Strategies and Structures in the European Dairy Co-operative Industry

Jerker Nilsson and Petri Ollila

Dairy processing seems to have substantial economies of scale. Moreover a development towards differentiated business gives advantages to large dairy processors. Given these trends, it is hypothesised that dairy co-operatives are gradually losing their raison-d'être as co-operative firms. On the basis of some prior studies, this study discusses the implications that the co-operatives' growth have for the members. It shows that the trend towards differentiation, large scale operations and internationalisation is so strong that members have difficulties governing and financing the co-operatives. Reorganisational measures may occur among the traditionally organised dairy co-operatives.

Introduction

The European dairy industry is undergoing major changes. Numerous mergers as well as acquisitions have resulted in fewer and larger dairy processors. These structural changes are linked to the dairy processors' market strategies. Dairy processors see a need to adapt their strategies when their markets are undergoing changes. Moreover changes in the agricultural policies imply that the markets for dairy products are becoming more competitive.

This study deals with the changes of the dairy processors' market strategies and organisational structures. The aim is to identify the implications that the dairy co-operatives' growth has for the members' possibilities to control the operations and to finance them.

The point of departure for the discussion is Figure 1. It expresses a contingency approach to organisational design (Miles and Snow, 1978). The top three boxes state that when market conditions change, firms have to adapt their strategies accordingly (Nilsson and Ohlsson, 2007). For these market strategies to be implemented well, the firms have to modify their organisational attributes. This sequence is necessary in the long run; therefore, the downward-pointing arrows are fat. In the short run, ie before the adaptations have been conducted, it is necessary to use existing resources to create best possible market strategies and to try to influence the market – see the thin upward-pointing arrows.

The bottom box of Figure 1 states that also member conditions exert an influence when the co-operatives are conducting market adaptation measures. Members may find that some market adaptations imply that the co-operatives no longer operate in their interest, and thus involvement, trust, solidarity and loyalty are fading. Further, the members may not be able to control the business operations of the co-operative, or not have incentives to invest time and effort in assessing the business, or want to free-ride by hoping that others will conduct the necessary control, etc. Finally, members may not have enough capital to finance the expansion of their co-operative, or they may not be willing to allow external investors to invest sufficient amounts, or if they allow external investors, they may not be willing to remunerate these investors enough to attract sufficient capital.

The figure indicates that problems may accrue when the two arrows, pointing at the "co-operative organisational model" box imply opposing signals. Therefore the co-operative has to adapt in different directions, and so it becomes poorly adapted to both the market and the members.

The article is structured in accordance with Figure 1. The next section discusses the market strategies that dairy processors are choosing to be competitive. In the subsequent section, the co-operatives' choice of organisational structures is presented. Then follows an account that presents farmer-members' preferences and opinions in terms of control of the co-operatives and financial obligations. The article ends with some conclusions.

Strategies

The most recognised classification of market strategies is the one presented by Porter (1980). It comprises three main classes, namely cost leadership, differentiation, and focus strategies. All these three are common in the dairy industry, and all of them are used by dairy co-operatives.

Both the cost leadership strategy and the differentiation strategy are best pursued if the

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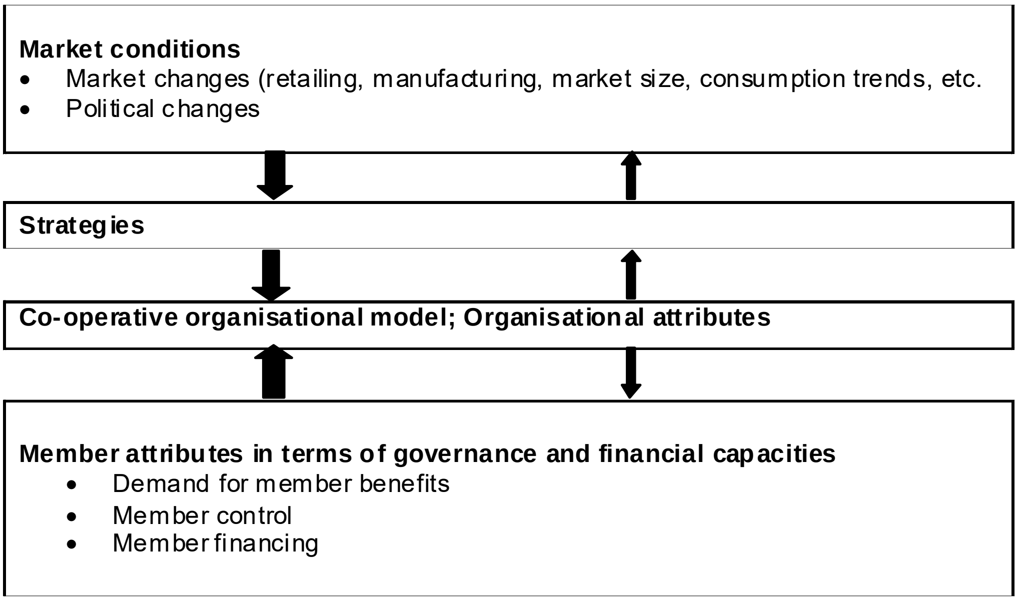

Figure 1: Influences on co-operative organisational models

processing firms enjoy economies of scale. Large-scale operations are important for most dairy processors. There are different ways of attaining growth. Table 1 presents six growth strategies as well as the firms' motive for the choice of strategy, the strategic fit between the partnering firms and the resource needs that are needed for the strategies. These concepts are rooted in the Resource-Based Theory (see for example Wernerfelt, 1984; Das and Teng, 2000).

An observation is that one expansion strategy does not exclude another one. Arla Foods, for example, is found in all the six categories of Table 2. At the same time it must be recognised that the alliance types are interrelated. If Arla Foods were not so large it would be less interesting as a partner in a collaborative agreement and would have fewer financial resources for acquiring other firms. A large size stimulates even more growth, and small processors have small chances to expand in other ways than by merging with or being bought by large firms.

The six growth strategies are not substitutable, ie, they fulfil different purposes. The ones that produce the most strength are mergers and acquisitions, as the result is a single firm with good integration between all business activities. Joint ventures may be risky, eg, the partner may become acquired by another firm; the share owners may assume other interests than those they had when the shares were bought; collaborative agreements can easily be broken; licensing does not give much power.

Different types of dairy processors tend to use different types of alliances. Co-operatives are more prone to merge, while IOF (Investor-Owned Firm) dairy processors tend to buy other firms, as is indicated in Table 2. During the five-year period covered by the table, the three co-operatives (Arla Foods, Friesland and Campina) have conducted many mergers and joint ventures but relatively few acquisitions. The only IOF in the table, Danone, has not merged even once but has acquired ownership in many other firms – five complete acquisitions and bought shares in other firms on twelve occasions. The three co-operatives have bought shares in other firms only to a limited extent.

A hypothesis is that the capital structure of the firm has a strong influence on the dairy processors' choice of growth strategy. IOFs can easily expand their capital base, while co-operatives have difficulties doing so. Arla Foods is almost completely financed by unallocated equity capital, and the members have no incentive to invest in the co-operative. The two Dutch co-operatives have a larger amount of individualised capital and the members have incentives to invest. Friesland also has external financiers. This may be a reason why Friesland and Campina have made more acquisitions than Arla Foods and why Arla Foods has had to compensate its capital constraints by involving itself in more joint ventures.

One way to obtain large scale is internationalisation, ie, expansion to other markets. Guillouzo and Ruffio (2005) analysed 33 EU dairy co-operatives' internationalisation.

Alliance type	Motive		Strategic fit		Resource	
Merger	Obtain scale advantages, utilise physical resources, create synergies, share risk, share cost, create bigger capital bases, and strengthen position toward customers and competitors.	Arla – MD Foods 2000 Friesland – Coberco 1997 Campina – MKW 2000	Total integration requires good fit. Both parts in control. Compatible cultures essential, like organisation models and compatible goals.	Brand position– export competence. Finances– modern structure. Brand pos – Operational activities and capital.	Market position, strong brands, good finances etc. Compatible competences and resources.	Mergers have been applied by all three co-operatives, but not by Danone. Financial means not necessarily a key resource.
Acquisition	Obtain scale advantages, utilise physical resources, share risk, share cost, and create bigger capital bases. International expansion, home market expansion, and take control over competitors.	Arla Foods – Skånemejerier 2000 Danone – Shape/Uniq Plc 2002 Friesland Coberco – Nutricia Dairy & Drinks 2001 Campina – Superlife 2002	Total integration requires good fit. Acquirer in control. Acquires objects with concepts that fit the firm strategy.	Finances– Market position. Finances– Market position. Finances– Market position, strong brands. Finances– Market position, strong brands.	Financial capital, ability to take some risk.	Danone, Campina & Friesland Coberco have done several acquisitions. They all have capacity to raise necessary financial means.
Joint Venture	Obtain scale effects and international expansion, create synergies, and strengthen position toward customers and competitors.	Arla Foods – Fonterra 2001 Danone – Rachid 2001 Campina – Tuffi Emzett 2000	Strategic fit for the resources involved in JV is crucial. Separate legal entity. Medium integration. Control allocated after contract and equity share. Parent firms should not be competitors.	Synergies in distribution, marketing & sales. Strong brands-market position. Complementing markets.	Processing sites, good market position, strong brands, good management skills etc.	Arla Foods dominates this category. Arla Foods has capitalised on its market position and competence to successfully expand through joint ventures.
Share	A step toward a complete take-over, influence in decisions and thereby affect one's own market situation.	Arla Foods– KronOst 2000 Danone– Stonyfield Farms 2001 Friesland Coberco – Napolact 2002 Campina– Emzett 1999	Important if the purchasing firm buys a significant share. Can be a step towards full take over. Level of integration is low, (depending of volume of shares). Control if >50%.	Finances– Competence Finances– Market position & strong brands Finances– Market position Finances– Market position.	Financial capital, ability to take some risk.	Danone strongly dominates the appliance of shares. Danone has the most favourable financial structure to raise capital to buy shares.
Collaborative agreement	Strengthen market position, international expansion, sale and synergy effects.	Arla Foods – Skånemejerier 2002 Danone – Shanghai Bright Dairy 2000 Campina – Agrimark 2001	Strategic fit is not of great importance but for the purpose of the alliance that is quite narrow. Level of integration is low.	Strong export market position – Processing capacity. Synergies Processing capacity.	Processing capacity, market position with growth potential etc.	None of the four firms apply co-operative agreements very often. Here a good match is more important.
Licensing	Narrow purpose. Achieve standardisation of a patented product, utilise innovative product optimally or overcome weaknesses without having to develop the solution.	Valio	Level of integration is low.	Attractive product – Processing possibilities & market.	Attractive patented product, market position, spared capacity etc.	Requires a genuine attractive product that can be patented.

Table 1: Explanations for the choice of strategic alliance types with Arla Foods, Campina, Friesland Coberco and Danone as empirical illustrations (1998-2002) (Source: Hedberg, 2003, p39)

The authors identify six main strategies although three of them can be divided into two types. All these strategies aim at attaining larger size but in different ways and for different purposes.

- The co-operatives, pursuing a **Raw milk procurement** strategy, are doing so because they need larger volumes for serving their customers appropriately.
- The **Market diversification** strategy has the purpose of expanding the operations by selling existing products to foreign markets.
- The **Commercial asset** strategy expresses economies of scale in the product development activities, ie gaining revenues from the sales of licenses.
- **Activity oriented leadership** implies that a firm, working in a well-defined market with specialty products tries to expand the market size, thereby acquiring economies of scale.
- **European expansion of national markets** involves exports of products, most often but not necessarily to neighbouring countries.
- **Multinationalism** means that the co-operative sells large volumes of low-processed products in the world market, in spite of this market being extremely competitive.

Guillouzo and Ruffio (2005) also specify some organisational attributes that are necessary for a co-operative to succeed with the chosen strategy. The general impression is that these firms must be quite advanced in terms of product quality, financial assets and human resources. Certainly not all co-operatives could have success with these strategies. Especially the most ambitious growth strategies – European expansion of national markets, and Multinationalisation – are highly demanding. The resource types that are of special importance seem to be product portfolio, product quality, financial resources, brands, and technical knowledge. All these resource types are mainly found in the co-operatives, which are already large and have good financial strength.

In a study of the expansion strategies of the 15 largest dairy processors in the European Union, van der Krogt, Nilsson and Høst (2007) identify some patterns. Seven of the processors are co-operatives while eight are investor-owned firms. The expansion strategies were:

1) Mergers
2) Acquisitions
3) Strategic share holdings
4) Joint ventures
5) Licensing
6) General collaboration agreements.

During a five-year period (1998-2002) the 15 dairy processors conducted 198 expansion activities.

Distinctive differences between the two types of organisation were found, and these differences were shown to be due to two attributes, inherent in the organisational structures. Co-operatives are by nature **risk-averse**, the reason being that the farmer-members consider the co-operative to be their defence against problematic markets, and so they do not want their co-operative to follow an offensive strategy. Further, members are neither able, nor willing, to invest sufficiently large amounts of capital in the co-operatives, and thus, there is a **capital constraint**, preventing the co-operatives from conducting costly growth strategies.

Co-operative firms prefer mergers, collaboration agreements, joint ventures, and licensing. All of these are low in terms of risks, and they demand limited amounts of equity capital. Investor-owned firms focus on take-over strategies – acquisitions and share holdings, both of which involve large investments.

A conclusion from the studies presented above is that the large dairy processing firms want to expand, seemingly without any limits. The co-operatives have, however, a more limited repertory of action than the IOF competitors have.

Co-operative organisational models

Dairy co-operatives' growth as a response to changing markets has resulted in a strong need for capital. As many scholars have pointed out, acquiring capital is not the most salient characteristic of the co-operative business form. Members are often not willing to increase their self-financing to the extent required for expansion needs. According to Vitaliano (1983), among reasons for members' low willingness to invest in their co-operatives are free rider,

Table 2: Number of alliances by type made by four firms in the European dairy industry 1998-2002 (Source: Hedberg, 2003, p33)

Firm	Number of alliances by type						
	Mergers	Acquisi-tions	Joint ventures	Shares	Collaborative agreements	Licensing	Sum
Arla Foods (DK & SE)[1]	3	1	8	3	2	2	**19**
Friesland (NL)[2]	2	7	-	3	-	-	**12**
Campina (NL)[3]	2	7	1	2	1	-	**13**
Danone (FR)[4, 5]	-	5	1	12	(1)	-	**19**
Sum	**7**	**19**	**10**	**20**	**4**	**2**	**63**

1 Arla Foods is the largest dairy processor in Denmark and Sweden. It is a co-operative.
2 Friesland Coberco was the largest dairy processor in the Netherlands. It merged in early 2009 with Campina, whereby the world's largest dairy co-operative was formed.
3 Campina was the second largest dairy processor in the Netherlands. It merged in early 2009 with Friesland Coberco, whereby the world's largest dairy co-operative was formed.
4 Danone is the largest dairy processor in France. It is a limited liability company, listed at the Stock Exchange in Paris.
5 The brackets express that Danone's collaborative agreement is only minor.

horizon and portfolio problems because of non-transferable ownership restricted to members, and that the residual is distributed according to patronage rather than the amount of investment. Even if members were willing to self-finance, Albæk and Schultz (1997) argue that the financing of an investment by retained patronage refunds would lead to efficiency distortion unless the financing rule is according to members' "size" independent of the voting rule.

The need of larger operations and market power includes a controversial interest of maintaining membership control. In their categorisation of co-operative models Chaddad and Cook (2004) make a distinction between the ownership rights (residual claim) and the control rights. Members' interests may be a hindrance to market adaptation. This is especially relevant in co-operatives that have a sizeable amount of unallocated capital.

Hendrikse and Veerman (2001) argue that in addition to capital needs, new organisational forms are also developed to take better care of transaction specific assets. In order to manage the problem of capital needs for growth, co-operatives have introduced several organisational solutions. Van Bekkum and Bijman (2006) have categorised co-operatives, which have a need for larger amounts of equity capital:

1. **Internally tradable shares:** In addition to retained patronage refunds, many co-operatives have introduced another possibility for members to finance their co-operatives. Even though this way of financing the co-operative to some extent restricts the principle of paying the farmers according to their patronage, the membership retains full control. Examples of such dairy co-operatives are Campina in the Netherlands and Dairygold in Ireland. Nilsson and Bärnheim (2000) report about a similar kind of arrangement in the Swedish dairy co-operative Skånemejerier. In many co-operatives such internally tradable shares are connected with delivery rights. If so, the control right is indirectly affected in the long run.
2. **Externally tradable bonds:** External subordinate bonds are external investments that have a lower rank as capital than the retained patronage refund. Such bonds are a way of gaining external capital without affecting members' control right. A problem with such bonds is that they often classify as debt rather than equity. Arla Foods has financed the acquisition of its UK operations by using such bonds with fixed dividend.
3. **External corporate investors:** External investor as special members or shareholders is a model applied in some co-operatives. A well performing co-operative with innovative product ideas may provide a low-risk and profitable business for investment. However, this organisational model includes two sources of potential conflicts. First, who decides how much will be paid to members

according to use, compared with the amount paid to investors as interest? Second, if member interests conflict with profitability requirements, who decides what is the meaning of member sovereignty with respect to control rights? Despite potential conflicts, some dairy co-operatives like Sodiaal in France have applied such a model.

4. **Public listing with preferential shares:** A way of coping with the conflict of member and investor governance is to have several sets of shares having different decision-making power. In this way member control can, to a large extent, be maintained and still such external capital can be regarded as equity. However, the conflict about how to divide the surplus remains. This conflict may hamper the external investors' willingness to buy shares. Van Bekkum and Bijman (2006) report that Dairy Farmers of America have applied such a model. The Finnish meat processing co-operative LSO has formed a separate company for meat processing that is financially 37 per cent owned by the co-operative but has about 85 per cent of voting rights. The rest of the ownership is traded in the Helsinki Stock Exchange. Thus, LSO has kept the most important co-operative-ruled function – the meat deliveries – in its own hands and has become a kind of holding company for the processing function together with external investors.
5. **Conversion into farmer-owned IOFs:** Chaddad and Cook (2004) regard IOFs as the other polar end to the traditional co-operative model. At a quick glance, one may believe that there are no differences between a co-operative and an IOF owned by the suppliers. However, there are fundamental differences. Firstly, in an IOF the surplus is divided according to capital invested whereas a co-operative divides it according to patronage. Secondly, the decision-making power is divided according to the number of shares instead of the often applied "one member one vote" principle. In an IOF also the principle of free entry may be restricted. An advantage is that in an IOF there is an objective way of measuring the performance, which is not possible in a co-operative. The Finnish Dairy co-operative Valio has moved towards a share company structure as it is owned by local and regional dairy co-operatives. This development may be interpreted as logical as the relative advantage of the co-operative form diminishes after milk collecting and delivery to the processing phase (Ollila 1989, p260). At the same time the processes become increasingly complex and, thus, more difficult for members to control the performance in the co-operative form "hierarchical decomposition" (Williamson 1981).
6. **Entire or partial public listing:** Complete public listing has been exercised a few times in situations where a co-operative has been in serious financial trouble. Even such attempts have been temporary as in the case of Australian Dairy Vale Foods, which was soon bought by another company. Despite latent conflict between co-operative members and investors through stock exchange, partial public listing has been successfully applied in a few co-operatives, as mentioned above.

Increased capital needs for growing operations has been the most important reason for the various co-operative organisational models described above. The explanation for the variety of organisational models is membership's desire to maintain co-operative features, especially the control rights. If either the control rights or the ownership rights have been at stake, the control right has been regarded as more important. However, those two sets of rights are to such an extent inseparable that their complete separation seems to be difficult to avoid. Because the ownership means residual claimants, this is always a function of the control right.

The growth of dairy co-operatives also means increasing heterogeneity in the memberships. This may become a growing hindrance for member governance. Even more problems may arise when co-operatives become transnational (Nilsson and Madsen, 2007). Danish-Swedish dairy co-operative Arla Foods has indicated difficulties in uniting memberships in two countries.

Member attributes in terms of governance and financial capacities

The preceding sections argue that agricultural co-operatives tend to become ever larger and get ever more complex structures and strategies. The memberships become extremely large and heterogeneous. This section proceeds to discuss the members' reactions to increased size and increased complexity.

Based on observations of the changes among many of the major U.S. agricultural co-operatives during the last decade, Hogeland (2006) suggests a diagnosis. She claims that, in order to gain strength relative to the competing IOFs, the co-operatives are striving for large size and diversified operations, whereby the members do no longer feel affiliated to their co-operatives. In the eyes of the members, co-operatives have adopted almost all the traits of the IOF competitors. Thus, the traditional co-operative culture has vanished. This observation is in line with several other observations (Cook, 1995; Fulton, 1995; Bager, 1996; Harte, 1997; Nilsson, 1998; Holmström, 1999). Lang (2006) provides a detailed account of the process that resulted in the collapse of one traditionally organised co-operative, Saskatchewan Wheat Pool.

Nilsson, Kihlén and Norell (in press) present an empirical test of these propositions, based on a survey among members of a large and complex Swedish co-operative, Lantmännen. The authors find that the members do not understand the business operations of the co-operative very well. The members are little involved in the co-operative and they have limited trust in the board of directors and in the management. Finally, the authors investigate whether it is possible for the co-operative to conduct remodelling measures such that the members again would be involved and have trust, but they find that this is not the case. Hence, the findings support what Hogeland (2006) suggests.

It is often said that members of a co-operative first and foremost appreciate good prices and other economic conditions, which contribute to profitability in their farm operations (Fulton and Adamowicz, 1993; Gray and Kraenzle, 1998; Karantininis and Zago, 2001; Lind and Åkesson, 2005; Berlin and Erikson, 2007). Several empirical studies do, however, indicate that this is not the whole truth (Bravo-Ureta and Lee, 1988; Cain, Toensmeyer and Ramsey, 1989; Jensen, 1990). Of course the farmers must have revenues, which more than cover their costs, but this does not necessary mean profit maximisation. At the same time the members appreciate good service, closeness, social relations and many other so-called soft factors even higher (Fulton and Giannakas, 2001; Borgen, 2001; Bhuyan, 2007). Such factors foster member commitment to the co-operative. This is of utmost importance as without such, there is a risk that member supplies will decline, and this is disastrous for everybody (Staatz, 1989; Fulton, 1999; Anderson and Henehan, 2005; Zeuli and Betancor, 2005). Bremmers and Zuurbier (1999) argue that in the global business environment the entire member reward system must be renewed.

Österberg and Nilsson (2009) found that the single most important explanation to members' satisfaction with their co-operative is not the product price levels but the members' perception of their participation in the governance. It is not necessary that they actually control the co-operative, but at least they should feel that their opinions are taken seriously by the board. The study is based on a sample of 1,170 Swedish farmers who are members of co-operatives in a variety of industries.

A related issue is that the Chief Executive Officer (CEO) gets increased power in the very large co-operatives as members have difficulty in understanding many business operations (Cook and Iliopoulos, 2000; Hendrikse, 2007). Hence, not only member control is being weakened but also the directors' control.

Laursen (2005) investigated whether members' satisfaction with their co-operatives and their participation in the member democracy might be related to:

1) The structure of the member democracy.
2) The economic relations between the co-operative and the members.
3) The co-operative's degree of diversified business activities.
4) The co-operative's member communication and member education.
5) The member's dependency on the co-operative.

The study was based on a survey among members of the three largest Danish farmer co-operatives, all of them traditionally organised. The study indicates that farmers attach much importance to the member governance of the co-operative. This factor is crucial for member satisfaction and for the co-operatives' business success.

Empirical studies specifically focused on members' view of co-operative financing are less common. Fahlbeck (2007), in a survey among members of a variety of Swedish co-operatives, found that the members have strong preferences for large unallocated funds. They do not want to have individual ownership, and they do not recognise either any horizon problem, or any portfolio problem. The study by Laursen (2005) comes to the same conclusion as does the study by Borgen (2001). There is no study which has investigated how members look at the possibility of inviting external financiers as co-owners of the co-operative.

Conclusions

The review of studies concerning co-operative members in terms of socio-psychological matters in the preceding section indicates that the very large and very complex co-operatives have difficulties in terms of member relations. Farmers demand insight into their co-operative's business. If farmers feel uninvolved in or even alienated from the co-operative, they lose their co-operative identity and become solely suppliers.

Especially, the members consider their governance of the co-operative to be crucial. Attitudes to ownership are less clear-cut, but probably even this factor is considered to be important. This refers to collective ownership, while farmers seem to be less attracted by extended individual ownership of their co-operatives.

All in all, the expectation presented at the outset of the article seems to have some support. As the co-operatives are becoming very large and very complex, the memberships have difficulties following. The members feel that they have too little influence and they do not want to invest sufficient amounts of capital. Hence, the co-operatives have no other choice than to invite external financiers and perhaps also to allow certain influence from the side of these financiers.

It is to be seen how the separation of ownership and control can be maintained in the long run. In a co-operative there is no objective way of deciding what is the proportion of the result to be paid to financers and what is the proportion paid to the members as patronage refund. If the former is too low, there is no external financing. If the latter is too low, there may be no members and no supplies of raw products. At present it seems that the combination of external financing with members' interest can function. However, long-run experiences are still very rare.

The overall conclusion is that the structural attributes of the co-operatives seem to be decided by the need for strong market strategies rather than by the members' demands (see Figure 1). If co-operatives do not fulfil the market requirements, they will hardly survive in today's intense competition. On the other hand, firms may survive if they do not meet the farmer-members' requirements, although they may survive in another business form than that of a traditional co-operative.

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