Readings
of particular interest

Concentrated Efficiency

Productivity and Prices: The Consequences of Industrial Concentration by Steven Lustgarten (American Enterprise Institute, 1984); 52 pp.

A "concentrated" industry is one in which a small number of companies account for a large share of sales. An industry can come to be more concentrated in two basic ways: firms merge with each other, or the larger firms grow faster internally than the smaller ones. Many critics have argued that industrial concentration hurts consumers by giving sellers "shared-monopoly" power, meaning that a small number of sellers collude overtly or tacitly to raise prices. A presidential task force cited this rationale back in 1968 when it recommended breaking up industries in which four or fewer firms sold 70 percent or more of domestic output.

An opposing school of thought holds that concentration is usually an efficient response to market conditions. As firms grow larger, economies of scale may allow them to lower their costs. Moreover, concentration can result from a natural evolutionary process as efficient firms grow and displace less efficient firms from the market. If concentration results in greater efficiency, consumers are likely to get some of the benefits.

In this study Steven Lustgarten, professor of economics and finance at Baruch College, examines how concentration has affected productivity growth and product prices in the postwar U.S. economy. To the extent that the monopoly view holds true, Lustgarten says, increases in concentration should correlate with price rises but not with productivity growth. If the efficiency theory is correct, on the other hand, rising concentration should be associated with increases in productivity and relative declines in prices.

The author examined Census Bureau figures on manufacturing industries for the period between 1947 and 1972. He found that the industries that had the biggest increases in concentration also had the biggest gains in productivity growth, and that their rates of price increase were below the average of all industries. Lustgarten also found—in a seeming but not real paradox—that industries with large *decreases* in concentration also enjoyed better than normal productivity rises and lower than normal price rises. This suggests that changes in concentration, one way or the other, signal technical changes that are associated with higher productivity. These changes sometimes reduce and sometimes increase the optimal scale of operations. Industries in which technology and productivity are not advancing rapidly tend, on average, to keep their existing structure.

The author also found that these effects were most pronounced in industries where output was growing faster than the average. The causal link between growth and structure-affecting technological change may be operating in both directions, he says. On the one hand, fast-growing markets may be among the first to incorporate innovations. Conversely, cost-saving innovations are themselves likely to stimulate the expansion of a market.

All these results are consistent with the efficiency theory. Both producers and consumers gained as a result of concentration, the author found: the prices of the companies' products were relatively lower, but rates of profit were higher.

Another factor related to concentration is the rate at which firms enter and leave an industry. Net entry generally reduces concentration, while net exit generally increases it. Entry and exit by firms also affect the data on industry productivity; even if the productivity of each particular firm remains unchanged, the entering or exiting firms may be more or less efficient than the rest of the industry and thus may pull the average up or down.

This affords another test of the efficiency theory of concentration. If the theory is true, firms that exit an industry should on average be less efficient than the firms that are left behind. If the monopoly theory better explains concentration, then it will be the smaller firms that will most often be forced out of the industry—perhaps by predatory pricing or excessive advertising by the largest firms—whether or not the smaller firms are in fact less efficient. The evidence shows that the industries with the highest rates of net exit had higher productivity growth and lower price rises than the average, which tends to support the conclusion that less efficient firms were leaving those industries.

Lustgarten's evidence suggests that if profits go up when an industry consolidates, it is typically because costs are lower, not because prices are higher. It also implies, he says, that "public policy that attempts to constrain the growth of large firms or to force divestiture will very likely prove harmful to consumers."

Gas Rationing by the Numbers: Oddly Ineffective?

"The Effectiveness of Odd-Even Gasoline Rationing" by Michael R. Metzger and Robert S. Goldfarb, in *Atlantic Economic Journal,* vol. 11, no. 4 (December 1983).

During the oil crunch of 1979, many states tried to cut down on long gas lines by adopting the "odd-even" system of gas rationing. There was little discussion at the time of whether the technique was actually working as planned or could be expected to work in theory. Michael R. Metzger and Robert S. Goldfarb of George Washington University argue in this paper that the effects of odd-even rationing are ambiguous and that it may even make gas lines longer in some cases.

The authors reason as follows: Under the odd-even system a car owner is allowed to buy gas only at even-day intervals, such as every two days or every four days. Some consumers had already been filling up every two or four days on average, and thus would not be much affected by odd-even. A consumer who had typically been filling up every five days, however, would have to alter his behavior under the rule. If he chose to buy gas every six days, then his appearances in the gas line would decrease, and the system would work as intended. If instead he decided to fill up every four days, he would increase his appearances, which would make the lines longer. The authors believe that the typical consumer in such a situation would be likely to switch to more frequent instead of less frequent fill-ups, because the risk of running out of gas on the fifth day, given the uncertainty of day-to-day driving needs, is more worrisome than the time loss involved in filling up more often. On the other hand, the odd-even system will reduce the frequency of fill-ups by certain other kinds of car owners, such as those who had been filling up every day. The authors argue that, under plausible assumptions about how many drivers fall into the various categories, the rule is unlikely to reduce lines significantly, and may even increase them.

Whatever the rule's "first-order" effect on gas lines turns out to be, it will tend to generate a "second-order" effect in the opposite direction. If gas lines shrink, some formerly discouraged drivers will be tempted to get in line, and similarly if lines get longer some drivers will drop out. The real price of buying gas consists of a cash price and a time or inconvenience price, the authors note; and although states may succeed in substituting one sort of inconvenience cost for another, they are unlikely to reduce the combined cost so long as demand remains unchanged.

Government in the Drug Labs

"Public Policy and Drug Innovation" by James Harvey Young, in *Pharmacy in History,* vol. 24, no. 1 (1982), pp. 3-31.

Recent years have seen continuing controversy over whether federal regulation is unduly slowing the introduction of new medicines. As James Harvey Young recounts in this article, government's role in the process of drug innovation has varied considerably over the years. Young is professor of American social history at Emory University.

Monarchs in early modern Europe and legislatures in colonial America occasionally

granted bounties to promoters who agreed to divulge sought-after secret medicines and cures. Ipecac, the medicinal root of a Brazilian shrub, first became widely known in this way. This prerogative eventually was regularized into the process of patenting. In England the first patent for a compound medicine was issued in 1711, in the United States in 1796. Most "patent medicines," however, were not actually patented. Instead their makers protected themselves through secrecy, advertising, and distinctive packaging: "Proprietors patented the shapes of bottles, not the formulas within."

Drug patents became truly important only after synthetic medicines were first derived from coal tar in the late nineteenth century and brought into wider use from the 1930s on. The patent system made it profitable for firms to carry out intensive research, and competition in research became the driving force in the drug industry.

From the nineteenth century on, governments also took a more direct hand in stimulating drug research. Some of the more paternalistic, such as Germany, Japan, and Imperial Russia, established state laboratories. For a long time the U.S. government's only operation of this sort was the Hygienic Laboratory of the Marine (later Public) Health Service. That laboratory later evolved into the present-day National Institutes of Health, which have played a major role in drug development. In the United States and elsewhere, wars have been a great stimulus to drug innovation and to government involvement in the affairs of the drug industry.

At the same time that a massive research establishment was developing to discover new drugs, an equally massive regulatory establishment was developing to restrain their use. As early as 1848 Congress barred imports of adulterated drugs, after the Mexican War resulted in a drug-import scandal. Serum and vaccine products were regulated in 1902 after contaminated vaccine caused ten deaths. In 1906 a quarter-century-long campaign resulted in the Pure Food and Drugs Act, which placed modest restraints on patent medicines. Intensive restrictions on the safety of new drugs came along in 1938 after a hundred people died from taking sulfanilamide, the first of the "wonder" drugs, that had been put in liquid form by the use of a toxic solvent. In 1962, after the thalidomide affair, Congress passed the Kefauver amendments which require that manufacturers prove efficacy as well as safety before selling a drug—even though thalidomide had been blocked by the existing safety rules and would not have been blocked by an efficacy rule. The Kefauver law also put new controls on clinical testing, manufacturing, and advertising and provided for post-market surveillance of new drugs.

Some time after the Kefauver amendments were put into effect a critical reaction finally set in. The Parke-Davis firm reported that when it introduced an adrenalin preparation in 1938 it had to file with the Food and Drug Administration a report of twenty-seven pages; in 1948 a new expectorant took seventy-three; a new contraceptive in 1962 required 12,370; and a new anesthetic in 1968 required more than 72,000 pages in 167 volumes. Between 1960 and 1973, according to another report, the average length of time for a drug to get through the regulatory process increased from 2.7 years to 6.6 years. Industry began to complain that the regulatory process was stacked against it.

Of course, advances in the complexity of new drugs and in testing techniques would have made industry's task harder even without regulation. Both economists and clinical pharmacologists, however, soon began to second the charges. In 1969 pharmacologist Louis Lasagna charged that "an inefficient and cumbersome [regulatory] system" was leading to a "lag in new drug development." Lasagna and William Wardell concluded in one study that Britain, with more flexible standards of drug admission, had access to many useful drugs that were still unavailable in the United States.

The FDA itself, and a number of its supporters, consistently downplayed the importance of this "drug lag." Several FDA officials advanced the "well-is-dry" hypothesis—that science had exhausted the basic biological knowledge from which new drugs had sprung. To the extent that there was a problem, they blamed inadequate staffing. (In fact, a former FDA commissioner said, the decline in new drug approvals began seven years before Congress enacted the Kefauver amendments.) Moreover, they argued, it made sense to scrutinize drugs heavily in advance because it was difficult to get them off the market once they were approved.

Nonetheless, the agency has begun to adopt changes intended to speed up the drug approval process. At the same time, the advent of genetic engineering and other scientific advances has brightened the outlook for drug innovation. Accordingly, Young says, the fears expressed by some economists that drug innovation would be choked off entirely now seem too pessimistic.

The Wages of Nationalization

Nationalized Companies by R. Joseph Monsen and Kenneth D. Walters (McGraw-Hill, 1983).

Western Europe is usually considered part of the capitalist world, but more than half of its fifty largest companies are owned as a whole or in large part by governments. Among them are such familiar names as Renault, Volkswagen, Alfa Romeo, BMW, British Leyland, Airbus, and Rolls-Royce. Moreover, state firms dominate such older industries as coal, steel, railways, and shipbuilding; but they also publish leading newspapers, develop computer software, bake cakes, and run hotel chains, according to this survey by R. Joseph Monsen and Kenneth Walters of the University of Washington. The public sector accounts for 65 percent of total investment in Austria and 55 percent in France.

Government ownership is more widespread in Europe than in the United States and Japan, a fact that is sometimes ascribed to Europe's strong socialist tradition. Monsen and Walters give another explanation: "Much of the nationalization in Europe in the past decade occurred under right-of-center governments that felt compelled to rescue failing companies." In Sweden, the recent Conservative government "nationalized more property in four years than the Social Democrats had in forty-four years."

Once a government starts to give continuing subsidies to an enterprise, it comes under political pressure to socialize the (potential) profits as well as losses of the venture. The authors note a number of other reasons for nationalization, among them to combat the influence of foreign multinationals, to give the government access to the "commanding heights" of the economy for purposes of economic planning, to placate ideologically minded socialists, and to maintain a national presence in such high-profile industries as airlines. Some firms wound up in the public sector "by accident"; Renault was nationalized because its former owners had collaborated with the Nazis, and Austria inherited most of its huge public sector from a Nazi occupation government.

In recent years the governments of France and the United Kingdom have been pulling in opposite directions on the issue, amid intense political controversy. The Thatcher government in Britain has had only limited success so far in rolling back that country's large public sector. Although it has sold off part of its stake in several companies, including British Aerospace, it has kept a controlling interest in many of them and sometimes a veto power on the companies' boards. Also, the firms that were denationalized were the profitable ones: the Thatcher government has not managed to unload the major money losers in the public sector, such as British Leyland, British Steel, and the National Coal Board. Meanwhile it has plowed new subsidies into state-owned ventures in such areas as microprocessors and biotechnology.

In 1982 the government of newly elected President François Mitterrand nationalized large parts of the French economy, including several major industrial firms and most private banks. France's nationalized sector now accounts for more than a third of electronics, office-equipment, and glass output, and more than half of chemicals, metalworking, and synthetic textiles. Although Mitterrand has forsworn further nationalization, French state companies have continued to diversify aggressively by buying companies at home and abroad. In this country, for example, Renault has bought Mack Trucks and a large stake in American Motors.

Public enterprises behave differently from private enterprises in several respects, the authors note. The government typically appoints the chief executive officer, and company managers have less latitude than private managers to make business decisions on their own. Elected officials, not the managers they appoint, have the final say on such matters as pricing, where to locate plants and when to shut them down, and often pursue what are conventionally called non-economic goals in these areas.

Monsen and Walters cite many appointed executives who lost or quit their jobs over disagreements in policy, but were unable to find any cases in which one was replaced for failing to earn a high enough rate of return.

Labor relations are also distinctly different in the public sector. Since unions are bargaining with the government (directly or at one remove), negotiations can become a test of the administration's generosity and political responsiveness rather than a test of just what the market (and the company's customers) will bear.

Most, though not all, nationalized companies lose money. Among the exceptions are state oil companies and some state monopolies in liquor, tobacco, salt, and matches, many of which were originally set up as revenue sources. Twenty of the twenty-five largest state-owned firms in Western Europe lost money on average in the decade 1972–81, compared to only one of the twenty-five largest *private* firms. Nationalized companies trail private concerns by most financial measures, including sales, physical output, profit, and taxes paid—all measured per employee—as well as sales per dollar of investment and return on sales.

Charting the "Global Public Sector"

Regulation of Business by International Agencies by Mary A. Fejfar, preface by Murray L. Weidenbaum (St. Louis: Washington University, Center for the Study of American Business, 1983), 98 pp.

This report catalogues the growing trend toward regulation by international organizations. At the United Nations and its agencies, the author says, this trend is still in its infancy. Other transnational bodies, however—most notably the European Economic Community and the Organization for Economic Cooperation and Development (a group of industrial countries)—have a much longer track record. These latter groups, unlike the UN system, do not aspire to universal membership; but their experience nonetheless offers a number of useful generalizations.

Regulatory endeavors have repeatedly moved along a spectrum of stringency, Fejfar says, starting out as simple, vaguely worded advisory guidelines and eventually serving as the basis for legally binding rules targeted at particular products or activities. Even if a rule never becomes legally binding, it can have an important impact. For example, Fejfar says, although the UN is unlikely to adopt its proposed code of conduct for multinational corporations in binding form, a voluntary code could provide a plausible basis for the UN to establish a vast monitoring apparatus that could begin taking a day-to-day interest in the affairs of global business. Likewise, although the UN's infant formula code is not legally binding on the countries that signed it, consumer groups are pressing for the EEC (and individual countries) to adopt it into law. Voluntary guidelines, Fejfar says, serve as stalking horses for mandatory measures.

The author lists existing and proposed rules according to the functional business categories they affect: operations, marketing, finance, technology, services, and information. Some regulations under development, like the UN code of conduct for multinationals, would affect all six areas. (The code would set standards for businesses operating outside their home countries on a wide variety of matters ranging from plant siting to the creation of subsidiaries.)

There is a major flurry of activity in the area of employment practices, especially layoffs and plant closings. International Labor Organization conventions adopted by some countries require employers to notify employees and government in advance of mass dismissals and to abide by an appeals process. The "Vredeling" proposal, now before the EEC, would require companies to institute employee consultation and participation in management decisions, and another EEC directive under study would grant part-time workers parity of benefits with their full-time colleagues.

Both the UN and the OECD are considering the regulation of corporate accounting procedures (the EEC already requires companies to issue detailed public financial reports about their operations in member nations). The proposed UN code of conduct for multinational corporations would regulate the internal prices at which firms transfer goods between subsidiaries.

The OECD and the Council of Europe have developed rules on the regulation of interna-

tional data transmission, an area that has received regulatory attention from many individual countries as well, especially in Europe. The rules regulate the collection and use of "personal" data such as information on individual suppliers, buyers, and employees. Although the rules are often defended on grounds of privacy, the author says, the major backers have included domestic data processing industries seeking the equivalent of protective trade barriers.

International agencies are also moving to regulate the licensing and sale of high-technology products or services to developing countries. At the UN, developing countries are demanding that the 1883 Paris Convention, which formalizes international protection of patents and related intellectual property, be renegotiated in their favor. Under their proposals, if an inventor does not use its invention in the country in which it was developed, the government will be able to declare the patent forfeited.

As these examples indicate, the UN has carried the principle of redistribution from rich to poor countries into some seemingly unlikely areas. (By comparison, EEC and OECD rules are not much concerned with redistribution.) Many of these measures have been advanced as steps toward the New International Economic Order, which envisions a massive transfer of resources and wealth from industrialized countries to developing countries. But redistribution, according to Fejfar, is not the only goal of the new international regulation. Other goals include paternalism—the protection of world consumers from the consequences of their choices—and protectionism—the encouragement of self-sufficient production in various countries.

On the paternalist side, the UN Economic and Social Council is considering a code on consumer protection that would regulate the advertising and marketing practices of multinational firms. In addition, among the products targeted by international consumer groups for future regulatory action are not only the usuals —pharmaceuticals, cigarettes, chemicals, pesticides, alcohol, and "junk food"—but also electronic teaching aids, vitamin tonics, cough syrups, carbonated drinks, and coffee. If the example of the UN's infant formula code is followed, such efforts may include bans on free samples and on public and point-of-sale advertising and promotion, along with labeling requirements.

On the protectionist side is the 1983 Liner Code promulgated by the UN Conference on Trade and Development, which provides that 80 percent of ocean shipping tonnage between two signatory countries must be allocated equally to those countries, leaving 20 percent for independent shippers. The idea is to promote ownership of shipping industries by third world countries, especially those that export raw materials. This code, along with other UNCTAD measures, would limit "flag of convenience" or "open-registry" shipping, such as the Liberian and Panamanian fleets; some developing countries have urged the UN to single out these fleets for specific sanctions.

Many international regulatory initiatives partake of all three purposes. The efforts in the United Nations Educational, Scientific, and Cultural Organization to regulate the media through a worldwide press code should be seen as an integral part of the process of regulation, Fejfar says, rather than a fluke. And with the passage of the law of the sea treaty and the lesser-known moon treaty, both of which attempt to establish centralized international regimes for the purpose of overseeing the mining process and collecting royalties, the cornerstone of a global public sector may already be in place.