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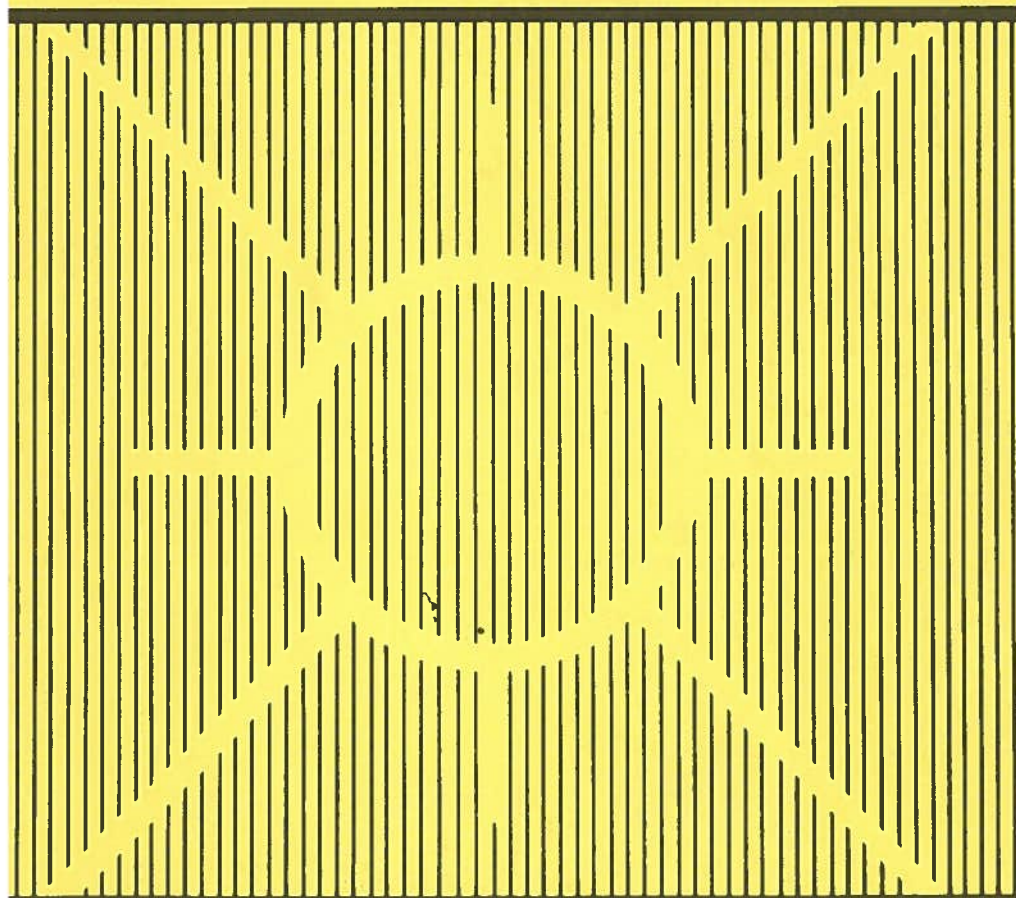
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AGRICULTURAL COOPERATIVES AND THE PUBLIC INTEREST

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SUMMARY OF POLICY ISSUES AND RESEARCH NEEDS

Bruce W. Marion

In attempting to distill the essence from the papers presented at the workshop, I was struck with the differences in the perspectives of the authors. In part this was due to the subjects they were asked to address. In addition, the topic of the workshop was broad, somewhat elusive, and sensitive. In focusing on agricultural cooperatives, the workshop dealt with an institution about which many agricultural economists have strong — and generally supportive — feelings. Differences in perspectives and opinions are therefore not surprising — but should be kept in mind in trying to sort out the policy issues and research needs identified in the workshop.

Three of the papers, in particular, (Breimyer, Raup & Knutson) provide broad perspectives of the workshop topic. Breimyer leads us to consider two alternative organizational systems for the imperfectly competitive areas of the U.S. economy and the philosophical consistency of the Capper-Volstead Act and the cooperative movement with these alternative systems (voluntary associationism and administrative command). He concludes "that the spirit and most of the letter of the cooperative movement including the Capper-Volstead Act fits with first organizational system" (voluntary associationism) — a system that allows "considerable aggregation of power but absolutely denies total aggregation, that is, monopoly." Further, that even though the economy as a whole is moving toward the second organizational system (administrative command or statism) which is characterized by substantial entrenched economic power, both private and public, Breimyer favors private and public decisions that prevent cooperatives becoming part of this broader problem. Breimyer's paper challenges us to consider more specific issues within the context of the type of economic system we prefer.

Raup identifies additional factors to consider, particularly the changes in political and economic power in agriculture and changes in capital requirements and sources. As a result of changes in the sources of farm capital, decline in farm numbers and increase in farm size and specialization, Raup indicates a growing separation has occurred between sectors of agriculture with political power and those with economic power.

Raup identifies the capital needs and sources for farm and cooperative businesses as a major determinant of the future role and characteristics of cooperatives. Recent developments (importance of pension funds, tax treatment of capital gains and inflation) have placed cooperatives in a poorer position to compete for capital, resulting in some cooperatives seeking to obtain capital from monopoly profits from branded consumer products. If cooperatives choose or are forced to seek capital from sources more distant from agriculture, members may lose control, the differences between cooperatives and non-cooperatives would likely decrease, and cooperatives — originally organized to address market failures — may experience "organizational failures".

Knutson's wrap-up paper provides yet a different perspective — one that is

essentially pragmatic and diagnostic. After identifying four types of cooperatives and six major agricultural marketing problems, Knutson considers the extent to which each type of cooperative holds potential for dealing with the marketing problems identified and contributing to the general public interest. Since the marketing problems vary from one commodity to another, he concludes that the optimum involvement and type of cooperative differs depending upon the commodity.

The perspectives provided by these three papers are not expected to be exhaustive. They do provide useful broad frameworks which remind us of some of the bigger issues and of the trade-offs that may be involved. With these as a backdrop let us consider what is known and not known about cooperatives and the public interest, and review some of the policy issues and research needs identified in the workshop.

STATUS OF COOPERATIVE THEORY

Vitaliano provides a comprehensive (and necessarily brief) review of cooperative theory, whether oriented toward explaining the internal operations of cooperatives or the competitive impact of cooperatives. He concludes that cooperative theory for either purpose is still incomplete due to the lack of empirical analysis to verify or refute alternative paradigms. The need, therefore, is not so much for additional theoretical constructs as for testing those that have already been articulated. Until this is done, many of the theories set forth to date will remain as untested hypotheses of cooperative behavior; the extent to which there exists a reasonably complete and valid theory of cooperatives will be unknown.

Drawing on the theoretical model developed by Helmberger, Masson and Eisenstat examine several alternative market settings in milk marketing in an effort to clarify theoretical issues of cooperative market power, countervailing power and vertical integration. They conclude that "in the absence of classified pricing, cooperative market power is never bad and may be generally good. Also, in the absence of classified pricing cooperative vertical integration leads to the economic ideal, not only countervailing any monopsony power not inherent in the technological conditions of the market, but also by output expansion canceling out the deleterious effects of final-product monopoly". When vertical integration by cooperatives occurs with classified pricing, however, the theoretically expected results are far from the social optimum. The authors thus identify classified pricing as the key factor determining the social desirability of cooperative behavior.

Unfortunately, Masson and Eisenstat were unable to provide empirical verification of their theoretical models. They therefore contribute to the "inventory" of cooperative theories that await testing. Without any intent to depreciate these and other models of cooperative behavior, it is well to keep in mind the limited scope of nearly all the available models. Allocative efficiency is the primary performance dimension considered. Vertical coordination, price and income stability, the control of agriculture and other performance dimensions that may

be of considerable importance are not (and generally cannot be) considered using these models. Thus, while the light shed by these models is often useful, it illuminates only part of the performance dimensions of interest. In addition, the theoretical models differ considerably in their results depending on the objective function assumed for cooperatives and their members, and assumptions about members' valuation of patronage refunds retained by cooperatives. Empirical analysis has shed little light on these important theoretical issues.

PRESENT CHARACTERISTICS OF COOPERATIVES

Several of the papers include empirical data that provide insights into the characteristics of cooperatives. Schmelzer and Campbell indicate that cooperatives marketing farm products are small businesses, on average, with only 3 percent having annual revenues greater than \$25 million. Approximately 36 large marketing cooperatives (revenues over \$50 million) accounted for over 46 percent of gross cooperative marketing volume in 1971-72.¹

Schmelzer and Campbell find that marketing cooperatives (cooperatives who derive 50 percent or more of their dollar volume from the sale of farm products) are highly specialized. Over 95 percent of regional cooperatives' net marketing revenues were derived from marketings in their primary commodity classification. Local marketing cooperatives realized 80 percent of their net marketing revenues from their primary commodity. Sporleder and Skinner provide supporting evidence of high specialization. Of the 345 regional cooperatives they studied, only 33 handled more than one major commodity.

Schmelzer and Campbell estimated the share of cash farm receipts accounted for by farm cooperatives in 12 commodity categories. For 1973-74, this ranged from 9 percent for poultry and poultry products to 72 percent for dairy products. Except for dairy and rice, cooperatives accounted for 45 percent or less of cash farm receipts.

The large regional cooperatives accounted for a disproportionate share of cooperative marketings in most commodities. The eight largest regional cooperatives in each commodity accounted for about 65 percent of cooperative commodity marketings, on average, and ranged from 33 percent of the grain marketed through cooperatives to 97 percent of the nuts. The share of cash farm receipts represented by the eight largest regional cooperatives in each commodity ranged from 6 percent in livestock to 56 percent in sugar in 1971-72, and averaged 22 percent.

Torgerson examines the change in the farm level share handled by farmer cooperatives over a 25-year period. From 1950-51 to 1974-75, cooperative share of commodities marketed increased from 20 to 30 percent; cooperative share of farm supplies purchased by farmers increased from 12 to 18 percent during this period.

¹ For comparison purposes, it is useful to note that the largest 275 food manufacturing companies in 1972 had sales of \$50 million or more.

Torgerson also compares the size (sales, assets, networth) of the four largest cooperatives in various commodities and farm inputs to the size of the four largest proprietary firms in the same commodities. In all cases, the cooperatives are considerably smaller and more highly specialized than their proprietary counterparts.

Although one of the frequently cited roles of marketing cooperatives is in countervailing monopsony power at the farm-first handler level, few statistics were presented on the level of buyer concentration at the local level. The results of Lang's study of fruit and vegetable bargaining cooperatives provide some insights. A survey of 47 cooperative managers indicated that in three-fourths of the cases, the four largest processors in their market area purchased 70 percent or more of the commodities which the associations represented in bargaining. Buyer concentration was higher for annual crops than for perennial crops.

Knutson discusses oligopsony buyer concentration and includes P & SA figures on buyer concentration in livestock (28 out of 40 states have four firm concentration ratios of over 65 percent in the purchase of steers and heifers). He notes that there has been "surprisingly little study of the extent of buyer concentration in agricultural markets".

Impact Of Bargaining Associations

Garoyan and Thor provide an empirical analysis of the impact of bargaining cooperatives on farm price, price stability and the market structure of producers and processors. Their data indicate that for bargained crops during 1960-75, farm prices were higher (by 5 percent per year), the number of growers declined more rapidly, and the increase in production per farm was lower than for crops with no bargaining association. Price and income stability was examined for four tree fruits. Although the results were somewhat mixed, there was modest support for the hypothesis that bargaining associations tend to reduce price, yield and income variation. The relation of grower price to canners' FOB price also tended to be more stable for crops with bargaining associations.

Involvement of Publicly Held Corporations

Schneider reported the results of a study of 873 randomly selected cooperatives plus 120 of the largest cooperatives. Only 3 percent of the cooperatives in the larger sample reported having publicly-held corporations as members; 9 percent of the sample of large cooperatives had corporate members. The percentage of the cooperatives in the two samples that had directors from publicly-held cooperatives was 1.5 and 5.4 percent, respectively. Thus, on average, publicly-held corporations played a minor role in cooperatives. Unfortunately, Schneider did not provide data on the *degree* of corporate involvement. For those co-ops with corporate members or directors, it would be helpful to compute a frequency distribution of the percent of members (directors) that are publicly-held corporations. In at least a few cases (e.g., Central California Lettuce Producers Co-op), this would be very high.

Financing of Cooperatives

Cook reveals a shift in the financing of cooperatives, with a decline in equity capital and an offsetting increase in borrowed capital. In 1970, 47 percent of cooperative capital was from equity sources, 32 percent from debt and 21 percent as a result of mergers. Approximately one-half of the equity capital (or one-fourth of total capital) was derived from member retains, which have received increased attention from state and federal legislatures and courts.

POLICY ISSUES

Cooperative financing and patronage refunds—Both Raup and Cook emphasize future cooperative financing as an important factor in the orientation, growth and competitive impact of cooperatives. With an increase in the capital needs of their farm members and a weakening of cooperatives' ability to attract capital, Raup suggests that cooperatives may have to turn to nontraditional sources of capital. Cook sees the same trend but for somewhat different reasons — a reduction in the reliance on member retains because of dissatisfaction by farmers. This may be reflected in legislation or court rulings establishing mandatory equity redemption. At the very least, cooperatives are likely to be under pressure to shorten the redemption period. If cooperatives are unable to obtain needed capital, their ability to grow and maintain or increase their market power will be reduced. If forced to rely on capital sources more traditionally used by proprietary firms, both Cook and Raup express concern that cooperatives may lose their unique character, the loyalty and support of members and the general public, and become "just another agribusiness."

Walsh expresses a different concern about patronage refund policy. On the premise that patronage refunds paid in cash are perceived by farmer members as a larger increase in the net price for a commodity than when patronage refunds are "revolved", he suggests that it is in the public interest for patronage refunds to be paid in cash. Walsh concludes that the effect of cooperatives on the public interest "depends largely on patronage refund policy".

There may be a trade-off between the short run benefits of paying patronage refunds in cash in order to stimulate production and lower consumer prices, and the long run benefits of using patronage refunds to fill the capital needs of cooperatives so that they can grow and maintain or enhance their competitive position. For those cooperatives that may have too much market power, the former benefits are likely to exceed the latter. For cooperatives that are of insufficient size to capture economies of scale or to countervail monopsonistic buying power, the latter benefits may be more important in the long run than the former.

The unique characteristics of farmer cooperatives — On this point, there appear to be important differences in the views of the authors. Breimyer, Raup, Cook and Shaffer all express concern about the future of traditional farmer controlled and financed cooperatives, albeit for somewhat different reasons. The concerns of the first three authors have already been discussed. Shaffer takes a somewhat different approach by identifying several different types of cooperatives,

one of which is the traditional "farmers' cooperative". Without attempting to evaluate the various types of cooperatives, Shaffer suggests the need to classify them and consider certification of "legitimate cooperatives" to ensure the political survival of farmer cooperatives as "a unique form of business organization". Shaffer recognizes that non-traditional cooperatives may play a positive role in the food system but suggests specific enabling legislation for their development rather than using the existing legislative cover for farmers' cooperatives.

Thor, on the other hand, expresses little concern that cooperatives will lose their "unique characteristics" as new organizational forms and mutations emerge. He recognizes the need for legal clarification of the question, "who is a producer", not because of philosophical or ideological concerns, but to provide guidance to non-traditional cooperatives. Thor appears to favor a broad interpretation of who qualifies as a producer from the pragmatic standpoint that it would allow a variety of cooperative forms to emerge depending upon the perceived need.

The effect of marketing orders on cooperatives' power and performance —

The issue here is rather sharply drawn on those marketing orders which provide for classified pricing. In the three papers which Masson helped author, the central concern that emerges is the same — classified pricing. Masson, Masson and Harris estimate that the net social cost of classified pricing is \$60 million per year in milk marketing and \$2.3 million per year in lemon marketing. Eisenstat and Masson conclude, "there seems to be no deleterious effects of cooperative marketing (including vertical integration . . .) as long as the cooperative does not price discriminate and if the cooperative is closed ended, there are low entry barriers".

Jacobson examines the influence of Federal milk marketing orders on the market power of dairy cooperatives by considering the effect of market orders on six constraints to cooperative pricing behavior: demand, supply, non-members, other cooperatives, lack of marketing facilities and Capper-Volstead undue price enhancement provision. He concludes that there is no "plausible demonstration that market orders have served as a power source for dairy co-ops".

Although Jacobson considers the extent to which milk orders can limit the total supply of milk or the geographic movement of milk, he does not directly examine the use of orders to partition the market and control supply in the more inelastic portion. This is unfortunate since it is the basic premise of Masson's criticism of classified pricing. Jacobson does offer an interesting counter hypothesis to ponder, namely that cooperatives would develop greater market power in the absence of marketing orders.

The relationship between cooperative membership policies and cooperative market power — Little disagreement emerges on this point. Youde suggests that a cooperative may perceive a downward sloping Average Revenue Product curve and restrict membership if it (1) has substantial market power, or (2) encounters diseconomies of scale or plant capacity restraints. Youde indicates that the positive relationship between cooperative market power and restricted membership policies found in a 1964 study continues to exist. About one-fourth of the 30 "leading co-ops" studied still restrict membership with market power the apparent reason for four firms. Since the performance of restricted membership co-ops

with market power is expected to be less desirable than those with open membership, Youde suggests that antitrust treatment for restricted membership cooperatives in their selling activities should be the same as for any other type of business.

Eisenstat and Masson also express concern about the competitive behavior of restricted membership cooperatives: "a cooperative monopoly must pursue one of two policies to charge supracompetitive prices . . . limit total supply possibly through a closed end organization . . . or else . . . pursue price discrimination".

The effect of marketing agreements on cooperative market power — Membership agreements appear to have some of the same potential to manage supply as restricted membership policies. Black indicates they have received increased usage as contracting and integration have made it more important for cooperatives to have assured supplies. Agreements are generally 2 to 10 years in duration. Black concludes that agreements provide cooperatives with greater supply and marketing management opportunities, often improve vertical coordination and operational efficiency, and "usually lead to higher net prices to members" due to "greater cost efficiency".

None of the other workshop participants commented on the public interest implications of marketing agreements.

Cooperative tax treatment — Like marketing agreements, cooperative taxation maintained a rather low profile at the workshop. Schrader indicated that the cooperative advantage due to tax treatment is much smaller than often thought; indeed, cooperatives may be at a disadvantage in some cases due to inability to take advantage of investment tax credit, accelerated depreciation or capital gains provision. Schrader estimates that the tax revenue loss to society due to cooperative tax laws is probably very small.

Vertical integration by cooperatives — Masson and Eisenstat examine several alternative scenarios for vertical integration by cooperatives in their two papers. As long as the cooperative does not have horizontal market power, vertical integration is found to be procompetitive or neutral in its effect. Vertical integration by cooperatives with horizontal market power may be procompetitive in some cases "but generally is not." Masson and Eisenstat indicate that "as long as the Capper-Volstead Act effectively allows cooperatives to use classified pricing and to have (or acquire) highly dominant market shares and/or use price fixing vis-a-vis marketing agencies in common, then the possibility of anti-competitive raw product pricing and vertical integration tactics is stronger here than in standard industrial monopoly situations". Since Masson and Eisenstat find vertical integration beneficial without horizontal market power, they suggest eliminating the sources of market power rather than restricting vertical integration.

Cooperative competitive conduct — In discussing the competitive behavior of regional farm supply cooperatives, Walsh indicates that they tend to be price followers because of their vulnerability to retaliation by large integrated chemical and oil corporations. He also suggests that the "yardstick" competitive effect of cooperatives received little support in studies of 14 agriculture-related industries.

Dahl proposes increased research of conduct dimensions. Preliminary results of a study of competitive behavior in local farm supply markets indicates no consistent role for cooperatives.

- Constraints on cooperative market power** — Torgerson identifies several characteristics of cooperatives that tend to limit their market power. These include:
- Cooperatives are loose associations of individuals that are "saturated with a tendency for disassociation through internal disruptive forces"
 - They rarely include all producers of a product; free riders are a common problem
 - They cannot control the production of members
 - They have less than absolute control over the decisions to sell
 - They are limited by virtue of their member-related business constraints; unlike conglomerates, they have limited ability to subsidize losses in one area from profits in another to restructure markets, or to select new business ventures on the basis of profit alone

To this list should be added the increasingly important cooperative financing constraints discussed by Cook and Raup.

RESEARCH NEEDS

Although some of previously identified policy issues are suggestive of research needs and opportunities, this is not always true. In some cases relatively little need for research is apparent. In addition, some authors identified additional research needs. The following list is not expected to be exhaustive but summarizes the major research needs identified in the workshop.

1. Empirically test the critical assumptions underlying alternative cooperative theories.
2. Analyze the capital needs and sources of cooperatives and the effects of alternative patronage refund policies. Determine the relationship between capital, firm growth and market performance.
3. Determine the structure of relevant producer-processor markets, including the market share and relative size of cooperatives.
4. Develop a taxonomy of cooperatives which emphasizes those characteristics thought to be related to performance and classify existing cooperatives accordingly.
5. Determine those factors which enhance or limit cooperative market power and the extent to which these characterize and influence existing cooperatives.
6. Examine the influence of marketing orders with classified pricing provisions on the structure, conduct and performance of relevant markets and the competitive impact of cooperatives. Test Jacobson's counter hypothesis that cooperatives develop greater market power in the absence of marketing orders.
7. Determine the impact of alternative organizational forms of cooperatives on member control, economic performance and the long range structure of the food system.
8. Examine the relationship between the size and organizational characteristics of cooperatives and the responsiveness to and control by members.
9. Analyze the effects of different types of cooperatives on the six major

agricultural marketing problems identified by Knutson in different commodities and on the general public interest. This would amount to empirically testing the estimated effects suggested by Knutson.

10. Examine the influence of cooperatives on competitive conduct in relevant markets, the frequency of antitrust violations, and the resulting competitive performance.
11. Examine on a comparative basis cooperative and corporate market shares as measures of market power.
12. Analyze the market power of free riders.