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AN OVERALL ASSESSMENT OF COOPERATIVE MARKET POWER

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INTRODUCTION

An assessment of the sources, limits, and extent of cooperative market power begins with a basic understanding of the organizational nature of cooperatives, knowledge of how they compare functionally with other businesses, and an awareness of trends in cooperative development. An important dimension is their position and role in the general industrial organization of the economy, and specifically their role in the economic organization of the agricultural sector.

As an economic entity, cooperatives were formed as an off-farm extension of the farm firm to provide services to members on a more economically advantageous basis than they could obtain by acting individually. Stated another way, cooperatives were organized because of the structural gap between the farm production sector and remaining sectors comprising our agricultural industry. Farm production is characteristically atomistic in nature (many firms but relatively small in size), compared with other agri-industry sectors (few firms but relatively large in size). Without ability to organize, farmers are powerless to deal with firms that are increasingly characterized by few numbers, larger market shares, more diversification and product lines, and greater vertical integration of operations.

A frequently asked question is whether organized farmers have achieved market power exceeding or even comparable to corporations in the food industry. Analysis of structural changes in the food manufacturing industry currently being conducted by NC #117 will be an important dimension of assessing how cooperatives fit and are adapting to changes in organization of this industry.

The changing market structure of agriculture, a prime motivator in early organizing efforts associated with emergence of commercial agriculture, remains the underlying rationale for cooperative efforts by farm operators. Farmers also organized because services were not available in their rural communities, or because those services were not available at reasonable costs. A broader social purpose was embraced in early organizing efforts – popularly called the cooperative movement – to improve one's individual position, community, and competitiveness of the capitalistic economic order through self-help organizational activity based on democratic principles. Each of these ingredients is very much a part of the fabric of cooperative organizations today and can be expected to continue in the future.

THE NATURE OF THE COOPERATIVE ASSOCIATION

The essential focal point is that the cooperative begins with the member, exists for the member, and is an off-farm extension of the member's business activity in acquiring inputs and services and marketing his products forward in the market place. This common orientation of group activity designed to benefit members economically and socially typically extends to several geographic and vertical levels of business activity. These are often described in international jargon as primary, secondary and tertiary levels but for our purposes identified as local, regional, interregional (national) and international.

Even within these spatial levels of activity, cooperatives differ greatly in their degree of organizational development. Considered in a vertical context, we have bargaining, local handling, processing or manufacturing, wholesaling by private label or branded products in domestic and export trade, and retailing. A great deal of cooperative activity in this country is still limited to bargaining and local buy-sell handling activity. In this respect, cooperatives are relatively underdeveloped in the United States compared with counterparts in other countries. A few cooperative federations and centralized cooperatives have begun to achieve in recent years performance results long expected of them. In most cases this has come about through achievement of economies of size and from further marketing activity that has altered product form through primary and further processing. About one hundred cooperatives actually market some of their members' produce under their own brand names.

Time utility of group action by farmers has been evidenced by capacity to convert raw products to an alternative product; i.e. from its often perishable nature to a more storable form. In some instances, farmers have used their cooperatives to perform storage functions of raw and finished products to assure market stability and to await sales on a more advantageous basis.

Above and beyond the purely "member benefit" orientation of cooperatives as an economic tool for members, a prevailing school of thought derived from E. G. Nourse also suggests that cooperative activity yields a "societal benefit."[1] Known as the "competitive yardstick" school, this widely accepted view holds that cooperatives are a yardstick by which members can measure the performance of the capitalistic system and the firms that comprise it, particularly at points where they feel exploited. More broadly, cooperatives are viewed as serving to restrain the capitalistic system and to modify potential excesses. In this manner, the existence of cooperatives in an industry or subsector corrects the evils of capitalism and performs a balance wheel or check point function that improves the competitive performance of the industry and the economic system itself. The pro-competitive external benefits of cooperatives accruing to the market place and society at large are therefore as important as the internal market correcting benefits to members.[2]

A corollary of the competitive impact of cooperatives is the way that they permit individually owned farm firms to survive and remain viable entities in an economy that is increasingly characterized by vertical integration and competition among the few. Perhaps no alternative form of business organization achieves such a broad base of local ownership and use nor such an effective exercise of democratic capitalism.

Increasingly, farm operators also find that they can access markets and assure their place in the economic organization of agriculture only through more effective use of cooperatives. According to some farm leaders, it is akin to the adapt or die situation. Farm operators either make extensive use of cooperatives thereby maintaining an independently owned and operated farm production plant, or succumb to the pressures of corporate agriculture and contractual arrangements that erode their participation in decision making and their status as farm entrepreneurs. Viewed in this perspective, cooperatives are *the* entree for farmers to maintain their independence through group action—i.e. individual freedom and the economic organization of agriculture.[3]

COOPERATIVE - CORPORATION COMPARISONS

Any analysis of cooperatives must be based on understanding of generally accepted – and fundamental – differences between a cooperative and a profit-seeking corporation. Such differences are found in motivation; performance criteria; financial base and capital access; owner involvement; responsiveness to changing needs or opportunities; and selectivity of activities.

Motivation

In a cooperative ownership, control and patronage are vested in the same people. The objective of the cooperative is to provide members with services at cost; provide a competitive environment; and to fill gaps in market structure vacated by corporations that seek higher returns from other activities.

The corporation has ownership by stockholders controlled by majority stockholders; and patronage by people other than owners. The emphasis in a corporation is to earn profits for stockholders.

Performance or Measures of Success

A cooperative's success is measured by the extent members' economic interests are best served.

A corporation's success is measured by the profits and concurrent economic benefit to stockholders.

Financial Base and Capital Access

In a cooperative, equity capital is supplied essentially by those who use its services—ideally proportional to use of services. Service at cost operations serves to limit equity capital access primarily to those who use the services of the organization. Cooperatives' borrowed capital is obtained from sources generally available to all business organizations plus the banks for cooperatives. Cooperatives derive little advantage from investment credit provisions of federal tax laws.

In a corporation, equity capital is supplied by investors interested in return on investment – either in the form of dividends, or in the form of gain from trading equities. Borrowed capital is typically obtained from generally known sources such as banks, insurance companies, etc. Investment credit can be useful, and even a significant advantage to the corporation.

Owner Involvement

In a cooperative, the owner patrons – essentially the same members – are closely involved in the organization's affairs. But hired management is separate in a cooperative and operates the day-to-day business activities. Therefore, policy and implementation are separate in the cooperative organization.

By contrast, corporation owners are generally different people than customers. Voting control is generally held by a relatively small group of people who tend to be both managers and directors. Policy making and implementation are therefore carried out by the same people.

Responsiveness to Changing Needs or Opportunities

A cooperative's operation is guided and controlled by the needs of members. Legal constraints on the extent of activities outside of member business prevail.

A corporation can shift easier from one activity to another where returns on investment are greater.

Selectivity in Activities

Cooperative business activities are user-related in marketing, purchasing and related services. Cooperatives typically assume service obligations that many profit-seeking firms would not bother with.

A corporation by comparison can engage in all activities domestic or foreign, where more attractive returns are available. They are not limited to member-user related activities.

These comparisons between the cooperative and profit-seeking corporation identify a simple underlying concept: namely that of farmers joining to collectively purchase their production inputs and market their products — to do for themselves at considerable capital cost and risk — economic activity on a nonprofit or cost basis. The story starts with the individual farmers. The cooperative serves them.

COOPERATIVE MARKET POWER

Many people have talked about the need for cooperative market power, but I can't recall any who spent much time explaining exactly what they meant by "market power." The title represents an excellent opportunity to do that; in fact I think it is necessary first to characterize market power before further discussing sources and limitations of it. I think the present concept of market power can be summed up by the boy's question to the zoo keeper: "Say mister, where does that 800 lb. Gorilla sleep?" "Boy, he sleeps anywhere he darn well pleases."

The shortcomings of this story are several:

(1) We aren't told anything about how the gorilla got so big;

(2) We don't know whether he gets his way because of his size, or how he acts, or how he may be able to act; and

(3) Why is it that most gorilla's we have seen are caged?

So, if a cooperative has market power, what does it have? Five characteristics are the:

- ability to influence, if not control, factor costs of production — both in the cooperative's operation and those of its members;
- ability to match or exceed the capability of other firms in fulfilling the requirements of the market;

- size and depth of operations to cause other firms to consider the cooperative's reaction before making major business decisions;
- ability to return greater benefits to members than any other firm;
- reputation for management and product integrity.

A definition of market power is the ability — through managerial expertise and pressure — to obtain and maintain control over one or several factors influencing prices and income including the willful restriction of supply in proportion to demand to maintain or enlarge the value of business assets.[4]

And this definition further enlightens us about the correlation between market power and the gorilla. Most gorillas we've seen are caged because of how gorillas use their strength, *or our fear of how they might use their strength.* The point is clear. Cooperatives, or other businesses, must be aware of the risk associated with having market power—how it is used, or how people fear it might be used. The risk is that firms having market power also can find themselves "caged" by government regulation.

AN ASSESSMENT OF COOPERATIVE MARKET POWER

It is generally recognized that cooperatives have certain structural weaknesses that inhibit them from becoming a major source of marketing power. Any achievement of marketing power has therefore been limited and modest. Cooperatives' greatest contribution has therefore been in achieving economies of size in member related business that have led to greater returns through improved coordination and operating efficiencies.

Market structure analysts suggest that the conduct and performance of the firm in any market can be explained by the structural attributes of the market. In this situation, the structural factors control the behavior of the firms. Such criteria as firm behavior under alternative degrees of market concentration, and the extent to which vertically integrated and/or conglomerate firms dominate the market become crucial. Farmers individually, as previously noted, are powerless and generally recognized as price takers. Only through organized activity do they find a degree of market influence. Farmers' influence is accomplished by expanding their own alternatives as sellers (or buyers of supplies) or as a result of limiting the alternatives of those buying from them (or selling them supplies).

The role of cooperatives in efforts to improve farm income was a major interest of a few economists in the 1950's and 1960's. More recently, it has attracted interest, primarily in an adversary context, from economists associated with the regulatory agencies such as the Department of Justice and the Federal Trade Commission as a direct result of shortage-induced higher food price levels from 1972-75. Among the earlier investigators, Clodius suggested that farmers could attempt to rectify their situation by exerting three types of market power: bilateral competition, interfirm competition and bargaining in the political economy. He focused attention on opportunities for cooperatives by suggesting that "the role cooperatives play in maintaining workable competition and the bargaining power of farmers depend on cooperatives of adequate power being present." In this respect the ability of cooperatives to grow externally through merger was regarded as a determining factor in cooperative survival.

> Survival in the coming world of monopolies will not be easy, but the evidence already suggests what is necessary for survival. If cooperatives are going to be around to serve farmers in the future, they must fight to enhance their market power by every economic, organizational, and legislative device available.[5]

In a similar argument for cooperative growth, Mueller suggested that one of the advantages of vertical growth is to permit a firm to enter an industry having a high degree of horizontal integration.[6] By so doing cooperatives could share in the profits of such industries. At the same time, however, he stressed that market power "depends on a high degree of horizontal concentration or product differentiation in some level of distribution or production."[7]

In yet another paper, Mueller argued that insights to "the future scope and opportunities of cooperatives require viewing them within their broad industrial context."[8] One major role cooperatives can play in this context is serving as devices for achieving economies of large scale operations in the handling of farm products. At the same time, Mueller recognizes that cooperatives also have a role in achieving market power. He further postulates, however, that cooperatives acting alone cannot achieve market power.

> Vertical integration per se does not give farmers market power at the farm level. Market power is made of different stuff; it requires control over supply. Therefore, farmers often may feel that their cooperatives have failed them because they have been powerless to solve the "farm problem" of overproduction generated by forces beyond the control of cooperatives. This failure is not a question of inadequate cooperative financing or management. Rather, it is a problem which cooperatives, acting alone, have not and will not solve because they are not adequate instruments for doing so.[9]

This observation begs the question about the role of other farm organization types in achieving bargaining power, and whether a "cooperative systems approach" is required to maximize producer influence in the market place.[10]

Each of these observations draw upon observations of Galbraith who identified in cooperatives fatal structural deficiencies in an economic sense for the exercise of market power.[11] Among the weaknesses pointed out are that: (1) cooperatives are a loose association of individuals; (2) they rarely include all the producers of a product; (3) they cannot control the production of members, and (4) they have less than absolute control over the decision to sell.

> "All of these powers over its own production are possessed, as a matter of course, by the corporation. A strong bargaining position requires an ability to wait — to hold some or all of the product. The cooperative cannot make the nonmembers wait; they are at liberty to sell when they please and, unlike the members, they have the advantage of selling all they please. In practice, the cooperative cannot fully control even its own members. They are under the constant temptation to break away and sell their full production. This they do, in effect, at the expense of those who stand by the cooperative. These weaknesses destroyed the Sapiro cooperatives."[12]

In addition to these cogent observations by Galbraith, Ivan Emelianoff in his classic work on the Economic Theory of Cooperation,[13] noted that cooperatives are saturated with a tendency for disassociation through internal disruptive forces.

These observations are supported to some extent in a theoretical and empirical study by Helmberger and Youde.[14] According to their analysis, only about four percent of the cooperatives in the United States restrict their membership because of market power in the final product market.

> Relative to other types of associations, the cooperatives that restrict membership because of market power tend to (1) have a higher market share, (2) advertise more, (3) be protected from new competition by barriers to entry, and (4) rely more heavily on markets for consumer goods . . . Federated cooperatives did not restrict their memberships, regardless of the amount of market power they possessed.[15]

Some cooperatives were observed to have achieved a degree of market power based upon traditional market structure variables of seller concentration, barriers to entry, and extent of product differentiation. These included both centralized and federated organizations. In addition, some evidence was noted that economies of scale were an important factor leading to high levels of concentration in procurement.

A brief summarization of the analyses in the foregoing articles is that a high degree of horizontal integration, product differentiation and restricted entry is required for cooperatives to achieve market power. Cooperatives are deprived of the opportunity to behave as monopolists in the traditional economic sense because membership is voluntary and they do not control production over the long run. Furthermore, cooperatives are limited by virtue of their member related business constraints, which can put them at a structural disadvantage when competing with conglomerate firms that subsidize losses in one area of their economic network from profits in another non-related business line. This power of conglomerate enterprise to restructure industries is not as a matter of fact possessed by farmer cooperatives due to differing member-owner interests. These writers also observe that cooperatives continue to be differentiated in their market power potential from other business forms. Internal structural weaknesses continue to limit the success that cooperatives seek in the market place as well as constrain the ultimate exercise of excessive market power to the detriment of the public good. These writers have therefore called for more vertical integration by cooperatives into industries that are horizontally concentrated and for broader organization by farmers through their cooperatives in an effort to achieve a modicum of marketing power. Examples are found in the entry of Land O' Lakes into the cheese market dominated by Kraft, Inc. and the broader organization of other dairy farmers through regional organizations that sell bulk milk to handlers.

More recent analysis by regulatory agencies has focused on the jurisdiction these agencies possess over cooperatives vis-a-vis that held by the Secretary of Agriculture. Beyond this jurisdictional dispute, these agencies have analyzed cooperative conduct with particular emphasis upon membership agreements, procurement activities, pooling strategies, sales arrangements, pricing activity, and growth through merger and acquisition. Many of us feel this attention has been misdirected away from the real sources of market power in the food industry. As pointed out by Garoyan and Harris, antitrust activity is focused on the intermediate and smaller firms that have limited resources to fight litigation by the huge regulatory agencies, in other words efforts are concentrated on the "easy" targets.[16] Also more attention appears to be directed by the regulatory agencies at protecting the rights of the non-joiner — where economic power resides — than upon assuring a more balanced representation of power among participants in the marketing channel. It is significant, nevertheless, that Justice Department economists concede that cooperatives require opportunities for achieving higher market shares than profit-seeking firms because of the conglomerate structure possessed by other firms.

Evidence of whether cooperatives possess excessive market power can be found by a cursory examination of two basic areas. The first is the earnings of farmers who are members of cooperatives. If excess of market power is wielded by cooperatives, members of these organizations would be expected to be receiving abnormal profits as a pass through due to the non-profit nature of cooperative operations. Recent studies by the Economic Research Service concerning cost of farm production, however, indicate that farmers on a multicommodity basis are generally earning less than full cost of production in their farm enterprises. This would lead one to a rather quick dismissal of charges that farm operators have been profiteering at the expense of the public interest. To the contrary, the evidence suggests that farmers have not as yet attained a level of earning power that is required by them to achieve full remuneration to resources employed in their farm firms. On the other hand if indeed abnormal profits were enjoyed by members of certain organizations, the chances are great that from 40 to 80 percent of such profits would be in the form of reinvestments in the capital structure of their cooperatives.

The second area that can be reviewed is the extent of cooperatives aggregate growth in market shares in various subsectors. As shown in Table 1 cooperatives have achieved a rather stable growth pattern over the years since 1950. It has not been an "uncontrolled growth" as has been suggested in a recent Business Week article.[17] Cooperatives since 1950 have grown from an aggregate share of commodities marketed at the first handler level of roughly 20% to 30% in 1974-75. In the farm supply arena, cooperatives have grown from about 12% of farm supplies purchased by farmers to 18% in 1974-1975. These aggregate figures indicate that the cooperative market share continues to remain a relatively small percentage of total marketings and acquisitions by farmers at the first handler level. When commodity areas are explored for the same time period we find that there has been growth in the dairy products sector from 53% in 1950 to 75% in 1974-75, in grain from 29% to 40%, and cotton products from 12% to 26%. There has been negative growth in market share, however, in livestock and livestock products. Cooperatives in this subsector occupied a 16% market share in the 1950's but it declined to 10% by 1974-75. Furthermore, cooperative marketings of poultry products and fruits and vegetables have been relatively stable through this period with little or no growth.

Table 1—Farm level share of the market handled by farmer cooperatives, major selected years

Functional group and commodity	Cooperative Share of Market									
	1950-51		1960-61		1964-65		1969-70		1974-75	
	No.	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*	*No.*	*Pct.*
	Number of cooperatives handling and percent of cash farm receipts									
Product marketed										
Cotton & cotton products	550	12	561	22	581	25	554	26	494	26
Dairy products	2,072	53	1,609	61	1,346	65	971	73	631	75
Fruits & vegetables	951	20	697	21	592	25	499	27	436	25
Grain & soybeans	2,740	29	2,661	38	2,596	40	2,539	32	2,540	40
Livestock & livestock products	753	16	532	14	479	13	546	11	572	10
Poultry products	760	7	567	10	410	9	295	9	167	9
Other	405	15	284	22	224	25	189	27	164	35
Total	7,276	20	6,548	23	6,009	25	5,415	26	4,817	30
	Number of cooperatives handling and percent of farm supply expenditures									
Farm supplies purchased										
Feed	4,406	19	4,412	18	4,363	18	4,214	17	3,744	18
Seed	3,636	17	3,912	19	3,962	21	4,007	16	3,553	16
Fertilizer & lime	3,352	15	4,276	24	4,409	30	4,294	28	3,865	30
Petroleum	2,677	19	2,798	24	2,773	26	2,774	29	2,624	35
Farm chemicals	na	11	3,014	18	3,329	16	3,721	18	3,328	29
Other supplies & equipment	5,937	5	4,558	7	4,858	7	4,856	7	4,224	10
Total	7,409	12	7,016	15	6,763	15	6,209	15	5,554	18

When individual farm supply items are analyzed, we find the greatest growth in cooperative market share has occurred in farm chemicals, petroleum products and fertilizers. The farm chemical market share increased from 11% in 1950 to about 29% in 1974-1975, petroleum from 19% to 35%, and fertilizer and lime from 15% to about 30%. A relatively stable market share position has been experienced in feed in the neighborhood of 17 to 18% over the same time period.

When market shares handled by cooperatives in the United States are compared with market shares handled by cooperatives in other countries, Table 2 shows that many countries exceed United States levels. Cooperatives in fact are the dominant form of business organization, compared with the secondary role they play in this country.

Table 2. Comparison of Estimated Market Shares Held by Cooperatives in the Aggregate, by Selected Commodities and Countries, 1975.

	Canada	Denmark	France	Japan	Sweden	W. Germany
Dairy	34%	[a] 86%	48%	NA	98%	5%
Livestock	10%	[b] 70%	[d] 20%	72%	85%	[h] 15%
Grain	58%	[c] NA	17%	44%	75%	[i] 50%
Fruits	4%	20%	[e] 40%	38%	NA	35%
Vegetables	4%		[e] 30%	15%	NA	26%
Poultry	4%	50%	NA	NA	[g] 50%	[j] 15%
Feed	33%	[c] NA	30%	30%	50%	NA
Fertilizer	40%	45%	NA	34%	80%	NA
Petroleum	NA	NA	NA	NA	NA	NA

NA = Not Available.

[a] Includes 90% market share for milk, 68% share for butter, and 35% share for cheese.

[b] Includes 90% market share for hogs and 40% share for cattle.

[c] Combined market share for grain and feed equals 43%.

[d] Includes 11% share of live animal market (including poultry), 35% share of slaughter market, 16% share of frozen market, and 0.5% of canning market.

[e] Includes 60% market share for fresh fruits and vegetables; 15% share of fruit canning and 24% share of vegetable canning market; and 5% of both fruit and vegetable juice markets.

[f] Refers to share of raw milk market; only 40% of the processing market is controlled by cooperatives.

[g] Includes 75% of the egg market and 30% of the poultry meat market.

[h] Includes 10% share of the live cattle market and 15% share of the swine market.

[i] Includes 50% market share for wheat, 52% share for barley, and 47% share for rye and other grains.

[j] Includes 24% market share for poultry meat and 9% share for eggs.

The most revealing statistics regarding cooperative size and ability to enhance market power are found by comparing the largest four cooperatives with the largest four profit-seeking firms in individual commodity subsectors shown in Table 3. In all the areas, it can be demonstrated that cooperatives handle a substantially smaller amount of product sales or inputs in these particular areas and that as a percent of total sales cooperatives are quite small compared with these other types of businesses. As an example, the most frequently mentioned source

of cooperative market power, based on litigation by the Justice Department, is found in the dairy product area. Comparison of the largest four cooperatives and the four largest noncooperative firms for the years 1960, 1965, 1970, 1975 indicate that cooperatives' sales as a percentage of dairy sales of noncooperative firms have increased significantly in the dairy area but are still only 54% of those of the noncooperative firms. Total cooperative sales, however, remain at a relatively low level of only about 25% of sales of the noncooperative firms. Furthermore, the cooperative presence as a percentage of total assets and total net worth is at a much lower level.

Table 3. Selected comparisons of four cooperative and four proprietary firms reporting largest sales of dairy products in fiscal 1960, 1965, 1970 and 1975

Item and year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Total sales			
1960	584	3,484	16.8
1965	750	4,624	16.2
1970	2,049	7,208	28.4
1975	3,771	14,991	25.2
Dairy product sales			
1960	526 [a]	2,613 [a]	20.1
1965	675 [a]	2,890 [a]	23.4
1970	1,844 [a]	3,604 [a]	51.2
1975	3,173	5,829	54.4
Total assets			
1960	126	1,361	9.3
1965	150	2,056	7.3
1970	493	3,391	14.5
1975	723	6,044	12.0
Net worth			
1960	71	904	7.8
1965	83	1,375	6.0
1970	214	2,017	10.6
1975	286	3,247	8.9

[a] Based on estimates that "dairy product sales" were 90 percent of the four large dairy cooperatives' total sales in 1960, 1965 and 1970; and that "dairy product sales" were 75 percent of the four large proprietary firms' total sales in 1960, 62.5 percent in 1965, and 50 percent in 1970.

In the grain subsector, the largest four cooperatives occupy only about 24% of the sales of the largest four noncooperative firms, 28% of total assets and 38% of net worth. Similarly in fruits and vegetables cooperatives represent 40% of fruit and vegetable sales of the largest four noncooperative firms, 24% of total assets and only 17% of net worth. The largest four cooperatives engaged in poultry had 50% of the four largest noncooperative firms' poultry sales but only

37% in 1975 of their total sales. Finally in livestock and meat, cooperatives' sales in 1973 were only 3% of those transacted by the largest four other firms. Likewise, cooperatives possessed only 15% of their total sales, 18% of total assets, and 21% of net worth.

Sales of the largest four cooperatives can also be compared with their noncooperative counterparts in farm supplies. In this area, we find that the largest four cooperatives in 1975 had only 33% of the feed sales of the largest four noncooperative firms, 65% of the fertilizer sales and only 1.4% of the petroleum sales of the four leading noncooperative firms in each of these subsectors.

The Emerging Scenario Concerning Cooperative Growth

As we look to the future we can anticipate some growth in cooperative's market share of farm supplies, particularly through an increase in petroleum sales as major oil companies exit from rural America. Furthermore, cooperatives can be expected to pick up more fertilizer and farm chemical business specific to members' needs. In marketing, it is anticipated that growth by cooperatives will be slower, primarily dictated by cooperatives' limited involvement in primary and further processing of food items and the tremendous entry problems that are encountered in national food distribution. Nevertheless, growth has taken place and will continue to take place in such areas as sugar and fruit and vegetable processing due to the vacuum created by the exit of profit-seeking firms from these industries. Farmers will be motivated to enter processing on a cooperative basis primarily as a means of preserving markets. This growth will be gradual and limited only by farmers' willingness and ability to finance such undertakings.

Future cooperative growth also can be expected to occur horizontally including export trade. Cooperatives will continue to grow horizontally by acquisition or merger to achieve economies of size in their operations, greater market orientation, assure sources of supplies, and coordination of supplies and marketing. In some instances, cooperatives may attempt to grow horizontally simply to achieve a greater degree of marketing power. This of course raises the hackles of antitrust people. However, at the present stage of cooperative development, I do not anticipate many problems for further cooperative growth horizontally in the grain or livestock industries through either mergers or further interregional alignments. The milk industry will continue to be somewhat sensitive but nevertheless will experience further restructuring in certain areas such as the Northeast, West Coast, Midwest and ultimately nationally. Further developments in farm supply activity by cooperatives will be mainly in response to needs of farmers for a dependable input-source. Supply cooperatives likely have some advantage because of their closeness to farmers and ability to anticipate and perceive changing needs.

One of the greatest opportunities for cooperatives growth is found in export markets. In one sense, engaging in the export business can be viewed simplistically — a foreign buyer is just like a domestic buyer except there is an artificial boundary line or a geographical span that lies between the cooperative marketer and the foreign buyer. But such distance raises many questions about shipping, chartering, aggregating volumes and varieties. Further involvement in foreign trade also raises

questions about cooperatives' ability to cope with credit markets, terms of trade, exchange rates, and language barriers and market intelligence systems. Generally, we can observe that cooperatives can buy the expertise they need, although financing facility expansion for entry in trading in multiple commodities presents a major challenge. The major question will be whether growers will offer commitment of products and financing through their cooperatives on a commodity by commodity basis. Grain cooperatives are making major headway in developing a system for export trade. Other specialty crops such as citrus fruit and raisins have developed such a system over a period of years. We can anticipate that cooperatives will continue to give major attention to this potential growth area. In short, future cooperative growth vertically and horizontally will be motivated primarily by efficiencies that accompany size and keep farmers competitive with noncooperative firms. Growth will be encouraged also by farmers' desires to preserve market access as profit-seeking firms leave certain subsectors; and to achieve cost of production for their farm produced products and full remuneration for value added through processing. A major challenge in such growth will be to make further strides in the national food trade with differentiated products that have a quality reputation.

Summary

The ability of cooperatives to achieve marketing power is limited and modest. They can utilize certain attributes that lead to marketing power such as horizontal and vertical growth in size and scope of activities, differentiate products, and seek to erect barriers to entry. But because they are voluntary organizations that do not control individual members' production decisions, cooperatives face major obstacles to the long-run enhancement of prices beyond those dictated by market supply and demand conditions.

Cooperatives' presence as measured by market shares in marketing and farm supply subsectors suggest that they are still relatively small compared with profit-seeking firms. Growth has occurred in certain areas, largely through default of profit-seeking firms. Cooperatives can be expected to play their competition enhancing role that pushes the market closer to the competitive norm so long as their exercise of market power continues to be restrained by structural variables inherent in their organization. The singularly most important role of cooperatives will continue to be one of offering farm operators an organizational alternative that enables them to continue their entrepreneurial role as atomistic decision units.

The review and analysis developed in this paper suggests areas for further research on cooperative market power. Characteristics of market power listed on page 228 and the definition contained herein require demonstration through economic research. This will provide a basis for further refinement of these concepts as they apply to cooperatives. Furthermore, this refinement would help clarify the structural characteristics of cooperatives that limit their ability to gain and use market power. A second area requiring further research concerns the use of market shares to compare cooperatives with noncooperative firms. This is particularly true if comparisons are made between buyers and sellers. Value added analysis is also essential for horizontal comparisons. Similarly, research is needed on the commonly accepted relations between market share and market power so that modifications can be made that take into account the internal structure of cooperatives for valid comparisons. Finally, research must include evaluation of market power possessed by "free riders" or those who would stand outside a group under "sweetheart" or other non-cost sharing arrangements with buyers rather than bolstering the welfare of the majority of cooperators.

Table 4. Selected comparisons of four cooperative and four proprietary firms reporting largest grain sales for specified years

Financial comparison and year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Total sales			
1960	642	2,300 [a]	28
1970	960	4,725 [a]	20
1975	3,768	15,860 [b]	24
Total assets			
1960	134	530 [a]	25
1970	253	1,018 [a]	25
1975	681	2,440 [b]	28
Net worth			
1960	75	[c]	--
1970	106	300	35
1975	228	594 [b]	38

[a] Figures apply to only 3 firms—data on 4th firm not available

[b] Data are for 1974.

[c] Data not available.

Table 5. Total sales, sales of fruit and vegetables, total assets and net worth of the four cooperative and the four proprietary firms reporting largest sales of fruits and vegetables in specified years

Item and year	Four cooperatives	Four proprietary firms	Cooperatives as a percent of proprietary firms
	Million dollars		Percent
Total sales			
1960	368	977	37.7
1965	439	1,294	33.9
1970	561	1,851	30.3
1975	984	3,081	31.9
Fruit and Vegetables sales			
1960	368	879 [a]	41.9
1965	439	1,165 [a]	37.9
1970	561	1,634 [a]	34.3
1975	984	2,308	42.6
Total assets			
1960	143	650	22.0
1965	185	922	20.1
1970	260	1,429	18.2
1975	491	2,031	24.2
Net worth			
1960	61	407	15.0
1965	82	507	16.2
1970	94	607	15.5
1975	150	884	17.0

[a] In 1960, 1965 and 1970 the four proprietary firms broke their total sales down into only three or four major categories. Consequently, it was not possible to segregate fruit and vegetable sales from the sales of other products in any precise manner. The authors of the 1973 report, estimated that fruit and vegetable sales accounted for about 90 percent of total sales.

Table 6. Selected comparisons of four cooperatives and four proprietary firms reporting largest sales of poultry and poultry products in fiscal 1973 and 1975

Item and year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Total sales			
1973	1,717	5,210	32.9
1975	2,227	5,951	37.4
Poultry sales			
1973	351	524	67.0
1975	521	1,032	50.5
Net margins			
1973	34	141	24.1
1975	65	178	36.5
Total assets			
1973	536	1,415	37.9
1975	724	1,158	62.5
Net worth			
1973	218	644	33.8
1975	286	600	47.7

Table 7. Selected comparisons of four cooperatives and four other firms with largest sales of livestock and meat sales in 1960, 1965, 1970 and 1973

Item and year	Four cooperatives	Four other firms	Cooperatives as a percentage of other firms
	Million dollars		Percent
Livestock and meat sales			
1960	13	2,608	0.5
1965	16	2,975	0.5
1970	212	3,592	5.9
1973	308	9,332	3.3
Total sales			
1973	2,052	12,949	15.8
Total assets			
1973	698	3,863	18.1
Net worth			
1973	281	1,346	20.9

Table 8. Selected comparisons of four cooperative and four proprietary firms with the greatest feed sales in fiscal 1960, 1965, 1970, and 1975

Year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Feed sales			
1960	226	N.A.	---
1965	273	N.A.	---
1970	367	N.A.	---
1975	679	2,021	33.6
Total sales			
1960	374	1,310	28.6
1965	724	2,110	34.3
1970	1,164	3,646	31.9
1975	4,810	8,402	57.2
Net margins (before income taxes			
1960	16	36	44.4
1965	37	117	31.6
1970	46	263	17.4
1975	300	460	65.2
Total assets			
1960	234	724	32.3
1965	535	1,011	52.9
1970	885	1,532	57.7
1975	2,080	3,443	60.4
Net worth			
1960	175	362	48.3
1965	163	518	31.5
1970	360	839	42.9
1975	697	1,848	37.7

Table 9. Selected comparisons of four cooperative and four proprietary firms with greatest fertilizer sales in fiscal 1960, 1965, 1970 & 1975

Year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Fertilizer sales			
1960	113	N.A.	--
1965	214	N.A.	--
1970	324	802	40.4
1975	1,355	2,084	65.0
Total sales			
1960	471	3,855	12.2
1965	769	6,081	12.6
1970	1,269	10,019	12.7
1975	2,621	17,943	14.6
Net margins (before income taxes)			
1960	16	58	27.6
1965	41	195	21.0
1970	40	541	7.4
1975	422	1,552	27.2
Total assets			
1960	333	1,796	18.6
1965	426	2,758	15.4
1970	832	11,439	7.3
1975	1,685	12,647	13.3
Net worth			
1960	217	928	23.4
1965	227	1,319	17.2
1970	325	5,845	5.6
1975	597	6,996	8.5

Table 10. Selected comparisons of four cooperative and four proprietary firms with the greatest sales of petroleum products in fiscal 1960, 1965, 1970, and 1975

Year	Four cooperatives	Four proprietary firms	Cooperatives as a percentage of proprietary firms
	Million dollars		Percent
Petroleum sales			
1960	232	N.A.	--
1965	265	N.A.	--
1970	558	33,390	1.7
1975	1,345	94,600	1.4
Total sales			
1960	304	16,900	1.8
1965	566	23,500	2.4
1970	1,205	37,100	3.2
1975	3,834	112,549	3.4
Net margins (before income taxes)			
1960	23	1,600	1.4
1965	44	2,400	1.8
1970	51	3,200	1.6
1975	322	16,172	2.0
Total assets			
1960	263	18,000[a]	1.5
1965	382	30,000[a]	1.3
1970	842	45,759	1.8
1975	1,880	78,050	2.4
Net worth			
1960	173	15,200	1.1
1965	241	20,300	1.2
1970	392	27,000	1.4
1975	709	39,025	1.8

[a] Estimates based on 1961 and 1966 data.

NOTES

1 See E. G. Nourse, "From Dogma to Science in Cooperative Thinking," *Agricultural Cooperation-1946* (Washington, D.C.: American Institute of Cooperation, p. 8).

2 See Randall E. Torgerson, "Farmer Cooperatives," *The New Rural America, - The Annals* (January, 1977) pp. 91-102.

3 Concepts about individual freedom and the changing economic organization of agriculture are spelled out exceptionally well by Harold F. Breimeyer, in *Individual Freedom and the Economic Organization of Agriculture,* (Urbana: University of Illinois Press, 1965), Chapter 18.

4 This draws on a widely accepted definition of John R. Commons found in *Legal Foundations of Capitalism.* (Madison: The University of Wisconsin Press, 1959). p. 52.

5 Robert Clodius, "The Role of Cooperatives in Bargaining," *Journal of Farm Economics,* XXXIX (December, 1957), p. 1281. In this manner Clodius tended to reject the "societal benefit" produced by cooperatives in the competitive yardstick sense and cooperative's role as a device for achieving the competitive norm as "not only unrealistic but misleading" in the analysis of cooperative problems in the modern economy. See also "Opportunities and Limitations in Improving the Bargaining Power of Farmers," *Problems and Policies of American Agriculture,* (Ames: Iowa State University Press, 1959), Chapter 17.

6 See Willard F. Mueller, "Vertical Integration Possibilities for Agricultural Cooperatives," Paper presented at American Marketing Association and American Farmer Economic Association Meetings, Philadelphia, December 29, 1957.

7 *Ibid.,* p. 6.

8 See Willard F. Mueller, "Discussion: Farmer Cooperatives," *Journal of Farm Economics* XLII (May 1960), p. 503-505.

9 *Ibid.,* p. 505.

10 For a case study of coordination between organizational types see Randall E. Torgerson, *Farm Bargaining,* (Oslo: Landbruksforlaget, 1971).

11 See John K. Galbraith, *American Capitalism,* (London: Hamish Hamilton, 1964), p. 161.

12 *Ibid.*

13 Ivan Emelianoff, *The Economic Theory of Cooperation,* (Ann Arbor: Edward Brothers 1946).

14 James Youde and Peter Helmberger, *Membership Policies and Market Power,* Research Bulletin No. 267, (Madison: University of Wisconsin), August 1966. In a rigorous application of the theory of the firm to cooperatives as a special case, the authors argue that open membership cooperatives push performance of an industry toward the competitive norm.

15 *Ibid.,* pp. 17-18.

16 See Leon Garoyan and H. M. Harris, Jr., "Industrial Restrictions: A Policy For Industrial Competition," *Marketing Alternatives for Agriculture. Is There a Better Way,* Senate Agricultural Committee Print, April 7, 1976.

17 See "The Billion-Dollar Farm Co-ops Nobody Knows," *Business Week,* Feb. 7, 1977, pp. 54-64.