ECONOMIC REQUIREMENTS FOR EFFECTIVE BARGAINING IN AGRICULTURE

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Introduction

Why discuss the economic requirements for bargaining today? Isn't it old hat? A rather comprehensive bibliography (8, p. 104) 1/ indicates that professional discussions date back to at least the year 1928.

But in action "bargaining" dates back to the days of the Old Testament. Jacob bargaining with Esau over Esau's birthright (Gen: 25-29). The Grange emphasized cooperative marketing in the 1870's. The Farmers Union attempted to control cotton prices and acreage in the early 1900's. The cooperative movement led by Aaron Shapiro has been studied and written about in volumes. Over the years we have talked about "collective" bargaining, bargaining "cooperatives", bargaining "power", and now I am asked to discuss "effective" bargaining.

In my opinion, the reasons for talking about effective bargaining today are three-fold:

a. The indiscriminate use of the term "bargaining" in the past and even now, has led to confusion and often misunderstanding. 2/

b. The aspiration level of groups organized to bargain or to exert market power often exceeds the potential for gain.

c. We all realize that external economic and competitive conditions external to the bargaining group(s) limit or affect the ability of a group to bargain effectively but we're not sure how much or in what way.

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*/ Helpful comments from Daniel I. Padberg, Bernard F. Stanton, and George L. Casler are gratefully acknowledged.

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1/ The numbers in parentheses refer to references listed at the end of this article.

2/ Farrell (3, p. 1) stated "Market Power, Monopoly Power, Bargaining Power are terms often used interchangeably ... and if used indiscriminately are likely to be confusing, if not misleading."

For these reasons I will first define bargaining, effective bargaining, and some other terms; discuss the bargaining process; and then discuss the economic requirements for effective bargaining.

Definitions

A bargain is an advantageous agreement. To bargain is to buy or sell on good terms, to haggle, to negotiate and compromise (12, p. 13). For purposes of this paper I wish to define "effective bargaining" as a bilateral act or series of bilateral acts achieved through a negotiation process, that results in an improvement in the terms of trade for either one or more of the groups involved. This definition presumes the ability to influence or alter the terms of trade. 3/ The ability to influence is dependent upon "power". The terms "bargaining power" and "market power" are used to describe the conditions necessary to influence. I find it useful to make a distinction between the two terms.

"Market power" implies the ability of a firm or a group of firms to directly and materially affect the incomes of other firms or persons or to appreciably change the average price, total quantity, or marketing or purchasing practices in which it (they) participates, by a decision (price, purchasing, production or marketing) that it might practically make. 4/ As defined this involves a unilateral act by one firm or group.

"Bargaining power", on the other hand, involves bilateral action or negotiation. It implies the ability to alter the terms of trade between two or more parties through a negotiation process and thus through agreement, affect the income of one or more of the parties involved.

G. E. Brandow made a meaningful distinction between "market" and "bargaining" power when he stated "A firm or group obviously needs some market power to bargain meaningfully, but market power may not be exercised through a bargaining process" (2, p. 1n). K. R. Farrell recently made a similar distinction (3, p. 1).

Although I plan to retain the dichotomy between "market" and "bargaining" power throughout this paper I realize that for practical purposes, bargaining in agriculture involves a complex combination of actions that combines the exercise of both market and bargaining power.

The Community of Interest vs. A Conflict of Interest

Bargaining in agriculture may involve firms or groups at any level

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3/ This definition does not preclude the possibility that one group or party might lose in the process.

4/ This definition is taken from Brandow (2, p. 2).

in the channel of trade in the food and fiber industry complex. Between firms or groups vertically related in the channel of trade (i.e., suppliers, farmers, assemblers, processors, and distributors) there exists some interests that are common and some that conflict. There is a conflict over the share of joint profit that may exist at any point in time. But a community of interest exists in altering price and nonprice variables so as to increase joint profits.

Two kinds of actions can be identified. The first kind such as the withholding actions of the National Farmers Organization emphasize the conflict of interest. The second kind includes actions of collective bargaining agencies or cooperatives (or individual firms or groups) to improve delivery schedules, to handle payment to producers, to jointly advertise and promote, to alter quality, to coordinate marketings with the desire of the consumers; all emphasize the common interests of the various parties. The first kind of action involves movement along a demand curve, i.e., a reduction in volume (or a threat to reduce) so as to increase price. This action only benefits the farmers. The second kind involves actions that either reduce marketing costs or increase the derived demand for the commodity. This action may benefit assemblers, processors, distributors, or even consumers as well as the producer bargaining group.

Effective bargaining may involve a mixture of both types of actions and an exploitation of both the community of interests and the conflicts of interest.

The Static Model for Bargaining Behavior

The classical static model for bargaining assumes imperfect competition. The only negotiable variables are price or quantity. The assumption is that both processors and producers have U-shaped cost curves on both an individual and an aggregate basis. Under these conditions an iso-profit map can be constructed for both parties in the negotiations. Such a model is presented in Figure 1. 5/

The model presumes excess joint profit at any raw product price and a fixed processor selling price, for any specific quantity processed.

Under assumptions of perfect knowledge all rational price and quantity combinations lie on the contract curve (CC). If, because of a lack of knowledge or because of improper adjustments or improper bargaining,

5/ Curves for the producers are drawn convex to the base; curves for processors are concave. The numbers at the right of each curve are hypothetical excess profit levels. Each curve represents alternative prices and quantities that will yield the same excess profit (iso-profit curves). The numbers in parentheses at the left of the processor curves represent a higher joint profit level such as might result from a significant short-run increase in the demand for product(s) sold by the processor. The contract curve (CC), often referred to as the Edgeworth contract curve represents those price-quantity relationships which are pareto optimum.

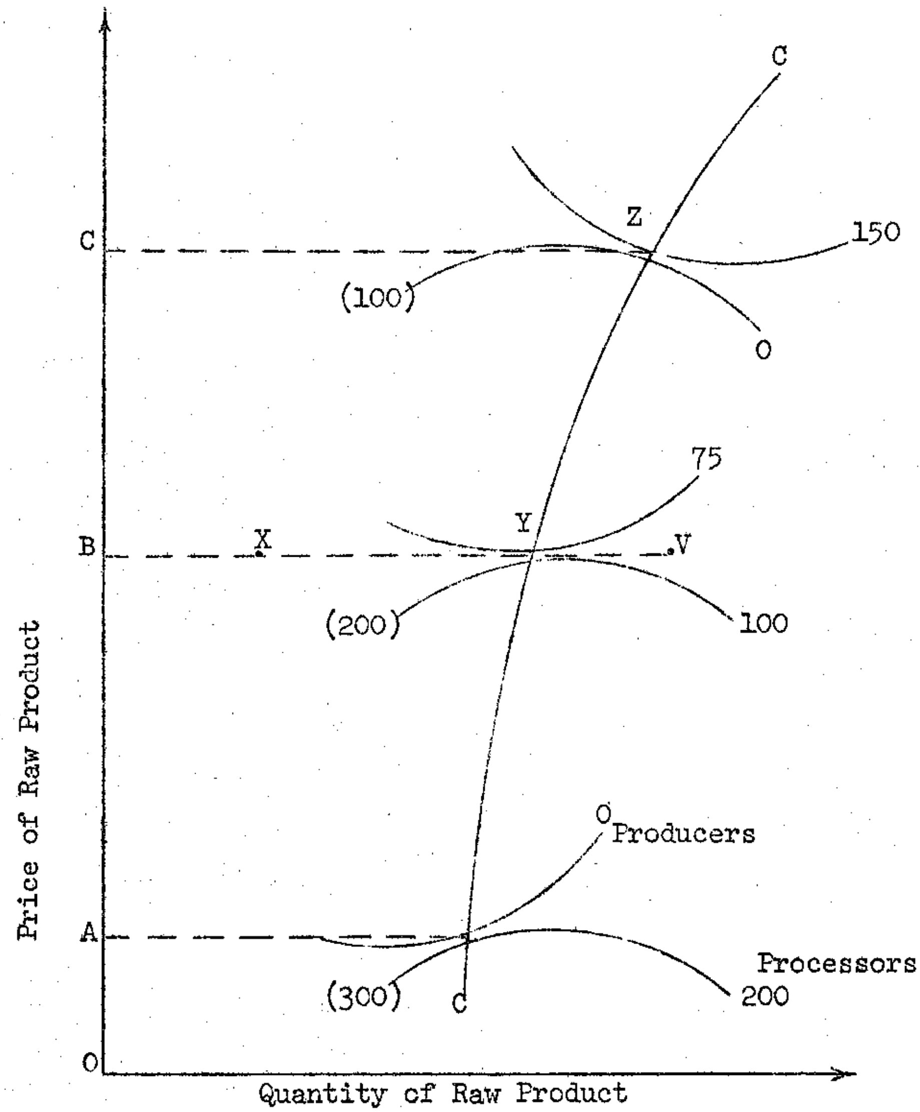

Figure 1: The Classical Static Model for Bargaining

the parties find themselves off of the contract curve (say, at point X or V), both parties will be better off by adjusting quantity and keeping the same price OB so as to locate at point (Y). They have a common interest.

An agreement to move to the contract curve results in a gain from both parties, a result of opponent-gain bargaining. 6/ If the parties are in adjustment or on the contract curve then improvements through bargaining can come about only by movements along the curve. Any movement along the contract curve results in a redistribution of income, i.e., opponent-pain bargaining. That is, one party can be made better off only by the other being made worse off. 7/

The static model restricts bargaining to price and quantity. The limits on negotiations are imposed by either the extent to which firms or groups, vertically related, are out of adjustment or to the extent that joint excess profits exist in the vertical trade dimension.

The Dynamic Model for Bargaining Behavior

But in a dynamic setting, effective bargaining need not be restricted to the price-quantity dimension. It may include price and non-price terms of trade such as: raw product quality, product quality, delivery schedules, weighing and testing procedures, exclusive supply agreements, premiums, tie-in advertising and promotion, and methods and techniques of production, assembly, processing, or distribution. These actions may alter the nature of demand; exploit markets in space, form, or time, change production and/or marketing costs.

The dynamic model is too complex to spell out in this paper but the above generally describes the number and kinds of variables that may be subject to negotiation in addition to price and quantity.

I have ten points to make in regard to the economic requirements necessary for effective bargaining.

1) Effective Bargaining and the Degree of Control over Supplies or Markets

The primary or necessary economic requirement for effective bargaining is some degree of control over the supplies or the market of an identifiable commodity or over an economic activity. This control is necessary for a firm to exercise either market power or bargaining power. Conceptually

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6/ Two types of bargaining behavior are usually identified -- opponent-gain and opponent-pain. The former involves making the opponent better off if he accepts your terms while the latter involves the ability to make the opponent worse off if he doesn't accept.

7/ Conceptually other terms of trade could be substituted for price or quantity or both and the same logic would apply.

the ability to exercise market power is zero when the firm or group has no meaningful degree of control but increases at an increasing rate as the firm's or group's control increases. (Figure 2) The full potential is reached only when the degree of control is complete. The effectiveness in the ability to influence the terms of trade through the exercise of market power is theoretically quite limited until a relatively large degree of control is achieved. But the effectiveness may be enhanced by some additional increment through the exercise of bargaining power.

Note that horizontal group action where farmers voluntarily get together involves a movement along the vertical axis. One hundred percent control over supplies is only possible if the group gets control over all resources that could possibly produce or supply the commodity in question or if the group gets mandatory control enforced by the police power of the government. However, one hundred percent control over a segment of a market, a product type, a brand, a process, or a technique is possible in a system. This is the reason why the power curve (Figure 2) increases as degree of control increases.

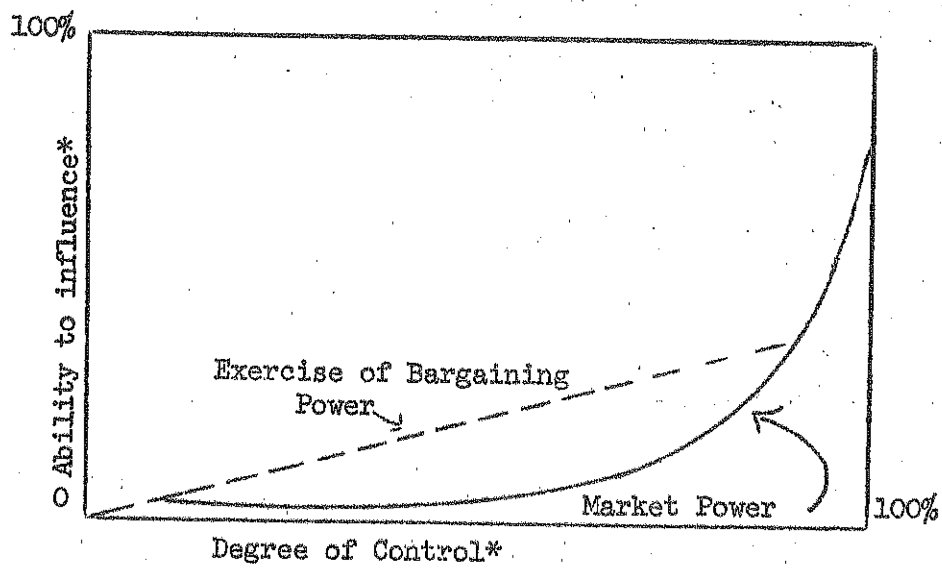
The exercise of market power involves direct action and is limited by the economic and social conditions external to that group. The exercise of bargaining power involves group action and thus is limited only by the economic and social conditions external to the group involved in the bargaining process. Since more decisions can be practically altered by joint action then, conceptually, bargaining enhances the ability to influence in some increment beyond that possible through a unilateral act at any given degree of control, at least over some range.

The dimensions of the relationships in Figure 2 are abstract and are obviously over-dramatized. The incremental difference, in the ability to influence, between the exercise of market power and bargaining power may be more significantly affected by non-economic factors such as group cohesiveness, negotiation skills, knowledge, and perception (12, p. 134; p. 184). But economic factors and conditions also play an important role in providing the potential base for bargaining.

2) Effective Bargaining and Imperfect Competition in the Marketing Sector

A firm in pure competition has neither market nor bargaining power. 8/ On the other hand, a monopolist confronting many buyers need not negotiate or compromise. His market power is absolute and therefore he need only act on this power. To bargain meaningfully the firm or group of firms must have some degree of market power and this implies some imperfection in the economic environment.

8/ Pure competition is defined to mean a large number of buyers and sellers but not necessarily perfect knowledge or factor mobility.



*As a percent of potential control over supplies or markets and as a percent of the potential ability to influence terms of trade.

Figure 2: Hypothetical relationship between the degree of control over supplies and the ability to influence terms of trade through the exercise of market and bargaining power.

The more imperfectly competitive the situation for either the producer group or the processor group or both, the wider the bargaining range along the contract curve (See Figure 1) and therefore, the greater the economic basis for bargaining. Such practical conditions that might exist are consistently high profits in the processing sector. These may come from some degree of market power in the processing sector or from unusually good management. (2, p. 9).

If high profits do exist in the processing sector, then producer groups can gain by developing and exercising market power and/or by negotiation from some developing base of power. Consistent high profits do not appear to exist in the food processing and distribution sector generally. However, this does not mean that the potential for high profits is non-existent nor does it rule out the possibility for higher joint profits through negotiated joint action in the market.

3) Potential to Alter or Increase Demand -- A Dynamic Dimension

It is conceivable that higher joint profits could be generated through negotiated action which would involve a better coordination of marketings or production in either time, form or space. The distribution of the higher joint profits then would also be a negotiable item.

Suppose that some product innovation increased the market for the products of processors so that a new iso-profit map applied, as indicated by the numbers in parentheses at the left in Figure 1. If this were a joint venture or if the producers were well informed, then less relative power (but some) would be necessary to bargain for a position between Y and Z. An increase for producers would be easier here because it would involve opponent-gain strategy, or a sharing of the gain. If they stayed at Y, all the gain would go to processors (from 100 to 200) and producers would be no worse off. A negotiated result at Z would leave processors no worse off with all the gain going to the producer group. A realistic solution probably lies somewhere in between. 9/ Of course, the ability to deliver without interference from other producers would imply supply discipline over a significant share of the relevant market volume.

The existence of some degree of market power by both the producers and processors provides the basis for collusive (joint) action to alter the terms of trade between the processor and the consumer (retailer). This action could be exploitive. However, if such action were to provide a more desirable flow of high quality products to consumers at still reasonable prices or a broader range of desirable products through innovations in product form, then the action could be desirable from the social view.

9/ In a simulated bargaining situation with complete information, there is a tendency toward a fifty-fifty split in joint profits. (10, p. 79)

Manipulation of variables that would improve the joint returns to processors and producers and also improve the satisfaction of consumers are difficult to envision where price is the primary motivation. But in an affluent society where price is not the primary factor in consumer decisions, the opportunity for effective bargaining is probably greater than most appreciate. Practically speaking, this means that in order to increase the demand for the product there must exist the opportunity for new product development, for product diversification or differentiation, or for promotion. The greater the opportunity for such demand increasing activities, the greater the opportunity for effective bargaining.

4) Inelastic Demand for the Industry's Product

The opportunity to influence price is greatest when the demand for the industry's product is highly inelastic. Conversely, the opportunity is small when the demand is highly elastic.

An inelastic demand may be favorable for a group that wishes to exercise market power. However, it is not necessarily favorable for farmers attempting to bargain voluntarily. In the first place, a highly inelastic demand may provide the basis for wide and rapid price movements over time, especially if the supply response is relatively more elastic than the demand.

If the processor sector is competitive, with easy entry, the processor margin will almost always equal the cost of providing the marketing services. There is no potential gain from opponent-pain bargaining. Rather the greatest potential gain is from getting and exercising market power, this means control over production or discipline over the volume marketed.

If, however, the processing sector is strongly oligopolistic, it is possible that greater gains can be achieved through negotiation when demand is highly inelastic than when demand is elastic. This follows because relatively small alterations in quantity or other terms of trade could result in relative large increases in joint profit. The allocation of this increase becomes a negotiable item. But here again, the producer group must have some degree of control over available supply (be oligopolistic also) to be able to maneuver into a bargaining position.

5) Degree of Control Over Raw Product Supplies (Short-Run Supply Response)

It was earlier stated that the greater the degree of control over available market supplies the stronger the position to bargain effectively. This implies one or at least a small number of producer groups with disciplinary control over the available supply. This means the ability to regulate flows to a buyer or a group of buyers, alter the form of the raw product, or allocate volume among buyers in some way. Control need not be complete but it needs to be adequate to cause the processors (buyers) to negotiate.

An egg marketing cooperative in Southern California had disciplinary control over about 60 percent of the market supply in the southern part of California and Arizona during the year 1966-1967. Although they did not have complete control over all eggs produced, they were able to influence the terms of trade in the short-run through bargaining. They did this by entering into an agreement with dealers whereby the dealers agreed to pay a price to member producers as specified by the marketing cooperative. To enforce this price, the marketing cooperative agreed to divert all volume of their members that would not move in local channels at the agreed-upon price, into non-competitive markets, i.e., non-competitive with the local market or local contract dealers. They thus disciplined the supplies available in the local market and reduced competition among dealers. They became the price leader and provided a price umbrella for all non-members. Their contract buyers were better off because competition was reduced at the handler-retailer level. In effect, they made a trade-off. They carried the burden of coordinating local movements (quantity) in turn for a higher, more stable price. Although they made significant short-run gains, production response to the higher prices and problems of distributing the benefits and costs among members resulted in a rather rapid erosion of their power position. The proper demand condition existed, short-run control over supplies existed but entry and expansion in subsequent years was not under control.

6) Degree of Control Over Production (Long-Run Supply Response)

This brings out the problem of long-run response to improved prices. Where entry into production is quite costly, where the time lag between initial investment and production is long, effective bargaining may have a relatively long life and the benefits occurring therefrom may persist. Helmberger (8, p. 181) noted that where net returns to producer members of bargaining cooperatives were in fact enhanced, production expanded in subsequent production periods. Because the program was voluntary, the association members then had to carry the burden of the surplus and ultimately their ability to influence terms of trade through negotiation diminished.

Thus, we conclude that an economic requirement for effective bargaining in agriculture over any extended period of time is a relatively inelastic supply response to price and/or effective control over production expansion or entry into production.

7) Number of Buyers and the Complexity of the Marketing System

On the basis of economic theory we recognize that the ability to exercise "market power" to influence the terms of sale is greater when the number of sellers is smaller than the number of buyers. However, the ability to "bargain" is probably greatest when a relatively small number of producer groups or a single producer group face a relatively small number of processors, or buyers. Their ability to bargain for a greater share of the excess profit (opponent-pain bargaining) is probably the greatest when one of the individual buyers is extremely dependent upon the volume controlled by the producer group. If the producer group has partial control of the total market supplies, relatively small buyers will bid for the non-controlled supplies and probably will be able to get along without the supplies of the producer bargaining group. However, if one or more of the buyers is so large that he cannot get adequate supplies from the nonmembers of the association, then the producer group will be in a strong bargaining position. The ability to exercise opponent-gain strategy is the greatest also when both the number of producer groups and the number of buyers is small.

8) Product Differentiation and Market Segmentation - A Dynamic Dimension

The greater the degree of segmentation possible or the greater the degree of product differentiation possible in a market place, the greater the potential ability of a strong producer group to influence the terms of trade. If it is possible to segment the market for the product geographically or in terms of groups of buyers either by type, technology, productive process, type of distribution or type of product, the basis exists for effective bargaining. The Welch Grape Juice Case is an example where the product was substantially differentiated. The National Grape Cooperative Association purchased the National Grape Company and then through supply discipline retained the profits generated through the ownership of a preferred brand.

9) Mandatory Control Over Price or Non-Price Terms of Trade

The authority to enforce mandatory compliance across all industry participants with respect to specific price levels or specific terms of trade may provide the basis for more effective bargaining in agriculture. Once accountability is established for specified terms of trade such as price, weights and measures, quality specifications, etc., the opportunity exists to negotiate over the remaining terms of trade. The extent to which this has provided the basis for bargaining in the dairy industry is impressive. Since Stewart Johnson will probably discuss this in more detail in the next presentation, I will not expand on that topic here.

10) <u>The Restraint of the Anti-Trust Laws</u>

The ability of agricultural groups to bargain effectively is not only influenced by the economic conditions of production, processing, distribution, and consumption, but it is also influenced by social restraints. Ronald Knutson (<u>11</u>, p. 340) after an analysis of several recent decisions of the Supreme Court concluded that as "bargaining and consolidation of cooperatives by merger and federation become more prevalent, the extent of exclusion from anti-trust prosecution which is provided by the Capper-Volstead Act will become an increasingly important issue." Thus, social conscience does realistically limit the ability of organized producer groups from colluding with non-producer interests and from extensive exploitation of consumers through a monopoly position.

However, enabling legislation does already exist which permits the use of the police powers of the state to exercise mandatory control over certain terms of trade. Through legal means the anti-trust laws are in effect circumvented. Currently only a few of the agricultural commodity groups have a large enough share of the market or the power to get the anti-trust division concerned. But the market order enabling legislation provides only the basis for market power. It does not in itself provide the basis for bargaining power.

<u>Summary and Conclusions</u>

"Effective bargaining" in agriculture can be defined as the ability to alter or improve the terms of trade of an agricultural producer group. Bargaining is a bilateral act designed to either enhance prices, increase net revenue or gain a larger share of the joint profit for one of the parties involved. The economic requirements for effective bargaining cannot be listed in any absolute sense. But certain economic conditions must exist before bargaining can be meaningful. Conceptually, the more intense or complete the conditions, the greater the ability to influence terms of trade.

If the industry is not in adjustment, i.e., if better coordination, more efficient assembly, processing, or distribution is possible, effective bargaining could result in joint action which would improve joint profits. Other forms of opponent-gain bargaining could involve actions to increase the demand for the products involved.

If, however, this sector of the industry is already in adjustment, effective bargaining can only involve the redistribution of profits.

In summary effective bargaining or the ability to influence depends on the degree of control over supplies (quantity) or over a market, on the degree of imperfection in the market prior to bargaining, the potential to alter or increase demand for the product, the elasticity of demand for the industry's product, and the extent to which it is possible to get and enforce mandatory compliance on certain terms of trade.

Some degree of imperfection must exist. Either the processors or the producers must have some degree of market power before there is even a potential for effective bargaining.

An inelastic demand is not a necessary condition for bargaining but it makes the potential gain from bargaining greater if coupled with the exercise of market power. One of the rather obvious requirements is that the bargaining group have significant control over the supplies that go to a particular market (form, time, space). This does not have to be complete control over the entire quantity, but the greater the control, the greater the ability to exercise market power and thus to bargain.

In addition, the bargaining parties need practically complete information concerning alternatives and their consequences, and high aspirations. These high aspirations though must be consistent with the potential for gains through opponent-gain bargaining and consistent with the economic restraints placed on the redistribution of profits, i.e., opponent-pain bargaining.

Bargaining, of course, is a dynamic activity that takes place in a dynamic environment. The demand for products shifts over time. Technology in processing, distribution, and production continually changes. The nature of competition continually changes. The potential for bargaining is thus continually changing. And the importance of the various economic requirements for effective bargaining is also continually changing.

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