Structure and Incentive Problems in Economic Regulation of Medical Care

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IT IS OCCASIONALLY ASSUMED THAT IF A SECTOR of the private economy is performing badly, then a public regulatory apparatus can make the private system straighten up and fly right, or at least fly better. In some cases this is certainly true, in others it is less true. This paper analyzes some of the limitations of this assumption for one particular and frequently proposed situation: strong, direct economic regulation of medical care. One purpose of the analysis is to facilitate better regulatory design by setting out some of the more deeply entrenched structural and incentive weaknesses that can be expected in such regulation. Improved regulatory systems should specifically attempt to remedy these weaknesses. Insofar as the analysis argues from the general to the specific, it may have some useful application to other kinds of regulation and other fields. A second purpose of the analysis is to shake any blind confidence that such improved regulatory design will be an easy job. In some cases it may not even be possible to design a regulatory system that will do more good than harm. This may encourage policy makers to consider more diligently the full range of options available to them: private sector restructuring and market reform, as well as regulation.

The limitations in the above assumption (that regulation can always

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improve poor private sector performance) do not lie in the integrity, diligence, or competence of people in the public sector. Neither the private nor public sector has any monopoly on talent or decency, nor for that matter on ineptitude and self-serving action. The issue of private markets versus public controls is unfortunately subject to much ideological cant that serves neither those who wish to improve the private sector nor those who wish to improve public regulation.

Our point is that systems of people ultimately tend to perform the way they are structured and rewarded to perform. This tendency is likely whether the people involved are well- or ill-intentioned. Poor structure tends to beget poor incentives, and poor incentives tend to beget poor performance. Incentives are quite as important in the public sector as in the private sector. If we desire improved performance of any major societal system, we must improve its structure and incentives.

To be more concrete, it has frequently been proposed, for a variety of reasons (see Section 1), that the medical care system be placed largely under the strong, direct economic control of some sort of regulatory agency or system of agencies. The details of such proposals vary greatly. The agencies may be at the federal, state, or local level, or all three. Their powers may include control over prices, quantity and type of service, facilities and equipment, manpower, capital investment, or any combination thereof. These powers all may be concentrated in one system of agencies or separated among several sets of agencies. To the extent possible, we try to avoid most of these details and focus on the generic structure and incentive problems that such an economic regulatory system is likely to encounter. There are many other less direct means of economic regulation, e.g., the tax structure, public financing of medical care, etc.; but we shall largely exclude these as outside the scope of our discussion.

Our method is frankly analytical and hardly definitive. We attempt to assess, as generally as we can, the likely incentives that will arise from the generic sort of regulatory structure proposed above. From these general incentives, we attempt to predict the behavior of the regulated system. Where possible we attempt to confirm these predictions against the general empirical evidence on economically regulated medical care systems and other economically regulated industries. We emphasize that incentives are only positive and negative pressures and can only predict tendencies that may or may not be

realized in every individual situation. While hard researchers may find such methods much too speculative, we point out that the problem of policy analysis is to assess the likely significant consequences of proposals in advance of their adoption. Any economic regulatory system will have to deal with any potentially perverse incentive tendencies inherent within itself. Quite significant consequences may take more than a decade to show up, and may never show up in smaller-scale experiments, frustrating the common call for more research in advance of the policy decision. The unfortunate urgency of important policy decisions then requires that, where empirical evidence is lacking, we use the best analytical arguments that can be made. Until supplanted by harder evidence, such arguments may provide some guidance to policy and offer some hypotheses and directions for future research.

Our emphasis on problems in direct economic regulation should not lead to any premature (and wrong) conclusion that such regulation is never justified. It may be appropriate in many cases. In some cases it may be the only alternative. Our message is that such regulation should never be adopted uncritically without careful advance analysis of its general structural and incentive vulnerabilities. This should result in both improved regulatory design and a more balanced assessment of the strengths and weaknesses of all the policy alternatives available, both market reform policies and economic regulation policies.

1. Motivating Economic Regulation

The motivation for economic regulation of medical care starts with the premise that the medical care system is in severe market failure, producing seriously excessive expenditure escalation, inefficiency, and maldistribution of manpower and resources. The naive regulatory argument stops at this point and proposes some form of economic regulation as the solution. As Schultze (1977) remarks, "The virtually universal characteristic of public policy in these circumstances is to start from the conclusion that regulation is the obvious answer; the alternative is literally never considered."

A more cogent argument for economic regulation is that the medical care system is not only in market failure, it also has a severe equity problem. Even were the medical market performing perfectly, ade-

quate medical care and health insurance would be beyond the reach of low-income persons. At a minimum, government would have to take over at least some, if not all, of the financing for such people. So far, this argument appears totally correct. The next proposition is less certain. Proponents argue that the only way to assure adequate equity is to grant all people the same universal entitlement and coverage; and, since any price competition would inevitably discriminate against the poor, price competition is inappropriate. Therefore, they conclude that market strategies, which necessarily rely on both price and nonprice competition, are not possible; and strong, direct economic regulation is the only means left to constrain expenditures and allocate resources.

That the medical care system is in market failure is not at issue. Severe market failure has been amply demonstrated, and there is now little scientific controversy on this point (McClure, 1976a; Council on Wage and Price Stability, 1976; Feldstein, 1971; Fuchs and Kramer, 1972; Davis, 1973). But we believe that both the naive and sophisticated regulatory arguments above, nevertheless, miss two important points. They ignore the existence of a set of equally promising alternative strategies based on market reform; these strategies seek the same goal of equitable, adequate, humane medical care and coverage for all at a price society can afford but employ market, rather than regulatory, means. Both regulatory arguments also ignore the growing body of research and experience on regulatory failure. We consider these two objections in turn.

There are at least two major strategic alternatives to deal with the market failure of the current medical care system. Certainly direct economic regulation is one such alternative, and several states and the federal government are now engaged in a variety of economic controls which attempt to impose regulatory forces as a substitute for the missing market forces (Davis, 1973; Cahodes et al., 1978; Hellinger, 1975). The alternative to regulation is the market approach. Several cogent strategies have been proposed to restructure the private medical care system in order to establish effective market forces (Elwood et al., 1971; Havighurst, 1970; Feldstein, 1977; Enthoven, 1978; McClure, 1978); and, in one of the few places where such a market strategy has been initiated, it appears quite promising. (These market strategies anticipate the use of public financing to assure

adequate and equitable purchasing power for low-income people in this market.)

For brevity the strategic alternatives are often referred to as "competition versus regulation," but this is not accurate. A more precise phrase would be "market reform versus direct economic regulation." The present medical care system is vigorously competitive, but, because of its structural market failure, this competition is cost-generating, not cost-saving—it is a medical arms race (McClure, 1976a). Moreover, even market reform strategies presuppose some degree of regulation. Few market advocates are proposing to do away with the life and safety codes, the licensure laws, or other reasonable quality assurance regulation, although certainly advocates of both strategies agree that such regulation could be much improved. The real and overriding issue between the two strategies is economic control: how to exercise economic allocation and restraint most compatibly with, and supportive of, the other major goals of coverage, availability, quality, equity, efficiency, innovation, and responsiveness to consumers.

Market reform strategies emphasize private choice and competition in a fair and structurally sound marketplace as the dominant economic allocation device. The role of government is to make the necessary temporary interventions to create this new, restructured, effective marketplace; to alter public financing programs to be compatible with it; and then to exercise modest continuing oversight (antitrust enforcement, etc.) to assure that healthy competition is maintained. We may term this market-corrective regulation. In contrast, direct economic regulation strategies emphasize explicit policy decisions and direct public controls on providers to impose cost restraint and allocate resources. Following Schultze, we may term this command and control economic regulation (1977). Because effective market forces are weak or absent in the present medical care system, such direct economic regulation will have to be quite strong and pervasive to succeed. Some proponents advocate the use of market reform and direct economic regulation at the same time. While not impossible, the two approaches are so highly incompatible that their simultaneous use may be more speculative in practice than either approach alone (McClure, 1979). Perhaps the most important strategic decision facing medical care policy in the 1980s will be to choose the relative role and emphasis to be given each alternative: market reform and direct economic

regulation. The naive regulatory argument misses this basic strategic decision entirely.

The second weakness of the regulatory arguments above is that both fail to recognize or address our increasing understanding that command economic regulation, like the present medical care system, has its own set of structural and incentive failings. Just as the structure and incentive weaknesses in the present medical care system lead to market failure, there is growing evidence that present regulatory processes have perverse, structurally entrenched incentives that in many cases lead to regulatory failure. There is both theory and some hard evidence that under certain conditions command regulation is not conducive to efficiency, innovation, quality, or equity (see Section 2). Indeed, command regulation can lead to the special interests of politicians, bureaucrats, and providers intentionally or unintentionally making deals at the expense of consumers. We are concerned at the present rush to command regulation in medical care at a time when the nation's experience with heavy command regulation in other industries has been so poor that it is now trying to deregulate many of them. In fact, premature or ill-advised command regulation may saddle the medical care system with a new set of structural and incentive difficulties more intractable than those it was supposed to solve.

Therefore, a defensible regulatory argument must: (1) identify the structural and incentive defects of the present private system that must be corrected; (2) similarly identify the structural and incentive defects in present command economic regulation systems that must be avoided; (3) analyze the strengths and inadequacies of proposed market reform strategies; and (4) design and justify an economic regulatory system for medical care that, on the basis of its improved structure and incentives, can be expected to perform superior (i.e. achieve goals better) to either the present private system or proposed market reforms. In particular, it must show, through its improved structure and incentives, how and why the proposed regulatory system will not ultimately succumb to the generally observed failings, now documented by research and experience, of present command regulation.

In this paper we will limit ourselves to the second task above: a structure-incentive analysis of command economic regulation systems particularly as they apply to medical care. We have drawn freely upon the excellent work of Schultze (1977), Enthoven (1978), Noll (1975), and Bauer (1977), especially in Sections 2 and 4 below. We happily

acknowledge our debt and also absolve them of our errors. The remaining tasks, analyzing the present system and market reform strategies and developing and defending regulatory strategies, are far too extensive to treat in this already lengthy paper and have been treated elsewhere in some detail (McClure, 1976a, 1979).

2. Research on Observed Regulatory Behavior

Noll (1975), in his excellent review, suggests three models of economic regulatory behavior. The traditional public interest model assumes regulation to be an omniscient and disinterested set of bureaucrats who see to it that market power or consumer ignorance is not exploited to enrich a few businessmen at the sacrifice of the general welfare. According to this model, cost regulation should reduce regulated prices to levels comparable with competitive market prices—usually taken as the standard of what efficient prices should be, since economic theory demonstrates these are the lowest prices at which suppliers still will enter the industry to meet the demand that consumers will pay for. The second model, the capture model, assumes regulation is proposed, supported, and unduly influenced by the regulated industry to supplant competition with a legally enforceable cartel; politicians accept the cartel in return for campaign contributions and other support as long as they have sufficient oversight authority to assure that the cartel does not become a political liability. According to this model, cost regulation should produce monopoly prices and monopoly profits. The political economic model assumes regulators attempt to impose some concept of the public interest in a milieu of uncertain, expensive, and unbalanced information; competing and conflicting social interests; and tenuous oversight structure, which creates biased and perverse incentives on the regulators. According to this model, cost regulation should produce monopoly prices and also push industry costs up such that industry profits are no more than competitive market profits.

According to Noll, the empirical evidence at this point, while far from complete, tends to support the third model. Economists have analyzed demand and cost conditions in several regulated industries and numerous pricing and profit decisions by regulatory agencies.

Contrary to the public interest model, except in the case of regulation of natural gas prices at the wellhead,[1] no depressing effect of regulation on prices has been found in any studied industry. However, contrary to the capture model, few studies have found any tendency of regulated firms to earn exorbitant profits. Instead, through a variety of largely uneconomic and undesirable behaviors induced by regulation, industry costs are pushed up. While research on the magnitude of these induced costs is by no means complete, existing studies suggest that, in addition to the direct cost of the regulatory agencies themselves, unnecessary industry costs induced by regulation may account for up to 25 percent to, in some cases, 50 percent of the revenue of regulated firms (Noll, 1975). If further studies continue to confirm results anywhere near such magnitude, this represents regulatory failure on a stunning scale. (In fairness, it must be noted that not all regulation is aimed just at cost control; but it seems doubtful that this magnitude of unnecessary cost can be justified by any supposed public benefit.)

Noll classifies the observed uneconomic behaviors producing these unnecessary costs into four categories: consumer cross-subsidization, producer protectionism, limited innovation, and inefficient operation. In *consumer cross-subsidization*, regulators permit monopoly pricing of some products to subsidize otherwise uneconomic activities. Such uneconomic activities are ostensibly in the public interest, but more often they benefit special interests. An illustrative example in health care is the requirement that hospitals that have received federal Hill-Burton grants must provide some amount of free care to the indigent. The hospital pays for free care by charging higher rates to paying patients. However, except for a few hospitals, free care to the indigent is a negligible cross-subsidy amounting to less than 1 percent of hospital revenues. A far larger example with questionable public interest is excessive charges by hospitals on hospital drugs, lab tests, and X-rays that are used to subsidize high-cost technological modalities—such as cardiac diagnostic procedures, intensive care units, fetal monitoring, and the like—which attract doctors, and loss leaders—

[1] Note that in this exception the buyers of wellhead natural gas are regulated pipelines, not final use consumers. This decision has benefited the pipelines more than consumers and resulted in uneconomically profligate use of gas and inadequate exploration for new gas fields. The decision was typical of regulators trying to balance the conflicting interests of regulated groups, in this case regulated gas producers and regulated gas distributors.

such as maternity, pediatrics, and primary clinics—which attract patients (Blumberg, 1981). The profligate spread and excessive use of these professionally attractive modalities with high costs and low marginal benefits to health is well documented (Russell, 1978; McClure, 1976b) and is preserved by present public financing policies. The literature shows that such uneconomic cross-subsidization is common to all regulated industries, not just health care. Even when such behavior has some benefit for society (whether or not the benefit is justified by the cost), there is the further objection to cross-subsidization that such costs should be explicit and borne by all society, not just certain users. For example, the cost of free care to the poor should be borne by all society, not just privately insured hospital patients.

A second uneconomic behavior commonly found by regulatory research is *producer protectionism.* Regulatory agencies set prices that prevent low-cost firms or industries from driving high-cost producers out of the market. An illustrative example from transportation is that boats, rails, and trucks are forced to use common prices on common routes even though on certain routes one mode is demonstrably lower in cost than the others and could drive them out by competitive pricing. An example from health care is that inefficient high-cost hospitals are allowed to charge more than efficient low-cost hospitals. Such protectionism of inefficient producers is often justified by the regulatory agency as maintaining a balanced system and as preventing one (more efficient) set of producers from monopolizing the industry. This latter is indeed a strange argument if the industry is regulated and the agency can presumably proscribe monopolistic profits. The actual incentives resulting in such producer protection by regulators are more complex (see Sections 3 and 4).

A third uneconomic behavior identified by regulatory research is that regulatory agencies have delayed or prevented many beneficial innovations while permitting or promoting others that are not justified (Capron, 1971). This *limited innovation* appears related to the previous behavior, being particularly pronounced when an innovation would substantially alter the balance among established producers in the industry or cause industry profits to decline. An example in communications is cable television, where, despite demonstrable consumer demand and benefit, the innovation was long delayed and is still heavily restricted by regulation. It should be noted that producers

likely to profit are different from the established existing VHF networks and stations. Examples in health care are prepaid group practice that is treated prejudicially by Medicare and the Health Maintenance Organization (HMO) Act and state laws, while, on the other hand, expensive, professionally popular, but scientifically unproven, innovations such as fetal monitoring of routine pregnancies and intensive care treatment of uncomplicated heart attack are permitted to flourish.

A last category of uneconomic behavior is *inefficient operation*; goods and services, whether or not economic (i.e., whose benefit may or may not be justified by their costs when produced efficiently), are produced more inefficiently than they could be. An illustrative example from transportation is railroad management, which has been criticized as lax, especially when compared to European and Japanese railroads. The health care field is often criticized for inefficient operation, although we suspect that its inefficiencies are due less to lax management than to the other uneconomic behaviors identified above (McClure, 1976a). However, there is little doubt that there is considerable inefficiency of provider operation due to detailed procedural requirements imposed by regulation itself that confer no value to society commensurate with their costs (McCarthy, 1978). Lobbying and legal challenges to legislative and regulatory agencies are a much lesser, but not negligible, expense induced by regulation, although some of this activity can be considered valuable and legitimate to society.

There are two points to note about this observed regulatory behavior. First, the fact that this behavior occurs to varying degrees in all regulated industries studied suggests that this behavior is not due to simple regulatory mismanagement or lack of effort which easily could be corrected just by trying harder. Rather, this behavior would seem to be due to more fundamental structure and incentive problems inherent in regulating these industries. Second, the fact that the same behavior occurs in all studied industries suggests that the structure and incentive problems are not specific to the details of the particular industries but rather are likely inherent in the general structure and incentives of the present regulatory process itself. If we expect a command and control regulatory strategy for health care to perform better than it has in other industries to date, then this strategy must alter or counter any major structure and incentive factors producing present perverse behavior.

Our method for determining structure and incentive causes of system behavior is termed structural incentive analysis; the method has been described and applied to health care system behavior elsewhere (McClure, 1976a). We briefly explain the method in Section 3 and apply it to regulatory behavior in Section 4.

3. Structural Incentive Analysis of Organizational Behavior

The object of this and the next section is to explain the perverse observed behavior of regulatory agencies and regulated industries reported in the previous section. Since we can safely assume that the great majority of regulatory officials are competent and honorable, there must be perverse underlying incentives and structural characteristics intrinsic in present regulation that lead well-intentioned regulatory agencies to induce undesirable and ineffective cost performance in regulated industries. By explicitly identifying these underlying structural features and incentives, we hopefully can design a regulatory strategy that can either remove or alter perverse incentives or overwhelm them with new, stronger counterincentives.

In identifying incentives, we must distinguish between incentives on the agency as an organization and incentives on the agency staff as individuals. In addition to external incentives placed on individual staff members by the agency itself, staff members have their own "internal" incentives or motivations, including a mix of such motivations as job security, agreeable work associates, interesting work, career advancement in position and income, professional respect and reputation, and finally aspirations to do a good job, perceived by themselves and others as socially useful. This mix of internal motivations will vary from one individual to the next, some individuals being powerfully social-interest motivated, others more self-interest motivated, and most with a balance of both. However, even an agency initially full of high-minded, public-interest motivated staff will not guarantee continuing agency behavior that is in the public interest.

To see this, we may introduce a rather self-evident theory of general organizational behavior and evolution, not unlike the genetic selection theory of natural behavior and evolution. Any organization or agency may be loosely likened to a natural organism in a natural environment

or ecosystem. At any point in time, the organism has an internal or genetic endowment shaping its behavior. However, genetic selection will favor those organisms whose behaviors enhance survival in the natural ecosystem. A species of organisms that fails to adapt its behavior to its ecosystem will become extinct. Just so, an organization (be it a company, a government agency, or whatever) exists in a larger environment or organizational ecosystem consisting of other organizations, pressures, and competing interests. A given organization has internal incentives, namely, its stated purposes and the motivations and competence of its staff, which in part shape its behavior. But an organization's behavior is also shaped by its environment. The organization may be said to have external incentives placed upon it by the organizational ecosystem to engage in behaviors which cause the organization to prosper in that ecosystem and to avoid behaviors which weaken or imperil it.[2] If the internal and external incentives upon the organization are aligned, well and good; the organization will prosper. But, if they are antithetical, the organization adapts by altering or deviating from its stated purposes and by translating the incentives on the organization into parallel incentives on its individual staff. If it can do so, the organization will prosper; if it can not, it will eventually fail. Staff will leave (internal failure) or the organization will be starved, abolished, or restructured by the external forces of the environment. Thus, surviving organizations are those that have sufficiently translated external environmental incentives on the organization into individual incentives on its staff members or that have replaced staff members who cannot be so motivated (i.e., a selection principle operates upon staff). Organizations which fail to so motivate or replace staff eventually do not survive; they may be said to have failed to adapt and become extinct.

The above theory of organizational behavior and evolution has important implications for regulatory strategy design. It implies that no matter how a regulatory agency is internally organized or how well-motivated its staff, the agency cannot persist in behavior which

[2] Note that organizations not only adapt their behavior to the environment, they also try to alter and adapt the environment to their behavior. Thus a constant adjustment between an organization and its environment goes on. (One organization is a part of the environment for another organization.) But usually the organizations must bend further and faster than the environment. Our analysis will emphasize those structure and incentive factors in the environment usually beyond the power of most organizations to change significantly.

violates the incentives placed upon it by the larger regulatory ecosystem or it will perish. Thus, suppose the regulatory agency is initially staffed with well-intentioned individuals bent on public-interest behavior. Assume that the staff can technically identify and carry out such public-interest behavior. (This itself is a large and doubtful assumption, see Section 4C.) However, suppose that such public-interest behavior is not welcomed by many organizations in the larger regulatory ecosystem. And, more crucially, suppose they can cause it to fall into legislative or executive disfavor that might result in jurisdictional limitations, staff and budget cuts, or even abolition or replacement of the agency. Staff will begin to feel their interests threatened. The more self-interested staff will begin to advocate compromises in agency behavior. If they win out, the more social-interested staff will begin to leave or be forced out. If the social-interest staff wins out, the agency will persist in public-interest behavior. This then provokes the threatened interventions from outside pressures in the larger ecosystem: jurisdictional restrictions, staff and budget cuts, replacement of leadership, agency reorganization, or outright abolition.[3] Eventually the agency is emasculated or reorganized to behave in a way the ecosystem will tolerate. Whether the staff is willing to compromise or not, the result is the same: the agency either adapts its behavior to the larger ecosystem incentives or perishes.

The above argument leads us to postulate that systems of people behave the way they are structured and rewarded to behave. The aim of structural incentive analysis is to identify the fundamental structure and incentive factors operating on the organizations and individuals of the system and to explain or predict the behavior of the system from these. By fundamental structure and incentive factors, we mean factors not derivable from other underlying fundamental structure and incentive factors within the system. A chain of structure and incentive factors operates in most systems. Fundamental structures create incentives that lead to further derived structures that create derived

[3] The recent congressional hearings on the newly aggressive, if not always judicious, Federal Trade Commission illustrates the point handily. Its aggressive pursuit of anticompetitive practices and its occasionally high-handed methods offended so many special interest groups that the commission barely avoided substantial loss of its authority by a few votes. As a result, it has apparently had to back off, at least temporarily, on many of its major initiatives.

incentives, and so on. It is the more fundamental factors that must be altered or countered if system performance is to change. We understand the term *structure* in its broadest sense, including not only the arrangements and relationships between people and organizations in the system but the process by which these arrangements are created. Structure thus includes all mechanical restraints on the freedom of individuals and organizations to act. Incentives are all the motivational forces that cause individuals and organizations to act.

Note that a change in a fundamental incentive will not necessarily have an instantaneous effect on system behavior; rather, as in the regulatory agency example above, it takes time for incentive effects to alter organizational behavior. But eventually the incentive balance will tend to determine behavior. (If system behavior is observed that cannot be explained by known incentives, then analysis has overlooked important incentives in the system; analysis must be continued until all major system behavior can be derived from identified, fundamental structure and incentive factors.)

The purpose of structural incentive analysis is better policy design. Thus proper regulatory design must take into account the larger regulatory ecosystem and the incentives it places upon a regulatory agency. All policy, including regulatory design, should take into account the incentives leading to poor industry behavior. It is less fruitful to prescribe the correct behavior of regulatory agencies or industry firms than to prescribe the conditions that create appropriate incentives on industry firms and regulatory agencies to behave correctly. The first approach demands heavy policing of behavior in possible conflict with incentives; the second aligns the incentives with desired behavior and requires little policing. As Schultze observes, "consistently . . . we try to impose solutions without remedying the incentive structure, and equally consistently, the power of that incentive structure defeats us" (1977).

4. Structural Incentive Analysis of Command and Control Regulatory Behavior

In Section 2, we described the observed behavior of economically regulated industries and regulatory agencies. In this section, we at-

tempt to identify the fundamental structure and incentive factors that produce this observed behavior. Since the same perverse performance is observed across all studied industries, it will not be necessary to explore the detailed structure and incentives on producers in each industry; it will suffice to assume that, where industry interests conflict with consumer interests, established firms will favor their own interests wherever possible. And, since command and control regulation presupposes weak or absent market forces,[4] we may assume the major counterincentives on firms for proconsumer behavior (beyond the fact that most industry people do not wish to harm consumers) in such conflicts comes from the regulation itself.

We may classify the suggested fundamental structure and incentive factors in three loose categories: (A) diffuse versus concentrated interest problems, (B) political setting problems, and (C) technical content and structure problems. In each paragraph below, we set out a fundamental structure or incentive problem. To give a feel for this problem, we usually also derive some behavioral consequences that result from it. In Section 4D, we then show how these fundamental structure and incentive factors in combination can explain the observed regulatory behavior of Section 2.

In order to anticipate potential problems, we have tried to be fairly exhaustive in setting out those factors that might affect direct economic regulation by an explicit regulatory agency or system of agencies. *We caution again that incentives produce general tendencies not absolute consequences.* We do not expect every structural feature and incentive listed to be present in every situation, and some incentives will be countered by others in ways not wholly predictable. Even alone, a given incentive will not be felt with equal force nor produce the most probable behavior in every organizational entity and individual. We emphasize these caveats because probabilistic exposition is often turgid and opaque. Therefore, for clarity and brevity, our language in this

[4] In some industries, weak market forces appear to be caused by poorly constructed or conducted regulation itself. In these industries, deregulation will induce effective competition. This is not the case in health care. The medical care system is in severe market failure. Deregulation will not produce effective competition without substantial restructuring of the private system. However, the present administrative design of large public health care financing programs makes such restructuring difficult and has tended to lock in the existing structure and incentive problems of the health care system.

section may frequently be more absolutist and less probabilistic than strict precision would commend.

A basic purpose of the analysis is to distinguish those structure and incentive factors that are fundamental from those that derive from more fundamental structure and incentives. If we try to alter only derived incentives, the more fundamental incentive forces may defeat us. Once the fundamental incentives are identified, we can survey the ones that are vulnerable to alteration or possible counterincentives and, thereby, design better policies.

A. *Diffuse Consumer Interests versus Concentrated Producer Interests*

A regulatory agency may be considered a referee between legitimate consumer interests and legitimate producer interests. But consumer interests are broad and diffuse and therefore difficult to mobilize through a regulatory process; whereas producer interests are sharp, concentrated, and, ironically, more easily mobilized in a regulatory process than in a market. Thus, a purely regulatory process unbalances the respective leverage of consumers and producers in favor of the producers. This is a central, almost inherent structural defect of command and control regulation that is extremely difficult to remedy.

(1) *Consumer interests are broad and diffuse, whereas producer interests are sharp and concentrated.* Consumers have many interests beyond any particular regulated good or service. While their collective gain or loss from a regulatory decision may be substantial, the individual stake of any single consumer is usually rather small. Moreover, most regulatory processes are lengthy, drawn-out proceedings, often lasting months or years, and entail considerable expense to prepare and represent one's case. Thus, most consumers have neither the interest, the skill, the time, nor the money to mount the necessary effort to represent their interests and influence the countless regulatory decisions in all the many regulated areas that affect them. In contrast, producer interests in each regulated industry are sharply focused on their regulated good or service; and regulatory decisions mean life or death to them. There are fewer producers to mobilize; their financial resources are larger; and they cannot afford not to spend the necessary time, effort, and money to hire the best talent in order to influence favorably a critical regulatory decision. Thus, they have the interest,

the skill, the time, and the money that consumers do not have. (Note that in a market, producers expend this skill, time, and money trying to influence consumer decisions through advertising and marketing; but, as long as the market offers real choices, each consumer has the ultimate leverage in his decision to buy or not to buy. Each consumer, not a regulator, is the judge.) As an oversimplified illustration, suppose a regulated system allows producers to extract a dollar from every American and put it in their own pocket. Each consumer is out a dollar, and the producers collectively garner $200 million. Obviously, producers will be willing to spend a substantial fraction of these gains to perpetuate such a system. They will give contributions to legislators who see it their way and oppose legislators who do not; they will conduct public relations campaigns on the virtues of continuing the system, etc. How much time and money will consumers spend to oppose producers when their stake, assuming they are even aware of it, is only one dollar? Obviously, not much. Thus, in cases where it must decide between consumer and producer interests, the regulatory agency knows that if it decides against the industry, a well-organized, well-financed lobby will be out to attack it, whereas no equally strong counterconstituency of the general public will rise up to defend it.

(2) *The leverage available to consumers in a regulatory process is difficult to mobilize and favors unrepresentative consumer interests.* Consumer levers to influence regulatory decisions include: lobbying regulators, lobbying elected officials, voting favorable officials in and unfavorable ones out, and boycotts and demonstrations. Spontaneous mass voter demonstrations or consumer protests require the least consumer effort but are unlikely to be triggered by incremental regulatory decisions. Also, they are hard to focus and hard to sustain long enough to gain permanent results. They are useful as a kind of blunt weapon—an outer limit that regulators and politicians will strive to avoid.

All the other levers are beyond the means of individual consumers and require organization and financing to carry out effectively. It takes skill, time, and money to become educated to industry complexities, gather and analyze industry information (not always obtainable by consumers), and prepare a case that will stand up to a well-prepared industry case. It takes further skill, time, and money to lobby that case through the regulatory process, court appeals, and legislative hearings. It takes a campaign to mount a nonspontaneous consumer

demonstration. It takes a campaign to elect favorable officials. The agency head is usually appointed, and the relevant legislators may be from different voting districts than the disaffected consumers. Also, voters seldom vote a candidate up or down on a single issue, let alone a regulatory issue that does not greatly impinge on them.

Even organized consumer groups appear to offer marginal or unrepresentative effect. Most consumers will neither participate nor contribute to such groups, both because the consumer has many other interests and because he will benefit from the group whether he helps it or not ("free rider" effect). Hence, these groups are characteristically undermanned and underfinanced, and the kind of consumers who do participate are seldom characteristic of all consumers. An exception to underfinancing occurs when a special interest group stands to gain from the consumer group and supports it with staff and money. In some cases, a group of highly motivated, zealous activists, usually with a larger ideology unsupported by a majority of consumers, can sustain a consumer group by sheer personal sacrifice. All these factors bias the kind of consumer voices heard by regulatory agencies and do not guarantee decisions in the broad public interest. Organized consumer groups do play a generally helpful, if usually marginal, role. But organized consumer groups appear inadequate to answer the problem.

(3) *The leverage available to established producers in a regulatory process is substantial.* Producers have the same levers as do consumers and more, and they are already organized and much better financed and positioned to use them. They can therefore exert a strong voice on, and strongly reward and penalize, regulatory decisions. Producers are already expert on the industry and have access to its data; therefore, they can prepare a solid case. They already have an experienced lobby with continuing contacts with the regulatory agency and other relevant government officials. They can mount strong public relations efforts with the public and government officials to cast doubt on or discredit an unfavorable regulatory decision or the agency itself. They can appeal an unfavorable decision and exhaust agency staff and funds (and consumer group staff and funds) in lengthy judicial proceedings on a single technical point, thereby diverting the agency from any other actions even should the producers lose. They can trade industry support on other issues for legislative support on industry issues (one-

issue consumer groups cannot do this easily). They can give campaign contributions to favorable legislators and to the opponents of unfavorable legislators, especially those on the legislative committee that oversees the regulatory agency. (Poorly financed consumer groups cannot.) All of these moves can jeopardize the reputation, authority, staff, or funds of the regulatory agency.

(4) *Consumers can seldom perceive most regulatory decisions, but they can perceive and oppose service failure and people put out of work even when in the consumer interest.* A final risk to the regulatory agency comes ironically from consumers themselves. Consumers are unlikely to recognize incremental regulatory pricing decisions that lead to a tight, efficient industry (proconsumer decisions). Hence, the regulatory agency garners little consumer support to counter strong industry opposition. Consumers are unlikely to recognize incremental decisions that lead to a bloated inefficient industry (proindustry decisions); hence, the agency gains little consumer support to oppose industry positions. But consumers can recognize regulatory decisions when they lead to temporary or continuing service failure or when they cause producers to fail and lay off employees (even if there is excess capacity in the industry that should be closed in the consumers' interest). Such events can produce strong consumer and political backlash (supported by the industry and its unions) against the agency.

We may summarize these diffuse versus concentrated interest incentives as follows: In a regulatory process, the consumer voice will be poorly represented and poorly heard compared with the producer voice. And the regulatory agency has little reward and great risk for proconsumer decisions that antagonize existing producers and great reward and little risk for decisions favoring existing producers. As a consequence, we can expect a general bias in regulatory actions favoring existing producers. One need not assume malice on the part of the agency (although outright capture is not unheard of). The agency will simply be conditioned by the incentive signals from the industry, the politicians, and the public to err on the side of existing producers whenever in doubt. (As will be seen in Section 4C, there is always considerable room for legitimate doubt.) The agency need never grossly violate the public interest in any single decision, or even perceive itself as doing so. But over time the accumulated weight of incremental, moderately, but constantly, biased decisions will even-

tually strongly favor existing producers over consumers. This structural problem appears extremely difficult to encounter, and it is only one set of powerful perverse incentives. We now turn to a second set.

B. *The Political Setting*

Regulatory agencies are created by government, operate within the structure of government, and are overseen by elected officials on whom they are dependent for authority, staff, and funds. Thus, regulation is inescapably imbedded in the political process, and this creates structure and incentive restraints on regulatory behavior. It is therefore simplistic to assume that regulatory agencies can be staffed with impartial, wise, and well-intentioned persons who can (or should) act unfettered by political pressures.

(1) *Americans distrust government and support an elaborate, almost endless set of legal safeguards to protect individual citizens and groups against arbitrary exercise of government power.* Americans tolerate substantial gain and loss of individual income, property, and well-being caused by private economic decisions and forces. For example, a company may close a plant that is the major source of a community's employment without significant public outcry, but Americans distrust any individual losses created by government action. Such action is viewed as a possible abuse of government power until proven otherwise. Any individuals or group experiencing losses as a consequence of government (e.g. regulatory) action may avail themselves of an elaborate set of constitutional and legislated due process appeal procedures, which can delay government actions for months and years. Elaborate administrative appeal procedures are usually written into all regulatory legislation; and, after these are exhausted, the aggrieved party may appeal to the courts. As a consequence, even when a government action would create great overall social gain (or failure to act would create great overall social loss), any individual or group who would experience direct loss as a result of the action can tie up the government endlessly by these appeal mechanisms. The converse is less true: individuals and groups who experience loss indirectly as a result of government failure to act have less recourse. They cannot appeal unless they can prove government was legally obligated to act, and the cause of their losses is more speculative and difficult to prove.

(2) *Interest groups have greater leverage on elected officials than do individual citizens or the broad public.* Elected officials are subject to the same diffuse versus concentrated interest incentives as are regulatory agencies, and they face the same imbalanced risks and rewards. Thus, politicians are reluctant to take actions which might create or offend one-issue interest groups. For example, while polls suggest the majority of Americans favor some form of gun control, a special interest group has forestalled any legislation because it commands a substantial body of one-issue voters; it makes no difference to such voters whether a politician is a statesman or a dunce, or what his views on other issues are, they will vote him up or down on his position on gun control—a skilled, well-financed lobby of these unrepresentative consumers and firearms companies will help him or hurt him. This incentive on elected officials reinforces the previous incentive described in Section 4B(1). A government action that would produce large, but diffuse, social gain at the expense of small, but concentrated, losses to a few individuals or special interests may turn these aggrieved groups into a one-issue constituency opposing politicians favorable to the action. But such an action is unlikely to create any broad counterconstituency of support for such politicians. (Also a small group on a national scale may be a very large group in the district of particular legislators.) The resulting reluctance of elected officials to create or offend one-issue interest groups unnecessarily, combined with the elaborate appeal procedures, creates what Schultze (1977) calls the "do no direct harm" principle of government behavior: government finds it extremely difficult and time-consuming to take actions that create direct losses to particular groups, even when these losses are greatly outweighed by the broad social benefit of the action. Since almost any major government action involves losses for somebody, almost all government action will be cumbersome and slow. The fundamental nature of these incentives makes the "do no direct harm" principle extremely hard to remedy. Americans are wisely reluctant to hedge legal safeguards that have served them well for two centuries. And it is extremely difficult to create representative pro-consumer counterforces to oppose the leverage of focused interest groups.

(3) *Regulatory agencies are subject to elected officials.* This rather obvious point simply emphasizes that the political forces on elected

officials are translated to the agency itself. Elected officials appoint agency heads, can call them up for hearings and praise or embarrass them, can modify the jurisdiction of the agency by legislation (or abolish or restructure it), and can decide its staff positions and budget. It is simplistic to assume that regulatory agencies can or should be completely insulated from oversight by elected officials. Moreover, elected officials, knowing they will be held responsible in any event, will not permit more than partial insulation of regulation from legislative authority.[5] This means that regulatory decisions will be determined as much by political muscle as by the broad public interest.

(4) *Unrepresentative oversight.* The legislative committee with oversight of the regulatory agency is not necessarily representative of the broad consumer public. It is representative only of the districts of the legislators on the committee. Moreover, since most committees have several responsibilities, only one or two legislators may give particular attention to the agency; or the committee may be controlled by its chairman or a few other powerful members. The industry can be counted on to reward or penalize these few legislators as much as it can for favorable and unfavorable decisions. As long as proindustry decisions do not upset their district voters or their influence with other legislators, these legislators face unequal incentives favoring the industry. And the agency must respond to these legislators whether they have resisted or succumbed to these incentives.

(5) *Noble language is cheap but tax monies are dear.* Noble statements win favorable press and public attention for elected officials and cost little. Raising taxes attracts unfavorable attention. Consequently, legislators frequently give regulatory agencies magnificent responsibilities (many of them technically impossible or prohibitively expensive) but appropriate inadequate funds to carry them out. Also, to avoid antagonizing industry interests, legislators may compromise the jurisdiction and sanctions of the agency. Indeed, compromise may be necessary to obtain any legislation at all. The resulting funding and authority incommensurate with responsibilities often lead the agency

[5] A not uncommon ploy of elected officials is to punt politically unpopular issues to regulatory agencies but to retain the power to overrule the agency if its decisions create too strong a political backlash. For example, the difficult issue of closing excess hospitals has been given to state planning agencies, but state legislatures have overruled the agencies when they actually threatened to close a hospital.

to spread itself so thin that it cannot regulate any aspect of the industry effectively. This structural defect is remediable by more realistic design, but only if the legislators are willing to enact it and resist the pressures against it.

(6) *Neither the political process nor the mass media lend themselves to subtle, complex arguments and strategies.* As social problems become more complex and government intervention in society increases, strategies to effect improvement become more complex and often require sustained effort over several years to produce results. These strategies are difficult to initiate and sustain. Americans are impatient with slow social processes and demand quick results, even when this is impossible. Various interest groups, otherwise supportive of a complex strategy, can emasculate that strategy simply by each fighting a particular element inimical to them; over time one or two vital elements get picked off in this way, frequently vitiating the effectiveness of the remaining elements. Or elected officials become anxious because of public impatience with the lack of quick results and divert effort to other, more precipitous schemes. The mass media make it difficult for legislators to explain complex strategies or defend them when results are slow in coming. The media want catchy statements and dramatic results, not complex arguments and evolutionary progress. Legislators cope with this by projecting an "image" so that voters who respond to this image have confidence that the legislator is acting as they would act in complicated situations. Hence, legislators are reluctant to take any action that could be taken out of context by their opponents' rhetoric and used to cloud their image. Complex strategies usually include several actions vulnerable to simplistic, rhetorical twisting, so public debate is often reduced to the lowest common rhetorical denominator. The result is that potentially effective, but complex and slow-acting, policies are often driven out by simplistic, ineffective policies.

(7) *Errors of commission have much higher political risk than errors of omission.* Elected officials, prosecutors, and the press obtain heavy rewards for public attention. Given American distrust of government, public attention is easily captured by government actions that fail. Hence, errors are sensationalized, and the responsible government official is then publicly flagellated by the press and political opponents alike. While public scrutiny is indispensable, this contributes to several harmful consequences. First, government becomes extremely

risk-averse. It is better not to act than to risk an action that might fail (or do direct harm) because the consequences of failure to act are always speculative and more easily defended against than the consequences of action. Second, government relies excessively on rules. Because they are not subject to detailed public scrutiny or trial in the mass media, private executives, unlike public officials, can defend their errors and failures by pointing to their "batting average." But the public official is berated for his "strike-outs" and not allowed to divert attention to his batting average. (This is particularly true when his strike-out has political implications that one set of proponents can sensationalize to use against political opponents.) His usual defense then is that he followed the rules. This diverts blame from the regulator to the rules. Then to show visible concern that the error not be repeated, government must promulgate new expanded rules. Since no set of rules can cover all conceivable cases, the possibility for expansion is infinite. Rule-writing is cheap, it is a visible (if naive) way to show concern that errors not be repeated, and it protects the bureaucracy in future actions.[6] These factors contribute to rapidly expanding rules that rigidify the industry and raise its costs and to the substitution of rules in place of discretionary judgment. To stand up to industry and cope with innovation, a regulatory agency must be able to exercise judgment and take reasonable risks.[7] Yet, democracy requires public scrutiny, and the incentive pressures underlying risk-aversion and excessive rule-making are not easily altered

[6] We do not imply this is the only factor contributing to excessive rules. Another important factor is that producers are always trying to beat the regulators. They constantly lobby for special dispensations and occasionally win. And they constantly ferret out every possible loophole. Thus, the regulatory agency is always writing rules to cover every conceivable situation and to close loopholes once found. For example, the regulations for Medicare, a simple program in principle but not in practice, now run to 10,700 pages with over 2700 revisions; and they are still growing. Since no set of rules can cover all the complexities of the real world, most often such excessive rules simply kill the flexibility of the regulatory system to deal with less common situations.

[7] Excessive risk-taking is inappropriate to government. Whereas private risks involve only private groups, government risks can affect an entire industry or the nation. Thus, conservatism is a wise course for government. If it appears that regulation cannot be effective without excessive risk, then it may be better to try other, incentive-based policies and use regulation only as a last resort.

by regulatory design, only by larger changes of attitude in society and more sophisticated legislatures and regulators.

(8) *Absence of public and legislative sophistication about incentives.* Government policies tend to ignore incentives both on regulatory agencies and on industry firms, and the power of these incentives consistently defeats the objectives of policy. Part of this policy failure to consider incentives can be attributed to incentive factors already mentioned: incentive strategies tend to be complex and slow acting; incentive strategies threaten the established positions of producers (i.e., favor well-performing producers over poorly performing producers) and may cause direct losses to particular groups, who will use their leverage to neutralize the strategy; incentive strategies are technically difficult to design (see Section 4C). But part of the policy failure to consider incentives arises because policy makers and the general public do not appreciate the central importance and power of incentives. Potentially, this can be remedied by education and information.

Failure to consider incentives has several adverse consequences. First, government fails to consider alternative incentive-based options that might work better than regulatory policy options. In some cases, well-designed regulation may be the best policy, but not in all. Second, government fails to build incentives into regulatory policies. For example, much existing regulation falls equally upon well-performing producers and poorly performing producers. If a firm cannot escape regulation by performing well, it has no incentive to perform well, only an incentive to fight the regulation. Third, government places unrealistic responsibilities on regulatory agencies, responsibilities beyond their capability, damaging the credibility of government. Thus, present regulatory design is frequently not only unrealistic about the incentive restraints on regulatory performance, it also heightens the incentives on industry to resist the regulation.

Lack of sophistication about incentives plus the vulnerability of complex arguments to simplistic criticisms produces another adverse government behavior: government tends to equate equity with uniformity. Policies that treat well-performing firms differently from poorly-performing firms can be attacked on the plausible, but erroneous, grounds that they are unfair. Because such policies threaten the established balance in the industry, the industry will resist them. And because performance criteria are usually complex and technically difficult to design (see Section 4C), the industry can usually cast doubt

on the criteria, making the claim of unfairness more plausible. On the other hand, policies and regulation that fall equally on all producers do not threaten the established balance in the industry and can be plausibly, but erroneously, defended as equitable (i.e., both the fat guys and the thin guys must go on the same diet).

(9) *Civil service impediments.* As employees of government, most regulatory staff are subject to civil service rules. Originally designed to protect against patronage abuse, civil service rules now seem almost fiendishly designed to overly protect incompetent and obsolescent civil servants and frustrate able ones. Only with extreme difficulty can a civil servant be demoted or fired; he can usually only be moved sideways or up. This removes a major incentive for individual performance. It also makes replacing obsolescent skills difficult. As circumstances change and require new skills in an agency, it cannot easily replace obsolescent staff with more appropriate staff unless it can find another agency that will take its obsolescent staff. Each skillful agency manager is thus trying to push his incompetent and obsolete staff onto other agencies. And new agencies often find they inherit everybody's discards whose skills seldom match the agency's needs. To obtain qualified staff, a typical ploy of agency heads is to try to create additional positions so they can bring in new people. Thus, bureaucracy grows in size without eliminating its deadwood. The atmosphere is debilitating to civil servants, creating a climate of indifference because poor work goes unpenalized. And competent civil servants become frustrated, and many eventually leave. This produces a selection mechanism that tends to force out many better performers and retain many poorer performers, who could not be hired privately at their government job and salary level. It is a credit to many dedicated civil servants that they perform as well as they do in this milieu. But this selection mechanism saddles many regulatory agencies with staff inadequately skilled to do battle with well-financed, entrenched industries.

Large numbers of overmatched, inadequately motivated staff not only dilute the quality of a bureaucracy's action, they make it sluggish. Even inadequately skilled staff want to justify their existence or at least fill in time; therefore, they invent work—an enormous amount of internal paper shuffling, procedural meetings, and memo writing goes on. Such make-work not only avoids or postpones the risk of real action, it proves to the individual and to others that he is working and that his job is necessary and worthwhile. All these individuals

attempting to avoid risk while pressing to make some little visible contribution to each action passing through their bureau inexorably slow government's ability to respond, despite many able staff in the bureaucracy. This major structural-incentive defect is technically remediable by civil service reform. Some progress is now being made on civil service reform, but the adequacy of the reform is unknown. Such reform is likely to be slow and resisted by public employee unions.

(10) *The relatively short terms of elected officials give them correspondingly short time horizons and militate against long-term strategies.* As noted, in a complex world effective strategies must usually operate over several years. But elected officials need quick dramatic results to which they can point with pride at the next election. They gain political advantage if they can avoid politically difficult strategies, and they gain little political advantage with long-term strategies whose benefits and credit will accrue mainly to their successors. Since incentive strategies are effective but slow acting and often involve political and economic pain before their benefits begin to show, they are often not very attractive to elected officials when compared with immediate dramatic actions which appear to be doing something even if they are ineffective (especially if any visible adverse consequences will not show up until after the elected officials have left office).

(11) *Command and control regulation subjects government officials to substantial temptation.* When regulatory decisions mean life and death to the financial interests of a large industry, there will usually arise occasions where a few unscrupulous industry officials will offer substantial financial inducements to legislators and regulatory officials to see things their way. The vast majority of business and government officials are honorable and would repudiate such tactics; indeed, as the other structure and incentive weaknesses of regulation suggest, illegal tactics are seldom necessary and quite legal tactics suffice. But bribery and corruption do occur in both the public and private sector. It seems wise to avoid policies that unnecessarily extend the opportunities for temptation that will impugn the integrity of government.

C. *Technical Content and Structure*

The above imposing array of incentives antithetical to good regulation is further compounded by the technical vulnerabilities of the regulatory

task itself. These vulnerabilities will be exploited by the forces opposing good regulation.

(1) *Industry inputs and outputs are numerous and complex; many are unknown; and information costs are often high. Costs and benefits are usually difficult to quantify; many are unknown; and most benefits are finally subjective value judgments.* The more extensive the regulatory intervention in an industry, the more difficult and expensive it becomes to acquire and analyze the necessary information at a central office for regulatory decisions. In the absence of any market forces, regulatory intervention is likely to be very extensive. Regulatory decisions may have to be made on the relative costs and benefits of literally thousands of types of transactions. The time and expense to obtain such information will be large. Moreover, benefits are often unknown, difficult to quantify, and involve inescapably subjective value decisions. (For example, what risks are produced by what concentration of asbestos fiber in water, and when does this risk exceed the cost of closing a particular factory with asbestos fiber effluents and putting its employees out of work, perhaps devastating a community's economy? This particular decision—the Reserve Mining case in Minnesota—required seven years of acrimonious judicial appeals and enormous legal expenses to resolve. As a second example, after ten years of hospital rate regulation by Medicare and several states, there is still no accepted way to determine whether or not a hospital is efficient.) The necessity for decisions before all information is known inevitably opens such decisions to challenge by adversely affected parties, who will appeal and demand new studies, more detailed information, and more rigorous criteria and methods. (In the above example, a rigorous research study of the cancer risk of water-borne asbestos fiber would require twenty or thirty years to reach definitive results because many cancer agents are slow acting.) Difficult and expensive as such information requirements and regulatory decisions may be in a static context, the problem is dwarfed by keeping all these thousands of decisions continually up-to-date with changing technology and circumstances in the industry. This latitude of uncertainty and incomplete information, coupled with endless appeal mechanisms, assures sluggish regulatory response when regulation is extensive.

(2) *No standard of comparison.* In markets, consumers make decisions by comparing the price and efficacy of one product with another. But a regulatory agency cannot accurately measure whether its industry

is efficient and effective by comparing one firm with another if all are led by regulation to engage in similar inefficient behavior.

(3) *Profits are measurable and can be compared; American attitudes toward profit are ambivalent.* One quantifiable cost factor in an industry is producer profits, and it can be compared with profits in other industries (usually using return on invested capital as the index). In the private sector, Americans aggressively seek profits; and economists recognize profit as a necessary signal to draw capital and promote efficiency. In regulated industries, Americans tend to equate profits with profiteering. Both because it is one of the few indices that can be measured and because the public is so sensitive to it, regulatory agencies and the press give obsessive attention to profits. The agency thus has a strong incentive to hold down industry profit to levels equal to or below that in other industries. We can also show that no comparable restraining force acts on industry costs. Because efficient costs of production are almost impossible to determine in the absence of comparable alternatives and unchallengeable standards, the simplest regulatory expedient is to accept most incurred costs as legitimate costs. This expedient is reinforced by producers. Efficiency is hard and demanding (for example, employees must be laid off when efficiency demands it). If there is no profit or other incentive reward for efficiency, producers will not seek efficiency. They will instead seek revenue growth and security. Larger revenues not only mean security, they mean higher salaries, especially to top management, and more money to engage in activities of interest to the firm and its employees. A second incentive to revenue growth arises if the regulatory agency uses return on invested capital as the measure of profit; more investment, demanding more revenues, means more profit. Hence, the industry will bend its considerable leverage to justifying revenue-generating activities, all in the name of the public interest. Finally, the regulatory agency knows that it will be judged to some extent on the health and tranquility of the industry (particularly in the absence of better measures) and that it will be castigated if there is service failure or employee layoff—see especially Sections 4A(4) and 4B(2). Lacking unchallengeable standards and comparisons to defend itself or to arouse the (difficult to arouse) public, the agency will have a tendency to accept incurred costs as legitimate costs, either voluntarily or under pressure. It will then set regulated prices equal (with minor modifications and much squabbling at the edges) to

incurred costs plus a small profit. And the industry will engage in cost-generating activities that increase costs in incremental and tolerable steps and so increase revenues.

(4) *Monolithic regulatory decisions cannot satisfy all diverse consumer tastes.* Even pluralistic markets cannot please all consumer tastes. But the more centralized and extensive the regulation of an industry, the more inevitable that broad-brush regulatory decisions must aim at average tastes and offend sizeable consumer minorities or do them "direct harm." Sufficiently unhappy consumers will appeal the decision to the agency or courts, which is proper and desirable. But often, because there is no downward pressure on industry costs, the agency will buy off aggrieved consumers by mandating the industry to engage in uneconomic behavior to satisfy them. This structural deficiency can be somewhat ameliorated by decentralizing regulatory decisions, but only if the decentralized regulators are under sufficient incentives to make proper decisions.

(5) *Complex regulation requires expertise usually available only from the industry itself.* Thus, the regulatory agency must usually acquire some staff formerly with the industry and who expect to return to the industry in many cases. Even when such persons attempt to be wholly objective, and we suspect most try to be, they cannot entirely avoid the industry perspective of their experience or their many friendships and loyalties in the industry. (Indeed natural friendships and loyalties are likely to emerge in the constant contact of all regulatory staff with industry people.) When such persons are deliberately less than objective, they can do much mischief. This structural weakness can be minimized by assuring a balance of expert staff in which industry personnel do not dominate.

(6) *The regulatory staff are always outnumbered.* For every regulatory official, there are hundreds of equally competent industry officials, well-paid to outsmart the regulatory agency. They will find all the holes overlooked by the agency in the regulations, and the sheer demands on agency staff will assure that not all perverse industry behavior will come to the attention of the agency.

D. *Consequences for Regulatory Behavior*

Under this staggering array of fundamental structural and incentive factors stacked against good regulatory performance, regulatory failure

seems less surprising than unavoidable. Most of the observed regulatory failure in Section 2 has already been discussed, but we quickly summarize a few of the arguments. The reader can supply others; indeed, a discouraging result of the analysis is how many factors combine and reinforce each other in so many different ways to generate the same undesirable behavior. This makes it difficult to find vulnerable points where incentives can be altered to produce improved performance.

Cross-subsidy of uneconomic activity results because the forces opposing cross-subsidy are broad and diffuse and therefore weak, while the many forces favoring uneconomic activity are concentrated and strong. The incremental cost of an uneconomic activity, when spread broadly and thinly and almost invisibly (no taxes need be raised) over all consumers, will provoke little tangible consumer pressure against the regulatory agency or elected officials. On the other hand, special interest producer and consumer groups desiring favored treatment can bring strong and continuing pressure on the agency. For example, citizens and merchants of a small town lobby incessantly for uneconomic air service or passenger rail service for their town; an airline or rail line (now Amtrak) agrees to provide the uneconomic service at a price below cost in exchange for a more profitable route elsewhere; the politicians of the area support the deal; the passengers on the more profitable line will never know they are subsidizing the uneconomic route; faced with these democratic forces, the regulatory agency agrees to the deal in the plausible name of a broader transportation system. Thus, cross-subsidy of such uneconomic activities becomes a principle tool for regulatory agencies to satisfy concentrated, unbalanced pressures from producers, consumer minorities, and politicians who want the activity and who might otherwise harm the agency if it resists.

Producer protectionism results from the same underlying imbalance of forces on regulatory agencies and elected officials mentioned above. It is important to note that these forces are not always anticonsumer or even proindustry, but they are always proexisting producers. It is existing producers who have the unequal leverage to protect themselves. While they may fight among themselves over market shares, they will unite against new competitors. The best means for existing producers to protect themselves against efficient new competitors is regulation of entry and innovation. Then when a new competitor or

innovation threatens existing producers, they can mobilize their considerable influence on the regulatory process to limit or exclude it. This is much cheaper and less demanding for existing producers than competing against the new competitor or innovation in a market. This explains why entry controls are so often supported, if not actively proposed, by producers. Regulators accept entry authority for a variety of reasons beyond just unbalanced producer pressure favoring entry controls. First, they usually believe they can abet the public interest with such authority (keep out bad producers and cutthroat competition) even though experience contradicts this hope. It gives them additional authority to satisfy the pressures upon them. They also can limit the spread of an uncertain innovation that might cause disruption for which the agency would be blamed. Finally, having created the peace among interest groups with various uneconomic cross-subsidies, the regulators cannot afford to let an efficient new competitor enter and drive out inefficient firms engaging in these uneconomic activities, thereby upsetting the hard won peace. These factors explain the widespread prevalence of entry controls in price-regulated industries.

Innovation is limited partly because of the inevitable sluggishness in keeping hundreds of regulatory decisions up-to-date, partly because existing firms will resist an innovation by any one of them or by a new firm that would upset the existing balance in the industry, and partly because any innovation is accompanied by a risk that it might not work out and therefore produce public dissatisfaction that will fall upon the agency. The innovation is then limited or excluded through the use of entry controls and regulated cost structures.

Inefficient operation derives from both the forces leading regulators to equate regulated prices with historical cost and the forces leading to entry controls on new firms and innovations. Because producers know that their costs are virtually guaranteed, that higher costs mean higher revenues, that there is no profit or other reward for efficiency or innovation, and that there is little reason to fear entry by more efficient competitors and innovations, then producers have virtually every reason to ignore the hard demands of efficiency.

In all these perverse behaviors, the rewards to the regulatory agency for permitting the perverse behavior are high and the risks are low, whereas the rewards for opposing the perverse behavior are low and the risks are high. No malicious or corrupt intent on the part of regulators need to be assumed. The incentives compel the agency to

buy the peace by assuring that nobody's share of the pie gets smaller; the agency satisfies conflict by allowing the size of the pie to increase so that it can offer increased shares or new shares to contending interest groups. The consumer gets stuck with the cost of the pie.

5. Structural Incentive Analysis of Health Care Regulation

The previous section has shown that general regulatory failure is not a consequence of incompetence or corruption or not trying hard enough or not having adequate regulatory power. It is the result of policies and regulatory design that do not adequately recognize the full structure and incentive difficulties facing good regulation. People in government are neither more nor less competent and well-intentioned than people in the private sector; people in both respond to the structure and incentives placed upon them by the system. This section considers whether there is anything special about health care that might mitigate these difficulties. In particular, is there anything that might lead cost regulation of health care to succeed where in other industries it has failed so badly? Our conclusion is that, if anything, the difficulties in health care may be worse, with one powerful exception.

First, regarding cost-benefit decisions, benefits of health care are even less quantifiable and less known than for most other industry products. Many health care services and benefits are almost indefinable and intangible (see Section 4C[1]). Second, the present health care system is more monolithic than most, and economic alternatives for comparison scarcely exist (see Section 4C[2] above; note, were it not for the few HMOs, almost no independent comparative practical standard to suggest the inefficiency of the traditional system would have been available). Third, health care regulation requires considerable medical expertise, and provider incentives are not all identical to public policy objectives (see Section 4C[5]). Fourth, physicians and hospitals are already well-mobilized to use leverage in the regulatory process; they have powerful, sophisticated, well-financed lobbies, and already dominate most health care regulation (see Sections 4A[3] and 4B[2]). Fifth, while consumers generally make adequate, if not perfect, decisions with respect to their health care, they cannot defend

these decisions with the expertise needed to stand up against providers in a regulatory process; coupled with their high respect, even awe, of providers, this lack of medical sophistication suggests consumers will be a poor counterbalance to providers in a regulatory setting (see Section 4A[2]). Sixth, medical care is almost a "sacred cow"; objective arguments on costs and benefits are extremely vulnerable to simplistic rhetoric (see Section 4B[6]); e.g., "human life has no price" can defeat objective evidence that much medical care has little connection to human life, that equal health can be achieved with much less medical care, and that some underemphasized types of health care can create more health per dollar spent than some other overemphasized types of health care. Any loss of human life that can be remotely connected to a regulatory decision will invite terrible harm upon the agency even if its decision was sound (see Section 4B[7]). These and other arguments suggest that health care regulation is not likely to be any exception to generally observed regulatory performance. If anything, it may be even more vulnerable.

There is one powerful exception to the above arguments that may vitiate this conclusion, at least in part. Unlike other regulated industries, in health care, government itself is a very large buyer. This gives government a substantial incentive to contain health care expenditures. Indeed, it is escalating public expenditures for Medicare and Medicaid that have continually pressured the government to intervene in health care in the first place. How large government expenditures must be before government will develop the political will to effectively restrain the health care system is not clear. The British government finances and operates virtually all health care and achieves excellent cost restraint, although it pays a substantial price in the bureaucratic rigidity, inefficiency, and undercapitalization of its health care system. The Canadian government finances and regulates most health care, but the system is largely private, and there are indications that some restraint is starting to occur. It is possible but not certain that present U.S. government health care expenditures are escalating sufficiently to produce effective controls eventually.

However, even if we assume that government has the will to restrain health care expenditures to a reasonable level, there is little assurance that it will do so in such a way as to eliminate uneconomic cross-subsidies, producer protectionism, rigidity, and inefficient operation. All the above arguments are still operative. Even if costs are restrained, we may simply get an inefficient, noninnovative, unresponsive health

care system for our money. Indeed, such protectionistic results may be the political price of gaining reasonable expenditure constraint. Effective expenditure restraint will create considerable political opposition from providers. Once expenditures are constrained acceptably, government would lose its principal incentive to intervene further in the system in order to make health care efficient and responsive. Therefore, as a political *quid pro quo* for constraint, government may well allow providers to allocate the constrained funds according to their professional interests and largely independent of need or efficiency.

We conclude that, with the exception of government as a large buyer of health care, the structure and incentives in health care regulation are even less conducive to effective direct economic regulation than in most economically regulated industries. It is possible, but not certain, that command economic regulation may contain costs; but, without substantial change in the regulatory incentive structure, such regulation may harm access, efficiency, effectiveness, innovation, and responsiveness to consumers.

6. Implications for Policy

The discouraging results of the foregoing structural incentive analysis suggest that command regulation of medical care is highly vulnerable to regulatory failure. Of course, any firm and final conclusions regarding a particular command regulation strategy must rest on a detailed structural incentive analysis of that strategy in comparison with alternative strategies. In some cases, command regulation may well be superior to the alternatives. But the sheer magnitude of structural and incentive defects in command regulation generically, many of them seemingly almost beyond the power of policy to alter, suggests certain conclusions.[8] Confronted with problem performance in the private sector:

> Market reform strategies, if sound and feasible technically and politically, appear more likely to work well than command and control economic regulation. Thus, policy makers should consider first

[8] Lest these conclusions appear too general, we have attempted elsewhere to design and critique in detail practical market reform and command economic regulation strategies that take the advice in these conclusions (McClure, 1979).

whether they can intervene to create conditions that will strengthen competitive market forces. Because effective markets have intrinsic incentives for efficiency and responsiveness, only modest regulatory oversight is needed. Therefore, inefficient producers usually cannot seek relief through regulatory influence because such regulation lacks authority to extend much relief. (Government bail-out of inefficient producers in a market is not unheard of, but it is infrequent because it is so visible.) While markets are not appropriate to all goods and services and market reform is difficult to design and achieve, it seems worth trying wherever it is appropriate.

Where market reform seems possible but inadequate alone, policy may do best to pursue both market reform and command economic regulation together, rather than give up on the market entirely. Because market forces and command economic regulation are highly incompatible, this combination strategy is not an obvious or easy solution and may well be impossible. Policy makers should probably try to maximize all possible market forces and reduce command regulation to an absolute minimum. Care should be taken in designing the regulatory structure so that neither producers nor regulators can, intentionally or unintentionally, use the regulation to escape market forces. Such a combination strategy, if it is possible, may help alleviate the weaknesses of either market reform or command regulation used alone.

Where market reform is impossible or inappropriate, command regulation is the only alternative. The regulation should then be structured, insofar as possible, to supply the incentives for good performance that an effective market would otherwise provide. Such performance-oriented incentives should be placed not only on the producers but on the regulators as well.

If neither a market reform strategy nor a command regulation strategy can be designed with structure and incentives superior to the existing private system, the best policy would be to do nothing until the situation is altered by natural causes.

In short, the structure and incentives of command economic regulation compromise the assumption, so seemingly simple and obvious on the surface, that direct public economic controls can easily remedy market failings over the long run. The basic argument for command regulation is not that it will perform terribly well. We have little experience or theory that this is likely. Rather, if a market reform strategy is technically or politically infeasible, there is no recourse but to command regulation. In this case, policy makers must either design a regulatory structure that alters the incentive weaknesses identified above sufficiently to outperform the existing private system or else content themselves with a less than perfect world.

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