Regulation : A Distinctly American Institution

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In the United States, recent years saw an explosion of interest in government regulation of private enterprises, among legislative committees and business associations as well as in the academic circle. This reflects, of course, the rapid growth of regulation itself, especially during the last two decades. In reaction, the administration initiated partial and gradual deregulation of airline and telecommunication industries lately, and is contemplating further deregulation.

While interest groups such as business enterprises and their organizations, labor unions and agricultural cooperatives may be equally or more important in influencing the shape of American industrial society, it is of utmost significance to understand the role of regulatory agencies. This is because the regulation in the present form is a distinctly American institution, by no means equally observable in other industrialized countries. Standing somewhat illogically between the free market and public ownership, this administrative form of intervention began to take roots as the state governments regulated public utilities and transportation in the nineteenth century. Federal regulation grew by leaps and bounds in its size and power, since the creation of the Interstate Commerce Commission in 1887.

The proliferation of government regulation heightened the cultural and ideological tension between individualism and communitarianism, the inescapable tradeoffs between efficiency and equity, and the contest between economic growth and environmental quality. Also of issue is the debate over the advantages and disadvantages of adversarial business-government relations compared with cooperative ones. At a preliminary look, the antagonism between business and government, a long-standing uniquely American tradition, seems to have resulted from the political power of the victims of the big business, and from the lateness in the evolution of public bureaucracy.

These issues and others are examined in the rest of the paper. Discussion of the growth, function and process of government regulation is followed by a section on the historical background. Later, an illustrative attention will be given to the first federal regulatory

agency, the Interstate Commerce Commission. Tentative evaluation, perspective and prospective, will close the paper.

1.

Government regulation of business in the United States began to take the present form in the last third of the 19th century, at the same time when modern big corporations took their roots. Prior to this period, Americans had placed their faith in the market that competition always protected the public interest; the early democratic ideal had agreed to the doctrine of minimum government interference. One way or another perception of the failure of the market competition grew, and regulation first appeared for those industries where this perception was greatest. Municipal authorities, and later state commissions controlled transportation, communication, water supply, gas and electricity industries. Since 1887, federal agencies participated.

Regulatory agencies have set prices and certified the services of utilities and of companies providing transportation of passengers and freight. Within the last two decades, regulatory controls have been extended to cover, directly, natural gas and petroleum products companies and, indirectly, health service organizations. Regulation has spread even further as state and federal agencies have been set up to control environmental quality and workplace health and safety conditions throughout all of industry and trade. By the 1970's, regulation had begun to have substantial effects not only on the provision of goods and services incertain markets but also on the overall economic condition of the country.

Traditionally controls have centered on regulating prices and entry of companies in interstate transportation, communications, electricity production, and pipeline transportation. The federal and state agencies performing these functions are indicated in Table 1. In most of these industries, price levels have been controlled by commission or agency review in courtlike proceedings on company requests for increases. At both the state and federal levels of government, commissions have also determined price differences for varying types of service and have set entry conditions into most or all markets providing these services. They have monitored service quality and extended service coverage to include new communities, customers and conveniences. These commissions and agencies were established to protect public interest from monopolistic or oligopolistic practices of the suppliers.

Regulation was not limited to such price-control and service-enhancement policies. It was part of a number of early attempts to improve health, safety, and working conditions as

Table 1. Industries Subject to Price and Entry Regulation

Industry	Jurisdiction and extent of regulation
Electricity generation	Federal Energy Regulatory Commission and 49 state agencies control prices; 35 state agencies certify service.
Natural-gas transmission and retail distribution	Federal Energy Regulatory Commission controls interstate transportation and 49 state agencies set rates for distribution.
Telephone services	Federal Communications Commission and 50 state agencies set rates, entry, and service conditions.
Airline services	Civil Aeronautics Board regulations set fares and entry conditions before the Airline Deregulation Act of 1978; 21 state agencies set fare and entry conditions interstate.
Highway freight services	Interstate Commerce Commission and 47 state agencies regulate rates; the ICC and 45 state agencies control entry into common-carrier services.
Railroad transportation	Interstate Commerce Commission and 44 state agencies set freight rates; the ICC and 26 state agencies certify entry into the provision of rail services.

Source: *The Challenge of Regulatory Reform: A Report to the President from the Domestic Council Review Group on Regulatory Reform* (Washington, D.C.: U.S. Government Printing Office, 1977), pp. 50-51.

well. Particularly important initiatives were the Food and Drug Administration, set up in 1931, and the Federal Aviation Administration, set up in 1948. They served as models for setting standards to improve product or service safety. However, the majority of federal agencies that are responsible for setting performance standards were established in the 1970's (See Table 2). The most significant of these are the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA). Both have had an impact on production conditions in almost every industry. The agency having the most comprehensive authority in a single industry is the National Highway Traffic Safety Administration, which sets performance standards for automobiles.

These regulatory organizations have mostly been justified on grounds that private producers fail to take account of the full social costs of their activities. Where this results in unhealthy conditions, controls should require the companies to provide more health and safety. The rationales of particular agencies imply different kinds of regulation, but the general basis of operations for all these new agencies is to prevent harm from a process, product, or their side effects.

How extensive is the coverage of the economy by regulation? The coverage of controls is indicated by accumulating industry by industry the share of national output produced

Table 2. Regulating Health, Safety, and the Quality of the Environment

Organization	Regulatory function	Year established
The Packers and Stockyards Administration, Department of Agriculture	Determines plant conditions and business practices in livestock and processed-meat production so as to provide healthful meat products.	1916
The Food and Drug Administration, Department of Health, Education and Welfare	Controls the labeling and content of foods and drugs.	1931
The Agricultural Marketing Service, Department of Agriculture	Determines healthful standards for most farm commodities and also sets minimum prices for milk in some areas.	1937
The Federal Aviation Administration, Department of Transportation	Operates air-traffic-control systems and sets safety standards for aircraft and airports to reduce accidents.	1948
The Animal and Plant Health Inspection Service, Department of Agriculture	Sets standards for plant safety and inspects and enforces laws relating to meat and poultry quality.	1953
The Federal Highway Administration, Department of Transportation	Sets safety regulations for interstate trucking services.	1966
The Federal Railroad Administration, Department of Transportation	Sets safety standards for interstate railroad transportation.	1970
The National Highway Traffic Safety Administration, Department of Transportation	Sets safety standards for automobiles so as to reduce highway accident fatalities.	1970
The Environmental Protection Agency	Develops environmental quality standards and approves abatement plans operated by state agencies to curtail individual industry pollution emissions.	1970
The Consumer Product Safety Commission	Sets product safety standards.	1972
The Mining Enforcement and Safety Administration, Department of the Interior	Sets mine safety standards.	1973
The Drug Enforcement Administration, Department of Justice	Controls trade in narcotics and drugs.	1973
The Occupational Safety and Health Administration, Department of Labor	Sets and enforces workers safety and health regulations to reduce work-related accident and disease.	1973
The Nuclear Regulatory Commission	Licenses the construction and operation of civilian nuclear power plants and other uses of nuclear energy.	1975

Source: *The Challenge of Regulatory Reform : A Report to the President from the Domestic Council Review Group on Regulatory Reform* (Washington, D.C.: U.S. Government Printing Office, 1977), pp. 50-54.

under regulation (as in Table 3). The national product of the public utilities and the transportation companies under the jurisdiction of price-regulating commissions accounts for more than 5 percent of total gross national product. When this regulatory process was extended to petroleum production, refining, and marketing in the mid-1970s, another 3

Table 3. Percent of GNP in the Regulated Sector of the Economy

	1965	1975
Price Regulation	5.5	8.8
Financial markets Regulation	2.7	3.0
Health and Safety Regulation	—	11.9
Total	8.2	23.7

Source: P.W. MacAvoy, *The Regulated Industries and the Economy* (New York: W.W. Norton & Co., 1979), p. 25.

percent of GNP was brought under agency serveillance. The financial sector, accounting for approximately 3 percent of GNP, typically has had controls on entry, service offerings, and interest rates, at either the national or state level.

By far the most significant growth of regulation, in terms of coverage of the economy, occurred with the establishment of agencies to increase workers' health and safety (OSHA) and to protect the environment (EPA). Their controls cover virtually every manufacturer regardless of industry. In practice, however, only a few industries were seriously enough affected to adjust pricing, production, and investment decisions; the other industries were not significantly affected because their particular processes allowed with virtually costless adoption of the rules or, more likely, because standards and enforcement had not been worked out for them.

The mining, construction, and chemical industries were regulated in the sense that large parts of their investments had been diverted to meet regulatory equipment requirements. The paper, primary metal, motor vehicle, stone, clay and glass product, and petroleum refining industries were not required to make such investments in plant and equipment, but their key production processes or products were controlled from specific work-safety rules and pollution-emission restrictions. These industries together produce almost 12 percent of GNP. Thus the regulated sector of the economy comprises nearly 24 percent of GNP (as shown in Table 3).

Another indicator of the growth of regulation is the total personnel employed by selected federal agencies. Table 4 evidently shows that the growth was constant throughout.

2.

Although regulatory institutions assume such a variety of functions as mentioned above, they can be classified into four major categories: policing, rationalization, standard setting,

Table 4. The Growth of Federal Regulation in America : Personnel of Selected Agencies, 1935-1977

"Economic" Regulation Agencies

	1935	1945	1960	1975
Interstate Commerce Commission (1887)	1,093	1,817	2,409	2,142
Federal Trade Commission (1914)	527	484	756	1,569
Federal Power Commission (1920)	70	723	850	1,320
Federal Communications Commission (1934)	234	1,757	1,454	2,022
Securities and Exchange Commission (1934)	153	1,249	1,000	2,150
Civil Aeronautics Board (1938)	—	385	766	713

"Social" or "Environmental" Regulation Agencies

	1970	1973	1977
Equal Employment Opportunity Commission (1964)	780	1,739	2,377
Environmental Protection Agency (1970)	3,702	8,270	9,550
Occupational Safety and Health Administration (1970)	—	1,285	2,306
Consumer Product Safety Commission (1972)	—	579	890

Source : Thomas K. McCraw, "Regulation in America : A Review Article," *Business History Review* 49 (Summer, 1975).

and interest representation.

The public interest image of regulation presumes that under the command of government directive businesses are forced to pursue goals which, left to their own, they would not pursue. Numerous examples of successful preemptive or policing powers exercised by regulatory agencies and the judiciary can be found. Antitrust doctrine has been consistently hostile to private agreements that create the danger of cartelization or other exercises of power against consumers.

Granting of sovereign public powers to private agents is another form of policing. For instance, the National Association of Securities Dealers, Inc., since 1939 has undertaken a major role in policing the trading practices of over-the-counter dealers. Under the constant threat of losing its autonomy to the Securities and Exchange Commission, the association has provided effective watchdog functions and disciplinary actions against member firms.

Another area in which regulation has functioned to police business behavior is in environmental, health, and safety regulation. The role of statutory agencies in assessing and setting acceptable levels of risk in these areas has been to open the process to scientific theories, information, and goals which historically had not entered into private business decision criteria. Thus, as well as directing business to meet new, often more stringent

standards, social regulation has forced business firms and their research divisions to consider outside sources of information in their own decision making.

Scientific rationalization was also a motive force behind the notion of industrial regulation. By replacing market transactions with publicly and privately planned factor procurement and output schedules, business-government associationalism could serve the public interest. The "progressive cartel" could regulate competition, not to maintain explosive prices, but to serve the ends of efficiency. Under what conditions were asscciational structures possible or successful? More particularly, can we refine the notion of rationalization as a function of regulation? In the 1930s rationalization of this type served to prop up ailing industries or to promote industries such as aviation that had yet to secure a reliable market.

Regardless of who benefits from business regulation, setting standards for products and services is always a central function in the regulatory process. Setting standards increases reliability and certainty in market transactions and in the relations between business and the state. Moreover, reliable and accessible information is important to consumers, producers, and government regulators. How and why government has assumed the function of standard setting in specific contexts is a continuing problem for students of regulation.

In addition to increasing the reliability of transactions between buyers and sellers, standards also served competitive and anticompetitive purposes in relations between producers. Standardization was a precondition for price fixing, since without it firms had no consistent criteria to compare their own product prices with those of competitors. On the other hand, standard setting could result from shared, rather than competitive, incentives among producers. Unlike voluntary price-setting associations, in which members had an incentive to defect from cooperative agreements, standard-setting associations created market signals that established the honesty and reliability of member firms in an industry to fail to comply with industrywide standards, then, was to signal that its product was presumptively defective or the firm itself dishonest.

If standards emerged inherently from private market transactions and were effectively enforced on the basis of private incentives, then how can one explain the functions that state regulators have assumed in standard setting? First, the state can lend legitimacy to privately set standards—a government stamp of approval, particularly in flodging or crisis-ridden industries, tended to engender confidence in the minds of consumers. But government standard setting can serve ends other than consumer confidence. In the securities industry, financial disclosure was a precondition to any form of effective market regulation. And

meaningful disclosure necessarily involved standard accounting procedures, which, by and large, did not exist prior to the creation of the Securities and Exchange Commission in 1934. Thus, in this case the impetus for standard setting came primarily from government, in alliance with the accounting profession. As a result, power over setting standard accounting procedures ultimately came to be shared between the profession and the commission.

Standard setting in the area of occupational health and radiation exposure was initiated by industry and professionals, with only marginal government involvement. The National Council of Radiation Protection, for instance, was a nonstatutory body which, unlike OSHA and EPA, had virtually no power to open the standard-setting process to sources of scientific information other than industry. It grew up simply as a device to facilitate communication between industry and professionals, and was replaced by statutory agencies as professionals with new and conflicting sources of information pressed for access into the tightly knit group that was setting exposure standards previously.

In the years since the New Deal, politics over the distribution of wealth and investment and the debate over corporate power and discretion have progressively shifted from political parties and Congress to administrative agencies and other public bureaucracies. Administrative regulation has become, more and more, an area for political struggle over health and safety risk in advanced industrial society, over the location and substance of investment, and over the social responsibility of business in American life.

A variety of explanations were offered for the dramatic increase in the interest-representation functions assumed by regulatory agencies since the 1960s. The fragmented structure of American political institutions provided one answer : if groups could not secure access through political parties or Congress, they turned to the courts or directly to the point of allocation —administration for representation. It is precisely this kind of institutional pluralism in the United States that has allowed "a radical redistribution of power since 1960s, without a redistribution of wealth." The courts were instrumental in realizing functional representation for new and underrepresented groups. Under the public interest mantle, the courts declared that previous administrative practices had systematically underrepresented some groups in American society. As a result, consumer, minority, environmental, and women's groups, backed by the force of law, waged political battles in areas traditionally limited to access by business alone.

Another explanation emphasized the formation and motivations of new interest groups in American politics. Leisure and intangible consumption have brought individuals together

into recreational organizations and that these voluntary associations have subsequently turned to political activity in order to have their concerns with environmental, quality of life, and health and safety issues represented in the formation of administrative policy. Other explanations noted the effects of foundation and public money, mass media and mass mailing techniques in lowering the costs of organization for groups seeking access to administrative procedure.

3.

What do these regulatory agencies actually do and how do they do it? Each regulatory agency begins with a different function, but a uniformity of process can be observed which allows generalizations about performance. Each agency has political appointees as executives to make decisions, a permanent staff to administer the decisions, and substantial financial support to carry out operations. Decisions and operations are to carry out the mandate in the statute provided by the legislature. As the agency develops, these procedures and decisions, if not goals, tend to resemble other agencies. A set of rather narrow practices becomes controlling with respect to case decisions. Thus the regulatory organization's behavior may well be predictable within a range.

Regardless of the industry being regulated, the various agencies, boards, and commissions use many of the same arguments and factual indicators of conditions. Although they respond to the requests of the companies for changes by taking a wide range of testimony and evidence, in practice certain physical and financial accounting measures of previous activities are used as the basis for their decisions. This accounting approach to evidence is constraining in ways that maintain decisions and thus establish the behavior of the regulated companies. In price-regulation cases, revenue increases are justified by changes in historical costs as shown in financial reports. In health or safety regulations, controls are placed on equipment specified by engineering studies. This results in present and near-future behavior set in line with past performance, and thus in marked stability when compared with change in the unregulated industries.

There are a number of factors, but principally two, that make for such operating uniformity. First, the legislative mandates of different agencies have been similar, in some cases going so far as to couch their purposes in the same language. For instance, the goals in the Interstate Commerce Act of 1887—stabilizing prices, expanding service, and promoting equity in railroad fare structures—were repeated in later transportation regulatory statutes.

Both state and national statutes establishing agencies to control the prices of electricity, gas, and telephone services repeated admonitions against discriminatory, unstable, and high prices, and most also set out requirements for more and better service in these industries. To be sure, the commissions controlling health, safety, and environmental conditions were called upon to solve different problems, but even then similarities of language in limiting controls to what was practicable in the market implied application of roughly the same process as for calculating costs in price regulation.

The second factor has been the Administrative Procedures Act and its recourse to court review. This general law sets requirements for open hearings, presentation of evidence, and case-decision justification in most of the agencies. By allowing the courts to review the agency's decisions for openness of process and due consideration of the evidence presented, the act naturally leads agencies to emphasize quantitative rather than judgmental or predictive materials. The courtlike proceedings under the act emphasize evidence on existing conditions, thereby taking less account of future or present opportunity losses from alternatives not in operation. The expanding scope of judicial review has encompassed issues not only as to whether a statute is being complied with, but also whether the procedures chosen by the agencies are "reasonable," and whether the results themselves are reasonable. The determination to avoid unfavorable review on these new issues has required the agencies to establish even more procedural conformity.

This case process has itself set limits on price increases in the public utility and transportation industries. The agencies evaluate requests for price or rate increases by holding them to the sum of recent period operating costs, depreciation, and taxes along with a "reasonable profit." The profit estimates mostly are arrived at by multiplying a determined "reasonable" rate of return by the capital rate base, which consists of the total undepreciated original costs of capital equipment. Once the agency has concluded what should be total expenses and profit, prices are then set by the company so as to result in revenues not exceeding this allowance. Of course, judgmental elements are part of this process, centrally in determining the reasonable rate of return. But even in profit determination there has been a tendency, as established by example and repetition, to use estimates within a narrow range since they come from publicly accepted sources, such as from accounting compilations of recent earned rates of return of other utility companies. In general the process has centered on the calculation of cost and profit averages from historical accounting data as the basis for future prices. Because of this, the results across price control agencies

have had a tendency to be similar across cases and over time.

The agencies conducting health and safety regulation have developed a process as well. What has evolved over the years in prolonged adversary proceedings are detailed quantitative specifications of equipment or operating conditions. These specifications are easier to certify and enforce than other kinds of standards. They are designed to control indirectly the company's performance as to health conditions, operating safety, or environmental quality. However, in a number of instances, the standards have become the focus of decision making to such an extent that they departed widely from performance goals. As with pricing controls, the courts and Congress have had their impact with respect to accountability, and this has resulted in a high degree of specificity in certification of operating practices rather than of the actual health effects in company performance.

4.

The growth of the administrative form of intervention has its deep root in the antagonism between business and government, a long-standing American tradition. It dates back to the 19th century anti-trust question.

The trust movement—that is, the powerful tendency of businessmen to cooperate with competitors in associations or mergers—grew out of a particular problem of industrialization. This was the problem of periodic industrial overcapacity tied to the boom-and-bust cycles of the late 19th century economy. Just as worldwide overcapacity lies behind the periodic "sickness" of such contemporary industries as steel, fibers, footwear, and automobiles, so in the late 19th century industrial overcapacity plagued the economies of all developed nations.

The underlying reason was the industrial revolution, which initially took the form of a revolution in production. Corresponding progress in distribution, marketing, and consumer purchasing power lagged behind production, and sometimes far behind. This created a serious periodic imbalance between nations' capacity to produce and their ability to consume. In some respects this sequence was natural and inevitable. However, it was dramatically serious in the United States between 1880 and 1920. As is now familiar thanks to the monumental study by Alfred D. Chandler, Jr., the four decades transformed the American economy profoundly; the present day industrial scene of the world was formulated almost entirely during the period. Mass production and mass distribution integrated in consolidated big corporations, managed by scientific techniques in carefully chosen organizational structure,

funded by modern financial market.... everything was established at the same period in a revolutionary speed. The truest measure of what was happening during this era, just as it is the truest measure today, was productivity. The best estimates suggest that the annual increase in total factor productivity, which had held remarkably steady at roughly 0.3 percent for most of the 19th century, began to rise very rapidly in the closing decades. So violent was this spurt that the figure for 1889~1919 reached nearly six times the rate that had prevailed for most of the 19th century. During this phase, then the industrial revolution was primarily a revolution in production and productivity.

With rising productivity came overcapacity, not only in the United States but throughout the industrialized world, as reflected in the worldwide price declines characteristic of the period. Among businessmen in every industrial nation, the natural initial response to overcapacity, especially in periods of recession and depression, was to combine with each other to limit the total output of their plants, maintain the price levels of their goods, and discourage the entry of new firms into their line of business.

Industrialists felt a powerful urge to maintain a market for their products, if necessary by temporarily selling below costs, if possible by cooperating with each other for the mutual protection of their capital and their own survival of gyrations in the business cycle.

In Europe, this inclination to combine in self-defense against overcapacity had very different results from those in the United States. The response was by no means identical all over the continent, but in general Europeans accepted business combinations far more readily than did Americans. Price and production cartels, set up in every country and in many different industries in response to the overcapacity problem, usually enjoyed the official sanction of the state. The law was actually on the side of cartels, and the machinery of the state could be used to enforce contractual articles of cartelization against rebellious price cutters. In Europe, with its large public bureaucracies long in place, and where government had always had a prominent role in the affairs of business, industrial overcapacity was in this sense simply another new problem for a mature state to help manage. The official sanction of cartels was a convenient way for governments to keep peace within troubled industries and among the major sectors of the economy—manufacturing, transportation, wholesaling, retailing. The rise and success of cartels in these sectors tended to soften and stabilize the industrialization process by protecting the vested interests of participating firms. Direct harm to individual companies was thereby minimized. Consequently, in Europe there were fewer of the internecine business wars so characteristic of the more fluid and indeter-

minate American context.

This is not to say that industrial peace prevailed on the continent during the late 19th century. It is clear, however, that in Europe the typical political battles pitted a fairly united business community against a powerful but factionalized labor movement. In the United States, by contrast, with its less mature proletariat, the labor question—despite periodic strikes and violence—was less salient. Instead, the customary political warfare found one group of businessmen faced off against another : carriers versus shoppers, commodity farmers against mortgage bankers, small wholesalers and shopkeepers against large firms whose marketing divisions were displacing traditional jobbers and retailers. Again in vivid contrast to Europe, the tiny size of the United States government meant that no public bureaucracy existed to manage these conflicts. Within such a context, the emerging overcapacity problem, compounded by the boom-and-bust business cycle, moved immediately into the realm of public controversy. And to a degree sometimes underestimated by scholars, it underlay nearly every major economic issue of the period : not only the trust question, but also the perennial and divisive battles over the protective tariff, the railroad rate problem, and the imperial quest for foreign markets to absorb surplus productions.

The initial response to industrial overcapacity in America took much the same form it took in Europe. American businessmen, like their counterparts abroad, energetically combined with each other in loose cartels designed to limit production, maintain prices, and divide markets so that all could survive. The array of formal and informal associations erected for this purpose within the United States in the 1870s and 1880s soon numbered in the thousands. Seldom, however, did these early cartels accomplish their purpose, because they encountered intractable legal obstacles. The common law and the national culture were so inveterately opposed to monopoly and "restraint of trade" that American courts refused to enforce cartel arrangements against recalcitrant members. Thus, in a fashion that would have been difficult in Europe, American businessmen participating in cartels were free to cut their prices in violation of the agreements or sell their products outside areas demarcated by the cartel. The passage in 1890 of the Sherman Antitrust Act formalized the common law's hostility and compelled the Department of Justice eventually to be an active opponent of cartel behavior. Despite the indifference of the first attorneys general who dealt with it, the act was soon to have an enormous and in part unexpected impact.

The same background has the passage of the Interstate Commerce Act in 1887, and the beginning of large scale federal administrative regulation. In short, it is a product of

the business-government antagonism, manifested by the political power of the "victims" of the big business, and by the lagging evolution of public bureaucracy.

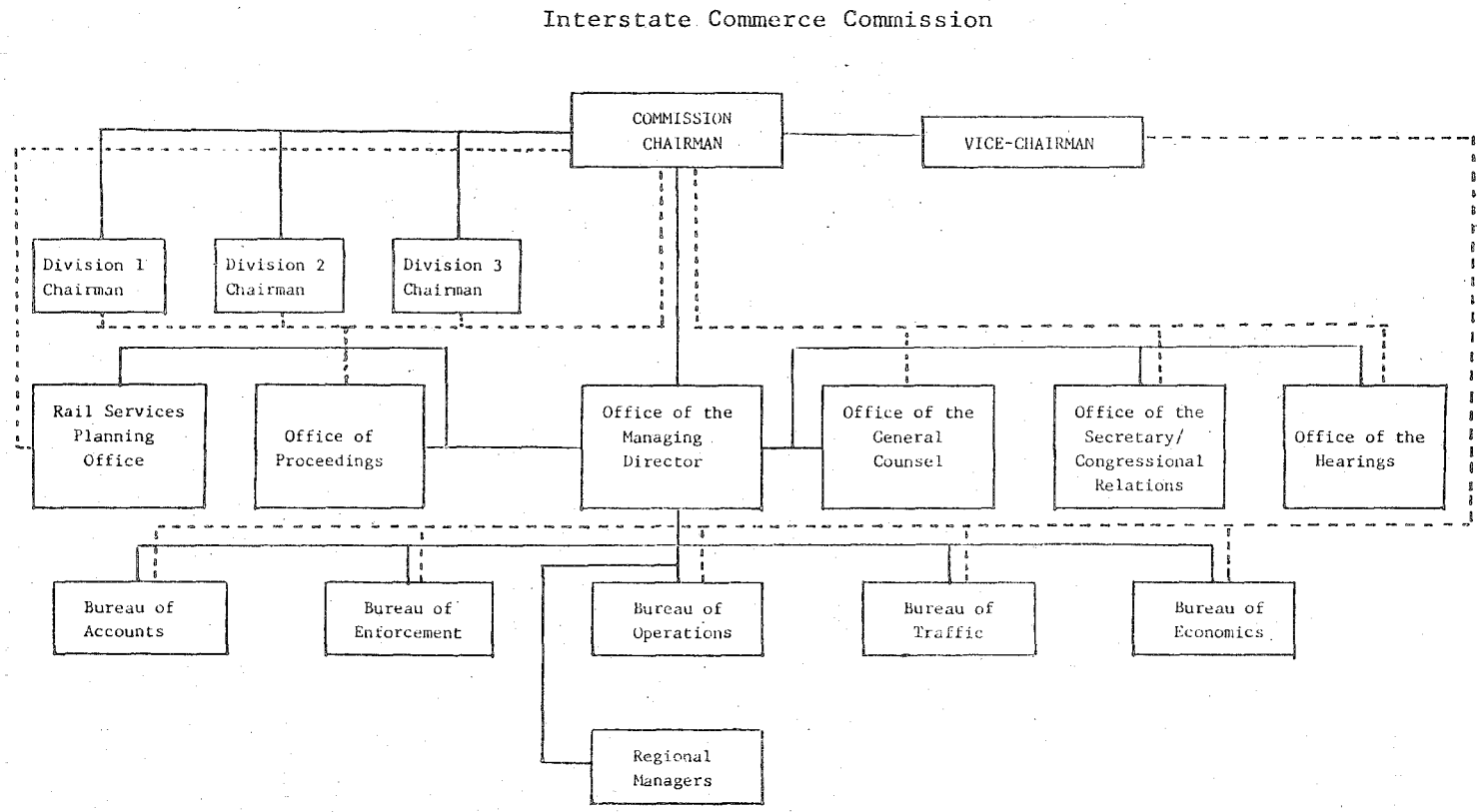
5.

Railroad industry sets the pattern of federal regulation as in so many other ways: the first big business, modern management, large scale fund raising, the first oligopolistic competition across state boundaries.

In the late 19th century, as the "railroad problem" grew to national scope, its nature became more and more complex. In the East the problem sometimes took the form of excessive competition, with too many roads handling too little traffic. In the West and South, by contrast, it could take the form of too little competition. Whole communities complained of monopoly, as they depended on single railroad corporations for their very existence. And in all regions the railroads often exhibited tendencies toward frenzied finance, corporate arrogance, and discriminatory pricing practices that, however logically they might flow from the economics of railroading, nevertheless appeared to violate basic notions of fairness. Underlying the entire "railroad problem" was the political incongruity of a democratic society in the role of handmaiden to one of its industries. Ultimately the railroad industry grew so powerful and vital to the national economy that continued reliance on state regulation was plainly futile.

The greatest significance of the Interstate Commerce Act of 1887 lay in its creation of the prototype federal regulatory tribunal. Most of the later federal commissions were more or less patterned on the Interstate Commerce Commission (ICC) in appointment and tenure of members and in relationships with the legislative, executive, and judicial branches of government (see figure). It is a measure of the success the ICC had in its first fifty years, or was perceived as having had, that the pattern was so often repeated in the creation of new agencies. The ICC begin life in 1887 with several missions, not all of which were easily consistent with each other or with the inherent nature of the railroad industry. The Interstate Commerce Act forbade pooling, rebating, and—with certain important exceptions—rate discrimination between long-haul and short-haul traffic. The statute insisted that railroad rates be "just and reasonable"; and it provided a new arena, the ICC, in which determinations of reasonableness could occur. The five members of the commission were to be appointed by the president and confirmed by the Senate, for the terms of six (later seven) years.

Fig.: Organizational Chart



Source : Glenn Porter (ed.), *Encyclopedia of American Economic History* (New York : Charles Scribner's Sons, 1980), p. 798.

In response to continuing problems within the railroad industry, and problems between the ICC and the judiciary, Congress steadily added to the authority of the commission and broadened its jurisdiction through a series of supporting legislation: among others, the Hepburn Act (1906), giving the commission power to fix maximal rates; the Esch-Cummins Act (1920), empowering the commission to set minimal rate as well and to regulate entry. In order to establish rate setting standards, the ICC had carried out an enormous inventory of railroad properties, so called the Railroad Valuation (early 1920s). The Motor Carrier Act (1935) added the regulation of trucking to the missions of the ICC and thereby increased its work load substantially.

Throughout its history the ICC has remained controversial. Sometimes, as in the Progressive era (1901~1920), it has been the target of industry criticism that it infringes on the prerogatives of management and wields pricing authority without responsibility for the consequences. More often, consumer groups have accused it of protecting the the carriers at the expense of the general public. Sometimes critics with entirely different viewpoints have joined in blaming the ICC for the almost uninterrupted decline in rail service. But the most damning criticism of the ICC has been on the grounds of economic inefficiency. This line of argument holds that the commission has prevented competitive market forces from automatically selecting the optimal modes of moving different types of freight, and that it has thereby injected an institutional inefficiency into the national system of freight transport, at great cost to society.

Of recent interest is the debate over the passage of the Interstate Commerce Act. The traditional view held that the ICC had been created to protect consumers' (farmers' and merchants') interests against the market power or the railroad industry, particularly the cartels. The revisionist view, pioneered by Gabriel Kolko, claimed that the principal agitators for the federal regulation were not the consumers but the railroads. The ICC would serve as a cartel manager, and bring to an end the cut-throat rate wars from which the railroads had gravely suffered by then.

These opposing views were conceived mainly through the investigation of court rulings, legislative documents, lobbyist's pamphlets, and other qualitative materials. In contrast, economists' approach to the question of regulation has been to build a formal model that will predict different behavior and performance of the firms according to different hypothesis, and marshall evidence against the model to determine which view fits the data better.

The first major work of economist on the railroad regulation by the ICC was that of

Paul MacAvoy. He examined the rates charged on dead freight transport and the profits of railroads that operated between Chicago and Atlantic seaboard ports from the mid-1870s to the late 1890s. His findings, among others, were that during the years before the passage of the Interstate Commerce Act (1879～1886), the collusive efforts among the trunkline railroads had been unsuccessful with low price-adherence and low profits. For the years when the power of the ICC was relatively strong (1887～1893), MacAvoy found far fewer instances of cheating.

Although he is modest in summarizing his results, his findings strongly suggest that the ICC itself promoted cartel stability, and are often referenced as supporting the revisionist view (or, "capture thesis") that the ICC came as a cartel manager. "The Interstate Commerce Commission sought to prohibit a good part of the rate pattern from rate wars." "The experience of the trunk-line railroads with rates, market shares, and profits indicates that an antidiscrimination law rigidly imposed on a cartelized market provides the means for effective cartel control."

Elsewhere in a somewhat technical paper, I scrutinized the work of MacAvoy and his followers, and developed an oligopoly model encompassing both price and nonprice competition. There, I tried to show that MacAvoy's finding could not be "explained away" by purely economic factors. Thus, while other external forces such as mergers and corporate reorganization may have changed the institutional environment, the federal regulation is possible to have altered the course of the troubled industry, the railroad.

6.

On the whole, the evolution of regulatory agencies in America suggests that regulation is an institution adaptable to many different ends and purposes. It is a flexible tool whose handle may be seized by reformers, business executives, bureaucrats, or consumers, and may be manipulated quite as easily for the particularistic goals of one of these groups as for the public interest. The functional diversity that has been the hallmark of regulation derives from several variables: the industry involved, the health of the economy, and the political climate. Regulation serves not only economic functions but political, legal, and cultural ones as well.

Now, the present situation does not represent a system constructed rationally to deal with present-day problems. And this essentially irrational aspect of business-government relations is the most important point about it. The system represents, instead, an evolutionary merger

of two processes: the first has to do with the early reactions of American government to industrialization and the rise of big business, and the second stems from a series of crises that has occurred since 1929. In combination, these forces have produced a complex network of competing governments, which reflect in new agencies the same principle of competition written into the Constitution as the separation of powers.

Government reaction in the 19th century can be seen as a remedy for the 'market failure'. The rise of enterprises whose processes of production or marketing had immense scale economies made the market suddenly inadequate. As Chandler has pointed out, the invisible hand suddenly became ineffective, and a series of visible hands were invented, in the form of modern management. This meant the rise of managerial science, and the appearance of new business devices—vertical and horizontal integration of corporations, the trust, the pool, the holding company, the oligopoly, the trade association, and the price leadership system. All these new devices aimed at neutralizing the built-in destabilizers of Adam Smith's classical market. And in other industries, widely regarded as 'natural monopolies', the market seemed to make no sense whatsoever, with the result that resort to the government was necessary for the welfare of both the business and the public. Thus, one basis for the present system is the new situation brought by 19th century industrialization; and one reason for the irrationality of the system is that some of the conditions that produced it have themselves been overtaken by technological change.

The second source of Big Government, after industrialization, has been the repeated national crises that have occurred over the last half-century. Starting in 1929, the United States has suffered—or has thought itself to be suffering from one serious crisis after another. The first crisis, of course, was the Great Depression. More than anything else, the Depression convinced the American electorate that classical economics did not work, that market failure was a clear and present danger, and that government intervention was the only solution. Thus, Franklin D. Roosevelt and the creation of new agencies, including such permanent institutions as the Securities and Exchange Commission, the Federal Communications Commission, the Civil Aeronautics Board, the National Labor Relations Board, and the Tennessee Valley Authority. And thus the explicit recognition of the importance of particular interest groups to the national welfare. This helped to lay the basis for the legitimacy of demands by innumerable interest groups. New dealers talked incessantly about the 'public interest,' even as their multitudinous new agencies laid the institutional basis for its fragmentation among particular interests. This was one thing about the New Deal that really was new,

and one can trace a line from New Deal politics to the legitimization of present-day demands by an endless roster of interests; particular industries, labor unions, ethnic groups, feminists, farmers, and so forth.

The next crises were Would War II and the subsequent Cold War, and the welfare programs in the 1960s, which made the American budget jump to an unprecedented level. In a word, the United States reached the strange situation of today not by rational choice but by an accumulation of crisis responses building on a system based on the principle of partial market failure.

Although most agencies originated within the context of reform politics, particularly in the Progressive and New Deal eras, their subsequent behavior often departed from the reform premises that underlay their creation. More than anything else, the inherent nature of the industries under regulations shaped the diverse experiences that the agencies encountered, the conflicting functions they performed. Some agencies, notably the Federal Trade Commission, sought to maximize competition in an increasingly oligopolistic economy. But others, such as the Civil Aeronautics Board and the state utility commissions, limited competition in order to promote stabilization and orderly development. That nearly every agency was perceived by the public as ideally devoted to low prices for consumers above all other functions led to numerous misapprehensions.

In recent years, all presidents and most members of Congress have promised to bring an end to excessive regulation in the United States. Members of the House and Senate have acted on these commitments by dealing with bills calling for decontrol in particular industries, for termination or sunset processes to apply to all regulating agencies, and for new procedures in major rule-makings that would require the agency to show that their rules were beneficial to the economy and society as a whole. However, the American economy will probably continue to operate under the legislation of regulation much as it now exists on the statute books for the time being.

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