

MARKET STRUCTURE IN AGRICULTURAL INDUSTRIES: AN EMERGING POLICY ISSUE?

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A few months ago the Sunday *New York Times* raised the question, "A Meatpacker Cartel Up Ahead?" (Robbins). At about the same time, in an article discussing the sale of the Farr Feedlot in Greeley, Colorado, to National Farms, a Bass brothers operation, the Ohio Farmers Union newsletter stated, "What had been a textbook case of many firms engaging in price competition is converting into industrial-style oligopoly." A couple of months earlier, an article in *FarmFutures* reported, "Of . . . immediate concern to producers . . . are fears that (the) trend toward fewer packers will soon lead to a less competitive market for their livestock" (Charlier).

These and other stories in the popular press could lead one to believe that, after several years of docile acceptance of industrial merger delirium, the public has come to realize that there might be a societal interest in the structure of markets. My purposes are to: 1. examine the extent to which concentration of market power exists, 2. briefly review how the welfare of society is affected and 3. identify some policy options for dealing with market structure if, indeed, it draws new attention as a public policy issue.

Market Structure as a Policy Issue

This issue deals with the concentration of market, or economic power, among a few, relatively large business firms. Economic traditionalists refer to this as monopoly or variants thereof. More recent economic thought encompasses aggregate or conglomerate concentration (Caswell; Mueller). John Kenneth Galbraith in his twenty-year reflection on his seminal work, *The New Industrial State*, called it ". . . the promiscuous exercise of power in modern economic life by the large enterprise" (1988, p. 376).

A.C. Hoffman in his 1980 fellows address to the American Agricultural Economics Association (AAEA) stated, "The rise of economic power and its replacement of the Invisible Hand of Adam Smith as the regulator of economic activity is surely one of the most important

developments of the century” (p. 866). Evidence of high, and generally increasing, industrial concentration abounds. For example, census data show that the largest fifty corporations control one-fourth of all U.S. manufacturing activity. Further, nearly 10 percent of all U.S. manufacturing and mining assets were gobbled-up in corporate mergers during just the first four years of this decade (Geithman, p. 265).

Among food manufacturers, the largest 100 firms control about 75 percent of all assets. About 25 percent of all food products are sold in oligopolistic markets and another 25 percent in markets dominated by a few sellers (Mueller 1983, pp. 855–856, 859). The number of food manufacturing industries with four-firm concentration ratios (CR4) below 35 percent, considered to be unconcentrated, has decreased by more than a third since the mid-1960s (Connor et al., pp. 135–136). Ward reports that the four largest steer and heifer slaughtering firms controlled 64 percent of that industry’s business in 1986, up from just 29 percent 10 years earlier, and that the four largest producers of boxed beef had captured 82 percent of that market by 1986 (p. 29).

Quail et al. have shown that high levels of buyer concentration exist in most procurement markets for fed cattle. Buyer CR4s in 1980 ranged from a low of 33 percent in the Michigan-Indiana-Ohio market to a high of 97 percent in the Kansas-Western Missouri-Northern Oklahoma market. For all 13 regional markets, buyer CR4s averaged 67 percent in 1980, up from 48 percent in 1971. High concentration can also be found in farm input markets, particularly pesticides and self-pollinating seeds, both with the CR4s approaching 60 percent, and farm machinery with a CR4 exceeding 70 percent (Henderson, pp. 18–19).

Concentration of industrial power has occurred simultaneously with the concurrent existence of numerous small firms operating in the same industries with virtually no market power or control. Galbraith first recognized this bimodal organization in *The New Industrial State* in 1967 and subsequently labeled the modes as the “planning system” for the powerful firms, and the “market system” for the unconcentrated part (1973). It is now generally recognized that this asymmetric structure well describes the food industries (Mueller 1983, p. 859), and much recent attention has focused on evidence that even the farm sector is caught up in the same phenomenon (Phillips, pp. 52–53). The point is, one cannot use evidence of small firms and unconcentrated markets to deny the existence of economic power.

Implications of Concentrated Markets

Both economic theory and empirical evidence show that the performance of the economy and the welfare of its peoples are influenced by market or industrial concentration. Since Cournot’s devel-

opment of the elementary mathematics of monopoly behavior in 1838, it has been theoretically possible to demonstrate that market power is positively related to prices charged and profits and negatively related to prices paid and quantity marketed. With theoretical ease this can now be extended to demonstrate a causal relationship between concentration and dead-weight loss to the economy (Varian, pp. 422–424).

Empirical evidence is largely consistent with theoretical expectations. For example, in a carefully specified study of 31 geographically separate retail grocery markets using 1974 data, Marion et al. found a statistically significant positive relationship between CR4 and prices paid by consumers (pp. 99–107). They estimated that annual “monopoly overcharges” to consumers in all 263 Standard Metropolitan Statistical Areas (SMSAs) amounted to more than \$600 million (p. 139). Using 1972–1977 data, Connor et al. estimated price overcharges due to seller concentration among U.S. food manufacturers at between 8.2 and 15.8 percent of total sales revenues (pp. 343–345). On the other side of the market, in an analysis of buyer concentration in fed cattle markets, Quail et al. found that prices paid for live cattle decline at least 10 cents per cwt. for each 10 percentage point increase in buyer CR4 (p. 50).

Turning to nonagricultural industries, Rhoades found 42 studies of banking as of 1982 which positively related local bank concentration to some aspect of prices charged. More generally, in analyzing data on 136 consumer goods industries in the 1958–1977 period, Weiss reports a statistically significant positive relationship between concentration and prices.

Numerous studies have been made of the relationship between concentration and profits. Vernon reviewed 32 such studies that had appeared in the literature through 1969. He concluded that “almost all . . . have yielded significant positive relationships for years of prosperity or recession, though they have depended on a wide variety of data and methods” (p. 61). For all food manufacturing industries, Connor et al. put monopoly profits at 3.1 percent of the total value of sales, ranging from highs of roughly 10 percent for chewing gum, flavorings and soft drinks to a low of 0 in 15 of the 59 industries studied (pp. 343–345). Across retail food markets, as CR4 increases from 40 percent to 70 percent, profits increase by at least 33 percent and in some cases by more than 200 percent (Marion et al., p. 91).

More than high prices and profits have been directly linked to concentration. Mueller summarizes much of the evidence on other performance impacts this way: “There is evidence that . . . market power contributes to inflation, results in disparity in wages, causes an excessive proliferation of products and enormous outlays for advertising and promotion, distorts consumer buying preferences among brands, and defines consumers’ nutritional habits” (1983, p. 856). F.M. Scherer, perhaps the leading industrial organization

scholar of our time, has estimated that the net economic loss due to the exercise of market power exceeds 6 percent of GNP (p. 408).

Nonetheless, while studies show that monopolistic price overcharges and profits are positively influenced by market power, they typically are less than predicted by theory. Even economists active in experimental economics, where all aspects of market structure can be controlled, unanimously expressed, at a 1988 AAEA symposium, the inability to generate full monopoly prices under any laboratory conditions.

One plausible explanation for the failure to find evidence of full monopoly profits has been put forward by Scherer. He argues that the appropriate measure of profits is the discounted present value of future profit streams (1988, p. 381), whereas empirical studies have examined profits earned in historic accounting periods. Surely market share and sales growth rates are important determinants of future profit streams. Thus, entry-limit pricing would seem to be fully consistent with long-term profit maximization, as are additional costs for such things as advertising and new product development. Perhaps if empirical studies focused on the current value of long-term profits, the evidence of social welfare loss due to the exercise of market power would be even more compelling regarding the need for a public policy response.

A Digression on Conglomerate Power

Both theory and most studies of market power-performance linkages focus on power held by one or a few corporations operating within a specific product market. However, much of the recent wave of corporate mergers has been between firms operating in different markets, or so-called conglomerate mergers. Mueller has specified three forms of business behavior that are uniquely available to conglomerates: cross-subsidization, reciprocity and competitive forbearance. None of these enhance efficiency and all are used to increase a firm's dominance in its various markets (1970, pp. 101-106).

Both "golden parachutes" and "white knights" have become standard fixtures in conglomerate mergers. The former guarantees top managers significant financial awards regardless of the outcome of a merger, and the latter accepts a merger partner based on the sole qualification that it will not force established management of the acquired company to relinquish control. Not only do these strategies divert earnings from stockholders to top management, they protect entrenched and often inefficient management.

Causes of Market Power

Most industrial organization texts list scale economies in plant operations, large capital requirements, control over scarce resources,

and patents among the determinants of market structure (Caves). Research results point to the dominance of product differentiation as an entry barrier and the related role of extensive advertising (Henderson, pp. 7–10). “The evidence indicates that the major causal force propelling the increasing concentration are the advantages (real and pucuniary) of large-scale advertising and promotion of products lending themselves to product differentiation” (Mueller 1983, p. 856). To this we would now have to add mergers as a principal cause, particularly of aggregate concentration.

Policy Options

Many economists, certainly most industrial organization scholars who have examined food-related industries, are calling for renewed attention to microeconomic policies, specifically those addressing concentration of power. Regarding microeconomic policy issues, Galbraith has stated, “These now rival, perhaps exceed, macroeconomic concerns in their social urgency” (1988, p. 376). As examples he cites problems in housing—“the great industrial default of capitalism”—energy and oil, agriculture, the aging industrial sector and the competitive relationship between older and younger industrial economies.

Unfortunately, assessment of microeconomic policy options is hampered by the fall of microeconomics, for many, into what might be called a recreational technicality, that is, a search for and expression of unchanging truth. Policy analysts, by contrast, must of necessity see economics as a subject in constant accommodation to social, political and institutional change. Thus, I highlight the implications of the following policy options in conceptual terms rather than with the technical specificity of economic determinism.

Laissez-faire

This option is akin to what the agricultural policy analyst refers to as “no program.” The government exercises no control over the structure of markets or business behavior. It relies on the invisible hand of competition to assure that what is in the best interest of the powerful corporations is also in the best interest of the people at large. Proponents either deny the existence of concentrated power or ignore the negative impacts that such power has on the welfare of society.

Events leading to the antitrust movement of the late 19th century pretty much gave lie to presumptions of the proponents. Nonetheless, the laissez-faire concept has given rise to several “innovative” economic theories designed to provide it with intellectual respectability. Two such developments are: 1. countervailing power and 2. contestable markets. The first, put forward by Galbraith in *Amer-*

ican Capitalism in 1952 and subsequently dismissed, suggests that the monopoly power of one corporation can be offset by the exercise of power by another. The second, advanced by William Baumol and colleagues, holds that potential rather than actual rivalry is the key competitive force. As such, barriers to entry are more important than actual concentration. In a practical sense, however, I suspect that the existence of only modest entry barriers in meatpacking is of little consolation to the feeder who can find only one buyer to bid on his cattle.

Central Planning

This option deals with the direction of the industrial sector by the public sector, or direct government control. It includes, but is broader than, public ownership. While this is an enigma in a market-driven economy, it has been used in the United States. Both land grant universities and the Tennessee Valley Authority stand as examples of state-owned businesses. In an agricultural policy context, this option is roughly equivalent to mandatory production controls. Philosophically, it substitutes the “heavy hand” of government for the invisible hand of the market as the guide for economic activity.

Recently this option has been given a new label: *national industrial policy*. This, proponents argue, would use the state to accomplish what cannot be accomplished by private decision makers within the context of macroeconomic policy. Invidious comparisons are made with the Japanese post-war economic “miracle,” which is attributed to comprehensive industrial planning by the Japanese Ministry of International Trade and Industry (MITI). But after a careful review of MITI, Mueller concludes “. . . most of Japan’s industrial policy involves old-fashioned protectionism in such industries as agriculture and textiles, and investments in declining industries . . .” (1983, p. 861).

Essentially, such policies replace concentrated market power with concentrated government power. They are justified on the basis of market failures; they, in turn, hold the economy hostage to non-market failures.

Regulation

Under this option, public policy promotes private enterprise, but with direct governmental regulation of certain aspects of business behavior. That is, the abuse of concentrated market power is limited by exercising public control over how it is used. Philosophically, this might be labeled the “gentle hand” approach. Examples abound, starting with the establishment of the Interstate Commerce Commission in 1887. Regulation was well on track as the “American way” in the post-depression period until Reaganomics rode into town with

deregulation high on its agenda. The trend since then appears to be moving away from regulation except in areas such as food and drug quality, safety and natural monopoly.

Traditional critics of regulation argued largely from a free market perspective. During the 1970s the attack on regulation was joined from the left by those who concluded that the regulators had been captured by the regulated. With this intellectual reinforcement, deregulation attained respectability. Now, after nearly a decade of deregulation initiatives, it might be a propitious time to revisit the gentle hand of economic regulation as a means of addressing issues arising from the rise in market power.

Antitrust

Antitrust policy is designed to curb the establishment and abuse of market power and to promote competition. It has been the law of the land since the enactment of the Sherman Act in 1890, although enforcement has varied widely. The wave of mergers during the Reagan years has resulted from putting people in charge who believe that price fixing is the only form of trust that violates the principle (but surely not the letter) of the law.

The basic purpose of antitrust is to assure that markets are structured and firms behave in ways that are sufficiently competitive so that private enterprise performs in a socially acceptable manner. It is, in essence, the "visible hand" that rules on what one shall not do. That is, antitrust policy proscribes conduct such as mergers, exclusionary dealing, price fixing, collusion and monopolization that is injurious to the welfare of society.

Even though enforcement of our antitrust laws has fallen on hard times in recent years, the principle of competition-enhancing public policy has not been invalidated. At the least, helping the public understand the cost to society of such laxity is an appropriate challenge to policy educators.

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