



# Organizational models in U.S. agricultural cooperatives

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# Organizational models in U.S. agricultural cooperatives

*Organisationsmodeller i amerikansk lantbrukskooperation*

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## **Preface and acknowledgements**

In the middle of January was Jerker Nilsson, professor in marketing and cooperation at the Swedish University of Agricultural Sciences, contacted by the Swedish Farmers' Foundation for Agricultural Research. It wished to have a study made on American cooperatives. Jerker Nilsson composed a project plan that was carried out by me with financial support by the foundation. The purpose became to analyze how American cooperatives adjust to market changes.

I first want to express my thanks to Jerker Nilsson. He is a magnificent resource at the Swedish University of Agricultural Sciences with his extensive knowledge in marketing and cooperation. With great enthusiasm and loads of energy has he advised me in this project. His valuable attainments, vast theoretical knowledge and a tireless desire to produce a high quality thesis have guided me when writing this report. Jerker, I have really appreciated our cooperation. Thank you so much!

I also want to thank Professor Nilsson's friends and colleagues in the U.S., professor Bruce Anderson and Brian Henehan, Cornell University, and David Barton, and Michael Boland, Kansas State University. Gentlemen, I could never believe I would be so well received at my visits, both at the cooperatives and by directors around the country. It amazed me how much time and interest they put in my visit, but I understand that without your support it would not had been possible for me to meet the cooperative leaders. I feel very humble for the fact that you gentlemen helped me getting these contacts; you are to a very large degree involved in making this study happen. I am tremendously grateful! Thank you very much!

Without the cooperation, openness and patience for the questions I asked executives and directors, I could never have had such interesting empirical material to analyze. I want to express my thanks to you all, I know that your time was precious but still you made the effort to answer my questions. It is hard to express my thankfulness in words, but I was extremely impressed by your leadership skills, knowledge and passion in your professions!

To the faculty staff at Kansas State University – Mykel and Justin, thanks for inviting me to your house. At SLU – Karin Hakelius thanks for your opinions of my text.

My warmest thanks I want to send to the Barton family. Susan and David, your generosity and hospitality during my stay in Kansas made this trip something extra. Going on Bison safari, checking the Tornado storm-watch and having steaks and sangria at Coco Bolos was unforgettable! I hope we can meet up in Sweden one day.

To all of you I met and worked with in this project - it has been a pleasure and I wish to see you all soon again! Thank you!

Daniel Karlson



## Summary

Agricultural cooperatives play an important role all over the world. They have substantial assets, large turnovers and extensive market shares, especially in Europe and North America. North American agriculture cooperatives face strong competition, partly from many large and efficient manufacturers, but also since customers gets larger and fewer. However, the knowledge about how these cooperatives adjust their market strategies and organizational structure to mirror the markets is little known in a European perspective.

The purpose of the thesis is to *empirically investigate and theoretically explain how and why a number of U.S. agricultural cooperatives have adapted their cooperative organizational model as their market conditions have changed*. The thesis is carried out on commission of, and with financial support from Stiftelsen Lantbruksforskning. With the help of U.S. expertise six agriculture cooperatives in five industries were chosen to be analyzed. During six weeks totally 15 representatives of the cooperatives were interviewed in the U.S.

The product markets have not changed dramatically the latest years due to policy changes or sudden technical breakthroughs. It is the market powers that affect the development, where extensive structural change has lead to a concentration in the food industry. 4-5 food retail chains control 50 – 60 percent of the consumer market. This change is primarily driven by the desire to reduce transaction costs and benefit from economies of scale. These changes affect cooperatives in their choice of market strategies and organizational model.

*Cooperatives with high raw-product costs* choose a differentiation- or focus strategy. One fascinating exception is DairyLea; it chose to gain regional control of assembling and distribution of milk. Its means to achieve this goal was favorably received by producers and has lead to a fourfold milk weigh-in. *Cooperatives with low raw-product costs* chooses among other market strategies, since they do not face the same market constraints.

The change in the food-industry fuels organic growth among cooperatives, since they need to provide large quantities and offer extensive product portfolios to the customers. The strive for size and scope among cooperatives has imposed increased capital needs, which has forced cooperatives to utilize various solutions for ownership and control. Joint ventures and other strategic alliances are as common as allowing external parties to make capital investment in the cooperatives. An important observation is that such cooperatives will not let external investors get ownership control in the cooperatives. These investors are tempted by 7-8 percent dividends on invested capital.

It is mainly the need for offering large volumes, many products and utilization of economies of scale that stimulates organic growth in the cooperatives. For such growth to happen producers must be tempted to join these large cooperatives. Hence they must pay well and individualize the ownership rights. This has lead to entrepreneurial cooperatives being common in the U.S., while traditional cooperatives to an increasing extent adopt characteristics that normally exist in entrepreneurial cooperatives.

## Sammanfattning

Lantbrukskooperativa företag spelar en viktig roll i stora delar av världen. De har betydande tillgångar, stor omsättning och höga marknadsandelar, inte minst i Europa och Nordamerika. Amerikansk lantbrukskooperation är starkt konkurrensutsatt, dels eftersom det finns många stora och effektiva producentföretag, dels eftersom kunderna blir färre och större. Kunskapen om hur de kooperativa företagen anpassar sin marknadsstrategi och organisationsstruktur till sina marknader är begränsad sett ur ett svenskt perspektiv.

Studiens syfte är att *empiriskt undersöka och teoretiskt förklara hur och varför ett antal amerikanska lantbrukskooperativa företag har anpassat sin organisationella struktur till förändringar i sina produktmarknader*. Projektet är genomfört på uppdrag och med finansiellt stöd av Stiftelsen Lantbruksforskning. Med hjälp av amerikansk expertis valdes sex kooperativa företag i fem branscher att studera. Under en period av sex veckor intervjuades totalt 15 företagsrepresentanter på plats i USA. Intervjuerna varade från 40 minuter till 1.5 timmar.

Under senare år har inte marknaderna förändrats på något omvälvande sätt till följd av ändrade politiska regleringar eller plötsliga tekniska framsteg. Däremot påverkar marknadskrafterna utvecklingen, där *omfattande strukturförändringar inom dagligvaruhandeln* har lett till en omfattande koncentration inom livsmedelsindustrin. 4-5 aktörer kontrollerar 50 – 60 procent av konsumentmarknaden. Denna förändring är främst driven av kedjornas strävan efter att sänka transaktionskostnader samt att utnyttja stordriftsfördelar. Dessa förändringar påverkar kooperativa företag i deras val av marknadsstrategi och organisationsmodell.

*Företag med höga kostnader* väljer en differentieringsstrategi eller fokusstrategi. Ett intressant undantag är Dairylea, som valt att skaffa sig regional kontroll över upphämtning och distribution av mjölk. Denna strategi har legat till grund för en fyrfaldig organisk tillväxt under 90-talet. *Företag med lägre råvarukostnader* väljer bland andra strategier. Dessa företag är inte så kringskurna och begränsade i sitt val av marknadsstrategi.

Förändringarna inom dagligvaruhandeln driver fram organisk tillväxt bland de kooperativa företagen för att de ska kunna leverera tillräckligt stora volymer och ha tillräckligt breda produktportföljer. Kraven på ökad företagsstorlek har inneburit ett *ökat kapitalbehov*, vilket har förmått de kooperativa företagen att finna nya lösningar för ägande och kontroll. Det är lika vanligt med *joint ventures och andra samarbeten* som det är med *externa investerare*. Exempelvis kan försäkringsinstitut vara delägare i moderföreningarna. En viktig observation är att kooperativen inte låter externa investerare få någon kontroll i moderföreningarna. Dessa investerare lockas av fasta utdelningsnivåer om 7-8 procent på placerat kapital.

Framför allt är det behovet av att erbjuda varierade produktportföljer, leverera omfattande volymer och att utnyttja stordriftsfördelar som driver kooperativ att växa organiskt. För att sådan tillväxt ska kunna ske måste medlemmar lockas att leverera till dessa stora kooperativa företag. Därför måste dessa företag ha god betalningsförmåga samtidigt som de ser till att medlemmarna får allt mer av individuellt ägande. Det har inneburit att förekomsten av entreprenöriella kooperativ i USA är omfattande, samtidigt som traditionella kooperativ mer och mer använder sig av karaktäristika som normalt existerar i entreprenöriella kooperativ.



# Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Background.....	1
1.2	Problems and issues .....	2
1.2.1	Markets .....	2
1.2.2	Market strategies.....	2
1.2.3	Cooperative organizational models .....	2
1.3	Theoretical framework.....	3
1.4	Implications for the study .....	4
1.5	Purpose.....	5
1.6	Structure of the study .....	6
<b>2</b>	<b>Theoretical framework.....</b>	<b>7</b>
2.1	Introduction.....	7
2.2	Market, market strategy and organizational form.....	7
2.3	Classification of market strategy .....	8
2.4	Classification of cooperative models .....	9
2.4.1	Cooperative organizational structure .....	9
2.4.2	Traditional cooperatives .....	10
2.4.3	Entrepreneurial cooperatives .....	11
2.5	Cooperative business theories.....	13
2.5.1	Classification of theories, applicable to cooperative business.....	13
2.5.2	Cooperative business existence .....	14
2.5.3	Cooperative business performance .....	15
2.6	Market strategies for cooperative models.....	17
2.7	Implications for the study .....	19
<b>3</b>	<b>Methodological approach.....</b>	<b>20</b>
3.1	Study trip to the United States of America .....	20
3.2	Selection of companies and interviewees .....	20
3.3	Interview methodology .....	21
3.4	Prior U.S. case-studies having similar purpose .....	22
<b>4</b>	<b>Collected information and data – US cooperatives .....</b>	<b>23</b>
4.1	Introduction.....	23
4.2	Dairy industry – Dairylea and Land O’Lakes.....	23
4.2.1	Dairy products market .....	23
4.2.2	Dairylea of today .....	26
4.2.3	Membership .....	27
4.2.4	Dairylea’s history and current market.....	27
4.2.5	Land O’Lakes of today .....	28
4.2.6	Membership .....	29
4.2.7	Market – Dairy foods.....	30
4.3	Fruits and vegetables – Pro Fac .....	30
4.3.1	Introduction.....	30
4.3.2	Pro-Fac of today.....	31

4.3.3	Membership .....	32
4.3.4	Market – market strategy .....	32
4.4	Grapes – National grape.....	34
4.4.1	Introduction.....	34
4.4.2	National Grape Cooperative of Today .....	34
4.4.3	Membership .....	35
4.4.4	Market.....	35
4.5	Beef – U.S. Premium Beef Ltd .....	36
4.5.1	Introduction.....	36
4.5.2	U.S. Premium Beef Ltd. of today .....	38
4.5.3	Membership .....	38
4.5.4	History of U.S. Premium Beef.....	38
4.5.5	Market – branded boxed beef .....	39
4.6	Grains – CHS Inc.....	40
4.6.1	Introduction.....	40
4.6.2	CHS Inc. of Today .....	40
4.6.3	Membership .....	42
4.6.4	Changes in the organization – market.....	42
<b>5</b>	<b>Analysis.....</b>	<b>44</b>
5.1	Introduction.....	44
5.2	Markets .....	44
5.3	Market strategy .....	47
5.4	Organizational structure.....	48
5.5	Changes in the cooperatives.....	51
5.6	Conclusions.....	53
<b>6</b>	<b>Discussion .....</b>	<b>56</b>
	<b>References.....</b>	<b>58</b>
	Literature.....	58
	Interviewees.....	<a href="#">599</a>
	Internet sources.....	59

# 1 Introduction

## 1.1 Background

Agricultural cooperatives play an important role as a unique form of private business organization in countries all over the world. As indicated by their substantial asset ownership, sales, and market share, their most extensive and successful use during the 20<sup>th</sup> century has been in Europe and North America (Chaddad and Cook, 2002). However, the process of modern agricultural industrialization has made agricultural cooperatives face survival challenges due to a number of changes in the marketplace, like increased competition and larger and fewer customers. Cooperatives are hence forced to pursue competitive strategies in response to structural and environmental changes in the marketplace. The strategies can comprise further value-added processing, brand name development, and entry into international markets, to mention a few examples. These changes result in more capital intense, larger and sometimes more complex cooperatives to monitor, which requires owners to act strategically if they are to keep ownership and control over their cooperatives. (Royer and Rogers 1998; Cook and Chaddad, 2000)

Like in all other sectors of business, an organization's success is dependent on its ability to adopt its organizational structure to match the market conditions its products face. This forces cooperatives to show a considerable abundance of variation regarding their strategic financial solutions, pricing principles, ownership control, etc. The development of the traditional cooperative organizational form, towards a more investor-oriented form, is an example of changes in the cooperative sector, possibly driven by the members' striving for better adaptation to changing market conditions.

There is currently much research done on European cooperative development, spurred by the fact that European cooperatives presently are undergoing considerable changes, due to the ever-increasing competitive pressure. However, from a European perspective, less is known about how North American cooperatives are keeping up with the changing needs. Given that the North American agriculture is less regulated than the European, and that the markets are larger, there are good prospects for reaping valuable experiences for the Europeans in these years, where markets are characterized by political deregulation and intensified international competition. Therefore, by conducting empirical studies of cooperatives in North America, experiences can hopefully be presented to inspire European cooperatives in considering alternative organizational models. However, before the study's purpose is defined, the core elements of the study need to be scrutinized in more detail.

## **1.2 Problems and issues**

### **1.2.1 Markets**

There is a wide span of markets, ranging from commodity markets with little value adding and product differentiation sold worldwide, to value added markets where products are sold to particular consumer groups in small trade areas. Not only are there differences in market characteristics depending on what type of customer the product faces, the market characteristics also depend on at what level in the food-chain a product is sold. In the first steps of the food chain the customer is typically a manufacturer who can be supplied by many competitors offering the same type of commodity product. Through the product homogeneity of commodities and large number of sellers, it's easy to substitute one supplier's products for another's. Hence, when basic quality criteria are fulfilled, the buyer focuses on the price of the product.

Further up in the food chain markets are more directly affected by consumer demands, rather than what customers in the first step of the value chain demands. In these consumer driven markets value-added and differentiated products are sold at higher prices. Here, companies can exercise customer segmentation and perfect product substitutes are harder to find, where both these factors reduce competition. Due to the threat of low-cost producers entering the U.S. commodity markets (Campbell, 2003), supplying commodity products should be less attractive. Hence, moving towards the value-added product markets seems more advantageous.

### **1.2.2 Market strategies**

Porter (1983) presents three strategies for approaching a market: a focus strategy, a differentiation strategy, and an overall low-cost leadership strategy. These strategies are best implemented given certain organizational models. (The characteristics of the market strategies are further presented in Chapter 2). During the agricultural industrialization most farmer-owned cooperatives have specialized in marketing high-volume, low-value commodities while other proprietary firms have focused on marketing value-added products. According to basic strategic management principles, marketing commodities is the least profitable market strategy, especially when facing threats of low-cost competitors entering the markets. (Ghemawat and Rivkin, 1999).

### **1.2.3 Cooperative organizational models**

The general definition of cooperatives, which is applicable for all cooperative organizations, is based on three relationships between a cooperative and its members:

- First, *the user-owner principle*. Persons who own and finance the co-operative are those that use it.
- Second, *the user-control principle*. Control of the co-operative is by those who use the co-operative.

- Third, *the user-benefit principle*. Benefits of the co-operative are distributed to its users on basis of their use. (Barton, 1989, p. 1)

Depending on how these relationships are regulated in the bylaws of the cooperatives and in the legislation on cooperative societies, different characteristics of the cooperatives are generated. Chaddad and Cook (2002) present a classification of cooperative models based on how ownership is defined, in which traditional cooperatives and investor-oriented cooperatives are polar forms. According to Nilsson and Björklund (2003) it is possible to classify cooperatives into traditional and entrepreneurial cooperatives depending on how the former mentioned relationships are regulated. The most important relationship generating the most evident characteristics is how the user-owner principle is regulated. In traditional cooperatives the user-owner principle carries many collectivistic characteristics, while entrepreneurial cooperatives carry individualized characteristics.

The development of entrepreneurial cooperatives carrying individualized characteristics has to a large degree caught the attention of North American researchers. One form is the New Generation Cooperative (NGC) model. The foundations of NGCs are closed membership and tradable delivery rights. Another individualized form is when subsidiaries are owned together with external financiers. These subsidiaries often perform value-added processing and are integrated vertically or horizontally in the food chain. However, with individualized ownership follows different claims, making this form of cooperative organization to deviate from the traditional cooperative form. One major characteristic that is influenced by individualized ownership structure is the incentive structures for controlling the value of ownership. In NGCs the often negative collective characteristics diminish or disappears (Nilsson and Björklund, 2003).

The individualized characteristics are supposedly attractive given certain market conditions, since several traditionally organized North American cooperatives have adopted individualized ownership rights. Hence, it would be interesting to empirically analyze in what markets cooperatives with individualized characteristics appears and if some cooperative models are predominant in any particular markets.

### **1.3 Theoretical framework**

On theoretical basis Nilsson and Björklund (2003) argue that given what market characteristics a cooperative faces, it can positively affect its degree of market success by selecting the most suitable market strategy and organizational form. If both the market strategy and organizational model is selected to suit the prevailing market characteristics, the greater the chance for the cooperative to experience market success, compared to a market strategy and organizational model that are not coherent with market conditions. Since organizational *characteristics* depends on different organizational *models*, the organizational model becomes important for management's possibility to enhance the implementation of an appropriate market strategy. For achieving market success this implies that certain markets should be approached with certain strategies. The

cooperative needs an organizational model that facilitates efficient implementation of its strategy.

Nilsson and Björklund (2003) elaborate further on this hypothesis and present a theory, which provides tools that can be used for assessing a cooperative’s likeliness of achieving market success, given its market strategy and cooperative model. The theory relies on Porter’s (1983) classification of market strategies and it seems to cover the core elements of the empirical experiences of the cooperative development in the United States. Hence, the Nilsson and Björklund (2003) theory should be suitable and serve as the base for this thesis’ theoretical part. The relationships between the three variables are illustrated in Figure 1.1.

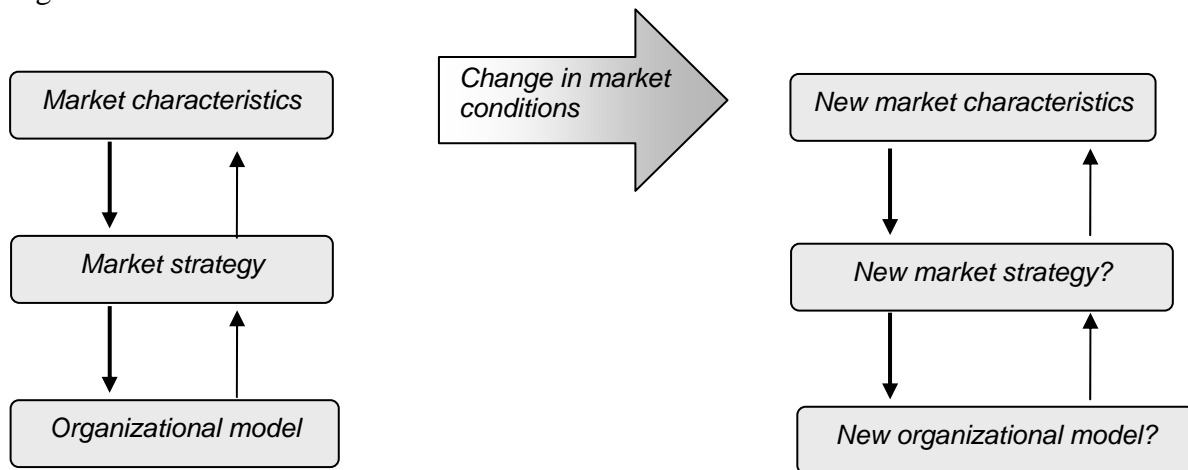


Figure 1.1: Relationship between market, cooperative organizational model and strategy exposed to change. Freely after Nilsson and Björklund, 2003

## 1.4 Implications for the study

Due to increasing competition *cooperatives selling differentiated products* should be included in this study. However, traditional cooperatives marketing commodities are still common and they will probably continue to play an important role in the agribusiness industry. Therefore, these types of cooperatives cannot be excluded from the study.

A research project characterized by complex interrelations between market characteristics, market strategy, and organizational form, and a vast variation within these variables, can hardly be based on quantitative analysis. Either the researcher has to delimit the project to such extent that the findings become less interesting, or extensive generalizations must be undertaken, generating the same weakness. Hence, *case studies* are the best suitable analysis form for meeting this thesis’ purpose.

For the study to provide readers in Europe interesting perspectives, *organizations that market similar products to those sold in Northern Europe* should be chosen. Cooperatives in dairy-, meat- and cereal businesses are examples of industries where case studies should be selected from.

The choice of U.S. agricultural cooperatives to be included in the study must be *decided upon collaboration with some U.S. experts*. In the selection process the size of organizations, their span of products and degree of diversification are of less importance. It's more important to find adequate sources of information for being able to perform a high-quality study.

For collecting useful and adequate information *both primary and secondary sources* providing data will be considered. That is, (1) by interviewing primary sources such as managers and directors, and (2) secondary sources like cooperative research staff in the U.S., (3) gathering information from case studies, publications, and (4) other research material, the necessary information should be found.

The data collected will result in *an instant description of the cooperatives*; their market position, business success and competitive strategies might show to be the right ones during current market conditions. Therefore, analysis of future market performance or suggestions of changes for any organizations won't be presented. Moreover, measuring *the degree of business success* is beyond the scope of this study. Recent bankruptcies of two national marketing and supply cooperatives, Farmland Industries and Agway Inc., confirm the difficulty of assessing sustainable long-term business performance. Despite their size and scope of operations these cooperatives' were unable to stay in business. It is also hard to know whether it is possible to receive adequate economic information for evaluating business success. Cooperatives can be reluctant to provide such information. Additionally, deriving business success solely from the fit within the relations of the market, market strategy and organizational model is to make use of a too simplified perspective. From a theoretical perspective a company may seem to be optimally organized and positioned, but profitable operations are affected by many factors. Hence, making a single entry in time for estimating economic conditions of a cooperative will not confirm if it will survive in the long-term perspective.

## **1.5 Purpose**

The discussions in the previous sections result in a number of conclusions that can be summarized and used for stating the purpose of the study. The conclusions are:

- The study should comprise a variety of organizational models existing among the U.S. agricultural cooperatives. Of special interest are non-traditional models, but traditionally organized cooperatives should also be included. By non-traditional is meant those that have closed memberships (so-called New Generation Cooperatives) as well as those with external financiers owning shares in jointly owned subsidiaries or having ownership in the cooperative society itself. Cases where cooperatives have changed the organizational model are of special interest.
- The choice of theoretical base is the one found in the book by Nilsson and Björklund (2003). This theory is delineated in Chapter 2.
- Cooperatives marketing products based on commodities produced in Northern Europe, such as grain, dairy or meat, should be selected.

- Due to time constraints and the need of reaping in-depth information delimits the number of cooperatives included in the study to, at the most, five or six cooperatives.
- The selection of companies to be included in the study will rely on recommendations from research staff in the U.S.

Due to the above conclusions, the purpose of this thesis is *to empirically investigate and theoretically explain how and why a number of US agricultural cooperatives have adapted their cooperative organizational model as their market conditions have changed.*

## **1.6 Structure of the study**

The Nilsson and Björklund (2003) theory is accounted for in Chapter 2, which works as the foundation chapter of this thesis from which all information are analyzed through.

In the 3<sup>rd</sup> chapter, the methodology is presented; how the information was gathered, who was interviewed etc.

Chapter 4 presents possible former studies, providing valuable information for the thesis. There might already prevail studies, unfamiliar to European experts, which should be included.

The 5<sup>th</sup> chapter describes the collected information and data from both the industries and the selected companies.

Chapter 6 comprises analyses of the information. Conclusions and discussions are presented in chapter 7.



## 2 Theoretical framework

### 2.1 Introduction

Chapter 1 briefly introduces the reader to the theoretical framework. In this chapter, theories explaining the reasons for cooperatives' existence and problems with different cooperative models are presented. Theory describing the importance of the fit within the market – market strategy – and organizational model is of special interest. This contributes to the understanding of *why* cooperatives adapt their model to different market characteristics. Then theories of how cooperatives can be organized to implement the market strategy as successfully as possible are handled.

### 2.2 Market, market strategy and organizational form

For a company to be successful, it must be successful in the market for its products. The degree of success in the marketplace is dependent on how the firm is organized, since market success is dependent on if the organizational form reflects the characteristics of the market. Tactical and operational activities must rely on the same strategy, if not sub-optimization and conflicts in decision-making are to occur.

The strategic interaction between a company and its market is dependent on its market strategy. This holds for investor-oriented firms as well as cooperatives. Figure 2.1 illustrates this relationship. (Nilsson and Björklund, 2003)

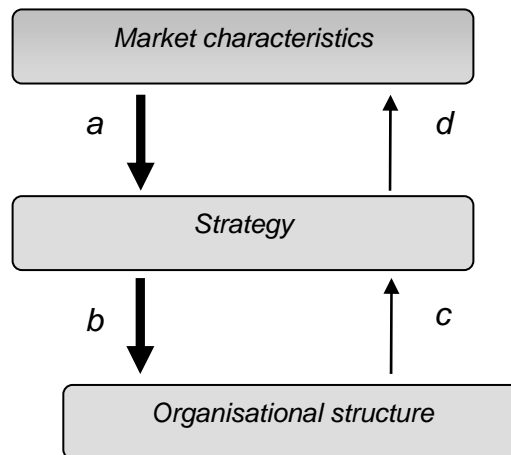


Figure 2.1: The relation between organizational structure and the market (Nilsson and Björklund, 2003, p. 50)

The downward pointing arrows (a, b) indicate market adjustments; (a) certain market characteristics determine what strategy is most suitable to obtain market success. Given what strategy to utilize, an organization needs a certain organizational structure (b) to have the best characteristics suited to pursue the strategy. However, there might exist a relationship in the opposite direction; the strategy an organization selects, can be the

result of its characteristics (c), and with a determined strategy, markets must be targeted where the strategy can be successful (d). This is not a sustainable approach. As markets change characteristics over time, it becomes increasingly harder to find specific markets suited for the strategy, the company eventually loses market shares and the approach is not a possible long-term solution. Hence, the tenable relationship is illustrated by the downward pointing arrows (a, b) which implies that adoption of the strategy to prevailing market characteristics is a sustainable long-run approach.

### 2.3 Classification of market strategy

Michael Porter (1983) presents a widely acknowledged classification of market strategies. He uses two criteria to identify market strategies – what customer group to target and what to satisfy within this customer group. Combining the two variables results in four strategies presented in Table 2.1. Due to similarities the two focus strategies are aggregated.

Table 2.1: Three generic strategies (Nilsson and Björklund, 2003)

Strategic target	Strategic advantage	
	Uniqueness perceived by the customer	Low cost position
Industry wide	<b><i>Differentiation</i></b>	<b><i>Overall cost leadership</i></b>
Particular segment only	<b><i>Focus</i></b>	

Since the two focus groups usually are combined the result is Porter's generic strategies:

1. *Overall cost leadership strategy*: Companies strive to achieve the lowest production and distribution costs to set the price lower than its competitors and hence win a large market share. Companies pursuing this strategy must be good at manufacturing, engineering, purchasing and physical distribution to keep costs low, since they sell standardized and undifferentiated products. The competition on the market is intense – companies offer products that are manufactured in many countries. The strategy relies on large-scale operations for achieving economies of scale, which requires investments in large-scale production facilities. The result is high fixed costs, which, however, becomes low per-unit with large volumes. Hence, the largest market player is likely to become the most successful in the long run.
2. *Differentiation strategy*: Companies try to differentiate their products from those of their competitors and hence decrease the most intense competition. Due to the uniqueness of the products they enjoy a higher price paid by customers. Economies of scale are desirable to keep costs low, but attractiveness of the products is more important. Since the strategy relies on product differentiation and market segmentation, the company must be very market oriented and allocate substantial

capital for product development and marketing efforts. Hereby the investment per product unit is high, but the attractiveness of the products enjoys a higher price paid, hence compensating for the higher per unit costs.

3. *Focus strategy*: Also a small company can apply either a differentiation or cost leadership strategy. The crucial aspect for the focus strategy is that a company operates in a *target market* – a particular buyer group, product line or a geographic area. The strategy rests on the premise that a company focusing on a particular segment is able to serve this segment better than competitors aiming at broader markets. The strategy implies reasonable investments per unit, but the company needs to be market oriented and allocate considerable capital per unit for marketing efforts.

It is possible to follow two or three strategies for the same products, but sustainable strategic positioning requires trade-offs (Porter, 1996). Porter's (1983) three generic strategies differ in operational decision-making, which also requires different resources and skills and hence involves differing organizational arrangements and control procedures. Tactical and operational activities must rely on the same strategy or else sub-optimizations and conflicts in decision making occur. There might also appear conflicts in product perception if a differentiation and low-cost strategy is used within a limited segment. Hence, it is arguable not to proceed with all market strategies at the same time.

## **2.4 Classification of cooperative models**

### **2.4.1 Cooperative organizational structure**

A cooperative society attracts members for a host of social-political and economical reasons. The fundamental and most important reason is, however, to help market actors correcting a market failure. The market failure might comprise the problem of a single actor trying to market products efficiently, or to act efficiently as a purchaser. By pooling purchases and sales, several market actors can generate economical benefits they could not achieve on their own. These economical benefits are then distributed on basis of use to members of the cooperative society. (Chaddad and Cook, 2002).

This reason for cooperatives' existence is recognized within the general definition of a cooperative (see Section 1.2.3). The three kinds of relationships between the cooperative and its members must coincide. A member must simultaneously own, use and carry out profitable trade with it; otherwise the cooperative has no value to the member. Among these three, the user-benefit relation is the most important relationship to nurture. If the members can't receive any benefits from the cooperative it has no rationale to exist.

The definition in Section 1.2.3 allows for different ways of organizing the cooperative organizations, and it is possible to add more precise definitions of a specific cooperative. Empirically there occurs a vast variation of added characteristics, a result of legal regulations, bylaws and other institutional conditions. In other words, cooperative

organizations constitute a broad spectrum of special cases, where each can be defined within the general definition of the three relationships.

Nilsson and Björklund (2003) distinguish between different cooperative models by dividing cooperatives in two main categories based on if they comprise either collectivistic or individualistic characteristics. Cooperatives with *collectivistic characteristics* are referred to as *traditional cooperatives*, while those with *individualistic attributes* are classified as *entrepreneurial cooperatives*. Nilsson and Björklund (2003) further divide the traditional category into *regulative* and *service-at-cost cooperatives*, and the entrepreneurial category in *internal* and *external entrepreneurial cooperatives* (see Table 2.2).

Table 2.2: Classification of co-operatives according to Nilsson and Björklund, 2003

<b>Traditional cooperatives</b>		<b>Entrepreneurial cooperatives</b>	
<i>Service-at-cost cooperatives</i>	<i>Regulative cooperatives</i>	<i>Internal entrepreneurial cooperatives</i>	<i>External entrepreneurial cooperatives</i>

#### 2.4.2 Traditional cooperatives

For traditional cooperatives the relationships a cooperative has to its members are characterized by collective structures. The collectivism comes to show in a number of ways, which are both advantageous and negative depending on the market characteristics:

- The principles of open membership and one member-one vote apply. The member having little patronage has as much say over decisions as a high patronage member.
- The level of unallocated capital<sup>1</sup> is often high and in combination with a collectivistic ownership, the control incentives diminish (see Section 2.5.2).
- Members allow for capital retains<sup>2</sup> but no dividends (or low dividends) are paid on member's equity capital; some members finance more of the equity capital but are not compensated for that.
- No upfront capital investment<sup>3</sup> is required, despite access to assets built up by former members.
- The non-investment allowance restricts capital growth, making traditional cooperatives having relatively low capital assets.
- The collectivism in voting power diminishes the investment interest, since investors want to have individual control over decisions concerning their investment.
- The membership is heterogeneous and as a result of uniform cost calculation, there are elements of cross subsidizing both over time and between different member categories. Some members add value; other benefits from a free-ride situation.

<sup>1</sup> Unallocated capital has no defined owner and is often retained earnings.

<sup>2</sup> Capital allowed staying in the company as equity, which should receive interest rate payments seen from an investment point of view.

<sup>3</sup> No investments in delivery rights are required.

- Another source for free-riding is the open membership; it is easy for new members to enter the cooperative and benefit from equity capital retained from former members.

The members are stimulated to supply large volumes of homogeneous commodities; the cost of capital policies subsidizes pricing levels; the membership entrance qualifications promote easy entrance, etc. Hence, the traditional model motivates cooperatives to grow for marketing large volumes sold at large markets with limited value-adding processing. This enables traditional cooperatives to benefit from economies of scale and will by this generate good prices to their members. The collectiveness and easiness of entrance is argued to be the most important characteristic of traditional cooperatives since they stimulate increased number of members. To bear in mind is that as a new member enters the cooperative he instantly receives access to all assets generated by former and current members.

Nilsson and Björklund (2003) divide traditional cooperatives into *service-at-cost* cooperatives and *regulative* cooperatives.

*Regulative cooperatives* are organized to suit markets having modest competitive pressure – often a result of political intervention. These cooperatives operate in commercial markets but given that they are successful lobbyists, their markets in fact become politically governed. Hence, the cooperatives try to generate support from the public and politicians to foster beneficial relationships. Strict commercial and market oriented goals becomes subordinated in favor of non-economical objectives, such as region-political, social and ideological goals. Hence, regulative cooperatives don't transfer market signals to their producers but rather transmit policy and social signals and these cooperatives therefore have the best chances to succeed in regulated markets.

*Service-at-cost cooperatives* are strictly commercially oriented and transmit correct market signals to their members. Subsidizing between member groups occurs, but they are motivated as long as the net gain from increased member volumes is positive. Pricing principles are put to foster production of profitable commodities; no extra volumes should be stimulated to be produced, unless the net gain is positive. The commercialism that denotes these cooperatives make them business oriented and this permeates the whole business culture.

### **2.4.3 Entrepreneurial cooperatives**

*Entrepreneurial cooperatives* have individualized characteristics, as opposed to the collectivist characteristics of traditional cooperatives. Ownership, for example, is individualized in the sense that ownership rights are tradable and appreciable. Hence, the owners in an entrepreneurial cooperative are driven by a return-on-equity goal, no matter if the ownership rights belong to members or external financiers. This affects the incentive structures, making owners controlling and requiring fair returns on the ownership rights.

In cases when ownership consists of farmer-members, the owners have tradable delivery rights. The tradability will ultimately result in a price of the delivery right reflecting the value for a member to deliver his products to that particular cooperative. This will make the price of the delivery right appreciate or depreciate depending on how valuable it is perceived to become a supplier to that cooperative.

If the owners are external investors, they want their shares to have the highest possible market value, which can be expressed in terms of the present-value of future expected net cash flow. Hence, entrepreneurial cooperatives have a highly commercial attitude, are they are profit and market oriented. Nilsson and Björklund (2003) categorize entrepreneurial cooperatives into *internal entrepreneurial* and *external entrepreneurial* cooperatives, depending on what type of ownership structure they have.

In *internal entrepreneurial cooperatives*, farmer-members constitute ownership by acquiring tradable delivery rights. For such delivery rights to have a value, the cooperative society must be closed and new members must buy delivery rights at a market. The tradability enables members to receive capital returns from their investment in the cooperative, since the price of a delivery right will reflect the future value of all assets of the cooperative, its market position, and product portfolio.

Another characteristic of internal entrepreneurial cooperatives is that the volume of raw products supplied to the cooperative becomes limited by the amount of delivery rights outstanding. The one member-one vote principle can be applied since there is great homogeneity in the membership, due to the cooperative controlling issuance of delivery rights. Net proceeds are paid out as patronage refunds, which is another trait of internal entrepreneurial cooperatives.

*External entrepreneurial cooperatives* admit non-members as shareholders. It is important not to let the controlling interest from farmer-members to decrease below 50 percent; if so it will not classify as a cooperative. This type of cooperative allows for two types of benefits generated depending on who the external investor is. If the capital is provided by institutional investors, such as banks, insurance companies etcetera, there are good prospects for growth of the cooperative generating advantages through economies of scale. If, on the other hand, capital is provided from an industry partner, know-how from another level in the food chain can be utilized when integrating the respective operations. This can lead to decreased transaction costs and creation of economies of scale. Joint ventures are one example of this option.

There are generally two solutions to where the external ownership can be placed: one case is when investors buy shares in the cooperative society itself. However, in such cases there is a risk for boosting conflicts between the farmer-members who demand high product prices, and external financiers, demanding high returns on their capital investment. To solve those problems, the cooperative must set a fixed or a minimal return on investment to the investors.

The other type of external ownership is external investors owning shares in a cooperative's subsidiary. Again, a return-on-equity goal prevails; otherwise the investors are not interested in investing. Net proceeds are distributed proportionally to ownership. All in all, external entrepreneurial cooperatives are profit-oriented, progressive and efficient, thanks to the individualized characteristics derived from individuals' desire to return on investments.

An important difference between internal and external entrepreneurial cooperatives concerns the amount of equity that can be gathered. As the former category is dependent on capital from a limited number of farmers, they normally have difficulties acquiring large amounts of capital. The latter category has the possibility to raise large amounts since such cooperatives have a larger pool to gather capital from.

## **2.5 Cooperative business theories**

### ***2.5.1 Classification of theories, applicable to cooperative business***

Theories are developed to explain reasons for the cooperative business form's existence and different aspects of cooperative business management. In this section, the most relevant theories corresponding to the purpose of this study are presented. The following theories and line of arguments are based on an individual-economic perspective. That is, an individual is recognized to act from his or her own best economic perspective, trying to maximize his or her own utility. Hakelius (1996) shows in an empirical study that differences between younger and older member categories prevails. Young members primarily value economic factors higher than solidarity and loyalty, but differing patterns in choice of trade partners and involvement in boards are also recognized.

Some theories explain why cooperatives exist. Others handle factors facilitating cooperative business success, and some portray the relationships between the membership and the cooperative business operations it owns. First, this chapter handles the theories explaining why cooperatives exist and why a cooperative might be beneficial for its members. Second, theories handling the relationship between the membership and the cooperative business are discussed. According to Nilsson and Björklund (2003) advantages and problems with different types of cooperatives to a large extent can be explained by scrutinizing what organizational model it has, since with different models follows different characteristics. Table 2.3 illustrates such theories and they are categorized and organized in terms of what area they are applicable.

Table 2.3: Cooperative business theories freely after Nilsson and Björklund, 2003

<b>Theory means</b>	<b>Theory</b>	<b>Problem area</b>
<b>Cooperative business existence</b>	<i>Transaction cost theory</i>	⇒ • Efficient market failure • Economies of scale
	<i>Neoclassical theory</i>	
<b>Cooperative business effectiveness</b>	<i>Principal-agent theory</i>	⇒ • Follow-up or control problem • Decision making problem
	<i>Property rights theory</i>	⇒ • Horizon problem • Common property problem • Portfolio problem

### 2.5.2 Cooperative business existence

*Neoclassical theory* holds that when production and activities are standardized and similar, large volumes are handled cheaper with increasing size. This is possible when processes can be standardized, mechanized and automated. Hence, in the first levels of the value-chain, consisting of collecting and marketing homogenized and standardized commodities, economies of scale can prevail, given that companies are run as efficient as possible.

Economies of scale in collecting and marketing commodities imply that competitors within the same type of market will face difficulties when trying to compete with the largest actor in the market. No one can possibly have the same cost efficiency as the largest actor, given similar cost structure among competitors. Competitors can therefore not rely on economies of scale and the overall cost leadership strategy when facing a large market actor; they must rely on other competitive advantages to stay competitive.

*Transaction cost theory* explains how costs associated with making transactions can become high enough for economic actors to consider forming cooperatives. Besides the cost for the actual product, costs also occur for all activities of gathering and processing information, negotiating contracts, administrating issues, monitoring the actual exchange of service or products and solving possible disputes. Hence, a group of actors can form a cooperative for purchases, marketing, capital acquirement and other tasks to lower such transaction costs. Forming a cooperative is also a type of forward or backward vertical integration for decreasing distorting costs in the value chain.

The integration of economic activities into a corporate form in one way or the other should continue until products can be sold without disturbing market failures. This holds in a host of markets; when purchasing inputs, marketing outputs, capital acquiring etc. In essence, to lower the transaction costs, a group creates some kind of partial vertical integration at one or more levels in the value chain of a good or service.



As transaction costs diminish due to farms being run as larger entities, technology innovations lowering transportation costs, and information technology transferring market information more easily – the chances of finding well-functioning markets increase. The reasons for having cooperatives providing farmers a secure marketing channel then decreases; there is less of a need for cooperatives acting in the need of farmer members.

### ***2.5.3 Cooperative business performance***

*Principal-Agent theory* handles problems that occur when an owner contracts an agent to perform activities on the owner's behalf. All contracts are unavoidably incomplete; it is impossible to outline exactly all responsibilities and possible outcomes of decision-making when managing a corporation. Applied in a corporate context the problem gets intriguing, since a company can be perceived as an organization built up as a network of contracts (Jensen and Meckling 1979, p 470). The company has contracts with its stakeholders such as employees, suppliers, customers, lenders, management and owners. All contracts, except the one with the owners, states that all stakeholders shall receive a certain payment for their undertakings. The owner, on the other hand, is allowed the residual (the net proceeds, the profit) after all contracted payments are made.

Residual rights of control are defined as the right to make any decision regarding the use of an asset that is not explicitly attenuated by law or assigned to other parties by contract. Residual claimants are also considered the risk bearers of the firm because net cash flows are uncertain and eventually negative which affects the value of the residual assets in a company (Chaddad and Cook, 2002). Hence, owners exercise the ultimate claim and control over a firm's residual.

As stated below, it is the residual right of control over an asset that defines ownership. If an owner tries to manage a large and complex organization on his own, problems occurs since it's not possible to administer a very large organization. Therefore, owners contract agents (employees) to perform activities on behalf of the owners. The agent is contracted to act in the principal's interest, but it also means that the agent is given the right to make decisions regarding the principal's capital wealth (the residual). When adding theories of individual utility-maximization, constrained rationality and information asymmetry to the incomplete contract dilemma, an agent's (management's) possibility of acting to arrogate unjustified benefits occurs, on behalf of the owner. Despite the contracted relation between the agent and the principal, it can be hard for the principal to stop the agent from acting in his own interest. These problems are argued to be larger or smaller depending on the organizational characteristics of a cooperative.

Nilsson and Björklund (2003) claim that the principal-agent problem is larger in a traditional cooperative compared to in an entrepreneurial cooperative. The residual claimant in a traditional cooperative is a membership organization with collective ownership and collective residual rights. Hence, the collectivism decreases the incentive for each individual owner to control the agent. Additionally, since members only possess direct ownership to their retained patronage earnings, the control incentives for

overlooking managements governing other capital assets can be weak. Also, collective characteristics in combination with the individual utility-maximization theory are argued to increase the risk of management acting deceptively towards its principals. Hence, cooperatives having collective characteristics face larger risks of having agents not working to maximize the wealth of the owners.

*Property-rights theory* holds that what one owns, one wants to govern in the best possible way to balance the future value of the resource and current benefits received from it. An owner of an asset will not make decisions that will destroy the asset, if he currently benefits from its presence. The asset would be sold if it were not generating any benefits. Given that a cooperative provides benefits to its members, they will not make any decisions that will hamper the future value of the benefits the cooperative provides. Since the ownership concept in a cooperative consists of three components; the right to use a resource, the right to returns from it, and the right to sell it, ownership is a multidimensional concept with implications for efficient use of a resource. In a business context, this arguing should result in efficient organizational design so that the resource can be nurtured and utilized in a sustainable efficient way. Hence, the entrepreneurial cooperative with individualized ownership should have a higher member-commitment than traditional cooperatives encompassing collective ownership. (Chaddad and Cook, 2002)

Collective ownership also contains disadvantages as market signals are distorted when transmitted to owners. Literature describes this as *the horizon problem*, *the problem of common property* and *the portfolio problem*.

*The horizon problem* exists when economic actors in a cooperative, such as members, board members and management have differing planning horizons. If the residual claimants of a cooperative can not obtain any capital appreciation for future cash flow from investments made during their ownership period, such investments might not happen. If there is no trade for ownership rights, members' focus is placed on current price levels for the commodities sold. The member will value present payments in favor for long-term profitability, which might destroy the possibility of the cooperative to generate future benefits from the current assets.

*The common property* problem, or free-rider problem, is bigger in organizations having collective ownership. When a member enters the cooperative, he instantly gets access to all assets that are created by current and former members. New members generally pay a low or no initial payment for accessing resources, which results in low capital growth. It is hard to convince members to invest in a cooperative when they must share the investments with all current and future members, since when members resign they cannot receive any appreciation for the capital growth they helped to generate. The personal investments only hold its nominal value throughout the membership years. The result is that members are encouraged to become free-riders; they can't capitalize economically on the results of investments taken on during their membership period.

Collective characteristics also affect basic market economy functions. A necessary condition for markets to function efficiently is that resources are mobile. Capital must be able to move from bad to promising projects, from unprofitable investments to profitable investments etc. This is hard to do when a company is built on collective capital. No one can claim ownership of the capital and hence no one can reallocate the capital. It might result in companies lasting longer than optimal, making unprofitable use of capital resources that should have been reallocated for other business operations.

Another result of collective characteristics is that management might handle collective capital sub-optimally. Provided individuals' utility maximization, capital lacking defined ownership can be used for suboptimal investments, due to low incentives for principals' controlling the use of unallocated capital. If the incentives for controlling capital returns are low, risk analysis and required return on capital investments can be badly managed. This further increases agency costs.

Due to this, one can be critical to the function of ownership rights within traditionally organized cooperatives. The cooperative business is owned collectively. If there is unallocated capital retained in the cooperative, no one can claim it since it is collectively owned. Additionally, the members' investments are used for collectively decided investments and the member only has access to their capital if they leave the cooperative. This creates *portfolio problems* for the members since different investment alternatives are optimally different for different members' individual risk management.

The former explanation of how characteristics diverge in different organizational models makes them optimal for specific market strategies. Since different strategies are best suited for specific markets, it is also understood that different organizational models are optimally good for specific markets. Hence it's also possible to reverse the argument and conclude that when markets change, other market strategies are better suited for trying to obtain market success. This is further described in the following section.

## 2.6 Market strategies for cooperative models

Nilsson and Björklund (2003) combine market strategies and cooperative models based on the degree of individual or collective characteristics that a cooperative constitutes. Paired to market characteristics this result in Figure 2.2, which is an elaboration of Figure 2.1. Porter's (1983) three generic strategies, *overall cost leadership*, *differentiation* and *focus* are combined with the cooperative models mentioned: *service-at-cost* cooperatives, *external entrepreneurial* cooperatives and *internal entrepreneurial* cooperatives. As the conditions of the *regulative* cooperatives are different from the market conditions in the U.S., this cooperative model is exempt from the figure and from further analysis.

*Service-at-cost cooperatives* are best suited for producing at low cost. The open membership policy simulates growing numbers of members, enabling processing of large quantities and utilization of economies of scale. The obligation to accept all products supplied, and the large number of members, makes it difficult to manage a complex set of

products and should make the cooperative focus only on how to manage primary production in the form of commodities or other low value-added products. Additionally, the collective characteristics results in low capital growth, making it hard to market products intensively or invest in value adding processing plants. The most suitable strategy for this type of cooperative is thus the *overall cost leadership strategy*.

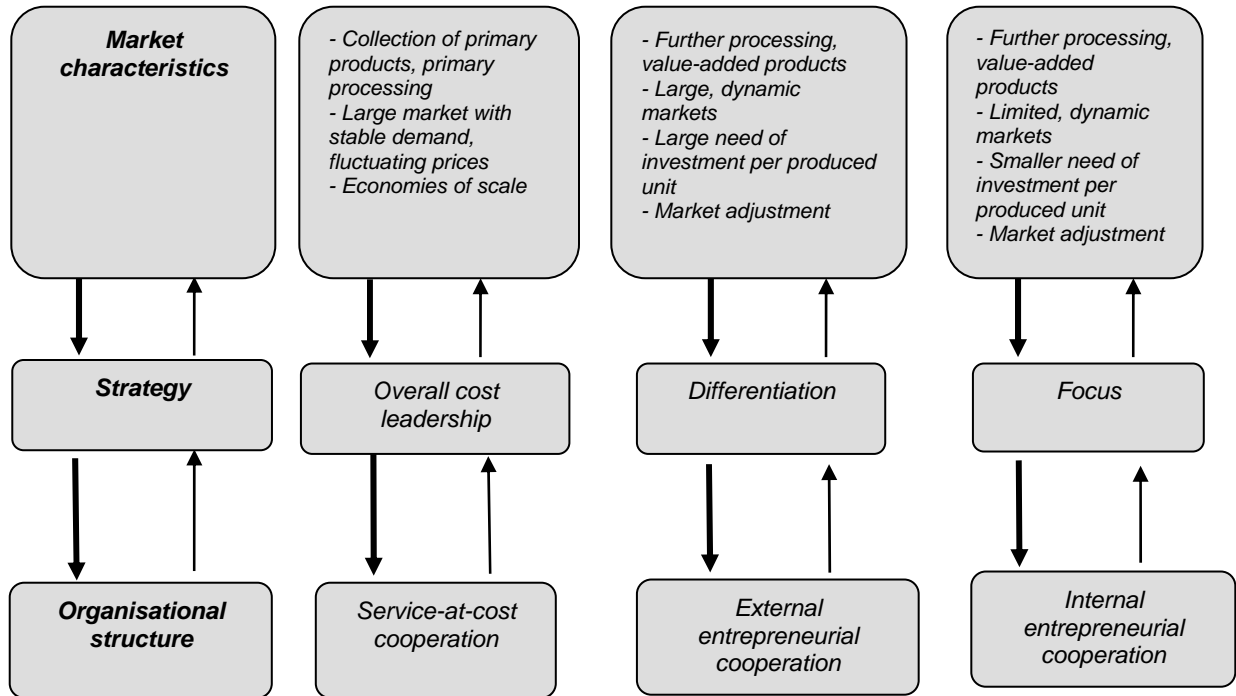


Figure 2.2: Choice of organizational structures according to different market characteristics, Nilsson and Björklund 2003

*Internal entrepreneurial cooperatives* have a high degree of individual ownership among shareholders. The equity base is generated from members through investments in delivery rights. This results in that the amount of equity is limited, which can make it difficult to aim at supplying a large number of market segments with a large number of differentiated products. Therefore a *focus strategy* should suit the internal entrepreneurial cooperative best.

*External entrepreneurial cooperatives* should be able to generate a larger equity capital base since it is subject to investment from non-members, hence having a larger pool of equity. This model does not suffer from capital restrains in the same way that internal entrepreneurial cooperatives do. This should make the cooperative rely on strong market presence, which demands large investments in product innovation and high costs for marketing the products. The cooperative operates in a way that is similar to an investor-owned firm, making the business environment profit oriented. The external entrepreneurial cooperative should successfully pursue a *differentiation strategy*.

## **2.7 Implications for the study**

The most important parts in the presented theories are the relationships of the market – market strategy – and organizational model. In the long run, it is only possible to obtain market success if the chosen market strategy suits the market that the firm operates in. Additionally, a selected market strategy will most easily and hence more efficiently be implemented if the cooperative has a certain organizational form. Hence, important for the study then is to find out if changes in the cooperatives are derived from the product market and to what extent the cooperatives adjust to the changes. Simultaneously, it is necessary to describe the current market situation, market strategy and organizational model of each cooperative for the concluding analysis. The Nilsson and Björklund (2003) theory and its conclusions regarding different organizational models will be the analytical tool used in this thesis.

The purpose of this thesis is not to assess the theory itself, though there seems to exist a good opportunity for testing if it holds. The theory do however seem to fit this purpose very well and hence its role is to work as the foundering tool in the analytical part.

### **3 Methodological approach**

#### **3.1 Study trip to the United States of America**

The information about the cooperatives was gathered during interviews, through the USDA homepage, case studies, cooperatives' homepages and discussions with research staff in the U.S. During 45 days, from April 18<sup>th</sup> to June 1<sup>st</sup> 2004, information gathering, preparations and traveling took place for collecting as much and accurate information as possible. One road trip during three days and a daytrip was made in New York State, a daytrip in Kansas, two flights to Minneapolis/Saint Paul and Kansas City.

Being at place physically is a necessity for conducting studies like this one. The interaction between the interviewer and the interviewees, physically at place, creates trust, which is invaluable for gathering accurate information. It would not have been possible to perform this study without meeting with the interviewees face to face. Trust is an important factor when discussing strategies, changes and company characteristics. This is hard to create by telephone interviews or by e-mailing. Information material like annual reports, brochures and slide show printouts could easily be obtained this way.

#### **3.2 Selection of companies and interviewees**

The number of companies and who to visit was decided upon in collaboration with Bruce Anderson, associate professor of business management at the Applied Economics and Management department, College of Agriculture and Life Sciences, Cornell University, and with David Barton, director of the Arthur Capper Cooperative Center, and professor at the Department of Agricultural Cooperative Center, Kansas State University.

Interviews were not booked as I left for the U.S. but through Anderson and Barton it was arranged during the stay. The first four weeks I stayed at Cornell University, N.Y, and the two last weeks I spent at Kansas State University, KS.

Anderson and Barton advised on what cooperatives to include in the study based on the needs I expressed (Section 1.6) but also depending on what cooperative representatives would be possible to meet with. Management and directors are busy and might not be able to allocate precious time for interviews. However, Anderson and Barton are highly respected persons and through their contact network I was able to visit with both CEOs and directors.

All planning worked out fine with a lot of help from company representatives. Professors Anderson and Barton and I were extremely well received by all interviewees. They allocated precious time for my questions and I expressed my deepest appreciation for their willingness to cooperate with me. The interviewees are listed in Table 3.1.

Table 3.1 List of interviewees

<i>Name</i>	<i>Position</i>	<i>Organization</i>
Jack Gherty	CEO	Land O'Lakes
Kevin Murphy	Vice president Member Relations	Pro-Fac
David Chamberlain	Director, treasurer	Dairylea
Ken Mattingly	Director	Pro-Fac
Brent Roggie	CEO	National Grape
C. Robert Militello	Director, both organizations	National Grape/Welch's
John D. Johnson	CEO	CHS
Chris Policinski	COO-Dairy foods; Exe. VP	Land O'Lakes
Tom Shephard	Agri-Services	Dairylea
Brad Keating	VP of Operations	DMS
Ed Gallagher	VP Planning and Regulatory Services	Dairylea
Greg Wickham	COO	Dairylea
Jim Kile	Director, second vice chairman	CHS
Mike Toelle	Director, chairman	CHS
Steven Hunt	CEO	USPB

### 3.3 Interview methodology

Interviews were conducted at main offices and at director's farms. Two phone interviews were made; with the directors of CHS. Since the purpose was to find out both technical data for descriptions of the cooperatives and information regarding changes of the , a standardized questionnaire was used. However, since all cooperatives had not experienced the same challenges and changes, the questionnaire was adjusted to fit each firm. The interviewees were informed in advance of what my questions in general would cover.

At some of the interviews professors from Cornell University and Kansas State University joined. For the interviews at Dairylea, Brian M. Henahan senior extension associate joined, since he also had an interest of meeting the Dairylea staff. For the interviews with CHS and Land O'Lakes, Dr. Barton and Michael Boland, associate professor, Agriculture Economy department, Kansas State University, joined. They are both working on case studies for the cooperatives and had interest of asking some questions themselves. For the interview at U.S. Premium Beef Dr. Barton joined.

The interviews were recorded on the permission of the interviewees. The interviews lasted for 45 minutes to 1.75 hours, mainly depending on to what extent big changes had occurred in the cooperatives. The questions were open-ended which allowed for many follow-up questions. I am grateful for the interviewees' patience and interest in explaining operational-, management-, board-, planning-, membership-, strategy- and industry related issues.

### **3.4 Prior U.S. case-studies having similar purpose**

The professors I visited in the US could not provide me with information regarding other studies with the same or similar purpose, utilizing similar theory. On the other hand I was provided many publications handling finance, governance, decision-making and other business and administration related case-studies.

There seems to be limited numbers of studies linking several fields of corporate theory, which is done by Nilsson and Björklund (2003). However, studies focusing on one theoretical area and a specific industry are common and several studies showed to be valuable for my study. Despite the lack of U.S. studies with a similar theory and empirical approach, the professors in the U.S. showed great interest in the theories used in this study. They provided extensive material which were connected to the field of study in this thesis. Despite differing objectives of the case studies, compared to this thesis, the information was useful and is hence included in the empirical information in the following chapter.



## 4 Collected information and data – US cooperatives

### 4.1 Introduction

This chapter describes each industry individually and how the cooperatives operate within them. Each industry section starts with a description containing an overall introduction of the industry structure, the value of production and characteristics of the market. The initial industry description makes it easier to understand the size and scope of each industry and how the visited cooperatives fit into this environment.

The cooperatives are presented, providing an instant description of the current situation with respect to their market, strategy and organizational model. Each cooperative is finally described in terms of how market changes have affected the organization.

### 4.2 Dairy industry – Dairylea and Land O’Lakes

#### 4.2.1 Dairy products market

Representatives for two cooperatives in the dairy industry were interviewed – Land O’Lakes and Dairylea. Land O’Lakes is headquartered in Minneapolis/Saint Paul, Wisconsin, and Dairylea is headquartered in Syracuse, New York. Both cooperatives are located in regions known for a large dairy industry (see Section 5.2.3), but they deviate significantly in size and strategy (Table 4.1)

Table 4.1: Selected company information, Dairylea and Land O’Lakes ([www.dairylea.com](http://www.dairylea.com), [www.landolakesinc.com](http://www.landolakesinc.com))

Cooperative	Members	Milk received	Sales USD	Main products	Employees
<i>Dairylea</i>	2500	2.5 billion kg	1 billion	Marketer of raw milk	600
<i>Land O’Lakes</i>	6000 + 1300 in local cooperatives (total cooperative)	6.9 billion kg	3.0 billions <sup>4</sup>	Food service, private label, cons. products	> 8000 (total cooperative)

Milk is produced in all 50 States of the U.S., with total production of 71.4 billion kilograms in 2001. Dairy cooperatives received, or bargained for, 86 percent of all milk sold by farmers in 2002. More than 81,900 members marketed their milk through the nation’s 198 dairy cooperatives. Almost two-thirds (62 %) of milk handled by cooperatives was sold as raw milk in 2002. The other 38 percent was manufactured at plants owned and operated by cooperatives. Cooperatives generally produce cheese, butter, nonfat dry milk, and other such manufactured products, but some cooperatives

<sup>4</sup> Note: Land O’Lakes total 2003 sales of \$6.3 billion include Agricultural inputs or Ag Services side of its business.

also process fluid milk. Regardless of the company's business structure, there is a relatively significant presence of foreign-owned companies in parts of the U.S. dairy industry. (Cooperative Programs, 2004)

The list below as well as Figure 4.1 indicates that major milk supply states are widely scattered across the West and North of the U.S:

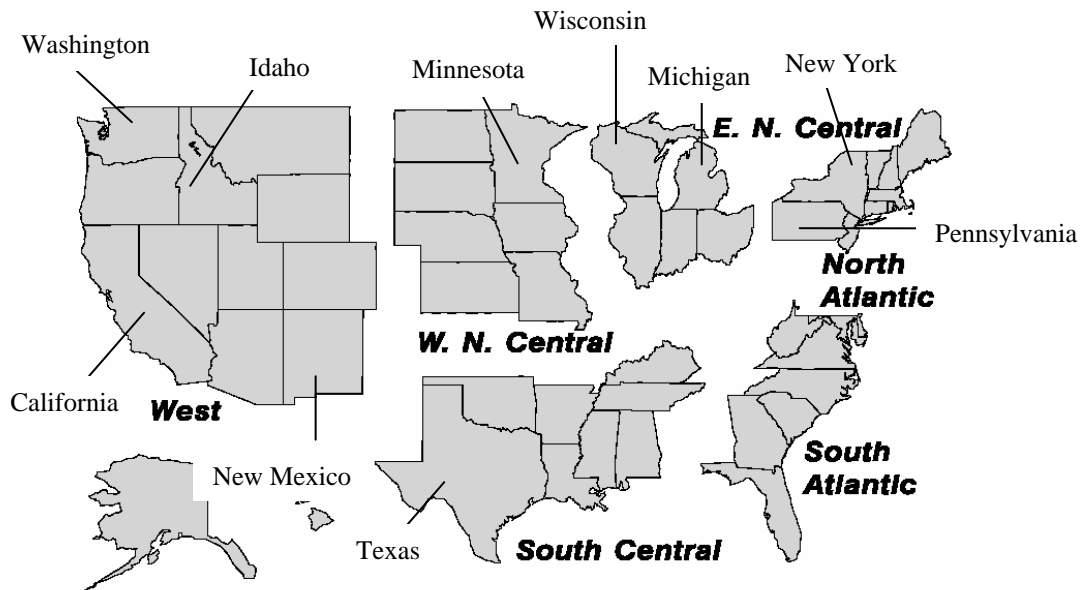


Figure 4.1 Ten largest milk producing states (Pautler, 2004)

Top producing States in 2001	
1. California	(18.7 %)
2. Wisconsin	(14.2 %)
3. New York	(7.4 %)
4. Pennsylvania	(6.7 %)
5. Minnesota	(5.8 %)
6. Idaho	(4 %)
7. Texas	(3.5 %)
8. Michigan	(3.4 %)
9. Washington	(3.4 %)
10. New Mexico	(2.9 %)

Three regions – the East North Central, West North Central and North Atlantic – together account for 52 percent of the cooperative milk volume. The relative importance of the western regions with respect to milk production has grown while other regions have declined or remained steady. Western areas have a lower average cost of milk production for a variety of organizational and climatic reasons. (Pautler, 2004)

The dairy market for milk products is domestic to its nature. There are few economic incentives for exports and imports of dairy products; quotas and tariffs regulate imports while exports are limited due to high domestic production costs. In 1999, prices for U.S. cheddar cheese, butter and nonfat dry milk, respectively, averaged 62%, 90%, and 76% above world prices. The imports accounted for about 1% of total volume dairy products produced. (Dobson and Christ, 2000)

USDA categorizes dairy products into two groups: 1) fluid milk and cream products, and 2) manufactured dairy products. The first group constitutes products such as milk, cream, yoghurt and eggnog, and makes use of about one third of total U.S. milk production. The

second group includes products like cheese, butter, and milk powder. It roughly makes use of the remaining two-thirds of the U.S. milk production.

Group 2 has experienced significant changes. Growing cheese demand has increased the per capita cheese consumption twice the level compared to 25 years ago and shows no signs of leveling. Increased cheese consumption has been helped by the common availability of a wider variety of cheeses, increased away-from-home eating, and greater popularity of ethnic cooking using a lot of cheese (such as Italian and Mexican food). Figures for the value of shipments and volumes of different dairy products reveal that the demand for cheese products has increased significantly since 1982, which is illustrated in Table 4.2. (Miller, 2004)

Sales of packaged fluid milk products by cooperatives equaled 7 percent of the nation's production in 2002, down from 14 percent in 1997. Cooperatives have very small market shares for most of the value added products (except cheese), less than 10 percent in each product category. However, these markets are small measured in value of shipment (see Table 4.2). Cooperatives marketed 17 percent more cheese in 2002 than in 1997, but cooperatives' share of the natural cheese market remained the same, 40 percent, from 1997 and 2002.

*Table 4.2 Value of shipments, dairy products (Dobson and Christ, 2000)*

	1982	1987	1992	1997	2001
<b>Fluid Milk</b>					
Value of Shipments (billions)	\$ 18.736	\$ 20.590	\$ 21.927	\$ 22.212	N/A
Production – volume (1000 mt)	22962	24634	25036	24999	24900
<b>Cheese</b>					
Value of shipments (billions)	\$ 10.763	\$ 12.971	\$ 18.352	\$ 20.326	N/A
Production – volume (1000 mt)	2060	2427	2942	3324	3645
Value of butter and milk powder (billions)	\$ 3.187	\$ 2.441	\$ 2.078	\$ 2.911	N/A
Total value of shipment - all products (billions)	\$ 32.682	\$ 36.002	\$ 42.357	\$ 45.449	N/A

Dairy products carry characteristics that affect the nature of their respective potential market volume. Milk is produced every day and must move to markets at least every other day – thus it is a flow commodity. In the short run (day to day) milk supply is not attuned to milk demand. On Sundays the demand for bottling (packaging) is almost zero and small on Wednesdays and Saturdays. Cows produce milk every day and the cost of discarding milk is high. Hence, managing milk distribution and milk hauling is important for minimizing wastage. Excess milk is used for manufactured industry products. These manufactured products are not a flow commodity; they can be stored and transported in a

way that makes manufactured products less dependent on geographic location. (Dobson and Christ, 2000)

Regional differences in demand and supply of milk also affect the milk market. In the east there is excess demand of raw milk because of a highly populated region resulting in a relatively large and attractive fluid milk market. However, production costs are higher in the east than in the west, which has led to a shift in production away from the east towards the west. This has also led to a shift of where new manufacturing plants for value added products are being located. Since manufactured products have better tenability, new manufacturing facilities are built in the west where milk production is less costly. It is seen by cheese-plants closing in the Northeast and new highly efficient cheese-plants being constructed in the west. (Chamberlain, pers. mes. 2004)

The future demand for dairy products domestically is not changing dramatically measured in volumes. USDA's outlook projections assume that total demand of dairy products will remain fairly steady, assuming no drastic changes in policy, weather, diseases or other major controllable or non-controllable input factors. What affects milk marketers of dairy products is the consolidation among customers, such as super-chains and food retailers. In 2000 the top 10 supermarket chains controlled about 52 percent of all retail grocery sales. This concentration is likely to continue, since Wal-Mart alone is projected to account for 35 percent of all retail grocery sales in 2008 (German, 2003). Large retailers wish to be served by one or two firms, which require suppliers to deliver large quantities, to prices that smaller suppliers face problems meeting.

#### ***4.2.2 Dairylea of today***

Dairylea is a farmer owned service and marketing cooperative with more than 2500 members. Its operating area is located throughout the Northeast, from Maine to Ohio to Virginia. A 16-member board governs Dairylea and its sales approached 1 billion USD in 2003. It marketed 2.5 billion kg raw milk on an annual basis. There are approximately 55-60 cooperatives located in the Northeast where Dairylea has become the largest single milk marketer in the region, handling approximately 50 percent of all milk produced there. It has long lasting delivery contracts with almost all milk processors and manufacturers in the region. ([www.dairylea.com](http://www.dairylea.com))

Dairylea is organized in two business units, Agri-Services, LLC and Milk Marketing and Membership. Dairylea offers a variety of field services through its holding company Agri-Services LLC. The service units are managed both as joint ventures and fully owned subsidiaries. The decision to start up service products is based on members needs, if it helps farmers increase the bottom line, and if the services covers its own costs. If Dairylea decides to take on a new service there often exists some kind of market failure; the current provider manages service operations poorly or there prevails too high margins. (Shepherd, pers. mes. 2004)

The milk marketing and membership business section of Dairylea includes a joint venture owned company called Dairy Marketing Services (DMS). Dairylea markets all its raw

milk through DMS which is a true marketer of raw milk. DMS is formed for the purpose of creating efficiencies and reducing costs associated with milk assembly, field services, and transportation. It creates values to dairy producers by streamlining the milk marketing system and by meeting the needs of processors more efficiently.

DMS was formed as a joint venture in 1998 with the Northeast council of Dairy Farmers of America, but it has recently expanded its operations nationally. Currently DMS markets 10.4 billion kg raw milk and is the second largest seller of raw milk in the country. Dairylea has a 33.3% ownership in DMS and approximately 80 employees are hired in the company. (Keating, pers. mes. 2004)

#### ***4.2.3 Membership***

Dairylea has an open membership policy with an equity investment requirement of 2-5 cents a hundredweight delivered raw milk (0.04 – 0.1 cents/kg) with an annual cap of 2200 USD per member. The equity is managed under a 10-year redemption plan with no equity interest payments and it is redeemed at par value. (Gallagher, pers. mes. 2004)

In 2002 Dairylea became a member cooperative of Dairy Farmers of America (DFA) and made a small equity investment in DFA. DFA is a dairy cooperative operating nationally, having 22,900 members and sales of \$ 6.9 billion dollars. It markets 25.4 billion kg of milk. Dairylea understood it would be beneficial for it to have a seat in the board of this national wide cooperative, though it could not see the benefits of a total merger. Hence, a minor equity investment became the solution. (Wickham, pers. mes. 2004)

#### ***4.2.4 Dairylea's history and current market***

Dairylea was founded in 1907 since a number of dairy farmers in Orange County, New York, wanted to increase their bargaining power towards their customers. They formed what became one of the first cooperatives in the nation and it was named The Dairymen League. The name was changed to Dairylea in 1969. During the 1980s Dairylea faced economical troubles and would, as CEO Rick Smith expressed it, "... have faced bankruptcy three times, if it wasn't for Dairylea being a cooperative" (Smith, pers. mes. 2004)

The economic difficulties in the 1980s made Dairylea conduct a major operating assessment. It assessed what would be the most logical thing for a cooperative to do being located in the Northeast with higher cost of production, excess capacity in manufacturing, and excess demand of fluid milk. The processing plants currently owned by Dairylea did not operate efficiently and it also sold milk to competing processors, which cannibalized its current products. Hence it made little sense to continue with the current strategy. Simultaneously, the operating risk would decrease if divesting off the manufacturing plants and the balance sheet would improve. Also, not having assets would decrease the need for equity in Dairylea, which instead would allow members to retain and invest such money at their farms. (Wickham, pers. mes. 2004)

Management and board also decided to take on a new strategy, aiming at engaging in activities enhancing the bottom line for its farmer members. All activities and operations of the cooperative should follow that guiding principle. Dairylea started “on the behest of farmer members” developing finance, insurance, credit, lab, and bargaining services, among others. Dairylea pursued with divesting all its processing and manufacturing plants and focused on being a marketer of its members’ raw milk. The strategy resulted in an improved balance sheet and a focus on offering services that farmers needed for increasing the efficiency in their production. (Shephard, pers. mes. 2004)

When focusing on increasing the bottom-line result for its farmer members, Dairylea implemented a volume based pricing system. It compensates producers for how valuable their milk is for the cooperative. It also aims at maximizing monthly payout and hence Dairylea doesn’t pay any patronage refunds. The pricing-strategy and equity requirements implemented by management during the late 1980s were favorably received by both small and large producers in the Northeast. It led to a tripling of revenues and milk volumes marketed during the 1990s. (Wickham, pers. mes. 2004)

The market in the Northeast during the late 1980s and beginning of 1990s is referred to as somewhat stable with little milk moving in or out of the region. However, the product market in the Northeast started to get affected by increasing milk production in the western states and customers consolidating at a national scale. Management concluded that Dairylea would be at risk not being able to serve national customers. It hence realized that it would be beneficial to be associated with a cooperative having a national footprint, but it did not want to merge. There was also a potential threat of national dairy cooperatives entering the Northeast region and with their size become a severe competitor to Dairylea.

In 1998 Dairylea formed a joint venture with Dairy Farmers of America (DFA) to have a one-third investment in two balancing plants. This turned out to be a test for how well the two parties could cooperate and while customers evolved to national entities, Dairylea now had found a partner it could consider further partnering with for better being able to meet large customer needs. (Wickham, pers. mes. 2004)

As a result of the joint venture with DFA, Dairy Marketing Services LLC (DMS) was formed in 1999, a joint venture between DFA’s Northeast council and Dairylea. DMS managed to create increased bargaining power, efficiencies and reduced costs of milk assembly. The success of DMS is seen in its geographic expansion, but it’s first and foremost recognized by how many customers that have put their trust in having DMS as their preferred supplier of raw milk. (Keating, pers. mes. 2004)

#### ***4.2.5 Land O’Lakes of today***

Land O’Lakes is a diversified, farmer-owned food and agriculture cooperative serving farmers throughout the whole United States. Land O’Lakes is headquartered in Arden Hills, Minnesota and in 2002 it operated approximately 200 processing, manufacturing, warehousing and distribution facilities throughout the country and employed about 8,000

people. The two operating segments, Dairy Foods and Agricultural Services, provides member cooperatives and farmer-members with agriculture supplies and services, such as feed, fertilizer and spray products, besides the dairy product marketing functions. Land O'Lakes has approximately 6,000 producer-members and 1,300 local community cooperatives as members who actively participate in its governance through a 24-member board, 12 directors from each the Dairy sector and Agriculture service sector. (www.landolakesinc.com, 2004)

Consolidated net sales reached \$ 6.3 billions USD in 2003, incurred from six operating divisions: Dairy Foods, Feed, Swine, Seed, Agronomy and Layers/Eggs. The Dairy Foods unit accounted for approximately 47% and Feed for 39% of net sales. (Annual report, 2004)

The Dairy Foods unit produces, markets and sells products such as butter, spreads, cheese, and other dairy-related products and is divided into two broad segments: value added and industrial. Value Added accounted for 44% and Industrial Products for 56% of dairy product sales in 2001. Thirteen manufacturing plus ten leased facilities throughout the country are used to produce the more than 300 dairy products marketed by Land O'Lakes. (Annual report, 2004)

Land O'Lakes procures 6.85 billion kg of milk and is currently sharpening its focus on leveraging the value added products under the Land O'Lakes umbrella brand. Primarily, it wants to grow its Butter and Superspreads, Foodservice, and Deli Cheese businesses. (Annual report, 2004; Policinski, pers. mes. 2004)

#### **4.2.6 Membership**

Land O'Lakes has an open membership policy and divides its membership base in two categories; "dairy members" who supply the cooperative with raw milk, and "agriculture members" who acquire production supplies from Land O'Lakes. The equity requirements are different depending on what member category they classify as, where dairy members have to allocate 2.75 USD a hundredweight (5.5 cents/kg) in equity investment. The equity is redeemed 12 years after the member has ceased doing patronage business with the cooperative. Net proceeds of Land O'Lakes are paid as patronage refunds. (Annual report, 2004)

There is a stock purchase requirement for becoming a member of Land O'Lakes. Classes A, and C, are devoted for cooperatives doing patronage trade with Land O'Lakes, where the A stock carries voting rights proportionate to the patronage trade that entity has made. Individual farmer-members must hold class B, and D stock, where Class B shares have voting rights. One member-one vote applies for the Class B shares. Class C Preferred Stock is open to be held, by approval of the board, by large investors such as corporations, insurance companies etc. Class D Preferred Stock is open to be held by any individual. The preferred stock is non-voting but subject to a maximum 8 % dividend. The amount of preferred equity totals approximately 1.4 percent of total equity. There is

no market for this type of equity and Land O'Lakes claims that it is unlikely that a market for this type of equity will develop. (Annual report, 2004)

#### **4.2.7 Market – Dairy foods**

Land O'Lakes markets both undiversified commodities and branded consumer products. The products are sold under well-recognized national brand names like LAND O'LAKES and Alpine Lace, as well as under regional brand names such as New Yorker. Land O'Lakes is the number-one marketer of branded butter and deli cheese. It also makes use of licensing agreements, where royalty fees are paid by manufacturers for the opportunity to use the brands owned by Land O'Lakes. It also provides the private label industry with products. (Annual report, 2004)

Reaching consumers with manufactured products is done through the company's customers. The customers are growing in size and scale by a consolidation process fueled by redundancies in the somewhat fragmented retail industry. Not only are the customers growing in size and scale, they are getting more sophisticated and look for innovative consumer products, sold via efficient business interaction systems. Customers want to cut transaction costs out of the supply chain and hence prefer doing business with fewer manufacturers offering a wider range of products. Hence, to reach the consumer markets it is necessary to meet the customers' needs. (Policinski, pers. mes. 2004)

Consumer preferences driving the manufactured dairy industry are currently factors such as taste, convenience, value, variety, and health issues, where convenience is the main driving force affecting the industry at the moment. To meet the consumer needs Land O'Lakes has focused on bringing consumer insights to product developers by sophisticated consumer research. It is extremely important to bring insights and innovation to consumer products since customers have a powerful position to market "commodity products" with their own private label systems. (Policinski, pers. mes. 2004)

To meet the customer needs Land O'Lakes implemented a set of strategic actions encompassing a restructuring of the sales force and utilization of efficient computer software enabling efficient commerce interaction. Land O'Lakes now manages its biggest customers' inventories of Land O'Lakes products. Through the investments in supply-chain software products and a reorganization of the sales force, Land O'Lakes has been able to strip out costs and improve the service to its customers. (Policinski, pers. mes. 2004)

### **4.3 Fruits and vegetables – Pro Fac**

#### **4.3.1 Introduction**

There were 212 fruit and vegetable cooperatives having approximately 32,500 members in 2002. The industry can be classified by its two major end uses; fresh market or processed canned products. Processing can be further divided into canning, freezing and



dehydrating. About 53 percent of total production is used for processing. The crop value of the processed vegetables is estimated to 1.4 billion dollars, equaling approximately 8.9 percent of total crop value. (Cooperative Programs, 2004)

Most of the products sold to fresh markets are produced in California and Florida. Vegetables for processing are mainly produced in the Upper Midwest States (Michigan, Minnesota, and Wisconsin) and the Pacific States (California, Washington, and Oregon). The production of vegetables is moving from the eastern states to the western states due to lower production costs and higher yields. (Lucier, 2000)

The market for canned and frozen products is increasingly international to its nature and very competitive, where imports of canned and frozen vegetables accounted for 8.2 and 20 percent respectively of year 2000's per capita consumption, while exports of both canned and frozen vegetables accounted for 8-9 percent. The per capita consumption was approximately 194 kg in 2003, where fresh market consumption accounted for approximately 77 kg, processed products for 56 kg and potatoes 61 kg. (Lucier, 2000)

#### ***4.3.2 Pro-Fac of today***

Pro-Fac is a marketing cooperative with approximately 500 members. Its members produce corn, fruit and vegetables which are processed by Birds Eye Foods, if not sold to other manufacturers. Pro-Fac's headquarter is located in Rochester, N.Y. Its net sales totaled 1.01 billion dollars in 2002 and its products were sold in all 50 states of the U.S. Its branded, private label and food service/industrial products are sold through its partially owned subsidiary Birds Eye Foods. A slight portion of its production is exported. (Annual report, 2004)

Pro-Fac of today is under transition. Due to economical difficulties Pro-Fac had to divest off its controlling ownership of Birds Eye Foods, which it had a 100 percent ownership of up to the year 2002. The new main owner is an investment company called Vestar Capital Partners (Vestar). The event took place in August 19<sup>th</sup> 2002, but it is more the ownership structure that has changed than the actual market channels for the farmers. Instead of a wholly owned subsidiary, Pro-Fac has a 40 percent ownership interest in Birds Eye Foods. After Pro-Fac's divestiture of its controlling interest in Birds Eye Foods it is impossible to say if Pro-Fac as a cooperative will prevail, mainly depending on what Vestar decides to do with its stake in Birds Eye Foods. This has also lead to Pro-Fac having only three employees since most of its operations were tied to the ownership of Birds Eye Foods. (Murphy, pers. mes. 2004)

Birds Eye as a company still operates as it used to do, but now under the directions of the new main owners. Besides Birds Eye Foods, there are eight other processors that Pro-Fac members sell their commodities to, but the substantial part (75 percent) is still marketed through Birds Eye Foods and its affiliated brands. Since most of the market for Pro-Fac members has not changed, the following information describes Pro-Fac as of before the event of divesting the controlling interest of Birds Eye Foods. (Annual report, 2004)

### **4.3.3 Membership**

Pro-Fac is a closed cooperative, where producers must invest in delivery rights to become member. The board decides what commodities to market and it also approves issuances of and transfers of all common stock (delivery rights). The price on initial offerings of common stock differs depending on in what state the production is located, but it aims at reflecting 25 percent of raw product value. At the peak the price of transferred delivery rights had a premium of 20-30 times its initial value. (Murphy, pers. mes. 2004)

Members' retained earnings are after five years of non-interest bearing maturation converted into Class A cumulative Preferred Stock. Each 25 USD of retained earnings are transformed to one piece of preferred stock with annual payments of 1.72 USD, reflecting a 6.88 percent rate of return. Whenever the member wants to, he can sell his stocks listed on NASDAQ under the trading symbol PFACP, and receive a market based price. (Annual report, 2004)

### **4.3.4 Market – market strategy**

From the 19<sup>th</sup> of August 2002, things changed for Pro-Fac due to the event of divesting of controlling ownership of Birds Eye Foods. Earlier Pro-Fac marketed 62 percent of its Birds Eye Food's products under branded labels and the rest was divided between private label and food service/industry. The product line primarily constituted vegetables, fruits, snacks and canned meals. (Annual report, 2004)

The proceeds in Birds Eye Foods will be assigned to the owners in proportion to ownership where Pro-Fac has approximately 40 percent interest. Depending on Birds Eye Foods financial result and market success, this might not lead to a significant price drop, just a different way of how net proceeds are distributed back to the producers. (Mattingly, 2004; Murphy, 2004)

There are a couple reasons for the evolution of the problems, which now are described in further detail through this historical description.

In the 1960's farmers and processors met to discuss if they could take advantage of their joint interest in keeping fruit and vegetable production and processing going in the northeast. The farmers that met formed a new cooperative called Pro-Fac, through which the members leased processing facilities to Curtis Burns, a processing firm that processed raw products to consumer products. The proceeds from Curtis Burns were split in half and shared between Pro-Fac and Curtis Burns. ([www. profaccoop.com](http://www.profaccoop.com))

The joint venture was very successful and the two companies grew in size and scale throughout the country. To finance the growth Curtis Burns needed more capital, which could not be supplied by the farmer owners. Curtis Burns then decided to go public and in 1973 it issued common stock. ([www. profaccoop.com](http://www.profaccoop.com))

One of the major stockowners in Curtis Burns was Agway, another supply and marketing cooperative, which faced economic difficulties and needed to restructure its balance sheet. One of the most valuable assets Agway had was its share of Curtis Burns. After 4 years Pro-Fac won the bidding against Dean Foods to purchase Curtis Burns. Pro-Fac went heavily in debt, but pro-forma calculations made by Pro-Fac employees showed that it could ride the debt situation out. However, pro-forma calculations were not accurate enough to handle a changing business environment, and in 1996 Pro-Fac lost a lot of money and it could not pay farmers full commercial market price for their commodities. This led to hiring of new management who immediately restructured the balance sheet by selling off some product lines, which reduced the debt with approximately 100 million USD. In 1997 Curtis Burns changed name to Agrilink Foods to signify the link between producers and consumers. (Mattingly, pers. mes. 2004)

One weakness of Pro-Fac in the increasingly competitive marketplace was its lack of a national brand. In 1998 Dean Foods vegetable company Birds Eye Foods, the former competitor to acquire Curtis Burns, was up for sale. Birds Eye Foods comprised a number of regional and a national brand, and Pro-Fac felt that a branded strategy was the only way to survive in the marketplace. However, a second bidding war took place, now between Pro-Fac and a management team from Birds Eye Foods. Pro-Fac won the bidding war but pro-forma calculations showed that the high leveraged debt situation could be managed. (Mattingly, pers. mes. 2004)

However in 2001, management was forced to tell the board that additional equity was the only way to make Pro-Fac stay in business due to the high debt situation. It was beyond the bounds of possibility to attract needed equity from the members and Pro-Fac had to look at other solutions. One of them was to let external investors make a majority investment in the wholly owned Birds Eye Foods Company, which included giving up the controlling interest of it. Board and management studied many options and finally accepted a proposal by Vestar Capital Partners (Vestar). Vestar has a history of acquiring companies, streamlining its operations and sell it off in a 5-7 year cycle. A bid from Vestar was accepted by the overwhelming majority vote of Pro-Fac members. (Mattingly; Murphy, pers. mes. 2004)

The Birds Eye Foods Company has a number of valuable and strong brands with significant consumer recognition in the U.S. as a whole, and particularly in the North East. This leaves both Ken Mattingly and Kevin Murphy to believe that members' equity is secured by the residual value of the approximately 40 percent ownership in Birds Eye Foods. There might even remain a residual value above the equity that the members have due, hence there seems to exist limited risks for equity losses for the owners. (pers. mes. 2004)

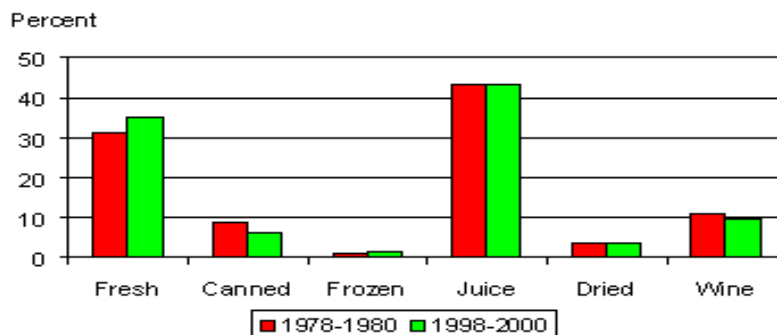
## 4.4 Grapes – National grape

### 4.4.1 Introduction

In 2002 there existed 212 fruit and vegetable cooperatives, having approximately 32,500 members. The value of U.S. grape production reached 3.1 billion USD in 2000, with 88.2 percent of production used for processing. Processed grapes include canned, frozen, juice, dried fruit and wine. Most fruit used for processing is grown under contractual agreements between growers and processors. (Cooperative Programs; Perez and Pollack, 2002)

Based on acreage California is the largest producer of grapes, mainly because its climate gives it an advantage over other grape producing states. Fruit is mostly consumed as juices, which grapes are as well. The 2002 consumption of canned and juice grapes totaled 1.9 kg per capita. (Perez and Pollack, 2002; Buzby and Putnam, 2004) (See Figure 4.2)

**Fruit product categories:  
Average share of U.S. per capita fruit consumption**



Source: Economic Research Service, USDA

Figure 4.2 Fruit product categories: Average share of U.S. per capita fruit consumption

The market for products made on processed grapes is highly competitive, facing international competition of low cost grape production.

### 4.4.2 National Grape Cooperative of Today

National Grape Cooperative (National Grape) is a cooperative having approximately 1,400 members. It solely markets members' production of Concord and Niagara grapes. National Grape is headquartered in Westfield, N.Y., and is governed by a 13-member board. Grape production is located in two areas geographical areas of approximately 20,000 hectares. The east pool constitutes the states of New York, Pennsylvania, Ohio, Michigan, and Ontario, Canada, and the west pool is the state of Washington. Through the wholly owned subsidiary Welch Foods Inc. (Welch's), National Grape processes and markets all of its members' grapes under the Welch's brand. (Annual report, 2003)

The National Grape/Welch's organization is the world's leading marketer of Concord and Niagara-based grape products. Dr. Thomas B. Welch, the inventor of pasteurized grape juice, founded Welch's in 1869. National Grape acquired Welch's and it became a fully owned subsidiary in 1956. Today it markets 55 percent of the Concord and 75 percent of the Niagara grapes produced in the U.S. Welch's also utilizes the opportunity of licensed production and juice concentrate and sells these products as well as finished products in 35 nations. In 2003 the net sales totaled 579 million USD sold through over 400 consumer products. (Annual report, 2003)

#### ***4.4.3 Membership***

National Grape is a closed cooperative and members acquire delivery rights based on acreage. In the east pool the price per acreage is approximately 1,500 USD, while the price in the west pool is about 5,000 USD. Prospective buyers of delivery rights are evaluated through an extensive screening process before they are allowed to become member of National Grape or to increase their existing acreage if they are already members. Members are paid a harvest allowance for the grapes, at delivery to Welch's production facilities. Net proceeds from Welch's are then distributed as subsequent payments as profitability of Welch's ongoing business allows based on patronage. Despite yearly variations in yields, National Grape accepts all grapes produced by members that fulfills quality standards and meets other regulations. (Roggie, pers. mes. 2004)

National Grape and Welch's are governed by a two-board system. The two boards operate separately, though four of the board members in Welch's are selected from the National Grape board. The National Grape board selects all ten members each February by vote of all 13 directors. Welch's board has totally 10 persons with four outside directors, the CFO and CEO of Welch's, and the representatives from National Grape. Welch's has always had a tradition of having outside directors contributing specific knowledge valuable for Welch's. Currently the four outside directors bring special knowledge in finance, marketing, management and market orientation. They have little to none experience from the grape industry, but their experiences are generated from food industry companies facing similar market characteristics having somewhat comparable strategies. (Roggie, pers. mes. 2004)

#### ***4.4.4 Market***

The market for grape based consumer products is highly competitive. Competitors like Minute Maid (Coca Cola), Tropicana (Pepsi), Juicy Juice (Nestlé's) and private label manufacturers use other grape varieties in their products, often produced in low cost regions like California. This gives Welch's a natural competitive disadvantage. Welch's use Niagara and Concord grapes supplied for the cost of approximately 200 USD per ton, while its competitors use grapes for the cost of 70-80 USD per ton. It is a necessity for Welch's to receive a price mark-up for being able to pay a higher price for grapes produced in the east. This forces Welch's to promote its products as being the industry benchmark, encompassing the original and best tasting grape based food products

available in the market. Equally important is to communicate that the taste is attributable to the use of Concord and Niagara grapes. (Millitello, pers. mes. 2004)

Being successful with the strategy of positioning itself as the original product is extremely important. The consumer must link the taste of Welch's products to Niagara and Concord grapes and accept the taste as being worth paying a higher price for. If not, there would be little to non use of Concord and Niagara grapes in the manufacturing. (Roggie, pers. mes. 2004)

To sustain the market leadership Welch's invests large amounts in research and product development and marketing. The main consumer criterion driving the market is convenience, while customers want new products served on a national scale. To meet the customers' needs National Grape has for example invested in supply chain software programs to manage inventories of grape based products for some of its largest customers. (Roggie, 2004; Millitello, pers. mes. 2004)

## **4.5 Beef – U.S. Premium Beef Ltd**

### ***4.5.1 Introduction***

There were 66 livestock cooperatives having 94,000 members, producing 12.2 billion kg beef-meat during 2002. Commercial cattle slaughter totaled 35.7 million heads, killed at 706 slaughtering plants, 15 of which accounted for 56 percent of all cattle killed. Steers comprised 49.8 percent of total federal inspected slaughter, heifers 32.3 percent, dairy cows 7.4 percent, other cows 8.7 percent, and bulls 1.7 percent. (Gustafson and Mathews; Cooperative Programs, 2004)

The market for U.S. produced beef is international to its nature. U.S. per capita consumption of meat was projected to approximately 82 kg in 2003, where beef will account for approximately 30 kg per capita, totaling retail value of 65 billion USD. Import and export volumes reached approximately 9%, respectively, of total U.S. consumption. Imports are mainly consisting of lower-grade beef, while higher-grade beef dominates exports. Exports will become minimal in 2004 due to a single breakout of Mad Cow disease in the U.S. (Johnson, 2003)

From a 20-year time period pork and poultry have increased their market share of total protein consumption. In this period the beef industry has lost 25 percent of the market share to pork and poultry. Most important for this development is argued to be the lack of incentives for producing a consistent, convenient product, priced competitively with pork and poultry. (Katz and Boland, 2000)

The beef industry value-chain includes stakeholders such as breeders, feeders, marketers, processors and merchandisers of retail products to consumers (See Figure 4.3). Each stakeholder of the beef supply chain is typically affected by the performance and decisions made by all other segments in the system. Customers emphasize factors such as

price, meat quality, traceability, and consistency in supply and quality as being the most important attributes to beef products. Hence, all segments are depending on each other for providing the desired products. (Hunt, pers. mes. 2004)

Most of higher costs in the beef industry results from lack of coordination between the parties in the value chain and a poor information flow to and from consumers. Actors in the industry agree that benefits generated by one party are done on behalf of another one. It is argued that low vertical integration reduces the incentives to correct such market characteristics. (Katz and Boland, 2000)

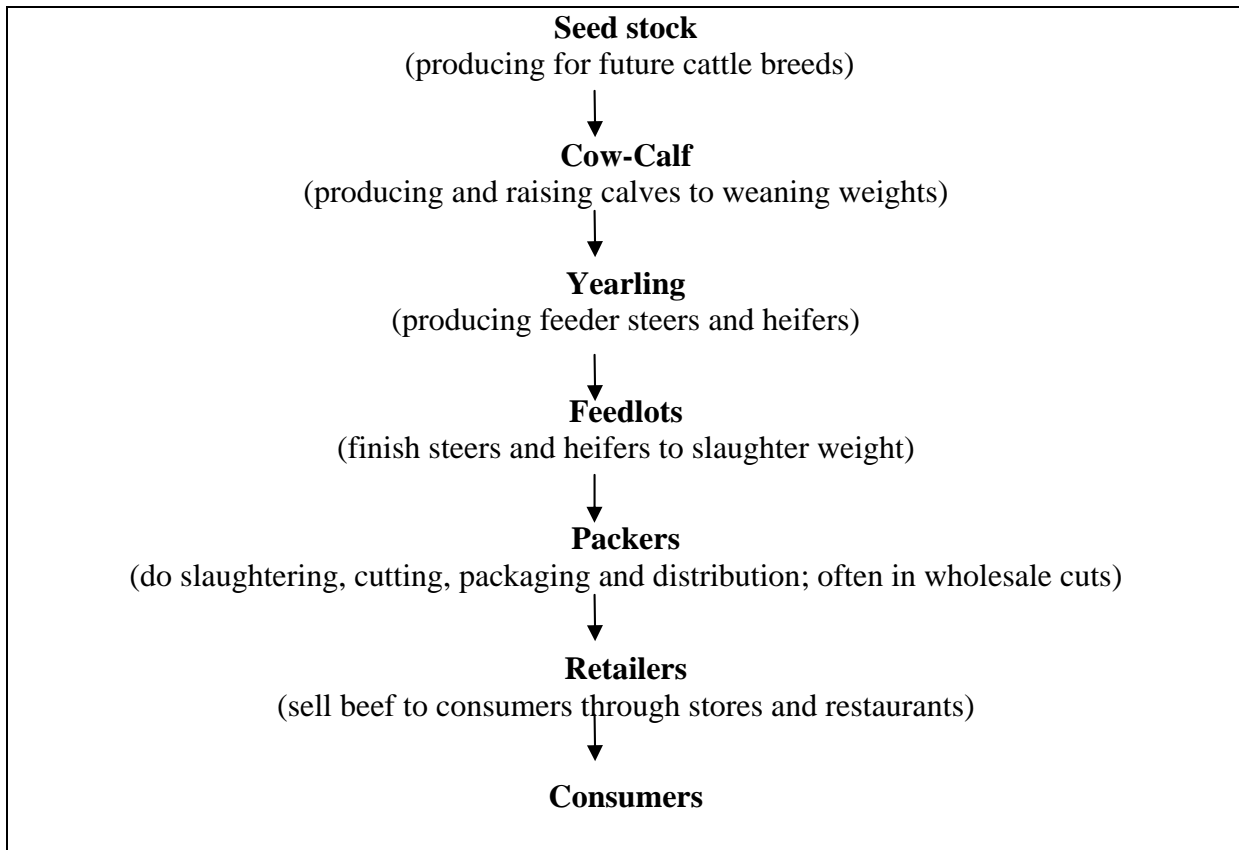


Figure 4.3 Beef industry structure (Katz and Boland, 2000)

The U.S. 2003 average price per kg live weight cattle was 1.77 USD, an increase of 19.6 percent from 2002. (Table 4.3)

Table 4.3 Average price USD per kg live cattle (Katz and Boland, 2000, Meat animals production, 2004)

Year	1992	1997	2002	2003
Price, USD /kg	\$ 1.58	\$ 1.30	\$ 1.48	\$ 1.77

USDA classifies beef in seven categories, where Prime grade beef is the ultimate in tenderness, juiciness, and flavor. Choice and select are the second and third best grades.

Fed cattle are typically purchased in lots by packing firms, and the price paid is set as an average price of the entire purchased lot. Higher-grade animals are not priced correctly and lower grade animals receive a favorable, though wrong, price. In 2002 the four largest packers dominated the beef industry by controlling 82 percent of all slaughter. (Katz and Boland, 2000; Gustafson and Mathews, 2004)

#### ***4.5.2 U.S. Premium Beef Ltd. of today***

U.S. Premium Beef Ltd. (USPB) is a closed marketing cooperative governed by a 7-member board representing the various stakeholders in the industry, from seed stockers to packers. Over 1,850 producers in 37 states are members who market their finished beef cattle through National Beef Packing Co. LLC (NBP). NBP is the fourth largest beef processor in the industry with a market share of 10.8 percent. ([www.uspb.com](http://www.uspb.com))

USPB has a 53.2 percent majority interest in NBP, managers and executives have 26.6 percent, and an outside group of investors, NBPCo Holdings LLC, own the remaining 20.2 percent. NBP is governed by a three-member board, constituting its CEO, the CEO of USPB and the CEO of NBPCo Holdings. NBP has a number of brands, through which beef is sold to national and international customers. (Hunt, pers. mes. 2004)

#### ***4.5.3 Membership***

Of the 1,850 members, 400 producers in 26 states constitute the ownership of USPB. The member-owners of USPB have purchased at least 100 shares, where one share of stock represents the right and obligation to deliver one animal. Voting rights are given to those who have at least 100 shares, but the voting power doesn't change with increasing number of shares. USPB allows member to lease shares to members, who has to pay an annual 100 USD fee for the membership. Owners of 100 or more shares must pay a lifetime member fee of 500 USD. The price for leasing shares is currently at 12 USD per share while shares are sold at 160 USD a piece. (Katz and Boland, 2000; Hunt, pers. mes. 2004)

Through the ownership in NBP, net earnings from NBP are distributed to USPB patrons. In 2003 members earned on average 15.98 USD per head above the cash market and more than 95 USD per head in patronage refunds. ([www.uspb.com](http://www.uspb.com))

#### ***4.5.4 History of U.S. Premium Beef***

USPB was established on July 1, 1996 by a group of producers (Steve Hunt, current CEO of USPB, was one of them) who wanted to increase the value of their cattle. By making use of a grading system at slaughter, where each cattle was paid its real market price, each stakeholder had interest of supplying high quality cattle. After a set of meetings they decided that a closed membership cooperative was the most suitable organizational form for making it possible to coordinate the interests of the stakeholders in the industry. Furthermore, USPB considered three alternative operational strategies: building a plant, buying a plant, or partnering with someone else. It pursued the latter alternative and after



a number of meetings with different companies USPB signed a letter of intent to purchase up to 50 percent of Farmland National Beef in July 31<sup>st</sup> 1997. (Katz and Boland, 2000)

By partnering with Farmland, USPB got access to a recognizable brand for its cattle and it also made sure it had the opportunity to expand the slaughtered volume if it wanted to. To finance the investment, a stock offering was held where one share equaled one head sold at the cost of 55 USD. Additional 50 USD per head was required in debt to finance the investment. After a second stock offering in December the same year, USPB had acquired sufficient capital for becoming a 29 percent owner of Farmland National Beef. (Katz and Boland, 2000)

In late May 2002 Farmland Industries declared bankruptcy. USPB, a management group and NBPCo LLC. bought the remaining 71 percent stocks in August 2003. The new company was named National Beef Packing LLC (NBP). Today NBP owns a 700 unit refrigerated trucking operation, which was the first trucking company to use a GPS tracking system, so that customers could track and plan their deliveries more in detail. Another feature of NBP is its reputation of selling high and consistent quality which is marketed through a couple of well known brands. (Hunt, pers. mes. 2004)

#### ***4.5.5 Market – branded boxed beef***

USPB sells all its members' beef through NBP. NBP utilizes a branded box strategy, where it leverages quality, consistency, service, and price attributes as its competitive advantage. Beef being sold by the box means that carcasses are cut up and bones and excess fat is removed. The beef is then packed into boxes and shipped to customers. (Hunt, pers. mes. 2004)

The customer assumes to get a certain amount in kg of beef, but if the slaughter weight differs among animals, it is first realized by the customer as the box is delivered. NBP sells 70-80 percent of the beef by the box. Exports account for 18 percent, mainly to Japan but problems have arisen due to the mad cow disease outbreak. NBP has found other markets for its beef and is not affected to a large extent. (Hunt, pers. mes. 2004)

NBP has tried to do more manufacturing with the beef, such as case ready products where beef is packed and shipped to customers who just stack the shelves with ready made cuts. However, the market is not responding to this opportunity. There is only a slow development. Traceability is another attribute that consumers are not responding to well enough for making investment in such a system worthwhile. (Hunt, pers. mes. 2004)

The competition is hard and NBP constantly has to nurture the service and quality attributes of its beef products. However, NBP's efficiency is good; it only has two plants but it slaughters 13,000 heads a week. That equals 10.8 percent of total beef cattle slaughter-volume in the U.S. The initial slaughter capacity and delivery volume planned for has resulted in NBP buying 75 percent of the cattle on the cash market. When buying on the cash market, NBP targets high quality cattle which results in NBP's beef products being graded higher than its competitors. (Hunt, pers. mes. 2004)

## **4.6 Grains – CHS Inc.**

### **4.6.1 Introduction**

There existed 769 grain and oilseeds cooperatives encountering 542,470 members in 2002. Grain cooperatives typically supply inputs for grain production besides marketing farmer-produced commodities. Competitors for purchase of grains include other elevator- and large marketing companies. Competitors for sales of product input supplies include a variety of cooperatives and local and national proprietary companies. (Cooperative Programs, 2004)

The production value of grains, oilseeds, dry beans and dry peas sold during 2002 totaled 39.9 billion USD, which accounted for 19.9 percent of U.S. total market value of products sold from farms. The market for grains is global to its nature and prices are highly affected by international variations in supply and demand. Grains and oilseeds typically are sold to millers, malt steers, feeders, crushers, and other processors. These manufacturers process grains and oilseeds to food ingredient products, flour, and feed etc. Per capita consumption of flour and cereal products reached 85.6 kg a year, in 2002. (Census of Agriculture, 2002)

The commodity prices are set at the Chicago Board of Trade. For the 2001-crop yield, 4.8 percent of wheat and 10 percent of soybean and corn were sold on marketing contracts. In 1999 marketing contracts of total production for wheat totaled 6 percent, and soybeans and corn 11 percent. (Corn, Soybeans, and Wheat ..., 2003)

Competitors typically compete for both the purchase of grain and sale of grain. When grains are purchased from farmers transportation costs is a vital component. Hence, a sophisticated transportation system can take substantial costs out of grain assembling. For the sales of grain purchasers typically favor suppliers that can deliver competitively on price and service at desired quantity to a specified quality. (Johnson, pers. mes. 2004)

### **4.6.2 CHS Inc. of Today**

CHS Inc. (CHS) is one of the largest integrated U.S. agriculture cooperatives with 50,000 individual producer members and 1,100 cooperative association members located all over the U.S. CHS is also one of the largest country elevator operators in North America with most of the purchased grain sold through CHS' Grain Marketing business unit, or used for local feed and processing operations. A 17-member board governs the cooperative. In 2003 revenues totaled 9.3 billion USD. CHS employs 6,800 people. (Annual report, 2004)

CHS offers services and products and it buys commodities from its members and other customers. Its operations are organized into five business units: Agronomy, Energy, Country Operations and Services, Grain Marketing, and Processed Grains and Foods. Through these operations CHS provides a wide variety of products and services, from initial agricultural inputs such as fuels, farm supplies, crop nutrients and crop protection

products, to agricultural outputs that include grains and oilseeds, grain and oilseed processing and food products. The total assets were 3,807 billion USD in 2003. Some of the company's operations are conducted with assets owned through equity investments and joint ventures with both proprietary companies and other agricultural cooperatives. (Annual report, 2004)

The *Agronomy* unit manufactures crop nutrients and is engaged in the wholesale distribution of crop nutrients and crop protection products. It is made through a 50 percent ownership in CF Industries Inc., and Agriliance, LLC, respectively. Both companies are among the biggest in their respective markets, which are global to their nature and highly competitive. In 2003 the business unit accounted for 9.9 percent of the company's total income before income taxes. (Annual report, 2004)

The *Energy* business unit is CHS's cash cow. It refines, retails and wholesales petroleum products through its Cenex brand and has targeted a profitable niche, constituting 1,500 independent retailers in somewhat rural areas. CHS has significant investments in refineries and is U.S.' largest cooperative energy company. The company makes approximately 75 percent of its refined fuel sales to members, with the balance sold to non-members. The refining and wholesale business is very competitive with worldwide producers, and smaller domestic refiners in the Midwestern and Northwestern U.S. In 2003 the unit accounted for 61 percent of total income before income taxes. (Annual report, 2004)

*Country Operations and Services* unit purchases and markets grains from producer members and provide a full range of products and services to producers and members. It purchased 10.5 million m<sup>3</sup> of grains in 2003, of which 92 percent was bought from members. Wheat was the primary type of grain, accounting for 45.6 percent, corn 26.5 percent and soybeans 15.4 percent of total purchases. Services offered include hedging and insurance products, financing, and programs for crop and livestock production. In 2003 the unit accounted for 24 percent of total income before income taxes. (Annual report, 2004)

The *Grain Marketing* unit makes CHS the largest cooperative marketer of grains and oilseeds, handling 38.7 million m<sup>3</sup> of grains. It primarily conducts its Grain Marketing operations directly, but some of its business done through two 50 percent joint ventures. Customers include millers, malt steers, feeders, crushers, and other processors. The unit competes both for grain purchases and sale of grain. CHS competes with companies handling larger volumes than CHS, making price, service and ability to provide desired quality and quantity the most important product attributes. The fierce competition resulted in the Grain Marketing unit to account for 2.7 percent of total income before income taxes in 2003. (Annual report, 2004)

In its *Processed Grains and Foods* unit CHS tries to integrate vertically in the food chain by focusing on further utilization of products supplied by members. Today CHS has invested in oilseed processing, wheat milling and value added foods. These product markets are highly competitive where price, transportation costs, service and product

quality drive competition. This has for example resulted in CHS's Wheat milling business unit to form a joint venture with a proprietary firm, Cargill. It resulted in the largest wheat milling company in the U.S. CHS conducts its business through a joint venture with Ventura Foods and a few Mexican food manufacturing plants, where manufacturing, packaging, and distribution of bulk margarine, salad dressings, mayonnaise, salad oils, syrups, soybean oil, tortillas, tortilla chips and prepared frozen Mexican food products takes place. These products are marketed under the Ventura brand, for third parties and for a variety of local brands. The unit contributed 3.0 percent of total income before income taxes. (Annual report, 2004)

#### ***4.6.3 Membership***

Membership is restricted to producers and associations of producers of agricultural products. The farmer-members have one vote each, while cooperative associations derive their voting rights by equity held by the cooperative in CHS plus business conducted with CHS over the past three years. Earnings derived from patronage business is not interest bearing. Patronage refunds are distributed 30 percent in cash and 70 percent as patron's equities. Patron's equities are paid out as cash when the patron has reached 72 years of age or at death. (Annual report, 2004)

In 2002 CHS issued non-voting Cumulative Redeemable Preferred Stock carrying an 8 percent dividend, at 25 USD a share for a total value of 93.7 million USD. These are listed and traded at NASDAQ, issued for the purpose of being able to redeem patrons' equities without affecting the investment grade rating. (Johnson, pers. mes. 2004)

#### ***4.6.4 Changes in the organization – market***

CHS has an extensive business portfolio ranging from agriculture supply inputs to consumer products in energy, as well as sales of value added consumer products. This is partly a result of the merger in 1998 between the Cenex and Harvest States Cooperatives. The merger took place since the member customers to a large extent were the same for both cooperatives.

Recent years have brought changes to governmental regulations regarding the refinery industry. This resulted in CHS having to take on substantial investments to manage new EPA restrictions. Since CHS' current refinery assets were favorably located, the board decided to take on the necessary investments. Simultaneously, local member cooperatives in rural areas have fuel products as a key component in their business portfolio, which contributed to the decision of making the investments. (Johnson, 2004; Kyle, pers. mes. 2004)

CHS has a strategy of increasing its presence in value added food business, though carried out slowly. CHS must utilize its capital resources prudently for not jeopardizing its investment grade rating. If not obtained, it will lead to higher debt costs. However, future customers have national presence and needs to be served at a national scale with continuous product flow. This implies that value adding manufacturers must reach

sufficient production volumes and utilize efficient distribution systems for continuing being a preferred customer. (Johnson, pers. mes. 2004)

Consumer food products manufactured by CHS are sold both under branded and private label brands. In the food service category CHS drives a branded strategy, though it's not given that such a strategy is the most profitable one. Private label products might have lower gross margin, but higher net margin. According to John Johnson (pers. mes. 2004) it is attributed to lower costs in research and development, marketing and supply-chain management. By integrating distribution, warehouse facilities and day to day sales by sophisticated software programs, it's possible to manage customers' inventory and attune product manufacturing efficiently to take substantial costs out of the food-chain.

## **5 Analysis**

### **5.1 Introduction**

As presented in Chapter 2 Nilsson and Björklund (2003) propose that a specific market's characteristics decide what type of market strategy is best suited for that market. This also results in a proposal of what type of organizational model is best suited for that market, since different organizational models carries different characteristics. The characteristics of an organization is claimed to affect how successful the market strategy is likely to become.

When classifying what market strategies are best suited for different cooperative models, Nilsson and Björklund (2003) make use of strategies for capital access, individual or collective characteristics in control and ownership rights, for illustrating how well an organizational model fits a chosen market strategy. This results in a proposal of which cooperatives are most likely to succeed in a given market situation. Additionally, they argue that it must be taken in consideration that markets change, which requires cooperatives to adjust to the changing business environment for staying successful in the long run. Hence, it is ultimately the market and its characteristics that should drive adjustments in the corporate strategy which aims at attuning the characteristics of cooperatives to mirror the market uniqueness. To some extent the internal characteristics of cooperatives must be considered when forming strategies concerning market strategy, but in the long run the product markets sets the agenda for what type of alternatives are available. (see Figure 2.1).

For analyzing the North American cooperatives visited with, the Nilsson and Björklund (2003) theory is used to classify and identify markets, market strategies and organizational models (Figure 2.2). Part of the purpose is to investigate the underlying reasons for changes in the cooperatives and how that has affected their structure. According to Figure 2.1 these changes must rely on changes in the market for sustainable market success.

### **5.2 Markets**

When defining a market for the commodities that the farmers produce, there often appears a set of possible customers and hence several market strategies to follow. Another question is under what time period a chosen strategy should be analyzed. If investing in assets such as manufacturing facilities, the options of acting like a true broker of commodities disappears, since made investments needs to be utilized. Hence, the question of what the possible market for a cooperative is, can be circumscribed by previous investment decisions creating a hold-up on other market strategy options. But again, in the long run should previous decisions not decide what type of strategies to be followed in the future.

The concepts of potential vs. available markets may be helpful for identifying what market a cooperative can reach. A *potential market* includes all customers that have a sufficient level of interest for a specific market offer (product), while an *available market* constitutes customers who actually can agree to make a purchase. It is important to divide an interest to make a purchase from a real intend to proceed with a purchase. When identifying the market for a cooperative it is important to identify the available market since it comprises customer demand, it provides a method to assess the demand of a product.

The product markets for the visited cooperatives carry many similar characteristics. The competition in the markets is fierce; almost any of the products offered by the cooperatives finds a substitute product. If not perfect substitutes occur, there often prevails some kind of product attribute in a substitute product that makes the customer equally satisfied, hence it is hard to diversify products to diminish competition.

The development of the market characteristics are driven both by customers' and consumers' demand. Customers try to decrease the number of suppliers, while they are consolidating to national entities. This forces cooperatives to consider expanding both their product portfolios and capacities for becoming a supplier of choice. Customers reward quality, price, consistency and service when assessing the value of a product offer. Consumers reward price, convenience and quality attributes of products, where convenience is the most dominant force affecting the food industry right now, paired with food safety and health concerns.

In general it is only in the dairy industry that political regulations significantly restrain competition from international companies, but this is counterbalanced by fierce domestic competition. In general no governmental regulations or patents exclude competition and no single market player is large enough to significantly alter the competitiveness in anyone of the markets analyzed. This makes it theoretically possible for the cooperatives to pursue with any of Porter's market strategies. However, when identifying the available market for the cooperatives' product offers, characteristics of the product must be considered. For some of the cooperatives this restricts the available market since their raw products are paid higher prices because of high costs in production due to less favorable production conditions in other areas etcetera. Transportation costs also delimit markets geographically.

The following sections theoretically describe what possible markets there is for each cooperative, given the information in chapter five, and what special characteristics delimits the possible markets. Bear in mind that the following sections are based on general information; more precise information would probably improve the analysis.

#### ***Dairy – Dairylea and Land O'Lakes***

Cooperatives in the dairy market mainly supplies domestic customers at different levels of the processing chain. A market offer can both comprise supply of unprocessed for manufacturing customers or cooperatives can process milk to different products and sell to retail customers. Dairy product customers are located throughout the whole nation; it's

only the fluid milk market that imposes direct geographic restrictions on the available market since fresh milk cannot be moved too far from a cost-perspective.

The available market for DairyLea is restricted since it bases its business on milk produced in a high cost region. Hence it is highly likely that manufacturing of value added products will move to the western states where production costs are lower than in the eastern states. Hence, DairyLea's available market is to be a broker of raw milk or going into the fluid milk market. These markets are influenced by transaction costs and economies of scale, which puts geographical restriction on the available market.

Land O'Lakes has national presence and procures milk from many states. Due to its national presence it is theoretically not restricted to any type of product market or to any geographic market since its manufacturing is based on milk-supplies from low cost production areas. Through its national presence and size in volumes its transaction costs can be low as well. This implies that Land O'Lakes' available market constitutes few restrictions.

#### ***Fruits and vegetables – Pro-Fac***

The market for fruit and vegetables cooperatives is mainly consisting of domestic customers, due to small export volumes and a high presence of imported frozen products. It's possible to reach manufacturing customers with raw products or retail customers with processed consumer products. When including conditions affecting the market offer from Pro-Fac, its possible market is large since it procures raw products from a large number of states. It also assembles considerable volumes which should make them benefit from economies of scale but the high production costs in the east compared to the west puts constraints to how competitive their products are, making the available market somewhat hard to distinguish, when also including the fierce competition from imports.

#### ***Grapes – National Grape***

The grapes market constitutes domestic customers who can be served by international companies as well. It's possible to reach customers with product offers constituting both deliveries of grapes for value added processing or manufactured consumer products. In the case of National Grape/Welch's, the available market is circumscribed by high costs of grape production in the east where most of its grapes are obtained. Since Welch's has no other option than using these high cost grapes, the product offer must target customers willing to pay a price that is higher than the price of competing products using low cost grapes. This delimits the available market, but the extremely strong brand image of Welch's provides a market of national scope. Welch's also allows licensing of its products internationally, as long as the grape concentrates are supplied from Welch's.

#### ***Beef – U.S. Premium Beef***

The market for beef meat comprises both domestic and international customers. It's theoretically possible to export beef products and different levels of processing makes it possible to reach customers high up in the food chain, but the structure of the beef product market economically restrains processors from other doing other value adding processes than removal of bone and excess fat. The market is hence adjusted to sales of



boxed beef with a federal inspections grading system. USPB has a large available market due to its operational effectiveness and consistent quality. The consistent quality is attributable to the use of a grading system that keeps track of and grades each animal individually. This facilitates targeting high quality cattle producers and it has resulted in an export market to Japan, where quality is the most important product attribute.

### ***Grains – CHS***

The potential market for grains constitutes an international market with customers downstream the processing chain purchasing consumer products, to local millers buying commodity products. The nature of grain commodities makes them easily substitutable with competitors' products. The available market for CHS seems to have few boundaries since CHS has national presence in procuring grains. The nature of the grain commodity market hence proposes development of cost cutting supply chain management principles. However, vertical integration is also an alternative if there are synergies to reap from integrating more stages in the processing chain.

## **5.3 Market strategy**

According to the previous section the cooperatives generally face few limitations when deciding what market strategies to pursue with. This makes it possible to utilize almost any market strategy, though depending on what size and type of market to serve. Also, when adding characteristics of the studied cooperatives to the potential markets some delimiting constraints appear. That of course affects the cooperatives when choosing what market strategy to pursue.

### ***Dairy – Dairylea and Land O'Lakes***

Dairylea is currently pursuing a *focus strategy*, with an overall low cost rationale. It markets its raw milk through DMS, which now has national presence. DMS's goal is to grow to supply processors over the whole nation with raw milk as timely, efficiently and consistently as possible. However, it is not possible to distribute North East produced milk to distant processors, from both a cost and a tenability perspective. Hence, for Dairylea as a stand-alone cooperative, its market is limited. However, when marketing through DMS, who handles large volumes, the cost per marketed unit can be low. The national presence of DMS also helps Dairylea to partly serve national customers, since Dairylea targets the North East market where some national customers have manufacturing plants.

Land O'Lakes is pursuing two strategies at the same time, the *differentiation strategy* and the *overall low cost* leadership strategy. It is marketing value added products through national and regional brands, and it has supply agreements with private label manufacturers as well. Its decision to pursue a strategy depends on what specific market characteristics it meets in a special geographic area. By using sophisticated methods for bringing consumer preferences into product development Land O'Lakes tries to leverage incomes from product differentiation, but in other areas supply agreements of unprocessed milk are also signed.

### ***Fruits and Vegetables – Pro-Fac***

Pro-Fac can still be identified as using a *differentiation strategy* despite the loss of the controlling interest in the Birds Eye Foods Company. Pro-Fac has long lasting supply contracts with the Birds Eye Foods Company that will secure a market for the members' production and it still has 40 percent ownership in Birds Eye Foods. This implies no immediate change in strategy; it still has national market presence through the brands in the Birds Eye Foods Company and it tries to leverage the price paid to producers from the goodwill and brand recognition in Birds Eye.

### ***Grapes – National Grape***

National Grape concentrates on differentiation of its products and leveraging on its sole use of Niagara and Concord grapes. It is classified as using a *focus strategy*. The grapes are supplied to Welch's who market its processed consumer products to national customers, relying on the goodwill and brand recognition that Welch's represents. Welch's is perceived as providing extraordinary consumer experiences that cannot be duplicated by any competitor and Welch's markets its product-uniqueness as being derived from the sole use of Concord and Niagara grapes. In a marketing perspective it also pushes that the quality is built up through a long tradition of consistency in production and processing procedures.

### ***Beef – U.S. Premium Beef***

U.S. Premium Beef has a *focus strategy* with a low cost concentration. It has a natural market disadvantage in only selling beef products when customers want few suppliers of all the three meat products (pork, poultry and beef). It can hence be classified as a supplier of a particular product category. Also, Steve Hunt stated that USPB couldn't expect to receive a price mark-up for its products for any reason; it can only try to satisfy the customers expectations by providing a consistent quality and excellent service and by that retain current and attract new customers.

### ***Grains – CHS***

CHS employs a *focus and overall low cost strategy*. It sells both commodities in the form of unprocessed grains to international markets and processing firms, and it has a few value added product lines as well. CHS also has a spoken strategy of increasing the value added sales, but will do so where it makes sense without jeopardizing the investment grade received by credit institutions. Hence, large investments cannot be rapidly carried out and due to its small amount of net income received from the Processed Foods and Grains business unit it cannot be classified as utilizing a diversified strategy.

## **5.4 Organizational structure**

Nilsson and Björklund (2003) make use of a set of institutional elements to classify a number of cooperative models. The institutional elements state that members are eligible to possess ownership, exercise control and carry out trade with the cooperative. Depending on to what extent members has individual or collective recognition within

these elements, different characteristics will signify the cooperative and it will affect its operational success. (see Chapter 2)

When analyzing what cooperative model is utilized by the visited cooperatives it is necessary with some kind of hierarchy of the tools used to define the cooperative model. One of the fundamental elements in a cooperative is its equity structure. Equity defines ownership and Nilsson and Björklund (2003) argues that the characteristics of a cooperative are highly dependent on who contributes equity, in what form and for what purpose. Nilsson and Björklund (2003) further argue that no matter how much or how little of the equity in a cooperative that is controlled by individual members the whole equity base will be viewed as an individual investment, which will generate investor-owned control-characteristics on management. This is positive for any cooperative since management will be forced to act in an efficient and highly market oriented way. (see Section 2.5.2) Hence this proposes that the way equity is controlled and generated to a cooperative becomes important when classifying cooperatives. The result of the classification, mainly based on the equity structure and if members exercise individual or collective control over it, is concluded in Figure 5.1 as well.

#### ***Dairy – Dairylea and Land O'Lakes***

Dairylea has *a traditional model with external entrepreneurial features*. Farmer members contribute equity to Dairylea while external capital is used in the joint venture of DMS. The cooperative has a mix of individualistic and traditional characteristics. It is illustrated through the equity investment requirements, which differ between farmers depending on milk volumes delivered. The pricing system is also volume based. Collectivistic characteristics are demonstrated in the one member-one vote system and open membership. Additionally, the equity is redeemed at par value under a ten-year redemption plan and no interest is paid for the equity.

The characteristics of Dairylea aim to support the overall low cost leadership strategy, and the joint venture with DFA is a step towards an external entrepreneurial model. However, Dairylea is still in its essence a traditionally organized cooperative.

Land O'Lakes has *an external entrepreneurial structure* since it is possible for external financiers and private non-members to invest in preferred stocks. In other ways Land O'Lakes has collective structures, due to, for example, no interest payments on member investments.

#### ***Fruits and vegetables – Pro-Fac***

Pro-Fac has *an external entrepreneurial model, making use of outside capital in the form of preferred stock listed on NASDAQ and through the external capital contributed to Birds Eye Foods through the arrangement with Vestar*. The preferred stock is initially patronage retains that after 5 years are transformed into preferred stocks, which then are freely tradable at NASDAQ. Patrons can then choose to sell the preferred stock and hence transmit the ownership and capital investment to an external investor. However, external investors do not have any voting right in Pro-Fac. The right to vote is tied to the delivery rights (the common stock) and one member-one vote applies. The delivery rights

are tradable among producers and owning delivery rights is a requirement for being a member of Pro-Fac. The characteristics of Pro-Fac are very individualistic.

Pro-Fac's change in ownership of Birds Eye Foods should theoretically not have changed the value of the preferred stock. Under the assumption of a well functioning market, the information about Pro-Fac's economic difficulties should already have been reflected in the value of the shares. The 40 percent ownership in Birds Eye Foods will also generate cash returns to Pro-Fac, if Birds Eye Foods makes any profits.

### ***Grapes – National Grape***

National Grape has *an internal entrepreneurial model*. It utilizes a closed membership system where members are requirement to invest in delivery rights. The delivery rights are tradable but owning delivery rights doesn't automatically result in membership of National Grape; that is decided by a comprehensive screening process.

National Grape wholly owns the Welch's cooperative, and the cooperatives are governed with a two-board system. National Grape wants to ensure that the producer perspective doesn't become very dominant in managing Welch's, since it relies on an extreme market orientation being the market leader. Hence, four outside directors are involved in the ten-member board of Welch's. This is a very investor-oriented approach and unique among agriculture cooperatives. All in all, the characteristics of National Grape are very individualistic.

### ***Beef – U.S. Premium Beef***

U.S. Premium Beef has *an external entrepreneurial model*, though it makes use of both *traditional and entrepreneurial characteristics*. It has a joint venture ownership structure in National Beef Packing Company, which is the fundamental criteria for being classified as an entrepreneurial cooperative. There are other signs of this as well; equity in USPB is gathered through issuance of delivery rights and in NBP by external investors plus USPB members, the requirement of delivery rights, the lease option and pricing grid system. Collectivistic characteristics are seen by payment of patron dividends and the one member-one vote system. The different features are used to attract as many producers as possible.

### ***Grains – CHS***

CHS has *a traditional model, with an increasing presence of external entrepreneurial features*. Its issuance of preferred non-voting stock in 2002 and the joint ventures with both proprietary and cooperative companies confirms this conclusion. CHS has though both collective and individualized structures. The individualism is shown through its non-cross subsidizing of prices between farmers' production. Each of the five business segments are operated as separate cost centers and some have started joint ventures with proprietary firms. Qualified members were offered to purchase Equity Participating Units (EPUs), by exchanging some of their retained patronage, in the Wheat milling and Oilseeds Processing and Refining business, which is another example of the individualism. The investment also allowed for delivery of specified volumes of the raw product.

There are also collective structures seen in CHS through open membership policy and the collective financing of the cooperative with non interest bearing patron equity. The pricing policy is uniform when members fulfill required quality standards and there is unrestricted delivery and intake obligation of the cooperative.

## **5.5 Changes in the cooperatives**

According to Figure 2.1 changes in an organization should be market oriented if the organization wants to become successful on the market, in a long run perspective. When analyzing the nature of changes in the market place, it is possible to identify two types of changes that occur. Either they can be a result from changes outside the control of market participants, like changes in policies regulating the market, or the changes are a result of how the internal market powers like competition and changing consumer preferences, develop the market. The former type of changes can alter the foundations for a market, which can have shocking effects hard to plan for, while the latter type of changes results in a somewhat expected evolvement of the market, which is easier to foresee.

When analyzing the five industries studied in this report it's possible to exclude regulative changes. According to the interviewed persons, the industry and related markets have had the evolving nature of changes. No revolutionary or extremely unexpected changes have been experienced.

It is possible to make a case that all the changes that have occurred in the cooperatives are market driven. Either it's changes in the competition or in customers' needs that have caused the cooperatives to adapt to new business environments. Simultaneously it is questionable if all changes in the cooperatives are market driven. As described in Figure 2.1 organizational changes can be driven by what features and driving forces are working inside a cooperative, without being attuned to the changes happening in the marketplace. This chapter will investigate to what extent changes in the marketplace is the underlying reason to the changes that are seen in the cooperatives.

### ***Dairy – Dairylea and Land O'Lakes***

Many changes have occurred for *Dairylea*. The greatest ones are probably divesting of the processing assets, focusing on enhancing the bottom-line results for the members, and forming DMS. The first change happened in a crisis situation, and it was a result of a necessary balance sheet restructure due to an earlier market strategy that was not attuned to the market characteristics. The decision to focus on farmers' economical result made *Dairylea* start developing services to its members, which also tied the members closer to the cooperative by increased points of interaction. The formation of DMS can be seen as an expansion of its current strategy, which also has shown to be successful since DMS now is the second largest marketer of milk in the U.S.

Changes in *Land O'Lakes* are less evident, but it has opened up the possibility of external equity investments. It is most likely a result of the costs of having a differentiated market strategy, which requires large capital assets, especially since *Land O'Lakes'* market is

national. It has also decided to go more into the branded market by leveraging the Land O'Lakes brand as an umbrella brand. However, it is also going to continue supplying industrial and private label customers, but the capital requirements for sharpening its focus on the Land O'Lakes brand will probably be substantial.

### ***Fruits and vegetables – Pro-Fac***

Pro-Fac on the other hand grew in size and scale but decided in 1998 it needed to proceed with a branded strategy, since competition increased significantly in the non-branded market. It also wanted a wider range of product lines. The problem turned out that the internally carried out calculations were not accurate enough. It is hard to say if that was due to market changes or other problems, but it eventually led to the Vestar deal.

### ***Grapes – National Grape***

National Grape hasn't changed its organization in any particular way. It has constantly been focusing on bringing high quality grapes to Welch's processing facilities not to destroy the quality perception of its products. Welch's has also had to continue nurturing its brand carefully, since its costs are higher than those of competitors due to the dominant use of northeast produced grapes.

### ***Beef – U.S. Premium Beef***

U.S. Premium Beef is an interesting case, since it was started only eight years ago and now has grown to obtain a majority ownership in the fourth largest beef packer in the U.S. No major organizational changes have occurred along the way; the market strategy it started with is the same today, though USPB has grown in size. The impressive thing is how the group of cattle farmers that met in 1996 was able to make all parties in the industry to have a stake in the value chain. They understood it would be necessary for pursuing with the quality strategy they wanted to utilize. The acquired majority interest of National Beef Packers in 2002 didn't mean much of a difference for USPB; it was more of a regular ownership change and a continuation of its former market strategy.

### ***Grains – CHS***

CHS has decided to integrate vertically by focusing on a branded strategy for a few special product lines. The new strategy is carried out slowly though, since it faces economical constraints. The issuance of preferred stock was made for the purpose of securing an investment grade among credit facilitators when equities were to be redeemed, but it's also possible to say that the market strategy currently used could not be carried out with the capital assets at hand. Hence, CHS decision to issue preferred stock was a necessary change of the equity base, to be able to continue with the preferred market strategy. However, it has not given up any controlling interests of its cooperative since the external investors have no voting power in CHS. Another change that has come out of its desire to grow in size and scale is the joint venture with the former main competitor, Cargill. According to John D. Johnson, CEO, both companies saw synergies in this deal.

## 5.6 Conclusions

The purpose of this thesis is *to empirically investigate and theoretically explain how and why a number of US agricultural cooperatives have adapted their cooperative organizational models as their market conditions have changed.*

Based on the following analysis it is possible to conclude how each cooperative is structured and what market strategy it utilizes. The conclusions are presented in Figure 5.1 and follows Figure 2.2 with the interrelations between different markets – market strategies – and organizational models that Nilsson and Björklund (2003) present.

### *Adaptation – how?*

The empirical investigations show that no unexpected drastic market changes have occurred in any of the industries studied. Hence, the changes in the marketplace can be described more evolutionary than revolutionary. The consolidation among customers, the increasingly tough competition and consumers' changing demands, have imposed the largest changes to the cooperatives. This development has resulted in large needs of capital for spending on advertising and product development, and for organic growth in size and scale.

The large equity need has been met in different ways in the former traditional cooperatives, *Land O'Lakes*, *CHS* and *Dairylea*, all of which now allow equity investments from outside investors. The equity has been contributed without the members giving up any of their "user-control" of the cooperatives. The equity is either invested in subsidiaries, with no chance of affecting the control over the cooperative, or as preferred stock with a fixed dividend with no voting power. *Dairylea* decided to allow for the external equity in the joint venture of *DMS*. *Land O'Lakes* and *CHS* have preferred stock investments by external investors in the cooperative society itself, without altering the voting power. However, the change in equity contribution is not happening fast. It is a continuous process that just has started and hence the external equity levels are low.

*USPB* is a special case, as it partnered with an existing beef packer, *NBP*. *USPB* has not changed its market strategy, just expanded it, which was a result of *Farmland Industries* facing economical difficulties. However, the market strategy and organizational structure was already in place for such a development, which made it easier to pursue with the strategy. It knew there would be an available market in place since it took over an existing market player. When acquiring the remaining shares in *NBP* it was also possible for *USPB* to find external investors, probably because of former business success due to an interesting business concept.

*National Grape* hasn't made any changes in its model, which also is the case for *Pro-Fac*. It's arguable, though, to state that *Pro-Fac* hasn't made any changes in its model, but looking at the equity structure it already had external investors before the event with *Vestar* through its preferred stock arrangement, and the change in *Birds Eye Foods* only handles the ownership structure of *Birds Eye Foods*, not *Pro-Fac*.

*Adaptation – why?*

The short answer is that the cooperatives have to adapt if they want to survive and to protect their members' equity and market access. Competition in the product markets as well as competition for farmers' production increase and customers prefers a single supplier of more advanced consumer products. The adaptation is also seen in the increasing number of services offered by the cooperatives. These service offerings obviously have two rationales, both to link the farmer closer to a specific cooperative which will make it harder for him to leave, but also for decreasing the risks in their members' operations and for increasing the economic results at farm level.



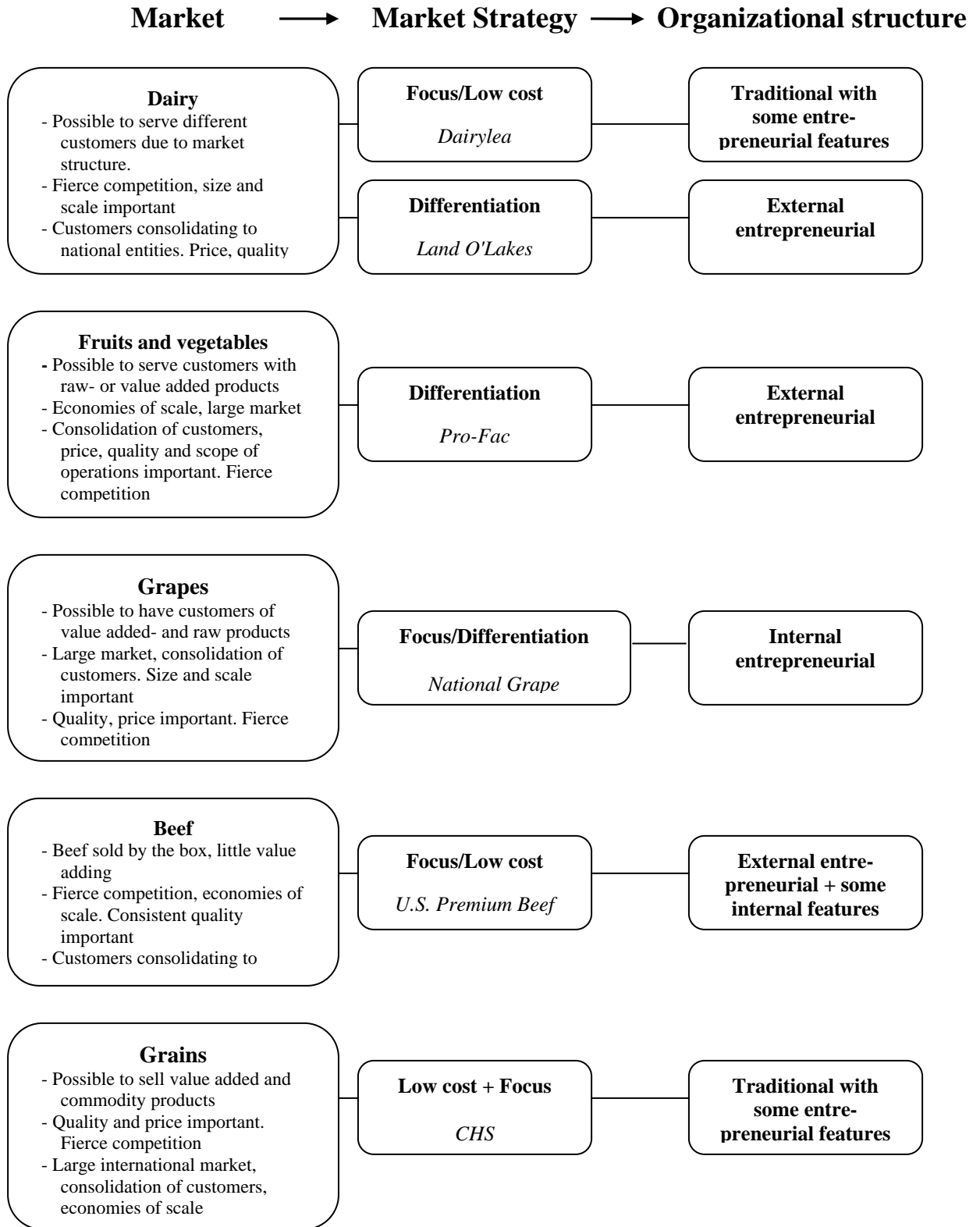


Figure 5.1 Classification of market – market strategies – and organizational model

## 6 Discussion

The cooperative business sector is large in the U.S. and it fills an important function in the U.S. agriculture. There is evidence of large cooperatives misfortune, Agway and Farmland, who had national presence in their operations but went bankrupt recently. Cooperatives do, however, play a crucial role in securing market access for geographic areas having higher cost of production. Proprietary companies would not have the same incentives to continue operating with raw products supplied to a higher cost. The typical example is National Grape/Welch's who easily could acquire grapes to substantially lower costs, but since it acts under the direction of producer-members it cannot do other than follow their decisions. Pro-Fac is the other example of how competition forced it to acquire both market competitors and a company having brands with national recognition.

It is probably possible to draw the conclusion that these cooperatives have been very market oriented for a number of years. Otherwise external investor would not have had the faith to invest and partner with the studied cooperatives. Hence, going forward with an entrepreneurial model should not imply drastic changes to the cooperatives.

The other interesting example of a cooperative that has developed a secure market despite its disadvantages in size and scale is Dairylea. Milk production in the North East is affected by high costs, which gives it a natural disadvantage when marketing products. However, since customers in a commodity market (raw milk) would reward supplies at the right quality and price, there was not much to do than cutting costs and trying to grow in size. The decision was probably fueled by the need of a balance sheet restructuring, but if possible to grow substantially Dairylea had to figure out an appealing business model that farmers would get attracted to. It did and milk volumes tripled during the 1990s.

With the current low cost strategy, Dairylea also figured out that forming an entity such as DMS would create an attractive company focusing on decreasing transaction costs while having the capability of growing nationally. It would also diminish the risks of having a large player like Dairy Farmers of America, to enter the northeast milk market, since Dairylea can take advantage of DFA having a national market footprint. In addition to forming DMS, Dairylea decided to become a member cooperative in DFA for the purpose of having more say over decisions affecting their northeast market.

CHS will probably face issues concerning its ownership of the Energy unit. It has huge assets in a very profitable industry, but what if these capital assets were reallocated and invested in value adding activities of foods based on the commodities supplied to CHS? That is a hypothetical question, and it is uncertain what the return on investment would be, but if the Energy unit loses importance for the patronage with members.

What is seen in the dairy, fruit and grain markets is that big customers like Wal-Mart, being supplied by CHS, Land O'Lakes and National Grape; have developed sophisticated computer software programs enabling their suppliers to manage inventory and supply of the respective products each supplier sells. Hence, deliveries must be large enough for such investments to become economically justifiable.

Beyond the scope of this thesis are subjects like drivers of success, leadership skills and business portfolio management. It was constantly brought up at the interviews as exceptionally important factors for reaching market success. It is certainly important to know one's market but if not knowing how to take advantage of the options in it, there are great risks for putting farmers' and other stakeholders' investments at stake. Hence, human capital is one of the most important assets to develop.

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## **Interviewees**

- German, Gene A., Professor Emeritus in Marketing, College of Agriculture and Life Sciences, Cornell University, Ithaca, New York State, USA, 2004-04-21
- Chamberlain, David, Director, treasurer, Dairylea, Wyoming, April 28<sup>th</sup>, 2004
- Gallagher, Ed, Dairylea, Syracuse, May 12<sup>th</sup>, 2004
- Gherty, Jack, CEO, Land O'Lakes, Arden Hills, May 18<sup>th</sup>, 2004
- Hunt, Steven, CEO, U.S. Premium Beef, Kansas City, May 25<sup>th</sup>, 2004
- Johnson, John D., CEO, CHS, Inver Grove Heights, May 18<sup>th</sup>, 2004
- Keating, Brad, DMS, Dairylea, Syracuse, May 12<sup>th</sup>, 2004
- Mattingly, Ken, Director, Pro-Fac, Le Roy, April 28<sup>th</sup>, 2004
- Militello, Robert, Director both National Grape and Welch's, Forestville, April 29<sup>th</sup>, 2004
- Murphy, Kevin, VP Member Relations, Pro-Fac, Rochester, April 27<sup>th</sup>, 2004
- Policinski, Chris, COO – Dairy Foods, Executive VP, Land O'Lakes, Arden Hills, May 18<sup>th</sup>, 2004
- Roggie, Brent, General Manager; COO, National Grape, Westfield, April 29<sup>th</sup>, 2004
- Shephard, Tom, Agri-Services, Dairylea, Syracuse, May 12<sup>th</sup>, 2004
- Smith, Rick, CEO, Dairylea, Ithaca, April 20<sup>th</sup>, 2004
- Wickham, Greg, COO, Dairylea, Syracuse, May 12<sup>th</sup>, 2004

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