

Influence Costs in Agribusiness Cooperatives: Evidence from Case Studies

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CONSTANTINE ILIOPOULOS AND GEORGE HENDRIKSE *

**Influence Costs in Agribusiness Cooperatives
Evidence from Case Studies**

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Abstract: *This article addresses the influence costs problem in the governance structure 'agribusiness cooperative.' Influence costs are higher in cooperatives than in investor-oriented firms due to the unique governance structure of the former. Hypotheses are formulated and tested regarding the relationship between influence costs and seven variables: membership size, member heterogeneity, average member age, singleness of purpose, managerial power over members, level of managerial compensation, and professional versus inside management. The main results are that heterogeneous member preferences, older average member age, and investment in multiple product lines all contribute to higher influence costs. At the same time, cooperatives with well-paid, powerful and professional managers incur lower influence costs. The impact of membership size on the level of influence costs is undetermined.*

Since the mid-1980s, the literature on the governance of organizations has been significantly enriched by research that focuses on intra-firm influence costs as an important source of decision-making inefficiencies. Influence activities may take various forms. For example, employees or other key stakeholders may engage in lobbying, or information providing that distorts decision making to their private benefit. Taken to the extreme, influence activities may involve the misreporting of skill deficiencies (Watson et al. 2006), sabotage (Dubois 1987), or explicit conflict between individuals or groups of firm stakeholders (Abma 2000).

Influence costs inevitably arise in any organization when decisions affect the distribution of wealth or other benefits among members or constituent groups of the organization and, in pursuit of their selfish interests, the affected individuals or groups attempt to influence the decision to their benefit (Milgrom and Roberts 1992, 600). Two conditions are necessary to make influence costs likely (Milgrom and Roberts 1992): First, a group of decisions or potential decisions must be made that can influence how the benefits and costs in a firm are distributed and shared, and second, the affected parties must have open communication channels to the decision makers during the time period when decisions are being made, as well as the means to influence them. Given that decision makers' ability to make sound decisions depends, among other things, on the information provided to them by the affected parties, influence costs arise not only when the affected individuals participate in decisions but indirectly as well. Organizations attempt to ameliorate the influence costs problem by using non-discretionary promotion schemes and narrowing wage differentials (Milgrom 1988; Milgrom and Roberts 1988), divesting poorly operating segments (Meyer et al. 1992), designing a company's capital structure (Bagwell and Zechner 1993), by adding levels of hierarchy (Inderst et al. 2005), and by introducing employee stock ownership plans (Matejka and De Waegenare 2005).

Not much attention has been paid to the study of influence activities in governance structures such as franchising, subcontracting, alliances, collective trademarks, and cooperatives (Menard 2004). In this article, this void is partially filled through the empirical investigation of the role of influence activities in the governance structure called 'agribusiness cooperative'¹. The influence costs problem is a major source of inefficiencies in agribusiness cooperatives (Cook 1995; Bogetoft and Olesen 2003). Several crucial decisions entail the (re)distribution of wealth among the members of a cooperative and thus may provoke influence attempts by members. The allocation of

overhead costs, the assessment of members' product quality, and the geographical location of a new investment are but a few examples of such decisions (Hansmann 1996; Hetherington 1991).

One way to position this article is to view it as a comparative institutional analysis. In addition to the influence costs identified in investor-oriented firms (IOFs), cooperatives incur extra influence costs due to their unique governance structure (e.g., Banerjee et al. 2001). Cooperatives are not publicly listed. Therefore, they have no access to most of the instruments available to IOFs for ameliorating the constraints imposed by high influence costs.

Alternatively, the article is positioned as an extension of the managerial power approach to the principal-agent problem (Bebchuk and Fried 2003) achieved by the incorporation of the influencing behavior of an agent and multiple principals.² The members as formal owners of a cooperative delegate a substantial amount of discretion to the CEO, but still want to influence his or her decisions. Cooperative members exercise their position as owners and users of the cooperative through voting, and influence activities. Each member supports the manager who maximizes his or her individual gain. Also, each member competes with the rest of members to capture as large a part of the redistributed rent as possible. At the same time, the manager maximizes her personal wealth by taking into account the voting behavior of members (Appelbaum and Katz 1987).

Several factors determine the amount of influence costs incurred by an organization. The theory of the cooperative firm highlights seven of them as most important. This research reviews these factors and states and tests hypotheses about the possible impact they have on influence costs.

The article is organized as follows. The next section highlights differences between cooperatives and IOFs in terms of the influence costs each of these governance structures incurs. Section three formulates hypotheses. Section four presents case studies that provide a preliminary test of the hypotheses. Particularly, we shed light on how the level of influence attempts is affected by the size of the cooperative membership, the heterogeneity of member preferences, the average age of active members, the singleness of the cooperative's purpose, the degree of managerial power over members, the level of managerial compensation and the manager being from inside or outside. Section five concludes and outlines directions for future research.

Cooperatives versus IOFs

Producer-oriented firms incur higher influence costs than their IOF counterparts for several reasons. First, traditional cooperatives have adopted a unique governance structure. Decision and income rights are allocated to member-patrons who are either the suppliers or customers of the cooperative firm on the basis of their patronage (Barton 1989). Such a governance structure implies that members-owners have easier access to the organization's decision makers. This access is further facilitated by the fact that the farmer-members are also users of the services provided by their cooperative. This can lead members to maneuver attempts in order to influence management's decisions to their benefit. In contrast, primarily, or exclusively employees in IOFs attempt to influence decisions. . Consequently, decision-making in diversified customer-and producer-oriented firms can be more complicated relative to IOFs of comparable size.

Second, residual income rights are not tradable in any secondary market as is the case in publicly-traded IOFs where owners can monitor managerial performance by observing variations in the company's stock value. Hence, in the absence of market monitoring tools, managers in traditional cooperatives are more flexible to pursue goals inconsistent with those of the membership as a whole. This problem, which has been identified as the "control problem" (e.g., Vitaliano 1983; Cook 1995), has an additional negative implication for firm performance not explicitly discussed in the literature. Cooperative managers may be more easily influenced toward advancing the interests of sub-groups of members since tight market monitoring does not alarm them. Thus the control problem may be transformed into a complex multiple principal-influence costs problem, which generates additional costs not usually observed in IOFs.

Given this multiplicity of principals and the open channels available to both members and employees for influencing decision-making, every resource allocation decision in cooperatives becomes a potential source of influence costs. Crucial resource allocation decisions regarding the allotment of capital to the various budget types (e.g., capital, operating and human resource budgets) create rents, which are more significant in case cooperative members have incongruent interests. Members pursuing their diverging individual interests may force decision-makers to deviate from maximum-efficiency business decisions.

Influence costs incurred by agribusiness cooperatives are classified into one of the following categories: (1) opportunity costs of cooperative stakeholders' time, (2) costs of monitoring and enforcing decisions that create quasi-rents, (3) coordination and measurement costs associated with delayed decisions, (4) costs of wrong or no decisions, and (5) costs associated with policies designed and implemented to avoid influence costs (Milgrom and Roberts 1990; Iliopoulos and Cook 1999). According to Milgrom and Roberts (1988), organizations have four options in dealing with the influence costs problem. First, they can close communication channels for certain decisions. Second, they can reduce the return to influence activities by limiting decision makers' discretion and restricting their ability to respond to information supplied by others. Third, they can decentralize and separate business units (e.g. by spinning off some operations). Finally, they can adjust compensation, promotion, investment, and other criteria in order to align individual goals with those of the organization.

Most of the above options are either not available to or cannot be implemented by cooperatives. Limiting employees' access to communication channels is considerably easier than restricting the access of cooperative members to such channels because the latter are also owners of the organization. The adoption of this strategy may generate more problems than decision makers have intended to solve. Equally difficult to implement are policies that restrict cooperative managers' ability to respond to information supplied by members. Actually, this information channel has been accredited as one of the key competitive advantages of agribusiness cooperatives relative to IOFs (e.g., Hansmann 1996). The third option of decentralizing and separating units has been primarily adopted by several European agribusiness cooperatives (Hendrikse and Bijman 2002). However, the success of this strategy depends, among other things, on the size of the cooperative (Cook and Chaddad 2006).

Hypotheses

The manager of an agricultural cooperative develops and implements policy proposals in order to bring the assets of the cooperative to value. The manager chooses among many investment possibilities not all of which generate the same rent for cooperative members. This provides scope for influence activities as each member attempts to force cooperative decision makers to choose and carry out those proposals that are most beneficial to her or him.

This section formulates hypotheses starting from the premise that both the manager and members advance their own personal interests. The interplay between the manager and cooperative members is ambiguous. On the one hand, members are powerful because as owners of the enterprise they influence the career prospects of the manager. On the other hand, the manager is often at least as powerful because (s)he has access to superior information about investment opportunities, market developments and intra-organizational issues. Another source of power is that usually the manager puts together investment proposals. This provides the manager with leeway regarding the size of the rent to be paid to one or all members, while the members choose the degree of their influence activities and at the same time exercise their voting right and decide whether to keep or replace the manager.

A number of theoretical perspectives have been advanced to explain/ predict the outcome of this interaction between the manager and members. They identify a number of variables having an impact on the amount of rent that will be distributed and the extent of influence activities. We highlight the variables membership size, heterogeneity of the membership, the average age of the membership, the singleness of purpose, the manager's power over members, level of the manager's compensation, and professional versus inside management.

Agribusiness cooperatives vary substantially in terms of the size of their membership. Some cooperatives have less than 100 while others have more than 10,000 members. The probability of a member being successful in influencing decision-making activities decreases when the membership size increases. This will result in a lower level of influence activities per member when membership size increases (Appelbaum and Katz 1987). In addition, the organization will structure itself in such a way to limit / handle an increasing number of sources of influence activities (Milgrom and Roberts 1988; 1990). This relationship is summarized in our first hypothesis.

Hypothesis 1: The larger the membership size the lower the number of influence activities employed by members in cooperatives

In single-commodity marketing cooperatives, in which the membership is not divided among various crops, members may still deliver substantially different product quantities. A policy that allocates overhead costs equally among members may result in a transfer of wealth from high- to low-volume producers. In this case, the provision of quantity discounts for high-volume producers may result in high influence costs. Large-volume producer-members are likely to be important to the cooperative, particularly if, as is often the case, a relatively small number of large producers deliver a very large proportion of the production handled by the cooperative. Strengthened by their increased bargaining power, large-volume producers demand special treatment and usually succeed in capturing, not only the value of the economies derived from their being a large-volume

member, but also in extracting favored treatment in excess of such gains. Pressure for different treatment can lead to serious dissension. Various similar differences between members can be formulated, e.g. quality differences, geographical differences, age differences, and so on.

Several observable business practices, behaviors and policies provide a crude manifestation of the existence of influence activities in agricultural cooperatives. One indicator of influence activities in marketing and bargaining cooperatives is the use of a third party (an independent company) for grading/classifying the products delivered by members to the cooperative (Hansmann 1996). Cooperative chief executive officers may use this practice to avoid influence attempts by members who want to receive a high price for low-quality produce. Hypothesis 2 highlights the importance of member heterogeneity for the extent of influence activities.

Hypothesis 2: The less heterogeneous the membership the fewer are the number of influence activities by cooperative members

Major among the problems triggered off by the vaguely defined property rights structure of traditional cooperatives is the horizon constraint which refers to the disincentive for cooperative members to invest in long-term projects. Benefits flowing to the patron instead of the investor are the genesis of this cooperative investment problem also. Specifically, the horizon problem occurs when a member's residual claim on the net income generated by an asset is shorter than the productive life of that asset (Porter and Scully 1987). This problem is caused by restrictions on transferability of residual claimant rights and the lack of liquidity through a secondary market for the transfer of such rights. The horizon problem creates an investment environment in which there is a disincentive for members to contribute to growth opportunities. The severity of this problem intensifies when considering investment in research and development, advertisement, and other intangible assets. Consequently, there is pressure on the board of directors and management to increase the proportion of the cooperative's cash flow devoted to current payments to members relative to investment, and to accelerate equity redemptions at the expense of retained earnings. In this case the influence costs problem manifests itself as a negative side effect of the horizon constraint. Yet, in traditional cooperatives the latter problem is intensified as the number of members who are older in age increases.

Hypothesis 3: The older the majority of cooperative members are the larger is the amount of influence activities employed by cooperative members

Marketing multiple products has the potential to create significant intra-cooperative problems in terms of rent-setting policies and director loyalty and responsibility. The conflicting interests of cooperative members and the accompanying decisions that lead to wealth redistribution can take several forms. For example, the conflicting interests of members in multiple-commodity marketing cooperatives are often severe. Even when such a cooperative adopts a separate-pools system, cost allocation decisions are tough to make. Under separate pooling, the growers of different commodities have little interest in the overall profitability of the operation of the business. The result is likely to be intense

and potentially disruptive disagreement that fatally limits managerial discretion to operate efficiently in the market.

The frequency of serious disagreements between members of the cooperative and particularly those serving on the Board of Directors is an indicator of the influence costs problem. As disagreements between members intensify, influence costs tend to increase. Consequently, CEOs in cooperatives incurring high influence costs are expected to spend a significant part of their time in dealing with influence attempts by members. Additionally, cooperative managers may maintain a notable portion of total equity as unallocated so that they can respond to the particular interests of different groups of members, especially in cooperatives with highly heterogeneous memberships. Logrolling provides yet another indicator of influence activities. Board members who represent different subgroups of members may agree to support each other when their most vital interests are not contradictory (Staatz 1987). A final indicator of inefficient influence activities and outcomes is that especially federated (multi-product) cooperatives have been targets of private equity parties (Bekku 2007). Hypothesis 4 formulates the relationship between multi-product cooperatives and the intensity of influence activities.

Hypothesis 4: Members of multi product cooperatives tend to employ more influence activities than members of single product cooperatives

Leadership is an important issue in cooperatives (Cook 1994). An efficient leader will be able to reduce wasteful influence activities due to being able to increase the likelihood of obtaining acceptance for the efficient investment proposals. Such a leader reduces the likelihood that surplus reducing influence activities survive in open group decision-making processes. A smaller rent available for members reduces their incentive to spend resources on influence activities (Milgrom and Roberts 1988; 1990). A strong manager is often also powerful, i.e. (s)he is able to allocate a substantial share of the rent to the activities of the cooperative rather than to the members. This reduces also the level of influence activities (Appelbaum and Katz 1987). The following hypothesis summarizes these ideas.

Hypothesis 5: The more powerful the cooperative's managers the less the tendency of its members to use influence activities

The outside opportunities available for the manager have an impact on the surplus available for rent seeking activities (Appelbaum and Katz 1987). More attractive outside opportunities for the manager will increase his/ her salary and therefore reduce the surplus available for the members. Outside opportunities can be made less attractive by paying a salary above the market wage, i.e. an efficiency wage (Shapiro and Stiglitz 1984), in order to prevent the manager from leaving when (s)he is performing well. Hypothesis 6 summarizes these ideas.

Hypothesis 6: The less attractive the cooperative manager's outside opportunities the fewer influence activities are employed by members

Many cooperatives choose one of their members as the manager. Having a member-manager has advantages as well as disadvantages. An obvious advantage is that this person knows the business and the membership very well. A disadvantage is that a member-manager may not have detailed knowledge of final product markets. Another potential disadvantage is that the manager has to decide about investment projects generating different rents for the various members. S/he may find it hard to take necessary but painful decisions because s/he continues to be a member of the cooperative after his/her management period. These disadvantages may make an outside manager attractive. Among the factors that determine the success or failure of a cooperative, hiring a full-time professional manager is consistently ranked as highly important (e.g., Sexton and Iskow 1988; Staatz 1987). Hypothesis 7 formulates the outside manager effect.

Hypothesis 7: Members of cooperatives with external (non-member) managers tend to employ less influence activities than members of cooperatives with internal (member) manager?

Methods

This section presents the sample and data collection, the measures, and the type of analysis used to test our hypotheses.

Sample and data collection

Case studies were selected from a number of English language sources by using the keyword “cooperative”. The following data sources were searched:

- The Harvard Business School Cases.
- Proceedings of conferences, symposia, and seminars organized by the European and American associations of agricultural economists.
- Proceedings of the annual meeting of the International Association for New Institutional Economics.
- A list of indexed academic journals (see Appendix 1).
- The on-line publications of the following research centers and governmental agencies:
 - University of Wisconsin Center for Cooperatives
 - University of Saskatchewan Centre for Co-operatives
 - British Columbia Institute for Co-operatives
 - Agribusiness Research Institute of the University of Missouri
 - Filene Research Institute
 - Rural Development Agency of the United States Department of Agriculture (USDA)
- The on-line publications of the Research Network for Agricultural Cooperatives (www.ernac.net).

The search generated a list of 915 papers, 120 of which were case studies. Subsequently, those cases that focus on one or more aspects of influence activities in cooperatives were selected. Table 1 presents the resulting sample. A brief description of each case follows.

Table 1
Sample

Case Study	Country	Authors	Hypotheses Tested	Independent Evaluation of Pattern-Matching (Internal Validity)
Cebeco	The Netherlands	Bijman (2005); Goldberg (1989)	H1, H2, H4	H1: 5.45 H2: 6.5 H4: 6.0
Sugar Cooperatives of Maharashtra	India	Banerjee et al. (2001)	H1, H2	H1: 5.10 H2: 6.5
Tri Valley Growers	USA	Goldberg and Carter (1997); Hariyoga and Sexton (2004)	H4	H4: 6.1
Renville Cluster of New Generation Cooperatives	USA	Cook et al. (2005)	H3	H3: 6.15
Saskatchewan Wheat Pool (SWP)	Canada	Goldberg and Kennedy (1988); Painter (1997); Goldberg and	H2, H4	H2: 6.0 H4: 6.0

		Shelman (2005)		
Douro Wine Cooperatives	Portugal	Rebelo et al. (2003)	H7	H7: 6.0
Polish Producer Groups	Poland	Banaszak (2007)	H1, H5	H1: 4.45 H5: 6.0
The Kerry Group	Ireland	Kennelly (2000)	H5	H5: 6.05
Upper Midwest Cooperative Cases	USA	Trechter et al. (1997)	H6	H6: 6.55
Californian Fruit and Vegetable Marketing Cooperatives	USA	Hansmann (1996); Hetherington (1991)	H2, H4	H2: 6.4 H4: 6.15
Co-op AG	Germany	Burt (1991)	H1, H2	H1: 4.75 H2: 6.0
The Berkeley Co-op	USA	Fullerton (1992)	H2	H2: 6.35

Table 1: Sample

CEBECO: Cebeco was a Dutch multipurpose agribusiness cooperative, with over 200 subsidiaries in such diverse industries as feed ingredients, pesticides, plant breeding, eggs, potatoes, meats and airline meals. Its federated structure included 22 local cooperatives with more than 40,000 farmer-members. In 2001, the Royal Cebeco Group celebrated its centenary and an annual turnover of approximately €4 billion. However, two years later turnover had been reduced to €626 million.

SUGAR COOPERATIVES OF MAHARASHTRA: India is the largest producer of sugar in the world and its western state of Maharashtra is India's largest producer. Over 90 percent of the sugar output of the state is produced by cooperatives, most of which were set up with the encouragement and support of the state government since the 1950s. Each cooperative is jointly owned by the growers in the local area and owns crushing and processing facilities that convert raw sugarcane, collected from its grower-members, into finished sugar. This sugar is sold on the market and the resulting revenues, net of collection and processing costs are distributed among the growers.

TRI VALLEY GROWERS COOPERATIVE: Tri Valley Growers (TVG) was a multi-product marketing cooperative in California. Its more than 500 member-owners delivered primarily tomatoes, peaches, peas, pears, and olives for processing and marketing. In 1998, the cooperative's sales revenue reached \$782 million while members' equity was \$125 million. TVG employed 1,500 permanent and 9,500 seasonal personnel. In July 2000, insurmountable financial difficulties forced TVG to file a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code and its assets were sold to various buyers.

RENVILLE CLUSTER OF COOPERATIVES: Located in Minnesota's western Corn Belt, Renville County is home to more than 1,500 family farms. Average farm size is 570 acres and the average market value of products sold per farm is over \$270,000. In 2002, Renville ranked number one in Minnesota in acres of corn for grain and soybeans with 247,053 and 245,244 acres, respectively. Renville County also ranked third in the state in acres of sugarbeets harvested with slightly more than 48,000 acres. Renville's land is productive, but transportation costs often put area farmers at a commodity-trading or marketing disadvantage. Nonetheless, Renville is widely recognized as a highly innovative community, where producers experiment with the latest technologies and business arrangements. Starting in the early 1990s, Renville County became known for several progressive and innovative producer-owned and -controlled cooperatives. Six are new generation cooperatives (NGCs): Southern Minnesota Beet Sugar Cooperative (SMBSC), ValAdCo, Golden Oval Eggs (GOE), Churchill Cooperative, MinAqua, and Minnesota Energy. The City of Renville, home to four NGCs, bills itself as America's "Cooperative Capital".

SASKATCHEWAN WHEAT POOL: In 1996, Saskatchewan Wheat Pool (SWP), the largest grain handling and agricultural marketing cooperative in Canada, changed its ownership structure to become a new generation cooperative. This transition has not been unopposed. Some of the members have suggested that SWP is no longer a real cooperative and that it is not different from any other public corporation. However, the proposal was voted down by the required member majority.

Recently SWP merged with Agricore United. The new company, named Viterra, is the number one grain handler in Canada but also a major player in agricultural inputs,

processed food, livestock and the provision of financial products. The year ending on April 2007 the before taxes earnings of the company were over \$350 millions.³

DOURO WINE COOPERATIVES: By producing over 20 percent of the Portuguese wine, Douro in northeastern Portugal is the most important wine-producing region of the country. Small family farms are the predominant form of organization in local agriculture; on average each grape producer cultivates around 1.17 hectares of land. The 22 wine cooperatives of the region have adopted the traditional cooperative model and represent more than 16,000 wine producers. On average they have 723 members but wine production per member is typically quite limited (58 percent of members produce ten or fewer barrels per year; 82 percent of members produce fewer than 20 barrels per year). Furthermore, 61 percent of cooperative members are 50 years or older. Despite their large membership and the complexity of the coordination and motivation issues facing the Douro wine cooperatives, only half of them have hired professionals to manage the organization.

POLISH PRODUCER GROUPS: Polish farmer organizations called Producer Groups emerged in the mid-1990s. Their principal goal was to market jointly their members' agricultural produce. Among the services provided to member-farmers are buyer identification, contract negotiation, and transportation. These groups have adopted various legal forms (e.g., cooperative, Limited Liability Company) but informal oral agreements have also been used as a means of coordination. Over 60 such groups were founded in the Wielkopolska province of Poland. However, by 2006 20 percent of the groups were disbanded. Furthermore, only 80 percent of the active groups kept performing their main task of organizing joint sales; the remaining groups focused solely on providing various services to their members. Even some of the active groups, however, were not able to negotiate any price premium for their members' output and were selling their products at the same price as non-members farmers; others were able to negotiate as much as a 39 percent higher price premium for their members.

THE KERRY GROUP PLC: Beginning as a collection of small dairy cooperative societies in rural county Kerry, Ireland, in 1974, Kerry Group plc had by 1996, grown to the status of a full-fledged multinational concern with manufacturing operations and markets throughout the world. In 1996, the Kerry Group had sales revenue of \$1.92 billion and an after-tax profit of \$78.4 million. The Kerry Group was led by an experienced management team, most of whom had been with Kerry since its inception as a cooperative in 1974. Indeed, one of the key elements often cited by the local Kerry community for the success of the cooperative was the leadership and vision of its managing director, Denis Brosnan.

UPPER MIDWEST COOPERATIVES: Five Midwestern agricultural cooperatives are examined in the Trechter et al. (1997) study whose names are undisclosed. These local cooperatives focus primarily on grain and oilseed marketing, and input supplies for their members. Between 1990 and 1994 their average sales revenues ranged from \$5 million to \$20 million per year.

CALIFORNIAN FRUIT AND VEGETABLE MARKETING COOPERATIVES: In 2006, 82 marketing cooperatives operated in California. More than half of them marketed fruit and vegetables and had net sales of \$2,143 million (USDA 2006). These cooperatives represent an important institutional arrangement in Californian agriculture. They range

from the simplest organizational form of a bargaining association to highly complex multi-product marketing cooperatives.

CO-OP AG: German consumer cooperatives developed in a pattern similar to the British Rochdale model, spreading rapidly in German cities after 1890. After the Second World War they were rebuilt and in 1960 the total sales of Western Germany consumer cooperatives rose to 3.2 billion German Marks. At the same time they were the country's third-largest employer by employing 80,000 workers and executives. The largest consumer cooperative of Western Germany was Coop AG. In January 1988 it was the fourth largest retailer with annual sales of more than 10 million Marks. However, in 1991, following a financial scandal the cooperative went bankrupt and the group's assets were sold to various competitors.

THE BERKELEY COOPERATIVE: Commencing in 1937, the Berkeley Co-op reached a height of 116,000 members, mostly family households who purchased 82 million dollars worth of goods and services a year. Despite its success, several factors led gradually to its downfall in the late 1980's. Heterogeneous member preferences, a vague objective function, and the lack of efficient communication of policies to members were among the chief reasons behind the cooperative's demise in 1988.

Measures

The data varies from qualitative case descriptions to quantitative indicators. Scores of a variables' values are based as much as possible on data, not on an author's conclusions (Rosenthal, 1995 and Dul and Hak, 2008). In order to avoid research bias in data analysis and interpretation all study findings were subjected to a group of five outside researchers-evaluators who concluded that the findings appear to be logical and free from prejudice (Johnston et al. 1999).

Analysis

Data analysis in case study research entails 'pattern matching' (Dul and Hak 2008, 95). Pattern matching entails comparing an observed pattern of scores with the pattern predicted by the hypotheses (Dul and Hak, 2008). It is a non-statistical test of the correctness of hypotheses. Pattern-matching is used in order to ensure internal validity by establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships (Yin 1994). For each of the theoretically-derived hypotheses all factors that may interfere in the stated causal relationship were considered. Subsequently, each case study was assessed. The following list includes the questions addressed during pattern-matching:

- Is the inference correct?
- Have all the rival explanations and possibilities been considered?
- Is the evidence convergent?
- Does the evidence appear to be sound?

The same questions were posed to the abovementioned evaluators who were asked to assess each case on a seven-point scale and the average for each hypothesis with respect to each case was calculated⁴ (Table 1). When more than one case was used to test a hypothesis, the mean of the average scores across evaluators was calculated. The final approval of pattern-matching was based on the rule of thumb: accept scores equal or higher than five.

Results

This section presents the results from comparing the data of the cases with the hypotheses derived from theory.

The cases are inconclusive regarding hypothesis 1. The case studies of Cebeco, Indian sugar cooperatives, and Co-op AG show that the influence costs incurred by cooperatives tend to increase as additional members join their membership. It is unclear, however, whether this result is due to a larger number of members or other factors such as increased member heterogeneity when new products are added to the product portfolio of the cooperative. On the other hand, when member preferences are homogeneous a larger membership may result in lower influence costs. In Polish producer groups, which represent a form of cooperative entrepreneurship, intra-organizational rent-seeking is reduced as additional members join the association (Banaszak 2007). Therefore, this case indicates that it may not be the absolute size of membership that boosts influence costs.

The reported case studies strongly support hypothesis 2. Membership heterogeneity makes cooperative decision-making cumbersome by boosting member influence attempts. In principle, revenues are supposed to be paid out to the growers as a uniform price so that each member's share is proportional to the amount of sugarcane delivered. In practice, members who are powerful within the cooperative will try to capture more than their fair share of the revenues. In the sugar cooperatives of Maharashtra, India, the rent-seeking behavior of large-volume producers has resulted in the underpricing of sugarcane. This inefficient policy is ascribed to both the large number of producers and the diverging preferences of large- and small-volume producers of sugarcane who participate in the local cooperatives (Banerjee et al. 2001). Influence costs are incurred even by organizationally simple cooperatives. In California, price adjustments for quality and condition of fruit delivered by members, price differentials for early and late varieties, and the arrangements to be made to compensate growers whose fruit is not sold have been sources of conflict among the members of fruit bargaining associations (Hansmann 1996).

In a nut marketing cooperative, contrary to the organization's bylaws, a large-volume member demanded that it be allowed to deliver to the cooperative those grades for which the cooperative was paying the higher price and to deliver the remaining grades to an investor-owned processor who was paying for those grades a price higher than the cooperative. The member was large enough to threaten to withdraw and to establish his own processing facility. The board decided to accept this demand to the interest of the remaining members of the cooperative (Hetherington 1991).

In a totally different setting, consumer cooperatives face similar problems. The case of the Consumer Cooperative of Berkeley illustrates the fatal contribution of influence activities to the demise of a collective enterprise. A book published by the University of California, presents the views of various cooperative leaders and stakeholders on the reasons behind the dissolution of the cooperative (Fullerton 1992). Influence costs imposed by a series of wrong managerial and board decisions played a fatal role and led to the gradual demise of the Berkeley Cooperative. Heterogeneous member preferences over the goods and services supplied made reaching consensus on crucial operational and strategy decisions time-consuming and unmanageable.

The consumer cooperative "co-op AG" in former Western Germany provides additional support for this hypothesis. Its successful evolution since 1974 attracted a large,

highly heterogeneous, membership unable to monitor management efficiently. As a result decision-making gradually became very inefficient and managers were able to implement policies that advanced their personal interests but led to the demise of the cooperative (Burt 1991).

The phenomenon observed in the Minnesota town of Renville, USA, provides support for hypothesis 3. The Southern Minnesota Sugar Beet Cooperative was the first to develop and adopt what is today known worldwide as the innovative 'new generation cooperative' (NGC) organizational structure. Subsequently, many farmers from the Renville area started organizing value-added NGCs in various commodities. Cook et al. (2005) studied nine of these cooperatives. They indicate a positive relationship between the age of the average cooperative member and the influence costs incurred by the cooperative.

Hypothesis 4 is supported by the evidence reported in the Cebeco and Saskatchewan Wheat Pool case studies. In Cebeco, the Dutch multi-purpose agribusiness cooperative, achieving the right balance between influence costs and listening to what members have to say about the organization's affairs proved to be an unattainable goal. The high level of influence costs is mainly attributed to the large number of highly heterogeneous members, a non-representative voting system, and the inability of members to exercise effective control over management (Bijman 2005). Their was scope for substantial influence activities in Cebeco was due to vaguely defined property rights producing investment disincentives for members, altered consumer preferences, and lack of control over crucial stages in several of its supply chains.

The involvement of the Saskatchewan Wheat Pool in many different industries resulted in a highly heterogeneous membership. Combined with the withdrawal of government support in the 1980's the heterogeneity-induced influence costs forced the cooperative to restructure in order to become more market-oriented (Goldberg and Kennedy 1988). Developments were more dramatic in the case of Tri Valley Growers. The bankruptcy of the cooperative is partially explained by its failure to implement separate pools for fruits and tomatoes (Hariyoga and Sexton 2004). The extraction of rents from fruit producers to compensate tomato producers who received low prices for their crop resulted in high influence costs and inefficient responses to rapidly changing market conditions.

Cooperative leaders and managers play a crucial role in minimizing rent-seeking activities. The evolution of the Irish Kerry Group provides support for hypothesis 5 (Kennelly 2000). During the mid-1980s the local dairy cooperative was transformed into a multinational company. While the majority of members supported this conversion, it was not completely without opposition and influence cost-generating internal conflicts. The senior management team headed by CEO Denis Brosnan played a crucial role in communicating the prospective benefits of their proposal to members and finally convincing them to vote for it.

In the case of Polish Producer Groups influential, experienced leaders contribute to the success of their organizations at least in two ways (Banaszak 2007). First, they play an active role in channelling information in an efficient, influence cost-minimizing way. Second, they minimize the negative impact that a large membership size has on communication and coordination costs. However, how successful managers are in these

roles depends crucially on their individual personal qualities. In other Polish Producer Groups an extremely powerful manager has resulted in the demise of the organization.

These findings accord with the personal managerial experience of Cook (1994) who argues that the 'entrepreneur,' 'disturbance or conflict handler,' 'negotiator,' and 'resource allocator' decision making roles of management are very different in cooperatives than in investor-oriented firms. The more diffuse objective function and the vaguely defined property rights of traditional cooperatives contribute to a more complex decision matrix. Particularly, cooperative managers need to possess special interpersonal skills in dealing with intra-organizational conflicts. As the author observes: 'The user-owner uniqueness of cooperatives forces a cooperative manager interested in minimizing conflicts between members to take a more integrated view of the fixed costs of the cooperative's user-owner when attempting to optimize the vaguely defined objective function of the association. It also encourages cooperative managers to be more interdependent and interactive with users-owners in executing interpersonal and leadership roles. Consequently, conflict resolution for the cooperative manager probably means peace-keeping sojourns to the country more frequently than his/her counterpart.'

Support for hypothesis 6 is provided by Trechter et al. (1997). Adopting a multiple-case study methodology, they compare the impact of managerial compensation on the efficiency of cooperative decision-making. Their findings from five cooperatives in the upper Midwest of the US suggest that the compensation method is less important than the manager's perception that the level and composition of her salary are fair. Managers perceiving their salary as being equal to or higher than the salary they could earn in another occupation tend to implement more efficient policies. Subsequently, less influence attempts are observed in such cooperatives. As reported in a survey of Midwestern agricultural cooperatives, boards choose compensation policies that can be sustained in the long run and encourage managerial actions that, among other things, minimize influence attempts (King et al. 1997).

The case of Portuguese Douro wine cooperatives provides evidence supporting hypothesis 7. In Mediterranean and South American countries many agribusiness cooperatives are managed by one or more of their members, usually on a part time basis. Cooperatives in the Douro wine region of northeastern Portugal represent such a case. Rent-seeking-induced decision-making inefficiencies along with risk capital accumulation challenges facing these organizations are higher when compared to cooperatives who hire non-member, professional executives to run their business. Fuelled by a unique combination of socio-economic characteristics and farmer demographics, the resulting horizon and free rider problems give rise to internal conflicts over which the members battle. The lack of managerial and/or board experience constrains the ability of member-managers to implement influence-minimizing policies.

Even in some of the most recently founded wine cooperatives in the Douro region which hire professional executives, the manager has limited discretionary power in setting cooperative strategies and policies. Entrapped by coalitions of members-owners who pursue their group interests managers have difficulties in managing areas such as the capital structure or member relations. Two of the most pressing issues that these cooperatives have to deal with are investment disincentives facing members, and influence battles taking place between competing groups of member-owners (Rebelo et al. 2003).

Conclusions and Future Research

What are the sources of influence costs? This article contributes to addressing this question by focusing on the governance structure cooperative. Cooperatives are informative regarding the sources of influence costs due to the multiplicity of principals. Members / principals collectively delegate substantial discretion to an agent / CEO, subsequently eliciting influence activities by members. The case studies presented indicate that heterogeneous member preferences contribute substantially to higher influence costs. Older average member age and investment in multiple product lines also result in higher influence costs. At the same time, cooperatives with well-paid, powerful and professional managers incur lower influence costs. The impact of membership size on the level of influence costs is ambiguous.

This research offers a preliminary test of the theoretically derived hypotheses by determining what the existing case studies say about them. It is preliminary because various hypotheses are addressed only once or twice (see Table 1). One of the implications for future research is therefore that series of replications are needed. One-shot tests of hypotheses are valuable, but they should be treated with caution due to either the case not being representative of the domain or the possibility that an erroneous conclusion has been drawn. Having replications with similar conclusions will increase the confidence in the correctness of the findings. Another limitation of this research is that most cases do not address all aspects of the studied phenomenon. Thus considering all relevant factors that might affect a causal relationship was difficult. A remedy for both limitations would be to use a true multiple-case design.

The results suggest that certain aspects of management and members have to be highlighted in future research regarding influence activities in cooperatives. Three aspects of management are addressed. First, the case study evidence reported suggests that managerial compensation may act as an important influence cost-minimizing device. An increase in the manager's salary leads to a decrease in the influence costs incurred as long as the manager perceives this salary as fair relative to the compensation he or she can get in an alternative occupation. A straightforward implication is that well-paid cooperative managers tend to initiate policies that minimize the influence costs incurred by agribusiness cooperatives. This result is consistent with the literature on efficiency wages (e.g., Shapiro and Stiglitz 1984). By paying a salary higher than her next best alternative occupation, the principals attempt to provide the manager with incentives to minimize influence costs. An apparent problem is that it is impossible for all cooperatives to pay higher wages than all other cooperatives. Milgrom and Roberts (1992) propose unemployment as an escape from this dilemma. A manager who loses a job is not immediately able to find another and so suffers a loss, even though once he or she finds employment again, it is at the same high salary as before. Of course, the output that could have been produced by these temporarily unemployed represents a social cost.

Second, the role of management in minimizing harmful intra-cooperative rent-seeking activities is also highlighted. Acting as conflict handlers, managers that exert power over members are able to function in the best interest of the cooperative firm. The flipside of this, however, is that extremely powerful managers may be difficult to monitor and thus may advance their own agenda to the detriment of the organization. Finding the right balance between managerial power and the implementation of procedures that serve the common good may turn out to be difficult.

Finally, the degree of separation between managerial and board roles also affects the extent of member influence attempts. In some countries agribusiness cooperatives are managed by one or more of their members. According to the case studies examined, this practice may give rise to influence costs not incurred by cooperatives which are run by professional managers. In combination with structural and demographic characteristics, internal management may explain the difficulties these cooperatives have in ameliorating vaguely defined property rights-induced problems such as the free rider, horizon, and portfolio constraints.

Two aspects of members are addressed. First, it is the heterogeneity of member preferences rather than membership size resulting in intra-cooperative, influence cost-boosting decision making. A related conclusion of the case studies examined is that multi-product cooperatives tend to incur higher influence costs. These results match well the observed trend toward single-product marketing cooperatives with less heterogeneous members (Chaddad and Cook 2004).

Second, cooperatives whose average member faces a horizon constraint due to older age incur higher influence costs than their counterparts with a younger membership. An implication of this observation is that cooperatives that issue transferable and appreciable equity instruments may be able to ameliorate this aspect of the influence costs problem. More generally, new generation cooperatives have partially solved the influence costs problem by reallocating their income and decision rights.

Finally, two directions for future research beyond the specified hypotheses are indicated by the case studies: organizational change and governance structure. First, influence activities are intended to have an impact on the decisions made by the organization. A decision may result in no change but most often it entails that adjustments or changes have to be implemented. The cases in our sample show that cooperatives respond in different ways to inefficiencies. For example, Cebeco divested its poorly operating units and focused on its primary strengths. Other cooperatives fail to respond to the challenges imposed by membership heterogeneity. The demise of Tri Valley Growers, the Berkeley Cooperative, and the Co-op AG are examples of this failure. This raises the question of what determines organizational change. The CEO and member heterogeneity are likely to play an important role.

Future work has to take into account additional issues regarding governance structure into account. Governance structure parameters that may alter the incentives of cooperative stakeholders to engage in resource-consuming influence activities include the type of membership structure (open or defined membership), the particular voting system adopted (e.g., one-member, one-vote versus proportional voting), the pooling system (single versus multiple pools for products, capital/risk, etc.), the property rights structure of the cooperative (e.g., the role of transferable and appreciable ownership instruments), and the separation of managerial and control functions. Behind these issues lies the need to allocate decision and income rights to cooperative stakeholders so that a diverse set of challenges are met. For example, the allocation of decision and income rights should ensure that major decisions are consonant with the cooperative's strategy, that they are financially well-justified, that the evaluation of decisions are not excessively tainted by the personal and career interests of the managers involved, and that the process taps the knowledge of those who are best informed. Yet, these individuals are often the very same people whose personal interests are most affected by this allocation. Another fruitful

avenue for future research is comparing the influence costs incurred by other governance structures such as franchising systems, collective trademarks, relational contracting, and alliances to those observed in cooperatives and IOFs. This will shed light on the key differences of hybrids with respect to the level of influence activities each of these governance structures brings upon itself.

Endnotes

1 The agribusiness cooperative is one of the many forms of producer-owned firms (POFs) commonly observed in the production and marketing of food and beverages. Several scholars have studied its unique governance structure. (e.g., Cook 1995; Hendrikse and Veerman 2001).

2 The interaction of multiple principals is one of the key features of hybrid governance structures (Hendrikse 2007).

3 Information on recent developments regarding SWP and Viterra was accessed on December 8, 2007, at: www.viterra.ca.

4 The names and scores of the independent evaluators are available upon request from the authors.

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Appendix 1

List of Journals Searched

Agribusiness: An International Journal
Agricultural and Resource Economics Review
Agricultural Economics
Agricultural Finance Review
American Economic Review
American Journal of Agricultural Economics
Annals of Public and Cooperative Economics
Canadian Journal of Agricultural Economics
Case Study Research Journal
European Review of Agricultural Economics
Finnish Journal of Business Economics
Industrial and Corporate Change
International Food and Agribusiness Management Review
International Journal of Retail and Distribution Management
Journal of Agribusiness
Journal of Agricultural and Applied Economics
Journal of Agricultural and Resource Economics
Journal of Agricultural Economics
Journal of Chain and Network Science
Journal of Comparative Economics
Journal of Cooperatives
Journal of Economic Behavior and Organization
Journal of Economic Literature
Journal of Economic Perspectives
Journal of Food Distribution Research
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The International Journal of Co-operative Management

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Philipp Koellinger and Christian Schade

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Dirk van Dierendonck and Rob Groen

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Muel Kaptein

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Entrepreneurship Education and Training in a Small Business Context: Insights from the Competence-based Approach

Thomas Lans, Wim Hulsink, Herman Baert and Martin Mulder

ERS-2008-028-ORG

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The Relationship between Technology, Innovation, and Firm Performance: Empirical Evidence on E-Business in Europe
Philipp Koellinger
ERS-2008-031-ORG
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The Relationship between Ethical Culture and Unethical Behavior in Work Groups: Testing the Corporate Ethical Virtues Model
Muel Kaptein
ERS-2008-037-ORG
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Influence Costs in Agribusiness Cooperatives: Evidence from Case Studies
Constantine Iliopoulos and George Hendrikse
ERS-2008-040-ORG
<http://hdl.handle.net/1765/12872>

The Locus of Innovation in Small and Medium-sized Firms: The Importance of Social Capital and Networking in Innovative Entrepreneurship
Willem Hulsink, Tom Elfring and Wouter Stam
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