources within a given time span (*Calculus of Consent*, p. 95).

Optimality, or the determination of the "best" decision rule (one of which could be majority rule), takes place in the presence of individuals' uncertainty concerning their future preferences about a series of individual collective acts or proposals to be voted upon. Given such uncertainty about the nature of future preferences, individuals may vote on criteria *unrelated to their respective position in income distribution*. Optimality in the more "dynamic" Buchanan-Tullock framework does not mean the same thing as in the time-constrained decision-making model of Wicksell. Strict unanimity is required for optimality ("justice") in Wicksell's conception, whereas the choices facing the Wicksellian community are later in time than the constitutional choices analyzed by Buchanan and Tullock. At this earlier point a voting rule that is nonoptimal from a Wicksellian perspective can be optimal in the presence of future preference uncertainty. Buchanan and Tullock thus provide a theory of constitutions and a design of political institutions that augments the unanimity rule as the sole criterion for efficiency in the narrow Wicksellian sense. Their analysis, especially when combined with the norm of "individualism," has had a large impact on contemporary research on political behavior and institutions.

Bureaucracy, the Supply Side, and Empirical Public Choice

Demand analysis—that is, the interconnections between voting and the demand for public goods—has taken center stage in the contemporary public choice literature. The primary focus on this issue implies that goods and services demanded in the public sector are *automatically* supplied. Public-goods supply, however, takes place through government bureaucracies, and the incentive mechanisms of "bureaus" have, with very few exceptions, not been the subject of much inquiry in public choice. Two exceptions have been the work of the Austrian economist Ludwig von Mises (*Bureaucracy*, 1944) and the more recent study by Gordon Tullock, *The Politics of Bureaucracy* (1965). These books, especially the latter, originated the attempt to model the process of bureaucratic output and most particularly the motivations through which "public-sector supply" takes place.

How do bureaucrats behave? What are their motivations? Is there a discernible quantity that they optimize in their public-good-supplying operations? The works mentioned above, especially through Tullock's intellectual influence, resulted in a singularly interesting recent contribution in this area. In 1971, William A. Niskanen, Jr., published his *Bureaucracy and Representative Government*, which, in the author's words, "focuses on the relations between a bureau and its environment, particularly the environment of representative government, and develops the consequences of these relations for the bureau's budget and output" (*Bureaucracy and Representative Government*, p. 9). Niskanen views the bureaucrat as an "endogenous" maximizer in the sys-

illegal side payments are not unknown in the political arena, it is far more reasonable to point to such variables as income, prestige, the size of the bureau, the bureau's budget, job promises after retirement, and so on as candidates for the bureaucratic maximand. Niskanen assumes that bureaucrats are budget maximizers, and he models government bureaus as individual budget-maximizing units. Budget maximization enables the individual bureaucrat to increase his or her salary, have an easier (or more "pleasant") working environment, or both.

Bureaus, in this scenario, are "nonprofit organizations which are financed ... by a periodic appropriation or grant" (*Bureaucracy and Representative Government*, p. 15). In essence, a *total* budget is transformed into a level of *total* output, since marginal adjustments are not feasible within the bureaucratic context. One of the (many) implications of the model is that in their attempt to maximize budget size (and thus the size of the bureau), suppliers will "eat up" the consumers' surplus that results from public-goods supply. The sheer growth of bureaucracy is also an obvious implication of this theory. There have been difficulties, moreover, in integrating the theories of public-goods demand and Niskanen's notion of supply into a "general-equilibrium model." Niskanen's model has stimulated a good deal of research into the "supply problem," however, and it has become an ongoing research concern in the economics of public choice.

Positive public choice has yielded a large number of testable implications and extensions. Economists, especially since 1970, have been hard at work expanding and empirically estimating some of these propositions. A very large literature, some of which might be called "empirical public choice" has grown up in the field.[9] The list of contributions delving into these matters is long and pertains to such issues as (1) what the economics of campaign contributions are and how they affect political competition, (2) how self-interest leads to length of political terms in office and to the rules of succession, (3) how the independent judiciary affects cartel behavior, (4) how entry barriers into politics are determined by economic variables, (5) how and why coalitions are formed within legislatures, and (6) why state and federal legislatures contain more lawyers as representatives than any other occupation. A whole branch of literature has developed on the "political business cycle," that is, how self-interested politicians acting under reelection constraints can *cause* swings in inflation, income, and employment. Some of these interesting contributions are discussed below, while others are referenced in the Notes for Further Reading at the end of this chapter.

The Median-Voter Model   Consider the median-voter model described earlier in this chapter. It has been shown that, assuming competition among po-

litical parties, the party that most appeals to the interest of the median voter will be elected. It is not likely that the strongest supporters of a political party will be most rewarded by favors from the party. In order to get elected, the party must sacrifice some of the benefits to its strongest supporters and real-party workers. Holcombe has shown that when tax shares can be offered as part of a political platform, democracy has a natural bias in favor of electing the political party that has the highest demand for public sector output" ("Public Choice and Public Spending," p. 382). He has also studied the empirical relevance of the Bowen median-voter model (see Figure 24-1). Utilizing data from Michigan millage referenda on educational expenditures in 275 elections in 1973, Holcombe provided empirical support for the assertion that the median-voter model is consistent with local governmental referenda on educational expenditures ("An Empirical Test of the Median Voter Model," pp. 272–273).

The Economics of Political Representation   Empirical models in public choice have extended to testing very practical questions. For instance, do methods of paying legislators (say, set in the state constitution or by state legislators themselves) determine "outside earnings?" A recent study by Robert McCormick and Robert Tollison suggests that in higher-paying states, with legislators setting their own salaries, individuals find it less in their own interest to seek outside payments or bribes ("Legislatures as Unions," p. 77). In another interesting empirical study, entitled "Legislatures as Taxicabs: On the Value of a Seat in the U.S. House of Representatives," Mark Crain, Thomas Deaton, and Robert Tollison investigated the question of why the size of the U.S. House of Representatives has remained constant at 435 (with the minor exception of a temporary expansion after Alaska and Hawaii were admitted to the Union). The only two constitutional requirements respecting size are (1) that there be no more than one representative per 30,000 population and (2) that there be at least one representative from each state. The House, given these restrictions, could have supported 5,977 members in 1977. Why, then, were there only 435? The answer, according to Crain, Deaton, and Tollison, is that legislators, like the situation where taxicabs are controlled, are able to restrict their own numbers. The result is that economic rents are earned by the existing units of supply—at least partially by the legislators themselves. Thus, some "economic" answers to "political" questions are provided by the axioms of self-interest, the ability of U.S. representatives to control the number of their own members, and the theory of rent seeking (see the following section).

The richness of the emerging literature on public choice is suggested in the brief discussion above. But beyond that, the public-choice paradigm has been a fertile source of advances in the theory of economic regulation. Indeed, an endogenous political process is central to most contemporary theories of eco-

THE NEW POLITICAL ECONOMY OF REGULATION

Deregulation of some industries became stylish among both Democratic and Republican politicians in the 1970s, a fact that represents a distinct and dramatic shift in emphasis from the philosophy of "New Deal liberalism" in the United States. Historically, regulation of some industries, especially those regarded as "utilities," or natural monopolies, has been considered in the "public interest." After the establishment in 1887 of the first large federal regulatory agency (the Interstate Commerce Commission), economists spent great quantities of paper and ink trying to devise better pricing tools to be implemented in the regulatory process.[10] A vast literature developed on such subjects as marginal-cost pricing, price discrimination, and peak-load pricing, all ostensibly to be of some use in implementing public policy in the regulated areas of the economy. The whole regulatory process was seen as stemming directly from market failure and from the consequent necessity of government actions in the interests of the public. While imperfections in the regulatory process were acknowledged, most economists lined up behind the view that regulation was required due to the presence of "natural monopoly" and, further, that the process could be perfected by successive approximations in control.

Unfolding intellectual events of the 1960s changed all of this within the economics profession and, ultimately, among politicians and the public as well. We have already discussed one of these developments—the emergence of the public-choice paradigm with its emphasis upon politicians as endogenous actors in economic processes. It simply remained to apply these principles to the regulatory process through a theory of rent or profit creation by politicians and regulators ("the government"). The stage was set by two important papers appearing in 1962. George Stigler and Claire Friedland broke the ice with an essay questioning the effects of regulation on such variables as rate levels, the degree of price discrimination, and the rate of return ("What Can Regulators Regulate? The Case of Electricity"). Their surprising conclusion, based on statistics before and after electrical-utility regulation, was that regulation was almost totally ineffective at controlling the quantities it was designed to control. They noted:

The theory of price regulation must, in fact, be based upon the tacit assumption that in its absence a monopoly has exorbitant power. If it were true that pure monopoly profits in the absence of regulation would be 10 or 20 percent above the competitive rate of return, so prices would be on the order of 40 to 80 percent above the competitive marginal cost, there might indeed be some possibility of effective regulation. The electrical utilities do not provide such a possibility ("What Can Regulators Regulate?" p. 12).

[10] An early "Chicago school" economist, Henry Simons, went so far as to suggest that failures

A second contribution was no less influential in questioning long-held beliefs about regulation. Harvey Averch and Leland L. Johnson developed a theory about the firm's actions when facing a regulated rate of return constraint ("Behavior of the Firm under Regulatory Constraint," 1962). They concluded that, under certain conditions, regulated firms would overinvest in fixed capital at least from society's point of view. Although optimal (i.e., profit maximizing) from the regulated firm's position, too much capital (relative to labor inputs) could force up the costs of utility services to society. The empirical relevance of this Averch-Johnson effect is still being debated by economists and econometricians, but their allegations, along with those of Stigler and Friedland and other writers, helped agitate a general rethinking of the whole regulatory process. This reassessment was, moreover, strongly influenced by the economics of politics and rent seeking.

Rents, Politics, and Regulation

Before turning to forms of the contemporary theory of regulation, let us review what "rent seeking" means.[11] A basic model is presented in Figure 24-4.

For simplicity, assume linear demand and marginal-revenue curves plus a constant average and marginal-cost function. Under competitive conditions a quantity Q_c would be produced and sold at price P_c. A monopoly, or a legalized cartel such as that provided under a regulatory system, could have the effect of causing a reduction of output to Q_m, and a rise in price to P_m. It is important to be clear about the nature of the losses. Triangle AFG corresponds to a deadweight loss due to monopoly—one that was first noticed by the French engineer Jules Dupuit (see Chapter 12). Such a loss is always present whenever price exceeds marginal cost (excise taxes and monopoly prices are analogous in this regard).

But what of area P_cP_mAF? Many economists have claimed these "rents" represent only a redistribution from consumers to the monopolist. In the context of regulatory processes, however, they may be viewed by any given competitor as the value of gaining the franchise.[12] In other words if a single award is given, each individual competitor will have an incentive to spend an amount P_cP_mAF, less an infinitesimal amount, for the exclusive monopoly-granting franchise. Likewise, a cartel, assuming that shares among firms can be cheaply and efficiently devised, would be willing to bid a similar amount for protection from competition. The disposition and dissipation of these rents could be in political lobbying or legal fees. With these principles in mind, let us return to the political and economic interconnections in the regulatory process.

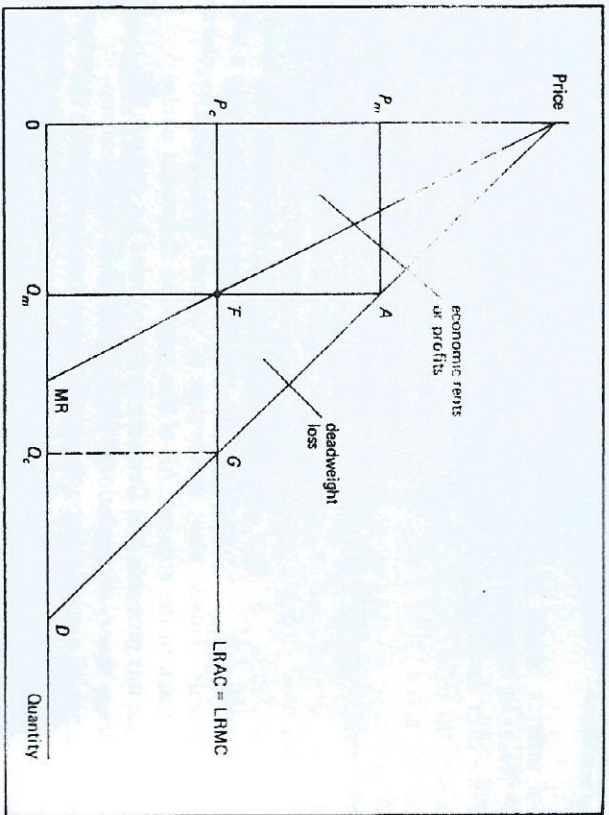A clear imperfection exists in the above argument. Legally, of course, pol-

FIGURE 24-4

In the regulatory process, individual competitors will be willing to spend P_cP_mAF less an infinitesimal amount for the exclusive monopoly rights.

iticians and regulators cannot take bribes, although, as stated earlier, *sub rosa* and illegal side payments have on occasion been unseemly features of government at all levels. Payments from business interests may take other forms, of course, and these motives are the key to the modern theory of regulation. Regulation, like any other good, such as shoes or beer, is demanded and supplied with underlying motives of self-interest. In a provocative paper published in 1971 ("The Theory of Economic Regulation") George Stigler fleshed out a "capture" theory of regulation based upon self-interested motives of demanders and suppliers. This view, it must be emphasized, is only superficially similar to the Marxian notion that "capital" uses the state and the political apparatus to capture benefits. In the modern theory capital or "business" does not always win. Groups of any kind, e.g., labor, farmers, or consumers, may institute or take over the regulatory system at different times. In Stigler's view regulation benefits politically effective groups. Let us consider his view in more detail.

The Capture Theory Who benefits from and who is burdened by regulation? Regulated firms may benefit from the process by direct subsidies of

ways, electrical utilities, etc.) or occupations (barbers, funeral directors, local contractors, etc.) must submit to certain rules, regulations, "standards" of conduct, or other interferences. These are costly and reduce the net return to the regulated firm, but as long as the *net* benefit is positive and reduce the net return to are not prohibitive those who stand to gain from the regulatory process will demand it.

Why will politician-regulators supply regulation? Stated another way, how do businesses go about demanding regulation in a system where outright bribes are illegal? Politically effective coalitions (e.g., nurses, carpenters, "the Moral Majority," etc.) do so with votes and other resources such as monetary support or "campaign contributions." A more basic question is, how do regulations get passed that hurt many people (consumers) a little but benefit a few people (industry) a lot? Certain characteristics of a democratic political process make this possible. Stigler noted that (1) political decisions must be made simultaneously, unlike market decisions, and that (2) a democratic process (through representatives) must involve all parties simultaneously—those very interested in a decision, those somewhat interested, and those uninterested ("Theory of Economic Regulation," pp. 10–11). In these circumstances, the larger damage to majorities (the "deadweight loss," analyzed above) may not find expression against the smaller gains of minorities. Information acquisition is a good with costs and benefits. An individual has no incentive to acquire costly information on issues of no concern to him or her, but the individual votes on these issues anyway, ordinarily through a full-time representative affiliated with a political party. As Stigler argues:

> The representative and his party are rewarded for their discovery and fulfillment of the political desires of their constituency by success in election and the perquisites of office. If the representative could confidently await reelection whenever he voted against an economic policy that injured the society, he would assuredly do so. Unfortunately virtue does not always command so high a price. If the representative denies ten large industries their special subsidies of money or governmental power, they will dedicate themselves to the election of a more complaisant successor: the stakes are that important. This does not mean that the representative and his party must find a coalition of voter interests more durable than the anti-industry side of every industry policy proposal. A representative cannot win or keep office with the support of the sum of those who are opposed to: oil import quotas, farm subsidies, airport subsidies, hospital subsidies, unnecessary navy shipyards, an inequitable public housing program, and rural electrification subsidies ("Theory of Economic Regulation," p. 11).

Politics and the voting process are thus a *gross* filter of individual preferences. Regulations of all kinds are simply the result of interactions of self-interested demanders, i.e., effective coalitions of individuals who stand to gain from regulation and political suppliers who must endure periodic reelection constraints. Does this mean that the "public interest" comes in last in this process? In

is merely a *summation of individuals'* interests on some issue. If transactions costs among consumers were zero, they would most certainly buy out monopolies such as that depicted in Figure 24-4. In other words, for a sum P_cP_mAF, consumers could buy out the monopolist and gain triangle AFG, the deadweight loss. But in an imperfect world where coalition costs are positive and where the state is permitted to coerce (in a democratic setting), monopolies created by regulation can reduce the welfare of consumers.

It is important to recognize that regulation does not always support the special interests of industrial market groups. Consumer or environmental groups may also form effective coalitions to impact upon the political process. Preferences of nonmarket groups may be registered, and different groups may capture the process at different points in time.[11] Identification of the specific configurations of costs and benefits facing demanders and politician-suppliers of regulations is an ongoing task engaging contemporary economists in this field. One of the central problems is to develop a sound single theory of political decision making within bureaucracies. The important point is that the outlines have been developed of a positive economic theory of the regulatory process assuming self-interested, endogenous politicians.

Other Modern Approaches to Regulation

The economic and political approaches to regulation outlined above suggest that *any* effective coalition might obtain regulation through the political process. This view assumes, for example, that regulation may be obtained by some industry irrespective of whether the firms' long-run costs are declining over large blocks of output. The presence or absence of natural monopoly conditions, in other words, is not the foundation of an explanation for government regulations. Altering constraints faced by suppliers and demanders of regulation is the only way to get a diminution of the activity. But what if natural monopoly conditions (declining marginal costs, great capital fixity) are present? Does that mean that agency regulation of the type discussed in early sections of this chapter is inevitable?

The so-called Chicago theory of regulation has dealt with this question. In a view derivative of Sir Edwin Chadwick's nineteenth-century assessment of similar problems (see Chapter 9), Harold Demsetz in 1968 questioned the necessity of regulating (in traditional fashion) industries having scale economies in production ("Why Regulate Utilities?").[14] Demsetz proposed that formal

[9] The central paper here was written in 1976 by Sam Peltzman. Peltzman's "Toward a More General Theory of Regulation" is a powerful generalization of Stigler's earlier theory that coalitions of producers, consumers, and politicians compete for economic rents. In this view regulation redistributes wealth or "rents" from some consumers to coalitions of consumers and/or producers or politicians.

[14] Actually, the modern rediscovery of the "Chadwick principle" was made three years earlier by Gordon Tullock who applied it to political

regulation of utilities would be rendered unnecessary where governments could allow "rivalrous competitors" to bid for the exclusive right to supply the good or service over some indefinite "contract" period. In such a system, as Demsetz shows, the existence of natural monopoly does not imply monopoly price and output, given (1) an elastic supply of potential bidders and (2) prohibitive collusion costs on the part of potential suppliers.

Under certain restrictive conditions a "competitive" price and output could be achieved under Demsetz's plan (see Figure 9-1 and the related discussion). Critics of this idea have strongly questioned the plan as a *substitute for* traditional forms of regulation, and they cite problems of market uncertainty, information and policing costs, investment criteria, and so on as making the plan practically unworkable. Government ownership of certain basic property rights would also attach to the scheme. All of this might be somewhat irrelevant, however, since it is probable that Demsetz never intended his conception to serve as a "Chicago theory of regulation." There is not much empirical support for the existence of natural monopoly in utilities and other regulated industries, and the "Chicago position" on the matter—if there is a unified position—is that *deregulation* and the return of competition to most regulated activities would improve consumer welfare.

A final contemporary view of the regulatory process offers a possible avenue through which regulation may be supported. Victor Goldberg's view ("Regulation and Administered Contracts") is that regulation is very much akin to private or public long-term contracts to serve and be served. Further, he argues that the vast complications associated with long-term contracts may provide a rationale for regulation. Goldberg's analysis is principally concerned with natural monopolies, though his considerations are important for the regulation of other industries as well.

There is a similarity between the regulatory process and long-term relational contracts giving producers a right to serve and consumers a right to be served. Owing to uncertainty and other problems, both parties to the contract limit future options in order to achieve optimality *over time* (all other theories considered in this chapter are static and carry no intertemporal implications). Contracts, or regulation, in Goldberg's view, provide procedural mechanisms for adjudicating future contingencies. Increasing the producers' right to serve makes the contract more attractive to producers while simultaneously making the contract *less* attractive to consumers. The opposite is true of the consumers' interest in the right to be served. In Goldberg's words:

[C]onsumers want to maintain freedom to terminate the agreement so that they can take advantage of lower prices and/or superior technologies as they appear. The only variable under the agent's control is the level of production of the right to serve.

just offset by the expected marginal costs of decreased flexibility ("Regulation and Administered Contracts," p. 433).

Thus Goldberg's justification for regulation is that long-term contracts are difficult to define and enforce because it is costly to delimit, ex ante, their many provisions The regulatory body is an ongoing monitoring agent that continually defines the relation between consumers and producers over time in much the same way that common-law courts continually interpret rights and obligations of citizens vis-à-vis other citizens and the state. (Goldberg is not optimistic about the efficiency of private contracting under public laws of contract.) Goldberg has not proved a case *for* regulation. No market failure is cited. But he has demonstrated an intriguing possibility. With risk-averse consumers and capital fixity, some regulation may be appropriate when viewed over a period of time. These views are, of course, in strong contrast to those developed earlier.

Schumpeter's Perspective on Market Processes

Arguments about the intertemporal optimality of regulation and its related problems of risk and uncertainty in long-term contracting can be found in economic literature much earlier than the contemporary writings of Goldberg and others. Earlier in this century, Joseph Schumpeter (see Chapter 21) characterized the market function as an intertemporal competitive process which implies certain things about the role of government regulation. According to Schumpeter, risk is an unavoidable and natural element of market activity. Schumpeter discussed the critical nature of risk and uncertainty and the problems they pose for entrepreneurs in a capitalist society.

Practically any investment entails...certain safeguarding activities such as insuring or hedging. Long-range investing under rapidly changing conditions, especially under...the impact of new commodities and technologies, is like shooting at a target that is not only indistinct but moving—and moving jerkily at that. Hence it becomes necessary to resort to such protecting devices as patents or temporary secrecy of processes or, in some cases, long-period contracts secured in advance. But these protecting devices which most economists accept as normal elements of rational management are only special cases of a larger class....

If for instance a war risk is insurable, nobody objects to a firm's collecting the cost of this insurance from the buyers of its products. But that risk is no less an element in long-run costs, if there are no facilities for insuring against it, in which case a price strategy aiming at the same end will seem to involve unnecessary restrictions and to be productive of excess profits. Similarly, if a patent cannot be secured or would not, if secured, effectively protect, other means may have to be used in order to justify the investment. Among them are a price policy that will make it possible to write off more quickly than would otherwise be rational, or additional investment in order to provide excess capacity to be used only for aggression or defense. Again, if long-period contracts cannot be entered into in advance, other

The point that Schumpeter stresses in this passage is that elements of competition that may appear to be anti-competitive from a purely static perspective (patents, etc.) may be elements of progress in a more dynamic competitive setting. Expressing a few reservations about the adverse effects of cartels, Schumpeter characterized a number of static "monopolistic" practices as "natural" tools of dynamic (long-run) competition But he was also alert to the possibilities of utilizing regulatory procedures to subvert the welfare effects of regulation. Since government is the only permanent source of monopoly privilege, its regulatory actions should be scrutinized intensively:

The power to exploit at pleasure a given pattern of demand...can under the conditions of intact capitalism hardly persist for a period long enough to matter for the analysis of total output, unless buttressed by public authority.... Even railroads and power and light concerns had first to create the demand for their services and, when they had done so, to defend their market against competition (*Capitalism, Socialism, and Democracy*, p. 99).

Schumpeter's perspective on market processes provides a forceful case for a clear delineation between "static" competition and "dynamic" competition. Nongovernmental restrictions on competition, when viewed in a static sense, are usually considered suboptimal, when in fact they may help regulate the introduction of new technology that improves economic welfare. Government regulation, on the other hand, is the major source of long-term economic rents associated with output reductions and welfare losses.

Ultimately, the debate over natural market processes versus regulation is a debate over economic efficiency. Schumpeter and other economists have argued that precontracting may be a natural response to the uncertainty and risk involved in intertemporal sales policies. Market contracting to avoid risk may take the form of warranties, guarantees, futures contracts, etc. Other economists are more inclined to reduce risk and uncertainty through government regulation. Does the market provide a necessary bridge between present and future supplies at a lower cost to society than government measures aimed at the same objective? This is an issue that remains hotly debated. Only a well-executed, case-by-case, empirical study seems capable of providing convincing support for one view or the other. In the absence of such complete documentation, Schumpeter's insights, combined with the modern theory of regulation, remind us that the mere existence of regulation and of intertemporal problems of production and consumption does not constitute proof that the market has failed to work properly.

CONCLUSION

The purpose of the present chapter has not been to attempt to settle contemporary theoretical disputes in the theory of public choice or regulation. Rather, it has been to demonstrate that new and ongoing inquiries in political economy

sential lesson within our discussion—is that self-interest as a basic economic motive does not differ in form whether one is buying an ice cream cone or running a campaign for city treasurer. These motives—in form if not in kind—pervade the activities of all humans. Public-choice theory and application, linking both taxation and expenditures and including the theory of regulation, is a valuable means of transforming economic analysis into other realms of human action. In doing so it is stretching the reaches of the discipline toward the original conception of Adam Smith, a conception of economics as part of a broader social and political inquiry.

NOTES FOR FURTHER READING

In addition to the classic writings of Lindahl and Wicksell mentioned in the References to this chapter, Musgrave and Peacock's important volume contains a number of translated international classics in public finance. For much insight into the development of public finance see the essays of Matteo Pantaleoni, Ugo Mazzola, F. Y. Edgeworth, Enrico Barone, and Friedrich von Wieser. A part of the French (Marshall-style) tradition is developed by R. B. Ekelund, Jr., and Robert F. Hébert, "French Engineers, Welfare Economics, and Public Finance in the Nineteenth Century," *History of Political Economy*, vol. 10 (Winter 1978), pp. 636–668.

Contemporary literature on public goods is plentiful. A central question concerns the "competitive provision" of public goods, that is, whether such goods can be supplied competitively and whether such equilibriums are "stable." See J. M. Buchanan, *The Demand and Supply of Public Goods* (Chicago: Rand McNally, 1968); J. G. Head, "Public Goods and Public Policy," *Public Finance*, vol. 17, no. 2 (1962), pp. 197–219; and Harold Demsetz, "The Private Production of Public Goods," *Journal of Law & Economics*, vol. 8 (October 1970), pp. 293–306. In addition to the literature on voting cited in the text, two early papers may be consulted: Duncan Black, "On the Rationale of Group Decision Making," *Journal of Political Economy*, vol. 56 (February 1978), pp. 23–24; and Kenneth Arrow, "A Difficulty in the Concept of Social Welfare," *Journal of Political Economy*, vol. 58 (August 1950), pp. 328–346. Also see T. Nicholas Tideman and Gordon Tullock, "A New and Superior Process for Making Social Choices," *Journal of Political Economy*, vol. 84 (December 1976), pp. 1145–1160.

The "constitutional rules" taken up by Buchanan and Tullock in their extension of Wicksell's optimal tax rules are considered in a somewhat different context in John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971). Buchanan's reaction to Rawls, in addition to a very sizable contribution to the question, is contained in his *Freedom in Constitutional Contract: Perspectives of a Political Economist* (College Station: Texas A &

1968), pp. 293–305. Emendations and extensions of Niskanen's work may be found regularly in the journal *Public Choice*; see also Bruce L. Benson, "Why Are Congressional Committees Dominated by 'High-Demand' Legislators?—A Comment on Niskanen's View of Bureaucrats and Politicians," *Southern Economic Journal*, vol. 48 (July 1981), pp. 68–77.

The literature on "empirical public choice" is wonderfully diverse and varied. On the economics of internal organization of legislatures, see W. Mark Crain and Robert D. Tollison, "Campaign Expenditures and Political Competition," *Journal of Law & Economics*, vol. 19 (April 1976), pp. 177–188; Arleen Leibowitz and Robert D. Tollison, "A Theory of Legislative Organization: Making the Most of Your Majority," *Quarterly Journal of Economics*, vol. 95 (March 1980), pp. 261–267; and W. Mark Crain, "On the Structure and Stability of Political Markets," *Journal of Political Economy*, vol. 85 (August 1977), pp. 829–842. An article by Randall G. Holcombe and Asghar Zardkoohi uses a regression model to show that grants are determined by political rather than economic variables; see "The Determinants of Federal Grants," *Southern Economic Journal*, vol. 47 (October 1981), pp. 393–399. An excellent contribution to interest-group theory is provided by Robert E. McCormick and Robert D. Tollison, *Politicians, Legislation, and the Economy: An Inquiry into the Interest-Group Theory of Government* (Leiden: Martinus Nijhoff, 1981).

An important aspect of the empirical public-choice literature has been the modeling of a political business cycle wherein inflation, employment, and disposable income are manipulated by politicians in attempts to win elections. One of the most interesting and comprehensive studies of the electoral cycle is that of Edward R. Tufte, *Political Control of the Economy* (Princeton, N.J.: Princeton University Press, 1978). Also see the following works of Bruno S. Frey and Friedrich Schneider: "On the Modeling of Politico-Economic Interdependence," *European Journal of Political Research*, vol. 3 (December 1975), pp. 339–360; and "An Empirical Study of Politico-Economic Model of the United Kingdom," *Economic Journal*, vol. 88 (June 1978), pp. 243–253. Frey and Schneider use ex ante measures of actual popularity rather than ex post electoral success as the "independent variable" in their studies. A model meshing political manipulations and the monetarist conception of the so-called inflation-unemployment tradeoff (called the "Phillips curve") is developed in Richard E. Wagner's "Economic Manipulation for Political Profit: Macroeconomic Consequences and Constitutional Limitations," *Kyklos*, vol. 30 (1977), pp. 395–410. An empirical study of why deficits are demanded as well as supplied may be found in W. Mark Crain and Robert B. Ekelund, Jr., "Deficits and Democracy," *Southern Economic Journal*, vol. 44 (April 1978), pp. 813–828.

An excellent summary of the "early" regulation literature and of the institutional structure of broad areas of regulation in the United States through the