Bargaining power in agriculture

Center for Agricultural and Economic Adjustment, Iowa State University

Lehman B. Fletcher
Iowa State University

Arnold Paulsen
Iowa State University

Donald R. Kaldor
Iowa State University

W. G. Stucky
Iowa State University

See next page for additional authors

Follow this and additional works at: http://lib.dr.iastate.edu/card_reports

Part of the Agribusiness Commons, Agricultural and Resource Economics Commons, Agricultural Economics Commons, Economic Policy Commons, Labor Economics Commons, and the Labor Relations Commons

Recommended Citation

http://lib.dr.iastate.edu/card_reports/14

This Book is brought to you for free and open access by the CARD Reports and Working Papers at Iowa State University Digital Repository. It has been accepted for inclusion in CARD Reports by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Authors
Center for Agricultural and Economic Adjustment, Iowa State University; Lehman B. Fletcher; Arnold Paulsen; Donald R. Kaldor; W. G. Stucky; Ross B. Talbot; Harold W. Davey; Harold H. Hines; Lee R. Kolmer; Francis A. Kutish; J. R. Strain; J. T. Scott; T. S. Rackham; and J. A. Nordin

This book is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/card_reports/14
BARGAINING POWER IN AGRICULTURE

CAEA REPORT 9
CENTER FOR AGRICULTURAL AND ECONOMIC ADJUSTMENT
IOWA STATE UNIVERSITY of Science and Technology
Ames, Iowa 1961
BARGAINING POWER IN AGRICULTURE

The Center for Agricultural and Economic Adjustment
College of Agriculture
Iowa State University
of Science and Technology
Ames, Iowa

1961
Bargaining power has long been a popular subject among farmers and farm organizations. Its popularity undoubtedly reflects farmers' continuing concern with their economic position relative to other sectors of the economy. Bargaining power is accepted as an important policy objective by major farm organizations who otherwise agree on few farm program proposals.

To explore bargaining power more fully, a series of staff seminars was sponsored by the Center for Agricultural and Economic Adjustment during the spring of 1961. Papers presented at the seminars are contained in this publication.

The papers develop four aspects of bargaining power. The first papers deal with the nature of bargaining power, its attainability as an agricultural policy objective, and the possibilities, limitations and consequences of increasing farmers' bargaining power.

The challenge to education and the political implications of bargaining power proposals then are examined. Next, the experience of labor and industry plus the possibilities of existing agricultural producer groups to gain bargaining power are studied.

Finally, the basic concept of resource allocation is examined. This paper was presented first during the series of seminars. It is included at the end of this publication in recognition of the theoretical nature of the subject and the difficulty non-economists may have in understanding it.

Through this publication the papers are being made available to farmers, farm leaders and others who may be unused to the technical terminology of economics. An attempt has been made to preserve the technical precision used by economists in expressing themselves, yet to help the interested non-economist broaden his understanding of the nature and possibilities of farm bargaining power. To accomplish this latter objective, papers have been somewhat revised since the seminars and definitions of some economic terms have been included. The efforts of Edwin O. Haroldsen, Editor, Center for Agricultural and Economic Adjustment, have been particularly valuable in preparing these papers for a wider audience.

It is recognized that these papers constitute only a beginning in the challenge of examining farm bargaining power. There is need for additional education and research in this area, where the issues have not been well defined nor the actions proposed to attain the goal adequately appraised.

Arnold Paulsen

L. B. Fletcher
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. B. Fletcher</td>
<td>Concept and Importance of Bargaining Power</td>
<td>1</td>
</tr>
<tr>
<td>Arnold Paulson and Don Kaldor</td>
<td>Possibilities and Consequences of Increased Bargaining Power for Agriculture</td>
<td>9</td>
</tr>
<tr>
<td>W. G. Stucky</td>
<td>Role of Land-Grant Colleges in Success and/or Failure of Bargaining Power Proposals</td>
<td>25</td>
</tr>
<tr>
<td>Ross B. Talbot</td>
<td>Farmers' Bargaining Power and the Dynamics of American Politics</td>
<td>31</td>
</tr>
<tr>
<td>Harold W. Davey</td>
<td>Bargaining Power in Labor-Management Relations</td>
<td>41</td>
</tr>
<tr>
<td>Howard H. Hines</td>
<td>Bargaining Power and Monopoly in Industrial Markets in Relation to Some Agricultural Policy Proposals</td>
<td>51</td>
</tr>
<tr>
<td>Lee Kolmer</td>
<td>The American Farm Bureau Federation and Bargaining Power for Farmers</td>
<td>73</td>
</tr>
<tr>
<td>Francis A. Kutish</td>
<td>Collective Bargaining by Producer Groups</td>
<td>77</td>
</tr>
<tr>
<td>J. R. Strain</td>
<td>Bargaining Power and Federal Milk Orders for Fluid Milk Producers</td>
<td>81</td>
</tr>
<tr>
<td>J. T. Scott</td>
<td>Bargaining Power Possibilities in the Cooperative Marketing of Durum</td>
<td>87</td>
</tr>
<tr>
<td>T. S. Rackham</td>
<td>Farmers' Bargaining Power in the Pre-Slaughter Marketing of Ontario Hogs</td>
<td>95</td>
</tr>
<tr>
<td>J. A. Nordin</td>
<td>Resource Allocation in Relation to Partly Competitive Systems</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Glossary of Economic Terms</td>
<td>107</td>
</tr>
</tbody>
</table>
CONCEPT AND IMPORTANCE OF BARGAINING POWER

by L. B. Fletcher

Historically, farmers have maintained that they occupy an unequal and passive status in the market relative to firms in other sectors from which they buy and sell. Currently they see themselves with no bargaining power and in a squeeze between rising costs of purchased inputs and decreasing prices of products they sell. There is wide agreement among farm groups about the desirability of increasing farmers' bargaining power. This paper will consider (1) the meaning of bargaining power, and (2) methods and consequences of manipulating bargaining power, and (3) the relevance of greater bargaining power for farmers as an agricultural policy objective.

That all buyers and sellers in either product or resource markets do not meet on completely equal terms is recognized in the earliest economic literature. Adam Smith, for example, observed in 1776, "In the long run the workman may be as necessary to his master as his master is to him, but the necessity is not so immediate... Masters are always and everywhere in a sort of tacit, but constant and uniform combination not to raise the wages of labour above their actual rate." Marshall also found inequality of bargaining strength between employers and workers and concluded that the workers' disadvantage lowers their wages. Similarly, he thought, "Those sellers of commodities who are poor and numerous relatively to the purchasers are at a disadvantage in bargaining in the same way as are the sellers of labour."

The Meaning of Bargaining Power

Discussions of inequalities of bargaining power between the two parties of an exchange transaction have rarely attempted to explain the meaning of the term "bargaining power." Apparently it has often been assumed that everyone knows from personal experience in shopping or selling what it means to possess a distinct advantage or disadvantage. When definitions have been attempted, wide variation in usage has made it difficult to attach a precise meaning to the term; economic literature reveals a serious lack of agreement as to its definition and importance. While any internally consistent definition cannot be regarded as incorrect, a wide diversity of usage encourages misunderstanding of the concept and weakens attempts to deal explicitly and systematically with it.

A critique of alternative definitions of bargaining power. Marshall attributes the inequality in bargaining strength between the employer and the worker to a wide variety of factors, including inadequate training, immobility, perishability,

1Assistant Professor of Economics at Iowa State University.
and lack of reserve fund. 4 Thus, Marshall views bargaining power--defined only implicitly--as a general concept which includes all forces determining the wage rate.

More recently, bargaining power was defined as the ability to obtain the most favorable price possible under conditions prevailing in all markets, either directly or indirectly involved. In other words the competitive situation in the market in which the transaction takes place and all restraints and repercussions each party must face in all related markets enter as determinants of bargaining power. 5 The competitive price is the point of reference, and bargaining power is proportional to the deviation of the price obtained from the price that would rule for the quantity supplied under pure competition in all relevant markets.

Both of these definitions accept all the determinants of price as determinants of bargaining power. One emphasizes the factors which determine bargaining power; the other emphasizes the gain resulting from possession of bargaining power relative to a situation in which it is absent. The important feature is that both definitions use bargaining power to express a conclusion about the totality of market forces. Expressed in terms of ultimate market outcomes, the concept appears logical and unambiguous. However, the difficulty with making bargaining power equal to the whole of forces determining prices is relatively clear. "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." 6

Others have attempted to name bargaining power as one factor among a number in price (or wage) determination. For example, one writer thought it influenced price determination through enhancement of one party's "power to withhold." 7 Another held that it is more important to ask which of the parties would suffer a greater loss from such withholding. Consequently he defined bargaining power as the ability to impose loss on the other party. 8 Similarly, the term may be defined as the power to organize and carry out a coercive device, skill in negotiation, monopoly power, supply control, or, as it is often used, an unspecified "other" factor in price determination.

4Ibid., pp. 560-569.
8S. H. Slichter, "Impact of Social Security Legislation upon Mobility and Enterprise," American Economic Review, Vol. XXX (1940), p. 57. See also G. W. Ladd and J. R. Strain, "What About Bargaining Power for Farmers?" Iowa Farm Science, Vol. 16, No. 1 (July 1961), pp. 3-5. However, when these authors specify the conditions under which one party can impose a loss on another party, their determinants are merely a classification of all the forces which influence price.
Bilateral monopoly, negotiation, and bargaining power. Bilateral monopoly arises when two firms that want to deal with each other are both in a monopolistic position on their own side of the market. In this situation, the terms of exchange transactions—both price and quantity—are subject to bargaining and are settled by agreement. The quantity agreed upon may or may not maximize the sum of the two firms' profits; if it does not, there is always a possibility of adjusting the quantity exchanged to the amount which does. A stable agreement is reached only at the quantity which maximizes the sum of their profits independently of what price they agree upon, for the price determines only the share of the two firms in their combined profits.

Therefore, even economists who have concluded that the quantity which will be exchanged in this market situation is determinant—and equal to the "optimal" competitive output—agree on the theoretical indeterminateness of the price of the product passing from the monopolist to the monopsonist. Whatever the price, limited only by the range from the low monopsony to the high monopoly prices, it will not affect the quantity produced but only the division of the combined profits. To the extent that the two parties can be expected to face each other on equal footing, a price outcome closer to the competitive level than under either one-sided monopoly or monopsony is suggested.

Similar to considering bargaining power as one among many factors accounting for price, another approach is to identify it as the ability to settle price within the range of theoretical indeterminancy in bilateral monopoly. That is, when competitive influences are too imperfect to compel price and quantity outcomes at equilibrium levels, firms with bargaining power will be able to exercise discretion in finally establishing a price. This suggests a dichotomy between competitive or market forces on one hand and discretionary power in settling theoretically indeterminant prices on the other. In practice, use of bargaining power in this sense will lead some people to see price determination through development of bargaining power as an alternative to prices determined by market forces. It is reasonably clear, however, that all of what has been called bargaining power by the various writers is present in market situations where prices are theoretically determinant; hence, bargaining power involves in large part the use of competitive influences to establish prices more favorable than those otherwise prevailing.

Likewise, it does not seem that the concept can be limited usefully to mean negotiation. In fact, ability and willingness to bargain probably have little to do with bargaining power. Consider a monopsonistic firm buying from a competitive

---

9See J. A. Nordin, "Resource Allocation in Relation to Partly Competitive System," in this report. For a convincing argument that bilateral monopoly at best appears to result only in the simple monopoly output, see McKie, J. W., op. cit., pp. 15-20. Whatever the quantity outcome, both authors agree that price only distributes profits (according to relative bargaining power.)
industry. This is a classic case of unequal bargaining power; bargaining, as haggling or negotiation, is not necessary at all in this situation.

Objection can also be entered against identifying bargaining power with monopoly power. Monopoly or market power results from the ability of one firm to restrict competition through control over its own and its competitors' market behavior, most often involving influence over the supply of a product. A firm's monopoly power extends over its competitors on the same side of the market; a seller has monopoly power over competing sellers, a buyer over competing buyers. However, bargaining power must be defined and measured relative to firms on the other side of the market. Monopoly power may be necessary to the existence of bargaining power, but it is not sufficient. Thus, a monopsonist has bargaining power relative to competitive sellers. Organization of the sellers into collective monopoly will not change the degree on monopoly on the buying side, but can be expected substantially to reduce the monopsonist's bargaining power.

The main purport of this discussion is that it well may be impossible to specify bargaining power as a factor in price determination and necessary to accept the term as summing up all forces which influence prices. This conclusion has been strongly stated by Lindblom. "The confusion over the meaning of the term is regrettable, the need for the term is doubtful, and the implication that bargaining power necessarily has something to do with bargaining is false. Relative strength in bargaining power must simply be read as a general advantage over an opposing buyer or seller in establishing on the market the terms desired, any attempt to narrow the term to consider it as a distinguishable factor among others being doomed to failure."

Methods and Consequences of Manipulating Bargaining Power

If it is agreed that bargaining power expresses a conclusion about the totality of all market forces influencing prices, then manipulation of bargaining power would include any action by which a firm attempts to establish more favorable prices than those previously prevailing. Frequently firms accept or reject the first price offered without considering the possibilities of altering the terms of exchange—conduct which economists associate with pure competition. In other cases, firms attempt to secure a more advantageous position in buying and/or selling transactions which significantly influence income flows.

Potential gain from manipulating bargaining power depends on the extent to which a firm can limit the alternatives available to its market opponents or extend its own alternatives. For example, a selling firm can initiate a new product or differentiate his product by endowing it with some unique characteristic, or it can incorporate into its product some characteristic previously

---

offered by competing sellers. It can advertise to uncover alternative buyers, reducing the necessity to sell at terms on which agreement is possible with current buyers. It can attempt coercive actions against buyers to force agreement on more favorable terms.

The ability to get more implies not merely the chance to ask for more (recognition and freedom from institutional constraints) and the ability to hold out and fight for more (staying power), but also an ability of the other party to give more. Consider a group of agricultural producers which has always accepted the price buyers first offer. Now the producers get legal sanction to form a cartel, secure a full-supply contract with buyers, and possess unlimited funds to divert supplies to surplus usage. In other words, they have what it takes to get substantially more than is first offered. How much more can they get?

This question can only be answered in terms of a specified time period. In the short run, the potential price gain for the sellers depends primarily on the increase in prices the buyers of their product can charge without much affecting volume...also the extent to which the buyers are able to hold their expenditures in line by lowering prices they pay to suppliers of other products or complementary factors of production. Perhaps if buyers may not be able to pay another cent they will be forced out of business. The increased bargaining power of the sellers would then be of no avail. Expressed in the extreme, "Even if you take from the other fellow all he has you can't get much if he hasn't got anything!"

In the longer run conditions of substitutability provide upper limits on the potential gain. Such substitution is possible at the point of final consumption (shift in level of demand due to substitution of competing products) or at the point of first sale (entry of new producers or foreign imports). Possibilities of substitution at one or more levels mean that potential gains may be relatively great in the short run but almost nonexistent when long-run considerations are introduced.

This point explains one reason why the concept of bargaining power gives rise to so much confusion. Because the scope of competitive factors increases with the shift from short-run to long-run analysis, potential gain from increased bargaining power must be estimated with reference to a specified period of adjustment. In this connection, we observe that attempts to identify different kinds of bargaining power often involve nothing more than implicit recognition of the time dimension. In the long-run, competitive forces obviously impose stricter conditions for the acquisition of bargaining power and narrower limits upon its exercise. The forces involved are always the same; their relative importance may vary depending on the time period involved.

11 Compare Ladd and Strain, op. cit., pp. 4-5.
Manipulation through horizontal combination. Possibilities may exist by which firms can unilaterally attempt to obtain and exercise power over price. There is, however, a second method by which bargaining power can be manipulated; whether the number of competitors is large or small, they might improve their position in the market by agreeing to act collectively. That is, a seller can gain relative advantage to the extent to which elimination of interseller competition insures that others do not undercut the terms he offers to buyers. By restricting interseller competition, such agreements reduce the possibility of substitution among products of participating firms. The sellers, acting in concert, and thus incurring no risk of losing customers to each other, improve their prospects for obtaining more favorable terms. Clearly, much of the current discussion about bargaining power for agriculture would involve some kind of collective action.

There are several ways in which rival firms can, by agreement, rule out competition among themselves and enhance their market power. Such agreements may take a variety of forms ranging from informal rules on business practices to detailed regulation of all facets of market behavior. One type of agreement restricts total output by limiting production of each party to the agreement (marketing quotas). Another type divides the market into several parts and practices price discrimination (fluid milk). A third sets prices and permits buyers to choose quantities (labor unions).

As a general rule, the more comprehensive the alliance, the greater the increase in bargaining power and the larger the potential gain. This principle is related to the substitution possibilities discussed above. If alternative supplies are adequate and readily available, buyers can turn to other sources, leaving an organized group of sellers with no bargaining power.

But bargaining power is not assured even if an organization embraces all producers of a certain product. Collective action must be based on prior bargaining among those who are participating. What happens when the parties to the agreement operate under different cost conditions, have different values, and appraise the market situation differently? This situation is like when large numbers of producers in widely scattered areas are involved. Under such conditions the common terms to be offered to sellers require compromise. Since each seller is anxious to receive a "fair" share of the total gain, the market offer adopted will be subject to the constraint that each firm maintains a satisfactory share of the total sales. The larger the number and the less homogeneous the members of the coalition, the greater the likelihood of disagreement on common terms and the tendency to disintegration.

A corollary of the difficulty in arriving at common terms is the tendency for combinations to be directed at limited objectives. For instance, a national association of livestock producers might attempt to bargain with packers over minimum prices to be paid for livestock of various kinds, weights, grades, and location, but leave packers free to choose how many head and from whom to buy. Competition among members of the association over other aspects of their market
offers might actually be stimulated as an indirect result of the agreement on one or more limited objectives.

In summary, combination among competitors for collective action is one means of shifting relative bargaining power. The more comprehensive the coalition—both in number of participants and scope of the agreement—the greater the potential gain, the more competition is transferred from the organization and its market opponents to a struggle among firms within its limits, and the more competition may be redirected along other lines not covered by the agreement. Interestingly enough, the source of its strength is the source of its weakness as well.

Consequences of shifts in relative bargaining power. A shift in the distribution of bargaining power among economic groups is manifested through relative price changes. Prices in turn are related both to resource allocation and to income distribution. Hence, manipulation of bargaining power involves two major areas of social concern with the performance of the economy.

With regard to resource allocation, the important question is the effect of shifts in relative prices on the level and composition of real output. Does aggregate demand decrease because quantities demanded of some commodities contract more rapidly in response to the changes in relative prices than others increase? Is the movement in relative prices likely to lead to a more or less preferred allocation of resources under existing restraints? I am aware of no generally accepted analysis which permits definitive answers to questions about the effects of relative price changes on the demand and supply of real output.

Relative price changes in favor of the products of one sector also imply an increase in total income accruing to resources used in that sector. Reactions in exchange relationships themselves and broader political considerations impose limits on the concentration of income in the hands of groups with increased bargaining power. Combination may be met by countercombination, restraining potential gain beyond upper limits set by possibilities of substitution and internal competitive struggles. Those whose economic position is weakened can seek government action to curb the coalition or redress the unfavorable distribution of bargaining power. In general, public policy is opposed to the development of bargaining power by some firms and industries relative to other parts of the economy. Participation by government or the granting of a special status by statute would appear to be a prerequisite to collective action to improve bargaining power, as illustrated by such cases as labor unions, farm cooperatives, and utilities.

Relevance of Increased Farmers' Bargaining Power as an Agricultural Policy Objective

This paper argues that the concept of bargaining power is most logically used to sum up overall advantages or inequalities in price-influencing abilities. Recognition of this comprehensive nature of the concept could explain why most persons
concerned with agriculture seem to agree on the desirability of increasing farmers' bargaining power, although they cannot agree on the means to accomplish this end.

However, this comprehensive concept is probably not the thing most people are talking about when they say that farmers are at a disadvantage in the market relative to the marketing and supply firms with which they deal. Here, the overall concept includes too much; what is needed is a concept which concentrates on the relative positions of buying and selling firms in specified markets. There appears to be a significant difference between the statement that "farmers have no bargaining power" and the claim that "farmers have less bargaining power than the firms from which they buy and sell."

This point can be expected to play an important role in consideration of any proposals to give farmers more bargaining power. The narrower question is whether producers as a group are at a relative disadvantage to marketing and supply firms as a group. Even if this question is answered in the affirmative, a choice must still be made whether to equalize the situation (1) by giving farmers more bargaining power or (2) by reducing bargaining power in the marketing and supply sectors. Choice of the latter course of action is clearly most consistent with general public policy in matters of competition and monopoly. However, it appears that the public might be quite willing to grant considerable freedom to farmers to act collectively to strengthen their market position based on the narrow justification of inequality in price determination relative to industrial firms to which they sell and from whom they buy. Perhaps the most relevant example here is the freedom granted labor unions and their exemption from antitrust legislation.

The broader question is the extent to which collective action by farmers will be made permissive for the purpose of gaining sufficient market control to raise prices and increase income. Programs designed to accomplish this end may be operated by government or by farmers themselves on a do-it-yourself basis. Certainly, the latter would necessitate a substantial exemption to farmers from antitrust and related regulatory statutes. If the government does not operate the program, the public may be unwilling to concur in this large a grant of monopoly power to farmers. At a minimum, some fairly specific rules to limit the methods to be used and the extent to which prices can be increased are likely to be established.
POSSIBILITIES AND CONSEQUENCES OF INCREASED

BARGAINING POWER FOR AGRICULTURE

by

Arnold Paulsen¹

and

Don Kaldor²

Farm producers have long speculated about the possibilities of bargaining power as a device to improve their incomes. Concern over lack of bargaining power is expressed in the frequent comment of farm people that, "Our trouble is we have to pay what's asked when we go to the store and take what's offered for what we have to sell." Some farmers feel there is something wrong with the system which puts them in a squeeze between rising costs for machinery, land, fuel, and labor and decreasing prices for products and even decreasing total value of output. Individually, they feel helpless to change the situation.

Some producers would like to break the grip of the economic squeeze. They would like to move from a passive to an active role with respect to the prices they receive, the costs they pay, and the rate of return they accept on their labor and capital. To become active some feel they need power to control their markets. Farmers have watched the activities of laborers in industry and observed how they have gained a measure of power by acting collectively. Some merely feel that bargaining power is worth a try, while others valiantly declare that collective action is the only way individual producers can gain market strength.

Bargaining power can be thought of as the ability to influence the terms of trade and the conditions of sale in product of factor markets. In the case of agriculture, this implies some sort of collective action on the part of many sellers. There are two approaches to this collective action. (1) Government can aid in bringing unity. (2) Producers themselves can operate within the present laws or a somewhat more permissive set of rules.

The political possibility of obtaining and exercising a franchise for collective bargaining in agriculture is discussed in another paper. In this paper we discuss only the possibilities and consequences of bargaining power.

We shall assume that (1) farm producers have agreed to act collectively, and (2) society has granted permission for farmers to act collectively. We shall look at the alternative ways or directions in which a decision-making unit might exercise bargaining power and evaluate the consequences.

¹Assistant Professor of Economics at Iowa State University.
²Professor of Economics at Iowa State University.
Let us assume the goal of the producer group is to improve the terms of trade for farm products and thereby increase the returns in agriculture relative to other parts of the economy. The terms of trade for agriculture can be improved by influencing supply or demand variables. However, some variables are more difficult or expensive to control than others. Devices used to manipulate the variables may be called instruments. Instruments include such things as (1) promotion to influence consumers preferences, (2) compulsory acreage allotments to reduce the land input and hence the total quantity of products supplied, or (3) liberalized immigration laws to increase population.

In most cases, a number of different instruments might be used to influence a given variable. They involve different costs and problems of administration. Each instrument is likely to generate different side effects. In selecting an instrument from a producer standpoint, it is therefore necessary to compare costs of the various instruments in moving a variable a given amount. However, society as a whole is concerned with all direct and side effects generated by an instrument. Society's evaluation of the desirability of employing an instrument is based on additional consequences--both costs and benefits.

Society has set up rules to govern use of instruments by various groups. The rules are subject to change depending on the disagreeableness to society of the direct and side effects of using the instruments. Political acquiescence is a permission of the moment. Rules which, at the moment, grant permission for the use of certain instruments may be expanded or contracted in a relatively short time.

The array of economically feasible instruments is also constantly changing. As science and imagination progress, new instruments are devised which are less costly. The variables which influence the terms of trade are relatively stable. The internal linkages within the agricultural economy are relatively stable. However, the relationships among variables change in time though in a relatively predictable manner.

To summarize, the terms of trade are improved through the manipulation of variables. Variables are moved by instruments. Instruments are available through acquiescence or direct permission of society. Improving the terms of trade is limited (1) by what is technically possible to do with the variables in the system, (2) by what is economically feasible, (i.e., which benefit the group using them more than they cost) and (3) by what is politically acceptable.

Demand, Supply Variables and Terms of Trade

Let us focus on the variables and technical possibilities of improving the terms of trade for agriculture. Perhaps the best way to look at the array of variables is in outline form. The terms of trade can be influenced by manipulating demand variables or supply variables. There may be some possibility of improving the terms of trade indirectly through a number of other factors called conditions.
of product sale. Let us ignore for a moment most questions involving the selection of instruments to control the variables. The following variables will be discussed.

I. Demand variables

A. Population
   1. Immigration
   2. Natural increase (excess of births over deaths; achieved by lengthening life or increasing live births)

B. Income
   1. Level
   2. Distribution

C. Preferences
   1. Appeal of competing products (high income elastic nonagricultural; tax and color of oleo)
   2. Appeal of own product (subsidy, advertising, promotion, nutrition research)

D. Prices and quantities of competing products

E. Margins in marketing sector
   1. Rate of return on marketing resources
   2. Number of resources needed

II. Supply variables

A. Quantity of product placed on market
   1. In total
   2. On particular markets (multiple pricing)
   3. Distribution over time (pork seasonality - quantity and elasticity decrease in summer)

B. Price of inputs (increase pressure for internal disintegration)
   1. Return to resources used as inputs or used in making inputs
   2. Number of resources used in making inputs
C. Quantity of inputs
   
   1. Decrease competing resources (other countries, regions, firms, new resources in other firms)
   
   2. Increase complementary resources (those which raise average product)

D. Changes in production possibilities
   
   1. Rate
   2. Volume
   3. Type

III. Conditions of product sale (indirect effect on terms of trade)
   
   A. Product differentiation and multiple pricing (limited by change in total cost equal to or less than change in total revenue)
   
   B. Market reporting and sale information (microproduct mix adjustment. Laurence Abbott, *Quality and Competition*)
   
   C. Quality and purity preservation (export wheat, highly perishable vegetables)
   
   D. Pricing practices to expand market (introductory offer, spoiling the market)
   
   E. Margin variation to decrease not increase price flexibility
   
   F. Product service as well as sale to expand market (IBM, soybean association)

**Demand variables.** Let us portray the consumer level demand curve as in Fig. 1. Quantity taken increases as price declines. Below and to the left of the consumer level demand curve lies the farm level demand curve. In this diagram it is separated by a constant farm to retail spread throughout the quantity range. To illustrate, OQ represents the quantity of pork sold per person in the United States in 1958—60 pounds per person. In that year the consumer paid an average of 62 cents per pound for pork. Putting it another way, consistently to move the volume of pork which was coming on the market, wholesalers and retailers found necessary an average price of 62 cents per pound at retail. After marketing, processing, and distribution costs and the shrinkage of the animals were subtracted, (42 cents per pound) farmers were paid 19 cents per pound liveweight for the hogs.
Obviously, if more people had been present in the United States something less than 60 pounds per capita would have been available and pork presumably would have sold for a higher price. An increase in population would improve the terms of trade for agriculture. This could be accomplished through increased immigration or by influencing the natural rate of population increase.

The level of income influences the position of the consumer level demand curve. As people become wealthier, their demand for food rises somewhat except for so-called inferior goods such as dry beans and wheat. However, the increase is small: the added income is likely to be spent mostly on nonfood rather than food items. Increasing the income of low income people boosts demand for food more than increasing the income of high income people. Thus the terms of trade for agriculture could be influenced somewhat by varying the level and distribution of income. ³

---
³Wetmore, et. al. "Expanding the Demand for Farm Products," Technical Bulletin 23, University of Minnesota Agricultural Experiment Station, April 1959, pp. 54-64.
The consumption of any product such as eggs or beef is influenced by the presence, appeal, and price of other products. In general, the presence of and consumer desire for many nonfood items will depress somewhat the demand for food. For example, a working girl may see a dress which is just exactly what she needs, and although it's very expensive, she is determined to have it. She may save a little each day on her food bill to buy it. On the other hand, food consumption was high during World War II when nonfood consumer items were scarce and people apparently indulged in large quantities of relatively expensive food.

One food item influences the demand curve for another. The price of beef influences the demand curve for pork. The tax on oleomargarine and prevention of its coloration probably enhanced the demand for butter. The demand for a product will be expanded by a tax or adverse publicity on substitute items quite as readily as by subsidy, promotion or favorable nutrition research on its behalf.

By reducing marketing margins the demand curve at the farm level can be moved upward and to the right without moving the consumer level demand curve. This type of movement has been a favorite wish of farm producers for many years. There are two obvious possibilities: (1) Reduce the rate of returns on resources used in the marketing, processing, and retailing sector. (2) Reduce the number of resources needed by adoption of newer, more efficient techniques in marketing.

Working on any or all the demand variables gives the same effect. The demand curve at the farm level moves upward and to the right. Such a movement affects the terms of trade differently over the short run and long run. In fig. 2 we consider the case of a single product or a group of closely competitive products such as meat.

In a period so short that the supply is perfectly inelastic (that is, quantity supplied is constant) \( S_1 \) in fig. 2, any increase in demand will be reflected entirely in a price rise. This will mean an increase in returns to resources in the production of the product. As a result, relative returns will become more favorable in this enterprise.

Over a longer time, the supply will be more elastic. Producers, free to shift resources, will expand production of the product for which there is increased demand. In the next period, the price will decline. The amount of price decline will depend on the long-run elasticity of supply. If supply is perfectly elastic \( S_2 \) (that is, producers are willing to supply all the market will take at the old price), the price will decline to the original level. The increase in demand will show up entirely as expansion in quantity exchanged. Supply is likely to be highly elastic when the product absorbs a small proportion of total farm resources and substantial resources are readily adaptable to produce the product. This is probably the case for Idaho potatoes, Iowa pork, or Illinois soybeans. In these cases, the price effect of the demand increase
is quickly dissipated over the whole farm industry. On the other hand, if the product absorbs a large proportion of total farm resources (such as feed grains), and/or resources in alternative uses cannot be readily adapted to the production of the product (maple syrup or cranberries), the supply is likely to be quite inelastic. If the supply is rather inelastic even in the long run, the increase in demand will induce a more permanent price rise. However, resource returns at the margin in the enterprise will not remain above the levels offered at the margin by production of other farm products. But average rates of return might remain separated for some time.

A demand increase for a particular product may be largely at the expense of other farm products. (For example people may decide to eat more pork and less beef.) When this is the case, the elasticity of supply of the particular product, pork for example, probably will be relatively large, and the price effect will be dissipated quickly. An expansion of demand for one meat at the expense of another will produce a shift in resource use among the two classes of livestock on farms. Resource returns in the enterprise expanding or in the industry as a whole may show little or no long-run improvement.
Even if the expanded demand is not at the expense of other farm products, the effect on resource returns may be more to the whole industry than to the particular enterprise. This is probably the case for soybeans, for which demand has grown rapidly. Expansion of the demand for soybeans has moved resources into soybean production, and out of feed grain and other production. Higher resource returns or smaller surpluses in the whole feed-livestock economy have probably resulted.

How much this shift in resources will affect the whole industry depends on the magnitude of the increased demand and the elasticity of aggregate supply. Since aggregate supply appears to be highly inelastic in the short run, the short run effect of expanded demand not at the expense of other products would be mostly to increase prices and not to expand total output.

Unfortunately the opportunity for expanding demand, especially of the noncompetitive variety, is relatively small, as summarized at a previous seminar, especially by Fox at that seminar.  

Supply variables. On the supply side, the terms of trade for agriculture could be influenced in two main ways: (1) Vary the position of the supply function. (2) Choose a more favorable point on the present supply function.

The total quantity supplied could be controlled directly or indirectly. That is, it could be reduced by restricting marketings or by limiting the quantity of inputs used in production. The price of agricultural products rises so sharply as output drops that a smaller quantity sells for more total money than a larger quantity. For example the total value of hogs in 1958 was $3.4 billion, while in 1960 it was $2.9 billion. The volume was about 13 percent larger in 1960 but the value of farm sales, 15 percent lower.

Because of recent purchases by government, a reduction of 6 to 8 percent in grain production presently would be necessary before prices would rise. After such a cut, further reductions in production would not raise prices if society chose to release present stored stocks.

The potential is large, however, for increasing the total return by controlling supply. The average total retail value of pork and beef combined could have been about 13 percent larger from 1949 to 1958 if 18 percent less beef and 16 percent less pork had been sold. This would be 50 pounds of pork per

---

4 Demand for Farm Products, CAA Report 2, Center for Agricultural Adjustment, Iowa State University, 1959.
5 The numerical estimates made in this section were based on demand equations provided by Wilbur Maki. The use of the equations and the accuracy of the calculations are the responsibility of the authors.
person per year instead of 59, and 60 pounds of beef instead of 71. Prices at retail would have been 35 percent higher if volume had been cut this much. Farm prices might have been up 50 percent. Net farm income from hogs and cattle probably would have about doubled.

Even more drastic cuts in production and still higher prices could be imagined. The maximum value of farm sales of meat animals would occur at a lower per capita consumption than indicated above. The net income would continue to rise even as output was cut below the level that would bring the greatest total value of sales. Net income of all operators would be a maximum when the quantity was set so that the last truckload of hogs sent to market added to total value of sales just what it cost to produce them. The total hogs marketed would, of course, sell at that point for perhaps much more than what it cost to produce them, since average revenue would be greater than marginal revenue.

These are rough estimates for the short run. Over a longer period the demand would become more elastic, and the production of substitute products would rise. As this happened the price received for a reduced volume of one or two meats would sink. Put another way, if a 30 percent cut were required in one year to raise hog prices above $25 per cwt. then to maintain prices at that level would require further cuts in supplies each year. There may be errors in the quantities estimated because we have no experience with even a 20 percent cut in per capita consumption. We cannot use the same relationships for large changes as we use for small changes.

Furthermore, a monopolist usually hesitates fully to exploit his position. A producer group would realize that the public would react negatively to agricultural bargaining power obtained through controlling supply if food prices became too high. Furthermore, informed producer groups would recognize that high prices and scarce quantities would make unity among farmers more difficult to maintain. This situation would also encourage the entry of other producers, regions, and even countries into the market. Therefore, the maximum revenue quantities should not be considered goals that would be striven for but only illustrations of the way in which control of supply could improve terms of trade.

There would be no need to induce farmers to cut supply; it is profitable for them to do so. But, we all know they do not readily agree to work together to attain this goal.

Let us return to the short-run and long-run effects on the terms of trade of operating at a highly favorable point on the supply function. Improving the price of one commodity through controlling the supply, such as hogs, would cause a reaction in close substitutes such as beef and broilers. The long-run gains from controlling supply depend on the closeness of substitutes and the willingness of producers of the substitutes to expand and supply the demand. If there is a perfect substitute and the substitute producer will supply all the demand without a price rise, there is no long-run gain from controlling the supply of the particular product. This is probably the case with two brands of gasoline.
If one company tried to improve its terms of trade by closing gas stations, customers might be able to buy all they wanted at a competing company's stations at the regular price. The first company could cut supply repeatedly until it had no more stations and still would not have improved its terms of trade.

In addition to varying total supply, a bargaining unit might try to institute multiple prices and allocate the supply among markets. There are two conditions for potential success. (1) The markets must be clearly separated so that quantities offered in one market will not flow into other markets. (2) The demands must exhibit different price elasticities. Under these conditions, the bargaining unit can increase total revenue by selling the product for different prices in different markets. From the producer's standpoint, the best allocation of product between the two markets is that which maximizes total revenue. This will occur when marginal revenue is the same in the different markets. This requires setting a relatively high price in the more inelastic markets and a relatively low price in the more elastic markets. Thus, his goal is to sell a limited quantity in the inelastic market and more than previously in the elastic market. If the elasticities are greatly different over a wide range of quantities, reallocation among markets and price discrimination can produce a large increase in total revenue. For example, a two-price plan for wheat might sell a slightly smaller quantity in the domestic food market at a substantially higher-than-present price. The remainder would be sold for less than present prices on the export and feed grain market. The result would be increased total value of wheat crops. Price discrimination has been forbidden by Federal law but is practiced with immunity in a number of agricultural markets -- milk, oranges, cranberries, and nuts, for example.

Total return from a given sized crop can also be increased sometimes by influencing the time when products flow to market. This can be accomplished partly by storage and also by collective production planning. Orange and apple producers frequently vary the time pattern of crop delivery to market to increase its total value. It would be foolish for a bargaining agent to send another load of produce to market this week if such action would only decrease the total return for the week's shipment. Destroying it, diverting it to some other use, or holding it until next week would seem only logical. Presently, in most agricultural markets the last loads of produce to arrive at the market during a week or month reduce the total value of the shipment.

Acting collectively in the purchase of inputs would be only a small step if producers were acting collectively with respect to selling their products. It is apparent that total return above out-of-pocket costs could be increased by lowering the cost of purchased inputs. Two possibilities exist. (1) Decrease the returns to resources used as inputs or used in making inputs. (2) Reduce the number of resources used in making purchased inputs.

On the supply side, there are also variables associated with improvements in production techniques. Let us say the cost per unit of input is stable.
The cost of production still could be decreased if fewer inputs were needed per unit of output. Most new technology increases output and worsens the terms of trade for agriculture after it has been generally adopted. Improvements in production techniques might be regulated to lessen their depressing effect on the terms of trade for agriculture by: (1) controlling the amount and rate of release of new technology, or (2) selecting the products so only those with more elastic demands and mobile resources would be affected.

Conditions of product sale. Actions besides specific manipulation of supply or demand variables may improve the terms of trade for agriculture. Conditions of sale in agricultural collective-bargaining contracts would be somewhat similar to the working-condition provisions usually included in labor contracts. Producers of farm products usually have no control over the way in which their product is handled after it leaves their ownership. However, in a collective-bargaining situation, producers could influence to some degree how products were marketed. If there were some advantage to them either directly or indirectly, one would anticipate that bargaining agents would try to specify certain conditions of sale. For example, producers might desire additional or less product differentiation, improved market reporting, quality and purity preservation, pricing practices which expand the market, different management of farm-retail margin variation over time, or additional product service to consumers. The opportunity to make gains from any or all of these may be limited. In principle, however, they might have some indirect impact on the terms of trade.

Product differentiation and multiple pricing might increase the total return for a given volume of output if some people prefer one of the differentiated products.

Improved market reporting and sale information would make it possible for producers to gear their product mix more perfectly with the desires of the market and increase volume or price. The broad product mix usually considered by agricultural economists (eggs, milk, beef, potatoes, pork and oranges) is probably handled well by the price and market system. However, the price and market mechanism is not precise in reporting the values of alternative qualities of a specific product. These might involve gluten strength of wheat, meatiness in livestock or variety choice in grains or vegetables. These consumer preferences could be reported to a bargaining group which would in turn relay the information to their producer members.

The preservation of quality and purity sometimes concerns producers. Wheat growers have been irritated considerably by reports from foreign users that American wheat is occasionally adulterated with inert material. Highly perishable products such as bread or frozen foods presently are delivered on contract, specifying the exact way in which they will be cared for in the store. If producers could gain directly or indirectly through quality and purity preservation, they might ask or bargain for guarantees concerning the conditions relating to sale of the product.
To expand markets, farmers might encourage pricing practices designed to acquaint new consumers with the product. Producers might ask the merchandisers of the final product to help insure that newly acquired customers are retained or that the product is adjusted to their desires.

Marketing margins vary between periods of low volume and high volume. There is some tendency to accept small margins when volume of farm production is low. During periods of seasonally low supply, competition among processors is keen. If marketing margins were larger rather than smaller than average at these times, the price to the farmers would be lower, but perhaps the over-expansion of production in the next cycle would be less severe. Conversely there is also tendency to take large margins when volume of production is high because of reduced competition. Considering average total costs, margins might be smaller than average at such times because costs decline with increased volume. If they were small at times of heavy marketings, this would move a large production into consumption without depressing prices to farmers so much. Thus, if the cyclical pattern of marketing margins could be reversed, (that is, large margins accepted at low volume and low margins taken at high volume), demand would be more elastic at the farm level and livestock prices and production might become more stable.

**Producer manipulation of variables.** Obviously, you will dismiss some of the supply and demand variables discussed above as beyond the practical control of producer groups. In almost all cases, the short-run gains of manipulation appear larger than the long-run gains.

Producer groups are organized to some extent at the present time. We see them trying to manipulate some of the variables. For example, they try to expand the demand for their product. Through the use of Public Law 480 foreign currencies, several groups have tried to develop larger export markets for their products. With money collected from producers, some groups have worked on product development and searched for new uses for the product. Several producer groups have a production research committee which meets with scientists or may support scientists who explore the possibilities of new cost-reducing technology. Commodity groups have long attempted cooperative selling to try to increase the total value of output by regulating the flow of a given sized crop to market and increasing competition in the marketing sector. Buying cooperatives also exist to try to reduce the cost of purchased inputs through making volume purchases and stimulating increased competition for their business among farm supply industries. There may be additional opportunities to improve the terms of trade for farm products in these ways. However, it appears that these opportunities are fairly small. Moreover, their exploitation by producer groups is likely to be costly with only negligible long-run effects on resource returns in the industry.

The chances are slight that producer groups can increase demand by controlling such variables as population, per capita income, and the price of competitive products. Congress controls the opportunity to influence the
distribution of income for food by means of food stamp plans, consumption subsidies, etc. Producer groups are limited to bringing political pressure on public decision-making units, particularly Congress. While some improvement in the terms of trade might be induced by a large food subsidy program for low income groups, such a program cannot be financed by private producer groups.

It is on the supply side that opportunities are greatest for the producer to influence the terms of trade. Unquestionably the potential here is very large. To exploit these opportunities, instruments must be available to control market supplies directly or indirectly by influencing inputs or the transformation of inputs into outputs. Here we are not going to be concerned with details of the methods of control. Our interest is primarily in analyzing consequences that are common to most, if not all, methods of controlling supply.

Consequences of Supply Control

Programs of significant proportions to control supplies of a single major commodity are not likely to be permanent. A control program for a particular product is likely to lead either to retaliation by other producer groups or the imposition of general controls. Where there is an excess aggregate supply of farm products, there is little opportunity to shift surplus resource problems from one commodity to another without serious income effects on producers of the substitute products. Thus, the ensuing discussion of the consequences of supply control will focus on general controls.

General controls to improve the terms of trade fall into two broad categories in terms of their consequences. (1) Some labor resources could be permitted to remain efficiently employed in agriculture; others would be removed and re-employed outside agriculture where they might produce a product of larger value than that which they produced in agriculture. (2) All labor resources might be kept in agriculture and some either unemployed or used less efficiently. The effects of the two types of control programs on agriculture and the general economy are very different. Instruments (that is, farm programs or actions by producer groups) are available to prevent farm resources from producing so much. Compulsory quotas or universal voluntary farmer participation in a producer group slowdown or strike are examples.

In the first case labor diverted from producing farm products are re-employed outside agriculture, the total real income of the system is increased, and income to farmers is increased relative to nonagriculture. This is a relatively pleasant situation; most segments of the economy are better off. For these shifts to occur, the labor resources must be re-employed in such a way that they produce outside agriculture products of more value than those which they earlier produced in agriculture. For this to be possible the resources must be mobile, and there must be productive opportunities to employ additional resources of the quality coming from agriculture.

Programs not specifically designed to transfer resources may nonetheless create opportunities which eventually lead to transfer and re-employment.
If there exists substantial unemployment of labor similar to that released from agriculture by controlling supply, the hope of re-employing the released labor may be dim. In addition, certain types of control programs may, at least for a time, make it difficult for released labor to be re-employed outside agriculture. Thus, it may be worthwhile to look at the second case in which resources are unemployed or underemployed in the process of controlling supply and not re-employed at a higher marginal value product as in the first case.

In this case, the total real income of the economy would be reduced, but the share of the total going to agriculture increased. In fact, because of agriculture's relatively small size and the inelastic demand for its products, the total income of agriculture in real terms would be increased. The total pie would be slightly smaller, but agriculture would have a larger slice—more pie than before. With more to divide among the same amount of resources, all resources including unemployed ones could receive more income than before controls. Of course, the increase in resource returns would be less than if some re-employment had taken place. Interestingly, it would appear that a voluntary supply control program which paid people not to produce could be self-financing from a producer group standpoint.

When labor is not re-employed, the increase in farm real income is less than the decrease in nonfarm real income. It is true that the additional income received by agriculture is a pure transfer from nonagriculture. However the nonagricultural sector in addition is forced to consume a smaller volume of agricultural products. Furthermore some loss of employment and real income occurs in the marketing, processing, and retailing sectors as a result of the smaller volume of agricultural production.

The effects of controlling agricultural supplies without re-employing the released resources are almost exactly the reverse of the consequences of a technological advance in agriculture. As technology advanced in agriculture, output from given resources rose, food prices fell, total cost and percentage of income spent for food fell, average real income rose, and employment in manufacturing and service industries expanded. As a consequence agriculture's real income fell and resources were beckoned to the non-agricultural sector. Economists said the adjustments were part of economic development. Controlling agricultural supply without re-employing the released resources, especially if the released resources were of major proportions, say 20 to 25 percent, would result in less total output from given resources. Food prices would rise, total cost and percentage of income spent on food would rise, average real income would fall, employment in high income, elastic industries would fall. Resources would be less frantic to leave agriculture.

Regardless of unemployment or re-employment of resources, controlling agricultural supply and the resulting income transfer affect the nonfarm economy. As a result of paying more money for farm products, nonfarm people will have less money available to buy nonfarm products. This situation may be offset in total volume of spending by farmers' increased purchases of nonfarm products out of the additional or transferred income they receive. With incomes and prices constant in the nonfarm sector, the income transfer would not affect aggregate
spending for nonfarm goods if nonfarm people reacted exactly oppositely to a decrease in real income as farm people reacted to an increase in money and real income. Thus a perfect offset is possible. However, we believe the net effect of the transfer would be to increase aggregate spending for nonfarm goods and reduce savings, especially in the short run.

The effect on the kinds of goods produced is interesting and would also be of concern to the voters. Re-employment again has an influence on the volume of goods but not a great effect on what kinds are produced. Momentarily after controls were placed on agricultural supply most people in the nonfarm economy would receive the same money income, but with larger sums spent on farm products they would have less available to buy other goods. Presumably they would cut purchases most on high-income elastic goods such as entertainment, recreation, education, and medical services.

The farm sector, on the other hand, would experience an increase in income. Farmers might desire more conveniences both on the farm and in the home. There would be some reduction in the total demand for purchased farm inputs. Consumption good purchases probably would increase. There would be an adjustment required in the overall mix of goods and services produced. The additional items purchased by farm people would likely not be exactly the ones foregone by nonfarm people.

Any supply control or bargaining power program changes the income distribution in the system. How much does society want to change the income distribution? How much of the benefits of technological advance would society permit to remain in agriculture as a result of bargaining power through supply control?

Price Targets, Controls and Political Acquiescence

A range of price targets is discussed by farm leaders. The 1960 corn support rate was at 65 percent of parity, and some discussion indicated that 90 percent of parity was considered too low. There is no objective way for us to say what price targets ought to be. This is related to the distribution of income and the rate of real income growth. Both are a matter of much concern and disagreement among economic policymakers.

The use of some instruments to reduce the quantity placed on the market and hence fix prices and raise farm income would probably be accepted by society at this time. It might even be accepted for producer groups to do this themselves if they were able. This would be the granting of a franchise to operate a monopoly. The principles discussed in Dr. Nordin's paper apply to this monopoly as well as any other. At the same time, it must be remembered the public has several antitrust and price-fixing laws to regulate monopolies.

With large surplus stocks of farm products held by the government and farm incomes apparently still below the level society desires, agriculture might
be able to obtain a franchise to operate as a regulated monopoly. An offer by agricultural producers to "do it themselves" by collective bargaining might be preferred to the present set of relatively expensive farm income support programs. Theoretically, larger incomes could be obtained for agriculture through the market place by reduced supply. However, society would probably limit the operations of producer groups which attempted to raise prices to very high levels.
ROLE OF LAND-GRANT COLLEGES IN SUCCESS AND/OR FAILURE OF BARGAINING POWER PROPOSALS

by W. G. Stucky

In previous sessions of this seminar, papers have examined the principles of monopoly and the economics of influencing terms of trade and conditions of sale in product and factor markets. These papers have provided a point of departure for discussing the probabilities of success or failure by food producers in reaping gains from bargaining power. Some will say we pass now from scientific objectivity to conjecture. Even so, the probability of success is fully as important as the size of the gains if success is obtained.

Paulsen and Kaldor rightly state that there is no scientific way to say what price targets ought to be; that these are related to the distribution of income and the rate of real income growth. One's position on income distribution and growth is based on goals and values. Therefore, people find themselves in conflict and disagreement. Reasonable people can reasonably disagree on these issues.

Whether proposals to improve the bargaining power of producers ought to fail or to succeed is a controversial issue. The determination of this issue can be influenced as much or more by the side effects outside agriculture as by the gains to producers.

The Issues

The exercise of bargaining power probably would involve a reduction in supplies and an increase in prices. The issues can be posed in terms of gains and losses as viewed by producers, consumers, and society as a whole. Each would gain or lose freedom of individual decision, and overall real income. Each voter, each group, and society as a whole must decide whether granting bargaining power to producers would increase or decrease his sense of well-being.

1. The producer probably would gain income stability and/or higher real income through the exercise of bargaining power. However, he would have to give up some freedom to choose (1) what to produce and (2) how much to produce. The main issues are: (1) To what degree is the individual producer willing to vest the power of these decisions in a central authority? (2) Is the gain in producer income and stability worth the loss in freedom to him?

1 Educational Leader, Center for Agricultural and Economic Adjustment, Iowa State University.

2. The consumer would pay a higher price for relatively less agricultural commodities. Alternatively, consumers, as is the case now, could have relatively abundant and cheap farm products and pay through taxes to support farm income. If we assume farm income is to be supported in any case, the choices are (1) between providing this income by taxes or by higher food prices and (2) between abundant food and less abundant food.

3. Society as a whole is concerned with the desirability of concentrating power to regulate the supply of a basic necessity of life such as food. Is it desirable to vest this important power in the hands of minority interests, or is this power safe only when in the hands of people acting through their government? Or is the society better off to avoid any concentration of the decisions affecting the supply of food?

4. The well-being of society is also affected by how the economic system grows and reallocates resources. Will improved methods of production still be rapidly discovered and adopted? Would resources move quickly to more productive, less wasteful uses? And finally does society feel that higher returns for producers of food are justified? Would society be better off if farm people received a return on their capital and labor closer to those levels achieved outside farming?

All the above issues are of public concern. They affect the position of individuals, groups, and society as a whole with respect to granting monopoly power to agriculture producers. In a democracy, the conflicting interests and positions of parts of society will be represented and the issue decided through the political process. The issues are dealt with either by action or inaction according to the beliefs of the people. These beliefs are influenced by the level of understanding the people possess concerning the problem situation, their goals, and the environment in which the problems must be solved. All public decisions, but especially complex decisions, have special implications for education.

The Role of Land-Grant Colleges

It is the business of the land-grant institutions to find and interpret relevant data pertaining to the developmental needs of the society it serves. On matters of public concern, especially on crucial public problems, the colleges can define the issues, clarify goals, and project the consequences of alternative responses. These are the essential ingredients of decisions by a free people. Rational and informed consideration of all of them by the voters enables a democracy to reach enlightened decisions. Educational service permits the people to arrive at decisions faster, make fewer mistakes, and limit the number of important problems that go neglected.

The problem that plagues educators in the land-grant institutions, and especially extension workers, is that the bargaining power issue contains conflicts of interest between the producing segment—the sellers—and the
consuming segment—the buyers. Educators are fearful of being counted on the wrong side when looking for constituency support to maintain their service. When the society needed rapid agricultural development to stimulate economic growth, the educators were on safe ground. Extension could be an end-of-the-line agency purveying the results of research to the users of new technology. Most research output was production technology, and Extension found this needed and popular. This process did not require much in program design because the research decisions were made outside the Extension organization. Many still cling to this notion today. The administrator of the Federal Extension Service, as recently as April 1, 1961, in discussing Extension's educational role, emphasized that, "Extension is the only organization delegated to work side-by-side with Federal and State research agencies—with responsibility to interpret, translate, and disseminate the results of this research to the people."

Thus Extension has been the link which translated research into increased agricultural production. However, the value to producers of additional production capacity has been eroding away. In fact, the major income benefits of the educational and research effort have accrued more to the consumer than to the producers. These farm people are the ones the agricultural colleges look to for support, though they are becoming proportionately less influential in deciding the public's level of support for research and education. At the same time, non-agricultural leaders seek research and education on problems of economic and social growth. The institution is not sure whom it ought to serve.

With difficulty, land-grant institutions are establishing themselves as responsible to the objective interests of the society as a whole. Thus, we find the land-grant institutions in a state of transition, uncertainty, and confusion. The challenge and opportunity remains for the land-grant institutions to make an educational contribution to the whole of society in the areas of greatest need. Of particular need are solutions to problems which hang over both farmer and nonfarmer. With respect to bargaining power, land-grant institutions could identify and explain the basis of the conflict of interests. They could interpret the issues and make projections and forecasts of possible alternatives. For example, they could help co-ops, producer groups, commodity associations, and marketing firms to better understand market demands, quality control, and consumer preferences. They could help consumers and agribusiness firms understand the nature of agricultural supply, components of costs of food, and the farm income situation. From such knowledge and through adaptation and compromise, they could reach a decision about increasing bargaining power and also about the volume, character, and quality of supplies and the level of income for agriculture.

---

Estimate of Land-Grant College Readiness and Capacity to Deal with Issues

Let us look at several conditions that are essential to the success of gaining bargaining power for producers. Keeping these in mind, we can then estimate the capacity of the land-grant colleges to help.

1. Producers have to agree on who is to be the bargaining agent.

2. The bargaining agent must also meet with the approval of the consumer.

3. The terms of trade (essentially price targets) have to be decided. How and by whom these are decided is also an issue.

4. The use of excess resources must be decided, since their use influences economic wealth and growth.

5. Black marketing must be avoided.

These conditions show how essential is a fairly general public understanding if satisfactory decisions are to be achieved. It seems essential that the explanation of such information as direct effects, side effects, long-run and short-run consequences, and implications of the bargaining power proposals be consistent from state to state. At present, there is no adequate system within the land-grant colleges for providing consistent intelligence to the several states. Neither is there such an organization outside the system.

An example will serve to emphasize the difficulty of providing consistent, nationwide information. The Secretary of Agriculture feels that under the omnibus farm bill, "It would be the responsibility of the Secretary of Agriculture to consider the...potential effects on our economy as a whole and the national welfare..."3 (i.e., of farm program proposals.) It is doubtful that the same interpretation would be made by some farm organizations or by workers, for example, in the land-grant colleges in the New England States. These states have a parochial view of agriculture, as do states in our area. They define their area as a deficit production area (not producing surpluses), and they favor low feed-grain prices. They believe such prices will improve the competitive position of their broiler factories and dairy farms. Other areas also have views out of perspective with the industry as a whole.

Conclusion

The land-grant college system in the immediate future can make but a limited contribution to improvement in the understanding of society of the

3 Address, Secretary Orville L. Freeman, National Press Club, Washington, D. C., April 17, 1961.
situation and alternatives in bargaining power. It will, therefore, not contribute very much to the resolution of the issues on either side.

These institutions are not in this position by choice. Some have made viable educational efforts and most have the desire to do so. What is lacking is a system for providing a consistent and constant stream of intelligence data, accurately interpreted in terms of the essential problems to which the society must respond. It is not likely that enough institutions will work together to get a large degree of national understanding. Without this clarity and total perspective it will be difficult to have effective educational program alternatives conceived, programmed, and carried out.

Some work will be done, but its scope will be limited. Society may, in addition, acquire a measure of understanding from other sources, especially from commodity groups. This understanding may be biased in the direction of the self-interest of the commodity group leaders, but society has in the past moved to decisions with this kind of information. Whether these decisions are good or bad depends on your point of view.

Summary

The issues related to bargaining power are such that the interests of producers and consumers are in conflict. For these conflicts to be reconciled in the national interest, the public and producer groups must understand the situation. Conceivably, the land-grant institutions could perform this educational function. To do so they would need additional research; even more important, the findings would have to be interpreted in terms of the ultimate goal—the general national welfare. But the land-grant college system has no adequate internal mechanism for developing such interpretations. Nor does it, as the logical next step, have a process for developing alternative educational program systems to make a viable national educational effort. Therefore, it is not likely in the immediate future that an adequate and coordinated national educational effort will be mounted. The land-grant college system will not make its optimum contribution to the resolution of problems arising out of attempts of producer groups to gain bargaining power.
FARMERS' BARGAINING POWER AND THE DYNAMICS OF AMERICAN POLITICS

by Ross B. Talbot

(Editor's note: In the following paper Dr. Talbot examines factors involved in efforts to increase farmers' bargaining power through legislation. The paper was prepared in May, 1961, before final action was taken on the Agricultural Act of 1961.)

"All indications point to an acceleration in 1961 of a drive by farmers for more bargaining power. The reason is that this is earning power, and farmers will not be denied their right to it." Homer L. Brinkley, executive vice president of the National Council of Farmer Cooperatives, goes on in his annual report to say: "I want to emphasize that in the use of the term 'bargaining power' we refer not to any particular kind of cooperative but to the principle of matching the combined strength of farmers to the strength of those to whom they sell and from whom they buy."2

It has been this agreement on principle fused with a substantial disagreement about the means to be used in its realization that has constantly plagued the farmer in his attempts to achieve bargaining power. For many decades the farmer has understood that power must be available to counteract power.3 He has, at least, come to such an understanding during periods of low income. His inability to meet those who buy from and sell to him on equal or superior bargaining terms has brought about periods of frustration, calls to action, occasional legislation, and -- in a few instances -- splurges of violence.

A fad of today is to proclaim once again that lack of power is a fatal weakness to the social, economic, and political position of the American farmer. The most notable and scholarly contribution in this field of disputation during the post-World War II era has been Galbraith's American Capitalism, in which he developed his concept of countervailing power and pointed sharply to the farmer's inability to exercise such power. A few years later, Willard Cochrane's Farm Prices: Myth or Reality provided intellectual respectability for a course of action, involving a specific approach to bargaining power which one of the major farm organizations had been advocating for several years.

Theory and environment came together during the 1950's: Farm income was on a rather constant decline (except for the Korean War period); the new phenomenon called vertical integration came into being; advancing farm costs

---

1 Associate Professor of Government at Iowa State University.
kept widening the gap between the gross and net income of the farmer; the farmer consistently produced more than the market would bear at the price he wanted; and costs of farm programs started to mount. The climate was propitious for political action.

**Political Approaches to Bargaining Power**

The leadership of the farm organizations, the political parties, and the Congress seem to be in general agreement that a critical weakness of the farmer is his lack of bargaining power. But, to use Walter Lippmann's apt phrase, we all have a different set of "pictures" in our minds of the nature of the reality that confronts us. It has been said that politics is a certain ordering of ideas, interests, institutions, and individuals. Probably so, but what kind of an arrangement of these four I's do we have when we examine the bargaining power concept as it affects agriculture? The interaction seems to have produced a consensus about the nature of the problem but three divergent approaches to its solution.

**Bargaining power through the price system -- the Farm Bureau approach.** In September 1959, the board of directors of the American Farm Bureau Federation recommended that the AFBF establish a national farm marketing cooperative. This action was approved at the 1959 national convention; in February of the following year there was created the American Agricultural Marketing Association; by April 1961, four state Farm Bureau marketing groups had become associated with the national organization. All these moves were ostensibly designed to improve the economic power of the farmer.

However, the Farm Bureau clearly intends to seek this bargaining power through what it considers the orderly and legitimate channels of the existing marketing system. "...A 'sound, workable' government program is agriculture's 'Holy Grail' --- a phantom, will-of-the wisp that can never be attained because it replaces God-given economic processes with man-made political power," according to Charles Shuman.

Just how effective the Farm Bureau approach will be in assisting farmers to obtain bargaining power, and thereby"...the full market value of farm commodities," is an issue which will be pursued in a later paper. However, the impression should not be left that the Farm Bureau is unwilling to use the instrument of government at all in the pursuit of an improved farm income. For example, during the 86th Congress and now in the 87th, the Farm Bureau has been endeavoring to secure the enactment of an enlarged and extended land retirement program. The Farm Bureau drafted at least two bills in 1960 which were designed to advance the conservation reserve program, and in the 87th Congress it sponsored a "cropland adjustment" bill which would, among other things, place some 60 million acres in a land retirement program.

---

Bargaining power through social conflict -- the NFO approach. The National Farm Organization is pursuing bargaining power through a new form of the general strike which it refers to as a "holding action." The objective and the strategy are obvious enough: Hold the particular commodity or commodities off the market until the processor agrees to a contract which will substantially increase the unit price of the commodity from what it was bringing in the "free market." The technique is to organize most of the 500 "farm" counties into a "minute men" set-up which can be used to shut off the flow of animals and grains to the market when the decision is made to do so.

The NFO considers itself a nonpolitical organization; but by this is really meant bipartisan. In NFO's opinion, the Capper-Volstead Act provides the legal justification for the holding action activity. NFO supported the feed grains bill ("...it can improve our bargaining power immensely") and has come out in favor of the recently proposed Agricultural Act of 1961. Nevertheless, the NFO is reluctant to seek bargaining power through such political means: "We point out, however, the weakness of relying entirely on legislation -- Congress can veto any plan developed by producers. Since consumers control Congress, consumers are still in a position to control farm prices. Are the prices charged by the U. S. Steel or General Motors, for instance, subject to congressional veto?"

Bargaining power through political conflict -- the Farmers Union approach. "Farm prices are made in Washington" has been a slogan of the National Farmers Union for many years. Such a statement is to the Farmers Union an expression of reality, if not of preference. Farmers Union officials have denounced the Farm Bureau approach because, in their opinion, it is a sure road to more production, lower prices, and the destruction of the family farm. The NFO approach had some attraction for them in the early 1930's when they assisted in the Farmer's Holiday movement, but the realities of American economic life and their own limitations in organizational strength have led them to pursue bargaining power through instruments provided by national legislation. Since at least 1947, the Farmers Union has been advocating congressional action which would bring the farmer into a bargaining power situation which would be comparable to that of organized business and organized labor.

These approaches make little, if any, original contribution to knowledge. Rather, they give weight to Lord Keynes' contention that, "...The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else." With time and diligence we might sketch the sources from which farm organizations derived their ideas. Such is not our task; for this presentation it will be sufficient if the approaches are described fairly accurately, without further questioning the why.

7 Ibid., April 1961, p. 6.
The pursuit of farmer bargaining power through the device of national legislation is hardly novel. The Capper-Volstead Act of 1922 and the Agricultural Marketing Agreement Act of 1937 are two notable historical examples. However, the purpose of this brief section is not to develop a legislative history of this field but simply to provide background for discussion of the current political situations.

There were several attempts during the 85th and 86th Congresses to delegate new or additional marketing order authority for the regulation of a specific commodity; in one bill an effort was made to clarify and amend the Capper-Volstead Act to add to the bargaining-power potential of cooperatives. The bills were not reported out of committee except the final version of the Poage bill (H.R. 12261), which did receive favorable report but was defeated on the House floor.

(1) S. 1680 (85th Congress -- First Session) would have permitted marketing orders for cranberries to be used for canning or freezing. Fresh cranberries are already covered by marketing orders. The farm organizations, including most of the grower's associations, favored the bill. The Department of Justice voiced serious objections, but the Department of Agriculture testified in the bill's behalf. It was not reported out of either the Senate or House committee.

(2) S. 3864 (85th Congress -- Second Session) was entitled the National Turkey Marketing Act and would have permitted the issuance of turkey marketing orders. The USDA and the Farm Bureau had some serious objections to the bill. The National Grange actually drafted the bill; the Farmers Union approved, and many state turkey organizations strongly advocated passage. The bill was not reported out of committee.

(3) H. R. 1077 and 14 other similar bills (85th Congress -- Second Session) were introduced to establish some form of dairy self-help program. The USDA and the Farm Bureau opposed this legislation. Different versions of a self-help program were introduced but none was approved by either the House of Senate committee.

(4) S. 2014 (86th Congress -- First Session) was designed to grant farmer marketing cooperatives complete immunity from antitrust laws, except where they combined or conspired with others. The USDA opposed the bill and recommended that no action be taken until the United States Supreme Court handed down a decision in the case of United States v. Maryland and Virginia Milk Producers Association. The Senate reported out the bill but later recalled it.
(5) H. R. 2490 (86th Congress -- First Session), the Metcalf bill, was a Farmers Union-sponsored bill. It would have given the Secretary of Agriculture and producer committees the authority to use nearly every known device to improve farm prices and incomes. The bill received no committee action. Then came the Family Farm Income Act of 1960 (H. R. 10355), followed by the Family Farm Act of 1960 (H. R. 11769). The latter did come to a vote in committee, but all the Republicans and eight Democrats voted against it. Finally, there was the Farm Surplus Reduction Act of 1960 (H. R. 12261). It cleared the committee but was defeated in the House by a vote of 176-230.

Congressman Poage, vice chairman of the House Committee on Agriculture, introduced the last three bills, so they will be referred to hereafter as the Poage bills.

Political Kaleidoscope

Conflict is the essence of politics. "At the root of all politics is the universal language of conflict," and "democratic government is the greatest single instrument for the socialization of conflict in the American community." When a particular course of action is believed to be one which will change the existing structure of social, political, and economic power, the issue will quite likely become involved in politics. Such is the situation today regarding the bargaining power of the American farmer. We are witnessing an all-out effort both to enact and to defeat the Agricultural Act of 1961. Just the fact that the Farm Bureau has labelled the measure as "the Cochrane-Freeman bill" says a good deal about the nature of and the interests involved in the struggle for power.

Of the three approaches outlined, it seems apparent that the third (Farmers Union) approach is the one that is now receiving its day in national politics.

My guess is that H. R. 6400 will be enacted into law, although the Title I provisions may have to suffer at least one further important alteration:

10 H. R. 6400 was introduced in the House by Chairman Cooley on April 18, 1961; S. 1643 was introduced in the Senate by Chairman Ellender on the same day. They are companion bills and are officially entitled the "Agricultural Act of 1961". Hereafter, the bills will be referred to as H.R. 6400. In barest outline, the act contained the following provisions:

Title I --Supply Adjustment and Price Stabilization programs:
   (1) Use of advisory committees; (2) Extension of marketing orders;
   (3) Use of marketing quotas; (4) Price stabilization authority --
       direct payments, price support levels, etc.; (5) Congressional
       review.

Title II --Extension of the Agricultural Trade Development Act (P.L. 480).

Title III --Modification of the credit program of the Farmers Home Administration.

Title IV --General provisions concerning the Great Plains conservation program,
   the school lunch program, and the legal status of cooperatives.
The supply adjustment and price stabilization programs of the USDA and the farmer advisory groups will probably have to be submitted to Congress for whatever specific modifications the Congress, and notably its pertinent committees, may wish to extend.

How could this prediction be plausible in light of the preceding review of recent congressional action and in view of the formidable authority which will be given to the USDA if H. R. 6400 becomes law?

Please don't inquire into the laws of physics involved in a child's kaleidoscope. For whatever the reason, a change in the structural positions of the glass particles brings about a new relationship of colors and imageries. In political terms, the equilibrium of power has been altered. Whether the viewer was more pleased with the original rather than the subsequent perspective is probably the crucial philosophical issue but not the one with which the political scientist is concerned. My contention is: The American voter turned the kaleidoscope last November. It was not a wrenching twist, mind you, but enough of a turn to bring one party into control of both the Presidency and the Congress. A few thousand votes in a few strategic states substantially changed the structure of political power.

It would require a major effort to describe and analyze even the major causes and effects involved in the new kaleidoscopic formation, but an outline of at least the most significant political ingredients seems necessary.

The Presidency. Since 1933, the President has been the clearly dominant figure in our American political system. Clinton Rossiter has named him the chief executive, the chief of state, the commander-in-chief, the chief diplomat, the manager of prosperity, the chief of his party, the chief legislator, the voice of the people, and the leader of a coalition of free nations. Perhaps Herman Finer and Rexford Tugwell are correct in saying that no one man can wear so many "hats" without being crushed by an overburden of responsibility. We are not about to change the system, however, so we must try to make it work for the interests of the United States and all the free world.

Our specific interest is farmer bargaining power and H. R. 6400. The picture in our kaleidoscope has changed: President Eisenhower was not about to accept a Poage bill, and the veto power is an almost absolute weapon. President Kennedy has sent just such a bill, and more, to Congress. He can get it passed.

---

if the priority is high enough on his agenda. A general farm bill is not top priority legislation in the President's judgment, but his political commitments in this area are rather formidable.

The Congress. The critical period in the life of a bill is when it is in the committee stage of the legislative process. If the bill is reported out of committee the chances are about nine out of ten that it will pass at least one house of Congress. For whatever the reasons, neither Cooley nor Ellender would even introduce into the 86th Congress what we have referred to as the Poage bills. In the 87th Congress, H. R. 6400 was introduced by Representative Cooley and the Senate companion bill (S. 1643) by Senator Ellender. The latter spoke on the floor of the Senate in favor of the Title I provisions: "The Congress would be able to carry out its authority and responsibility more effectively by devoting its attention to the broad policy questions and implications of recommended programs and not become involved in interminable discussion of the minute details involved."13 Chairman Cooley talked to the House in equally enthusiastic phrases: "I have today introduced the Administration's Farm Bill. I shall do everything within my power to bring about its enactment at the earliest possible date."14

Committee action poses certain imponderables. The Republicans gained 21 seats in the 1960 House elections, and their membership on the House Agriculture Committee increased by two. The issue becomes: Will the Southern Democrats stand fast and vote for the administration's bill? Probably some of them will maintain their allegiance to the quondam coalition of Southern Democrats and Midwest Republicans.15 On the Senate side, the two strongest advocates of potent national farm legislation of the H. R. 6400 variety have left the Committee on Agriculture and Forestry -- Senators Humphrey and Symington. Their replacements -- Senators McCarthy and Neuberger -- are of the same political inclinations as their predecessors but are not of equal experience and seniority.

14 Statement by Congressman Harold D. Cooley, Chairman, House Committee on Agriculture, April 18, 1961 (mimeograph).
15 This type of legislation tends to freeze production patterns. The average net income per farm family is considerably lower in the South than in the rest of the nation's farm areas ($2,036 compared to $2,084 in 1959), but during the last decade it increased 16 per cent as contrasted to 4 per cent for the non-South. Change has been slow in parts of the South but "in other areas, where one-crop farming formerly was typical, peaches now blossom, cattle graze, hens cackle, and hogs bask in their parlors". (C. E. Bishop, "The Changing South -- Problem or Opportunity," Agricultural Policy Review, Vol. 1, No. 1 (1961), p. 4).
The same kinds of consideration must be given to the interplay of political forces that will take place when this bill moves to the floor of the House and the Senate. At this time a new variable enters -- the urban members. The recession will probably be significant in keeping the Democrats in line, but the Republicans and the Farm Bureau, among others, will start to shout "bread tax" as soon as the bill leaves the committee, assuming the Title I provisions are retained.

The Supreme Court. The Court has not used its power of judicial review since 1936 to void any Congressional legislation of an economic nature. The Warren Court is dominated, in numbers at least, by Eisenhower appointees, but the practice of judicial self-restraint in the area of economic policy is still being adhered to.

Section 401 of Title IV in H. R. 6400 seems to countermand the Supreme Court decision in United States v. Virginia and Maryland Cooperative Association (362 U.S. 458), but the qualifying phraseology is so general ("... substantially to lessen competition, or to tend to create a monopoly") that the Supreme Court will almost certainly have to give some interpretation to the statute.

The U. S. Department of Agriculture. The U. S. Department of Agriculture is already, and by far, the most potent force in the formation and execution of farm legislation. If H. R. 6400 is enacted substantially as is, the department's role will become even more paramount.

Here the changing picture seems clear. Secretary Benson strongly endorsed the Farm Bureau approach. Secretary Freeman is asking Congress to give him more power than any Secretary of Agriculture has ever had. Whether Freeman would use those powers aggressively is a point of conjecture, but there seems to be little reason to think that he would not. He is a dynamic, experienced, resourceful, and ambitious politician-administrator. To bargain effectively one must not only have power but, just as importantly, be willing to use it.

The private interest groups. Any major political controversy leads to a coalition of public and private interests and ideologies. Sometimes these coalitions are multisided, but in the case of H. R. 6400 the situation is becoming one of the USDA-Farmers Union versus the congressional Republican leadership and the Farm Bureau. Both sides are engaged in the usual and hectic scramble for allies. The NFO approach is in temporary abeyance, and the NFO has chosen to side with the Farmers Union for the time being.

Certain of the farm organizations met at the National Grange headquarters on April 20 and agreed to support H. R. 6400. Eleven in all signified their alliance, among them the Farmers Union, the Grange, the National Association of Wheat Growers, the NFO, and the National Corn Growers Association.16

The American National Cattlemen's Association has decided to ally itself with the Farm Bureau and announced that some of the sections of the bill form a breach of the traditional and constitutional rights of a free people.\footnote{17} 

At this juncture, the National Council of Farmer Cooperatives, the National Milk Producers Federation, and the National Cotton Council have not committed themselves. 

The Farm Bureau has announced that the "Cochrane-Freeman" bill is "a bid to concentrate unprecedented power over the destiny of American agriculture in the hands of the Secretary of Agriculture and the Executive." \footnote{18} Secretary Freeman has testified that "delay or postponement (in the passage of this bill) now could mean disaster. The time is running out." \footnote{19} 

Organized labor probably will support the Administration's bill after it is reported out of committee. Organized business will surely rise to denounce the bill if it comes out of committee with the Title I features intact. 

The political parties and the constituency parties. The position of the national party organizations is fairly clear cut. The Democratic Party will certainly support the bill; the Republican headquarters will pick and choose; that is, they will pick at Title I mercilessly and choose to accept at least Title II (the extension of the Public Law 480 program). 

The constituency parties are still the Democrats and Republicans, but their basis is provincial, not national. Each member of the House and Senate is, to a significant degree, on his own in American politics. The national party organization and the Congressional campaign committees may be of some financial help at election time, but largely, he -- the Representative or Senator -- will have to make his own decision about the configurations of power within his constituency. This condition probably will bring about some crossing of party lines when the bill comes up for floor votes. 

The "publics." The urban consumer public will respond in some manner to the cry of "bread tax" and higher food costs. The processor, exporter, and grain storage publics will reflect on the meaning of a shrinking supply of farm products to their business enterprises. Those who believe in "cheap feed" will also express a concern. If the producers should vote down a supply adjustment program the defeat might harm the Kennedy Administration more than would the failure of the bill to be enacted into law. 

\footnote{17} The American Farm Bureau Federation, \textit{Official Newsletter}, May 1, 1961, p. 1. \footnote{18} Ibid. \footnote{19} Orville L. Freeman, \textit{Testimony on H. R. 6400}, given before the House Committee on Agriculture, April 24, 1961, p. 9, (mimeograph).
Albert Einstein was once asked, so the story goes, why Aristotle's studies of physics were outmoded while his writings in the area of politics were still considered highly useful. His generous reply was reported to be, "This is because politics is so much more difficult than physics." It may well be true that this oft-told tale is the concoction of some frustrated political scientist. Nevertheless, the remark does point to one difficulty involved in political predictions, namely, the configurations in the kaleidoscope are never static. Groups and individuals are always in conflict when the issue at hand involves a change in the structure of power.

This means that analyzing the various alternative courses of action is a rather pedantic way of viewing the political process. More specifically, power groups are seeking to bring all three approaches into constitutional, economic, and social reality. And the contests are going on simultaneously.

The principal conclusion of this paper is as follows: Because of the present configurations of power, the USDA-Farmers Union approach will be the next legislative experiment to be put into operation in the area of farmer bargaining power. Let it be noted that this is only one estimate of the situation.
The concept of bargaining power is treated here as it may be usefully applied in understanding the specific total relationship between Company X and Union Y, who are parties to a collective labor agreement. Possible applications to the field of agriculture will be left to those more conversant with the latter field. The approach here is pragmatic rather than theoretical.

The discussion is divided into three sections: (1) a brief survey of the legal framework within which contemporary collective bargaining takes place, (2) an analysis of some common misconceptions of the nature and content of bargaining power in the labor relations field, and (3) an outline of some constructive ways to use bargaining power concepts in management-union relations.

**Legal Framework of Collective Bargaining**

More than half a century ago Sidney and Beatrice Webb defined a trade union as a "continuous association of wage earners for the purpose of maintaining or improving the conditions of their working lives." This still accurately describes the basic purpose of most American trade unions. The principal union instrumentality for achieving this purpose since the time of Gompers has been collective bargaining with employers.

---

1 Professor of Economics at Iowa State University.
2 In speaking of Company X and Union Y, it is important to remember that the outstanding characteristic of union-management relationships in the United States is their diversity and variety. There is no such thing as a typical or average company or union. American unionism is heterogeneous in size and structure, although reasonably homogenous (as will be noted presently) in its basic emphasis on collective bargaining as the principal instrumentality for achieving economic goals. At this writing, there are nearly 200 national and international unions operating in the United States, to which are affiliated some 75,000 local unions. Approximately 125,000 collective-bargaining contracts with employers are in force today. The union movement embraces very small craft unions of a few thousand members as well as such sprawling giants as the Teamsters, who now claim 1,700,000 members, and the Auto Workers and the Steelworkers, each with membership in excess of 1,000,000.
The American union's philosophic orientation is normally as conservative as that of the typical American employer. This fact is not always easy for the employer to appreciate. American workers are not interested in having their unions assume control of industry, nor do they want their unions to have an official role in the running of the business enterprise. They are interested in improving their own economic position and status in a particular job in a particular company in a particular industry.

Unionism traveled a rocky road, legally speaking, until comparatively recent times. However, since the Norris-LaGuardia Anti-Injunction Act of 1932, unionism as an institution has benefited from Federal statutory recognition that the "individual unorganized worker is commonly helpless to exercise actual liberty of contract and to protect his freedom of labor, and thereby to obtain acceptable terms and conditions of employment." This implicit statutory presumption in favor of unionism and collective bargaining was made explicit in the Wagner Act of 1935 and continued in the Taft-Hartley Act of 1947 in the following language:

The inequality of bargaining power between employees who do not possess full freedom of association or actual liberty of contract, and employers who are organized in the corporate or other forms of ownership association substantially burdens and affects the flow of commerce, and tends to aggravate recurrent business depressions, by depressing wage rates and the purchasing power of wage earners in industry and by preventing the stabilization of competitive wage rates and working conditions within and between industries.

Experience has proved that protection by law of the right of employees to organize and bargain collectively safeguards commerce from injury, impairment, or interruption, and promotes the flow of commerce by removing certain recognized sources of industrial strife and unrest, by encouraging practices fundamental to the friendly adjustment of industrial disputes arising out of differences as to wages, hours, or other working conditions, and by restoring equality of bargaining power between employers and employees. (Emphasis supplied)

Taft-Hartley also recognizes that experience has demonstrated that "certain practices" of unions interfere with the effectuation of the "rights" guaranteed in the act and therefore must be eliminated. The act then states categorically, as did the Wagner Act, that it is the policy of the United States to encourage the practice and procedure of collective bargaining.

At the same time it must be remembered that Taft-Hartley embraces a conflict of interests and goals. It attempts to protect both the right of workers
to form and join unions and to bargain collectively and their right to refrain from any and all such activities. Taft-Hartley also prohibits some of unionism's historic instruments of economic pressure, notably secondary boycotts, strikes for closed shops, jurisdictional strikes, etc.

Notwithstanding the severe legislative control by Taft-Hartley and, more recently, the addition of pervasive regulations of the internal affairs of unions under Landrum-Griffen (Labor-Management Reporting and Disclosure Act of 1959), the basic policy of the Federal Government since 1935 has been to encourage the formation of unions and to encourage the practice and procedure of collective bargaining.

It is significant, however, that at no point has it been possible to give any substantive meaning to this legislative goal of equality of bargaining power. Achievement of such a goal may have been a plausible rationale on which to predicate the constitutional validity of the legislation in question (i.e., the objective of removing hindrances to "commerce.") Most students of labor relations, however, would agree that the concept and goal of equality of bargaining power has no real operational significance on an aggregative basis. It has meaning only in terms of specific bargaining relationships between particular companies and particular unions. Even on the microeconomic level, it would be naive to try to arrive at any precise quantitative estimates of relative equality or inequality of bargaining power. This brings me to the second area of analysis, an appraisal of some familiar misconceptions of the nature and content of bargaining power in the labor relations field.

Misconceptions about Bargaining Power

Union not a monopolist. Economists writing about unionism and collective bargaining are partially to blame for the prevailing misunderstanding and misuse of the term bargaining power as it applies in the field of management union relations. Many economic theorists treat collective bargaining as a special case of bilateral monopoly in which the parties to the bargaining are concerned solely with wage determination. The union is treated as a single seller with complete control of the supply factor, the employer is regarded as sole buyer of this factor, and both are regarded as concerned only with the price of the factor.

It is unrealistic to treat a union, when it negotiates, as a monopolistic seller in control of the total existing supply of the commodity in question. The only union that fits such an image is a craft union with closed shop contracts covering the total employment of a particular kind of labor in a particular factor market where the union in question is also a closed union. A closed shop held by a closed union does approximate the picture of a monopolistic seller. However, the number of situations of this type is negligible today. Most craft unions, while they still seek closed shop contracts where legally permissible, have abandoned closed union policies of a discriminatory nature and no longer engage in the cruder methods of supply restriction, makework, or technically
Unauthorized strikes. Cape Canaveral is, in my judgment, an exception and not the rule.

Industrial unions, whose membership is mainly semiskilled or unskilled, have no control over the supply of labor to the firm. Excepting some special situations such as longshoring, the industrial union has no control over hiring. The industrial union must seek to attain its job security objectives through seniority and union shop provisions, plus limiting the employer's right to discipline to cases where good and just cause can be proved.

To put the matter somewhat differently, the trade union is not a seller of labor in the way a business firm is the seller of a commodity. The trade union is an agency for the collective representation of particular groups of labor in particular situations. The union serves as the exclusive bargaining agent for employees in a defined unit of representation. Such a unit must be appropriate for bargaining purposes and one in which a majority of employees have signified their desire to have the union represent them.

**The concern of the union.** Another common misconception derives from the average economist's conviction that the trade union is concerned only with maximizing something purely economic. Some economists assume that the union is out to achieve the highest possible money wage rate with little or no regard for the effect on volume of employment opportunities. Others assume that the union has the studied objective of maximizing total income to the membership. Such thinking assumes that the union operates within the same economic framework as business firms, who are presumed eager to maximize profits. Such analysis oversimplifies. It ignores the fundamental fact that unions by their very nature are not concerned with cost-price-quantity relationships in the same way or to the same degree as is the employer.

The key to understanding trade union behavior lies in an appreciation of the proposition set forth some years ago by Arthur Ross of Berkeley that, "A trade union is a political agency operating in an economic environment." As a political institution with an elected leadership, the union is under constant pressure from its members to deliver tangible gains or to appear to deliver tangible gains. Unions today still operate with the same pragmatic, nonideological orientation and objective of Sam Gompers -- "more, more, more -- now."

Union leaders are thus constantly preoccupied with the essentially political question of what and how much needs to be "delivered" to the membership at each successive contract negotiation to maintain membership loyalty. The leadership must cope continuously with such questions as what is equitable, what is obtainable, and what is acceptable. These are intensely practical

---

questions whose answers may or may not be consistent with the so-called pure economics of the situation.

I do not say than union leadership does not generally have some fairly aggressive ideas on utilizing collective bargaining as a vehicle for maximizing membership welfare as seen by such leaders. I do say that analysis of union behavior based on an assumed effort at maximization in purely economic terms is likely to be partial and misleading in specific situations for two fundamental reasons:

1) Such an analysis ignores the fact that to achieve the most for the welfare of its members in particular situations the union may have to trade economic demands for noneconomic ones.
2) Or the union may have to insist on securing or maintaining an essentially noneconomic objective no matter what inducements might be offered to cause it to abandon such an objective.

An illustration of the first point is the union which in facing an economically hard-pressed company reduces or abandons its economic demands in favor of securing some improved contract language (from the union’s standpoint), dealing with seniority, promotional policy, and similar matters. The reverse of this is the familiar story of the union leader who brags that every year he "sells the union shop for a nickel." That is, a strong union makes a noisy show of demanding a union shop contract for the coming year; then it withdraws the demand as the employer offers to "sweeten" his wage offer by 5 cents.

The second reason involves certain basic union objectives in bargaining that are essentially non-economic and nonmeasurable in nature and which are not substitutable. That is, they will not be traded under any circumstances no matter how attractive the economic inducement to abandon them. An example of this is an employer offering an extremely attractive wage increase in exchange for an abandonment of contract language requiring the observance of seniority as the primary factor governing layoffs, recalls and promotions. No union could or would consider making this kind of a trade regardless of the economic calculus involved. Nor would any industrial union trade off contract language requiring that no employee be disciplined except for good and just cause.

In short, the practical questions of what is equitable, what is obtainable, and what is acceptable in contemporary bargaining relate to both economic and noneconomic issues.

Most trade unions do not serve a homogeneous constituency. The typical industrial or multi-industrial union, for example, embraces a highly heterogeneous conglomeration of conflicting interest groups whose diverse pressures on the leadership need to be blended and rationalized prior to and during negotiations and during contract administration.
The typical heterogeneity multiplies as the scope of bargaining extends beyond a single plant or enterprise into multi-employer or industry-wide bargaining. As Professor Fletcher emphasizes in his paper, the more comprehensive the alliance, the greater the potential gain in bargaining power. However, this very source of strength is also a source of weakness in that such alliances can be formed only by bargains among those who are potential participants. The industrial union forcefully illustrates the validity of Professor Fletcher's proposition.

Bargaining gains and losses. A third misconception arises because of many academic discussions tend to place too much stress on the word "power" and not enough on the word "bargaining." Such usage tends to support the familiar dichotomy of gain versus loss or pleasure versus pain which appears to dominate many discussions of this subject. Such an emphasis on power is certainly justified when applied to instances of what has been termed "collective bludgeoning" rather than collective bargaining, i.e., when the inequality in bargaining power has been so extreme that it sanctioned take-it or-leave-it bargaining by the union in some situations and by the employer in others. I respectfully suggest, however, that such situations are not representative of union-management relationships. I also suggest that the emphasis on a gain to X necessitating a corresponding loss to Y is not necessarily accurate. My experience supports the proposition that a sound bargain is a mutually acceptable bargain, resulting in some gains to all parties to that bargain.

A so-called agreement that is in fact an imposed ultimatum by X on Y or Y on X is not a bargain. It is an edict. Most collective bargaining relationships, I submit, are not of this nature. On the contrary, the ultimate product of most negotiations is a written joint understanding that is mutually acceptable to the contracting parties and which contains advantages for each.

Bargaining Power in Labor Management Relations

I have elsewhere defined collective bargaining as a process in these words:

...the negotiation, administration, interpretation, application, and enforcement of written agreements between employers and unions representing their employees setting forth joint understandings as to policies and procedures governing wages, rates of pay, hours of work, and other conditions of employment.6

---


This definition underlines the fact that collective bargaining must be viewed as embracing much more than contract negotiation. It must be seen as a continuous, dynamic process concerned with the total relationship involving the employer, the union, and the employees represented by the union. It is axiomatic that administration of collective labor agreements is of greater importance to the success or failure of the particular union-management relationship than contract negotiation. The process of continuous, joint consideration and adjustment of problems arising under the contract constitutes in many cases the real heart of the collective bargaining relationship.

These adjustments are effected by the grievance and arbitration machinery provided for in the contract itself. Although many academicians neglect contract administration, it is of decisive importance. Yet, bargaining power considerations do not normally play a critical role in contract administration.

In fact, agreement by the two sides that arbitration shall be used as the last step in a grievance procedure means that they have jointly abandoned their relative bargaining strength as a means for reaching agreement. Under arbitration, authority is delegated by contract to an outside party to make a final and binding decision on unresolved disputes arising under the contract. When companies and unions provide in their contracts for grievance arbitration, they are saying: "We hereby jointly agree to give up the right to use economic forces as the ultimate arbiter of disputes arising under our contract; instead we choose to accept as final and binding upon us the decision of an arbitrator on the meaning of our contract and its application to specific, unresolved disputes that may arise between us."

A responsible arbitrator does not make his decisions in terms of his estimate of the relative bargaining power of the parties. The arbitrator derives his authority from the contract. He is responsible to the contract rather than to the parties as such; he makes his decision in terms of this contract and the record made before him at the arbitration hearing. 7

7It is worth noting that approximately 90 percent of the more than 125,000 collective bargaining contracts now in effect in the United States provide for arbitration as the last step in the grievance procedure for finally resolving disputes arising under such contracts. The role of arbitration in contract administration is not well understood by many not immediately involved. For a more complete analysis see Harold W. Davey, "The Proper Uses of Arbitration," Vol. 9 Labor Law Journal (February, 1958), pp. 119-126. For an analytical treatment of arbitration in a particular management-union relationship, see Harold W. Davey, "The John Deere-UAW Permanent Arbitration System," in Jean T. McKelvey, editor, Critical Issues in Labor Arbitration (Washington: The Bureau of National Affairs, Inc., 1957), pp. 161-192.
We also need to understand the limitations of the Hicks analysis of bargaining power. This analysis deals solely with the wage variable at the negotiation phase in developing its concepts of employer concession curves and union resistance curves; it thus regards strikes and lockouts as the result of a divergence of estimates; i.e., the union overestimates the employer's capacity or willingness to concede, or the employer underestimates the union's capacity or willingness to resist. The Hicks analysis is perhaps the best and most closely reasoned of the many efforts by theoretical economists to analyze bargaining power in a labor relations framework. However, like many other analysts, Hicks in my judgment misses the fundamental point that the concept of bargaining power has utility only if it is viewed, as Neil Chamberlain aptly suggests, "as an effective force behind the whole collective bargaining relationship and the process of intergroup agreement."  

Chamberlain makes the crucial point that bargaining power relates to the entire organized economic relationship between management and union. Bargaining power must be viewed from the point of view of all the conditions under which the cooperation of the economic partners takes place. It must be considered in terms of the costs of agreement relative to the cost of disagreement (using costs here in the broadest possible sense rather than in the purely economic or pecuniary sense). Bargaining power also must be regarded not only in relative terms, but as a dynamic, shifting phenomenon depending on the objectives sought. If it is to be meaningful, bargaining power analysis must consider the capacity of the parties to secure specific objectives. This point is well stated by Chamberlain in these words:

The nature of the objective sought is determinative of bargaining power no less than is the bargaining skill or financial resources or membership strength of the organizations involved. The bargaining power of employer and union thus changes with the nature of the demands made. Their costs of agreement and disagreement are relative to specific objectives.

Whenever Company X and Union Y negotiate for a new contract, each is engaged in the process of evaluating the costs of disagreeing relative to the costs of agreeing. They are doing so in terms of their respective specific objectives. Such a cost balancing operation, however, is not entirely or even primarily pecuniary. Rather it is an effort to appraise relative advantage and disadvantage when viewing a range of issues, some of which lend themselves to quantitative appraisal and many of which clearly do not.

10 Ibid., p. 221
It is the very process of appraising nonmeasurable costs of agreement and disagreement that lends value and importance to the negotiation process. It is in that process that the company and the union jointly discover the feasible combinations that ultimately produce an agreement for the next contract period. If they do not discover such a combination, a strike or a lockout results. In this connection, one must remember that the basic function of a strike or a lockout is to produce agreement. Excluding the extreme case of one party seeking to smash or obliterate the other, the goal of economic force is the same as the goal of negotiations, i.e., the reaching of a mutually acceptable agreement on wages, rates of pay, hours of work, and other conditions of employment for a future period of time.

Put in the simplest possible terms, agreement between the parties occurs when the costs of agreement are equal to or less than the costs of disagreement. In the overwhelming majority of cases, this goal is reached short of economic force.

Summary

In summary, a realistic conception of bargaining power in management-union relations must, in my judgment, embrace the following considerations: 11

1. Estimates of actual bargaining power must be made in terms of company X and Union Y, not in terms of such generalizations as "unions are becoming too strong," etc.

2. Bargaining power must be regarded as taking into account the total situation—not only the striking or resistance capacities of the parties but also the entire range of economic, political, and social circumstances insofar as these may have a bearing on the costs of agreement or disagreement.

3. Bargaining power must be regarded as a shifting matter in which even in a fairly brief period of time, substantial changes may occur in relative positions, e.g., as a result of political pressures.

4. For agreement to be reached, terms must be negotiated that for all parties concerned represent a cost of agreement equal to or less than a cost of disagreement. Disagreement may persist where the parties find that the terms under discussion make it cheaper to disagree than to agree.

5. Bargaining power for any party may be increased by any variable or any proposal or any contemplated consequence that contributes to lowering the relative cost of agreement to that party or to raising to the other party the relative cost of disagreement.

11 This summary closely parallels that of Neil Chamberlain, a perceptive recent writer on bargaining power. The reader should consult Chamberlain's Collective Bargaining, cited supra, pp. 213-238.
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
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; contract 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

6 See Maxwell R. Conklin and Harold T. Goldstein, "Census Principles of
Industry and Product Classification, Manufacturing Industries," in Business
Concentration and Price Policy, a conference of the Universities-National
Bureau Committee for Economic Research (Princeton: Princeton University
Press, 1955). Also, the introduction to Concentration in American Industry,
Report of the Subcommittee on Antitrust and Monopoly, 85th Congress, 1st

7 Preliminary estimate. The number had grown by somewhat more than 1 per-
cent 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></th>
<th>(Thousands)</th>
</tr>
</thead>
<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
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 theoretically10 and also in connection with the use of concentration statistics for the purpose of measuring monopoly.11 For example,

---

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.

Nor can one automatically equate large firms with monopolists, or assume small ones to be purely competitive. 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, it is evident that the relationships of these giants to our society and economy are among the most perplexing social challenges of the age. 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

---

12 Chamberlin, op. cit., Chs. 4 and 5.

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.


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. 17

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. 18 But even pricing to maximize long-run profits is always done under some degree of competitive constraints. 19

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

---

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.

---

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 over-capacity 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

---

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 D] 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.


35 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.

36 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 Postwar 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' a

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.

42 Joseph A. Schumpeter, Capitalism, Socialism, and Democracy, (New York: Harper, 2nd edition. 1947), pp. 84-85. See generally Chs. 7 and 8. He further argues that some degree of absence of competition at each point of time may be a condition for the speed of long-run performance. This point is echoed in John Kenneth Galbraith, American Capitalism (Boston: Houghton Mifflin, 1952), p. 96:
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.\(^{49}\) 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.\(^{50}\) 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.\(^{51}\)

---

\(^{49}\) In production technique and product innovation, however, I believe the industry earns higher marks.


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 or 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."
THE AMERICAN FARM BUREAU FEDERATION AND BARGAINING POWER FOR FARMERS

by Lee Kolmer

The program of the American Farm Bureau Federation is concerned with improving the economic position of the farmer. It is not a program to secure bargaining power through supply control, as the term has been primarily employed in this seminar. The Farm Bureau is making no attempt to secure control of a large segment of the output of a particular commodity for the purpose of holding it off the market and, through this control, bargain for better prices or market conditions. It hopes to inject more competition into the system and at the same time obtain prices that may be above the general level of prices for a particular commodity.

This higher price does not represent compensation for control exercised by the Farm Bureau in the market but compensation for marketing services provided the buyer. These services might include (1) assembly; (2) grading, sorting, and packaging; (3) relatively large volume lots in each grade; and (4) market information concerning available supplies and prospective supplies.

In short, the Farm Bureau activities might be described as an attempt to improve the farmers' economic position by assuming some of the marketing functions and implicitly threatening to assume additional functions. The Farm Bureau attempts to increase returns to farmers by:

1. Retaining profits now going to other marketing agencies.

2. Introducing efficiencies which will reduce costs and increase net revenues.

In discussions with Farm Bureau officials the objective of supply control was never mentioned as a primary objective of the organization at this time. However, Farm Bureau officials did emphasize that the objectives of the organization may change, and I have no doubt that if they decided this objective were feasible at some time in the future, they would attempt supply control.

The program of the American Farm Bureau Federation, as presently organized, has two major aspects -- developing foreign markets and strengthening bargaining associations for domestic producers. Foreign market development has been concentrated in Western Europe. The Farm Bureau maintains an office in Rotterdam and through this office attempts to bring Western European buyers of agricultural products in contact with United States processors and handlers of these products. The Farm Bureau's European representatives, in a

1 Associate Professor of Economics at Iowa State University.
sense, operate as brokers. In addition, they attempt to arrange meetings between prospective buyers and United States processors at trade fairs and similar events in Europe. At one recent trade fair they arranged a meeting between the buying executives of a group of Western European supermarkets and the sales executives of the Campbell Soup Company, in an effort to expand the market for American branded products in European retail outlets. Through activities such as this the Farm Bureau hopes to shift the demand curve for United States farm products in European to the right.

At the present time, the Farm Bureau does not take title to goods. However, Farm Bureau officials indicated that if quality standards and uniformity require it, they may take title to products at some time in the future. Also at present, they do not charge a finder's fee. Here again, if they are successful in Europe they feel they may be forced to charge a fee.

The Rotterdam office also is responsible for keeping the Farm Bureau informed on legislative proposals in Europe that may affect the market position of United States agriculture. For example, recently the Common Market nations were deliberating whether they should pursue a policy encouraging self-sufficiency in food production in Western Europe. The Rotterdam office made a report of this so the Farm Bureau was in a position to bring its influence (political and otherwise) to bear on this problem.

On the domestic side, the Farm Bureau has formed a corporation to act as a selling agent for member cooperatives. Membership is by application, and any cooperative certified by a state Farm Bureau organization is eligible for membership. The purpose is to provide a nationwide product clearing house and selling agency. This program is in the initial stages and the only commodities under consideration at present are fruits and vegetables. Michigan and California organizations are the most active in the program at present. Conceivably if this program is successful and eventually includes Farm Bureau affiliated cooperatives in all commodities, a considerable degree of supply control may be effected. Under such conditions the American Farm Bureau Federation could divert or destroy a portion of the total supply to raise prices. Perhaps at such times, supply control will be an explicit objective rather than an implicit objective as it is now.

In addition to engaging in selling activities, the Farm Bureau market corporation provides legal counsel and market information to affiliated cooperatives. The aim is to strengthen and build from present cooperatives rather than to form new organizations. Farm Bureau officials emphasized that the entire program is in the formative stage and that the ultimate form and nature of the marketing corporation would only be determined after an experimental period.

The American Farm Bureau Federation has requested that each state Farm Bureau set up a marketing corporation or department to work with the national Farm Bureau organizer stationed in Chicago.
Farm Bureau activities may eventually result in bargaining power or supply control even under the vague and nebulous framework we have outlined in this seminar. However, at present, the Farm Bureau is primarily a marketing agency in competition with other marketing agencies.
COLLECTIVE BARGAINING BY PRODUCER GROUPS

by Francis A. Kutish

In discussing collective bargaining by producer groups I would like to set up what I think are some of the requirements for successful collective bargaining. Collective bargaining is presently being done by the National Farm Organization. I want to look at how well the methods employed by the NFO meet the requirements of successful collective bargaining as developed by G. Alvin Carpenter, Extension Economist, Marketing, University of California.

There are five major requirements for successful collective bargaining:

1. The organization must be realistic and consistent in asking for what it can get.

2. The negotiators must be well fortified with economic information about the producers, processors and consumers before they undertake to bargain.

3. The officers, the people and the management also must have bargaining know-how.

4. The management or agency must have the confidence and loyalty of the producers. On the other hand, the agents must command the respect of the processors with whom they're going to deal.

5. The bargaining agent must be able to speak for a significant number of growers. In addition, he must control the timing, volume and direction of flow to market of production of adequate size to cause the buyers to want to negotiate with him. These are the essential ingredients for effective bargaining activities. It is no simple matter to be a bargaining agent and to maintain popularity with hundreds of producers on the one hand and the respect of several processors on the other.

Bargaining is the continual process of arriving at some sort of an agreement. First, it is necessary to reach agreement among the growers on the price for which they're going to bargain; second, it is necessary to try to reach an agreement with processors concerning this price and other conditions of exchange. The processors, however, will also have a price for which they will begin to negotiate. Their price will be consistent with their views

1 Professor of Economics at Iowa State University.
of the market situation, general economic conditions and their own interests in profits and resource returns. This might coincide with the producers' ideas but probably not. Then the bargaining process begins.

Let's look at the actions of the NFO in terms of this five-point framework:

First, are the NFO's requests consistent and realistic? The prices sought by the NFO thus far have been determined partially at least on the basis of popular vote. They have not been arrived at primarily as a result of a consideration of the supply and demand situation.

Second, are the negotiators well-fortified with necessary economic information? This is difficult to say. I was informed once at an NFO meeting by some members of the collective bargaining group that they do not believe in supply and demand. They said quantity had no relationship to price. Prices are set, they said, by monopolistic elements in the economy. They could be set at any particular figure.

However, the assumption that the meat packing industry is highly monopolistic with strictly monopolistic pricing practices is not accurate. Earning returns do not bear this out.

There is probably a difference between what the NFO membership believes and what officials of the organization believe. The latter are conscious of the necessity for realism and good economic information. Withholding action specifically has been used as a means of demonstrating the organization's strength and attracting new members. This doesn't have any real lasting effect upon prices. But if the organization can get sufficient members it can undertake other activities.

Third, does the agent have bargaining know-how? I do not think we can answer this question in evaluating the holding actions. These actions have not involved bargaining. Thus bargaining ability has never been demonstrated because there hasn't been any bargaining yet.

Fourth, does the bargaining agent have the confidence of the producers and processors? I think they have the confidence of the producers. There is zeal among these people, an acceptance of the goals of the organization. The producer members have confidence. But the processors do not recognize the bargaining agent as an official representative or of significant influence to command their respect.

Fifth, are they able to attract and hold a sufficient number of growers and control a sufficient volume of the industry's production to be effective? In some areas many have been attracted. The contract specifies that at the option of the organization every producer will be required to turn over selling all of his produce. Holding growers for the length of the contract seems assured.
Both cattle and hogs are nationally produced, nationally processed and nationally marketed. They are quite different from fruits and vegetables. Cattle and hogs, as well as feed grain, are produced under almost perfect competition. Bargaining associations can most readily improve the status of farmers in segments of agriculture where monopolistic elements are already the rule rather than the exception. Where effective control of volume exists or can be secured and where effective bargaining techniques are employed, I think the bargaining associations also can influence the price as they have influenced the contract provisions.

But it is well to remember that the collective bargaining techniques are no cure-all for all of the marketing problems of the farmers. Only under certain conditions and with the proper leadership can professional bargaining be an effective tool.
BARGAINING POWER AND FEDERAL MILK ORDERS
FOR FLUID MILK PRODUCERS

by J. R. Strain

In Iowa there is probably no agricultural commodity group that is more completely organized or that has realized more financial gains through bargaining than producers of grade A milk. A few groups of grade A producers are either incompletely organized or not organized at all. However, a single organization represents all of the producers in most of the larger market areas.

There also are many organizations of ungraded producers, but most of these are on a much smaller scale than grade A producers. Members join solely to process their milk on a joint basis, not to gain bargaining strength. In general, they do no bargaining. They take the price offered for their product by their marketing agency.

However, there is one exception to this general situation. State Brand Creameries market the output of their affiliated plants with all of the sales techniques at their command, including some promotion, advertising, and bargaining.

Grade A producers have made many apparent economic gains through their bargaining strength and through federal milk marketing orders. The intent of this paper is to examine the history of grade A bargaining associations and the peculiarities of the grade A product market in order to evaluate the possibilities for similar gains to other agricultural commodities.

The Beginning

At one time milk was milk as far as its use and price were concerned. However, as the economy began to grow and distribution systems became more complex, keeping quality became a concern, and milk-borne disease problems appeared. Taste preferences expressed by consumers and sanitary standards set by health authorities resulted in the establishment of a special "fluid" grade of milk. This milk was produced and handled with specified equipment and under specified conditions to qualify for use in the fluid form. This grade evolved into our present grade A milk program.

Special equipment and handling procedures made grade A milk production more costly than under conventional methods. The consumer demand schedule permitted charging a higher retail price and paying a substantially higher farm price for fluid milk. However, the amount of milk that could be marketed at higher prices in fluid form was fairly consistent throughout the year; the

1 Assistant Professor of Economics at Iowa State University.
production of milk that qualified for fluid use varied widely between summer and winter. During short seasons there often was not enough qualified milk to fill demands at the going price. At other times a large surplus had to be marketed at lower prices for use in manufactured products such as butter and cheese. Thus the farm price a distributor could pay for qualified milk depended not only on amount of additional returns realized from the sale of milk in the bottle, but also on the proportion of qualified milk he received that could be sold in fluid form.

**Setting for Cooperative Action**

In the beginning many individual farmers separately offered their qualified milk for whatever premium price they could obtain. Separately they had little effect on that price. They sold to relatively large buying units, which varied considerably in the type of use they made of the milk and hence the returns they could realize from its sale.

Distributors who sold most of their input as bottle milk realized a higher average return than those who had to process a considerable amount of it into cheese or butter. Yet all tended to pay about the same price at the farm for this qualified milk. The price was usually established by the plants with the largest surplus.

Also in these early days, the product offered by farmers varied considerably in quality and other characteristics even though it was approved for fluid use. This variation often prompted plants with more milk than they could bottle to quit buying from certain producers, sometimes permanently and sometimes just for the summer, to keep their average returns as high as possible. This practice left farmers who had no market often willing to undercut their neighbors to obtain a market above the cheese milk price. When a dealer found he could buy one farmer's milk for a lower price, he tended to use this as a lever for buying everyone's milk at a lower price. This jockeying often led to disorderly marketing.

**Development of Cooperative Bargaining Associations**

In this setting the cooperative bargaining association movement developed in an attempt to improve producers' income. The associations sought to raise the bargaining power of the individuals by amassing a comparatively large volume of the supply for a market area and putting its administration in the hands of a skilled sales executive.

They developed a classified pricing system in which dealers were charged for the milk they received according to the use they made of it. Thus a dealer who sold a large part of his purchases in bottle form no longer had the advantage of a greater average return over the dealer with a large surplus. In theory, this policy reduced the incentive of a plant with more milk than it needed for bottling purposes to quit buying from producers at will.
The "pooling" practice was developed along with classified pricing. In effect all sales were lumped together, whether for class I (fluid use) or for surplus, and a uniform blend price was determined. Thus with all producers sharing in class I sales, individual producers no longer had incentive to undercut their neighbor to obtain a higher return for their milk.

Full acceptance of these cooperative programs was retarded considerably by variation in the products mentioned above. Thus cooperatives in general embarked on an extensive program for improving product quality, standardizing grading, and bettering assembly methods. In some cases, surplus milk was processed in cooperatively-owned plants to lower handling costs and increase returns to members.

Local Markets

Primarily, the activities mentioned thus far relied upon differing demand schedules for the various uses of the same product. Equally important to the pattern of development of producer groups is the fact that fluid milk markets are relatively local in scope. Qualified milk in the fluid form has been relatively perishable and bulky (thus costly to transport from market to market) when compared with products such as butter, pork, corn, beef, or wheat. When the sociological and psychological problems or organizing relatively small groups of milk producers were overcome, these groups could then bargain, invest in facilities, and obtain a considerable economic advantage before their gains became large enough to attract a supply from producers in another market. This situation made possible market-by-market organization of producers a much easier accomplishment than simultaneous organization of all producers of a region or a nation.

Federal Order Program

The cooperatives often had considerable difficulty in initiating the classified pricing system, in bargaining for gains, and in realizing that a bargain, once reached, would be honored. Firms marketing as processed dairy products a high proportion of the milk they bought from farmers wanted a pricing program which would permit them to pay producers a price equivalent to that paid by firms selling most of their milk in the bottle. Those who sold a relatively high proportion of their milk in bottle form preferred to buy at a classified use price in order to maintain a stable and high quality supply. Many stories have been told of dealers who refused to purchase the milk of the officers of a co-op (for "quality" reasons) or offered the co-op officers a special price to discourage their concern for the general interest of the entire co-op membership. Dealers who did bargain with a local association often would refuse any form of audit so that the co-op never knew for sure if milk purchased at a lower price for use in manufactured dairy products didn't end up in the bottle.
These difficulties reached their peak in the early 1930's with groups of farmers occasionally dumping milk, shooting holes through tankers, and so forth. At this point the Federal Order Program began with the objective of promoting orderly marketing and establishing a price for fluid milk that would assure an adequate and dependable supply the year around. The Federal program adopted the practice of classifying prices and pooling of receipts (initiated by the cooperatives) and instituted a federal audit as a means of verifying the usage of the milk in each price category.

**Basis of Bargaining Gains to Fluid Milk Producers**

The gains achieved by grade A producers have not been solely through organization, bargaining strength, or the Federal Order Program. Two contributing phenomena, both unique to fluid milk, have provided the setting within which the other activities have operated. One is the substantially smaller elasticity of demand that exists for milk in the fluid form compared with milk in the many alternative manufactured product uses. The other is a relatively local market situation for fluid milk, permitting relatively small groups of producers to organize, bargain, and retain the gains obtained by these activities for their members. The organization of producers, bargaining strength, and government regulation, working within this unique economic situation, have brought substantial gains to producers of grade A milk.

**Possibilities for Other Groups**

The above discussion indicates that success in transferring the organization, methods, and government regulation used successfully in marketing fluid milk to other commodities such as manufactured milk will hinge on the elasticity of demand of the various uses of the commodity. For instance, manufactured milk does have many uses, but the demand schedules for these various uses appear so similar and interrelated that minor gains may be the best that can be hoped for. Furthermore, markets for these products are so universal that a producer organization which gains a price advantage of only a cent or two in given areas, such as the Chicago metropolitan market, may be confronted by a flood of easily substitutable products from New York, Florida, California, or Oregon. Perishability, quality, and transportation cost restrictions are so small for most of these manufactured products that a program of market-by-market development, as occurred with fluid milk, could not retain in the local area the gains of such development. The gains would be dissipated quickly to other producers and other areas. If such gains are possible and if the producers who bear the cost of development are to retain the benefits, they will have to be obtained on a national or at least a regional basis.

Currently, a similar situation seems to exist for every other major agricultural product marketed from Iowa farms. Thus the possibility of producers gaining from organizing and proceeding in a way similar to that followed by the grade A associations appears extremely limited both from the
point of view of the scale of the organization required and the similarities that exist in the elasticity of the demand for the various uses of these commodities.

Role of Government

If producer groups can isolate similar phenomena for other agricultural products, they may require government assistance in organizing on a production-wide basis and in developing a discriminatory pricing arrangement to take advantage of their findings. Past experience in the milk industry indicates that if the same buyer makes two or more products from the same but discriminatively priced raw material, market order and federal audit may be required. On the other hand, if each use of a product requires a separate sale to a separate buyer, a government market order may offer no advantage.
BARGAINING POWER POSSIBILITIES IN THE COOPERATIVE MARKETING OF DURUM

by J. T. Scott

Introduction

World wheat production for 1960 was estimated at 8,180,000,000 bushels. The United States accounted for 1,363,443,000 bushels of this production.

![Pie chart showing United States and the rest of the world's wheat production. United States 17%, Rest of world 83%.]

Fig. 3. World wheat production, 1960.

Durum wheat production in the United States in 1960 was estimated at 33,969,000 bushels out of a total United States wheat production of 1,363,443,000 bushels.

1 Associate Professor of Economics at Iowa State University.
The production of durum is highly concentrated. North Dakota, the leading state, accounted for 26,880,000 bushels of the 33,969,000 bushels of durum produced in the United States in 1960.\(^4\) The bulk of the North Dakota durum is produced in the northeastern part of the state in a small triangular-shaped territory around Devils Lake.

Durum production has been attempted in many states since the first seed was brought to this country in 1898, but North Dakota has emerged as the dominant producer. The climate and soil of that state permit the growth of a product that is generally of higher quality than that produced in other areas.

Processing

The method of processing of durum depends on the end product for which it is selected. The three markets for durum in the United States are (1) the puffing market (i.e., puffed wheat market), (2) the spaghetti and macaroni market, and (3) the noodle market.

The puffing market uses only the fanciest, plumpest durum. Spaghetti and macaroni are made from the better grades. The poorer quality durum is used in making noodles and "alphabets" for soups.

Durum is not used as a bread wheat in the United States. A one-pound durum loaf makes a much smaller loaf than do the bread wheats. The consumer prefers the larger loaves.

Position of Farmers Union Grain Terminal Association

The Farmers Union Grain Terminal Association (GTA) handles approximately 40 percent of the durum produced in the United States. It receives part of the grain of member elevators located in the durum producing areas for use in its processing plant at Rush City, Minn. The member elevators sell the rest of their grain to the seven other firms which comprise the durum milling industry. The output of the Rush City plant (semolina and durum flour) represents approximately 10 percent of the industry total and is sold to other firms for final processing. The GTA is not represented among the more than 200 companies doing the final processing.

The GTA is not the only integrated firm in the industry. Other firms buy part of their durum needs from the GTA, but they are not entirely dependent on the association for their supplies. Some own country elevators in the durum producing areas and buy part of their supplies directly from farmers.

Possibilities for Increasing Producers' Returns

Can GTA enhance the prices received for durum by farmers? Officials of GTA think they can and have received better prices in the short run through judicious use of storage facilities. The long-run story, however, is somewhat different because the association must handle the quantity that farmers want to market. Consequently the association has no control over the durum supply and therefore none over the long-run price level.

Then what are the possibilities for getting better prices for durum and durum products if one ignores short-run storage operations? The long-run situation is extremely difficult to assess. However, some knowledge can be acquired by the exploring several related questions. First, are the possibilities for durum price gains relative to other wheat prices limited by opportunities for substitution in production and/or substitution in consumption. Second, are there price-enhancing possibilities arising from GTA's relatively
large size and market share? Third, is GTA's market share vulnerable to competitors? Finally, does the presence of a cooperative affect prices under an oligopoly situation?

Substitution in Production

Farmers in the major producing areas grow both durum and hard red spring wheat when growing durum becomes less profitable. Conversely, they plant more durum if durum wheat prices rise in relation to other wheat prices. Durum, however, is generally the favored crop, even at a lower price, for it produces higher yields per acre than hard red spring wheat. As in any producing area, there are farms where this yield advantage is small and others where it is quite large. Allowing for such differences and assuming the price of other wheats to be constant, we can suggest a long-run supply curve for durum.

\[ \text{Op = Price of "other wheat," which is assumed constant} \]

Fig. 6. Long-run supply situation.

The durum supply curve under such circumstances can be pictured as having three distinct segments. The segments are pictured in fig. 6 as straight lines to simplify the illustration. The upper segment represents the situation when durum sells at a premium over other wheats. The middle segment represents the situation prevailing when durum sells at a discount--but at a discount too small to offset the advantage of durum's superior yielding qualities on all farms in the durum areas. The lower segment represents the situation when durum sells at such a discount that other wheats can be grown more profitably. If durum prices fell to such a low level, there would be (with some lag due to imperfect knowledge) a shift out of durum production into other wheat production (i.e., the supply curve would become perfectly elastic). If durum were selling at a premium over other wheat, the supply curve would be much more inelastic as is shown in the upper segment.
The middle segment has an elasticity somewhere between these two extremes. This segment accounts for the fact that durum outyields other wheat more on some land than on other. Therefore, with each small reduction in the durum price, a few more farms will find it profitable to shift out of durum. Thus for any given drop in price there will be a greater reduction in supply than would prevail for an equivalent price reduction when durum is at a premium. Note that the actual situation is probably a smooth curve with only a suggestion of a corner. Obviously the shift depicted in the middle segment is also operative to a somewhat lesser degree in the corners and on the other two segments.

**Substitution in Consumption**

Can other wheats be substituted for durum in the preparation of macaroni and other products usually made from durum? The answer to this question is still in doubt. However, when durum was scarce in the early 1950's some substitutions were made. In fact some durum product manufacturers found it necessary to manufacture their finished products entirely from wheats other than durum. The complete substitution resulted in an acceptable product in the sense that it was not criticized by the consumer. Whether a prolonged offering of non-durum macaroni products would result in lessened demand for such products is not certain. Nevertheless, it does seem probable that substitutions of non-durum ingredients will be made if durum sells at substantial premiums over other wheats.

The durum product demand curve is shown in fig. 7. The actual situation would be shown by a gently rounded curve since each processor and consumer would shift from durum at a different price.

![Fig. 7. Long-run demand situation facing the farmer and/or his representative.](image_url)
The "kink" in this demand schedule would be less pronounced in a short time period. Because of custom and the processors' fixed investments and also because of lack of knowledge, a sharp shift away from durum would be less likely in the short run. Of course the durum seller's chances of getting a very high premium in the long run are almost nil.

Putting these two concepts (supply, fig. 6 and demand, fig. 7) together with other pertinent information, we find that the durum price will not be the same as the price for other wheat except by coincidence. However, it should move with other wheat prices, and over the long run, durum prices relative to other wheat prices should not be higher than the "kink" in the demand curve nor lower than the lowest "kink" in the supply curve.

Market Share Considerations

GTA is one of eight firms involved in the first processing stage, during which durum is made into semolina and durum flour. It has approximately 10 percent of the industry's capacity. With only a few firms and a product which is relatively homogeneous, in the first processing stage the industry seems to be an oligopoly.

An oligopoly is said to exist when "each firm must ask itself what will be the effect of its action upon the behavior of other firms." One can be relatively certain that each of the eight firms is painfully aware of the retaliatory threat of the others to any contemplated price changes. This situation should be equally true at the terminal grain-marketing stage, during which GTA handles 40 percent of the durum produced in the United States.

From the foregoing discussion of the market structure one might speculate that durum prices are higher than they would be under perfectly competitive conditions. Price leadership in buying and selling could develop where there are such a small number of firms. There are factors that make this supposition somewhat doubtful, however. For one thing, none of the oligopolists has any control over the supply of durum. Second, one of the oligopolists is a cooperative.

The durum producers determine the amount of durum to be planted; therefore, elevators and processors have little control over the long-run supply. They can affect the short-run offerings by storage operations, but over the longer haul they must process and sell all durum produced. If one processor refused to buy from a farmer, the processor's competitors would gladly handle the entire crop. Thus the individual processing firm can have little effect on the total supply marketed, consequently little effect on durum prices. The obstructionist would succeed only in reducing his own profits below what they could have been.

Of course a firm could decide to buy a large quantity of durum and destroy it. This action would reduce the long-run supply, thereby increasing price. The firm taking such unilateral action would probably have to control more than half of the crop to benefit from such action, however. Lucrative crop reduction would likely require concerted effort by firms handling more than 70 percent of the crop. Since this action would be difficult to achieve, it appears unlikely that durum middlemen will do anything other than market the amount produced.

**Vulnerability of Market Share to Other Competitors**

What response could GTA expect from its customers if it announced a "high price" for its durum? For one thing such action would allow the other handlers to sell a larger share of the durum merchandised provided they could obtain their supply directly from elevators or farmers. This alternative is within reach of some durum product manufacturers, for they own and operate elevators in the durum producing areas. Thus, GTA stands to lose a part of its share of the market if it attempts to extract a premium for durum which is not based on competitive market conditions.

**Cooperative Corporation in an Oligopoly Situation**

How does the operation of a cooperative affect the oligopoly situation? At first glance one might suppose that the participation of a cooperative would not affect oligopoly pricing practices. However, "follow the leader" or other arrangements which enhance the price of the product will likely result in increased net earnings by the participating firms. This creates no problem among business corporations other than to attract the attention of potential competitors.

However, the cooperative remits its earnings to member elevators and thence to the farmer patron. Since each farmer patron can independently decide where to market his grain, a number would shift from elevators to cooperative elevators dealing with the cooperative oligopolist provided market prices for all oligopolists were identical.

Thus there is a tendency for the product to shift to the cooperative. Business corporations resist the short-run temptation to raise industry prices, for in so doing they run the risk of reducing their share of the market and subsequently their profit.

**Summary**

Briefly, it would appear that the GTA cannot appreciably raise durum prices in the long run. The reasons for this are somewhat complex but can be summarized as follows:

1. Other wheats can be substituted without too much fear of market reactions if durum sells at too high a premium over competing wheats.
2. Although only a few firms are represented at the terminal handling and first processing stages, there are some factors which would tend to defeat price enhancement schemes:

   a. The firms at these two stages cannot in the long run control the supply since the farmer makes the production decisions.

   b. Business corporations at these two stages cannot join with a cooperative in a price enhancement scheme since the scheme would result in greater cooperative patronage dividends and a shift of the market to the cooperative.

   c. Some of the larger business corporations have country elevators in the durum producing areas. The potential competition which these elevators represent is a deterrent to any move by the cooperative to try to practice marketing restrictions and extract higher prices from consumers on its own initiative. Any such move would be countered by increased country buying by the cooperative's competitors.
FARMERS' BARGAINING POWER IN THE PRE-SLAUGHTER MARKETING OF ONTARIO HOGS

by T. S. Rackham

Setting

Efforts of Canadian farmers to increase their bargaining power in the primary markets have not altogether paralleled those of American farmers.

Time will permit me only to touch the highlights of one of them -- the now-successful effort of a producer group in Ontario to gain monopoly control of the supply of live hogs in order to secure higher returns.

Three general conditions differentiate the Canadian from the U. S. hog marketing system:

1. Federal regulation and supervision of grading, including grade-price differentials and a quality premium program, relieve producers and processors of any latitude in bargaining within these variables.

2. Long-established standardization of the bacon-type hog gives the live product characteristics of homogeneity, so processors generally need not be selective to get the kind of hogs they desire.

3. Grade and premium benefits limit to about one week the optimum period in which prime quality hogs can be delivered. Thus there is a steady rather than discontinuous flow of hogs to market and it is unprofitable for producers to hold their hogs off the market.

In Ontario three other conditions have been important:

1. Wartime fixed-contract pricing destroyed competitive marketing and led to delivery of nearly all hogs directly to plants.

2. The large Ontario market is isolated by distance from Canadian surplus hog producing areas.

3. Truck route and licensing controls restricted the freedom of producers to designate where they wanted their hogs delivered.

Thus producers raised hogs and shipped them off without knowledge of price or access to alternative markets in a market completely void of bargaining. Bargaining took place between trucker and processor on a transportation cost

---

1 Associated with the Department of Agricultural Economics, Ontario College, Guelph, Ontario, Canada.
margin, and occasionally truckers could pass some gains back to producers. Variation in prices to producers at one plant on the same market day often amounted to a dollar per cwt. or more, dressed weight.\(^2\)

Dissatisfied with pricing conditions, farmers agitated for more bargaining power. Three gains were anticipated from producer control:

1. Reduced marketing margins mainly from pressure on processors.
2. Elimination of under-the-counter trucking and handling kickbacks.
3. Upward pressure on the retail price to squeeze consumers for additional nickels and dimes.

**Development of Power in Hog Producers Marketing Board\(^3\)**

First, the Ontario Hog Producers Association was organized. It worked out a scheme under the Ontario Farm Products Marketing Act to set up a negotiating committee and agency for selling hogs. This was partially accomplished when the Ontario Hog Marketing Board was formed as one of several commodity marketing boards under the regulatory Farm Products Marketing Board. The hog board collected license fees from producers and through a checkoff (2 cents per hog), the supporting-and-policy-making Ontario Hog Producers Association gained strength and unity. An attempt was made to negotiate prices in 1951, but no agreement was reached, and the packers refused to go to arbitration. The parent provincial Farm Products Marketing Board was reluctant to interfere.

The Hog Marketing Board proceeded to set up a marketing agency by unifying the commission firms operating on the stockyards into a single selling agency controlled by the board through a contract agreement. The agency was empowered to establish prices, sell the product, direct the movement of hogs, and handle payments to producers. It sold its hogs to the highest bidder and withheld hogs from those not meeting this bid. However, the agency had little bargaining power because less than 10 percent of hogs moved into trade through the stockyards. Processors paying freight assistance to truckers were still able to attract direct shipments in sufficient quantity to offset any increase in bargaining power based on loyalty to the hog marketing agency.

---


New legislation permitted formation of a successor to the contract marketing agency. This was the Ontario Hog Producers Cooperative Ltd., a sales agency directly dependent on the Hog Marketing Board and the policy-making Ontario Hog Producers Association. This development brought the producer organization into direct conflict with truckers and drovers, who still maintained freedom to deliver their hog loads to the processor of their choice. Eventually the sales cooperative set up district assembly yards to serve the hog producers and sidestep opposing truckers and drovers. The sales cooperative then hired its own staff and trucks to make delivery as it directed. Bargaining power of the agency increased as the volume moving independently to processors was shut off.

However, complete control was not achieved until legislation designated the Ontario Hog Producers Marketing Board and its selling agency as the sole marketing agent for all live hogs produced in the province. This action gave the producer organization monopoly control of hog supplies. The organization could discriminate between processors by threatening of retaliatory action if outside supplies were brought in.

Operations were centralized by setting up assembly points throughout producing areas, maintaining supply information, and dispatching full loads by telephone from the central office. The central selling agency analyzed trade factors and established prices weekly. The co-op salesman contracted prospective purchasers by telephone and accepted price and quantity bids. He was able to play one processor against another and delay acceptance of offers he deemed unsatisfactory. At times prices were not stabilized early enough to keep hogs rolling to market and processors' killing floors operating. Small above-average-quality lots would be sold early to specialty firms to set high opening prices.

This situation led to week-end hog carryovers and tail-end sacrifice pricing. This was partly offset by directing the overrun to a cooperative, producer-owned packing plant or outside the province to an agency in Montreal, a hog deficient area. Packers claimed that to keep plants operating they were forced to make bids inconsistent with market demand, that when their storage space was filled they had to quit buying. The selling agency claimed this practice was really a conspiracy to break the price which the agency's research indicated to be consistent with supply-demand relationships. These claims led to conflict among producers, the Ontario Hog Producers Marketing Board, processors, and the Ontario government through the parent, regulating Ontario Farm Products Marketing Board. The government ordered the board's selling agency (still supported by the required two-thirds majority of producers) to set up a more acceptable system of marketing hogs by April 1, 1961, or suffer its compulsory powers to be withdrawn.

As a result, a teletype system was set up connecting each processor with a master teletype unit in the selling office. This is how the system works:
The selling agency lists at given offering prices the various lots of hogs available in the Ontario area for that market date. If after a given time there is no taker at first offering price, the various lots are listed at lower offering prices. Buyers can bid on any lot of hogs listed regardless of the point at which the hogs are assembled. However, buyers bid on the basis of F.O.B. assembly point, so they have to make some adjustment for the cost of transportation to their plants. The offering price of each lot is progressively reduced until a buyer signals his acceptance. His action locks the circuit, ends the bidding and notifies other buyers of the sale. Only the sales agency and the buyer know who bought the lot in question. The sales agency may, at its discretion, refuse a bid and continue offering for sale the lot or portion of lot not desired by the purchaser.

**Observations and Conclusions**

Ontario commodity marketing boards such as this one grew out of a background of Canadian cooperative and government marketing experience. They were conceived, according to J. K. Galbraith to "become part of a system of countervailing power to offset the concentration of resources and bargaining power in large industrial and commercial corporations, labor unions and supermarket chains."

They are looked upon as a method of improving bargaining power of producers who had so little power that they could only accept or refuse the first price offered. Their power potentially would be derived from monopoly control over supply of the product in a market. However, the Ontario commodity marketing boards in general and the hog producers in particular, have not attempted any production control. Thus they lack ability to control or set price level.

I believe the Ontario Hog Producers Marketing Board anticipated that they could gain an advantage over consumers that would force price levels up at retail, that they could impose a loss on processors and truckers by reducing the operating margins of the latter.

The attempt, in the words of Professors Kaldor and Paulsen, was to influence the terms of trade through discriminatory control of the supply variable using an instrument sanctioned by the provincial government. This instrument was compulsory channeling of all hogs through the board's selling agency, a bargaining agent that played an active role as contrasted with the passive market role played by sellers before collective union.

The result was a demonstration that the long-run gains came not from bludgeoning power but from perfecting the bargaining process. These are relatively small gains in monetary terms but still of value and mutually acceptable to the opposed forces.
As I see it the gains are these:

1. Efficiencies in mass full-load collection and movement of hogs with minimum disturbance, crosshauls, overlapping of agents services, and communication expenses.

2. Reduction and prevention of covert marketing practices, under-the-counter subsidies, and so forth, with resulting nonmonetary dividends in producer confidence, in equitable treatment and in better producer-processor relationships.

3. The possibility that the price level will adjust more smoothly to demand and supply conditions rather than in the jerky manner pressured by the previously imperfectly counterbalanced powers.

The hog producers have now launched a program to take over processing of their own hogs. Ultimately they may attempt to raise or control the price level by production control and thereby extract higher prices from consumers -- at the risk of attracting supplies from other areas.
This paper deals with the resource-allocation effects of possible increases in the bargaining power of groups of farmers. The major theme is the effects of the exercise of monopoly power by farmers on the "quality" of resource allocation. That is, we first develop the notion of a desirable allocation of resources and then inquire about the impact of a farmer monopoly on this allocation.

Let us consider a simple setting for our problem. Let us assume that:

1. Labor is the only resource.

2. Each industry produces only one kind of consumer good in a one-stage production process.

3. In each industry there is only one kind of work, and this kind of work is different from the kind of work done in each other industry.

4. There is a market for each consumer good and for each kind of work.

5. On the buying and the selling side of each market there is perfect competition (a homogenous product and enough buyers and sellers so no buyer or seller thinks he individually can affect the price).

6. Each worker works a fixed total number of hours per week but is free to choose the distribution of his time among kinds of work.

Let us assume that the society identifies the price of labor for a given kind of work as the marginal social sacrifice associated with that kind of work--the social sacrifice caused by using the last unit of labor in the given kind of work. That is, if each worker does some of each kind of work, he allocates his own time so that, relative to other kinds of work, the wage for the last hour of each kind of labor just compensates him for the sacrifice he makes by being unable to devote that hour of labor to any other kind of work.

Similarly, let us assume that the society identifies the price of a consumer good with the marginal social significance of the good -- the social significance of the last unit of the good produced. That is each consumer can be assumed to divide his expenditures among consumer goods so that the amount of money he pays for his last unit of a good indicates the importance he attaches to it.

1 Professor of Economics and Head of the Department of Economics & Sociology at Kansas State University.
On the basis of the above interpretations, the marginal social sacrifice in using a marginal unit of labor on consumer good A is equal to the price of a unit of labor used on A. (This price may be different from the price of the same kind of labor used for other purposes, since the laborers may have preferences among kinds of work.)

Similarly, the marginal social significance of using a marginal unit of labor on A is the price of A times the resulting number of extra units of A. For the use of a marginal unit of labor on A, let us define

\[ R = \frac{\text{price of A times resulting number of extra units of A}}{\text{price of labor used on A}} \]

If the price of labor used on A is constant from the standpoint of the producer of A, the marginal cost of A (when the use of labor is increased) is equal to the price of labor used on A divided by the resulting number of extra units of A; in this case, R can be written as

\[ R = \frac{\text{price of A}}{\text{marginal cost of A}} \]

We shall define "R criterion" as the criterion according to which R must be 1 for all uses of all resources, which would mean that prices of all goods are equated to the marginal costs of producing them. We assume that the society adopts the R criterion as a measure of the quality of resource allocation.

Perfect competition in all markets tends to satisfy this criterion; in a perfectly competitive market each seller can maximize his profit by making marginal cost equal to price. Since prices are equal for all producers, the R criterion is clearly satisfied.

The monopolist (the sole seller in an industry) maximizes his profit by choosing an output at which in expanding output he increases his cost exactly as rapidly as he increases his revenue. (Marginal revenue is defined as extra revenue per extra unit of output.) The monopolist will make the marginal cost of \( X_A \) equal to the marginal revenue of \( X_A \). Since the price of \( X_A \) will be greater than the marginal revenue of \( X_A \), R will be greater than 1 in a monopolized industry.

If some industries are monopolized and others are not, then on the basis of the R criterion, monopolized industries tend to produce relatively less than is desirable from the viewpoint of resource allocation. A monopolist maximizes his profit by making his good scarce. He keeps the marginal social significance of his product high relative to the marginal social sacrifice needed to produce it. He forces the rest of the society to put resources to relatively unimportant uses.

In some cases there may be reasons why the society is unwilling to use the R criterion without modification. For instance, in a particular situation society may not wish to identify marginal social sacrifice and marginal social
significance with quantities entering the calculations of individual firm managers. A resource use may involve either social sacrifice or social gain that does not affect the profits of the firm using the resources, leading to a disassociation between sacrifice and gain.

For instance annexation of adjoining areas into a city may be needed to associate tax payments with use of city streets so that all persons using the streets may help pay for them. Or, discharge of untreated chemical wastes into streams may be prohibited, particularly if the cost of treatment is slight in relation to the damage done by untreated wastes. Similarly, prizes may be given to encourage firms to design plants that will be an aesthetic asset to the community. In each case, restrictions to reduce the disassociations in addition to the R criterion may be considered.

In other cases, price discrimination (charging two or more prices for different units of a given product) will make it difficult to judge resource allocation. When price discrimination is possible investigation must be more detailed than that associated with a simple resource allocation criterion. The lack of a unique set of prices (one for each product) makes it difficult to evaluate the associated resource allocation.

Resource Allocation and Markets for Intermediate Goods

We have been concerned largely with interpreting the R criterion. Let us now consider how the value of R in the market for a consumer good is affected by conditions of competition in the market for an agricultural good used in producing the consumer good. If we do not have perfect competition on both sides of the market for the agricultural product, will this market affect adversely the market for the consumer good?

Let $X_A$ be the quantity of an agricultural good used in the production of a consumer good A. We have seen that perfect competition on both sides of the $X_A$ market would not create any tendency for R to deviate from 1 in the A market. Since the $X_A$ market affects the A market only through the quantity $X_A$, we want to know whether $X_A$ under specified conditions will be the same as it would be if there were perfect competition on both sides of the $X_A$ market.

If there are two or more sellers of $X_A$, we assume they are identical. We want to show a supply curve for a group of sellers (a curve showing for each given price the total quantity that will be offered by the sellers as a group). At any price, the quantity offered by n sellers will be n times the quantity shown on an individual marginal cost of $X_A$ curve, since each marginal cost curve will coincide with a seller's individual supply curve. Instead of drawing a new diagram to show the supply curve of the group, we assume that an n:1 horizontal scale factor is used; therefore, a horizontal distance representing one unit of $X_A$ with reference to an individual seller represents n units of $X_A$ with reference to the group of n sellers.
Marginal value product of $X_A$
Marginal revenue of $X_A$
Marginal outlay on $X_A$
Marginal cost of $X_A$

Fig. 8. Vertical price relationships
We make an analogous assumption about the demand side of the \( X_A \) market.

In fig. 8, we show quantities of \( X_A \) horizontally and price of \( X_A \) vertically.

If there is perfect competition in both buying and selling \( X_A \), the marginal value product of \( X_A \) curve is a demand curve (a curve showing for each price of \( X_A \) the quantity that will be bought) and the marginal cost of \( X_A \) curve is a supply curve. The output of \( X_A \) will be \( OB \), and the price \( BC \). Thus \( R \) is 1, as suggested earlier.

If there is monopoly in selling \( X_A \) and perfect competition in buying it, its marginal value product curve becomes a demand curve for \( X_A \). There is a corresponding curve showing marginal revenue from the sale of \( X_A \). The seller can maximize his profit by equating the marginal revenue of \( X_A \) to the marginal cost of \( X_A \), at the output \( OG \) with the price \( GK \). In comparison with the output \( OB \) under perfect competition, monopoly restricts the output of \( X_A \) and so indirectly restricts the output of consumer good \( A \).

If there is monopsony in buying \( X_A \) and perfect competition in selling \( X_A \), its marginal cost curve becomes a supply curve; the monopsonist can set the price. The marginal outlay on \( X_A \) curve shows the rate at which his total outlay increases as his use of \( X_A \) increases. To maximize his profit, he must equate the marginal value product of \( X_A \) to the marginal outlay on \( X_A \), buying \( OE \) at the price \( EJ \). This output is smaller than it would be with perfect competition on both sides of the \( X_A \) market, so monopsony in the \( X_A \) market tends to restrict output of \( A \) and thus to make \( R \) greater than 1 in the \( A \) market.

Incidentally, \( R \) is 1 in the \( X_A \) market, but we are concerned with the \( X_A \) market only as it affects the \( A \) market.

If there is monopoly on each side of the \( X_A \) market (bilateral monopoly) there is neither a demand curve nor a supply curve for \( X_A \). (A demand curve is based on the assumption that price is announced to the buyer, and a supply curve on the assumption that price is announced to the seller.) Buyer and seller will bargain about both price and quantity.

Ignore the buyer's costs other than his expenditure on \( X_A \), and the seller's costs other than those shown in the cost of \( X_A \) curve. The sum of profits of buyer and seller is shown by the area between the marginal value product of \( X_A \) curve, and the marginal cost of \( X_A \) curve enclosed by a vertical line drawn from the quantity of \( X_A \) sold. For instance, let \( OG \) be the quantity of \( X_A \). If the price is \( OT \), \( OSKG \) is the buyer's total revenue, \( OTKG \) his total costs, and \( TSK \) his profit. \( OTKG \) is the seller's total revenue, \( OLHG \) his total cost, and \( LTKH \) his profit. The sum of the bargainers' profits is \( LSKH \).

Given the quantity \( OG \) to be sold, \( LSKH \) is the sum of the bargainers' profits whatever the price at which the \( OG \) units may be sold. \( OSKG \) is the buyer's total revenue, and \( OLHG \) the seller's total cost. Money paid by the buyer to the seller cannot affect the sum of their profits. The profits will equal the buyer's revenue minus the seller's cost.
The bargainers can maximize the sum of their profits by making the $X_A$ quantity $OB$, giving a profit of $LSC$. They can then bargain about the price of $X_A$ to determine the division of $LSC$ between them.

Since $OB$ is the perfectly competitive output of $X_A$, bilateral monopolists maximizing the sum of their profits affect the $A$ market exactly as it would be affected if there were perfect competition on both sides of the $X_A$ market.

This result may seem strange, but bilateral monopolists can determine output without determining price at the same time. A monopolist or monopsonist must determine price and output simultaneously.

Creation of bilateral monopoly may depend on horizontal combination among sellers -- either merger or concerted action among firms in the same production stage. There also may be horizontal combination among buyers. If there have been horizontal mergers followed by bilateral monopoly operations, vertical combination (merger of firms in successive stages of production) may follow. Instead of bargaining repetitively about prices and quantities of goods, negotiators may find it more efficient to bargain only once, for the rate of exchange of shares of stock in their corporations.

Once vertical integration has taken place, there is no reason for events in the $X_A$ market to influence the $A$ market unfavorably.

Bilateral monopoly in the $X_A$ market, like vertical integration doing away with the $X_A$ market, is compatible with optimal allocation of resources among processes leading to consumer goods.

**Conclusions**

Finally, we should note that society has objectives in addition to the "quality of resource allocation" objective. For instance, it is likely to be concerned with the quality of income distribution. Any social action affecting resource allocation probably will affect also income distribution. If the society wants to increase the ratio of the income of sellers in a given market to the income of buyers in the same market, it may maintain laws that tend to create monopoly, even if laws that would create perfect competition or bilateral monopoly would be preferable on the basis of the society's criterion for resource allocation.

When we deal with resource allocation, we avoid considering discrimination among persons. When we deal with income distribution, we may be particularly interested in bringing about a specified kind of discrimination among persons. Probably the institutional arrangement selected by the society will make neither the exact set of interpersonal discriminations that the society wants nor create a resource allocation entirely in accordance with the desires of the consumers and workers, but represent some compromise between these two conflicting objectives.
GLOSSARY

Monopoly: a market in which there is only a single seller of a product

Monopsony: a market in which there is only a single buyer of a product

Horizontal combination: a collective monopoly created by agreement among all sellers or buyers of a product

Oligopoly: a market in which there are only a few sellers, and the demand for the output of each firm depends on the decisions of the other sellers

Elasticity of demand: a numerical coefficient which shows the percentage change in the quantity of a product consumers will purchase with a percentage change in the price of the product; a measure of demand responsiveness to price changes

Elasticity of supply: a numerical coefficient which shows the percentage change in quantity producers will supply with a percentage change in the price of the product; a measure of supply responsiveness to price changes

Demand schedule (curve): a schedule showing the various quantities of a product consumers will buy at alternative prices assuming that consumers' preferences, incomes, and the prices of other products do not change

Supply schedule (curve): a schedule showing the various quantities of a product firms will offer at alternative prices

Marginal revenue: the change in total revenue which occurs as a result of a one unit change in the quantity sold; the slope of the total revenue curve

Marginal cost: the change in total cost associated with a one unit change in the rate of output by a firm; the slope of the total cost curve

Marginal outlay: the cost associated with the purchase of an additional unit of a product or an input

Marginal value product: the value of the change in output resulting from the use of one additional unit of a given input

Bilateral monopoly: a market situation in which a monopolist sells to a monopsonist (single seller faces a single buyer)

Vertical integration: the extension by a firm at one level of management control forward or backward to other levels of the production-marketing sequence for a commodity

Perfect competition: an "ideal" market situation in which there are a large number of firms selling a homogeneous product