BARGAINING POWER AND MONOPOLY IN INDUSTRIAL MARKETS IN
RELATION TO SOME AGRICULTURAL POLICY PROPOSALS

by Howard H. Hines

As the decision to hold this series of seminars illustrates, both farm spokesmen and agricultural economists are interested in bargaining power and monopoly in the industrial sector of the American economy. There seem to be two reasons for their interest: Monopoly in industry might (1) justify measures to increase bargaining power of agriculture, and (2) exemplify techniques that agricultural markets might imitate.

For either purpose, defining and measuring bargaining power and monopoly and discovering their prevalence in the industrial sector turn out to be much more complicated problems than they are often casually assumed to be. In the first place, the nonfarm economy, which we shall call the "industrial sector" for short, is extremely large--and diverse. Secondly, there are numerous dimensions to monopoly and competition and their measurement.

Most of this paper is an attempt to make these matters clear. To do this, I shall explain a number of matters familiar to economists specializing in industrial organization including agricultural economists working in the area, but which I am told are perhaps not familiar to the larger number of agricultural economists whose principal interests are elsewhere, or to those who are concerned with how these matters might relate to agricultural policy but who are not economists at all. As a guide to additional reading for those to whom the area is new, I am including fairly numerous footnotes.

At the end I shall briefly consider how these findings relate to some kinds of agricultural policy proposals.

Definition of Bargaining Power

Despite the admirable efforts of Professor Fletcher and of others, I doubt that a rigorous definition of "bargaining power" is yet agreed upon by

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1 The original paper was read on May 18, 1961. Out of it grew a later manuscript most of which is substituted in this publication for the original. I have adopted a number of suggestions made by members of the seminar and by other readers. Professor Lehman Fletcher has been particularly helpful. The views, of course, are the author's.

2 Professor of Economics at Iowa State University.
all participants in this seminar, still less by the general public. I am inclined to agree with Professor McKie of Vanderbilt University, who observes, "'Bargaining power' is not a precise concept; the phrase is a way of expressing some conclusion about the totality of market structure. If we try to specify those factors which determine bargaining power, we find that we are merely enumerating and describing all the structural elements of the market." Since I believe that bargaining power derives from some kind of monopoly, and since there is a definite meaning for the latter term, I shall deal mostly with "monopoly" and avoid the vaguer concept. "Monopoly" means "control over the supply of a product to a market." The results of monopoly may be undesirably high prices and profits, excessively low output, etc. The practical difficulties lie in defining "product" and "market," for if they are defined too narrowly, almost all firms would be monopolies, and if they are defined too broadly, none.

Scope of the Industrial Sector

Taken as a whole, the nonfarm private economy is both large and complex. Of the total national income, $417.5 billion in 1960, only about 4 percent originated on farms. Excluding this and income originating in government and the "rest of world" sectors, one notes that the industrial sector accounts for more than 80 percent of national income. This includes mining; construction; wholesale and retail trade; finance, insurance, and real estate; transportation; communications and public utilities; services, and manufacturing.

Each of these categories is large and highly aggregated. (Only mining generated less income than agriculture.) As an example, consider manufacturing, the largest major sector. So heterogeneous is it that the Bureau of the Census has worked out an elaborate classification system which begins with 21 major industry ("2-digit") groupings (e.g., food and kindred products, textile-mill

3 James W. McKie, Tin Cans and Tin Plate: A Study of Competition in Two Related Markets (Cambridge, Mass.: Harvard University Press, 1959) p. 24. This study of relationships between tin plate producers and tin can makers and between the latter and food processors should be compulsory reading for serious students of bargaining power.

4 Contrary to one view encountered, this does not imply that every firm, even one selling in purely competitive market, has a monopoly. Such a firm controls the amount of its output, of course, but not the supply of the product to the market.

5 Use "monopoly" and "monopolistic" as generic terms to cover not only control of market supply arising from concentration of output or sales in the hands of a single seller (as the etymology implies) but also that arising from oligopoly (few sellers), and from the use of restrictive devices such as price agreements, market-sharing schemes, etc. These practices occur most often in markets where sellers are few, because there they can be made and enforced most easily. When they appear in markets where there are many sellers, it is usually with government sanction.
products, etc.) and runs down to more than a thousand product classes ("5-digit") (e.g., linoleum; warm air furnaces; mustard and other meat sauces, except tomato), and even to about 7,000 products ("7-digit").

Furthermore, in analyzing monopoly, the appropriate focal point should be the market. The nonfarm economy includes not only manufacturers' markets, but also wholesalers' and retailers'. And each must be defined geographically. The total number of plumbing shops in the United States has little to do with the behavior of the few which operate in a neighborhood or small-town market. On the other hand, with modern transportation, interregional competition (even international, as automobile companies have found) may often be as significant as local monopoly once was. This paper, by the way, will discuss only markets for products, not those for capital and labor. It will not develop the important relationships between the two kinds—a serious omission. Even so, there are thousands of industrial markets.

Moreover, as of January 1, 1961, there were 4 2/3 million operating business concerns in the United States—members of the various industries and participants in the thousands of product markets. These include the giants that Fortune magazine lists in its annual "Directory of the 500 Largest U.S. Industrial Corporations" and its companion lists of the biggest commercial banks; merchandising, life-insurance, and transportation companies, and public-utility systems. But millions of others are comparatively small; at

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7 Preliminary estimate. The number had grown by somewhat more than 1 percent from a year earlier, a slightly smaller rise than in the more prosperous previous year. See U. S. Department of Commerce, Office of Business Economics, Survey of Current Business, June 1961, p. 5:

<table>
<thead>
<tr>
<th>Industry</th>
<th>(Thousands)</th>
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<tbody>
<tr>
<td>All industries</td>
<td>4,717</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>479</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>324</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>323</td>
</tr>
<tr>
<td>Retail trade</td>
<td>2,011</td>
</tr>
<tr>
<td>Services</td>
<td>893</td>
</tr>
<tr>
<td>Other</td>
<td>687</td>
</tr>
</tbody>
</table>

8 The latest list of Industrials is in the July 1961 issue, pp. 167-186. The other lists were published in August 1961, pp. 129-138.
any rate they are not giants, whether measured by sales, value added, assets, or number of employees. They, too, are part of the industrial sector.

**Whose Monopoly is Meant?**

Considering the enormous size of the industrial sector in America, one could give a competent report on monopoly within it in a paper of this length only if the nonagricultural industries and firms, though numerous, were reasonably homogeneous with respect to their monopolistic power. But there is an enormous variation in the degree of monopoly exercised in industry.

One reason why this is not surprising is that monopoly and competition have a large number of dimensions. Almost every market outside of agriculture and some within contain a blend of monopolistic and competitive elements. But these do not combine in identical proportions. It is likely to be quite misleading, therefore, to calculate a total or average degree of monopoly for the entire nonagricultural sector. Certainly this gives a false impression unless one indicates that the dispersion around this average is as significant as the average itself.

Even to represent a specific industry or market as mainly monopolistic or competitive may inaccurately suggest that every member firm possesses a uniformly strong or weak position. Yet the member firms of the vegetable industry range from such giants as Libby and Cal Pack to hundreds of anonymous strugglers-to-survive.

Finally, when it comes to considerations of equity, what matters is not firms or farms but individual persons. For large companies this requires that we explore the problematical relationships between the monopolistic gains of the firms as such, and of the degree to which these gains may be shared with stockholders and employees. Stockholders may be numerous and may not all be rich. They may have acquired the stock long after the primary monopolistic position was established, perhaps at prices which capitalized the gains from it into rents retained by the original owners. The present stockholders may have acted "innocently," a view which if it were applied incautiously, might almost strip antitrust remedies of effectiveness. This is no hypothetical question, as everyone who has been following the DuPont-General Motors Case knows. Not only stockholders but also employees may in some circumstances share excessive monopoly gains. Whether these results come about because of unions is a matter of controversy, which we shall not attempt to explore. It is impossible to proceed, however, without remarking that unions, like firms, exist in varying degrees of strength and effectiveness.

Those who refer to industrial monopoly or bargaining power, therefore, must state whose they mean. The steel manufacturers'? Or retail shoe
sellers'? If monopoly of tin cans, American Can's or Heekin's? Or if it is an average, how weighted, and with what measures of dispersion? 9

Dimensions of "Monopoly"

Let us look at some of the dimensions of monopoly and competition. Probably we can fairly assume that the monopolistic attributes of the industrial sector have been more fully presented by agricultural policy writers than the competitive aspects. On this supposition, the following discussion perhaps leans over backwards to focus attention on some of the more easily overlooked competitive elements. The purpose of this emphasis, I must state strongly, is not to ignore or condone the all-too-numerous monopolistic forces in our industrial markets. It is rather to attempt to achieve a balanced, factual picture in a specific context where one side seemingly has had stronger advocacy.

We have briefly commented on the spatial aspect of market definition. The difficulty of defining "product" is that if it is taken too narrowly, almost all nonfarm firms would seem to be monopolies, and if too broadly, none. To illustrate, consider whether the Census Bureau's "digit" categories suitably approximate the economic definition of product. For some purposes of public policy, strict interpretation of product differentiation must be relaxed; yet this is no easy thing to do. Are 5- or 7-digit items too broad or too narrow in the light of crosselasticities of demand and supply? The point has often been analyzed theoretically 10 and also in connection with the use of concentration statistics for the purpose of measuring monopoly. 11 For example,

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9 Perhaps the question may be asked, whose bargaining power is discussed in the other papers? The prospectus for this seminar series reads "farmers'"; also there are some corroborative references to "agriculture's." But some of the discussion suggested that much of the time "a farmer's" bargaining power was meant.

10 See especially the work of Triffin, Papandreou, Bishop, and Chamberlin, cited in Edward Hastings Chamberlin, Towards a More General Theory of Value (New York: Oxford University Press, 1957), Ch. 4 and Supplementary Note.

linoleum manufacturing is highly concentrated, but asphalt floor tile, another 5-digit product class, is less so, and various carpet and rug categories, especially tufted carpets and rugs, except wool, still less. If all "floor coverings" were combined, the result would seem quite unconcentrated. (One must ascertain, however, the degree to which a single firm or a few of the same group of firms might dominate several of these categories.) Again, an apparently narrow category that is defined on the basis of business practices or technical considerations may actually lump together several distinguishable economic products, each monopolized.\(^\text{12}\)

Nor can one automatically equate large firms with monopolists, or assume small ones to be purely competitive.\(^\text{13}\) Absolute size (measured by assets, sales, number of employees, etc.) and monopoly are not perfectly correlated. A chain of retail stores may be large absolutely without possessing significant power in any selling market nor necessarily in buying markets either. A small manufacturer may dominate a regional or specialty product market. The village general store in the days before automobiles and mail order houses was no giant business but it was nonetheless a monopoly.

When it is observed that our largest 50 companies accounted, in fact, for 23 percent of the total value added by manufacture in 1954, and the largest 200 companies, 37 percent,\(^\text{14}\) it is evident that the relationships of these giants to our society and economy are among the most perplexing social challenges of the age.\(^\text{15}\) Not all of these problems are monopoly problems, however, and neither all nonfarm business nor all monopolists are big.

**Price Formation for Industrial Goods**

Small or large, industrial firms typically operate quite differently from farm firms. Relatively few goods are sold on open markets; most prices in this sector are chosen or "administered" by the seller firms. Such firms usually have some opportunity for choice of price/quantity of sales instead

\(^\text{12}\) Chamberlin, *op. cit.*, Chs. 4 and 5.

\(^\text{13}\) Size and monopoly may be combined, of course. "Nevertheless, while it is size in combination with monopoly that constitutes one aspect--perhaps the most important aspect--of economic concentration, it is advisable to keep these elements separate in any analysis of the total problem of concentration." Mason, *op. cit.*, p. 19.


\(^\text{15}\) On this subject, Edward S. Mason (editor), *The Corporation in Modern Society* (Cambridge, Mass.: Harvard University Press, 1959), is an interesting symposium.
of being limited to quantity only, as is the case for farmers. Often they can follow a policy of price discrimination.

I believe the best hypothesis is that the objective of the pricing procedures is to maximize long-run profits. Other investigators have suggested that something less than long-run profit maximization is frequently the business goal. But even pricing to maximize long-run profits is always done under some degree of competitive constraints.

The most common price-setting procedure is to identify the direct costs of the product and to add to this a markup to cover overhead and other indirect costs and a profit margin. For retail stores, the invoice cost is most of the direct cost, but for manufacturers, direct costs per unit are less easily discernible and may significantly vary according to the rate of production. The amount to add per unit to cover overhead and common costs inevitably is

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16 Economists naturally will read the diagonal mark correctly as "or," but there is some tendency among laymen to suppose demand is always perfectly inelastic to such firms, and sometimes to believe that it is costlessly expansible as well.

17 Interpreted in a broad sense, to cover the use of different products, including locational and time of sale variation, to achieve differential profit margins. The Robinson-Patman Act has inhibited some discrimination, especially between manufacturers and dealers. On the wide use of discrimination at retail, involving trade-ins, discount houses, and other devices, see Stanley C. Hollander, "The 'One-Price' System, Fact or Fiction?" Journal of Retailing, 31: 127-44, Fall, 1955.


affected by rate of output. But the firm’s rate of sales and production will depend on its price, for demand is never completely inelastic. It is therefore possible to set prices on the basis of "cost plus" only when it is recognized that demand determines the plus—and the cost!

How elastic a firm's demand will be and the other characteristics of its long-run demand function will depend upon the alternatives available to buyers. The possibility of buying from other sellers of the same or nearly identical goods is the most powerful alternative if supplies of the other sellers are ample. Competition from "substitutes," including alternative opportunities to spend money, also affects the demand for a single firm's product. (A consumer may buy a Fedders air conditioner or a Frigidaire, or take a longer vacation, or endure the heat while enjoying a new television set.) The firm can set any price it wishes, but competition—direct and indirect—will control its sales. This and the potential competition from new entrants into the field often (though not always) confine the choice of prices to a rather narrow range, not far removed from the level that might have arisen in pure competition.

Where goods are durable, another limit on the power of firms which sell new goods is the "overhang" of partially substitutable second-hand or scrap products. This has affected markets for low-priced automobiles, farm machinery, shoe machinery, vacuum cleaners, housing, and aluminum, to cite a few examples. The problem is not unlike that of "surplus" stocks in wheat and other storable agricultural commodities.

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20 The ability of the chain stores and other large retailers to enter or threaten to enter manufacturing and other possibilities for vertical integration are tremendously important. Where, as is usual, these retailers, though large, are nevertheless subject to relatively intense competition in their reselling markets, the lower prices they receive are probably reflected in lower prices to the general public. (It is impossible here to consider the effects of the Robinson-Patman Act; it seems to have encouraged retailer entry into manufacturing.) See M.A. Adelman, A & P: A Study in Price-Cost Behavior and Public Policy (Cambridge: Harvard University Press, 1959), especially Ch. 12.

21 For example, see U. S. v. Aluminum Co. of America, 148 F. 2nd 416 (1945), which examines the question of competition from scrap. Also, Carl Kaysen, United States v. United Shoe Machinery Corporation (Cambridge, Mass.: Harvard University Press, 1956), p. 73.

22 Incidentally, this shows the fallacy of the popular view that sellers of "perishable" goods (and services) are at a bargaining disadvantage. Were the goods just named perishable, monopoly today would be strengthened.
Price and Output Flexibility

How responsive are these industrial prices to changes in costs or to secular or cyclical changes in demand? Compared with prices in the organized commodity and financial markets, they are relatively rigid. But it is easy to exaggerate this point. When one looks carefully at the facts, there often turns out to be more price flexibility than surface appearances suggest. Consider some cases where demand falls. Official or openly-quoted prices may be fixed, but sales may take place "off list." Or prices for a line of products may remain constant, but the proportion of sales shifts from mostly "deluxe" to mostly "stripped" models. In some respects, this can be viewed as a form of price competition. Or credit is extended more generously than usual, or delivery terms, return privileges, and guarantees are liberalized.

In the summer of 1961, industrial prices were generally stable. Yet some were rising (textiles, ball bearings, aluminum conduits), and others were falling. The dropping prices were conspicuous since a general business upturn had been widely expected. Price cutting was stimulated by foreign competition and substitute materials in the case of specialty steel items, by new production techniques and "competition" in electronic semiconductors, by overcapacity and "a desire to be more competitive so as to forestall more price-fixing suits" in machinery and tools. Usually overcapacity in relation to demand is a cause of price cutting. Its pressure on prices may be resisted in short, mild cycles. But history shows that there is a different response to prolonged weakness of demand, especially secular declines. In its face, sellers may call for government help. They may attempt to fix prices on their own. (Overcapacity was a factor in the recent electrical equipment conspiracy.) They may try to switch to other products or markets. But price cuts usually come first in these circumstances.

Nonprice Strategies Available to Industrial Firms

Firms outside agriculture have not only a range of choice in pricing but also in other business strategies. Most of these firms sell a large variety of


26 Often specific plants have been bought, run into losses and even bankruptcy, sold at knock-down prices to new owners, who then could merely return to the cycle. "What is needed to eliminate excess capacity is not the extinction of firms but the sterilization or scrapping of capacity, and competition in selling (price-cutting) is much less effective in killing capacity than firms." Jack Downie, The Competitive Process (London: Duckworth, 1958), pp. 117-8.
products. I have seen an estimate, now probably outdated, of 2,000 different product items for General Electric, 350 for Armstrong Cork, and 32,000 for B. F. Goodrich. The modern supermarket carries 6,000 or more items. And who could count those in a typical "drug" store? The number and selection of products can often be profitably varied. For instance, not only can the supermarket add or substitute new brands of food, but it can stock drug or hardware items. Manufacturers can vary the design, size, flavor, color, packaging, etc., of individual products; retailers can modify the conditions under which products are sold (the location and environment of the store, the terms of delivery and payment, the nature of guarantees, etc.) Where one firm can distinguish its products from those of others (by design, location, trademark, or otherwise), it may profitably use sales promotion, including advertising, as part of the "marketing mix." A manufacturer will be able to choose among many options about marketing channels. For example, he may use independent wholesalers or he may be his own distributor; he may try for dense distribution of his product or he may elect to use a smaller number of exclusive sellers.

Innovational strategies include not only the development of new product varieties, but also new techniques of production and marketing.27

Even allowing that every one of these kinds of strategies is not always open to every industrial firm, one cannot doubt that the opportunities of industrial firms typically are more numerous than those of farm firms. The question is, "Does this indicate possession of significant bargaining advantage or monopoly?"

It may. It often does. But it does not always. The business firm can choose from many lines of action, but so can his rivals. The concentration of output or sales of a product into a few hands does not really indicate much monopoly power if it would be easy for additional sellers to enter that market. This is just what happens when an established manufacturer or retailer adds to his line a product which has been doing well for others. Entrants and potential entrants need not be newly-established firms. They may be already-established firms, perhaps quite large ones, who take on another product or market. This is the competitive side of the "conglomerate" firm and of much vertical integration. Supermarkets begin to sell aspirin and toothpaste; automobile companies begin to manufacture tires; vegetable canners make their

27 The cause and effect relationships between monopoly and research and innovation are much disputed. For the latest installment in the controversy, see James S. Worley, "Industrial Research and the New Competition," Journal of Political Economy, 49:183-6, April 1961.
own tin cans; A. & P. bakes its own bread. A farmer cannot enter many of these markets, of course, but groups of farmers can and have by means of cooperatives.

It is a mistake to suppose that business firms which somehow manage to lessen price competition always thus assure themselves of comfortable and effortless profits at the expense of their customers or suppliers. Frequently it is as hard for a businessman to earn profits or even to survive when confronted by nonprice competition as when faced by price competition. Moreover, nonprice competition is extremely varied. Precisely for that reason it is usually harder to avoid nonprice competition (even with government assistance) than to suppress price competition.

Profit and Survival Results

Variety in business situations is reflected for illustration, in the performances of various firms reported in the Brookings Institution study of giant businesses. Pricing methods and pricing results varied among companies, among products within the same firm, and over time. The study reported General Motors' income after taxes as a percentage of capital invested was never below 17.03 percent from 1947 to 1955, and in two of those years, it was more than 30 percent—after taxes. Nor were automobile workers nor Chevrolet dealers visibly squeezed in the period. The study does not report the fates of Kaiser, Packard, and other auto companies. But in contrast with the performance of General Motors, Swift and Company in the same period only once made 10 percent (10.74, after taxes, in 1953). It usually earned 6 or 7 percent, but in 1951 returned only 3.55 on capital invested. The variation in return by the different products of all of these multiproduct firms must have been extraordinarily large. One can infer this from the unwillingness of firms to publish profit data product by product.

Similarly, Fortune magazine's survey illustrates a variety of profit results among the 500 largest industrial firms in 1960. The 10 most profitable firms made from 22.2 to 43.4 percent on invested capital; but among the 500

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28 The ability of chain stores or other large retailers to enter, or threaten to enter, manufacturing is tremendously important. Where, as is usual, these retailers, though large, are nevertheless subject to intense competition in their reselling markets, the lower prices they can thus obtain probably result in lower prices to the ultimate consumers. See Adelman, op. cit., especially Ch. 12. Adelman also considers the effects of the Robinson-Patman Act, which seems to have encouraged retailer entry into manufacturing.

29 Kaplan, et. al., op. cit.
giants, there were 24 which lost money. The 1960 median return for firms in the 500 class only, but grouped by industry, ranged from 11.7 percent in tobacco to 6.1 percent in metal products. For all industry, 9.1 percent was the median.

Evidence of the fate of an unhappier group drawn this time from firms of all sizes in commercial service, construction, manufacturing and mining, and retail and wholesale trade--is reported by Dun and Bradstreet. This firm's data show that annual failure rates, seasonally adjusted, have rarely fallen below 50 per 10,000 concerns during any month within the past three years.30

Social Desirability of Nonprice Strategies

But is nonprice competition socially desirable? This is a most difficult question.31 Changing the size of a candy bar but leaving its price fixed at the conventional price of 5 or 10 cents presents no challenge. But what can we say about altering its flavor? Some persons would be delighted, others disappointed and still others quite unaware of the change. In general, consumers seem to want a wide variety of designs and models from which to choose. Indeed, people criticize excessive standardization of American consumer goods quite as often as they attack multiplicity and change. They welcome moderately frequent changes, too, for variety if not always for "functional" reasons. On the other hand, many hold that the near-annual cycle in automobile models is unreasonably costly--especially in a product so mature as this one. (In early days, I have been told, the annual model was a device for slowing the rate of model change.) The social benefit and harm from advertising and other selling efforts are probably the most difficult of all to ascertain.32

30 Published monthly in U. S. Department of Commerce, Survey of Current Business, e.g., June 1961, p. S-5, when the rate was 64.3 for May.
31 One student offers this hypothesis: "Price competition is more likely to lead to workable competition than nonprice competition. This is one of the most important theoretical issues in the field of industrial organization and price policy, and one upon which there is no general agreement." (Emphasis supplied.) Thomas A. Petit, "The Value of Competition: A Study of the American Softwood Plywood Industry," Journal of Industrial Economics 6:46, October 1957. Also: "...the important inference to be drawn from the theories of oligopoly and monopolistic competition is not that the typical firm...competes less, or more, than it would under conditions of pure competition, but that it competes differently." Jesse W. Markham, loc. cit., pp. 390-1.
32 The standard work, but by no means the ultimate word on the subject, is Neil H. Borden, The Economic Effects of Advertising (Chicago: Richard D. Irwin, Inc., 1942).
Informed judgments about the total outcome of price and nonprice competition in specific markets appear in many excellent industry studies that have been published (some of which are cited in this paper). At least for now, however, generalizations about the social worth of nonprice competition are impossible to make on a scientific basis. From the point of view of the business firm, nevertheless, competition in any form makes life difficult and profits scarce. Which point of view is relevant to the use of industrial competition information in the farm policy debate?

Some Attempts to Measure Monopoly Structures in U.S.

As we have mentioned, some of the forces that constrain a business firm as it seeks to attain maximum profits may originate within the organizational structure of the firm itself, especially if it is a large firm; or they may stem from the ethical and moral climate of the community and the possibility of political sanctions against certain kinds of behavior. It is not possible here to do much more than mention these fascinating but difficult matters. We have to limit ourselves to the economic constraints from outside the firm, especially those caused by what we shall call the structure of the industry. These include (1) competition of other firms selling identical or similar products in the same markets, (2) the effects of generalized competition from sellers of products outside the particular industry, (3) the role of large buyers, (4) the significance of durable products, and (5) the effectiveness of entry and potential entry.

Two kinds of factors might prevent an industry from exerting strong competitive pressures--price or nonprice--on its member firms. (1) There may be cartels or other overt monopolistic agreements and practices--these are protean--which restrain competition among firms. (2) The structure of the industry may be so concentrated that aggressive competition is avoided merely by recognition of mutual dependence among member firms. 33


34 For a while, economists were coming to think formal agreements in these oligopolistic markets were obsolete. This was before the electrical equipment conspiracy was disclosed.

Already in 1948, Bain had observed (in the Ellis Survey, p. 158), "In the first flush of enchantment with the new price theory of oligopoly, and of reaction against the old 'trust problem' study, there may have been some tendency to discount the importance of collusion. It may have been supposed that the theory of oligopoly pricing showed collusion to be unessential--'mutually recognized interdependence' taking its place or giving the same result--or that emphasis on the firm's demand curve eliminated the necessity of direct reference to crass institutional matters.... The suggestions of Thurman Arnold and Corwin Edwards were thus (continued on next page)
Obviously, the number and relative size of business firms in each market are crucial, although they are not the only factors. Two eminent students of competition and monopoly have distinguished between structural oligopolies. They call Type One those in which the first 8 firms have at least 50 percent of total market sales, and the first 20 have at least 75 percent. In Type Two the first 8 firms share 33 percent of the market, and the rest of the market is relatively unconcentrated. Of Type one, they say:

Recognition of interdependence by the leading firms is extremely likely, and the 75 percent share of the first twenty sellers makes it likely that the response of the smaller sellers will not limit the behavior of the larger firms.\(^{35}\)

The same investigators have attempted to classify American manufacturing industries by careful analysis of the concentration data originally published by the Subcommittee on Antitrust and Monopoly of the Senate Judiciary Committee.\(^{36}\) It would be too technical for the present purpose to describe how they divided or combined the "4-digit" product class groups, considered the significance of imports and of regional submarkets, and otherwise attempted to convert the "digits" into meaningful economic industry markets.\(^{37}\) However, let us refer to their conclusions, for I think they are as close as we can get to tenable generalizations. For national-market manufacturing, they find:

\(^{34}\) (continued) useful in reminding us: (1) that collusion in some sense often if not commonly plays a strategic role in the process of price formation; (2) that it is a very complex phenomenon, and can assume many significantly different forms; (3) that price behavior may vary with the sort of collusion adopted, and with the state of law and law enforcement affecting collusion."

For an amazing account of General Electric's part in the electrical equipment conspiracy, see Fortune, April, May 1961.


The data source is cited in a preceding footnote. The importance of this source, compared with direct use of the Census of Manufactures, is that the Census reports on the basis of establishments, whereas the Committee was able to have the 1954 Census data reworked by the Bureau of the Census in terms of firms. Several establishments might be controlled by a single firm.

An essential critical review of the literature on definition and measurement of both concentration and monopoly (they are not synonyms) is Edward S. Mason, Economic Concentration..., op. cit., Ch. 1. Also see papers by Rosenbluth, Scitovsky, and Miller, in Business Concentration and Price Policy, op. cit.
The manufacturing sector contains a numerical preponderance of structurally oligopolistic markets... which, because of its location in the economic process, has a special importance in the functioning of the American economy. At the same time, this one market type hardly dominated manufacturing, since there is a substantial minority of unconcentrated industries. 38

Some markets are more important than others. The value of shipments is a rough indicator of economic importance, and Kaysen and Turner use this measure. However they also emphasize the location of the industry in the economic process. That is, monopoly in industrial input materials used in several industries, such as steel, and investment goods in general is much more important than in consumer nondurables. 39

The mineral industries are smaller even than agriculture, but their products are pervasive and important industrial inputs. The same investigators found many (but not all) of these to be concentrated. The three largest copper companies account for 60 percent, and the 19 largest for 99 percent of domestic copper output. Moreover, the imports come mostly from Chile, where the same three companies own almost all production. Many of the giant

38 Kaysen and Turner, op. cit., p. 36. The pattern of market structures in regional manufacturing industries is approximately the same. See p. 37.
39 Something of what they have in mind might be seen in the analysis of Otto Eckstein and Gary Fromm for the Joint Economic Committee of Congress in 1959, which used Leontief's input-output technique. They found, "If steel prices had behaved like other industrial prices, the total wholesale price index would have risen by 40 percent less over the last decade and less by 52 percent since 1953. Finished-goods prices would have risen less by 23 and 38 percent, respectively." Study Paper No. 2, Steel and the Post-war Inflation, Study of Employment, Growth and Price Levels; Joint Economic Committee, 86th Congress, 1st Session (Washington: U.S.G.P.O., November 6, 1959).

Not only do the prices of such products affect a multitude of other prices, but they also cause the production methods and product designs of other industries to be altered in order to minimize the use of such inputs. The rising relative price of steel, together with the growth in the number of firms and in capacity in the aluminum industry, has brought the aluminum automobile engine into production. It is unfortunate, therefore, that the industries with lowest concentration are in consumer nondurables, the least important products by these tests.

On steel prices, also see the very provocative "Steel, Administered Prices and Inflation," by M. A. Adelman, Quarterly Journal of Economics, Vol. 75, (February 1961), pp. 16-40. The behavior of the steel industry, far from typifying "industrial" behavior, is clearly extreme.
mineral producers operate in several markets, so cross-product competition is weakened. Thus, Anaconda is one of the largest copper, silver, lead, and zinc producers; Phelps Dodge is important in all these and in gold as well. Bituminous coal, however, is not very concentrated.

In trade, service, and construction, markets are usually local. Indeed, they may be neighborhood; the problem of defining markets here is very difficult. The number of sellers in each market is, therefore, far fewer than one might expect considering the enormous total number of firms of these types which operate in the nation. Nevertheless, "the traditional view that the local-market industries are essentially competitive in character is probably correct...."40

Dynamic Competition

The structural approach to measurement of monopoly, we see, need not be limited to observation of the present membership of narrowly-defined markets. Properly done, this approach can take account of competition from imports, from "substitutes" and alternative ways of spending money generally, from entry and potential entry into the markets, and from the possible offsetting influences of such large buyers as chain stores. 41 It perhaps runs the danger of giving insufficient weight to the effects of rapid technological advance and its economic results. The strongest proponent of competition in the form of new products and new methods of production was, of course, the late Professor Joseph Schumpeter. His brilliant defense of capitalism as the dynamic process of "creative destruction" asserts that the kind of competition which really counts is:

...the competition from the new commodity, the new technology, the new source of supply, the new type of organization...competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives. This kind of competition is as much more effective than the other as a bombardment is in comparison with forcing'

40 Kaysen and Turner, op. cit., p. 40. They qualify the statement in several ways, particularly noting the many cartel-or guild-like restrictions in this area, enforced by trade associations, unions, and local governments.

door, and so much more important that it becomes a matter of comparative indifference whether competition in the ordinary sense functions more or less promptly; the powerful lever that in the long run expands output and brings down prices is in any case made of other stuff.\(^{42}\)

No matter how "static" one's thinking about the monopoly problem may have been before reading Schumpeter, it will never again be possible to forget the role of innovations. It would seem, however, that competition in this form is a great deal more active in some markets than in others. Also, Schumpeter himself had a rather timeless, historical kind of mind which was satisfied to view the world in terms of trends that could work themselves out only over a half-century or more. Whether the average American citizen and consumer has this patience is doubtful.

*Extent of Monopoly and Competition in Industry*

Both the fate of the individual business firm and the social results of business performance depend upon the degree of monopoly and competition in a market. There is extensive literature on methods of measuring market power in terms of (1) market structure—in such dimensions as number and relative size of firms, degree of vertical integration, etc.; (2) performance—relation of prices to costs, level of costs, rate of innovation, etc.; and perhaps (3) market conduct—especially devices for coordinating decisions among sellers.

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The showpieces (of American industrial achievement) are, with rare exceptions, the industries which are dominated by a handful of large firms. The foreign visitor, brought to the United States by the Economic Cooperation Administration, visits the same firms as do attorneys of the Department of Justice in their search for monopoly. There are innumerable critics, however. See James S. Worley, *loc. cit.*
The best advice is to use a combination of these measures. This technique has been applied—a painstaking operation—to a number of American industries recently. Owing to the difficulties of obtaining information about private businesses, most investigators have had to rely upon data obtained from large-scale antitrust cases or other government activity. As a result, the studies are biased toward industries that present major monopoly problems (aluminum, in past years, or motion pictures) or, occasionally, those which suffer acutely from excess capacity and perhaps excess competition (bituminous coal). With this bias noted, what generalizations could one make from these individual industry studies about markets and businesses in the industrial sector as a whole? Only the following, I hazard:

(1) There are a great many monopolistic forces in American industry—more than we need, more than we should continue to condone.
(2) There are also a great many competitive factors—more than critics of business usually recognize.

Again we may observe that the relative positions of different firms within industries and markets are, of course, also diverse.

Capacity Adjustment

Before closing, I should also make a few remarks about cyclical and secular (or long-run) capacity adjustments in industrial markets. The organizers of the seminars have specifically requested this. However, considering the context, I cannot see how the cyclical question is relevant, for today the agricultural problem is essentially long run rather than cyclical. In addition, the industrial products for which cyclical fluctuations are greatest are capital goods and durable consumer goods. Thus behavior is affected obviously and substantially by differences in kind of product and not by industrial organization and degrees of monopoly. In passing, I shall report, however, that I am not aware of any considerable body of economic thought which any longer holds that flexible prices in industrial markets would cure the cyclical production-employment problem.

43 Much of the literature is concerned with matters of law as well as economics, with which alone we are presently concerned. Key works are: Mason, Economic Concentration...; Bain, Industrial Organization; and Kaysen and Turner, all cited above.
44 For earlier ones, see citations in Bain, "Price and Production Policies," loc. cit.
46 Sometimes flexible prices are simply held to be an unacceptable or otherwise impractical remedy. A theoretical objection, however, originates in the likelihood that falling prices would set up unhealthy price expectations.
The secular adjustment problem seems more relevant, although again the problem of identifying parallel situations is with us as well as the problem of measuring them. Bituminous coal, cement, flour, textiles (especially the older fibers), aircraft (airframes), beer, household mechanical stokers and oil burners, ships, and wool carpets and rugs are only a few products which have seen trouble. Mentioning downtown hotels, butcher shops (independent of grocery stores), movie theaters, and urban public transportation should remind you of many others. Less permanent cases of excess capacity, yet perhaps not strictly cyclical ones, appear in steel, aluminum, and "medium priced" automobiles. Regional problems, often associated with specific industries, are much in the news today. In New England and in some mining areas, they have long passed from the category of news.

These examples suggest that the industrial sector of the economy does not always find a quick solution to its secular excess capacity problems. More readily than in agriculture, however, manufacturers and distributors sometimes can transfer much of their capacity to new or different products. The April 8, 1961, issue of Business Week presents a lengthy survey of "The Big Switch From Aircraft." Grumman is making a hydrofoil boat; Martin has converted to missile making and electronics; and Lockheed, we learn, has even bought a sewage disposal plant. In the ballpoint pen market, we read in the New York Times of April 16, 1961:

Scripto and other industry leaders have watched profits shrink rapidly in recent months under the twin pressures of overproduction and price cutting. Intensive advertising and promotion campaigns have brought only marginal improvement. Scripto announces its new remedy, a "tilt-tip pen." Retailers likewise constantly adjust their product lines to replace unprofitable items.

Of course, excess capacity which reduces prices and profits also is an incentive for monopolistic schemes, governmentally sanctioned (as in Texas oil production) or otherwise. It was a factor in the electrical equipment conspiracy. One wonders what John R. Kennedy of the Federal Paper Board Company, Inc., has in mind for his industry, which the New York Times reports is facing price problems "symptomatic of the intense competition within an industry confronted by the effects of its own surplus productive capacity as well as the decline in the general economy." Kennedy's report to his stockholders, in April 1961, notes,

As in many other industries, there exists some over-capacity in our industry....This overcapacity, however, is not so great as to be the determining factor in the unsettled conditions
and lower earnings experienced by the industry. Sound, constructive industry marketing practices and policies would do much to re-establish proper earnings ratios. 47

What happened to hula hoop production capacity, I don't pretend to know. The industry didn't last long enough for either industrial statesmanship or public policy to come to the rescue. In other areas of secular over-capacity, whether or not prices have been maintained (and usually they weaken, not instantaneously, but inevitably), there have been severe losses in profits and employment. It seems doubtful that New England textile manufactures, pre-World War II rubber and tire manufacturers, commuter railways, or the nation's breweries really have much in example or consolation to offer the farmer, except as misery likes company.

Still another phase I shall not attempt to touch, in spite of its relevance, is that industrial price rigging and other monopolistic practices are not only a response to excess capacity, but may also be a cause of it. 48

How These Findings Relate to Farm Policy Proposals

We have seen that (1) competitive and monopolistic elements blend in varying proportions in different industrial markets, and that (2) there is consequently great danger in attempting to characterize the extent of monopoly in the huge nonagricultural sector by incautious phrases or oversimplified averages.

Too often the nonfarm sector is "represented" in discussion by industries like steel and automobile manufacturing, and firms like General Motors or (not surprisingly in current discussion) General Electric. But the near-pathological postwar price and output performance of the steel industry is clearly extreme. Surely and fortunately, in no way does it "typify" American industry. Its behavior cannot reasonably justify abandonment of competition in other markets where such competition is effective, nor is its price-output performance something that agriculture—or any other industry—

47 New York Times, April 23, 1961, Sec. 3, p. 5. For the price cutting effects of cyclical excess capacity in industrial markets, see the lead article of Wall Street Journal (Midwest Edition), June 19, 1961. It reads, in part: "Price cuts, both announced and unannounced, are being made by manufacturers on a widening range of products they supply to other business firms. The price cutting that's come to light recently in steel...is typical of what's happening...Whatever the reasons, there's no doubt the price cutting is widespread..." A large number of examples are quoted.

should want to imitate. Again, exactly what beyond mere special pleading justifies using (as I have seen used) General Motors as a sample firm instead of Studebaker-Packard? Or instead of one of the third of a million eating and drinking businesses?

Another special group of industries—agricultural supply and food processing and marketing—has also often been chosen for discussion by farm spokesmen and agricultural economists. Much of this interest grows out of the long-standing preoccupation with "marketing margins." It is hoped that gains from increasing efficiency in these activities will be passed back to farmers—a difficult point to establish. Or it is contended that greater farmer "bargaining power" in the specific narrow sense of power in these particular markets might enable agriculture to take a larger share of the consumer's dollar without risk of affecting retail prices and, consequently, inciting reaction from the general public. Whether this can be done requires a concrete, detailed analysis of vertical relationships in each market, case by case. For this purpose it is irrelevant what degree of monopoly there is or may be one day in this area taken as a whole, still less in the entire non-agricultural economy. Only the facts in each specific market are germane.

But if the object is to point to these industries as justification for a broader kind of farm policy designed to give agriculture the equivalent of monopoly power held by others in the economy at large, this choice of industries is strategically a poor one. For, notwithstanding the existence of some monopoly, the food processing and marketing industries are, on the whole, among our economy's most competitive. For a sample, consult chapter on meat packing by Simon N. Whitney, in his Antitrust Policies, vol. 1 (New York: Twentieth Century Fund, 1958); on grocery retailing, see Adelman, op. cit.; Bob R. Holdren, The Structure of a Retail Market and the Market Behavior of Retail Units (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1960); Staff Report to the Federal Trade Commission, Economic Inquiry Into Food Marketing, Part I: "Concentration and Integration in Retailing" (Washington: U.S.G.P.O., 1960); and Willard F. Mueller and Leon Garoian, Changes in the Market Structure of Grocery Retailing (Madison, Wis.: The University of Wisconsin Press, 1961). The last two are much concerned with possible trends toward concentration and monopoly, but my impression is that the picture at present is mainly competitive, though not in all respects.
In addition to the problem of selecting or averaging industries, there are other problems. Where monopoly does occur it often does bring extraordinary profits which fall visibly into the hands of a few monopolists. However, earnings of a monopoly may in other cases be distributed rather widely or in a manner not easy to trace. How, then, can one interpret the resulting income distribution in equity terms, where individuals, rather than firms or unions, are the relevant "units"?

Or, again, business strategies may be offsetting to the point where certain firms or even whole groups of firms are not able to earn extra-normal profits at all. Yet there is probably mal-allocation of resources from the social point of view. Society loses, but neither managers, stockholders, nor labor necessarily acquires monopoly gains. How does this kind of result affect the use of industrial monopoly as a justification on the grounds of equity for increasing farmers' bargaining power? Or as an example agriculture might want to imitate?

Conclusions

Many persons who are concerned with public policy for agriculture are interested in monopoly in the nonfarm sector because they believe it might provide (1) a justification and possibly (2) a model to imitate for policies intended to benefit farmers through increasing their bargaining power.

But have they carefully considered whether they want to take justification and model from the monopolistic extremes of the nonfarm economy of from average or "typical" industrial markets?

And how do these investigators feel, at the same time, about antitrust policies that are intended to destroy the power of the monopolistic extremes? If successful, these policies would remove the most flagrant exhibitions of monopoly and, moreover, reduce the size of the "average degree of monopoly." But wouldn't this result weaken the justification-- and transform the model-- for this kind of agricultural policy?

This, of course, simply reminds us of alternative means of raising the bargaining power of agriculture, in the broad sense relative to the economy as a whole. First, we could give more bargaining power to agriculture. Alternatively, we could reduce monopoly in other sectors or subsectors. My own preference should be clear. But those who would choose the first course will still have to justify selecting electrical equipment, steel, or automobiles as the examples agriculture should imitate, instead of women's apparel, manufacturing, retail grocery selling, or hundreds of other members of the great nonfarm economy who may also claim to be "typical."