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Membership Segmentation: Issues and Strategies for Cooperatives and Group Marketing Institutions

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This article examines the strategies that have been used by cooperatives and group marketing institutions dealing with differentiation of producers into distinct market segments. Based on a comprehensive study of significant agricultural cooperatives and group marketing institutions in Alberta, Saskatchewan, Minnesota, North Dakota, and South Dakota, the authors attempt to explain the rationale behind these strategies and to demonstrate the extent to which these strategies are used by cooperatives and group marketing institutions. This article puts forth a theoretical model that can be used to explain the effects of loyalty and market segmentation strategies on producer cohesion. The model can also help to analyze the potential effects of the strategies on the core of the business.

When agricultural cooperatives in North America were first formed, due to homogeneity of their membership, meeting members' needs was relatively straightforward for most local farm supply cooperatives. All members received the same price/ton of commodity or paid the same price for inputs and services. This way of meeting member needs has been ingrained in cooperative concepts of equity, trustworthy service, and service at cost.

Agriculture has evolved, and farming operations have diversified resulting in a more diverse, segmented marketplace (Boehlje 1997). Differentiation between producers is developing in terms of (1) degree of specialization, (2) ability to meet processors' demands, (3) financial characteristics (for example, risk profiles, need for different payment structures, and credit facilities), (4) perception of benefits to cooperation, and (5) size of farm unit. Now, members of cooperatives and group marketing institutions typically have diverse economic interests (Reynolds 1997).

The trend toward differentiated service and pricing to producers by investor owned firms (IOFs) presents a strategic dilemma and challenge for cooperative enterprises (Reynolds 1997). Moving away from the traditional principals while not alienating members has been a difficult task for many cooperatives because cooperatives are constrained by maintaining some notion of fairness when developing pricing and service packages for members. Consequently, many cooperatives have abandoned the principle of equal treatment in favor of equitable treatment, to the dismay of some members.

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Cooperatives' transparent policies, due to their visibility, inflexibility, and relatively slow capability to respond to competitive pressures, make it somewhat easier for IOFs to strategically respond to the cooperatives' policies. Transparent policies, which are consistent with the principals of equity embedded in the traditional cooperative arrangements, allow competitors to price services and commodities on an individual customer basis, relative to the cooperative's approach of treating members equally. Many managers now treat producers differentially, according to the price and service package being offered by the competition as long as the business maintains some contribution to fixed costs. Another concept that has been adopted by many cooperatives is treating producers with like attributes equally.

Cooperatives are being pressured by the competition as well as by particular members to make operational changes that will allow cooperatives to adequately respond to the competitions' pricing strategies. Differential pricing programs based on accurate assessments of costs and revenues more closely approach the proper alignment of costs and benefits with actual use. Strategies that segment customers according to their patronage volume or use are usually more efficient and can have a substantial impact on the distribution of benefits among members (Fulton and Vercammen 1995). Cooperatives continue to struggle with providing competitive services and prices to memberships while trying to ensure that memberships feel they are being treated fairly.

The general objectives of this study are to provide a framework to analyze the strategic decisions of traditional cooperatives and group marketing institutions that face diverse member interests and attributes. Specifically, this study outlines the strategies attempted by cooperatives and group marketing institutions in response to membership segmentation by IOF competition. This study attempts to provide a framework from which cooperatives can examine and evaluate the relevance of traditional concepts associated with cooperation, such as equality and fairness, in responding to the trend of differentiated treatment of members. This may provide a forum to address changes in business practices and distribution of benefits of cooperation on a broad scale.

Methodology

The data were collected by in-person interviews between March and August 1999 with managers of fourteen significant agricultural cooperatives and group marketing institutions located in Alberta, Saskatchewan, Minnesota, North Dakota, or South Dakota.[1] A larger sample size would have been more ideal, but due to time and budget constraints this was not possible. The cooperatives are involved in selling farm supplies and/or petroleum and/or marketing/handling of grain, hogs, chickens, or milk. The group marketing institutions are involved in marketing grain, hogs, or chickens.

The cooperatives and group marketing institutions were selected for interviews based on the suggestions of key informants in industry, academia, and government, and were selected based on telephone conversations between the interviewer and the manager to determine if: (1) the cooperative is responding to the competitions' membership segmentation strategies, and (2) the manager is willing to participate in the study. The interviews were conducted at the cooperative's location. The same interviewer interviewed each manager using a standard questionnaire minimizing interviewer bias. The survey[2] consisted of both open- and closed-ended questions that were developed from existing theory and anecdotal evidence from key informants in academia, government, and industry.

Theoretical Framework

Game theory literature with cooperative applications provides some insights to the effect that an IOF strategy that encourages defection from the cooperative by a particular group can have on the remaining membership (Staatz 1987a; Reynolds 1997). For example, it is realistic to expect costs to increase for the remaining membership if a significant number of large-scale members leave the cooperative.

With increasing competition, membership loyalty is an important issue for cooperatives. Staatz (1987b, 40) defines cooperative loyalty as "members' willingness to do business with the cooperative even if short-run incentives to defect exist." Many decisions, such as how to maintain member loyalty in a cooperative business, can be modeled using a noncooperative game,[3] the Prisoner's Dilemma. The Prisoner's Dilemma is an example of a two-by-two game because each of the two players has the choice of two possible actions; either cooperate with the other player or defect and act individually. Each player has a dominant strategy to defect.[4] "However, the defect/defect outcome leaves both players worse off than if the cooperate/cooperate outcome had been selected" (Fulton et al. 1996, 4).

The viability of cooperatives can be threatened by members' perceptions of the short-term and long-term benefits to cooperation. IOFs constantly try to mitigate farmers' unity in the cooperative by offering more attractive price and/or service packages to farmers. If the benefits of cooperation are not apparent to producers, they will exit the cooperative when an IOF offers a better price or service. As producers leave the cooperative the bargaining power of a marketing cooperative/group marketing institution diminishes and, consequently, so does the price offered by the cooperative/group marketing institution. When the cooperative's price drops, the IOF responds by dropping its price and, consequently, all producers get a lower price. In the short term the individual farmer gained by getting the one-time higher price. However, as the price continues to drop all producers lose in the long run.

The single-period Prisoner's Dilemma is played only once players are not penalized or punished in subsequent periods if they defect. Game theorists have found the multi-period Prisoner's game to be social-welfare enhancing relative to the single-period Prisoner's Dilemma since the Pareto optimal outcome can be achieved with the possibility of a cooperate/cooperate outcome.[5]

The next section provides results of the survey. It attempts to illustrate how the interdependency between the cooperative and the membership can make it challenging to implement strategies that the membership will view as fair, resulting in a cooperate/cooperate outcome.

Results of the Survey and Implications for Cooperatives

This section explains the importance of maintaining a database of segmentation strategies and of outlining these strategies according to size of operation and ability to meet processors' or marketers' needs. Loyalty strategies are presented that have been implemented to encourage the cooperate/cooperate strategy consistent with the multi-period Prisoner's Dilemma. This section also includes evidence from managers and other sources to explain either the strategy implemented or the rationale behind the strategy.

Maintaining a Database

Historically, the strength of cooperatives has been their close relationship with members and their ability to understand members' needs. It has been hypothesized that this provides lower transaction costs for cooperatives than for IOFs. However, as cooperatives move away from face-to-face service, maintaining a database is necessary to differentiate producers according to their needs and is essential to developing and implementing loyalty and segmentation strategies. All the managers stated they either have a database or are currently developing a database that contains member information that can be used to develop both pricing and marketing strategies.

Member information for the database can be gathered from a variety of sources. Programs that require members to provide information about input use or seeding intentions will provide the cooperative with members' production and/or marketing information. As well, cooperatives that offer custom services have access to a tremendous amount of member information. This information can be used to profile members according to their attributes, which allows the cooperative to develop pricing and service strategies consistent with the members' needs.

Databases can also be used to identify which members have decreased their patronage with the cooperative. At the manager's discretion, these particular members can be contacted to determine why they are conducting less business with the cooperative.

Access to member information provides cooperatives with an important competitive advantage. Using member information from the database, two of the cooperatives segment their membership into four categories according to the producers' needs/attributes. Members who are able to make large-volume purchases might fall into one category, whereas members who want longer hours of service might fall into another category. Profiling members in this manner helps the cooperative to design service and pricing programs to satisfy specific member groups.

Segmentation Strategies

The next section provides an overview of segmentation strategies that cooperatives have used to remain competitive. These strategies have been implemented by cooperatives to deter large-volume members from defecting from the cooperative.

Typically, membership segmentation arises because the cost of doing business with large-scale farms is less than with small-scale farms. Most managers noted that a key consideration in responding to the competition's strategies is being involved in declining-average-cost businesses that require large volumes to keep average costs low. Managers were asked what best describes their overall business concentration. Overall, the majority of the cooperatives' business was conducted by a small percentage of the membership with an average of 75% of the cooperatives' business conducted by 25% of the members. Managers were asked if maintaining high volumes of business is crucial to the cooperative's financial stability. Twelve managers stated that high-volume business is crucial to the cooperative's financial stability, indicating strategies that encourage large-scale member business are necessary to maintain the cooperative's viability.

Consequently, the competition between agribusiness firms for large-volume business is intense; therefore, large-scale farms have more purchasing and marketing options than small-scale farms. A large-scale producer is also able to attract lower-cost alternatives from agribusiness firms by buying directly from a supplier or manufacturer to receive a discount, where a small farmer does not buy enough volume to demand such discounts. Managers were asked if the competition is targeting their membership and, if so, how.[6] Although all managers stated that the competition is targeting all of their members, typically with either a low-price/low-service strategy or strictly a low-price strategy, most of the managers (86%) stated that large-scale members are the focus of the competitions' strategies as well as the cooperatives' strategies.

Volume Discount or Premium

Managers were asked if they explicitly target large-scale member business and, if so, how.[7] All cooperatives offer some form of volume discount on input purchases, and most of the cooperatives offer freight discounts on large-volume purchases. One farm supply cooperative offers a volume discount only if the product is prepaid. Cooperatives/group marketing institutions provide these discounts or premiums to compete with IOFs in an attempt to maintain their large-scale members' business.

Ability to Meet Processors' or Marketers' Needs

Group marketing institutions and cooperatives are often obligated to accept raw product delivered by producers, regardless of quality. The inherent risk in supplying a low-quality product to the market may not only result in lower prices for all producers but may also jeopardize the relationship between the supplier and the processor/marketer. Therefore, many group marketing institutions and cooperatives are developing and implementing quality standards for production.

To ensure the availability of consistent quality, cooperatives and group marketing institutions (50%) provide either price discounts for commodities that do not meet quality standards or premiums for commodities that exceed quality standards. In some cases, this strategy has been implemented in response to processors who can increase processing efficiency with deliveries of consistent quality. These industry-driven programs reward producers through price incentives to produce commodities in accordance with the established quality guidelines.

> The Canadian Quality Assurance (CQA) program, implemented in April 1998 and owned by the Canadian Pork Council, addresses the issue of food safety and quality. Participating producers receive a price bonus if the producer meets established safety and quality standards. In 1999, 237 of 2,000 producers in Alberta were participating in the program, accounting for 45% of Alberta's production. The program was established in response to pressure from a major importer that demanded a quality-assured product. Canada had to develop and implement a quality program to guarantee export market opportunities and to compete with countries that already have established quality programs (LeBlanc 1999).

Some producers are able to meet marketers' and processors' needs because of technology and management practices. In the Canadian grain industry the trend has been toward meeting needs of an increasing number of customers who purchase grain in smaller quantities and with more specific class, grade, and protein requirements. This may increase the demand for identity-preserved contracts.

> Warburton's Bakery in England has always used Canadian Western Red Spring Wheat (CWRS) in the production of their high-quality bread. Warburton's realized that particular varieties of CWRS worked best in their bread-making system, producing bread suited to their customer's needs. To ensure that they would obtain only the desired varieties, the Canadian Wheat Board (CWB) decided to use identity-preserved contracts administered by two accredited exporters.[8] These

contracts are awarded annually to farmers with a reputation for growing consistently good quality CWRS crops, typically long-standing member/customers of the accredited exporter. In return for meeting the production standards, Warburton contract farmers receive a $20/ton-premium, paid in cash from Warburton's, over the regular CWB price for identical grain (Kennett et al. 1998).

Loyalty Strategies

Individuals form and join cooperatives because of the benefits of collective action. However, this does not mean that producers will continuously work together. Evidence suggests that individual actions, as opposed to collective action, are becoming more predominant among farmers. Fulton (1995) notes declining membership in Canadian farm organizations like the Keystone Agricultural Producers, National Farmers Union, Canadian Federation of Agriculture, and Unifarm as evidence supporting this trend. Therefore, cooperatives need to develop strategies that encourage large-scale members' business while trying to maintain the loyalty of other members by promoting cooperative benefits.

To counteract this trend toward individualism, cooperatives need to continually develop programs that promote membership loyalty. Loyalty strategies are employed to deter members from defecting from the cooperatives and from shopping around for a better price/service. Or, as in multi-period Prisoner's Dilemma, loyalty strategies are used to ensure that cooperation will be the dominant strategy and that, consequently, producers will be better off than if they acted individually. In this study, managers were asked what tactics/strategies their cooperative employs to hold members' business.[9]

Educating Members about the Benefits of Cooperation

To maintain a coalition of producers, members need to understand the value of the cooperative (pecuniary and nonpecuniary). Member education is an ongoing challenge for many cooperatives because the value of the cooperative changes with economic and market conditions. Education about patronage dividends was only noted by one manager as the most frequently used strategy to encourage members' business. However, public relations through annual meetings and community involvement to reinforce cooperative identity was identified by eleven managers as the third most commonly used strategy to hold members' business.

Competitive Service and Price

Providing a competitive service and pricing package for each identified producer segment is the most commonly used tactic to hold member business. A majority of the managers (86%) identified this as either the most or second most frequently used strategy to hold members' business. Two cooperatives have market support programs, which allow retail outlets to meet the competition's price while maintaining profitable margins. According to one of the managers, the fund supporting this program has grown substantially in recent years, indicating an increase in industry competitiveness.

Bundling goods and services according to the needs of members is an important competitive strategy employed by all grain marketing and/or farm supply cooperatives. With this strategy the cooperative is assured that the producer will buy at least what is offered in the bundle. Most cooperatives offer a price discount if the producer purchases a bundle of goods and services. Bundles are typically sold on a $/acre basis so that the member and the competition do not know where the discount lies. This deters members from shopping around for a better deal, and it makes it difficult for the competition to match the price. "Bundling should ensure the cooperative a year of business with that particular customer" (anonymous manager). Although bundling is a way to lower decision flexibility of members, it may have some impact on the relationship between the cooperative and the producer.

Service and Relationship Focus

Contact between the members and the cooperative manager/employees continues to change. In the past, customers came to the local cooperative to purchase product. Now, sales can be made in the field, at the customer's home, or over the phone. Employing fieldmen that make contact with the member at the member's location is an important strategy employed by cooperatives to ensure member commitment. Eleven managers stated that direct marketing was either the most common or the second most common strategy used to hold member business.

In an attempt to maintain relationships with the highest valued members, one cooperative hosts one hundred select, "high value" members at a weekend retreat.

> At the retreat the members attend industry information sessions and network with other similar producers and with industry and cooperative personnel. The retreat provides the cooperative with an opportunity to express appreciation to those members for their business. The manager did suggest that the retreat is controversial and has caused some tension within the membership because of the selectivity (anonymous manager).

Increasingly, cooperatives supply products along with access to knowledgeable staff. Most cooperatives have crop scouts who provide advice on seeding, chemical use, and on weed and insect identification. This service is offered either for a fee or free with the purchase of chemicals. The crop scouting service provides economic and environmental benefits to the producer's operation; therefore, the demand for this service is expected to increase.

Many cooperatives offer services to secure the relationship between member and cooperative. One cooperative developed a program that consists of a package of services to help members expand their milking operations. The program provides business and financial planning, project planning, facility design, operation management, waste management, feed storage and handling, livestock care, and personnel management. This program has established loyalty between the cooperative and participating members.

Credit Facilities

Credit facilities are another service offered to members to increase loyalty. Producers typically require a variety of credit facilities to finance crop inputs. However, producers appreciate the convenience of purchasing all inputs at one location (Fulton and Adamowicz 1993), and sufficient credit will allow them to do just that. In June 1999, Cenex Harvest States introduced a financing program called "Partners in Production."

This program is available to all members of Cenex Harvest States that have approved credit. If the grower buys seed, plant food, and crop protection from the same local Cenex Harvest States location, the grower will get a buy down on the loan interest rate.

The buy down ranges from 1% to 2% depending on the amount of the product bought. For example, if the member buys all inputs from the same local cooperative the member will get a 2% discount on the interest; if the member buys only seed and plant food, the discount is 1.5%; and if the member only buys seed, the discount is 1%. The program benefits producers by providing sufficient financing that allows members to purchase all inputs from one location. The program benefits the cooperative because it encourages loyalty and does not affect product margins (Marquardt 1999).

Memberships' Response to Strategies

Concerns about the effects of differential pricing and service strategies on the unity of the cooperative are often expressed. "Granting special favors or price advantages to large producers will alienate members" (Lasley and Baumel 1996, 5). Differential pricing, as viewed by small-volume members, may provide an increased competitive advantage for the larger-volume producers. Yet, according to Hartley and Burt (1989), farmers and managers both disagreed that cooperative prices should be the same regardless of quantities purchased. Even though small-volume members often disagree with programs that violate the principal of equality, these members realize that large-volume members are needed to ensure the long-term viability of the cooperative. In this study, managers were asked how members react to pricing and service strategies aimed at different member groups. Seven managers felt that members understood that differential pricing is necessary to ensure the viability of the cooperative. However, members who are not in favor of differential pricing state that it is "unfair," "large members are getting a better deal than small members," "it is dividing the membership," and "some members leave the cooperative."

Conclusion

IOFs have responded to producer diversity by developing pricing and service strategies to satisfy large-scale producers. These same producers can also be members of agricultural cooperatives and group marketing institutions. Therefore, most cooperatives and group marketing institutions have responded to the competition's strategies with their own membership segmentation strategies. These strategies are implemented in an attempt to maintain a stable coalition of producers where no member, or group of members, has the incentive or the ability to disrupt the membership. Implementing these strategies has resulted in most cooperatives abandoning the notion of equal treatment in favor of equitable treatment. As the heterogeneity of producers becomes more apparent, membership segmentation will continue to be an issue for most cooperatives and group marketing institutions.

While the results of this study suggest that in responding to IOFs' membership segmentation strategies many cooperatives have moved away from equal treatment to equitable treatment of members, it was beyond the scope of this study to examine different notions of fairness that are acceptable to members from sociological and economic perspectives. There are many other issues related to membership segmentation that may be worthy of investigation. Future studies in this area could include a study of IOFs' strategies when competing with cooperatives, including case studies of IOFs or of cooperatives and IOFs operating simultaneously in a particular market. In addition, other studies could include the necessity for some farm supply cooperatives to serve only one defined market segment, such as hobby farms, or for some marketing cooperatives to serve only farmers who produce a specific quality of commodity type.

Notes

1. In an attempt to get diverse responses to IOFs' strategies we chose a large area for the sample.
2. The survey can be obtained from the authors.
3. A noncooperative game is a game in which the players cannot make binding commitments.
4. A strategy is dominant if it is a player's strictly best response to any strategies the other players might pick (Rasmusen 1990).
5. According to Staatz (1987a, 129), if players face recurrent Prisoner's Dilemmas, patterns of cooperation among players may "evolve."
6. Managers could chose from the following: (1) high service/high price, (2) low service/low price strategy, (3) wholly-owned subsidiary, (4) high service/competitive price, or (5) other.
7. Managers could chose from the following: (1) volume discounts, (2) bundling, (3) direct contact with the member at the member's location, (4) high service, (5) trucking premiums, (6) quality premiums, or (7) other.
8. Manitoba Pool (now Agricore) and N. M. Paterson & Sons Limited were key in facilitating these contracts.
9. Managers were asked to rank the following responses: (1) advertising, (2) education about patronage dividends, (3) public relations to reinforce cooperative identity, (4) competitive price and service package, (5) direct contact with the member at the member's location, and (6) other.

References

Anonymous Manager. 1999. Interview by author. Calgary, Alberta, 18 March.

Boehlje, Michael. 1997. Industrialization of agriculture: Implications for cooperatives. *American Cooperation*: 6–14.

Fulton J., and W. Adamowicz. 1993. Factors that influence the commitment of members to their cooperative organization. *Journal of Agricultural Cooperation* 8:39–53.

Fulton, M., and J. Vercammen. 1995. The distributional impacts of non-uniform pricing schemes for co-operatives. *Journal of Cooperatives* 10:18–32.

Fulton, M. 1995. The future of Canadian agricultural co-operatives: A property rights approach. *American Journal of Agricultural Economics* 77:1144–1152.

Fulton, J. R., M. P. Popp, and C. Gray. 1996. Strategic alliance and joint venture agreements in grain marketing cooperatives. *Journal of Cooperatives* 11:1–14.

Hartley, M., and L. Burt. 1989. *Are farm supply cooperatives meeting farmer needs? A survey of farmers and managers*. Station Bulletin 672. Corvallis: Oregon State University.

Kennett, J. M., M. Fulton, P. Molder, and H. Brooks. 1998. Supply chain management: The case of U.K. baker identity preserving Canadian milling wheat. *Supply Chain Management: An International Journal* 3(3):157–166.

Lasley P., and C. Baumel. 1996. A matter of trust: Sound co-op business ethics can enhance loyalty. *Rural Co-operatives* 63(3):4–7.

LeBlanc, Dawn. 1999. Interview by author of national co-ordinator of the Canadian quality assurance program. Edmonton, Alberta, 5 August.

Marquardt, Stan. 1999. Interview by author of vice president, Agronomy Sales, Cenex Land O'Lakes Agronomy Company. St. Paul, Minnesota, 5 May.

Rasmusen. E. 1990. *Games and information: An introduction to game theory*. Cambridge: Basil Blackwell, Inc.

Reynolds, B. 1997. *Decision-making in cooperatives with diverse member interests*. USDA Rural Business Cooperative Service. RBS Research Report 155.

Staatz, J. 1987a. A game-theoretic analysis of decision making in farmer co-operatives. *Co-operative Theory: New Approaches*. USDA. Agricultural Co-operative Service. Service Report Number 18:117–147.

———. 1987b. The structural characteristics of farmer co-operatives and their behavioral consequences. *Co-operative Theory: New Approaches*. USDA. Agricultural Co-operative Service. Service Report Number 18:33–60.