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THE IMPACT OF INDUSTRY TURBULENCE AND FOOD INDUSTRY TRENDS ON THE CEREAL PRODUCT SUPPLY CHAIN: AN AUSTRALIAN STUDY

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INTRODUCTION

This paper discusses some key business environment factors impacting on the cohesiveness of the Australian cereal product supply chain, as identified from a review of food industry literature and an industry research project conducted in 2003 (Sohal & Perry 2004, pp.1-12) for the Victorian Government Department of Innovation, Industry and Regional Development. The 'cereal products industry' comprises all domestic cereal grain processing including flour milling and the production of cereal food, baking mix, bread, biscuits, cakes, pastries, animal feed, bird feed and beer. A major factor affecting the stability of the industry is the recent unprecedented company-alignment turbulence and future uncertainty within the Australian grains industry (Sohal & Perry, 2004, pp. 1-12). This paper examines the industry turbulence scenario and food industry trends impacting on the cereal products supply chain including the global competitiveness imperative, changing market demand patterns (Folkerts & Koehorst, 1998), power-dominance relationships (Robson & Rawnsley, 2001 and Piggott, Griffith & Nightingale, 2000) and increasingly strict delivery imperatives (Rademakers & Knight 1998). These business environment factors are also considered in the light of the necessity of supply chain cohesiveness for the cereal-product industry's ongoing success (Fearne & Hughes, 1999).

The Australian Cereal Products Industry

Cereal products are a key component of Australia's processed food and beverage industry, the largest manufacturing industry, with a turnover of over $55 billion (Department of Agriculture, Fisheries and Forestry, Australia (AFFA), 2002). The Australian cereal products industry, having a national turnover of nearly $9 billion in 1999-2000 (Australian Bureau of Statistics (ABS), 2003), is also clearly important to the Australian economy. The industry is also becoming increasingly focussed on global trade.

METHODOLOGY

A major purpose of the cereal-products industry research study was to examine the status of the supply chain networks and practices within the climate of industry upheaval in the state of Victoria. The study involved two phases of fieldwork applying open-ended field interviews addressing the research objectives. Phase one entailed initial open-ended interviews with over 20 grain, grain-marketing and cereal foods industry practitioners and authorities, seeking their views on current cereals industry supply chain issues and challenges. Phase two was conducted across a representative sample of 15 cereal product manufacturers. The sample was obtained through industry database scrutiny and referrals from industry organisations. The interviewed cereal processing managers represented the industry sectors of bread (small and large-scale), flour, baking mix, biscuits, cakes, pastry, stockfeed, pasta and snack-food manufacturing.

The Importance of Supply Chain Cohesiveness for Competitive Success

The theme of supply chain cohesiveness is viewed as an important feature of supply chain business success. This theme and similar others, such as collaboration, cooperation and partnerships, feature clearly in supply chain literature. They are generally viewed as competitive imperatives (Bhatt & Emdad, 2001; Collins, Henchion & O'Reilly, 2002; Desbarats, 1999; Dyer & Chu, 2003; Frolich & Westbrook, 2001; Govil & Proth, 2002; Holstrom, Framling, Kaipia & Saranen, 2002; Macbeth, 2002; Milgate, 2001; Macbeth, 2002; Newton, 2000; Perry, 1995, Perry, Sohal & Crawford, 1995; Sahay, 2003; Spekman, Spear & Kamautt, 2002; Sahin & Robinson, 2002; and Yu, Yan & Cheng, 2001). Clearly, cohesiveness towards the global competitiveness supply chain imperative, discussed in the 'Food Industry Trends' section, is difficult to maintain in the face of industry turbulence compounded by changing demand patterns, a shift towards high power dominance relationships and increasingly strict delivery imperatives (Rademakers & Knight 1998). The complexity of the cereal product supply chain, entailing many logistical steps and players between seed development and consumer Point-of-Sale (POS) normally presents cohesiveness challenges. Typically, the main logistical steps first involve preliminary grain seed research and development in a laboratory, seed handling, seed transport to the farm, farm storage and actual planting. This is followed by harvesting, transport to a silo or other bulk storage facility, transport to a miller, flour or feed milling, transport for further manufacturing, product processing, packing, transport to supermarket distribution centre, handling, transport to supermarket, or export outlet, and in-store display leading to purchase. Because of this complexity the supply chain's need for streamlined logistics, information flow and general cohesion are inherently high. As discussed in the ensuing section concerning grains and cereal-products industry turbulence and general food industry trends, with cereal-product industry examples, it is evident that the related business-environment factors compound the supply chain complexity challenges.

Grains and Cereal-Products Industry Turbulence

Over the past few years the Australian grains industry has been in the process of rapid consolidation, with varying degrees of vertical integration towards a small number of major players. These mainly multinational companies, with interests and establishments throughout Australia, are experiencing a period of intense competition for industry dominance, particularly in the predominant commodity export field, with impacts spreading through the remainder of the supply chain. Macbeth (2002), who examined the chaotic nature of change in complex supply chain systems, referred to inherent difficulties in company alignment. He also discussed the inherent lack of equilibrium that supply chain companies may encounter on their way to becoming aligned strategically during an initial period of turbulence. Authors Glaser, (1994) and Rigby (2001) also highlighted the challenges of managing systems in times of industry or organisational turbulence.

From the early 1990s, with the deregulation of the Australian domestic grains industry, international food-company activity in Australia has been increasing rapidly. Multinational companies have acquired mills, brands and logistics operations. According to industry leaders, small bakeries in particular have reduced in number, due to industry domination by international players, large franchise operators and, more recently, in-store baking by the major retailers. The logistics sector, incorporating marketing, handling, storage and transport, is now dominated by international players. Examples of multinational players now positioned in, or drawing upon the Australian cereal industry are: Cargill, Louis Dreyfuss, JR International, Freight Australia, Effem, Simplot, George Weston, Nestlé, General Mills and Burns Philp. Approximately a third of the international processed food industry is now controlled through transnational companies with worldwide subsidiaries and establishments (AFFA, 2002). These transnationals are able to draw upon widespread food suppliers and supply chain networks to suit competitive contingencies. It is clear that Australia needs to quickly position itself to participate in these global supply chain networks or risk losing existing markets and the opportunity to participate in new ones (AFFA, 2002).

Food Industry Trends

In this section key business environment issues impacting on the general food industry are discussed. They include the global competitiveness imperative, demand trends, power relationships and delivery imperatives.

The Global Competitiveness Imperative

One interviewee in the study stressed a need for the Victorian food industry generally to respond to future export opportunities or risk erosion of market share. He stated that:

> "If we don't become competitive, other world markets will move in on top of us. Australia is largely self sufficient in a lot of its grains. Clearly we can grow more than we need, with wheat being a good example, and are in a strong position to export food products.

> However, there is little doubt that all food trade is incredibly competitive and every little bit of supply chain efficiency that can be achieved is required."

Addressing the imperative of companies foraying into the international arena to optimise their supply chains, Prasad & Sounderpandian (2003), McAdam & McCormack (2001) and Motwani, Larson & Ahuja (1998) discussed a range of enabling strategies within conceptual models. McAdam & McCormack (2001) particularly highlighted the importance of whole-chain communication. It is evident that in moving towards the global competitiveness imperative, the Victorian cereal product supply chain will need to build strong, cohesive industry and supply chain networks.

Demand Trends

The increasing westernisation of Asian diets and the emergence of the discerning 'global consumer' exhibiting both homogenised taste and demand for wider product choice have presented lucrative markets opportunities for the international food industry. The cereal product industry interviewees also referred to other international trends affecting food demands such as health consciousness, the desire for organic or gluten-free products, the addition of vitamins and minerals and concerns about contamination and diseases. Piggott, Griffith & Nightingale (2000, pp. 12) highlighted the fact that pre-prepared meals are also increasing in demand throughout the developed world. They cite Glover (1999) who predicted further decreases in the average amount of time people will be spending on meal preparation. This view was supported by several of the interviewees who referred to an increased demand for customised, packaged snack foods. Interestingly, it is evident too that the lines between food categories are blurring as manufacturers innovate to meet demands. In the light of these market opportunities there is a sense of competitive urgency with expeditious positioning by multinational food industry companies in competitive global supply chains. Sohal & Perry (1999) noted that exacting customer requirements and technological innovation have been increasingly driving organisations to look to deriving competitive advantage through the management of their total supply chain.

Power Relationships

Grocery retailing in Australia is mostly under the control of several large supermarket-chain companies. Recent years have seen the introduction of cut-price competition from overseas. In the cereal-product supply chain study there were a number of references to an imperative of maintaining compliance with exacting retail requirements in order to retain business. It was also mentioned by an interviewee that during the drought period higher grain costs could not be passed on to retailers because the retailers did not want to increase store prices. Hence manufacturers had to bear the cost. A further related issue was incidents of retailers changing large orders at the last minute, thereby greatly affecting production schedules and other orders. Kurnia & Johnston (2003), who studied electronic commerce applications in Australian grocery supply chains, presented negative findings concerning the relationships between retailers and manufacturers. The findings concerned retailers being more powerful and experiencing more benefits than manufacturers and there being a lack of cooperation and trust between the parties. Coercive power relationship contrast starkly with the mutually supportive, information-sharing type of supply chain relationship recommended throughout supply chain literature (O'Keefe, 1998, Harland, 1996 and van Hoek et al, 2002). Retailers are developing strategic initiatives to capture the emerging markets (Thompson, 2001, vi-vii). Piggott, Griffith & Nightingale (2000, p. 12) indicate a clear shift of power from manufacturers to an increasingly consolidated retail core that is driving innovation, and increasing costs, back through the chain. Retail initiatives include store brands competing with manufacturer brands and the development of new products such as prepared meals.

Delivery Imperatives

As is the case in Australia, major retailers worldwide are now requiring full ingredient labelling, fully bar-coded cartons and store-ready product packaging with ease of unpacking and full compliance with their electronic business-to-business set-ups. The more automated, large scale manufacturers have been generally better equipped to adapt to these demands than their smaller counterparts who focus more on supplying niche-markets and less sophisticated outlets.

Rademakers & Knight (1998, pp. 203-213) demonstrated that, in the light of the continuing fast-food trend, some small suppliers have faced difficulties in restructuring to provide large quantities of uniform, high quality foodstuffs (such as baked buns) to international fast food chains. Given the widely recognised increased power of global food retailers and the need for suppliers to meet their requirements to retain preferred status, cereal product manufacturers have had to adapt and change.

CONCLUSION

In the light of the current climate of industry turbulence, logistical complexity, uneven power relationships, demands of an increasingly global market and the clear need for a much more cohesive, streamlined supply chain, the Australian cereal products industry supply chain faces a challenging future. There is clear potential for increased cereal product export activity to cater to global food-demand trends. Effective and efficient deliveries to appropriate global markets are becoming mandatory and the implication is a highly efficient supply chain. Ideally speaking, the globally-responsive cereal products supply chain, if that is the direction chosen by much of the industry, will need to strategically align itself with the wider Australian cereals industry, food industry, governments and overseas market agencies to cohesively maximise all infrastructure and strategic considerations. It will also need to maintain a constant supply chain dialogue focussing on common global competitiveness goals, mindful of current constraints and future challenges. Supply chain cohesiveness has become an elusive challenge that is at the same time a strategic necessity.

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