

# **Dynamics of Australian dairy-food supply chain: strategic options for participants in a deregulated environment\***

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## **Abstract**

Following deregulation, participants in Australian dairy-food supply chains are confronted with a more complex and rapidly changing environment. In a study conducted between March 2002 and April 2003, major supermarkets emerged as the dominant power in chain development, with a trend towards greater interdependence and coordination between the chain participants. Future supply chain development will depend on the capabilities of the chain participants in operational and strategic management within the firm, and also in successfully negotiating linkages within the chains. In addition the organizational structures of both the firms and the chains need to be responsive to changing end-user needs and the dynamic business environment.

## **Keywords**

Supply chain strategy, channel relations, dairy-food, deregulation

## **Introduction**

Since dairy industry deregulation in July 2000, dairy-food supply chains in Australia have transformed, with renegotiation of inter-sectoral relationships on-going. This has led to the use of supply chain management (SCM) as the paradigm for analysis of the co-ordination of business processes within a company and amongst different supply chain participants. Australian dairy-food supply chains are in the early stages of development with issues of coordination and power relations among channel members, processes of chain formation and changing drivers of superior performance.

## **Concept of supply chain management**

Definitions of supply chain management incorporate both strategic and tactical objectives (Cox 1999; Ross 1998). Supply chain management here refers to 'the systemic, strategic coordination of the traditional business functions within a particular company and across businesses within the supply chain, for the purposes of improving long-term performance of the individual companies and the supply chain as a whole' (Mentzer et al. 2001, p. 22). Coordination at systemic and strategic levels addresses two fundamental requirements for a successful supply chain: efficiency within the supply chain by driving costs out of the system, and successful alignment between what is being produced and delivered in the chain with the end-user's demand for intrinsic and extrinsic product or service characteristics (Westgren 1998).

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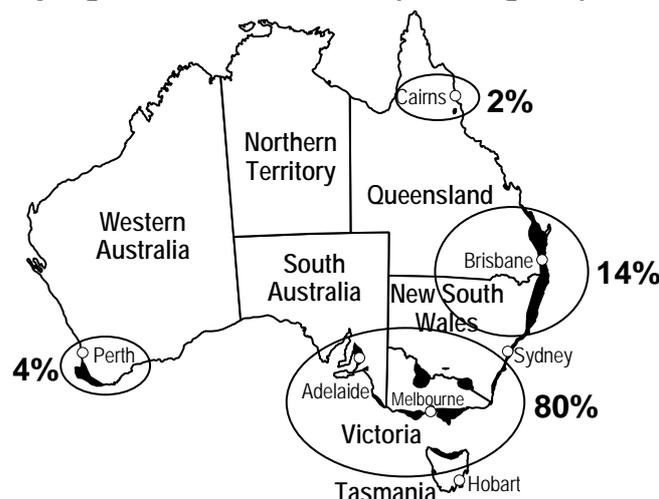
Individual supply chain participants activities are part of an interdependent system where the cost or effectiveness of one activity can affect the way other activities are performed (that is, linkages exist between activities). Such linkages extend outside the firm to encompass the activities of suppliers, channels and buyers. Through learning, the activities of one chain participant are eventually modified and adapted to activities of other participants, so that their joint productivity is increased. At the same time, the specific interdependency of their activities is strengthened. In this way chains of interdependent and at least quasi-integrated activities are created across companies just as they are created within a company (Håkansson & Johanson 1993).

Conflict is inevitable in supply chain relationships. Emiliani (2003) identifies one cause of conflict as the belief of senior managers that companies exist to maximise shareholder value. This results in power-based bargaining approaches between buyer and seller in supply chain situations. In a supply chain, two types of exchange relationships play simultaneously. In the first, the participants work together to reduce costs or create value, requiring close cooperation between the chain participants. The second relationship, where value is divided between the channel participants, is potentially adversarial, as each participant attempts to appropriate maximum value for itself (Hamel et al. 2002).

### Australian dairy industry

The Australian dairy industry, with a farmgate value of \$A3.7 billion in 2002, is the third largest rural industry in Australia. Eighty percent of milk production in Australia is concentrated in the south-eastern corner of the country (Figure1). Fifty-five percent of Australian milk production is exported, accounting for 16 percent of the global dairy exports.

Figure 1: Dairy regions in Australia, with percentage of production in each region.



Source: Australian Dairy Corporation (2002)

Milk produced is destined for two broad categories of market, known (pre-deregulation) as market milk (fluid drinking milk) and manufacturing milk (used to produce manufactured dairy products including butter, cheese and milk powder). Market milk accounts for only 17 percent of total milk produced, but it is the largest

segment (40 percent) of domestic dairy-food sales. Market milk is especially important in Queensland, NSW and WA, representing 50 percent of total milk produced.

Cooperatives dominate the processing industry, accounting for approximately 75 per cent of all milk output. Three processors, National Foods, Dairy Farmers and Parmalat handle 86 percent of market (drinking) milk in Australia (Australian Dairy Corporation 2002).

In the domestic market dairy-food products move mainly through three distribution channels: supermarkets, the route trade and food-service channels. The supermarket channel, which includes major supermarkets, smaller chains and banner group independent stores, represents the largest and growing channel of distribution. Woolworths and Coles dominate this channel, together controlling 69 percent of the total grocery sales. Independents, under four banner groups, together account for another 22 per cent (Retail World 2003). The route trade, which includes convenience stores and smaller retail outlets, is the second largest distribution channel for dairy produce. The food service channel is the smallest segment but growing, and includes caterers, restaurants, and fast food outlets.

### **Study method**

Data were collected through semi-structured interviews with retailers, processors, producers, farm input providers, and the industry organisations. Retailers and processors were selected at a national level, and the milk producers from Queensland and northern NSW regions. These regions face the greatest degree of adjustment to deregulation.

A total of 46 interviews were conducted between March 2002 and April 2003. The interviews, and the subsequent analysis aimed to identify business strategies pursued at the individual firm and each level of the aggregate supply chain. The resources and capabilities critical to business success were also investigated at each supply chain level. Data were managed and analysed using NVivo ver.2.0 software, which assisted in identifying major themes and relationships. This paper summarises the supply chain dynamics and the relationships at two important dyads, the retailer-processor and the processor-producer.

### **Deregulation process in the dairy industry**

Prior to deregulation, the market for manufacturing milk was already characterised by open access with dairy products freely traded within and between states.

For market milk, however, State Dairy Authorities set all price margins from farm gate through to the retailer. The distribution of market milk was also regulated, with vendors only allowed to sell in specified zones. The relationships between producers, processors and retailers were characterised by controlled supply, regulated pricing and income sharing. The effect of deregulation has been to merge the market milk and manufacturing milk markets, necessitating major adjustments by producers, processors, and retailers in efficiency and contractual arrangements. While the move to an open market in milk was gradual and widely publicized, the speed and scope of the resulting changes appear to have been more profound than some industry

stakeholders anticipated. Adjustment is proving challenging to all participants in the dairy-food supply chains, but especially to milk producers in states where a large proportion of milk production was previously sold as market (drinking) milk.

### **Supply chain dynamics: the retailer/processor dyad**

“Private label” has emerged as a major corporate strategy of the retailers, with milk and milk products at the forefront of the push for the private label dominance. Milk sales through the supermarket channel increased to 55 percent in 2001/02 from 49 percent in 1999/00. More strikingly, nearly 50 percent of supermarket milk sales in 2001/02 were supermarkets’ “private label” as against 26 percent in 1999/00 (Australian Dairy Corporation 2002). (This is significant because the overall grocery value share of “private label” in Australia is only 9.6 percent (Retail World 2003).)

*“Our focus is now on (private) brand milk, which is our own home brand and that makes it easier for us to manage... (As) we have just got one brand, we bring it as efficiently as possible and of course at the best price. We retail it at a good price as well.”*  
(Retailer)

Supermarkets now call tenders for their private label milk and set a national price. For example, Woolworths’ 200 million litres per annum milk tender is the largest groceries contract in Australia and it locks-in the wholesale milk price for two years. Three major processors now compete for supermarket tenders.

Processors have recognised that drinking milk, with its future predominantly as a private label product, is essentially a commodity. They are therefore actively redefining the milk segment as a part of the larger beverage group, putting more emphasis on value added speciality and modified milks. Processors are also putting more resources into their brands and expanding their product portfolio to target growing dairy-food segments such as yoghurts, dairy desserts and drinks. The years since deregulation have seen an avalanche of new dairy product development and introduction. Retailers see this as a positive development, as they prefer to select suppliers who demonstrate desire and ability to be innovative.

*“Positioning is very important ... we position ourselves as market leaders in value added modified food products. To do that you need competitive advantage and ... investment in research & development and marketing...”*  
(Processor)

Processors are also trying to optimize their customer portfolio, and to decrease reliance on the supermarkets. A renewed emphasis on the route trade and a growing service industry provide good opportunities.

*“I think what we (have) got to do is to keep (a) certain amount of power in channels apart from the supermarket channel...(one way is) to look for new channels...”*  
(Processor)

The processors see themselves as not just selling milk, but assisting the supermarkets to shape end user’s view of the product and the category. They are investing in information tracking systems to monitor market developments and competitor moves, and expanding their distribution networks nationally to meet with supermarkets’ national tender requirements. Processors are updating their electronic information exchange systems to have a more efficient and responsive transactional environment with the retailer.

*“We now have our employees actually working in Coles and Woolworths. So we are asking about their demand creation; we see their forecasts before anybody else; these people can check for any problems... We are changing the way we operate our business.”*  
(Processor)

The increasing supermarket emphasis on private label, with price as a major component of the marketing strategy, has been accompanied by a search for increasing supply chain efficiency and “squeezing” out costs. This search for greater supply chain efficiency, and attempts to meet the consumer preference for healthy and safe foods, are facilitating alignment in dairy food supply chains.

*“Our (supply chain management) strategy is to reduce costs and to improve efficiency. We are investing over a billion dollars on technology in supply chain efficiencies, and one of the components is handling of milk.”*  
(Retailer)

Processors are the ‘torch-bearers’ for retailers on quality and food safety issues and invest heavily. However, with contracts for private label milk supply limited to one or two years, processors are always at risk when making short-term, contract specific investments.

*“...there are some very nasty supply solutions that supermarkets are asking us to make at the moment that we are not ready to make. But we should talk about it as an industry rather than just as a company.”*  
(Processor)

Processors see consolidation of the industry as one means to bring some balance into the power relationships. However, despite significant industry and media speculation about possible rationalisation over the last few years, a successful negotiation is yet to be achieved.

*“(There are) too many players (processors) and (the) pie is not big enough. And ... our customers, Coles and Woolworths, are far too powerful. So for that reason we need consolidation, as simple as that...It is by dividing and conquering Coles and Woolworths have been able to keep the prices where they are.”*  
(Processor)

The retailers perceive consolidation of the processing industry as a threat, with less players bidding for their tenders. Thus strategic priorities of the players are not always in consonance.

*“Three (processors) are ideal; two are probably too tight from the perspective of choice.”*  
(Retailer)

The relationships are slowly moving in the direction where both processors and retailers realise that to improve efficiency, competitiveness and customer value, there will need to be clear benefits for both participants, a good strategic fit, and flexibility to adapt to a dynamic market and supply chain environment.

*“(The key to a successful relationship is) mutually agreeing on objectives, mutually agreeing on problem solving, mutually agreeing on benefits, versus an adversarial approach. It is actually about satisfying the customers.”*  
(Retailer)

*“(We need to) find ways of improving our mutual business, so it is a win-win for both...”*  
(Processor)

## **Supply chain dynamics: the processor/producer dyad**

In the processor-producer dyad, the relationship that was previously driven by cooperative principles and averaged or pooled returns, has given way to processors regulating the relationship through the contractual agreement.

*“We want security of supply, that is the most important thing for us. Therefore we forward contract with all of our farmers.”*  
(Processor)

With penalties attached to non-compliance, managing contractual risks has become an important business requirement for the milk producers. The risks to price are in non-compliance with quantity and quality requirements. Farmgate milk price has been volatile since deregulation, while input costs have increased as a percent of total milk income.

*“Deregulation has put a greater need to improve business because inefficiencies can't be hidden in the high farmgate milk price.”*  
(Producer)

Milk producers have responded by expanding herd size and monitoring costs closely against benchmarks. However, they have not been able to achieve any strategic positioning, either on collective or individual level. The main milk producers' organisation, which earlier assisted milk authorities in setting farmgate milk prices, has continued to focus on 'collective bargaining' to obtain a 'fair' farmgate milk price from processors, but this is proving to be difficult. A new milk producer organisation lobbying for 're-regulation' has received a sympathetic response in the producer community, also stricken by recent drought conditions.

Small numbers of milk producers are independently exploring new consumption opportunities for their milk, such as producing organic milk and processing their own milk. Such products are initially evoking a sympathetic reception in the community due to being 'local' and the perceived freshness of the product.

Milk producers realise the advantages of better communication with processors and greater awareness of market trends, price movements and signals. However, they are still coming to terms with the fact that they are not just delivering a bulk commodity, but need to understand and manage their contractual obligations and the resulting risks.

*“Milk producers should be more aligned to the market rather than being preoccupied with farm issues.”*  
(Producer)

### **Supply chain dynamics: whole chain issues**

The retailer domination in Australian dairy-food supply chains is consistent with global developments (Banks & Marsden 1997; Fearne & Hughes 1999). However, retailer domination is still being contested, although processors and milk producers are being realistic and complying with the changing supply chain configurations.

Processors need to balance between closeness with the retailers and the producers. The major competitive gains will come through relationships with retailers, whereas relationships with producers are predominantly to secure milk supply and quality. The drivers of superior processor performance are emerging as capabilities to meet stringent quality requirements, deliver across geographic locations, operate adequate logistics and information management infrastructure, maintain cost competence, innovate in product range and packaging, and work together with the retailer to create

better value. Processors also need strong brands, a large market share in one or more product category and a presence in different market channels.

Producers remain the 'weak' participants in the supply chains, with major needs for skill development. Milk producers need to meet volume, composition, quality, safety and environmental standards to qualify as reliable suppliers. Beyond the need to focus on operational efficiency on the farm, producers need to look beyond the farmgate and upgrade their business management skills including contract evaluation and negotiation. Their business is aligned to a processor that suits their long-term business goals.

## **Conclusion**

Analysis of the Australian dairy-food supply chains illustrates the potential of the supply chain concept for exploring dairy-food industry development. Understanding the supply chain dynamics provides insights into the potential drivers of change, and the resources and capabilities likely to determine chain success in the medium and longer term. In addition to continuous efficiency improvements, effective business strategies for individual firms and the supply chain will need to be developed and redeveloped to accommodate the dynamic nature of Australian dairy-food supply chains post-deregulation.

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