New Zealand Dairy Co-operatives

– Strategies, Structures, and Deregulation (18 pkt)

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Nyzeeländska mejerikooperativ – strategier, strukturer och avreglering

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Uppsala, October 2003

Camilla Ohlsson

Summary

The purpose of this thesis is to examine how the New Zealand dairy co-operatives have adjusted their market strategies and organisational structures as a result of changing market characteristics, and to investigate what were the driving forces behind these adjustments. The thesis gives an introduction to the industry and its development. The three dairy co-operatives which operate in New Zealand are analysed from a strategy (Porter's generic strategies) and structure (collective versus individualised) perspective. The main part of the empirical material was collected during a study trip in New Zealand in March and April 2003. Interviews were carried out with representatives of the three dairy co-operatives and with persons in other ways active in the dairy sector.

With excellent conditions for pastoral agriculture, New Zealand has a dairy industry that successfully exports dairy products on the world market. The majority of products are exported as commodities, such as milk powder, butter and cheese. The dairy industry has undergone major structural changes. During the last decades, the industry has seen the number of co-operatives decline as a result of mergers between co-operatives. In 2001, only two major co-operatives remained, New Zealand Dairy Group and Kiwi, along with two minor co-operatives, Tatua and Westland. The industry has also undergone deregulation, after being regulated since 1935. An export monopoly, which allowed for dairy products to be exported solely through the New Zealand Dairy Board, was abolished in 2001. At the time of the deregulation, the two larger co-operatives merged to form the dairy giant Fonterra, a co-operative with over 13,000 shareholders. The operations of the New Zealand Dairy Board were integrated into the new co-operative. Westland and Tatua chose not to join the so-called mega-merger.

A number of driving forces can be identified, which explain these changes. Early mergers were mainly driven by technical improvements and economies of scale, while later mergers also were the results of the export pricing system, the power balance between co-operatives and personal prestige for persons in leading positions. The deregulation of the Dairy Board can be explained by the political (deregulation) climate in New Zealand, international and domestic pressure to deregulate and the understanding within the dairy industry that the system with one export organisation and few dairy co-operatives was no longer functional. The formation of Fonterra can be explained similarly, along with the expectation that the New Zealand dairy industry would have a stronger position on the international market as one single operator.

The dairy co-operatives have different strategies and structures. The focus of *Fonterra* is on commodities, but with an increasing interest for consumer goods and value-added products. The structure of Fonterra is rather individualised, with close to all equity being allocated to shareholders. Membership is open. The shares are valued by an independent valuer every season and are thus appreciable. Shareholder influence is related to delivery, the number of votes being proportional to milk supply. *Westland* is mainly a commodity processor, but has made significant investments to increase the share of value-added products. Westland has a somewhat more collective structure than the other two co-operatives. The shares have a nominal value and the number of votes per member is calculated on the basis of larger quantities. The membership is open, but limited by geographical boundaries. *Tatua* is the most specialised co-operative and produces value-added ingredients and consumer products. Structurally, it is the most individualised co-operative of the three. Membership is practically closed, shares are tradable and voting rights are linked to delivery rights.

The analysis shows that New Zealand co-operatives have more individualised structures than those found in the European and Swedish dairy industries. Their strategies give an indication that the share of New Zealand dairy products exported as value-added products is likely to increase in the future.

Sammanfattning

Denna uppsats behandlar den nyzeeländska mejeriindustrin och dess kooperativa aktörer. Uppsatsens syfte är att undersöka hur de nyzeeländska mejerikooperativen har anpassat sina strategier och stukturer som en följd av förändrade marknadsförhållanden, och att kartlägga drivkrafterna bakom dessa anpassningar. Uppsatsen ger en introduktion till industrin och dess utveckling. De tre kooperativa mejeriföretag som idag är verksamma i Nya Zeeland beskrivs och analyseras ur ett strategiskt (Porters generiska strategier) och strukturellt (främst i termerna kollektivt kontra individualiserat) perspektiv. Huvuddelen av det empiriska materialet i uppsatsen inhämtades under en studieresa i Nya Zeeland i mars och april 2003. Intervjuer gjordes med företrädare för de tre kooperativen, samt med personer som på något sätt varit delaktiga i mejerisektorns utveckling.

Nya Zeeland har, med sina mycket goda förutsättningar för betesjordbruk, utvecklat en mejeriindustri som konkurrenskraftigt och framgångsrikt exporterar mjölkprodukter. Större delen av exporten utgörs av bulkprodukter såsom mjölkpulver, smör och ost. Mejeriindustrin har genomgått stora strukturella förändringar. För det första, har industrin de senaste decennierna präglats av fusioner mellan mejerikooperativ. År 2001 återstod endast två dominerande kooperativ, New Zealand Dairy Group och Kiwi, samt de små kooperativen Tatua och Westland. För det andra, var mejeriindustrin länge strängt reglerad. Ett lagstadgat exportmonopol innebar att enbart exportorganet New Zealand Dairy Board hade rätt att exportera mjölkprodukter. För det tredje, fusionerade de båda stora kooperativen samtidigt som exportmonopolet upphävdes år 2001, vilket resulterade i mejerijätten Fonterra, ett kooperativ med över 13 000 medlemmar. Westland och Tatua valde att stå utanför fusionen.

Ett antal drivkrafter kan antas ligga bakom dessa förändringar. Tekniska förbättringar och stordriftsfördelar kan sägas ligga bakom tidiga fusioner, medan man bakom senare fusioner kan skönja faktorer som exportprissättning, maktbalans mellan kooperativ och personlig prestige för personer på ledande positioner. Avregleringen av New Zealand Dairy Board kan förklaras av det politiska (avregleringsvänliga) klimatet i Nya Zeeland, internationella och nationella påtryckningar och en insikt inom mejerisektorn att systemet med ett exportorgan och ett fåtal mejerikooperativ inte längre var funktionell. Liknande förklaringar finns bakom bildandet av Fonterra, samt förhoppningen att med en enda aktör kunna få en starkare position på världsmarknaden.

Mejerikooperativen är till sina strategier och strukturer mycket olika. *Fonterras* fokus ligger på bulkvaror, med ökande intresse för konsumentprodukter och högförädlade produkter. Till sin struktur är Fonterra relativt individualiserat, med i princip endast individuellt eget kapital. Medlemskapet är öppet. Andelarna värderas varje säsong av en oberoende värderare och kan således öka i värde. Medlemmarnas demokratiska inflytande i kooperativet är relaterat till mängden mjölk som levereras. Även *Westland* tillverkar huvudsakligen bulkprodukter, men har gjort betydande investeringar för att öka andelen förädlade produkter. Westland har en något mer kollektiv prägel, då andelarna har ett nominellt värde och antalet röster per medlem beräknas på större kvantiteter än hos Fonterra. Medlemskapet är geografiskt begränsat. *Tatua* är det mest specialiserade kooperativet och producerar högförädlade ingredienser och konsumentprodukter. Det är även det till strukturen mest individualiserade kooperativet – medlemskapet är stängt, andelarna kan köpas och säljas och demokratiskt inflytande är kopplat till leveransmängden.

Analysen visar en bild av de nyzeeländska kooperativen som betydligt mer individualiserade än svensk/europeisk mejerikooperation och med strategier som tyder på att nyzeeländsk mejeriexport i framtiden kan komma att utgöras av högre andelar förädlade mejeriprodukter än i dagsläget.

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1. Introduction

1.1 Background

New Zealand is a major exporter of agricultural products, especially sheep meat and dairy products, where New Zealand exports constitute 50 percent and one third of international trade, respectively. The dairy sector has a long tradition of successful exporting. Milk production is extensive and low-cost thanks to favourable climatic conditions. Dairy products are highly competitive on the international market and the large part of the production is exported. Exports were regulated through the export monopoly of the New Zealand Dairy Board until 2001.

A wave of mergers during the 1990's made the number of dairy co-operatives decrease drastically. Eventually, a merger between the two largest co-operatives, New Zealand Dairy Group and Kiwi, was proposed. The so-called mega-merger led to the creation of Fonterra Co-operative Group Ltd, one of the world's ten largest dairy companies. The merger was preceded by internal power struggles, debates among co-operative shareholders and a need to change New Zealand legislation, since the legislative export monopoly of the New Zealand Dairy Board would be abolished and the Board itself incorporated into the new dairy co-operative. Fonterra Co-operative Group Ltd became operative in October 2001 and is clearly the largest dairy co-operative in New Zealand. Only two independent dairy co-operatives exist – Westland Co-operative Dairy Company and Tatua Co-operative Dairy Company.

1.2 Problem, purpose and issues

The empirical starting point of this study is the change that New Zealand dairy co-operatives have undergone, leading to the formation of Fonterra. From consisting of a number of small independent co-operative processors and a statutory export marketing body, the industry now has one major player which comprises processing and marketing and can be subject to competition.

Theories on co-operative organisational models (van Bekkum, 2001; Nilsson & Björklund, 2003) suggest that there are differences between co-operatives operating in liberalised markets and co-operatives operating in regulated markets. In the New Zealand case, it is interesting to follow the development of the dairy sector, since it has gone from being formally regulated (on domestic as well as export level) to being deregulated – firstly through the deregulation in the 80's, secondly through the removal of the statutory export monopoly of the New Zealand Dairy Board. Taking the mergers and the dissolution of the New Zealand Dairy Board into consideration, it is clear that the structure of the dairy sector has changed considerably. One might wonder whether the changes are a consequence of deregulation – to what extent the co-operatives have changed their market strategies and organisation structures because of the shift from a regulated to a deregulated environment (figure 1.1).

The purpose of this study is to examine *how the New Zealand dairy co-operatives have adjusted their market strategies and organisational structures as a result of changing market characteristics, and to investigate what were the driving forces behind these adjustments.*

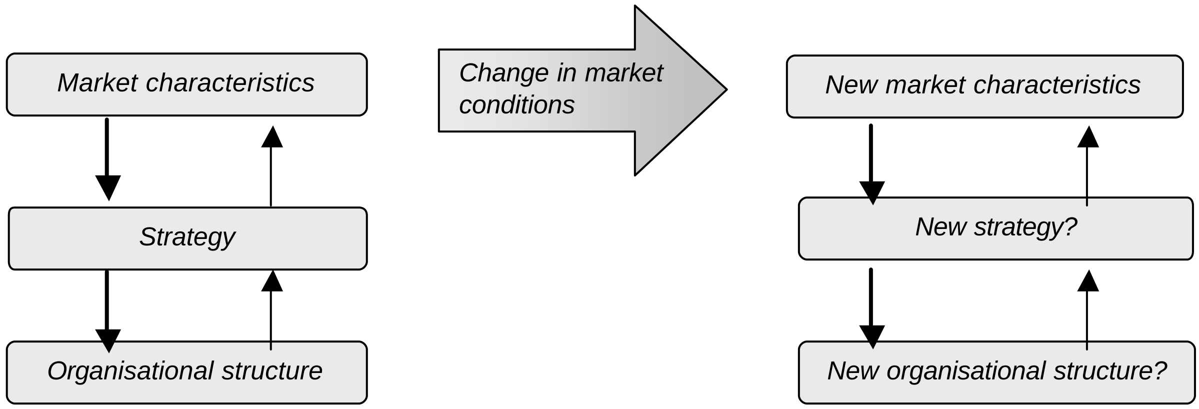


Figure 1.1: Relationship between market, organisation and strategy exposed to change (after Nilsson& Björklund, 2003)

The study presents an *analysis of strategy-structure patterns of New Zealand dairy co-operatives*. The focus is on the connection between the changing market conditions and the direction chosen by dairy co-operatives in order to adjust to these new conditions. In order to give a picture of the development of dairy co-operatives, the study starts out with a general description of the New Zealand dairy industry and its structural changes leading up to the formation of Fonterra.

In brief, to fulfil its purpose, the study will answer the following questions:

- What strategies are applied by dairy co-operatives today as opposed to those before the deregulation of the dairy industry?
- Which are the market conditions and the organisation structures of the firms and how have they evolved?
- What organisational changes have been made in order to implement suitable strategies?
- What are the lessons to be learned from the New Zealand case from a European (Swedish) perspective?

1.3 Theoretical framework

The theoretical framework consists of current theories on co-operative enterprises and their relations to the markets. Theories have been chosen on the basis of their ability to describe the connections between market, co-operative business strategy and organisation (introduced in figure 1.1). The theoretical core of this thesis can be described as being a combination of theories on business strategies, co-operative organisational structure and the impact of market characteristics. This is illustrated in figure 1.2, where the theoretical focus of this thesis is in the overlap between the three circles, representing the three theoretical parameters used.

The topic of dairy co-operatives and their relations to the markets has been explored in a recent (2001) PhD dissertation by Onno-Frank van Bekkum, entitled *Co-operative Models and Farm Policy Reform. Exploring Patterns in Structure- Strategy Matches of Dairy Co-operatives in Protected vs. Liberalized Markets*. In his dissertation, van Bekkum analyses dairy co-operative models on the basis of their combination of strategy and structure. Strategies refer to the three generic strategies developed by Porter (1980): cost leadership strategy, differentiation strategy and focus strategy. The aspect of structure is represented by "collective" and "individualised" as the two extremes. Van Bekkum's analysis shows the matches between strategy and structure recognisable in a number of case studies of co-operatives in deregulated versus regulated markets, which constitute the empirical basis of his dissertation.

Figure 1.1 is based on Nilsson & Björklund's (2003) theory on the interaction between market and co-operatives organisation through strategy. They also offer a classification of co-operatives according to strategy and structure, which also includes the characteristics of the market, mainly in the sense of regulated versus deregulated.

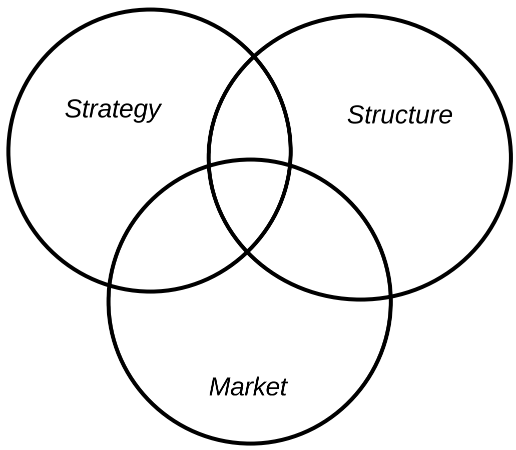


Figure 1.2: Theoretical core of the study

1.4 Methodology

This thesis analyses the changes undertaken in a co-operative theory perspective. The theoretical framework provides a basis for an analysis of the findings from literature and interviews, necessary in order to draw conclusions applicable to other businesses and markets.

The thesis briefly describes the development of the New Zealand dairy industry. Information on this process is found in various publications, on the Internet, through financial statements etc. The empirical basis however, is the development in strategies and structures within co-operative enterprises after the deregulation of the dairy industry. The main part of this information was collected during a study tour in New Zealand in March and April 2003. A number of interviews were conducted with representatives of the dairy co-operatives Fonterra Co-operative Group, Westland and Tatua (board members, executives etc), government officials, dairy farmers and other persons with insight in the dairy sector.

1.5 Structure of the study

To give the reader the necessary background information, dairying in New Zealand and the development of the dairy industry leading to the formation of Fonterra is briefly described in *Chapter 2*. The conditions of the New Zealand dairy sector are described along with an outline of the changes in the industry.

In *Chapter 3*, the theoretical framework of the study is presented. Theories cover company strategy, co-operative structure and classification of co-operative models.

The methodological approach is discussed in *Chapter 4*.

Chapter 5 presents the driving forces behind the development of the dairy industry and describes the dairy co-operatives more in detail on the basis of information retrieved during interviews. The companies are described from a strategy and structure perspective, outlining the general strategic focus of the co-operative and the relation between the shareholder and the co-operative in terms of transaction, investment and governance.

In *Chapter 6*, the empirical findings are analysed according to the theoretical framework. The co-operatives studied are analysed in a strategy/structure context.

Conclusions drawn from the empirical findings and the analysis, and possible implications for European (Swedish) dairy co-operatives are discussed in *Chapter 7*.

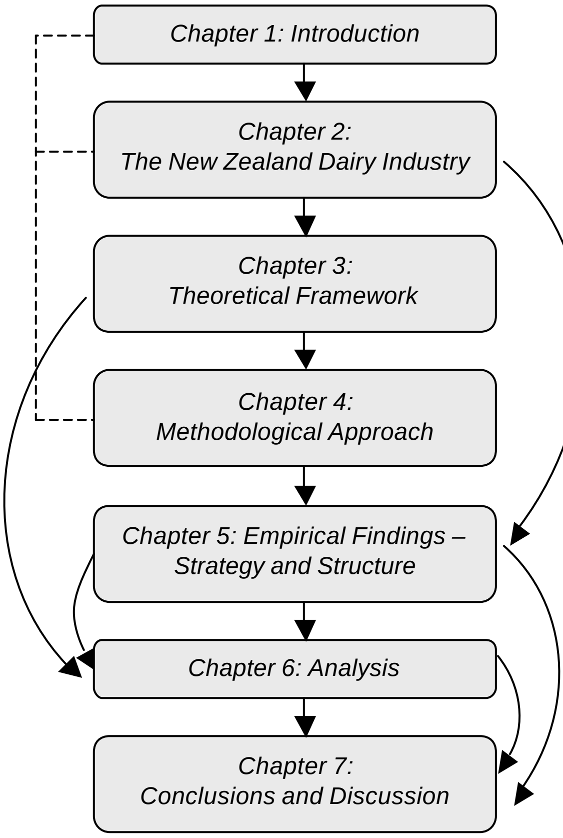


Figure 1.3: Structure of the study

2. The New Zealand Dairy Industry

2.1 Introduction to New Zealand dairying

2.1.1 Conditions of production and trade

The New Zealand climate offers excellent conditions for pastoral agriculture. Production is extensive, as cows graze outside all year round, sometimes with addition of silage or feed supplements during parts of the year. No indoor housing and pasture based feeding enables a low-cost production at well below average world costs, which makes New Zealand milk products highly competitive on the world market. (MAF, 2000)

New Zealand has about 13,700 dairy herds that supplied a total of almost 13,000 million litres of milk for processing in the season of 2001/2002. The main dairying area of New Zealand is in the Northern part of the North Island, but dairying in the South Island is increasing. The majority of dairy farms (83 percent) are located in the North Island. The South Island dairy farms are on average 40 percent bigger than North Island farms on average. The average New Zealand dairy herd size is 271 cows, but there is a steady trend towards larger herds. The group of 300 or more cows (30 percent) is increasing. The number of farms with less than 250 cows is decreasing, although the most common herd size (21%) is 150-199 cows. Herds with between 950 and 999 cows have the highest production per cow. (LIC, 2003; van Bekkum, 2001)

The majority of dairy herds (96 percent in 1999) supply milk seasonally. These cows are milked between August and May, with a peak in milk supply during October, and are dried off during winter when pasture production is lower. The rest of the herds supply milk all year round for the domestic liquid milk industry. Since so little of the milk is consumed as fresh milk products, it is usually stripped from its water contents and then further processed. For this reason, milk volumes are commonly not expressed in kilograms or litres, but in terms of “milksolids”, which is the actual milkfat and protein contents of the milk. One kilogram milksolids corresponds to approximately 12 kilograms of milk (LIC, 2003; van Bekkum, 2001; MAF, 2000).

The processing of milk is carried out by three co-operatives: Fonterra Co-operative Group Ltd (Fonterra), Westland Milk Products (Westland) and Tatua Co-operative Dairy Company Limited (Tatua). Approximately 95 percent of dairy produce is exported, the domestic market being very small. The major markets are South East Asia, Latin America, the European Union and the United States. The dairy industry is New Zealand’s single largest export earner, representing approximately 23 percent of the value of all exports. New Zealand accounts for approximately 30 percent of international trade in dairy products. (Market New Zealand.com, 2003)

2.1.2 Agricultural deregulation

In 1984, the New Zealand government embarked on a series of reforms that would affect most sectors of the society. The agricultural sector was one of the first to be deregulated. Farmers, who had previously been the beneficiaries of various government support schemes, saw their incomes decrease by 30 percent on average. Sheep and beef farmers were struck harder by the reforms than dairy farmers. A production subsidy (the Supplementary Minimum Prices) guaranteed farmers a minimum payout for their produce, and in years when the world market price was low the difference between the world market price and the "price floor" would be covered by government funds. With a number of years with low world market prices for sheep and beef, farmers became heavily dependent on subsidies. Dairy farmers were less dependent on subsidies, as the low cost dairy production was highly competitive on the international market and no price support was necessary. However, also dairy farmers received support through input subsidies, development schemes etc. (Cloke, 1989; Bell & Elliott, 1994)

One of the major effects of the agricultural deregulation in the 1980's was a shift from sheep and beef farming to dairying, which was a more profitable alternative after the removal of subsidies for meat and wool. This led to an increase in milk production. Dairying also became more common in the South Island with the migration of farmers from the North Island, which had traditionally been the centre of dairy farming, and through the conversion of sheep and beef farms. (Bell & Elliott, 1994)

New Zealand agriculture now has the lowest subsidy levels in the OECD. Support to agriculture is commonly measured in terms of the *Producer Subsidy Equivalent (PSE).* Expressed as a percentage, the PSE indicates the share of farm income that is a result of direct transfers to agricultural producers. New Zealand has a PSE of one percent, which can be compared to that of the European Union (35 percent) or the United States (21 percent). (OECD, 2002)

2.2 The New Zealand dairy industry in a deregulation perspective

2.2.1 New Zealand dairy co-operatives

The New Zealand dairy industry structure has changed considerably in recent years. Not only has the industry been through a wave of mergers between dairy co-operatives, but the political foundations of the industry have also been altered. From having consisted of many farmer-owned processing co-operatives and a producer board, the New Zealand Dairy Board, with a legislated monopoly on export of dairy products, the export monopoly is now abolished, and the export organisation of the producer board has been integrated into one of the three remaining co-operatives.

The dairy industry has a long history of co-operative collection and processing of milk. With dairy production being spread over the country, small co-operatives were established for the processing of milk. In 1935 there were over 400 co-operatives. Through improvements in transportation and advances in large-scale processing technologies, the number declined to 180 in 1960/1961. Further consolidations and rationalisations brought the number down to 19 at the beginning of the 1990s. Mergers continued and small co-operatives merged with each other and/or with one of the two large co-operatives. Otago Co-operative Dairy (1997/98), South Island Dairy Farmers (1998/1999), and Tasman Milk Products, Kaikoura and Marlborough (2000) merged into *Kiwi Co-operative Dairies Limited.* Alpine Dairy Products and Southland Dairy Co-operative (1998/1999) merged into South Island Dairy Co-operative, which subsequently merged into the *New Zealand Dairy Group* (1999/00), as did Anchor Bay Holdings (1998/1999). The sequence of the mergers is illustrated in figure 2.1. Before the deregulation of the New Zealand Dairy Board in 2001, there were only two large and two small co-operatives remaining. The New Zealand Dairy Group and Kiwi merged in 2001 to form Fonterra, while Tatua and Westland chose to remain independent. The merger process is described in section 2.2.3. (Dobson, 1990; MAF, 2000; van Bekkum, 2001)

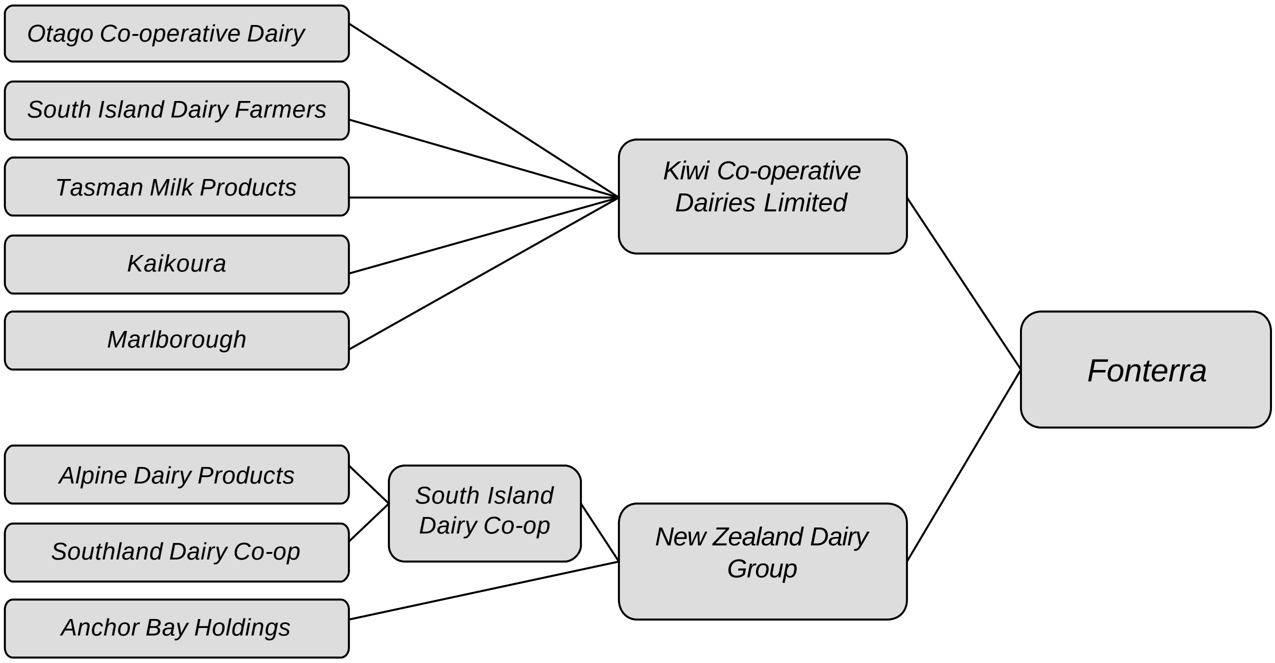


Figure 2.1: Mergers between dairy co-operatives 1997-2001 (van Bekkum, 2001)

2.2.2 The New Zealand Dairy Board

The New Zealand Dairy Board (NZDB) used to be the exporting arm of the dairy co-operatives. Through the legislation of the Dairy Board Act, the NZDB had the exclusive right to market all export dairy products. With sales representatives around the world, the NZDB transmitted the market signals to the dairy co-operatives to ensure that their manufacturing programs would meet the demands of the world market. While the co-operatives would be in charge of the collection and processing of member milk, the NZDB would organise shipping, packaging, transport, storage, quality control, market promotion and other support services. Livestock improvement and dairy research were also carried out within the NZDB. The dairy co-operatives were responsible for marketing milk and other dairy products on the domestic market. (MAF, 2000; Dobson, 1990)

Dobson (1990) listed the following as NZDB's main strategies: "to increase exports of specialized, value-added products, increase sales through foreign subsidiaries, and diversify across products and countries."(p. 547). Although relying on statements of NZDB directors and executives of the time, these strategies seem representative for the long-term ambitions of the NZDB. In a symposium in 1997, the chairman of the NZDB stated that "The Dairy Board strategy is to place as much of our milk as we can in the branded consumer, food service and speciality ingredient sectors where the returns are generally higher than commodities and more consistent." (Spring, 1997, p. 4)

The NZDB was governed by a Board of Directors consisting of thirteen Directors; eleven dairy farmers, who represented their co-operatives, and two government appointees. The NZDB was owned by the dairy co-operatives, which were the owners of shares in proportion to their supply of products to the NZDB. In 2001, New Zealand Dairy Group owned 58 percent of the NZDB and Kiwi owned 38 percent, Tatua and Westland owning the remaining four percent. (MAF, 2001; Dobson, 1990)

In the 1998 budget, the New Zealand government announced that all producer boards, including the NZDB, were to be deregulated. The boards should provide the government with plans for deregulation. In the case of the dairy industry, its response was to propose a merger between at least the two largest dairy co-operatives. The operations of the NZDB would be integrated into the new company. (MAF, 2001)

2.2.3 The mega-merger and the deregulation of the NZDB

As mergers in the dairy business proceeded, discussions on a final amalgamation of the industry had occurred. The so-called mega-merger would mean a merger between the two largest remaining dairy processing co-operatives, New Zealand Dairy Group and Kiwi Co-operative Dairies Limited. It would coincide with a removal of the statutory export monopoly of the NZDB, which would be integrated into the new company. An alternative to the merger, which was discussed, was a division of the NZDB between the two largest co-operatives with the smaller co-operatives being financially compensated. Tatua and Westland had stated during the mega-merger process that the companies were not interested in being integrated in the new dairy giant. (van Bekkum, 2001)

Because of the importance of the New Zealand dairy industry to the national economy, the mega-merger was of national interest and was heavily debated. The initial merger proposal of the dairy industry had to be approved by the Commerce Commission, a government organisation with the purpose to ensure that market structures and market practices are consistent with competition. After examining the proposal, the Commerce Commission found that the public benefits of the merger were outweighed by the detriments in terms of lack of competition leading to lower milk prices for producers and higher dairy product prices in the domestic consumer market, losses in productivity due to the monopoly situation, and a lack of stimuli in the fields of product development and adoption of new technology. As a result, the dairy industry withdrew its application to the Commerce Commission in September 1999. (MAF, 2001; Johnson, 2001)

Due to disagreements between the parties involved, the merger discussions were stalled in March 2000. Suggested reasons for this were disagreements on the share structure of the new company, financial valuation of the co-operatives, internal politics, cultural differences and rivalry between the companies. However, negotiations were recommenced, and in December 2000, New Zealand Dairy Group and Kiwi announced that they intended to merge, the target date for the merger being 1st of June 2001, at the beginning of a new milking season. The new company, which was given the preliminary name Global Dairy Company, would incorporate the NZDB. The merger proposal was presented to the government with request *not* to be scrutinised by the Commerce Commission. The proposal also included mechanisms that would protect consumers through creating competition in the domestic market and mechanisms that would protect farmers' interests. A review of the proposal was commissioned by the government and carried out by external consultants. The review concluded that the new merger proposal was more convincing than the one presented in 1999. It also stated that the structure of the NZDB had been appropriate at the time when the New Zealand dairy industry consisted of a large number of co-operatives, but that the structure was inefficient when there were only a few co-operatives left. A merger with the NZDB was considered to be the best solution to achieve vertical integration in the industry, since the costs of splitting up the NZDB between the co-operatives would have been too high. (van Bekkum, 2001; MAF, 2001; Johnson, 2001)

In April 2001 the Prime Minister and the Minister for Agriculture announced that the merger proposal had been approved and that it would not have to be scrutinised by the Commerce Commission. In order to avoid or mitigate possible negative consequences of the merger, a comprehensive regulatory package had been developed. Global Dairy Company also had to fulfil a number of conditions, such as divesting 50 percent of a subsidiary acting on the domestic market, selling milk to competitors at a fair price and permit their shareholders to supply up to 20 percent of their milk to other suppliers. (MAF, 2001; Johnson, 2001)

The shareholders of New Zealand Dairy Group and Kiwi approved the merger proposal in June 2001, when over 80 percent of shareholders voted in favour of the proposal. Following the passing of a new legislation (the Dairy Restructuring Act) by Parliament, the new company, Fonterra, became operational in October 2001. (www.fonterra.com)

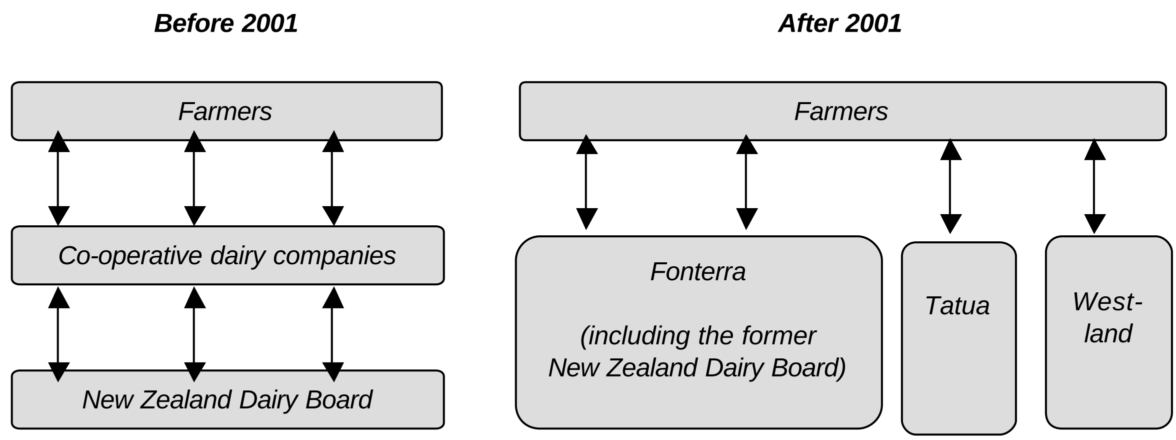


Figure 2.1: Industry structure before and after 2001

2.2.4 Current industry structure

The New Zealand dairy industry currently consists of one major player, Fonterra, and two smaller co-operatives, Tatua and Westland. Their main characteristics are listed in table 2.1, which illustrates the difference in size and focus between the "giant" Fonterra and the two smaller companies.

Fonterra clearly dominates the industry, processing approximately 95 percent of all New Zealand milk nation-wide. Westland and Tatua process the remaining five percent. Fonterra mainly produces and exports commodity milk products, such as milk powder, cheese and butter. Products are exported to approximately 140 countries through the sales and marketing network of the former NZDB, which was integrated into Fonterra when New Zealand Dairy Group and Kiwi merged. Fonterra generates 20 percent of New Zealand's export receipts and this represents some seven percent of its Gross Domestic Product. (www.fonterra.com)

Westland is located on the West coast of the South Island and collects milk from an area limited by the sea in the West and the Southern Alps in the East. The company's main product is whole milk powder that is partly sold and marketed through Fonterra's global network. Westland is building up its own marketing and sales organisation and will increasingly market and sell its own products.

Tatua is located in the Waikato area in the North Island. The company has invested heavily in research and development, processing plants and the development of value-added products. Between 60 and 70 precent of Tatua's revenues come from value-added niche products such as nutritional supplements and bio-actives, sold on the global market.

There are also a number of independent, investor-owned processors who buy milk from Fonterra for the processing of various consumer products. (Market New Zealand.com)

Table 2.1: Characteristics of New Zealand dairy co-operatives

	FONTERRA *(Annual Report 2002, www.fonterra.com)*	***WESTLAND*** *(Annual Report 2002)*	***TATUA*** *(Annual Report 2002)*
Number of shareholders	*13,000 +*	*335 suppliers, 370 farms*	*132 suppliers*
Volume of processed milk (milksolids)	*1,080,000,000 kg*	*29,546,923 kg*	*9,303,104 kg*
Main products	*Milk powder, cheese, butter, casein*	*Milk powder, butter, casein*	*Fresh curd caseinates, whey protein con-centrates, conversion caseinates*
Main export markets	*USA, Japan, Philippines, Mexico, South East Asia*	*Australia, Asia*	*Australia, North, Central and South America, SE Asia, South Africa*
Turnover (NZ$)	*13,924,000,000*	*178,529,000*	*111,241,279*

3. Theoretical Framework

3.1 Introduction

Chapter 2 gives a general overview of the New Zealand dairy industry and its development. To provide an understanding of the development of dairy co-operatives *per se*, this Chapter introduces the theoretical framework of the study. After an account of the setting of the changes taking place, there is a need for a "map" of co-operative structures and strategies to see what way New Zealand dairy co-operatives have taken in their development. Theories are used to depict a "landscape", where the landmarks are the theoretical descriptions of co-operative models.

Theories have been selected by means of their ability to describe different aspects of the co-operative and its environment. There is a need to understand the internal structure of the co-operative to fully understand the implications of its interaction with the market. A number of theories describe internal issues, such as transaction cost theory and agency theory (see e.g. Hackman & Cook, 1997; Sykuta & Cook, 2001). These theories are not elaborated on in this Chapter.

The theories used in this study portray the connection between markets and organisations (external) on one hand, and strategy and structure (internal) on the other.

3.2 Market, strategy and organisation

Every enterprise striving to be successful in its market, must be aware of the characteristics of the market and make sure that there is a coherence between the *market* and the characteristics of the *organisation* itself. This is valid for investor-owned firms as well as co-operatives. The connection between market and organisation is the *market strategy*. Figure 3.1 illustrates the relation between the market, the strategy and the organisation. (Nilsson & Björklund, 2003)

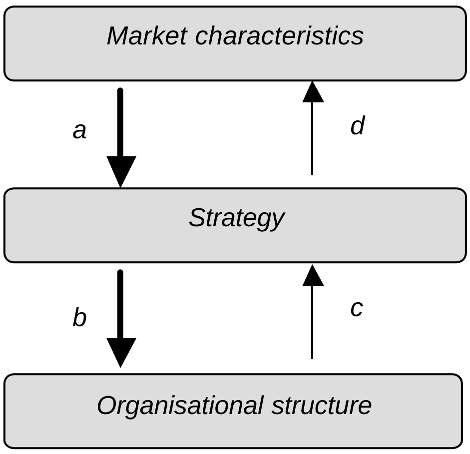


Figure 3.1: The connection between organisational structure and the market (Nilsson & Björklund, 2003, p. 50)

The arrows directed downwards (a, b) indicate market adjustment. The characteristics of the market decide the most suitable successful strategy (a). To pursue this strategy, the organisation must have certain endowments – the characteristics of the organisation (b). The connection between organisation and market can also be found in the other direction, indicated by the arrows directed upwards (c, d). The strategy of an organisation can be the result of its organisational structure (c), and the strategy chosen may only be applicable on certain markets (d). However, this kind of adjustment is more short-term than the market adjustment described with arrows a and b. Since markets change, it is risky to focus only on markets that "suit" the strategy and thus the organisational structure of the enterprise. A change in market characteristics could lead to the enterprise losing the market, if its strategy and structure are too rigid. In a short-term perspective, it is possible to influence markets (follow arrows c and d), but the sustainable solution is a fair or high degree of long-term adjustment. (Nilsson & Björklund, 2003)

3.3 Classification of market strategy

The most acknowledged classification of market strategies is the one introduced by Michael Porter (1980). This classification is used by van Bekkum (2001) and Nilsson & Björklund (2003) concerning market strategies of co-operatives. To identify market strategies, Porter uses two criteria – the target group (industry-wide or a particular segment) and the approach chosen to satisfy the target group (uniqueness perceived by the customer or low cost). Combined in table 3.1, these criteria result in four strategies, two of which are aggregated due to similarity.

Table 3.1: Three generic strategies (Porter, 1980)

Strategic target	**Strategic advantage**	
	Uniqueness perceived by the customer	Low cost position
Industrywide	***Differentiation***	***Overall cost leadership***
Particular segment only	***Focus***	

The two focus strategies are usually combined into one, which leaves us with *Porter's three generic strategies:*

1. *Overall cost leadership strategy* is suitable for offering a low cost product on a price sensitive market. The strategy implies maximising economies of scale, cost minimisation in areas like research and development, sales, service and advertising. Although issues like quality and service cannot be ignored, low cost relative to competitors is the theme running through the entire strategy. Achieving a low cost position generally requires a high relative market share or other advantages, such as a favourable access to raw materials. It also demands heavy investments in large-scale production facilities, a wide range of related products to spread costs, service of main customer groups to build market share and capital to cover losses while doing so.

2. *Differentiation strategy* means creating a product or service which is perceived *industry-wide* as being unique. Approaches to differentiation are various design or brand image, technology, service, special features, distribution network etc. The concept of differentiation is not linked to a high market share because of the perception of exclusivity. The perceived uniqueness of the product reduces the price sensitivity of the customer, but the issue of cost cannot be ignored although it is

not the primary strategic target. Achieving differentiation sometimes requires investments in costly areas such as branding, research and development and high quality raw materials. In other cases, it may be possible to differentiate a product and still have prices comparable to those of competitors.

3. *Focus strategy* implies applying either an overall cost leadership strategy or a differentiation strategy. The central issue is that the strategy is aimed at satisfying one particular segment only. The target group can be a particular buyer group, product line segment or geographic market. The strategy rests on the premise that a firm focusing on a particular segment is able to serve this segment better than competitors aiming at a broader market. This limits the market share achievable for the firm applying a focus strategy, but increases the possibility of high penetration in the target group.

The three generic strategies are not only different when it comes to operational decision-making, but also require different resources and skills and imply differing organisational arrangements and control procedures. Since the choice of strategy has effects in most levels of the firm, it is necessary to be committed to *one* of the strategies to be successful. A firm "stuck in the middle" is in a bad strategic situation as it will be unable to lower costs enough to be competitive in the low cost range of products, and unable to achieve differentiation necessary to compete with more exclusive brands. Neither will it be able to combine the low-cost and differentiation strategies in a limited segment. (Porter, 1980)

3.4 Co-operative organisation structure

There are a large number of co-operative organisation models and a comprehensive terminology used in theoretical literature to describe them. Generally, co-operative structures, comprising the transaction, investment and governance dimensions, can be described in terms of level of individualisation, ranging from *collective* to *individualised* as two extremes.

There are several definitions of co-operative enterprises, but the following definition is acknowledged and widely used in theoretical literature. It states that a co-operative is owned and controlled by the members and that the co-operative gives benefit to the members, according to the following three principles:

- First, the *user-owner principle*. Those 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-benefits principle.* Benefits of the co-operative are distributed to its users on the basis of their use. (Barton, 1989, s 1)

Van Bekkum (2001) refers to the three principles as three dimensions: a *transaction* ("use" and "benefit distribution") relationship between member and co-operative, an *investment* ("ownership") relationship and a *governance* ("control") relationship. The three dimensions can be briefly described as follows:

- The *transaction* relationship consists of the delivery of the product from the member to the co-operative (or the purchase of a product by the member from the co-operative in the case of a supply co-operative) and the payment received in exchange.

- The *investment* relationship includes the issues related to ownership: the contribution of capital (individual or collective equity), the bearing of risks, and the right to residual claims. Residual claims are often distributed on the basis of transaction volume, not on the basis of invested capital. Given that there is a linkage between the volumes delivered and the level of investment, the residual claims received should be proportional to an assumed return on investments.
- The *governance* relationship involves the participation in decision-making and monitoring activities.

Co-operative organisations can be classified with reference to all three principles. Van Bekkum (2001) uses the level of individualisation, ranging from "collective" to "individualised", as a parameter according to which co-operative structure can be analysed. A definition of what is meant by a collective or individualised structure in the three dimensions (transaction, investment and governance) is given in table 3.2 (next page). The characteristics in the table refer to two extremes and there are thus a large number of intermediate structures. Generally speaking, co-operatives engaging in activities requiring large risk-bearing capital investments tend to have more individualised, rather than collective internal structures. There is thus a connection between the level of individualisation in the structure of the firm, and its chosen strategy.

3.5 Classification of co-operative models

The division of collective versus individualised structures in table 3.2 reflects the basic characteristics of what Nilsson & Björklund (2003) refer to as *traditional* co-operatives (collective) and *entrepreneurial* co-operatives (individualised) (Table 3.3).

Table 3.3: Classification of co-operatives according to Nilsson & Björklund (2003)

Traditional co-operatives		*Entrepreneurial co-operatives*	
Service-at-cost co-operatives	*Regulative co-operatives*	*Internal entrepreneurial co-operatives*	*External entrepreneurial co-operatives*

3.5.1 Traditional co-operatives

Traditional co-operatives have collective internal structures. They generally engage mainly in primary processing, selling undifferentiated products. They follow the cost leadership strategy, thus volumes are large and economies of scale are maximised. The level of unallocated capital is high. The membership is highly heterogeneous and as a result of uniform cost calculation, there is an element of cross-subsidisation, where members with a high profitability and large delivered volumes are likely to "subsidise" less profitable members with lower volumes. Membership is open and voting principles highly democratic.

Table 3.2: Co-operative structure: collective vs. individualised extremes (van Bekkum, 2001, p. 47)

	Collective structure	**Individualised structure**
TRANSACTION		
Pricing policy	*Uniform pricing for all members, with some minimum criteria.*	*Differentiated pricing in terms of volume, quality and produce content to reflect as much as possible the handling costs and market returns of each member's produce specifically; the price level may be cross-subsidised with returns on transaction-based investments, or reflect the market equilibrium price in which case a surplus is paid in the form of a separate dividend.*
Supply management	*Unrestricted delivery and intake obligation from members only, though there are no significant entry barriers for non-members.*	*Delivery volumes are made dependent on marketing needs of the co-operative firm, through obligatory purchase of production rights tradable among members only; additional raw materials may be purchased on a short-term basis from non-members as market opportunities call for.*
INVESTMENT		
Financial entry conditions	*Free and costless entry.*	*Closed membership or subject to the purchase of production rights at a value at least equivalent to the average member's funds locked up in general reserves.*
Financial instruments	*Collective reserves without any individual rights, risks, obligations or benefits; member loans with no or limited interests.*	*General reserves (minor); member loans; capital accounts; voluntary, long-term, tradable, non-voting, risk-bearing and high-interest-bearing bonds or subordinated member loans; obligatory, transaction-based, voting, permanent, risk-bearing, centrally administered or internally tradable, appreciable production rights giving title either to high prices or dividends.*
Distribution of residual surpluses	*Addition to reserves (major), price supplements.*	*Addition to reserves (minor); dividend payment on production right basis.*
Nature of the right to residual claims	*Held by the membership as a collective; permanent; non-tradable.*	*Held by individual members; permanent but the attachment to transactions restricts duration of individual ownership; voting; tradable within the membership and hence appreciable.*
GOVERNANCE		
Voting rule	*One man, one vote.*	*Proportional to production rights.*
Decision making rights and monitoring	*Decision management and decision control are in the hands of the farmers' Board of Directors.*	*Separation of residual risk-bearing (members individually) from decision management (management), with decision control delegated to the farmers' Board of Directors.*

Further, Nilsson & Björklund (2003) divide traditional co-operatives into *service-at-cost co-operatives* and *regulative co-operatives*.

Service-at-cost co-operatives are run according to the terms of the market. The relationship between shareholders and the co-operative is on a strictly commercial basis. There may be elements that would not occur in an investor-owned firm, such as cross-subsidisation between members, but such a practice must still make “business sense”. A service-at-cost co-operative has commercial objectives and strives to improve the returns of the shareholder. It welcomes competition on an open market.

Regulative co-operatives often operate in markets with low competition, often as a result of political regulations. The regulated environment and lack of competition enables the co-operative to act in a way that is not necessarily compatible with market forces. The objectives of the co-operative are not first and foremost commercial, but also include regional policy, lobbying, and social and other non-commercial objectives. The co-operative tries to hamper competition and has its natural place in the structure set up by political regulation.

It is easy to draw the conclusion that service-at-cost co-operatives are well adjusted to the market, while regulative co-operatives are not. However, this is not the case. Each type of co-operative can be well adjusted to the market where it operates – it depends on the characteristics of the market. A regulative co-operative makes the most of its position on a regulated market, taking advantage of the political system, and is thus able to reap the benefits, financial and otherwise, from it. This can lead to a lower degree of adjustment towards the commercial markets, as it is difficult to adjust *both* to the political system *and* to the demands of the market.

3.5.2 Entrepreneurial co-operatives

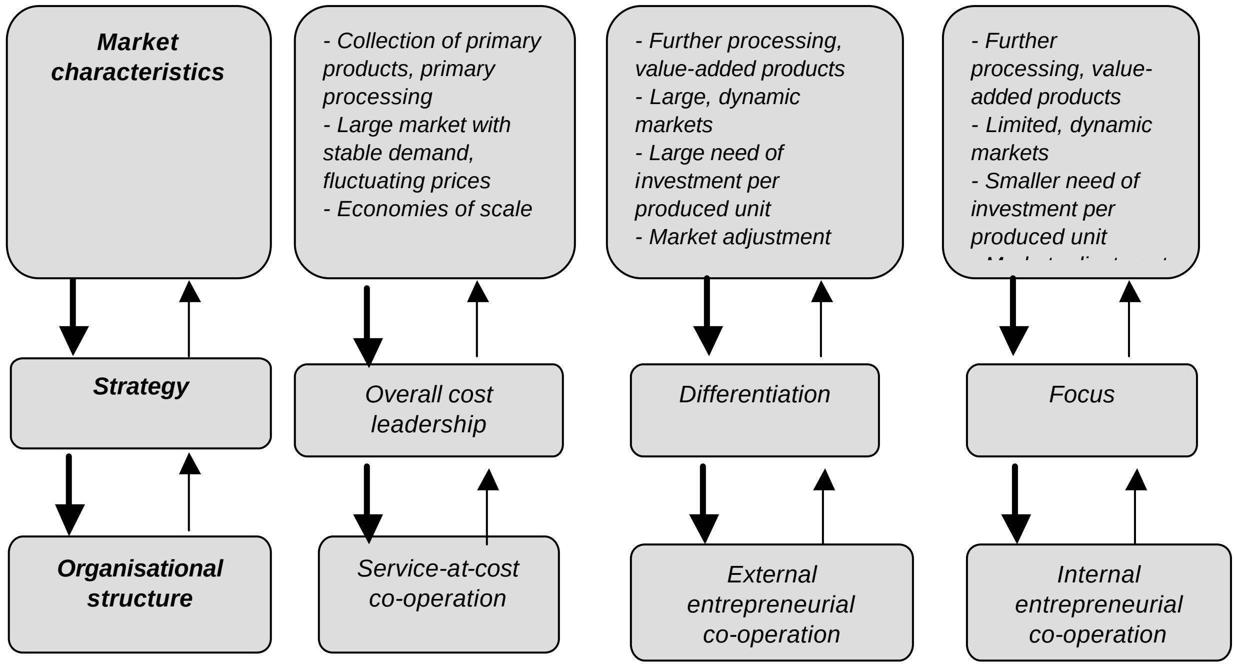
Entrepreneurial co-operatives have a more individualised internal structure than traditional co-operatives. Ownership is more individual in the sense that the degree of unallocated capital is very low. This leads to an incentive structure for shareholders that makes collective traits less predominant or even negligible. Entrepreneurial co-operatives have a highly commercial attitude and do not have lobbying, regional policy or social objectives on their agenda, as a regulative co-operative may have. Nilsson & Björklund (2003) divide entrepreneurial co-operatives into the categories *internal entrepreneurial* and *external entrepreneurial*.

Internal entrepreneurial co-operatives means that the shareholders have individual ownership in the form of delivery rights or other shares connected to production or supply, which enable them to receive the profits of the co-operative. Delivery rights or shares are owned individually and can be bought and sold among shareholders. The supply levels are limited and membership is closed or “selective”, limited by the purchase of delivery rights.

External entrepreneurial co-operatives admit non-suppliers as shareholders, which enables investors to own shares in the co-operative. If suppliers are shareholders, they have a dual role - as suppliers, wanting a high price for their commodity, *and* as investors, wanting a high return on their investment. As for internal entrepreneurial co-operatives, the supply level is limited in order to have better control over production and give a higher return on invested capital.

3.6 Market strategies for co-operative models

Nilsson & Björklund (2003) combine market strategies and co-operative models as shown in figure 3.2, which is an elaboration of figure 3.1. Porter's (1980) three generic strategies, *overall cost leadership*, *differentiation* and *focus* are combined with the co-operative models mentioned: *service-at-cost co-operatives*, *external entrepreneurial co-operatives* and *internal entrepreneurial co-operatives*. As the conditions of the *regulative co-operatives* are different from the market conditions of most co-operatives, this co-operative model is exempt from the figure and from further analysis.



Figur 3.2: Choice of organisational structures according to different market characteristics (Nilsson & Björklund, 2003, p. 60)

Service-at-cost co-operatives have good conditions for producing at low cost. The open membership policy facilitates the number of shareholders to grow, enabling the processing of large quantities and achievement of economies of scale. Shareholders are encouraged to produce large quantities of homogeneous produce, since the payout is not declining depending on the quantity and the co-operative is obliged to accept all products supplied. The collective ownership structure and the larger number of shareholders often imply difficulties to manage a complex set of activities, leading to a focus on primary production or commodities. The most suitable strategy for this kind of co-operative is thus the *overall cost leadership strategy*.

Internal entrepreneurial co-operatives have a high level of individual ownership among shareholders, which creates incentives to be innovative and adjust to market demands in order to increase sales and profitability. All investment comes from suppliers, that is, the equity base of the co-operative is limited. This can make it difficult to aim at supplying a large number of market segments with a large number of differentiated products, and the *focus strategy* is more appropriate for the internal entrepreneurial co-operative.

External entrepreneurial co-operatives have a larger capital basis, since it allows investment from non-suppliers. The incentive structure is similar to that of an internal entrepreneurial co-operative and promotes market adjustment and innovation. The co-operative operates in a way that is similar to an investor owned firm. The external entrepreneurial co-operative can successfully pursue a *differentiation strategy*.

3.7 Implications for the study

The New Zealand dairy co-operatives are described in Chapter 2 and 5. The three co-operatives studied are different in size, scope and organisation. The theories described in this Chapter are used in the analysis in Chapter 6 to analyse the co-operatives in terms of *strategy*, using Porter's (1980) three generic strategies, and *structure*, using collective versus individualised as parameters. The strategy/structure analysis results in an attempt to classify the co-operatives according to the classification of Nilsson & Björklund (2003).

As all theoretical concepts, the concepts of the theories used in this thesis do not represent an absolute "strategic recipe. Co-operatives with an altogether individualised structure may not exist in many industries, since collective and individualised represent two extremes. Similarly, it might be difficult to find a "pure" regulative co-operative. As stated at the beginning of the chapter, the theoretical concepts introduced are rather used as references when analysing the strategies and structures of co-operatives, than being actual co-operatives.

4. Methodological Approach

4.1 Study trip to New Zealand

The main part of the information used in this thesis was collected during a study trip to New Zealand in March – April 2003. During the study trip, two rounds of interviews were carried out: one in Wellington and one in the northern parts of the North Island. Lincoln University in Canterbury kindly offered an office space, which facilitated the work with preparing and processing the interviews. Staff members of the Farm Management Group of the Applied Management and Computing Division were also very helpful in contributing to the background and empirical material of the thesis.

The study trip was a necessity for collecting the empirical material of the thesis. Telephone or e-mail interviews would not have provided the same good contact between interviewer and interviewee. To understand the New Zealand dairy industry, it also takes an insight into the New Zealand economy and the importance of agricultural production, which is better understood after a visit to New Zealand. The possibility to meet farmers and visit dairy farms meant a lot for the understanding of the information gathered during interviews and the information retrieved through other sources.

4.2 Selection of interviewees

Taken the geographical distance and a difficulty to access Fonterra directly, I was dependent on the help of contacts in New Zealand to find interviewees with experience from the dairy industry, who could provide me with information on the development of the industry as well as the current situation.

Interviewees were contacted through two sources in New Zealand: Ian Reid, Executive Director of the New Zealand Co-operatives Association Ltd and Neil Gow, Senior Lecturer, Lincoln University. They were approached with a preliminary project description at an early stage in the working process and kindly offered their help to find suitable interviewees among their contacts in the dairy industry. They suggested a number of people who I contacted and made appointments with. The final selection of interviewees was thus a result of the interviewees suggested by Ian Reid and Neil Gow, my own judgement of the different perspective each interviewee could provide and the possibility to carry out an interview, being limited by time and geographical distance.A number of interviews were carried out with past and current representatives of the dairy industry and related organisations. The interviewees are listed in table 4.1.

Two rounds of interviews were undertaken. The first round focused on the New Zealand dairy industry structure and its development. The interviewees were mainly representatives from organisations playing an active role in the deregulation of the export monopoly of the New Zealand Dairy Board and the formation of Fonterra. The questions dealt with issues related to the driving forces behind the development of the dairy industry leading to the so-called mega-merger. The diverse background of the interviewees meant that the development of the industry was described from different perspectives, which pointed out the complexity of the industry structure with its multiple players (before the merger process) and stakeholders.

Table 4.1. List of interviewees

Name	*Position*	*Organisation*
Ian Reid	*Executive Director*	*New Zealand Co-operatives Association*
Charlie Pedersen	*National Vice-President*	*Federated Farmers of New Zealand*
	Member of Shareholders' Council	*Fonterra*
Gerard Lynch	*Former Board member*	*Fonterra*
Chris Kelly	*Former Senior Executive*	*New Zealand Dairy Board*
Dan Bolger	*Director, Sector Performance Policy*	*Ministry of Agriculture and Forestry*
Tony O'Boyle	*Chairman, Shareholders' Council*	*Fonterra*
Jim van der Poel	*Board member*	*Fonterra*
Keith Holmes	*Former Board member*	*New Zealand Dairy Group*
Alan Frampton	*Chairman of the Board*	*Tatua*
Ian Robb	*Chairman of the Board*	*Westland*
Noel Dalley	*Dairy farmer, supplier*	*Fonterra*

The second round of interviews focused on the strategies and structures of current dairy co-operatives. The emphasis was on Fonterra, but also representatives from Tatua and Westland were interviewed to get a perspective on alternative ways chosen by the co-operatives that decided not to join Fonterra. The questions dealt with structural issues within the fields of transaction, investment and governance, and with strategic issues. Questions for representatives from Fonterra were more in-depth, while questions on the smaller co-operatives were more general.

4.3 Interview methodology

Depending on the different backgrounds of the interviewees, interviews (in both rounds) were carried out without a standardised questionnaire. Questions were structured and prepared on beforehand, but were open and often led to further questions, which were answered and developed upon by the interviewees. In this way, the interviews provided extensive background material.

Interviews were carried out in different environments and lasted for about one hour. The first round of interviews was principally carried out in the offices of the interviewees. As the second round of interviews included Board members, located in various parts of the country, interviews were carried out in the homes of the interviewees or in public places such as cafés. The interviews were recorded with the permission of the interviewees. Interviews were not transcribed in their entirety, but partially, depending on the focus of the interview. Interviewees were informed of the topic and purpose of the thesis at the beginning of the interview and most of them had received a project description beforehand.

5. Empirical Findings – Strategy and Structure

5.1 Introduction

This Chapter describes the strategies and structures of the three dairy co-operatives, with emphasis on Fonterra. It also lists the driving forces behind the development of the dairy industry, which is described in Chapter 2. The information has been gathered during a series of interviews as described in Chapter 4, through research on the internet and the use of annual reports from the co-operatives and additional literature.

Some background information on the three companies is given in Chapter 2, in order to give a background to the study. This Chapter contains more in-depth information and describes the firms from strategy, transaction, investment and governance perspectives.

5.2 Driving forces behind industry restructuring

The restructuring of the New Zealand Dairy industry can be divided into three major processes or events. First, the consolidation of the industry through mergers, a process that has occurred naturally since improved transportation and technology made it possible to transport milk further and process larger quantities. Second, the debate on the export monopoly of the New Zealand Dairy Board (NZDB) and its eventual dissolution, which occurred simultaneously with the formation of Fonterra. Third, the "mega-merger", which was the final merger between the two largest dairy co-operatives in 2001.

5.2.1 Driving forces behind mergers

The large number of dairy co-operatives that used to exist in New Zealand eventually shrunk to the existing three. There were several driving forces behind the development of the New Zealand dairy industry. Some, like economies of scale and technical development, are "universal" and not specific to the New Zealand dairy industry. Others, however, are related to the political climate in New Zealand and the intrinsic characteristics of the dairy industry.

Early mergers had technical development as their main driving force. With the means to transport fresh milk longer distances came the possibility to process more milk in bigger processing facilities, which made some of the smaller plants redundant. The importance of technical progress remained also in the later mergers, as larger quantities could be produced in one single plant. Economies of scale have been one of the driving forces behind the mergers in the New Zealand dairy industry, but this is not unique to this particular industry or country. What is interesting in the case of New Zealand are the other factors that led to the wave of mergers between dairy co-operatives in the 1990s, which ended with the "mega-merger" and the deregulation of the NZDB.

One factor that contributed to the mergers was the structure of the industry itself and the power balance that occurred between the different dairy co-operatives. The co-operatives were represented by their directors and executives on the NZDB. From 1995, the ownership of the NZDB was formally attributed to the dairy co-operatives in the form of shares. The larger the co-operative, the more influence would it have on the NZDB. Hoping that increased influence would, in the long run, mean better possibilities for the respective co-operative to manufacture the products that generated a higher margin, co-operatives were eager to increase in size to gain more control over the NZDB. (Kelly, 2003; Dalley, 2003)

A company is not only a product of resources combined with the right technology and labour. Neither is the management of a company delegated to an anonymous or homogeneous group of Directors. The people in management positions all have more or less of an impact on the directions taken by the company. The development of the New Zealand dairy industry is not only the outcome of changing market conditions or political decisions, but also a consequence of decisions made by individuals. As a result, it is inevitable that these decisions were coloured by an element of personal power and prestige, as individuals would see the increased influence of the organisation they represented as an increased personal influence.

One reason that the take-overs and mergers were approved of by shareholders is possibly the capital structure that the dairy co-operatives had until the 1990's. Shares had a nominal value and were not appreciable. This meant that a new member paid the same amount for shares when joining the co-operative, as an existing member would receive when he sold his shares. The value of the co-operative was thus not reflected in the shares. A co-operative interested in taking over another co-operative could take into account the market value of the co-operative and its brands and offer shareholders a market value for their shares. This could be substantially higher than the nominal share value, making the take-over a good deal for the shareholders in that the shares were appreciated. (Dalley, 2003)

"A lot of the mergers were caused by difference in payout prices which created incentives for shareholders to transfer to the higher paying co-operative. Milk supply would go down, you would have over-capacity and a self-fulfilling prophecy."

Alan Frampton, Chairman of Directors, Tatua Co-operative Dairy Company Ltd, interview, March 2003

The milk price was another factor that made co-operatives merge. Larger co-operatives with a stable balance sheet could use the payout as a means of power by raising the payout to attract shareholders from a neighbouring co-operative. Rather than losing a large number of suppliers, some co-operatives would agree to merge. Another aspect of the difference in payouts, was the difference between milk prices in the North Island and the South Island. The North Island, being the main location for milk production, had higher milk prices and higher land prices. As an indirect effect of the deregulation in the 1980's, dairy farming increased in the South Island at the beginning of the 1990's through the conversion of sheep and beef farms. However, the land prices were lower in the South Island and so was the milk price. When the dominating dairy co-operatives in the North Island were seeking to increase their volumes of processed milk and turned to the co-operatives in the South Island, the higher payout in the North Island was an opening for take-overs. (Dalley, 2003; Frampton, 2003)

5.2.2 Driving forces behind the deregulation of the NZDB

The deregulation of the NZDB was driven by external and internal pressure. One external force that could have pushed the NZDB in the direction of deregulation was the WTO negotiations. Classified as a State Trading Enterprise under WTO rules, the NZDB and other export boards were under pressure from politicians and trade officials. However, when asked about their expectations of future trade negotiations, New Zealanders who were interviewed were confident that New Zealand's trade negotiators and the NZDB would resist the pressure to remove the export monopoly (Dobson, 1998). Chris Kelly (2003), former Senior Executive of the NZDB, confirmed that there was a pressure from the WTO to abolish the export monopoly, but that the NZDB was able to maintain an acceptance of the Board's practices, since it was an export and not an import State Trading Enterprise.

Of greater importance was the internal pressure to deregulate. This pressure came from critics both outside and within the dairy industry. The arguments were of both a pragmatic and an ideological character. In an article about the possible future deregulation of the NZDB, Dobson (1998) pointed out the main arguments that some critics of the NZDB export monopoly used in favour of a deregulation. These critics included for instance the finance minister, the commerce minister and business people interested in exporting dairy products, who considered that reforms of the NZDB were needed to:

- "create incentives for additional foreign investment in New Zealand's dairy industry;
- acquire the equity capital needed to permit the Board to become a more dominant player in international dairy and food markets; and
- provide a corporate structure that would reveal in an unambiguous fashion how effectively the Board performs." (Dobson, 1998, p10)

The spirit of deregulation that had prevailed throughout the 1980's had also led to a debate over the export boards, who were in charge of exports of dairy products, kiwifruit, apples and pears etc. At the beginning of the 1990's there were negative currents against state and even co-operative ownership. Critics argued that the NZDB and the dairy industry ought to be privatised (Reid, 2003). An example is the New Zealand Business Roundtable, an organisation consisting of representatives from the New Zealand private sector industry, who argued that the export monopoly of the NZDB as well as the co-operative structure of the dairy industry had a negative impact on the efficiency of the dairy sector. The Business Roundtable advocated that the NZDB and the dairy industry should be corporatised or privatised, rather than being a combination of co-operatives and a producer board (Gibson et al., 1995).

5.2.3 Driving forces behind the "mega-merger"

In addition to being a political decision, the deregulation of the NZDB and the formation of Fonterra was a decision made by the dairy industry itself, which saw a need to modify the structure of the dairy sector. The NZDB was obliged to accept the export production of the dairy companies, while the companies had the corresponding obligation to market their export production through the NZDB. The structure of one producer board in charge of marketing and exports and co-operatives in charge of the processing of milk had been appropriate when there were a large number of co-operatives. With only two major competing suppliers remaining, this system was no longer efficient. The NZDB suggested a model where the NZDB would remain intact while the two processors would merge. However, this was not

"Whereas in the past [the processors] were the 'slaves' of this organisation, they became the masters and the Dairy Board became the slave."

Chris Kelly, former Senior Executive of the NZDB, interview, March 2003 possible according to competition rules. The co-operatives themselves were also interested in increasing their control over the functions and skills of the NZDB such as brands, sales structures and international marketing expertise. The processors therefore suggested a merger resulting in one co-operative, which would also integrate the functions of the NZDB. With the pressure to deregulate the NZDB and the dysfunctional system with one marketing board and two large competing dairy processors, the industry eventually presented a solution where the NZDB would be integrated in the large co-operative resulting from the merger between the NZDG and Kiwi, which is described in Chapter 2. (Kelly, 2003)

In addition to the need to modify the way the industry worked, there were economic reasons for a merger, such as savings from eliminating duplicated facilities and activities and enhanced economies of scale. In a presentation of the merger business case, issued together with the merger proposal from NZDG and Kiwi, the merger benefits were divided into three categories:

- *Cost savings:* savings due to cost reductions in areas as supply chain optimisation, procurement and administrative staff overheads.
- *Revenue enhancements and productivity improvements:* benefits that "arise from better production planning, enhanced responsiveness and better co-ordination between manufacturing and marketing functions."
- *Strategic benefits:* benefits that "arise from the better realisation of the industry's strategic plan under Global Dairy." (Global Dairy was the name used for the new company during the merger discussions.) (www.fonterra.com)

As presented in the merger proposal and the business case, the basic idea behind the merger of the two dairy co-operatives was to provide a better platform for competing on world markets by increased size and a stronger balance sheet. This would benefit all shareholders (www.fonterra.com). However, similar to previous mergers in the industry, the mega-merger was partly a product of individual decisions among Directors and Managers. Again, there was the aspect of personal power and prestige, and disagreements on how the new co-operative would function and its strategic scope, combined with the wish to increase personal influence, caused many internal power struggles.

After 18 months of operating as a "new" co-operative, at the time of the interviews for this thesis, Fonterra was still struggling with its company culture. New Zealand Dairy Group and Kiwi had different cultures and used to be competitors. In addition, the incorporation of the NZDB in Fonterra added a third culture to the "marriage" between the two competing processing companies. Although a large majority of shareholders voted in favour of the merger, they were sometimes reluctant to let go of the identity of their old co-operative. Communication problems between shareholders and the new dairy giant, combined with a very low payout in the 2002-2003 season due to low world market prices, contributed to a lower level of satisfaction among shareholders than expected. (Pedersen, 2003; Lynch, 2003; Holmes, 2003)

5.3 Fonterra

5.3.1 Fonterra corporate structure

Fonterra Co-operative Group Ltd has over 13,000 shareholders, producing approximately 95% of New Zealand milk. The company has over 20 000 employees world-wide. The company structure is shown in figure 5.1.

NZMP is Fonterra's ingredients business. Its scope encompasses collection of milk from more than 13,000 suppliers, manufacturing and packaging of over 1,000 product specifications and the operation of a supply chain linking production plants in New Zealand and overseas. Ingredients products are marketed under the NZMP brand to the international food industry in over 100 countries. During its first year of operation under Fonterra, NZMP had a revenue of NZ$ 7,766 million. (Fonterra, 2002a)

NEW ZEALAND MILK is Fonterra's fast-moving consumer goods business, providing dairy-based consumer and food branded products internationally. Its primary business operations are in sales, marketing and distribution, using a number of national and international brands for its products. NEW ZEALAND MILK also owns and operates plants in a number of countries, especially in Latin America and Asia, which pack bulk dairy and non-dairy into branded consumer presentations. During its first year of operation under Fonterra, NEW ZEALAND MILK had a revenue of NZ $ 5,583 million. (Fonterra, 2002a)

The Fonterra Co-operative Group also consists of a number of other enterprises, supporting Fonterra's core business. These enterprises include a biotechnology company, technology development, a rural retailer and an agricultural website. (www.fonterra.com)

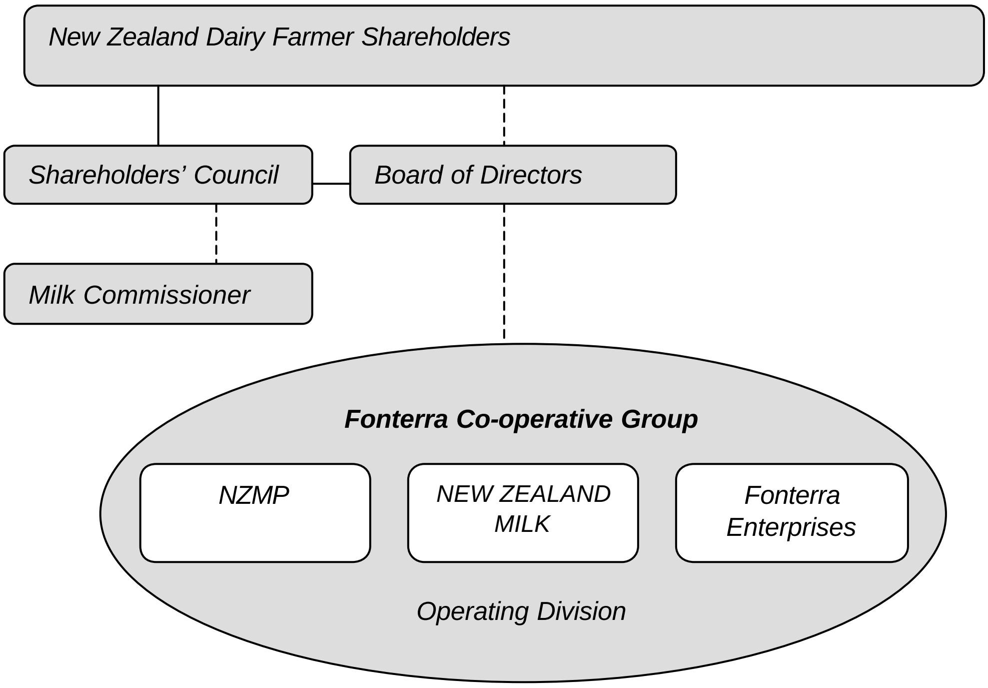


Figure 5.1: Fonterra company structure (www.fonterra.com)

5.3.2 Fonterra operations and strategies

Through its predecessors, Fonterra has a long history of dairy product exporting. Today, 96% of shareholders' production are exported. The United States are the single largest market by revenue, while Asia is the largest export region. The main products exported are commodities such as milk powder, cheese, butter, casein and anhydrous milk fat. (www.fonterra.com)

A strategy was outlined for Fonterra in November 2002. It includes seven strategic themes, of which the first is to be the "lowest cost supplier of commodity dairy products" (www.fonterra.com). Fonterra considers its position as the lowest cost supplier as its most important competitive advantage. This becomes apparent when looking at the current product mix – the majority of the production is exported as commodity products and the revenue from the ingredients business is higher than the revenue from consumer products. However, the Fonterra strategy also includes strategic themes indicating an increased focus on value-added products: "leading specialty milk components innovator and solutions provider" and "leading consumer nutritional milks marketer" (www.fonterra.com). A number of interviewees also think that the share of value-added products is going to increase relative to commodity products and are strongly in favour of such a development. Increased value-added production will require increased resources in the fields of research and development and in marketing for consumer products.

Fonterra differentiates between "cornerstone" and "non-cornerstone" activities. Cornerstone activities are "the activities that involve the collection, processing and marketing of [**Fonterra shareholders'**] milk **and** the activities with a **strong link** to **selling or adding value to [Fonterra shareholders'] milk**." (Fonterra, 2003, speech notes for slide 2). Non-cornerstone activities are activities in which Fonterra engage (e.g. for strategic reasons) to compete in the international dairy market, but which do not use shareholders' milk. However, these activities require capital and capital supply is from shareholders only. Because of the varying ability and interest among farmers to supply capital for non-cornerstone activities, one possible solution is to delink or structure these activities outside the co-operative, where shareholders will be given an investment choice. Delinking non-cornerstone activities means that the proportional relationship between the supply of milk and the provision of capital would be broken, and that investment would be open to non-supplying investors. This possibility does not apply to cornerstone activities, where there is a strong determination to keep the existing co-operative structure. Another hypothetical option mentioned by interviewees is a share structure where shareholders would have the choice to invest in shares financing non-cornerstone activities, in addition to the compulsory investment in shares financing cornerstone activities. (Fonterra, 2003)

Another strategic theme is to be an "effective developer of dairy ingredients partnerships in selected markets" (www.fonterra.com). Fonterra is pursuing this strategy by establishing different kinds of partnerships and joint ventures, such as an alliance with Nestlé in North, Central and South America, a joint venture with Arla Foods in Great Britain and a joint venture with Dairy Farmers of America.

5.3.3 Transaction – Pricing Policy and Payout

The payout that Fonterra shareholders receive in return for their supply of milk can be divided into two components: the *Actual Milk Return (AMR)* and a *value-added component* (figure 5.2). The amount received by the shareholder is "bundled" and the share of the payout coming from the AMR and the value added component is not presented separately to the shareholder, but can be calculated. The Actual Milk Return is calculated by Fonterra for every season and is based on actual revenue and actual costs incurred by Fonterra. The value-added component is calculated in the following way:

Cash from Fonterra's investing activities, after allowing for AMR
- Retentions for reinvestment
Value-added component

When there were several co-operatives operating in New Zealand, the milk price, to some extent, served as a benchmark of how a co-operative was performing relative to its competitors. With Fonterra being the only remaining co-operative of its size, the milk price can no longer be set in relation to the milk price of other co-operatives, neither can the shareholders compare the performance of Fonterra to that of a similar co-operative. For this reason, it was stated in the Dairy Restructuring Act that a benchmark price had to be calculated every season (van der Poel, 2003). This benchmark price is called the *Commodity Milk Price (CMP)* and is defined as: "a theoretical estimate of the price an efficient commodity producer could afford to pay for your milk and still make an adequate return on capital" (Fonterra, 2002d, p.4). When there is no competitor of equal size operating under equal conditions, such a competitor with an ideal long-term product mix is "invented" for benchmarking purposes. (Fonterra, 2002d; O'Boyle, 2003)

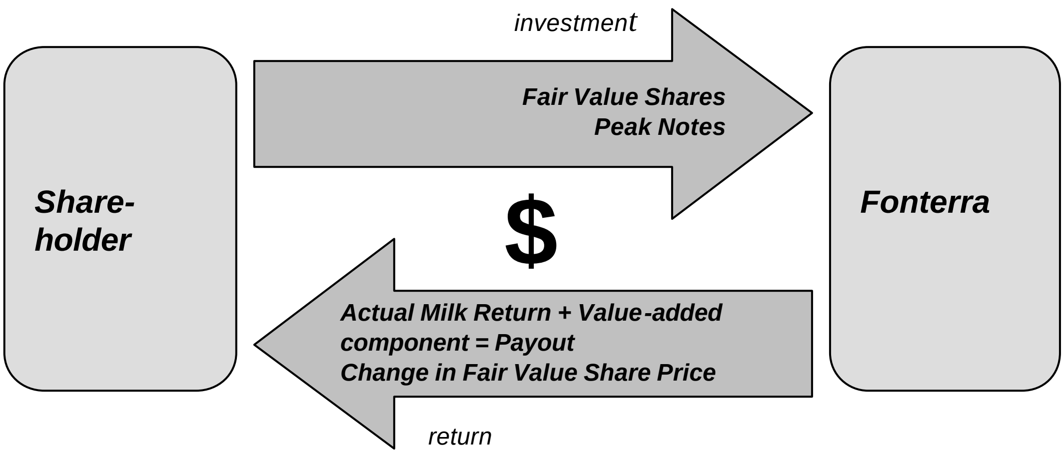


Figure 5.2: Investment and return relationships between the shareholder and Fonterra (freely after Fonterra, 2002d)

The CMP is calculated each year by an independent valuer[1] and is based on international commodity prices and foreign exchange rates less an assessment of efficient manufacturing costs. The CMP is assessed in the following way:

[1] The valuer for the 2002/2003 season was Standard & Poor's Corporate Value Consulting

Commodity milk revenue
- Efficient commodity milk costs
Commodity Milk Price

Commodity milk revenue is the annual revenue which could reasonably be achieved by a company like Fonterra from the sale of a balanced portfolio of commodity products. The *efficient commodity milk costs* is the valuer's estimate of the costs which an efficient manufacturer would have for producing this balanced portfolio, including an appropriate return on the capital employed.

A *forecast CMP* is used by the valuer as an input cost when estimating Fonterra's underlying future profitability and determining the value of the Fonterra share (the relation between the CMP and the Fair Value Share is showed in figure 5.3). The valuer presents an estimate for the forecast CMP in December every year, and finalises the forecast CMP no later than 15 May. An *actual CMP* is calculated at the end of each season and is based on actual international commodity prices and actual foreign exchange rates. The actual CMP can be used to assess the efficiency of Fonterra's commodity business by comparing the actual CMP to the Actual Milk Return. The difference between the AMR and the CMP is that the AMR is based on actual revenue and actual costs incurred by Fonterra, whereas the CMP is a theoretical assessment of the cost of milk that an efficient commodity manufacturer could pay. (Fonterra, 2002d)

5.3.4 Investment – the Fair Value Share

Shareholder investment in Fonterra is done through the purchase of *Fair Value Shares* and *Peak Notes* (figure 5.2). Each shareholder is required to hold one co-operative share for each kilogram of milksolids obtainable from milk supplied by the shareholder under the season. The shareholder is also required to hold a number of peak notes, which can be described as delivery rights based on the shareholder's milk supply profile during the season. (Fonterra, 2002a; Fonterra, 2002d)

In the past, transactions between the New Zealand dairy co-operatives and their shareholders were based on nominal share value, meaning that the price of the share a new supplier would pay when entering the co-operative would be the same as the amount he would receive when leaving the co-operative. This made it difficult for shareholders to assess the true value of their shares. Fonterra has introduced the Fair Value Share, a share that reflects the current value of shareholder investment. The Fair Value Share price is estimated every season by an independent valuer, appointed by the Fonterra Shareholders' Council. The valuer assesses the Fair Value range (plus or minus 7.5 percent of the mid-point) for the upcoming season starting on 1 June. In determining the Fair Value range, the valuer takes the following factors into account:

- Fonterra's likely future earnings after deducting the valuer's assessment of the Commodity Milk Price in the future (figure 5.3)
- Projected earnings of Fonterra's separate businesses and other operations
- Forecast movements in volumes of milk supplied to Fonterra
- Forecast foreign exchange rates
- The number of shares and other capital instruments on issue during the current season, and those the valuer estimates to be redeemed in the following season.

The valuer sets the Fair Value range, but it is the task of the Board of Directors to set the Fair Value Share prices within this range. The Fair Value Share price for the 2002/2003 season was NZ $ 3.85. The price set for the 2003/2004 season is NZ $ 4.38, an increase of 14 percent. The increased value of the share is part of the returns from the co-operative to the shareholders, which is illustrated in figure 5.2. (Fonterra, 2002d, www.fonterra.com)

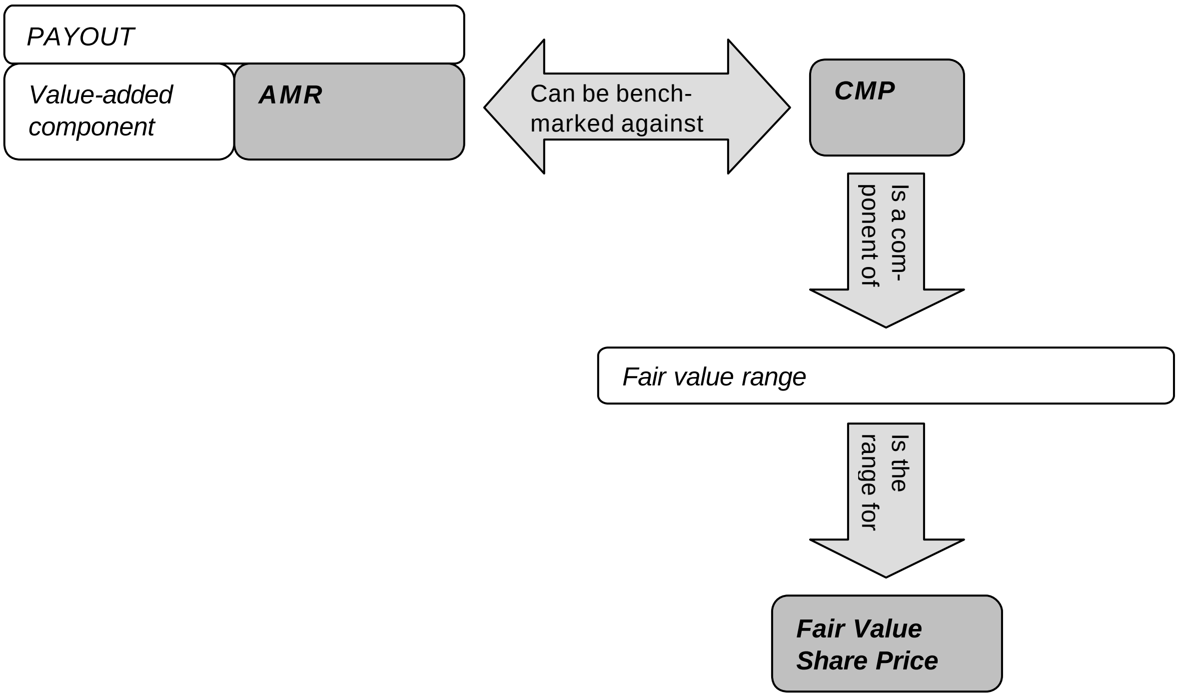


Figure 5.3: A simplified schedule of the context of Actual Milk Return, Commodity Milk Price and Fair Value Share Price (freely after Fonterra, 2002d)

5.3.5 Governance

The Fonterra Board consists of twelve Directors. Nine Directors are elected by shareholders and three are appointed by the Board for their specialist skills. Elected Directors retire by rotation after three years and may stand for re-election. (www.fonterra.com)

When Fonterra was formed, a Shareholder's Council was established. The Shareholders' Council has 46 Councillors, representing shareholders in 25 wards. Councillors are elected for a term of three years, one-third of them retiring by rotation each year. The Council has "a variety of responsibilities concerned with ensuring that the co-operative nature of Fonterra is protected, that effective monitoring of the business by shareholders is able to take place and that the needs of shareholders as both shareholders and suppliers are properly considered by the Board". It is also the responsibility to appoint the Valuer to establish the Fair Value range of the Fonterra shares and the CMP, and to appoint a Milk Commissioner, who arbitrates in the event of disputes between shareholders and the co-operative (Fonterra, 2002a). The Shareholders' Council also undertakes regular communication with shareholders through letters, columns in the Fonterra supplier magazine, meetings and field days (Fonterra, 2002b).

It is a constitutional requirement that the Shareholders' Council works with the Board of Directors to develop a co-operative philosophy for Fonterra. These Co-operative Principles were elaborated in 2002-2003 by Councillors and members of the Board and can be found in table 5.1. The co-operative philosophy was presented by Councillors in a series of meetings with suppliers nation-wide. (Fonterra, 2002c, Pedersen, 2003)

The voting system applied is one vote per 1,000 kilograms of milksolids supplied by the shareholder in the last season. The exception is the election of Councillors for the Shareholders' Council, where a shareholder has two votes. (Fonterra, 2002a; O'Boyle, 2003)

Table 5.1: Fonterra's Cooperative Principles (Fonterra, 2003)

- *Fonterra shareholders agree to dual commitment to supply milk and invest capital*
- *Shareholders will be issued co-operative shares in proportion to total milksolids supplied*
- *Control of Fonterra is exercised by its shareholders who have voting rights in direct proportion to total milksolids supplied*
- *Financial benefits and obligations that arise from being a shareholder are distributed in proportion to total milksolids supplied*

5.4 Westland

5.4.1 General Introduction to the Co-operative

Westland Milk Products collects milk from an area on the West Coast of the South Island, limited by the Southern Alps on one side and the sea on the other. This means that the co-operative is rather isolated from other dairy co-operatives and that the distance from the most southern farm and the most northern farm is over 500 kilometres. Westland decided to remain independent from Fonterra. The main reasons were a wish to remain in control of the investments made by present and former shareholders and a fear that they will gradually lose influence in the new dairy giant as a fairly isolated area. (Robb, 2003)

Unlike Tatua, Westland used to sell all its products through the NZDB. The co-operative mainly produced high-quality commodities, such as milk powder and butter. When the NZDB was abolished, Westland, just like Tatua, was "bought out" and got the value of its shares. For Westland, this amounted to over NZ$ 100 million, leaving the co-operative with a very strong balance sheet. On the other hand, Westland lost its channels to the market, as the sales network of the NZDB was integrated into Fonterra. An intermediate solution is an agreement in which Fonterra markets Westland products during the first years after the dissolution of the NZDB. The amount of products marketed through Fonterra will be phased out over time as Westland is building its own sales structure. Over the next five years, Westland expects to have increased its staff by 70-90 staff members, mainly in the fields of customer relations, R&D, product development and processing. (Robb, 2003)

"However, there is a sense of sadness for many of us to see the Dairy Board absorbed into the large conglomerate, Fonterra. […] Westland has prospered as a Company through the integrated industry and has had the luxury of concentrating on manu-facturing excellence, leaving marketing to the Dairy Board."

Ian Robb, Chairman of Directors, Westland, Annual Report 2002

Having been mainly a commodity producer, Westland is now aiming at increasing its share of value-added products and is investing in R&D, protein processing facilities and a new laboratory. A Chief Executive Officer with experience in high value milk ingredients and nutritional products has also been recruited and the company is building a value-added strategy. One step in that direction is a joint project with Tatua for the extraction of lactoferrins. (Westland, 2002; Robb, 2003)

5.4.2 Transaction, Investment and Governance

Westland applies a nominal share structure, where the only types of equity in the company are the nominal shares and retained earnings. Each supplier holds one share per kilogram of milksolids supplied to the company. The nominal share gives relatively low entry barriers, but entry is restricted to farmers in the Westland area who fulfil certain criteria. However, the nominal value of the share enables present members to increase production for a low cost (the share value is NZ$ 1.50).If a member wants to exit the co-operative, he will receive the same amount that he paid for the shares when entering the co-operative. (Robb, 2003)

"We are what I call a 'true co-op'."

Ian Robb, Chairman of Directors, Westland Milk Products, April 2003

Voting is distributed on the basis of one vote per 10 000 kilograms of milksolids or part thereof with a maximum of ten votes per supplier. This system applies to all voting of the shareholders. The Board of Directors consists of eight elected Directors and two appointed Directors with specialist skills, who are either accepted or rejected by the shareholders at a meeting following their appointment. (Robb, 2003)

5.5 Tatua

5.5.1 Introduction to the Co-operative

Tatua Co-operative Dairy Company Limited is the smallest of the three co-operatives with only 132 suppliers, all located within a limited geographic area in the North Island (Tatua, 2002). Tatua differs from the other New Zealand dairy co-operatives in that it is highly focused on value-added products, such as aerosol creams, bag-in-box food service products, caseinates, whey protein, hydrolysates and other biologically active compounds (Frampton 2001). Tatua was the co-operative that offered shareholders the highest payout in the 2001-2002 season.

The focus on value-added products has its origins in the 1970's, when Tatua Board and management anticipated that there would be further consolidation within the dairy industry. During the 1970's the NZDB introduced a "cost model" basis of payment, which was based on an assumed daily processing capacity of a plant. Competition between dairy companies intensified and co-operatives would build bigger and bigger milk processing plants in order to manufacture commodity products such as milk powders, cheese, butter and casein. Through increased economies of scale, dairies would try to "beat the model" by processing more milk than the cost model assumed. (Frampton, 2001)

As a small co-operative, Tatua could not compete with the larger dairies in the production of commodity milk products if it would be paid by the NZDB on the basis of the cost model. Tatua's response was to focus on high value, low volume markets. The first product introduced was aerosol whipped cream, marketed in New Zealand and Australia under Tatua's own brand. The NZDB was generally the sole exporter of all New Zealand dairy products, but could issue export licenses to other exporters for products that were of no interest to the NZDB and did not interfere with its activities. Tatua was granted export licenses for a range of its niche products. In March 2001, the company had over 30 active licenses. However, many products were still exported by the NZDB. (Frampton, 2001)

Tatua was asked several times to take part in merger discussions, but wished to remain independent. As a shareholder in the NZDB, Tatua was paid for its exported products according to the prices set by the NZDB, which gave Tatua a slightly higher margin than the other co-operatives. After the deregulation of the NZDB, products have been sold at a market price, which has resulted in substantially higher margins.

"Although we were asked many times to take part in merger discussions and so on, no one was able to demonstrate that our shareholders would really be better off in a merger situation."

Alan Frampton, Chairman of Directors, Tatua Co-operative Dairy Company Ltd, interview, March 2003

The dissolution of the NZDB also meant that Tatua and Westland received the value of their shares in the Board as it was incorporated into Fonterra. Based on its previous sales and marketing structure, Tatua has been able to develop its international exports network and export independently. However, part of the company's products is still exported through Fonterra's sales structures. (Frampton, 2003)

5.5.2 Transaction, Investment and Governance

Tatua's structure can be compared to a New Generation Co-operative (see e.g. Cook, 1997; Stefanson et al., 1995). The membership of an NGC is closed, restricted or selected, which enables the product supply to be managed and controlled. Tatua applies very strict rules of entry for new shareholders, with a number of requirements that have to be fulfilled, and has maintained the right to determine who is allowed to become a shareholder. One requirement is the location of the farm, which must be within a certain distance from the plant. (Frampton, 2001; Frampton, 2003)

An important feature of New Generation Co-operatives is that producer capital contributions are proportional to product delivery rights. Tatua wished to maintain the principle of milk supply being related to equity (shareholding). The company had a shareholding structure based on a nominal share of three NZ$ 1.00 shares for each two kilograms of milksolids supplied. The shares were redeemable at their nominal value but not tradable. Since the 1999/2000 season, a "hybrid" share structure has been in place. In addition to nominal shares, there is also the *Milksolids Supply Entitlement (MSE)*, which gives the shareholder the right to supply one kilogram of milksolids to the co-operative. In order to receive full payout from the co-operative, the supplier must possess one (standard) share and one MSE for every kilogram of milksolids supplied. The thought is that the MSEs captures the value that Tatua adds to the milk, compared to competing dairies. The MSEs grant no voting rights and are transferable among shareholders. They can be sold, leased or given away. Tatua maintains a register of MSEs and offers a market facilitation service, but is not involved in the negotiation of prices. (Frampton, 2001; Frampton, 2003)

"… the modern co-operative idea is to move a bit closer to the investor-owned firm in the sense that you put a market related value on share capital so that new milk must pay an appropriate entry fee thus placing some control on the growth of the milk supply. There is an element of selfishness in this as compared to the old co-operative principles, but if you want to survive as a smaller company you have got to be able to control the milk supply and determine who does and who does not become a shareholder."

Alan Frampton, Chairman of Directors, Tatua Co-operative Dairy Company Ltd, interview, March 2003

The MSEs were issued to the suppliers of the 1999/2000 season, named the Foundation Shareholders, free of charge, since these and previous shareholders had all invested in the company through shares and retained earnings. The number of MSEs issued was based on the capacity of the plant, which was not equal to the milk intake of the 1999/2000 season. This meant that the number of MSEs issued allowed for an increase in production, both by being calculated with a level lower than the maximum processing capacity as a basis and by the fact that unused MSEs can be transferred between shareholders. In the case where a supplier wants to deliver more milk than he/she, through his number of MSEs has the right to supply, he/she may do so, but will not receive a full payout. Just as supply is tied to shareholding, voting is on a one vote per kg milksolids basis, but with the restriction that no shareholder may have more that 5 percent of the votes. (Frampton, 2001; Frampton, 2003)

6. Analysis

6.1 Introduction

Figure 1.1 illustrates the main question of this thesis: *how have New Zealand co-operatives adjusted their market strategies and organisational structures as a result of changing market characteristics?* This Chapter tries to give answer that question in theoretical terms, presenting an analysis of the three co-operatives Fonterra, Westland and Tatua, using the theoretical concepts introduced in Chapter 3. Figure 6.1 is an elaboration of figure 1.1, providing an overview of the three main areas investigated: market, strategy and structure.

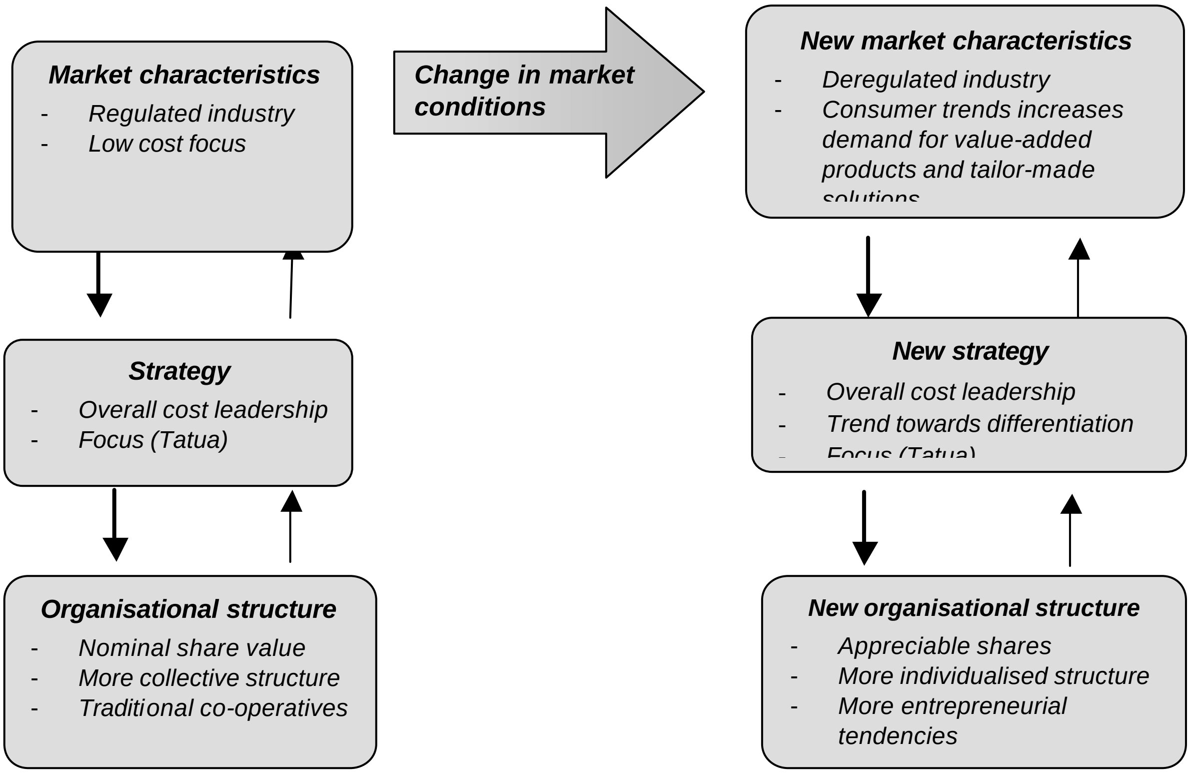


Figure 6.1: Relationship between market, organisation and strategy exposed to change (freely after Nilsson & Björklund, 2003)

6.2 Market

The concept of "the market" is not evident. Being highly dependent on exports, New Zealand dairy co-operatives can consider the international export market as their market. On the other hand, the country in which they act and to whose laws and regulations they are subject, is the national New Zealand market. Thus, in this study, market conditions and market characteristics refer to the international market *and* to the domestic market.

The development of the New Zealand dairy industry is described in Chapter 2 and its driving forces are listed in Chapter 5. What we can see in terms of market characteristics, is a change from a regulated industry structure to a deregulated one and co-operatives merging to achieve economies of scale and a stronger position in the market. The agricultural deregulation in 1984 and onwards, which represented a major change for other kinds of agricultural production in New Zealand, only had minor, indirect effects on the dairy industry. The change from a regulated to a deregulated environment for the dairy industry did not take place until 2001 with the deregulation of the New Zealand Dairy Board and the removal of the export monopoly.

On the international market, there has been an increased demand for value-added products and tailor-made solutions. The New Zealand dairy industry is dependent on consumer trends just as much as any other food industry, although a majority of products is exported to manufacturers as commodities. Only a minor part of the total dairy production is sold as value-added or consumer products.

6.3 Strategy

A majority of dairy produce from New Zealand is exported as commodities – whole milk powder, skim milk powder, butter or cheese. Good conditions for pastoral agriculture enable a low cost production of milk. As mentioned in Chapter 5, Fonterra regards its position as a low cost producer to be a main competitive advantage. On the other end of the spectrum, Tatua has chosen a strategy that is not dependent on a low cost primary product. Having the same conditions of production, the companies have thus chosen divergent strategic directions.

Fonterra mainly exports commodities on a global scale. Its operations cover approximately 140 countries. Although the company has identified a number of geographical focus markets, these markets are rather the target of an expansion from Fonterra's side, than intended to be the only geographical markets. As stated in Chapter 5, Fonterra operates one ingredients business and one consumer goods business, where the ingredients side is the larger of the two. However, the margins are higher in consumer goods and enable the manufacturer to be a price-maker, not merely a price-taker, exposed to the fluctuations of the world market price for dairy products. Therefore, an increased share of value-added products in Fonterra's future operations was mentioned as a possibility by several interviewees.

In theoretical terms, the strategy chosen by Fonterra is an *overall cost leadership strategy*. Products are mainly undifferentiated and sold as commodities. With a low cost for raw material, large quantities permitting economies of scale, and a well-developed logistic and sales network, Fonterra is able to be the lowest cost supplier on the world market. Representing one-third of international trade in dairy products, Fonterra has a significant market share in its main markets.

With part of its operations being directed as consumer goods and value-added ingredients, Fonterra also has a *differentiation strategy* for part of its products. For its consumer products, the company operates under a number of brands for value-added products. Especially the strategies stated by Fonterra, for instance to be a "leading specialty milk components innovator and solutions provider" (www.fonterra.com), indicate a differentiation, which requires increased resources for R&D and marketing.

Westland was strictly a producer of commodities such as milk powder, butter and casein, which were exported through the New Zealand Dairy Board. Although Westland got awards for premium quality products several times, the strategy pursued by the company must still be considered as a overall cost leadership strategy, the products being sold as commodities on the ingredients market. Westland has now taken a strategic turn towards a *focus strategy*, going into the value-added segment, which implies increased resources dedicated to research and development, specialty production equipment etc.

Tatua has had special ingredients and high value-added products as its core area for the last three decades. The company has pursued a *focus strategy*, aiming at high-value, low volume markets. The focus strategy according to Porter implies either applying an overall cost leadership strategy or a differentiation strategy, thus targeting only a limited market segment. In Tatua's case, the products have been highly specialised and differentiated, perceived as unique and having a high value on a market dealing with low volumes.

6.4 Structure

Co-operative structures can be classified in terms of individualisation, ranging from collective to individualised as described in section 3.4. Examples of what characterises collective or individualised structures in the *transaction, investment and governance dimensions* of the co-operative are given in table 3.2. The analysis covers only a selection of the dimensions mentioned in table 3.2, considered to be most crucial.

Fonterra can be said to have a semi-individualised structure. In terms of *transaction*, the co-operative has an open membership, but the requirement to acquire shares serves as an entry barrier, as the shares are appreciable. The co-operative has an intake obligation for shareholder milk, but the supply is regulated by the requirement to own one Fair Value Share for each kilogram of milksolids supplied and to own Peak Notes, which are delivery rights based on the shareholder's milk supply profile during a given season. The *investment* relationship is characterised by the appreciable Fair Value Share, which is valued every season by an independent valuer. The share is not tradable and its price is supposed to represent the "true value" of the assets of the co-operative, so that a new member contributes to the assets built up by present and previous shareholders. The requirement to purchase appreciable shares can constitute a significant entry barrier, as opposed to the characteristics of a co-operative with a strictly collective structure, where membership is free and costless. The capital structure shows a very low share of unallocated equity. The *governance* relationship diverts from the collective "one man, one vote" in that one vote is granted per 1,000 kg of milksolids supplied.

Westland has a less individualised structure than Fonterra and Tatua. *Transaction* between the member and the co-operative is done solely on the basis of shareholding, where one share entitles the shareholder to supply one kilogram of milksolids. Membership is restricted geographically, but open to suppliers in the determined area. *Investments* in the co-operative are done through the purchase of shares with a nominal value. In this respect, Westland has a more collective structure than the two other co-operatives. The nominal share value means that the entry barrier is lower, as the price of the share is not increased by "market forces" as with a freely tradable share, or by a gradual appreciation by a valuer (taken that the estimated value of the share does not decline). When it comes to *governance*, Westland has the most collective structure of the three co-operatives. Votes are distributed per 10,000 kg of milksolids supplied or part thereof, the maximum number of votes per shareholder being ten.

Tatua has the most individualised structure of the three co-operatives studied. The *transaction* relationship between the supplier and the co-operative is strictly regulated by the possession of *Milksolids Supply Entitlements (MSE),* where one MSE is required for the right to supply one kilogram of milksolids. This system guarantees the control over the volume of milk supplied to the co-operative, as opposed to a co-operative with a collective structure, where delivery is unrestricted and the co-operative has an intake obligation. The *investment* dimension is characterised by the tradable and thus appreciable shares, which imply very high entry barriers for potential new members (in addition to the "selective" membership policy applied by Tatua). Voting is proportional to production rights, each kilogram of milksolids entitling the shareholder to one vote (with a limit of five percent of the votes being held by one supplier). The *governance* dimension is thus more individualised than in the cases of Fonterra and Westland, where one vote is granted per 1000 kg and10,000 kg milksolids respectively.

6.5 Strategy/structure implications

The three co-operatives studied differ in choice of strategy and have different degrees of individualisation. They can be classified according to the co-operative models described in section 3.5. Table 6.1 serves as a reminder of the theoretical concepts related to co-operative structure introduced in Chapter 3.

Table 6.1: Theoretical concepts related to structure and strategy

Structure	*Collective*		*Individualised*	
Co-operative model	*Traditional co-operatives*		*Entrepreneurial co-operatives*	
	Service-at-cost co-operatives	*Regulative co-operatives*	*Internal entrepreneurial co-operatives*	*External entrepreneurial co-operatives*
Strategy	*Overall cost leadership*	---	*Focus*	*Differentiation*

Because of its size and scope of production, *Fonterra* can be considered to be a *service-at-cost co-operative.* The company has a large number of shareholders and the shareholders constitute a highly heterogeneous population. This does not create the same incentive structure as in an entrepreneurial co-operative, as a feeling of individual participation and influence is difficult to obtain in such a large organisation. The structure is partly individualised, but not to the same extent as in an entrepreneurial co-operative. As a service-at-cost co-operative, Fonterra's objectives are strictly commercial, aimed at improving the financial situation of the shareholders.

However, Fonterra differs from the definition of a service-at-cost co-operative in a number of ways. The capital structure is different, in that the level of unallocated capital is low. The appreciable share is another trait that is foreign to the traditional co-operative. The voting system is based on milk supply. These are factors that place Fonterra among the more individualised traditional co-operatives.

The strategy chosen by Fonterra, predominantly overall cost leadership, is well suited for service-at-cost co-operatives, as the structure allows for a large number of shareholders. This enables the co-operative to benefit from economies of scale to produce at a low cost. On the other hand, the large milk volumes are difficult to control, a factor that makes differentiation or focus strategy less suitable for a service-at-cost co-operative. The variation in milk supply makes it difficult to produce value-added products evenly over the year, depending on the milking season. The ambition to increase the share of value-added production must therefore be followed by structural adjustments.

Considering the relatively collective structure of *Westland* and its past and present focus on commodity production, the co-operative can be classified as a *service-at-cost co-operative.* Although less individualised to its structure than Fonterra, Westland is still more individualised than the traditional service-at-cost co-operative. Westland has mainly followed an overall cost leadership strategy. However, the company is now making a shift towards more value-added production, a strategy more commonly seen in *entrepreneurial* co-operatives. A *focus* strategy normally requires a different incentive structure or a higher input of shareholder/investor capital than a service-at-cost co-operative can provide. In Westland's case, the strong balance sheet after the remuneration for the shares of the New Zealand Dairy Board has allowed for investments necessary for a shift to value-added products.

With its highly individualised structure, *Tatua* can clearly be categorised as an *entrepreneurial co-operative.* The absence of external shareholders implies that the company belongs to the sub-category *internal entrepreneurial co-operatives*. The company pursues a *focus* strategy, which is appropriate for this kind of small co-operative with a structure that strictly regulates milk supply and a capital structure that facilitates investment in value-added production.

6.6 Conclusions

Section 3.6 presented the following hypothetical connection between market characteristics, strategy and organisational structure:

- *Service-at cost-co-operatives* are most efficient in the collection of primary produce and in primary processing, benefit from economies of scale and operate on large markets with stable demand, but with fluctuating prices. They can successfully apply an overall *cost leadership strategy*.
- *External entrepreneurial co-operatives* can operate on large, dynamic markets and involve in further processing and value-creating activities that require a high level of investment per produced unit. With the additional capital of external investors, they are well equipped to follow a *differentiation strategy*.
- *Internal entrepreneurial co-operatives* operate on limited, dynamic markets. They undertake further processing and manufacturing of value-added products. Their structure is more appropriate for products requiring less investment per produced unit, taken that capital supply is limited to supplying shareholders. The co-operative is well fit to follow a *focus strategy*.

The analysis of the three New Zealand dairy co-operatives, summarised in figure 6.2, show that they, in their strategies and structures, fit the theoretical assumptions rather well. A possible exception is Westland, which is mainly organised as a service-at-cost co-operative, but is gradually applying a focus strategy.

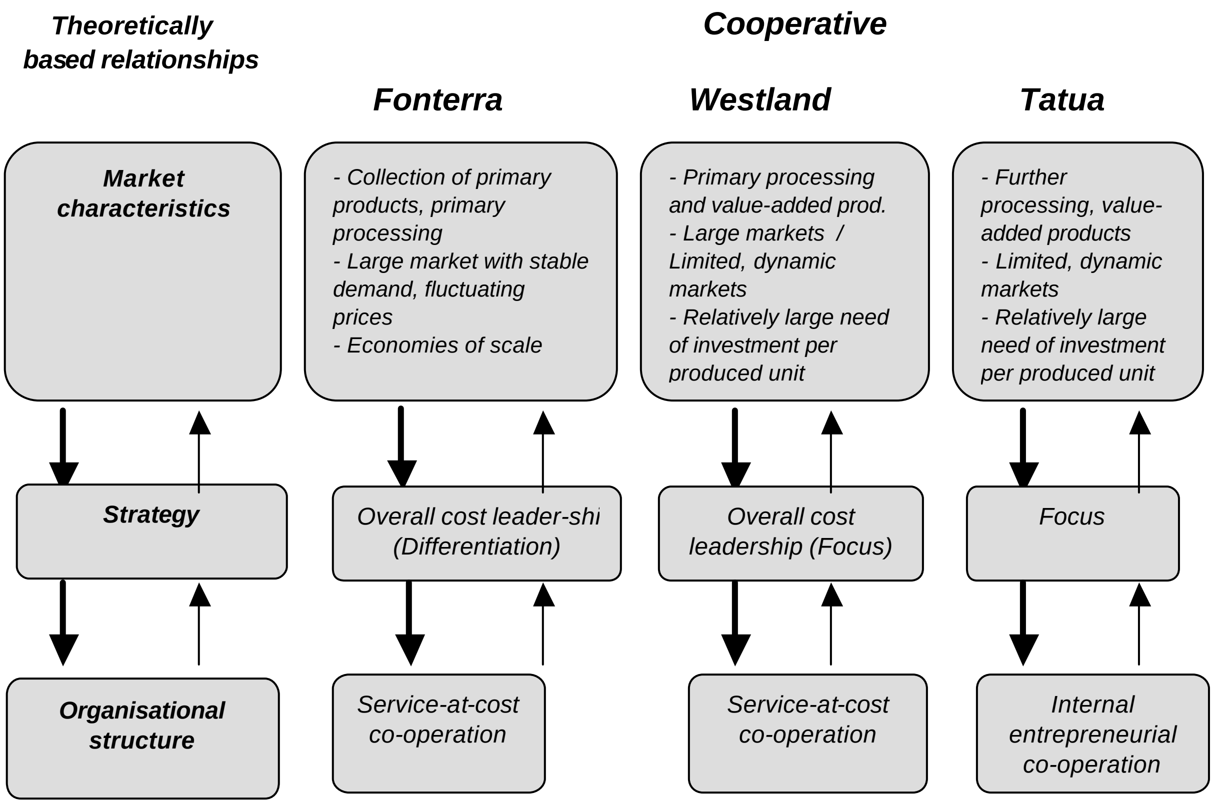


Figure 6.2: Summary of market characteristics, strategy and structure of the three co-operatives

7. Conclusions and discussion

As stated in Chapter 1, the purpose of this study is to examine *how the New Zealand dairy co-operatives have adjusted their market strategies and organisational structures as a result of changing market characteristics, and to investigate what were the driving forces behind these adjustments.*

The conclusions of the findings and the analysis of the study can be divided into three sections: market, strategy/stucture and driving forces behind industry restructuring. To conclude, some implications for Swedish/European co-operatives are given.

7.1 Market

For the New Zealand dairy co-operatives, "the market" equals the world market. With 95 % of production being exported, the companies are very dependent on world market prices (valid especially for commodities), currency exchange rates, trade regulations and consumer trends. This becomes especially apparent when the co-operatives do not have a large internal, regulated market to operate on, like co-operatives within the European Union.

Comparing regulated versus deregulated markets, one might believe that the deregulation of agricultural policy in 1984 would have had an impact on the strategies and structures of dairy co-operatives. However, the agricultural deregulation in New Zealand in the 1980's seemed to be a "non-issue" for the New Zealand dairy industry. As dairy farmers were not the beneficiaries of any price support, the effects of the deregulation seem to have been only indirect, in that there was a shift from sheep and beef farming to dairying. Instead, the term "deregulation" refers to the removal of the export monopoly of the New Zealand Dairy Board in 2001, which is regarded as the "milestone" of the industry.

7.2 Strategy/structure

The analysis states that the three co-operatives studied, Fonterra, Westland and Tatua, represent combinations of strategies and co-operatives structures that fit the theoretical assumptions used in the study rather well. Fonterra can be classified as a service-at-cost co-operative, following an overall cost leadership strategy with certain differentiation tendencies. Also Westland can be considered to be a service-at cost co-operative, but with a strategy gradually shifting from overall-cost-leadership to focus. Tatua is categorised as an internal entrepreneurial co-operative, following a focus strategy.

The main change in strategy that was perceived, is a shift towards more value-added products. Both Fonterra and Westland have shown such tendencies; Westland through actual investments in technology and human resources and Fonterra through its pronounced strategic goals. If Fonterra pursues this strategy, the share of New Zealand dairy exports as value-added products is likely to increase.

When the interviews for this thesis were done in March and April 2003, Fonterra seemed to be at a crossroads. A new company culture is taking shape, a process that takes time. The elaboration of a set of co-operative principles for the company is a part of the work that is needed to create this culture. In the meantime, one of the main issues seem to be the choice between maintaining the focus on commodities, and following a strategy that implies production of more value-added products. Several interviewees regarded the choice between being a price-maker or a price-taker as being a crucial one for the co-operative.

However, as the theories used in this study suggest, different strategies require different co-operative structures. The question is whether Fonterra can successfully pursue a focus or differentiation strategy with its current company structure. As a very large processor, Fonterra benefits from economies of scale, but the large volumes make it difficult to control milk supply in order to manage the production of high-value products. Fonterra's size is thus both an advantage and a constraint.

7.3 Driving forces behind industry restructuring

The driving forces behind the restructuring of the dairy industry were related both to a changing market, political decisions, co-operative strategies and structures and personal power and prestige for leading industry officials. What is interesting is the development from a regulated industry with a functioning system with an export monopoly and independent processors, to a deregulated industry with one major player. The wave of mergers can to some extent be explained by improved technology and co-operatives looking for economies of scale. However, mergers were facilitated by the fact that share structures were nominal and that the payout could indeed be used as a means of power by co-operatives wishing to increase their volumes.

An interesting fact in the case of New Zealand is that the dairy industry remained regulated for so long in a country that underwent significant deregulation in most sectors in the 1980's and 1990's. It was not until the dairy industry itself insisted that the industry be restructured that the deregulation actually took place. This shows that the regulated system was functioning well, until the power balance between the marketing arm and the processors eventually became unsustainable. With the formation of Fonterra and the incorporation of the NZDB in the company, market signals are transmitted more clearly than in the previous system.

7.4 Implications for Swedish/European co-operatives

The descriptions of the co-operatives in Chapter 5 and the analysis reveal co-operative structures that are rather different from those found in Swedish dairy co-operatives (described by Nilsson & Björklund, 2003). In general terms, New Zealand co-operatives are more individualised in all three dimensions. The *transaction* relationship between shareholder and co-operative is more individualised in terms of supply management, where New Zealand co-operatives have limited supply through the link between shareholding and milk supply, while Swedish co-operatives have an unrestricted intake obligation. In terms of *investment*, the three New Zealand co-operatives have different share structures, but two of them have appreciable shares, while Swedish dairy co-operatives have a nominal share structure. The level of unallocated capital is also significantly higher in Swedish/European dairy co-operatives, as showed by van Bekkum (2001) in a comparison between capital structures in dairy co-operatives in regulated versus deregulated markets. When it comes to *governance*, the New Zealand co-operatives all apply voting rules where voting is (to different extent) related to the volumes supplied, while Swedish dairy co-operatives strictly adhere to the principle of "one man, one vote".

The level of individualisation is thus much higher in the New Zealand co-operatives than in their Swedish and European counterparts. In Sweden, possible reasons for the collective structures are the strongly regulated agricultural policy, which much protected the co-operatives from competition until 1995, and the fact that laws prohibit the co-operatives from applying some of the more individualised structure, for example in terms of voting and open or closed membership. New Zealand co-operatives (through the NZDB) have a long tradition of operating on the world market and thus being exposed to world market prices. This is one possible reason to the less collective structure of the co-operatives. Since they have not had the "guarantee" of a certain commodity price or a predestined buyer of surplus produce in the same way as co-operatives in regulated markets, the co-operative principles have been more market oriented and less tied to traditional co-operative ideology.

Although the conditions of production in Sweden and New Zealand cannot be compared, the strategy/structure perspectives presented in this study can be of value to Swedish dairy co-operatives. As for every company striving to be successful in its market, Swedish dairy co-operatives need to be aware of the importance of applying strategies and structures coherent with the characteristics of the market in which they operate.

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