Chapter 22

ECONOMIC PERSPECTIVES ON THE POLITICS OF REGULATION

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1. Introduction

Economics research on regulation has three main themes. The first and oldest deals with market failures and the corrective actions that government can undertake to ameliorate them. The second examines the effects of regulatory policies, and asks whether government intervention is efficient (an easy question) or more efficient than doing nothing (often a very hard question). The spread of mathematical modeling to applied fields of economics and the development of econometrics and computers greatly facilitated this research, and it has been the predominant form since the late 1950s. The third, which became an important part of the literature only in the 1970s,[1] investigates the political causes of regulatory policy. The motivation arises from the disjointness in the first two areas of research: regulation as practiced commonly was found to be inefficient and to adopt methods that do not appear to be the best choices for tackling their associated market failures.[2]

The purpose of this chapter is to provide an interpretative survey of the third category of research. The focus is on research that employs the conceptual model and methods of economics, i.e. that assumes rational, goal-directed behavior by all relevant agents (consumers, firms, voters, politicians, input suppliers, etc.), that uses economic theoretic (though not always mathematical) arguments to make predictions about political behavior, and, where relevant, that employs methods of testing theoretical hypotheses that economists commonly employ. Hence, our coverage includes work done in disciplines other than economics, and especially by lawyers and political scientists.

The logical place to begin an analysis of the politics of regulation is the so-called "public interest" theory, which in the context of this chapter refers to the view that, as a matter of positive theory, the normative goal of curing market failures animates the choice of regulatory policies. In a limited but complex sense, normative welfare economics constitutes a positive theory of government if the conditions of the Coase Theorem [Coase (1960)] are true: information is perfect and costless, and the political process is free of its counterparts to transactions costs. Section 2 is devoted to the development of this argument.

[1] The watershed event is the publication of Stigler's (1971) highly influential paper, which was referenced approvingly when Professor Stigler deservedly was awarded the Nobel Prize. Notable antecedents of Stigler's work are Bernstein (1955), Downs (1957), Caves (1962), Kolko (1965), MacAvoy (1965), Olson (1965), and Buchanan and Tullock (1962).

[2] The economic effects of regulation are discussed in the chapters by Joskow and Rose (Chapter 25) and Gruenspecht and Lave (Chapter 26) in this Handbook.

Section 3 addresses the next logical step: why might the Coase Theorem not apply, and what are the implications if it does not? The key point here is that imperfect information and transactions costs provide an entering wedge for political theories as to why regulation can be inefficient: capture by interest groups for the purpose of acquiring monopoly rents, or otherwise redistributing wealth to themselves in ways that also create inefficiency [Stigler (1971)].

Regardless of the motives of political actors, an essential ingredient to a theory of regulatory policy when the Coase Theorem fails is how political officials control agencies. Whether the aim of regulation is to maximize efficiency or to transfer wealth to a special interest, politicians face a principal–agent problem in trying to assure reasonable bureaucratic compliance with the objectives behind a legislative mandate. Section 4 addresses these issues.

2. Welfare economics and positive political theory

The theory of market failure consists of a littany of ways in which the conditions for competitive equilibrium may fail to be satisfied. For our purposes, it is useful to think of the market failure rationale for regulation as having three distinct components: a positive theory of conditions under which a market produces an inefficient outcome, a normative theory that government ought to undertake actions to improve the efficiency of poorly functioning markets, and finally a positive theory that, in the presence of important market failures, government will attempt to ameliorate them through regulation.

2.1. Market failure rationales

The importance of the first component is that in literally every circumstance the adoption or extension of regulation has been defended by its proponents on the basis of allegations (sometimes implausible) of market failure.[3] In the United States, the first examples of regulatory programs were justified on the basis of natural monopoly: a specific good or service (in this case, grain elevators, water supply, and railroads)[4] could be produced at lowest cost only if supplied by a single firm,[5] but this would give rise to monopolistic abuse and dead-weight loss

[3]A comprehensive list of the sources of market failure and their relationship to regulation can be found in Breyer (1981).

[4]For useful summaries of the important early court decisions which permitted regulation of these industries, see Weiss and Stickland (1982).

[5]For a comprehensive statement of the definition of natural monopoly and the method for detecting it, see Baumol (1977).

in an unregulated market. Regulation was proposed as a means to capture the efficiency advantages of monopoly while eliminating some of the potential for monopolistic abuse.

A second form of market failure, imperfect information, has been the rationale for regulating consumer products and workplaces, beginning with the Pure Food and Drug Act of 1906. Complex, costly information can lead to poorly informed and sometimes potentially hazardous decisions about goods, services, and jobs. It can also lead suppliers to provide either too much or too little quality, and industries to adopt inefficient technical compatibility standards.[6] In principle, regulation can provide two types of efficiency gains. First, by increasing the supply of information, it can reduce uncertainties about the consequences of market decisions, thereby causing the market to make a better match between suppliers and demanders. Second, by setting minimum standards, it can protect uninformed participants against bad outcomes, including a "market for lemons" equilibrium in which quality is supplied at inefficiently low levels.

The third form of market failure is the presence of external effects and public goods. These arise when economic agents impose costs on, or deliver benefits to, others who are not parties to their transaction. This form of market failure has been used most notably to justify environmental regulation,[7] regulatory allocation of the use of the electromagnetic spectrum,[8] and the "universal service" doctrine in communications.[9] For example, regulation of the electromagnetic spectrum, by assigning frequencies within a geographic area to particular users, could prevent mutually interfering transmissions. Zoning and emissions standards could force industry to make location decisions and adopt production processes that produce fewer external diseconomies. Optimal pricing of telephones might require price regulation that causes subsidies for basic subscription, financed by an implicit tax on other telecommunications services that produce no external benefits.

Two additional rationales for regulation, while commonly defended in political discourse, are nonetheless of more debatable economic validity. These are scarcity rent and destructive competition.

Scarcity rent is the producers' surplus that arises in otherwise competitive and efficient markets with rising industry supply curves. Examples are easy to find in resource economics and in urban location theory. Since the very beginnings of

[6]See Akerloff (1974), Oi (1973), Spence (1977), Shapiro (1983), Schwartz and Wilde (1985), and Milgrom and Roberts (1986).

[7]For an excellent survey, see Fisher and Peterson (1976).

[8]A comprehensive treatment of rationales for regulating broadca- ng on the basis of externalities, whether interference or social spillovers from broadcast messages, can be found in Spitzer (1987).

[9]If another customer is added to a telephone or mail delive- ystem, the value of the system to other users is enhanced by the possibility of communicating wi- the new customer.

the oil and gas industries, regulation has been proposed – and periodically enforced – as a means of stripping scarcity rents from especially low-cost producers [Sanders (1981)]. And residential rent controls have occasionally been imposed for the same purpose, most notably in New York City [Olsen (1972)]. The core of the pro-regulatory argument here is that scarcity rents are socially undesirable. Usually the argument is based on the effects of scarcity rents on income distribution, but in some cases a kind of externality/efficiency argument is made as well. For example, rising land values in an urban area can lead to eviction of low-income people from their residences. Decisions to upgrade the use of land normally do not take into account the costs imposed on the forced relocation of these people. Even if the conversion of the use of the land is efficient, compensation is rarely sufficient to cover the losses of the displaced. The fact that the dispossessed cannot pay land owners enough to prevent their eviction is not fully dispositive that their replacement is economically efficient, for if they were fully compensated the income effect could, in principle, change the outcome of the compensation test [Chipman and Moore (1973)]. That this may be a serious issue is suggested by research by anthropologists, which shows that morbidity, mortality, and socially deviant behavior are substantially greater after forced relocation, especially among elderly and less educated populations [Scudder and Colson (1982)]. Lawyers have argued that a value of regulation can be that it avoids these "demoralization costs" [Michelman (1967)] by protecting "dignitary" human values [Mashaw (1985)].

Destructive competition is the circumstance in which an industry that is not a natural monopoly nonetheless lacks a stable competitive equilibrium. It was used to support the argument for regulation of truck and airline transportation in the 1930s, but subsequently has been almost unanimously rejected in economics research.[10] The destructive competition rationale for regulation is that in its absence the instability of such an industry would require that producers and consumers assume unnecessarily high risks, thereby producing an inefficient market outcome. The most respectable economic theoretic example of such a circumstance is the theory of the core, which demonstrates the nonexistence of competitive equilibrium in an industry in which capacity is lumpy and firms are myopic in making investment commitments.[11]

Finally, regulation may be regarded as a necessary byproduct of other government policies that are justified on other grounds. For example, distributional considerations could lead a nation to subsidize medical care, but this could leave the government vulnerable to a moral hazard problem with respect to both

[10]For good early treatments, see Meyer, Peck, Stenason and Zwick (1959), Caves (1962), Friedlaender (1969), and Eads (1972).

[11]Telser (1972).

patients and medical professionals.[12] Government then might seek to regulate medical care prices, and/or to regulate health hazards in order to avoid the pecuniary externality of hazards that is created by the subsidization policy.

2.2. *Regulation as the best policy instrument*

The second component of the public interest theory of regulation is that government ought to adopt regulatory strategies that cope with these market failures. The preceding rationales are only part of such a theory. If economic analysis does demonstrate that a market has failed and that additional economic welfare is available if the failure is cured, only the necessary condition for government regulation has been satisfied. In addition, it must also be demonstrated that a regulatory policy is the most effective remedy.

The economics literature contains a rich array of alternatives to regulation as a means of coping with market failures.[13] For example, instead of regulating the prices charged by a natural monopoly, the government could assist in the formation of customer cooperatives for providing the same service, or could use competitive bidding and contracting for awarding monopoly franchises of limited duration [Demsetz (1968)]. Or, as initially analyzed by Pigou (1920), clever uses of taxes and subsidies could be used to cope with a variety of market-failure issues, ranging from environmental externalities to scarcity rents. Or, as especially emphasized since Coase (1960), some market failures are amenable to solution simply by redefining property rights and creating a market in them.[14]

The positive theory of public interest regulation posits that the regulatory policies which are adopted will be the most effective remedy for a market failure. The essence of any such theory must rest in the fact that a market imperfection creates a dead-weight loss (e.g. greater costs than benefits), so that (in principle) those suffering its adverse consequences can bid more to cure the problem than its beneficiaries can bid to maintain the status quo.

Of course, if the conditions for the Coase Theorem are not met, the normative link in the three-link chain of argument in the public interest theory is broken. Specifically, the Coase Theorem holds only with perfect information and no

[12]The "moral hazard" problem in medical care arises from two sources. First, consumers generally do not pay for the medical care services they consume, and so have an incentive to consume too much relative to an efficiency standard. Second, payors – government, insurance companies, employees – cannot prevent this effectively, for they cannot costlessly observe how much medical care would be most efficient for any given patient. For an excellent statement of the issue, see Arrow (1963).

[13]These are presented comprehensively in Breyer (1981).

[14]See Dales (1968) on environmental policy and Spitzer (1987) on spectrum allocation.

transactions costs.[15] If this is the case, the sufferers from a market failure simply can buy out its beneficiaries and cure the market failure themselves. Regulation is then at best an equally attractive means of solving the problem.

By moderately relaxing the assumptions that give rise to the Coase Theorem, a far more serious public interest theory of political action can be constructed [see, for example, Levine (1981) and Becker (1983, 1985)]. One direction of modification is to relax the assumption of zero transactions costs. Instead, assume that in order to negotiate the amelioration of a market failure, all participants would face significant transactions costs. If transactions costs are lower to secure government action against the market failure, regulation can be a superior alternative to a negotiated settlement. This might occur if passing a bill is cheaper than negotiating a contract, or if a political leader can effectively overcome the costs of organizing an interest group by becoming its spokesperson in government, presumably in return for its political support. Alternatively, because the state has coercive powers, government regulation may permit the sufferers from a market failure to avoid paying off those who cause it. Even here, however, the transactions costs of government action must not be significantly higher than direct negotiation, or else the beneficiaries of the market failure, rationally expecting their bonanza to be terminated through coercion, could offer the sufferers a better bargain than the political solution.

A second direction of modification is to relax the assumption of perfect information on behalf of the sufferers from the market failure. In this case, political entrepreneurs can play the role of market perfectors, identifying failures and reporting them to those harmed. As long as the costs of collecting and disseminating the information are low in comparison with the magnitude of the efficiency loss from the market failure, the opportunity exists for a mutually beneficial transaction among the sufferers, the beneficiaries, and the political entrepreneur.[16] Once again, however, a further detail is required to explain why the outcome is political entrepreneurship, rather than a private transaction orchestrated by a broker possessing superior information. An example of such detail is the argument that information pertinent to identifying market failures is most cheaply acquired and disseminated by government. Government alone can compel private parties to provide it, and relevant information is a byproduct of other government activities. Moreover, government officials, because of their

[15] Here "transactions cost" takes its most general meaning. It includes not only the costs of negotiating a deal, but also the costs each side must bear to prepare itself for negotiations, and, afterwards, to make sure the other party complies. In the case of, say, environmental externalities, the former would include the costs of organizing the group of sufferers from pollution to negotiate as a unit with a source of pollution. Organization costs are discussed in detail in the next section.

[16] For a discussion of how Senator Edward Kennedy played this role with respect to airline deregulation, see Breyer (1981).

importance and recognizability, can more readily access the public through the media to announce the information they acquire.

In this form, the public interest theory is compatible with the presence of organized interest groups – so-called "special interests" – that participate actively in the political process. These groups are manifestations of transactions costs, of course, but the decision of, say, environmentalists and the electric power industry to fight their battles before regulators, rather than simply to merge, would reflect lower transactions costs for government action. Each party has a willingness-to-pay for favorable political action that is the difference between its stake in a market imperfection and the transactions costs involved in the process of implementing policy. If policy is for sale to the highest bidder, the outcome will be the action that can command the greatest aggregate willingness to pay, which, ceteris paribus, is favorable to the elimination of market failures.

This line of analysis leads to a number of predictions about regulation. First, if a market failure is increasingly important as time passes, the likelihood of political action increases. The reason is that transactions costs, being independent of the scope of the market failure (and instead dependent on the difficulties of organizing affected parties and reaching an agreement), will remain constant, whereas the benefits of agreement and the likelihood that the imperfection will be detected will both increase.

Second, transactions costs and information imperfections limit the extent to which regulation can depart from efficiency with respect to anyone affected by it. Specifically, no group can experience losses under regulation that fall short of compensating gains to other groups by more than the amount necessary (a) to overcome transactions costs or (b) to reach the threshold at which the information imperfection is overcome, whichever implies a larger departure from efficiency. Thus, if the most efficient form of pricing for a natural monopoly is to employ Ramsey prices, no price can depart from the Ramsey optimum in a manner that generates an efficiency loss of more than the transactions cost of pointing out that fact to the government (unless the magnitude of that departure is too small to be observed by the parties that suffer the attendant efficiency loss).

Third, deregulation occurs when the costs of regulation exceed the transactions cost of repealing it plus the costs of the remaining market failure. Thus, if outward shifts in demand and technological change continue to erode the position of a natural monopoly, at some point (short of perfect competition) both the monopolist and its customers can be made better off by deregulation if the transactions costs of repeal and the inefficiency of the remaining market power of the monopolist are less than the cost of maintaining the regulatory system.

Fourth, the theory predicts that when regulation is adopted, it is the most effective means for dealing with the market failure, but it may persist after that is the case. Obviously, once the transactions costs for political action are paid, the greatest amount of wealth is available for political distribution if the most

efficient policy is adopted. But once regulation is in place, it can depart from the optimum policy if the departure is unknown to those harmed by it, or the inefficiency is small compared to the transactions cost of changing the policy instrument.

As posed above, the public interest theory of regulation does not require that regulation be perfectly efficient. As pointed out by Levine (1981), a proponent of a weakened form of the public interest theory, the job of political actors and analysts alike would be considerably less interesting if either markets or public policies worked perfectly. But the theory does require that regulation is adopted only in the presence of a genuine market failure, that at the time regulation is the best available policy instrument, and that it not persist once it begins to impose sufficiently large costs. It also implies a rather pluralist view about the regulatory process: the broader the spectrum of interests that are actively participating in regulatory policymaking, the more efficient should be the performance of the regulated market. Thus, liberal rules of standing and subsidies to assist the participation of some interests are likely to be warranted on efficiency grounds [Stewart (1975)], although they may cause an offsetting social waste in the cost of participation in the regulatory process [Posner (1975), Rogerson (1982)]. Finally, the sophisticated version of the public interest theory implies that political leaders ought to favor simple, open decision processes and the widespread dissemination of information about market performance and the effects of regulatory rules. To do so reduces the transactions costs of regulatory policy and increases the likelihood that a constituency will acquire the necessary information about an inefficiency to trigger a political response. Both thereby increase the demand for political action and raise the price that political actors can charge for market-enhancing regulatory policies.

The key insight on which this analysis is built is a close cousin of Adam Smith's invisible hand. Self-interested actors who view regulatory policy as a means of capturing wealth may conflict over the distribution of the rents available in a market, but they have a common interest in minimizing inefficiency. Competition among them for the favorable attention of self-interested political actors creates an incentive on behalf of the latter to find the most efficient policy response to this competition, for greater efficiency confers upon political actors a greater amount of economic wealth to allocate among political supporters.

One tough hurdle for the theory is to provide a convincing explanation of why the state is involved at all. The relevant hypothesis here is that the coercive power of the state causes transactions costs and information imperfections to be lower for government action than for private negotiations. An important feature of some alternative theories of regulation is that they take issue with this hypothesis.

Another controversial aspect of the sophisticated public interest theory is the implicit supposition that institutional arrangements in government are not an

especially important object of study. They are simply selected, and evolve, to serve the end of maximizing efficiency. The maintained hypothesis is closely related to Samuelson's famous dichotomy between efficiency and equity [see Samuelson (1954, 1955)], wherein issues regarding income redistribution were to be resolved by rearranging endowments, whereas specific public policies were to be implemented so as to be economically efficient. The difficulty with this proposition is that government may not have available policy instruments that can achieve distributional objectives without causing inefficiencies. If so, public officials are likely to be forced into compromises between efficiency and distributional goals [Okun (1975)]. Much of the work on alternative theories of regulation focuses on the details of political and economic institutions and how they affect both distributional and efficiency consequences of policies.

3. How regulation can make matters worse

Numerous avenues of attack on the public interest theory can and have been traveled. Most fundamentally, many scholars in law, philosophy, political science, and psychology reject welfare economics as having interesting normative content and microeconomic theory as a relevant scientific approach to studying political behavior.[17] The scope of this chapter, however, is more narrowly concerned with the microeconomic foundations of political behavior and regulatory policy. Consequently, the focus here is on arguments fought on basically the same ground as the arguments presented in the previous section.

Because the essence of the economic theory of policymaking (including regulation) is tied up in the concepts of transactions costs and information imperfections as they apply to political phenomena, it is natural to exposit this theory in the framework of the principal–agent problem. Regulatory policy is promulgated through a complex set of agency relationships, each of which typically involves multiple principals and multiple agents. First, elected political officials act as agents for their constituents. The re-election process and the career path through the hierarchy of political offices provide the means by which citizens enforce compliance by an elected official with their policy preferences. Citizens, in turn, vote for or otherwise support numerous elected officials. Second, regulatory agencies act as agents for elected political officials in both the legislative and executive branches of government. In this relationship, legislation, executive orders, appointments of agency leaders, the budgetory process, and direct intervention in decisions all are available to elected officials as means for enforcing

[17]For a comprehensive statement of these objections, see Rhoads (1985); for a specific discussion of the relevance of microeconomic theory in the setting of safety regulation, see Slovic, Fischhoff and Lichtenstein (1985). Both contain numerous additional references.

compliance with their policy preferences. Third, within legislative bodies, internal delegation of responsibility takes place. Legislatures normally delegate day-to-day policy oversight, annual budget review, and responsibility for initiating legislation to committees.[18] Because members of a committee are largely self-selected, they tend to be atypically intense in their interests in the program, often because of close connections to organized groups which are especially affected by a committee's policy decisions [Shepsle (1979)].

The result of this institutional structure is a very complex set of agency relationships that mediate the relationship between the policy preferences of citizens and the policy outcomes of agencies. At each stage, the degree to which agents comply with the preferences of principals depends on several important factors: (1) the extent to which principals and agents have conflicts of interest; (2) the costs and accuracy of methods for principals to monitor the performance of agents; and (3) the power of the principals' enforcement mechanisms for redirecting the incentives of the agent. To the extent that monitoring and enforcement are imperfect, agents can carry out policies that do not reflect the interests of their principals. To the extent that the costs and benefits of monitoring and enforcement differ systematically among principals, policy outcomes will not only be bent toward the preferences of agents, but will be biased in favor of some principals at the expense of others. In order to understand how both sources of policy drift can occur requires some further development of the theory of these various agency relationships. The rest of this section focuses on relationships between citizens and elected officials, and specifically on the role of interest groups. The next section focuses on relationships among government officials, and especially on the role of administrative law in the political control of regulatory agencies.

The central problem of a citizen in dealing with government is powerlessness. A single vote is inconsequential, and does not permit revelation of the intensity of preferences. Moreover, candidates embody a complex array of policy preferences and personal attributes which cannot be unpacked. Voters cannot selectively express preferences on each issue, but must send a simple signal of acceptance or rejection of an entire platform. The implication is that voters face relatively high costs but low expected benefits from engaging in sophisticated evaluations of political candidates [Downs (1957)]. Hence, voters are likely to be poorly informed, and their evaluations are likely to be based on a few especially important issues on which they have become at least partly informed through other aspects of their daily lives, such as their experiences in factor and product

[18] In parliamentary systems, these responsibilities are usually given to ministers and sub-ministerial members of parliament who also have executive responsibilities, so that the second and third agency relationships are combined: however, this is not a necessary feature of parliamentary systems. New Zealand, for example, has a parliamentary system that also has a committee structure which is similar to that of the U.S. Congress.

markets or as consumers of the mass media [Campbell, Converse, Miller and Stokes (1960), Key (1966), Fiorina (1987)].

A second aspect of the political system is the difficulty of assigning responsibility for the performance of the public sector [Fiorina (1981)]. Elected officials, the courts, and the bureaucracy all play a role in shaping policy, and even within a controlling party the assignment of individual responsibility for a change in policy is problematic.

The appeal of organized interest groups in democratic political systems is that they simultaneously attack the problems of powerlessness and informational imperfections [Olson (1965), Moe (1980)]. Citizens of like mind can pay to create an organization that will monitor political activities, inform members about a politician's performance in office, and influence policy by virtue of its status as a representative of a significant number of voters. The last can occur through directly influencing the voting behavior of group members, or by providing resources (contributions, volunteers) to favored politicians. Thus, all else equal, organized citizens are more likely to be influential in controlling the decisions of political actors than are unorganized ones.

Most Western democracies rely upon decentralized parties or even decentralized legislatures to protect against the obvious potential abuse of organized interests.[19] Decentralization allows a large number of different interests to be represented in policy decisions, thereby protecting against oligarchical control [Madison (1961)]. But even this is an imperfect protection, for a number of additional factors affect which types of interests are likely to be organized at all, regardless of the structure of governmental institutions.

Interest group organizations constitute an important part of the transactions costs of government actions, and these transactions costs depend on the nature of the interest group.[20] First, because effective organization requires coordination and communication among group members, transactions costs are larger for larger groups, although there are likely to be economies of scale for very small groups owing to the fixed cost of acquiring and preparing relevant information. Second, the degree of homogeneity of the preferences of the group affects its ability to reach a stable consensus. In general, groups are more likely to be successful politically if they have a relatively narrow political focus on an issue about which there is little disagreement among their members. Thus, groups of people with the same or very similar source of income (a labor organization, a trade association) can easily find common ground on improving their collective bargaining power, whereas groups organized around consumption activities face

[19] Usually, decentralization is achieved by constructing numerous legislative districts, each of which contains a very small proportion of the population. Typically the basis of legislative decentralization is geographic, but sometimes it is ethnic or cultural.

[20] For a more complete development the points in this and the next paragraph, see Moe (1980) and Noll (1983).

more serious costs of finding consensus owing to differences in tastes. Third, groups organized for other purposes, having already paid the fixed costs of formation, have an advantage over interests that would have to become organized to take effective political action. This is especially important if the political activities of a group are susceptible to the "free rider" problem. If an organization achieves a desired political outcome, but cannot limit the beneficiaries to its membership, it will have a more difficult time organizing in the first place than a group which is already organized for the purpose of providing private or team goods to its members. This favors groups organized around production (unions, trade associations) and social organizations (churches) in relation to interests with nothing in common other than a similar policy objective.

The implications of these and other similar arguments about organized political participation are as follows. First, not all policy positions face the same transactions costs for effective political participation. They will differ according to the difficulty they face in organizing, and the degree to which the organization can obtain financial backing at or near its members' willingness to pay for effective policy representation. In general, large, heterogeneous groups with relatively small per capita stakes and which are otherwise unlikely to organize will be disadvantaged relative to small, homogeneous groups with high per capita stakes that are already organized. Second, because political organizations themselves are a means for reducing the informational imperfections in political processes, unorganized groups will be further disadvantaged. They are less likely to detect a policy change that harms them and to assign responsibility accurately when it is detected.

In the context of the public interest theory, the key implication is that the trigger threshold of costs that can be imposed on any group differs systematically according to how effectively it is organized. Unions, trade associations, religious organizations, and large businesses are likely to be systematically favored. So, too, when relevant, are other political entities, e.g. city governments when dealing with a national government.

In the domain of regulatory policy, the way in which policy departs from an efficient outcome is complex, and dependent on the specific circumstances of the industry and market failure in question. Generally, represented groups should favor actions that maximize the rents available for distribution among them [Becker (1985)]. If all interests affected by a regulatory decision were represented with roughly equal effectiveness, circumstances would favor a relatively efficient outcome [Becker (1983)]. If not, circumstances favor a policy which creates monopoly rents, but then dissipates them among the represented interests [Posner (1971)] approximately in proportion to their stakes (net of organization costs) in the regulatory policy [Peltzman (1976)]. The resulting policy will be efficient only if an efficient arrangement is available which maximizes the joint rents of the represented interests.

In the extreme, where only a single interest is effectively organized, the result is Stigler's simple "capture" – the one organized group will tend to be a monopoly or cartel that is protected by regulators. It will adopt efficient monopoly pricing – e.g. perfect discrimination, optimal two-part tariffs, Ramsey rules – only if the costs of enforcing them, such as by preventing arbitrage, are sufficiently low. The more normal circumstance is that several groups are represented, including some suppliers and some customers as well as multiple firms in an industry.[21] Regulation then becomes a forum among them for creating and dividing rents. Indeed, the groups that are represented initially may even endogenize the extent to which others are represented by deciding whether to threaten sufficiently costly actions against a given interest that it triggers their participation. The cost of bringing in another interest is the share of rents that a newly represented group will be able to acquire; the potential benefit is that the new group may open new opportunities for extracting more rents. The logic behind such an action is essentially the same as the logic of certain types of mergers, such as vertical integration by an upstream monopolist to cause more efficient as well as joint profit-enhancing operations by downstream firms [Warren–Boulton (1974) and Perry (1978)]. Thus, to Williamson's (1975) "markets and hierarchies", we can add regulatory processes as an alternative institutional arrangement among firms for maximizing joint profits.

Regulated businesses and their employees are likely participants in the formation and execution of regulatory policy, and especially in decisions that directly and immediately affect them. All else equal, this implies an outcome that first creates monopoly rents, and then engages in rent-sharing between management and labor of the benefits thereby attained. Although this is most easily detected in economic regulation, where a disorganized group may face monopoly prices, similar outcomes can also arise in environmental, health, and safety regulation, in which standards can be written so as to reduce competition. One prediction from this analysis is that a relaxation of regulation, should it occur, ought to cause some combination of lower wages and harder financial times for regulated (or formerly regulated) firms. Regulated firms are likely to face higher than competitive costs because of rent-sharing with input suppliers, and may have specialized investments to supply some customers at a subsidy.

A second prediction is that all forms of regulation are likely to retard entry by new firms either directly by franchising [Stigler (1971)] or indirectly by imposing higher costs on potential entrants. Entrants are likely to be less effectively represented in the political process. The employees and customers of a potential entrant are unlikely to know in advance who they are, and to be organized to offset the influence of groups associated with established firms who stand to lose

[21] See Wilson (1980) and Noll and Owen (1983) for several case examples of how different patterns of representation arose to influence several areas of regulatory policy.

if entry is permitted. As a result, they are vulnerable to being disadvantaged by onerous entry requirements, such as more rigorous standards to comply with environmental, health, and safety regulations [Ackerman and Hassler (1981)]. Note that if regulation divides rents among the existing represented groups, the dissipation of those rents through competition is likely to be opposed by literally all those represented. Even represented customer groups can be brought into the fold of opposing entry if the existing regulatory arrangement cuts them into the rent-sharing. In economic regulation, this is done by cross-subsidizing them [Posner (1971)], and in social regulation by providing special, targeted benefits, such as environmental regulations that differentially protect a particular industry or geographic area [Crandall (1983), Pashighian (1985)].

The last observation leads to a third prediction, which is the systematic nature of departures from an efficient regulatory policy: regulation will depart from efficiency only when it is necessary to create and divide rents among represented interests [Becker (1985)]. In economic regulation, represented interests favor efficient pricing as long as it can be implemented in ways favorable to them. Thus, multipart tariffs, for example, are attractive as long as they do not interfere with rent-sharing and the maximal extraction of rent from unrepresented constituencies. Moreover, to the extent efficient pricing is adopted, it will be based on "cost" calculations that contain the rents accruing to labor and management through gold-plating, excessive capitalization, and above-market wages. (Note that the mechanics of how labor or management would be favored relate to the stringency of cost review, not manipulation of the price structure.)

Other than triggering more representation through attempts to extract too much rent, the departure of regulation from efficiency is constrained by two other phenomena. First, political entrepreneurs (rather than those harmed by a policy) can effectively pay the organization costs of an unrepresented group [Wilson (1980)], as argued in the public interest theory. Second, technological change and rising incomes can cause previously unrepresented interests eventually to have sufficient stakes in a particular domain of regulation to become represented in it. Eventually, this can make the problem of creating rents and allocating them among the interests so difficult that the represented groups themselves become divided about the desirability of regulation, thereby causing it to be radically restructured or to collapse [Weingast (1981)].

The role of political entrepreneurs is limited by the context in which they must find political support. Unrepresented interests, as argued above, are likely to have relatively low individual stakes in any given regulatory issue, and to differ in the details of how regulation affects them. The former makes it difficult for political actors to interest constituents who are harmed by a regulatory policy in focusing on that policy rather than one which is more directly important to them. The latter makes it difficult to identify a concrete policy action on which a significant amount of political support can be based, even if the first hurdle is overcome.

Thus, the most likely form of political entrepreneurship in regulatory policy is to try to obtain a cut in the regulatory rents for a specific interest that is in any case on the threshold of representation. This may or may not make regulation more efficient, depending on the circumstances. Special provisions, such as a targeted price cut or a partial exemption from a costly requirement, reduce the net rent extracted from the favored group, but may be more distortionary from the perspective of efficiency.

In the long run, a series of such acts of political entrepreneurship systematically reduces the value of regulation to its beneficiaries, while raising its costs as more groups participate and so decisions become more complex. Hence, it can lead to the internal destruction of the process as described above. In addition, as regulation becomes more complex with more groups receiving favors, the opportunity arises for reform at the higher level of the overall business policy of the government. In a sense, each regulatory policy suffers from a form of common property resource problem. Within the narrow confines of a given policy, extracting rents from unrepresented groups may not trigger an adverse political reaction. But eventually, as the summation of further attempts to cut more groups into any given process grows, the gross effect of all regulatory policies can itself become an issue, perhaps expressed in ideological terms [Derthick and Quirk (1985)]. Externally imposed general reform (rather than internal to the specific regulatory policy) arises owing to the cumulative impact of two phenomena: generally excluded groups who bear the costs of regulation are triggered to take effective political action not by any specific policy, but by their cumulative effects, and some represented groups perceive that their share of the rents from regulation have dwindled sufficiently that their net returns from the system as a whole are negative.

The last political factor that can influence regulatory policy is the arrangements by which organized interests or unorganized constituencies can influence political outcomes. The mechanics of representation presume that blocks of voters, either organized around interests or available for political entrepreneurs, can credibly threaten an adverse electoral outcome if they are not dealt with by policymakers. This means not only that they have the franchise, but that they could alter the probability that a political party or candidate for office will retain or acquire power. If parties/candidates are motivated by the desire to win elections, they will consider entreaties only from groups that potentially could be part of a winning political coalition. In nearly every democratic society, electoral institutions fall short of granting all interests this form of effective political power. Groups that do not vote or that have preferences far from the political mainstream have no prospect for influencing policies through the electoral process, even if they are organized and informed. Moreover, because different parties/candidates have different support coalitions, at any given time the distribution of rents through regulatory policies will depend in part on who is in power as well as how well the various interests are organized. In general,

coalitions for dividing rents are unstable, although risk-averse legislators may devise practices within the legislature (so-called "norms") that stabilize these divisions so that they will not be dramatically affected by changes in the distribution of power within the legislature [Weingast (1979)].

Tests of interest-group theories

A large and growing literature attempts to test interest-group theories of regulatory policy. Initially, tests of interest-group influence on regulatory policy simply made inferences from the observable effects of regulation on prices, costs, and income distribution. Recently, more direct tests use statistical models of the voting behavior of members of the U.S. Congress on regulatory policy measures.

The first generation of sophisticated studies of the effects of regulation focused primarily on economic regulation, especially in the transportation sector. The latter was a ripe target because not only had it appeared to be at least somewhat competitive before regulation, but also it remained structurally (if not behaviorally) competitive after regulation. Economic theory led scholars to be skeptical that in such circumstances regulation could provide economic benefits. Indeed, the early studies found regulation to be inefficient, to protect the interests of regulated firms, and to use the price system to engage in tax-subsidy schemes among customer groups.[22] Because this conflicted with the traditional historical account, which accorded with the standard "market failure" interpretation of regulatory origins, it gave rise to a series of revisionist historical studies of the oldest national regulatory institution, the Interstate Commerce Commission (ICC).

The standard account of the formation of the ICC was that railroads, while competing for shipments between major transportation hubs, exercised monopoly power for shipments to and from the small towns along each route. The ICC was said to be formed to eliminate monopoly pricing in the "short-haul" routes from small towns to the nearest hub. In the 1950s, students of the ICC concluded that its actual post-war behavior reflected its "capture" by regulated interests who had succeeded in deflecting the agency from its original purpose [Bernstein (1955)]. Typically, observers blamed this capture on the political unimportance and invisibility of regulatory agencies, the failure of politicians to engage in active oversight and to give them sufficient resources, and the flawed, overly broad character of their legislative mandate.[23] Beginning with Kolko (1965) and MacAvoy (1965), revisionist historical studies examined the early effects of ICC regulation, and concluded that the ICC, rather than being captured long after its

[22]Meyer, Peck, Stanason and Zwick (1959), Caves (1962), Harbeson (1969), MacAvoy and Sloss (1967), Friedlaender (1969).

[23]See, for example, Cary (1967) and Friendly (1962). For a summary of these arguments, see Noll (1971, ch. 3).

origins, was in fact created to facilitate the operation of only a partially successful railroad cartel.[24] Rather than eliminate monopoly pricing on short-haul routes, the ICC was seen as helping railroads make their cartel more effective on long-haul routes.

While the origins of other regulatory policies have not been as exhaustively studied, the extensive literature on the current effects of regulation contains numerous studies which reach the same general conclusions as the research on transportation regulation.[25] The importance of this literature with respect to the study of the politics of regulation is that it documents the claim that regulatory policy has a widespread tendency to protect certain well-organized economic interests, most commonly the industries that are regulated. But this literature cannot be regarded as a valid test of the political theory of regulation outlined here. The reason is that these studies were not based on a comprehensive political theory of why government would decide to deliver benefits to regulated firms (and *not* to unregulated firms). Indeed, this literature was not intended to test a political theory, but to disprove the traditional, benign view of regulation as a cure for market failure. Nevertheless, the first generation of these studies was the antecedent of the political theory of regulation. Stigler's (1971) influential study, containing as examples truck regulation and occupational licensing, used the general idea of organized interests to produce an explanation of why regulation worked to cartelize regulated industries.

While the findings of the studies of the economic effects of regulation are consistent with interest-group theories, their scope is too narrow to constitute a test of them. The reason is that they do not link the effects of regulation to the causal variables that are the focus of the political theories – the elements of transactions costs and information imperfections that would permit an inefficient political equilibrium that delivered distributive benefits in ways that are predicted by the nature and sources of these factors. More recent studies have attempted to test these theories by explicitly measuring the sources of interest-group influence on votes on regulatory legislation in the U.S. Congress. Because the U.S. legislature is decentralized and has relatively weak parties, members exercise considerable independence in casting floor votes on legislation. The question addressed in this literature is whether these votes can be explained in part by measures of the interests of a legislator's constituency.

Numerous difficulties plague such a statistical analysis. A major problem is to measure a legislator's relevant constituency. Legislative districts are heterogenous, and legislators represent only some of their constituents [Fenno (1978)]. Relatively little is known about the relationship between interest-group participa-

[24]See Also Spann and Erickson (1970), Ulen (1982), Zerbe (1980), and Porter (1983).

[25]See, for example, the case studies in Capron (1971), Phillips (1975), and Weiss and Klass (1981, 1986), and the references therein.

tion and voting behavior in legislative elections. Hence, the statistical studies normally rely upon relatively broad socioeconomic measures of the entire constituency, not the relevant support constituency, which normally would be only somewhat more than half of the whole. Usually the composition of the support coalition can be indirectly measured by such things as the legislator's party membership or ratings by political organizations. Ratings are provided by two general types of organizations: "issue" groups (like environmentalists or labor organizations) and "ideological" groups that attempt to measure the degree of conservatism or liberalism of a representative by considering a broad range of legislative issues. In fact, the line is very blurry between the types: both form part of the support coalition of elected officials, and there is a high statistical correlation among the ratings of all groups. This makes it very difficult to separate interest-group influence from general ideological tendencies.

A final serious problem with this literature is that it normally cannot distinguish between two quite different bases for political action by an interest group: the desire to cure a market failure that falls especially heavily on members of the group, and the desire to redistribute rents in their favor. Are environmental groups, for example, motivated more by the desire to make polluting industries more efficient, or to finance their atypically strong tastes for environmental cleanliness by a tax on firms and their customers?

Numerous studies do find some important relationships between the characteristics of constituencies and the policies advocated by their representatives. Members of Congress from districts with high union membership are more likely to support increases in the minimum wage,[26] an especially interesting finding because of its relatively pure distributional character. Members representing districts with a relatively large number of people who belong to environmental organizations were more likely to support various environmental programs.[27] Coal mining areas in the eastern United States and industrial areas that used their coal or the electricity generated from it were more likely to support legislation that imposed high environmental costs on western coal, even though the latter is less harmful to the environment.[28] The latter is more convincing than the former, of course, because it more clearly separates the "interest-group" and

[26]Silberman and Durden (1976); however, Kau and Rubin (1978) found the unionization variable to have the right sign but to be insignificant when average hourly earnings were also included in the model.

[27]Kalt and Zupan (1984), Pashigian (1985). The former argue that their results, which accord most of the explanatory power of the estimation to scores by ideological groups, indicate "shirking" by legislators who, they argue, should be adhering more closely to interests of the home constituency. The implied hypothesis is that constitutents do not also have ideologies which legislators try to represent. Another interpretation of these results is that liberal (conservative) legislators represent the 60 percent or so most liberal (conservative) constituents, not the entire constituency [Fenno (1978)], so that the results cannot be clearly distinguished from faithful representation based on issues.

[28]Crandall (1983), Pashigian (1985); a similar observation, without statistical analysis, was also made by Ackerman and Hassler (1981).

"public-interest" theories. Another study found that legislators representing districts containing pulp or paper mills were more likely to vote against water pollution abatement bills.[29] Again, the study does not deal directly with whether the costs at stake to the industry were excessive or an efficient correction of a market failure.

Several studies have attempted to disentangle the distributive aspects of energy regulation during the 1970s,[30] and in general they find that the state of energy supply and demand in an area – whether it is a net importer or exporter of energy resources, and what resources, if any, it holds – affects votes on energy regulation bills. Another study finds that the pattern of support for the various forms of the original Act to Regulate Commerce (which introduced the regulation of the railroads) depended on the economic structure of legislative districts.[31] In these cases as well, efficiency gains and expropriation of rent are not comprehensively measured, so the role of market failures, and the trade-off between efficiency and distributive politics, cannot be treated in a definitive fashion.

Some studies have attempted to use differences in economic structure (and therefore, interest-group influence) among states to explain interstate differences in regulation. Consumer and business characteristics are found to be related to the nature and extent of consumer protection regulation,[32] and the extent of competition and demand for power is related to the date at which states adopted regulation of electric utilities.[33] Once again, the models do not measure the extent to which these tendencies were driven by efficiency or redistribution, or, in the latter case, underlying cost differences.

The impression left by all of this literature is that interests directly affected by a proposed regulatory policy do influence floor votes in the legislature, but that these variables contribute less to explaining voting behavior than do party and ideological scores. In essence, these studies confirm the coalitional basis of government, and the role of organized interests in shaping government policy. But without explicit measures of the magnitude and nature of the net stakes of groups at risk in the vote, they cannot distinguish among alternative theories that are based on interest-group analysis. An idealistic pluralist, believing that majority rule always converges to efficient policy outcomes in the end as long as a substantial number of conflicting interests are represented, would not find this pattern of results to be uncongenial.

[29] Leone and Jackson (1981).

[30] Bernstein and Horn (1981), Kalt (1981, 1982), Riddlesperger and King (1982), and Wayman and Kutler (1985). In most cases the effects of energy interests were detected, but were weaker than party and ideology.

[31] Gilligan, Marshall and Weingast (1987).

[32] Oster (1980).

[33] Jarrell (1978).

The key empirical question is whether the distribution of rents in the regulatory process accords with the principles of interest-group theory, and in particular whether regulation seeks to maximize the rents available for distribution to the represented groups. Thus, empirical studies of the effects of regulation – inefficiencies and obvious redistributional practices – play a central role in testing political theories of regulatory policy.

In a remarkably rich and detailed study of water pollution regulation by the Environmental Protection Agency (EPA), Magat, Krupnick and Harrington (1986) examined industry-specific standards for total suspended solids and biological oxygen demand to detect the extent to which efficiency and distributional objectives were traded off by the agency. One of their key findings is that the EPA systematically departs from maximizing efficiency of water-pollution control in order to distribute abatement costs more equally across industries and firms. They also find that weaker standards are applied to industries that have higher profits and better-financed trade associations. In a manner equaled by no previous work, these authors document the importance of all three conflicting forces in regulatory decisions: efficiency, equity in the form of equalizing costs, and a bias in favor of industries that have the greatest financial resources behind their representation in the process.

One clearly distinctive difference between public interest and interest-group theories is that the former requires efficient pricing and use of labor, whereas the latter predicts that labor, as an organized group, will benefit from regulation. The few studies that exist indicate that the latter is correct.[34] Anecdotally, U.S. deregulation in transportation, communications, and financial markets has been disruptive of labor markets, leading simultaneously to greater employment and lower wages in some cases (most notably airlines), but in every case at least to lower wages. Another study finds that the stringency of regulations for total suspended solids was weaker in industries where regulation caused unemployment, but no similar effect was detected for standards regarding biological oxygen demand [Magat, Krupnick and Harrington (1986)].

Another prediction of interest-group theories is that large businesses should benefit at the expense of small businesses unless the latter are organized into an effective trade association that is active in regulatory policy. Again, both statistical and anecdotal information confirm this prediction in environmental, health, and safety regulation.[35] The key point, of course, is not just that small business

[34]Rose (1985), Bailey (1986).

[35]Cornell, Noll and Weingast (1976), Linneman (1980), Bartel and Thomas (1985), Maloney and McCormick (1982), Neuman and Nelson (1982), Pashigian (1984); Magat, Krupnick and Harrington (1986), however, did not find a bias against small firms in EPA's water pollution control program, although they found that industries with well-financed trade associations did have less costly standards.

faces higher costs of compliance per unit output; the important issue is whether these costs are warranted on the basis of differences in the degree to which small or large firms create market failures requiring regulatory intervention. While not all of these studies address this question, some do, and the consensus is that the cost differences are unwarranted by performance differences.

Entry controls provide another basis for testing the implications of political theory. Established interests generally will prefer to retard entry by new firms. Of course, entry is a phenomenon that takes place in markets; hence, theory predicts that when entry does occur, it will be from established firms. Moreover, the allocation of entry rights will be based in part on political considerations – a politically determined division of the rents – as well as economic efficiency. If firm structure affects efficiency, the result will be a compromise of efficiency to maintain relative stakes in the regulatory process.

An illustration of this hypothesis is the route structure and number of firms in transportation before and after deregulation.[36] Airline deregulation has caused almost a complete restructuring of the U.S. airline industry. The old "local service" or regional carriers have been virtually eliminated through merger or expansion. A "hub and spoke" route structure has replaced the criss-cross pattern under regulation. A similar reorganization has taken place in trucking. In both cases, the change has been accompanied by reductions in costs as well as wages of employees in the industry.

Broadcasting regulation provides another example of inefficient allocation. The allocation of spectrum rights and power limitations in radio and, especially, television regulation were based on the "local service doctrine": maximize the number of communities with broadcasting outlets, rather than the number of outlets received by a consumer. The result was a relatively small number of stations in nearly all cities. In television, these few outlets became immensely profitable because of protections against entry in the face of rapidly growing demand. The result was far less competition and fewer national networks than were economically feasible, coupled with almost exclusive reliance on national sources of programs by the "local" outlets.[37] Only with the entry of cable television in areas with poor reception was the opportunity created for expanded competition, and here technology managed to create a new organized interest that, after a decade of legal and political battles, finally was cut in on the distribution of regulatory rents in the 1970s.

While much of regulation seems superficially, at least, to reflect the fundamental properties of interest-group politics, there are some anomalous puzzles. State regulation of local public utilities – electricity, gas, telephones – has not been as extensively studied as federal regulation, but on the surface raises some serious

[36] Eads (1972), Bailey, Graham and Kaplan (1985).
[37] Noll, Peck and McGowan (1973), Park (1975).

questions about regulatory politics. In general, residential customers are charged less for service than are businesses, although one would expect the opposite. Consider the case of telephones.[38] The monthly telephone bill is a tiny fraction of household costs, and consumers are unlikely to become organized to cast votes on the basis of telephone rates. Yet residential rates are half or less of business rates. Moreover, residential demand is almost perfectly inelastic, so the difference is unlikely to reflect rational price discrimination by the regulated firm. Indeed, in recent years, local telephone companies have tried in vain to convince regulators to permit significant increases in residential prices. The interpretation of this phenomenon is still a matter of controversy. Perhaps residences are receiving service roughly at cost, and regulation is serving the public interest. Perhaps residences are being subsidized by business. Or, perhaps telephone pricing is a mechanism for providing subsidies generally to rural areas, where telephone costs are especially high, and reflects the historical success of rural organizations at attaining all forms of governmental benefits. As a scientific matter, the details of the cost and subsidy flows in local telephone service are only beginning to emerge, and the nature of regulatory politics at the state level is now only a matter of crude speculation.

Another troubling issue is whether regulation is necessarily the most effective means for achieving a given political objective. Perhaps the clearest example here is in environmental regulation, where a substantial literature has developed in support of the superior efficiency of marketable emissions permits compared to source-specific regulatory standards. If emissions permits are distributed on the basis of present emissions under existing standards, the efficiency gains of marketable permits will accrue to polluters. However, implementing change redistributes wealth in another way that may be harmful to polluters by reallocating the risks of changes in regulatory policy and of the consequences of energy shortages.[39] Moreover, polluters may be wary of the durability of emissions permits, fearing that efficiency gains may be expropriated by regulators through tougher standards. Environmentalists have mixed views; some worry that tradable permits represent backsliding from environmental goals, although this has not been the experience to date with the minor degree of tradability that has been permitted.[40] Nevertheless, none of these objections seems insurmountable, raising the question why regulators, environmentalists, and polluting firms have not successfully negotiated a way to implement a clearly superior method of environmental regulation.

Another potentially interesting improvement in methods is the possibility of using bidding processes to award utility franchises and set prices. Demsetz (1968)

[38] Noll (1986).
[39] Hahn and Noll (1983).
[40] Liroff (1986).

introduced the concept by proposing that utilities be granted franchises on the basis of competitive bidding over prices and service quality. The more recent literature on cost-revelation processes, surveyed by Baron in Chapter 24 of this Handbook, attempts to construct regulatory decision rules about prices, output, and whether a utility will keep its franchise which yield efficient operation at least in the second-best sense. Others have argued that contracting problems are too difficult to expect such processes to substitute for regulation.[41] One key issue is whether political agents can credibly commit to durable, long-term arrangements with utilities which, even if optimal ex ante, could produce supracompetitive profits ex post. Such an outcome would leave the architects of a bidding or cost-revelation mechanism vulnerable to attack by political entrepreneurs seeking elective office. But even if this problem could be solved, interest-group theory suggests that such mechanisms are extremely unlikely to be politically acceptable because they reduce to formula the politically relevant act of creating and distributing rents. Only upon the collapse of an economic regulatory process when too many interests are being cut in, combined with natural monopoly, would the political process be likely to consider such a mechanism. These circumstances have taken place in railroads, and may be under way in electricity and local telephone networks. An interesting issue is whether this type of method is therefore on the verge of serious consideration in these areas.

Recent deregulation in the United States represents another challenge to the interest-group theory, and indeed its occurrence gave rise to a rebirth of the more sophisticated version of the public interest theory in the late 1970s. One recent account proposes that deregulation came about because of the intellectual force of economists' arguments against it.[42] Yet, in each case technology seems to have created severe problems for retaining regulation in its old form, and a plausible argument can be made that technology created new organized interests, which in turn either divided the old interests or created impossible management problems for regulators.[43] Moreover, during the 1970s some political leaders did manage to make overall regulatory policy an issue in the general political debate. Regulatory horror stories were part of campaigns against intrusive government waged first by Jimmy Carter and then by Ronald Reagan. Thus, Derthick and Quirk, in illustrating the connection between economic studies showing inefficiencies of regulation and regulatory reform, may have been observing only a manifestation of a more fundamental political phenomenon.

Taken together, the empirical studies surveyed here are broadly consistent with, but do not really prove, the political theory of regulation set forth at the outset of this section. Organized interests not only seem to succeed, but usually

[41] Williamson (1976), Goldberg (1976), Zupan (1986).
[42] Derthick and Quirk (1985), who are political scientists, not economists.
[43] See the case studies in Noll and Owen (1983).

they do so at the cost of economic efficiency, at least as far as the data can tell us. Yet the evidence is still far from fully conclusive. One major weakness is that, except for simple cases involving one or two interest groups, the relationship between the stakes of groups and their political strengths remains a mystery, largely because in nearly all studies neither stakes nor gains in regulation are directly measured. The second weakness is the lurking danger of tautology, i.e. of attributing causality to an inevitable consequence of any public policy action. It is impossible to imagine that regulation could be imposed without redistributing income. Hence, a look for winners in the process – and organizations that represent them – is virtually certain to succeed. Until fundamental measurement problems about stakes, power, and gains are overcome, analysts will not be able fully to predict and to explain the details of regulatory policy. Only when they do can it reasonably be argued that interest group theories of regulation have been fully tested.

4. The politician's agency problem

For several decades, a recurring theme in the literature on regulation – especially as written by legal scholars and the popular press – has been the difficulties faced by political leaders in controlling the behavior of regulatory agencies. The essence of the argument is as follows. Regulatory agencies (and other bureaus) possess superior information about the effects of their policies [Wildavsky (1964), Schultze (1968)], and can change policies in subtle ways without political overseers being fully cognizant until the deed is done. Monitoring the behavior of an agency is costly, as is subsequent legislative or executive action to undo an agency's misdeed, the latter because the policy surprise tends to create a new constituency to defend its continuation [Noll and Owen (1983)]. Hence, agencies have an opportunity to engage in "shirking" – consciously failing to pursue the policy objectives that elected political leaders would desire.

The ways in which agencies could engage in shirking are several. First, to comport with the normal definition of the term, agencies may simply undersupply policymaking effort, thereby failing to carry out with precision the policy objectives of political overseers [Niskanen (1971)]. The motive for such behavior would be the desire to avoid investigative work or intense conflict with the parties that appear before it. As to the latter, an agency can avoid the effort of subsequent appeals to its decisions by placating the parties who participate in the agency's decisions, even if pleasing them is contrary to the intent of the agency's legislative mandate [Noll (1971)].

Second, agency officials may have their own political agenda. The legislative mandate of an agency normally represents a compromise among a broad coalition of interests within a party or a legislature. The personal political preferences

of the handful of leaders of an agency may differ from the consensus of the coalition. The result is a form of capture, in that agency decisions systematically favor one of the several interests whose welfare is at stake in the agency's decisions.

Third, agency personnel may be motivated by personal career objectives. One form that careerism might take, emphasized by much of the scholarly literature on bureaucracy [e.g. Wildavsky (1964), Niskanen (1971)], is to promote the growth and power of the agency as an end itself, perhaps by attempting to extend the agency's jurisdiction into activities not fully contemplated in its legislative mandate, but not ruled out, either. Another form of excessive careerism is to use regulatory processes as vehicles to demonstrate managerial talent as well as a particular policy slant in order to curry favor with prospective future employers. Once again, the consequence, should this be significant, is interpreted as capture by a subset of the interests whose welfare is at stake in agency decisions.[44]

Fourth, agencies may be populated by professionals that genuinely attempt to pursue public interest objectives, but who have a narrow or uninformed perception of where that interest lies. One potential problem is an overemphasis of a particular bias in the methods of a professional group, such as the emphasis of economists on theoretical efficiency, lawyers on procedural equity, or medical care professionals on risks to health [see Perrow (1961)]. Another problem is that analysts may be forced to rely on selective information that is controlled by interest groups, and face selective likelihood of appeal and reversal through the courts owing to the unequal participation of interest groups in their decision process. In either case, decisions, on balance, can reflect capture by the interests represented before them [Noll (1985)].

While these arguments give plausible reasons why an agency might be prone to stray from the positions most desired by their political overseers, the question remains whether and to what extent these forms of shirking occur in reality. Theoretically, there are several reasons to believe that agencies do not stray far from the range of policies acceptable to the supporting political coalition of the statutory policy.

First, the purpose of enacting a regulatory statue containing elaborate fact-finding procedures for solving market failures may well be to remove hard decisions from the direct control of political officials [Fiorina (1985)]. Faced by divided represented interests and irresolvable conflict, politicians may decide to

[44]A detailed analysis of the representativeness of high-level regulatory officials, containing a mix of arguments and evidence about (a) the narrow perspective of regulators and (b) their careerism, can be found in the studies published by the Senate Government Operations Committee in connection with their investigation into regulatory reform during the late 1970s. See also Gormley (1979) and Eckert (1972).

"shift the responsibility" to bureaucratic officials for the purpose of attenuating specific political accountability for the results. Hence, the coalition enacting a statue may have no clear policy preference, other than that the issue be resolved in an adversarial, evidentiary process that is constructed to reach some sort of compromise. The only way in which an agency can shirk such a mandate is not to provide the forum for resolving the issue.

Second, the details of the procedures established by political officials for making regulatory decisions govern who will be represented in the process. To the extent that participation matters in terms of outcomes, the ability to shape it confers a means of political control – albeit indirect – on the decisions of the agency. In fact, by assuring participation by the members of the enacting political coalition, legislators "mirror" the politics of enactment in the procedures of the agency [McCubbins, Noll and Weingast (1987)]. This gives agencies an early signal concerning the political environment facing their elected overseers. Moreover, it creates the opportunity for "fire alarm" oversight of the agency [McCubbins and Schwartz (1984)], whereby disaffected participants in the process warn political overseers of impending decisions that are inconsistent with the coalition agreement. This enables political overseers to intervene informally in agency policymaking before decisions are rendered, new interests and wealth positions are established, and hence the costs of reversal are increased by an unsatisfactory fait accompli by the agency.

Third, the extent of information dependence and professional bias in an agency is also to some degree under the control of political overseers. The magnitude of the agency's budget in relationship to the scope and complexity of its responsibilities affects the extent to which the agency can assure itself of multiple and independent sources of information [Noll (1983)], and the professional composition of an agency can be controlled by legislation, executive order, or the appointments to leadership positions.

To illustrate some mechanics of procedural details as means of political control, consider the following examples. In 1970, the U.S. Congress enacted the National Environmental Protection Act, which required that all agencies formally consider the environmental consequences of their decisions, and, if those consequences were potentially significant, undertake an environmental impact statement as part of their decision criteria. NEPA did not require that these considerations actually change outcomes, but it profoundly changed agency decisions nonetheless [Taylor (1984)]. First, it gave standing to people representing environmental interests, and thereby caused agencies to confront the facts and arguments raised by these groups. Second, it caused agencies to acquire staff to review environmental arguments and perform EIS studies. Third, it forced agencies to consider EIS information in reaching decisions, and to state reasons for overriding environmental issues, or face a significant chance that the courts

would overturn their decisions. The result was a profound change in a variety of agencies that had previously ignored environmental concerns.[45]

The importance of staffing is illustrated by the history of safety and health regulation in the 1970s. The legislation establishing the new safety and health agencies oriented them to be sensitive to well-represented interests, and to pay little attention to economic efficiency [Cornell, Noll and Weingast (1976)]. For example, the Occupational Safety and Health Act virtually forced the agency it created, OSHA, to adopt voluntary industry safety standards as mandatory regulations, to delegate priority setting to labor and industry organizations, and to ignore benefit–cost analysis. The Consumer Product Safety Commission was given essentially no staff, and was required to use "offerors" – largely unpaid volunteers, usually trade associations – to write its standards. By the mid-1970s, however, economic analysis began to be forced upon these processes by the creation of the Council on Wage and Price Stability through a series of Executive Orders. COWPS was created to be a group of independent economist-gadflies, one of whose major tasks was to participate in the regulatory processes of the environmental, health and safety agencies. [For some examples of economic interventions from the Executive Office of the President, see Miller and Yandle (1979) and White (1981).]

Another example is the choice between case-by-case decisions and broad rulemaking as the primary means of making economically relevant decisions. Specific cases – the price of a shipment of a specific commodity between two cities, the award of a franchise to serve a specific market, an emissions control standard for a particular plant – generally are of great interest to the regulated firm whose business is at stake. But most case decisions will have very little effect on overall policy. Hence, relatively little attention will be paid to the case by anyone other than the firms with a direct interest, such as customer groups, labor unions, environmentalists, etc. General rules, such as a formula for setting all prices in an industry, an emissions standard to apply to all sources of a given pollutant, or a set of criteria to be followed in future cases, have much greater policy significance, and hence will draw more attention from a wide spectrum of interests. The expected consequence is that processes based on case-by-case decisions are most likely to favor regulated firms, whereas regulatory processes that emphasize rulemaking are more likely to reach some sort of policy balance. Because the extent to which an agency relies on such procedures can be controlled by statute, political leaders thereby can control the particular distributive orientation of the policy.

Empirical studies of regulatory processes bear out the general argument that political actors have influence on agency decisions. For example, the National

[45]See Cohen (1979) regarding the regulation of nuclear power and Taylor (1984) with respect to federal construction projects.

Labor Relations Board (which regulates labor–management disputes in the United States) has been shown to vary the degree of pro-business or pro-labor slant in its decisions according to the preferences of congressional oversight committees[46] and the orientation of the President [Scher (1960) and Moe (1985)]. Weingast and Moran (1983) have shown that shifts in the composition of legislative oversight committees are reflected in the decisions of the Federal Trade Commission, the agency charged with protecting against product misinformation, consumer fraud, and, in part, antitrust policy. Weingast (1984) has found similar results for the Securities and Exchange Commission.

Moe (1985) also shows that staff recommendations have considerable weight, implying that the magnitude of the agency's budget (and hence the size of its staff) is another potential control variable [see also Weingast (1981)]. Magat, Krupnick and Harrington (1986) find that the quality of background studies and the continuity of staff affect the stringency of water pollution regulations.

State regulatory proceedings provide another source of evidence. Generally, state regulation of utilities takes the form of broad reviews of all aspects of a given utility's operations, from cost estimation through review of the prudency of its expenditures to setting overall revenue requirements and their distribution among all services and customer classes. This maximizes the saliency of rate hearings, and hence participation in them as well as their political and public visibility. And, the behavior of the commissions appears to be to seek compromise and consensus among the represented parties [Joskow (1972, 1974)].

As in the previous section, these studies do not prove that political control of regulatory decisions through manipulation of process is a perfect solution to the agency problem faced by political actors. Instead, they are broadly consistent with the view that (a) decisions are responsive to changes in underlying political circumstances, even in the absence of explicit directives from political overseers, and (b) process matters in determining the policy orientation of an agency. The primary lesson from this literature is that the absence of direct political oversight – with public hearings, explicit directions through legislation or executive order, and occasionally punishment of agency miscreants – does not imply a lack of political control and an opportunity for runaway bureaucracy.

5. Conclusions

The literature on the politics of regulation provides few concrete, quantitative predictions about how regulatory policy will affect efficiency and the distribution

[46]Concern about the preference of committees, rather than Congress as a whole, follows from the tendency of Congress to delegate much of its policy responsibilities to committees. This gives committees considerable autonomy in directing agencies. For a thorough treatment of the relationship between Congress and its committees, see Weingast and Marshall (1986).

of rents. The theory is ahead of the empirical work, containing a number of interesting predictions about which interests will be represented, to what extent the intensities of their stakes will be translated into effective political participation, and the relative allocation of rents by the regulatory process. None of these qualitative predictions about relative shares has been convincingly demonstrated empirically, but the empirical literature is broadly consistent with the view that representation matters, and that regulation may or may not be more efficient than its absence, depending on the political and economic circumstances.

Nevertheless, the field is in its infancy. Serious attempts to deal with the political control of regulatory policy date only from approximately 1970. Moreover, the underlying more general theory of the political process – the way voters, politicians, and bureaucrats interact to formulate policy – is progressing very rapidly, constantly raising new questions in its application to regulatory policy.

The future research agenda certainly contains two obvious priorities. One is more theoretical insight about the role of citizens acting as heterogeneous, numerous, but marginally interested consumers, and how political entrepreneurs mobilize their support for regulatory reform, or even for day-to-day management of a regulatory institution in a manner that protects their perceived interests (e.g local telephone rates). The other is empirical: How can more meaty tests of interest-group theories be devised? In part, the solution is hard work – real effort, as exhibited in a handful of the best studies, to measure the stakes of groups, their effectiveness of organization and participation, and their relevance to the support constituencies of elected officials. A similar observation is apt for studies of the way elected political officials influence agency decisions, directly or by controlling the information available to agencies and the participants in their decision processes. Again, detailed studies that trace the influence of political leaders on the development of policies in an agency are necessary to resolve the question of the relative importance of political factors (interest groups, political entrepreneurs) and bureaucratic discretion in determining regulatory outcomes.

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