

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Coopetition in supply chains

A case study of a coopetitive structure in the horticulture industry

Lincoln C. Wood

School of Information Systems, Curtin University of Technology, Australia

ABSTRACT

Supply chain management has been increasingly seen as a strategic tool to improve the competitiveness of companies. Coopetition, the mingling of competitive and cooperative relationships, has been utilised by New Zealand companies in the horticulture industry to help break into and develop new markets. Using a case study various elements of the supply chain are examined from both strategic and operational perspectives for this group of companies and their customers and suppliers. The connections to the customer are shown to be enhanced through careful implementation, as the group of companies act to adjust their entire supply chains to make them increasingly customer-orientated. Significant benefits that are shown to accrue include improved information flow, increased ability to supply, and flexibility to meet customer requirements.

INTRODUCTION

Primary sector commodity chains are very important in many developing countries and are still critical to several developed countries like Canada, Australia, and New Zealand. Price competition is rampant with many of these products being impacted by 'commoditisation' and 'perfect competition' due to the homogenous nature of the products. Under these circumstances price is a key consideration for buyers; suppliers are 'price-takers' as "they have no control over the price they receive for their products" (Burt, Petcavage, & Pinkerton, 2010, p. 323). The ability to supply while controlling costs and developing appropriate supply chain structures to support customers can lead to significant advantages for producers. This chapter focuses on a case of New Zealand horticulture exporters and the development of a 'coopetitive' (Brandenburger & Nalebuff, 1996) structure within the supply chain, where the members simultaneously compete and cooperate with each other. A review of strategic supply chain management positions this case, which is followed closely by supporting lessons and an examination of how the firms involved have implemented a strategic supply chain

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

management approach in their activities. The use of coopetitive structures to improve customer orientation is outlined, along with some important considerations for managers who seek to operationalise the concept. The thesis of this chapter is that coopetitive structures, carefully used both operationally as well as strategically, enable individual firms to more effectively in their customer-orientation and improve their profitability and competitive positioning.

LITERATURE REVIEW

When understanding the management of the supply chain from the perspective of a group of firms it helps to understand *what* is being managed and *how* it is managed. Supply chain management has its roots in logistics management and the terms have come to mean similar things today (Jonsson, 2008). Both logistics and supply chain management have frequently been relegated to tactical level and charged with cost-efficiency in providing adequate customer service (Bovet & Martha, 2000), yet the discipline of supply chain management has increasingly been given significance and recognition at the boardroom level (Boubekri, 2001; Dath, Rajendran, & Narashiman, 2010).

One of the first scholars to recognise the significant implications of the supply chain on the competitive positioning of firms was Fine (1998, 2000), who investigated the dynamic changes in both the horizontal and vertical dimensions of various supply chains and concluded that “the ultimate core competency of an organization is ‘supply chain design,’ which [can be defined] as choosing what capabilities along the value chain to invest in and develop” (Fine, 2000, p. 213) to enhance success. The design of the supply chain therefore becomes a *strategic* concern to firms. But what does ‘strategic supply chain management’ mean? Hult, Ketchen, and Arrfelt (2007) assert that “ ‘strategic supply chain management’ – [is] the use of a supply chain not merely as a means to get products where they need to be, but also as *a tool to enhance key outcomes*” (Hult et al., 2007, p. 1036; emphasis added); a supply chain is for getting goods to where they need to be but may also be of importance to a firm to enable attainment of other, *strategic*, outcomes. Paraphrasing Hill and Hill (2009, p. 25), the strategic role of supply chain managers will be to support competitive drivers in their company’s market, for which the supply chain team is responsible.

Fisher (1997) also sees that supply chains are associated with product flow as well as providing a means for market mediation to ensure the right mix of products reach the market. Such traditional product flows require firms “to synchronise the requirements of the customer with the flow of material from suppliers in order to effect a balance between what are often seen as the conflicting goals of high customer service, low inventory investment and low unit cost” (Stevens, 1989, p. 3). These synchronised and integrated flows of material are similar to vertical integration where there is coordination over successive phases of production so there is operation as a unified process (Frank,

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

1925); however, supply chain management is not integration and sits on a continuum between integration and separate firms (Ellram, 1991). Overall, in the supply chain this synchronisation of flow should limit wastes in excess or obsolete inventories and should improve profits. In this way the supply chain may be used to 'enhance key outcomes', which will usually involve the marketing positioning of the supply chain (Bowersox, Closs, & Cooper, 2002), through improving the customer-orientation of the chain to create greater value for the customer.

Supply chains involve a complex web of interrelations surrounding various elements that may be leveraged to affect outcomes. Many of these components relate to the flow of materials and logistics networks but there are others as:

Strategic supply chain management deals with a wide spectrum of issues and includes several types of decision-making problems that affect the long-term development and operations of a firm, namely the determination of number, location and capacity of warehouses and manufacturing plants and the flow of material through the logistics network, inventory management policies, supply contracts, distribution strategies, supply chain integration, outsourcing and procurement strategies, product design, decision support systems and information technology. (Georgiadis, Vlachos, & Iakovou, 2005, p. 352)

Many additional outcomes envisaged through supply chain management relate to the utilisation of resources and capabilities throughout the supply chain. In their leading text book Stock and Lambert (2001, p. 703) perceive that the objective of logistics is to "[m]inimize total costs given the customer service objective"; where costs are contributed by transportation, warehousing, order processing and information costs, inventory carrying costs, and lot quantity costs (2001, p. 688).

One common and critical element of the supply chain are the locations of facilities such as warehouses and manufacturing sites (Bowersox et al., 2002; Chopra & Meindl, 2010; Georgiadis et al., 2005; Oakden & Leonaite, 2011; Stock & Lambert, 2001; Webster, 2008). The integration and locations over the network become important to support an effective flow of materials through the network, particularly with ensuring suitable lead times are observed in the chain (Webster, 2008).

Locating suitable facilities must be balanced with simultaneous consideration of available capacities (Webster, 2008), establishment of various types of inventories, and implementation of suitable inventory management policies and controls (Bowersox et al., 2002; Chopra & Meindl, 2010; Fine, 2000; Georgiadis et al., 2005; Oakden & Leonaite, 2011; Stock & Lambert, 2001; Webster, 2008). The physical flow of materials through the network and between facilities is undertaken through the use of various modes of transport, where appropriate decisions may impact on the competitiveness of

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

the overall supply chain (Bowersox et al., 2002; Chopra & Meindl, 2010; Fine, 2000; Oakden & Leonaite, 2011; Stock & Lambert, 2001).

Between the firms in the supply chain there should be commonality and development of a process architecture, end-to-end along the chain (Cohen & Roussel, 2005). This represents a level of integration, and collaborative models must be carefully selected to generate appropriate integration along the chain (Georgiadis et al., 2005). Where less integration is required the decision may be made to outsource the product or process, raising the importance of the procurement function which manages these links in the supply chain (Chopra & Meindl, 2010; Fine, 2000; Georgiadis et al., 2005; Webster, 2008).

Attention to the processes and levels of integration along the chain, coupled with the logistics network design, help chains to manage trade-offs in managing order processing costs (Bowersox et al., 2002; Chopra & Meindl, 2010; Oakden & Leonaite, 2011; Stock & Lambert, 2001). Many other elements impact on these decisions and these interrelationships require careful consideration.

Product design becomes critical to the competitiveness of the supply chain as it enables chains to meet customer requirements while balancing other elements, such as the lead times of development or supply (Fine, 2000; Georgiadis et al., 2005; Webster, 2008). Suitable components must be able to be sourced consistently while time-based competition becomes faster and more intense (Fine, 2000; Horvath, 2001), increasing the pressures on the chain. Similarly, quality concerns are becoming increasingly important and are changing the shape of the supply chains and operations within the supply chain (Lu & Wood, 2006; Webster, 2008).

The use of decision support systems confer advantages to firms that seek to make trade-offs and they point to new ways of sharing and using information in the supply chain. IT systems may support demand planning and scheduling and other operations relating to material flow, in addition to distribution and procurement (Chopra & Meindl, 2010; Georgiadis et al., 2005; Monczka, Handfield, Giunipero, & Patterson, 2009).

Designing suitable organisational structures to support the competitive drivers, may encourage centralisation of supply teams or executive responsibilities, stimulate the development of further cross-functionality, or the development of councils to work with suppliers (Cohen & Roussel, 2005; Monczka et al., 2009; Stock & Lambert, 2001). Based on various competitive priorities, suitable metrics or measurement criteria must be developed and applied internal and along the supply chain (Cohen & Roussel, 2005; Fawcett, Magnan, & McCarter, 2008; Monczka et al., 2009).

Ultimately, supply chain managers are concerned with providing the appropriate level of customer service through developing appropriate supply chain configurations and designs to enable desired

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

levels of customer-orientation over time in a dynamic process (Fine, 2000). This is accomplished through viewing and utilising the supply chain as a strategic asset and frequently focuses either on efficient or responsive configurations (Fisher, 1997), although agile and flexible configurations are also possible (Gattorna, 2006). Various configurations of the supply chain therefore deliver different outcomes (in addition to the flow of products to customers) and may support alternate competitive positions for the company.

Competition versus coordination

Some scholars have postulated that changing economic circumstances have meant that “individual businesses no longer compete as stand-alone entities but rather as supply chains” (Christopher & Towill, 2000, p. 209). This requires a focus on the horizontal dimension of a supply chain, which has received less attention than the traditional vertical focus.

In the case where the supply chains of several competitors ‘intersect’ at the same tier, a case of competition may occur where firms are both cooperating to pursue congruent goals, while engaging in a limited form of competition. Cooperation occurs through coordination of activities, where coordination may be seen as a harmonious alignment of different units to achieve common goals (Min, 2001). Such coordination may be possible through controls and careful arrangements, with cooperation (and associated mutuality of the relationship and goodwill between parties) being absent entirely (Day & Klein, 1987). Day-to-day activities engaged in by employees shape the coordination that may have been influenced by contractual coordination (Hamel, Doz, & Prahalad, 1989), to create a procedural coordination in the partnership (Sobrero & Schrader, 1998). On the other hand, opportunistic behaviour, where a firm seeks to improve on their individual position at the expense of the group interests, is a form of competitive behaviour that must be discouraged (Park & Ungson, 2001).

Coopetitive situations, with dual tensions between cooperation and competition, may be formed as firms seek to secure access to resources or capabilities that they do not possess, without resorting to developing these themselves which is a possibly expensive or lengthy exercise (Porter, 1998, 2003). To make coopetition work the firms must overcome a barrier of inter-firm rivalry with their competitors (Fawcett et al., 2008) and ensure that surplus value created can be shared amongst participants (Jain, Nagar, & Srivastava, 2006). Operational controls need to be instituted to ensure that there are mechanisms developed to encourage coordination of activities while discouraging potentially damaging opportunistic behaviours (Wood, 2010a).

Structure of the Supply Chain

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

A simple supply chain consists of sourcing processes, manufacturing or transformational processes, and distribution processes (Ballou, Gilbert, & Mukherjee, 2000, p. 9). At any level of this supply chain there may be incidences where firms involved in complementary or competing products work together to achieve congruent objectives, allowing cooperative structures to form along the horizontal dimension of the supply chain (Figure 1). Such structures may aid the operations of the chain along the vertical dimension.

Figure 1. Supply chains with both vertical and horizontal dimensions. (Adapted from Figure 1.1 in Wood [2010a])

CASE STUDY – THE FRUITCOM SUPPLY CHAIN

New Zealand was once referred to as “Britain’s Farm” due to the role played by the colony during WWII in supplying Britain with foodstuffs. The nation of New Zealand is a small and geographically isolated island nation in the South Pacific Ocean. Now, in the 21st century, the economy remains heavily reliant on agriculture, horticulture, and primary production, much of which must be exported as it is beyond the capacity of the domestic market to consume the full output. The economic landscape is characterised by strong growth and employment within small- and medium-sized enterprises (SMEs).

One of the key sectors in the horticulture industry is fruit. The fruit discussedⁱ has been grown in New Zealand for several decades but only in commercial volumes since for around thirty years after a period of rapid and large-scale planting. Only one variety is grown in commercial quantities. Under the Closer Economic Relations (CER) agreement with Australia, the Australian market can be considered an extension of the domestic market. Despite this broadening of the demand base, much of the fruit must still be exported.

There are many producers of the fruit in Australia, yet the growing seasons are similar to those in New Zealand, with some overlap in the seasons. There is still opportunity for New Zealand firms to export to Australia, where the supply of New Zealand fruit can extend the period of time when fresh fruit is available to Australian consumers. Effectively this means that the source of supply will be extended for Australian supermarkets.

Customers in the northern hemisphere import fruit from suppliers in the southern hemisphere to supplement their local supply during the off-season from their domestic producers. This means that importers in the USA or Europe may seek supply from New Zealand as well as Australia, Central American, and South American countries. As it is difficult to differentiate between sources of fruit the nature of the product becomes commoditised, forcing the price of the fruit down. The vast bulk of

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

international demand is for a limited number of varieties, with a very demand-driven focus making it difficult to develop varieties unavailable elsewhere, which is a strategy followed by other New Zealand fruit producers (McKenna & Murray, 2002).

Structure of the FruitCom Supply Chain

Generally within a fruit supply chain there are growers, packers, exporters, importers, and retail chains (F 2), but the exact configuration and levels of integration along the supply chain may change in each instance depending on the historic arrangements.

Figure 2. Structure of the supply chain

Growers are responsible for the growth and future supply of fruit. They acquire land, plant trees, care for the orchard, and eventually arrange for harvest of the fruit. The application of sprays in modern horticulture is important to prevent bugs or insects from impacting on the crop. The decisions made by the growers, such as which types of sprays and when to apply them, as well as when and how to expand their crop through new planting, may have a significant impact on downstream availability.

Following harvest the fruit must be sorted, stored, and readied for export; these jobs are the responsibility of the packhouses and the packers. Several growers may work together with a single packhouse. Sometimes growers and the packhouse may be vertically integrated in a single organisation. Fruit may be differentiated by size, weight, dry-matter or other aspects of the fruit such as visual blemishes. Through the grading a variety of stock-keeping-units (SKUs) are created, corresponding to various combinations of physical characteristics and spray residues. While a consumer may only be exposed to several combinations, the packers may work with many hundreds, or even thousands, of SKUs for each type of fruit.

The role of the exporter is to mediate and match the supply with demand. This function is performed through their communication both up and down the supply chain, and the arrangement of transport for the produce from New Zealand. Each exporter will work with a range of packers, frequently concentrated in a single geographic region, allowing the FruitComⁱⁱ cooperative venture to therefore work with packers from all regions.

In the export markets the importers locate suitable source of supply for supermarkets or retail chains in their domestic market. They frequently coordinate marketing campaigns with retail chains and act as a conduit for marketing expertise and ideas to flow through the chain.

The FruitCom group consists of New Zealand-based exporters of the fruit. Their management structures relating to revenue and costs are beneficial to the constituent organisations as well as the

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

supply chains they are embedded within. The FruitCom organisation was established around the start of the 21st century to enter new markets effectively and benefit the members who would coordinate their activities to supply these markets, while also continuing to compete with one another in other international markets and New Zealand and Australia. This coopetitive behaviour requires flexibility to act individually while there are also high-levels of participation in the coordinated group operations.

Figure 3. Supply to separate customers through a single jointly coordinated supply chain

Each of the exporters works with a single client in Japan, each with separate pricing structures (Figure 3). This means that the exporters receive a varying range of revenue depending on the customer supplied. The total revenue over a single season is totalled and then split pro-rata amongst the exporters, on the basis of proportion of supply. If the exporter is supplying the customer in Japan that pays the least per unit of fruit, they still receive the same revenue as the others in FruitCom at the end of the season. A key element of this arrangement that provides flexibility to FruitCom is the way in which the firms are able to assist one another in the supply of fruit for the other customers, without disadvantaging themselves. They receive the same revenues for their supply, whether they are supplying their own customer or the customer of another member of the coopetitive cluster. There is no gain or loss from assisting other members with supply-related issues, allowing members to more easily adapt to an environment characterised by high levels of cooperation and coordination in their processes and activities. In much the same way the costs for the season are split on a pro rata basis, allowing each member proportionate shares of revenues and costs in a transparent and equitable fashion.

In the USA market the FruitCom coopetitive cluster works with a single importer that is the only source of the New Zealand fruit in the USA market. The importer is operationally sophisticated and manages flows, inventory, and development of markets and products very effectively. A different brand is used in this market, yet the FruitCom companies act in a similar fashion; the key difference is that instead of the costs and revenues being split on a seasonal basis as in Japan, in the USA the costs and revenues are split on a shipment basis. The proportion of supply for each shipment to the USA is divided in terms of revenue and costs between the contributing members. The rationale is that while the season in Japan is stable, in the USA benefits accrue on the basis of time-based competition; the exporters must be able to load ships effectively and quickly for a short period of time. Not all members are able to operationally support this process effectively, making it a better choice to aggregate revenues and costs over the shipment as opposed to the season.

Benefits from the coopetitive arrangements

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

The most significant strength gained from the cooperative arrangement is the broadening of the supply base to all growing regions of New Zealand. Rather than a single exporter being tied to few regions, with limited exposure to supply from other regions, the entire output from all regions can be aggregated in order to meet demand from Japanese and US importers. In manufacturing this concept may help overcome issues surrounding variability of supply or disasters striking a supplier; in the horticulture industry the benefits may be more pronounced. Different climates and weather in alternate regions of supply mean that harvests occur at different times around New Zealand, leading to an overlap but with earlier supply from some regions and later supply from others presenting a profile of supply for New Zealand as a whole that is superior to that which may be gained by any single exporter (Figure 4).

Figure 4. Increased duration of harvest using coopetition

This aggregation of supply leads to the overall volume of fruit being balanced and available over a greater period. Such balance reduces the pressure on the operations of the packers, who would otherwise scramble to find supply to meet the requirements of the exporters. All members in the industry respect this natural variability in the supply of the fruit and accept that things sometimes 'simply go wrong'. When the profile of the volumes harvested is adversely affected by weather the members coordinate their activities to supply key importers in Japan and the USA as best they can; they recognise that 'fruit is what it is' and they must respond to the challenges inherent in the natural variation of supply.

FruitCom's strategic coordination of supply in this manner is a form of 'risk pooling' (Simchi-Levi, Kaminsky, & Simchi-Levi, 2008, p. 48), which may be more commonly applied to demand so that "demand variability is reduced if one aggregates demand across locations" (Simchi-Levi et al., 2008, p. 48). However, in FruitCom's case the same risk pooling concept can be applied to supply, where the group reduces supply variability due to the aggregation of supply over several different areas. While the benefits of aggregation are greatest when there is low positive correlation between the sources of supply (Chopra & Meindl, 2010, p. 322), some positive correlation is present in FruitCom's case as large climate changes or weather patterns can impact on all regions of supply simultaneously.

Despite the best efforts of the managers involved sometimes one of the FruitCom exporters faces challenges in their supply or operations whereby they are unable to supply their customer in Japan. Under these circumstances, where they 'come up short' and need assistance, the structure of FruitCom and the sharing of revenue means that the fruit may be sourced from other members. With the same

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

brand and sourced from the same country, this activity is 'invisible' to the customer, but means that each member is much more able to meet their customer requirements (Figure 5).

Figure 5. Drawing supply from the supply chain of other members of the coopetitive structure

After several years of operation the firms in the supply chain at many levels perceived significant benefits, not all of which had been foreseen. One of the key perceived benefits has been the higher returns flowing through the supply chain, yet it has also been noted that the returns have become much more stable from one season to the next (barring disasters such as significant weather impact on crops).

There had previously been competition between the packhouses for the business of local growers. Success in one season would allow a high pay out to growers, making the packhouse more attractive to other growers in forthcoming seasons. Such behaviours created significant churn, characterised by growers frequently changing of allegiance to new packers following significant swings in returns. With the stabilised returns offered through the FruitCom arrangements, flowing through each of the packhouses, the returns offered by the packhouses have become homogenised to the point where there is considerably lower levels of churn as growers see similar returns with reduced variation. Growers perceive greater stability in the industry and the returns received, allowing more effective planning for future seasons.

Challenges in the operationalisation of coopetitive structures

The setup and operation of FruitCom has not been without challenge. Coordinating activities with competitors was initially worrying due to the possibility of opportunistic behaviours.

Planning and coordination within the FruitCom companies advances through the season in a joint effort, resulting in a 'flow plan' which indicates how they will match supply and demand. This is based on forecasts of both demand (provided by the various importers) and supply (provided by growers and packers). In both cases the forecasts may be more volatile than in manufacturing organisations; weather and climatic conditions can significantly impact on the crop and output in New Zealand, leading to variability in supply and frequent inability to meet expected levels of supply to importers.

Difficulties also ensue as each FruitCom member has many options for fruit placement – whether domestically or in Australia, the USA, Japan, or other markets. As prices change and the season develops the members may struggle to 'stick to the plan' as other markets perform better than

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

expected. If the market in Japan performs better than the original flow plans had arranged for, some FruitCom members must 'pull through' and find additional supply, while others may not be able to do so. When this occurs there is always some 'argy-bargy'ⁱⁱⁱ as the members jostle and change their internal plans. It is not considered to be 'good form' if a member has allocated fruit elsewhere, in a market where they compete with the other FruitCom exporters, and then comes up short to supply their customer in Japan, where they are coordinating activities with the FruitCom exporters. Such behaviours can damage the reputation of the brand needlessly where a member has supplied another market for more immediate and perceived higher-returns and then become unable to 'pull their own weight' regarding the FruitCom obligations, disadvantaging other members. Where such behaviours occur they may be easily traced and tracked, due to the small size of the market and the ability for key members in the industry to figure out what is happening regarding different shipping lines and ports; members frequently 'hear things' about the activities in the market.

Not all of the members are equally professional in their approaches to the business. Some are large organisations that operate with many types of fruits and vegetables; others may be small and specialise in few types of fruits or vegetables. Operational difficulties faced by some members have, in the past, reduced their ability to meet obligations to the supply according to the FruitCom flow plan. Such occurrences lead to the more sophisticated members 'carrying' the weaker members over this period.

Operational Issues

Working in the cooperative structure has introduced new challenges and pressures into the supply chain. Most importantly, there is a significantly increased level of horizontal activity in the supply chain. While before there was some information sharing and networking between the exporters, now there is structured horizontal coordination of activities and intertwining of business processes. Initially, there were some minor issues with implementation. Frequent meetings coupled with pre- and post-season meetings helped members to articulate their firms' objectives and ensure ongoing congruence of goals.

While the coordination occurs primarily at the level of the exporters, the impacts flow throughout the supply chain. While the packers needed to incorporate a new brand, most individuals could see that the change required relatively insignificant adaptations of the existing processes; the new brand was not perceived as being an onerous problem.

There are challenges surrounding the sharing of information and plans with the competitors; the reluctance felt by individuals took time to overcome, creating a significant barrier to the coordination of activities. One manager pointed out that if you want to keep something secret you may be doing

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

something that you shouldn't be doing. In the cooperative atmosphere, this coordination forms a check and balance on the activities of members. Additionally, the members must agree unanimously on a course of action. Under these circumstances there is one vote per firm; the larger firms that account for a greater proportion of the overall volumes get no greater say, despite the acknowledgement that their greater share of supply could give them greater 'power' in negotiations. Indeed, these larger firms are aware of potential power balances and actively seek to include the other firms in decisions and activities so there is a joint sense of ownership and contribution from the group.

At the strategic level there have also been challenges as the group seeks to bind their activities together. Coopetition is seen to reduce the flexibility of a member to take advantage of other opportunities in markets, or to pursue other opportunities as they arise.

Each of the members has a unique history with some firms considerably larger and more sophisticated than others. Due to different backgrounds there are various resources that have been accumulated amongst the different members, leading to different capabilities flourishing in different firms. Each firm has unique resources or capabilities that they contribute to FruitCom operations. When the customer requires marketing support, one of the FruitCom members with the greatest capabilities and marketing resources provides the support on behalf of FruitCom. Another member has a team that is well versed in working with shipping lines and they coordinate the shipping for FruitCom, maintaining economies of scale and leveraging their capabilities fully. As a result, each member of FruitCom benefits from the capabilities and resources possessed by other members. This allows improved responsiveness and reductions in costs, benefiting the customers.

Pressure

When the cooperative venture was launched there was intense pressure between the key individuals, who were of good standing in the industry, to 'make it work'. Over time there has been recognition of the success of the venture both up and downstream, resulting in other parties in the supply chain emphasising that the FruitCom coordination should continue. This has occurred from the suppliers, where the buyers and packers have been buoyed by greater stability in returns and successes. If the cooperative venture were to be discontinued the packers and growers would be 'furious' that this had been allowed to happen as the present arrangements are very beneficial to them. Similarly, the importers are able to effectively plan for the New Zealand fruit over a season and gain greater support from FruitCom for their operations.

This shows two forms of pressure on the members of FruitCom. The first is the horizontal pressure, between the members. This is based on the reputation and the close-knit structure of the industry. It is difficult for one of the key individuals from a member firm to go back on their word as they must

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

have on-going relationships in the small industry with other individuals. Such an on-going relationship requires consideration of each action, and members are happy to cajole one another and apply pressure on the others if someone breaks their word or reneges on an agreement. Such social control is a form of 'network governance' (Jones, Hesterly, & Borgatti, 1997) and is a form of pressure that can be quickly developed at the initiation of the cooperative venture based on past history between members. The second form of pressure is developed over time as the benefits have become apparent to customers and to suppliers; pressure is exerted by these parties in the supply chain to maintain the FruitCom relationships and coordination of activities, forming vertical pressure applied on FruitCom. Soon after formation there were early commercial successes that provided proof that the concept worked, as the firms "got some early runs on the board."^{iv} This was supplemented over several seasons, as the successes of the cooperative venture became apparent to the members in the supply chain and appeared to be stable.

These sources of pressure help the members to overcome their otherwise natural urge towards competitive behaviours which would cause them to act in isolation. If one of the members were to create problems significant enough to disrupt normal FruitCom operations, this may damage the value of the brand in Japan and the long-term prospects for the group. The strong pressure, both horizontally and vertically, helps the group to cooperate rather than compete with one another.

STRATEGIC COOPETITION IN SUPPLY CHAIN MANAGEMENT

Within FruitCom there were several important benefits that were gained by their use of cooperation as a strategic supply chain management tool. As a concept, it allowed the members to better meet higher customer service levels while gaining greater revenues for themselves. This was accomplished through changes in the way in which they used inventory, arranged for transportation, engaged in sourcing, used pricing, and shared the flow of information along the supply chain. Appropriate metrics and measures were developed to aid them in coordinating their efforts. Overall, the cooperative arrangement has enabled the firms to move ahead successfully.

Customer service levels have been increased so that any one of the customers is now more likely to be able to receive the bundle of fruit, based on their specifications, than they were before FruitCom was formed. For the members of FruitCom, costs have been lowered while revenues and customer service levels have been increased. At the strategic level the FruitCom cooperative structure can be considered a success.

While the industry was well-disciplined prior to FruitCom formation, allowing the exporters to form FruitCom easily, the new organisation has also increased the flow of information upstream and downstream along the supply chain. This has enabled other members in the supply chain to better

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

understand the requirements of customers and how trends in the industry are taking shape. New ventures are being trialled with the intention of rolling out the approach over all the suppliers for FruitCom, whereby there may be enhanced flexibility regarding the application and use of sprays. This would further improve the capability of FruitCom members to meet specific customer orders in the future.

Some elements of the supply chain have remained unchanged through the FruitCom implementation and growth; the general flow of materials, distribution strategies, and transportation modes, remain similar under both the prior competitive model and FruitCom's coopetitive model. Similar packing and warehousing processes are still used with minor changes to accommodate a new brand. Information technology use has remained relatively constant, with a reliance on spreadsheets, emails, and telephone calls as supplements to face-to-face meetings to coordinate activities. Yet differences emerge in the types of collaborative models employed and levels of integration through the supply chain. Different measurements have also been employed and internal changes to organisations and management of relations along the chain have been required to manage new types of joint flow plans (concerning inventory movement) and control of actions and behaviours of employees and other coopetitive members. Improvements from the perspective of a customer may be seen in the inventory management, lead times, and capacity exhibited by FruitCom.

Operationalising coopetitive structures

Key elements that have driven the success of FruitCom in their venture have been the presence of group pressure (both horizontal and vertical), congruence of objectives, and rules and procedures to enable members to work with partner behaviours.

Strong arrangements between the members and the presence existing industry networks can be used to exert pressure on other coopetitive members to help develop horizontal group pressure. Discovering the ability to secure 'early runs', leading to sustained and more tangible benefits, leads to benefits along the supply chain which foster the creation of vertical group pressure. These pressures to cooperate can overcome the substantial pull of competitive and opportunistic behaviour, which is at the core of an unwillingness to share information between members.

Structured discussions that occur both pre- and post-season allow the opportunity to identify gaps in the alignment of objectives and allows for explorations to reconverge goals in the group. Through the creation of the flow plan for the season the members are bound together with a set of congruent objectives. It is also critical for members to ensure that those individual employees that work and coordinate with other member firms are apprised of all changes and developments within the organisation. When one part of the firm takes a series of actions, individuals with coordinating and

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

boundary-spanning roles, must be aware of this and able to communicate with their counterpart in other member firms in such a way so that there are no concerns about competitive or opportunistic behaviours.

The use of the group's volumes to gain economies of scale is a simple way to lower costs for the group and requires little effort to implement. Such efforts may represent a way to rapidly gain benefits from the coopetitive supply chain venture so that there is proven and tangible benefit to the individual organisation. Working together to ensure greater stability of supply may be a more multi-faceted element of the engagement but one which may bring more pronounced long-term benefits to the group, through creating additional value for their customers. The decision concerning which elements of the supply chain should be focused on first becomes strategic, but it is necessary to get some 'early runs' while working to build a foundation for long-term success and benefits to members.

When the coopetitive venture is formed it is also useful to conceptualise the various ways in which member firms may react, or the different types of behaviours that may be engaged in. Policies or structured approaches for communicating and dealing with member firms that fail to meet obligations, or even flout the agreed behaviours or objectives of the coopetitive venture, should be put in place at the start of the arrangement as it becomes increasingly difficult to implement such measures later when the venture is in operation.

Coopetitive structures in the greater supply chain

Within the FruitCom supply chain the coopetitive structure has helped foster a tighter vertical relationship and changed the dynamics of the constituent supply chains. It has been utilised in a manner that enhances the outcomes for the customers through the creation of additional value, while reducing costs for the coopetitive members, presenting a significant benefit to the members and their supply chains. In this manner the venture has been very strategic in the use the supply chain as a tool. The case study has examined several implications of this coopetitive tool in order to understand and illustrate how it may be used at an operational level to support strategic objectives.

It is important for firms engaging in coopetitive ventures to be wary of barriers to coordination and cooperation (Fawcett et al., 2008; Park & Ungson, 2001). While many traditional barriers to supply chain coordination apply, those relating to interfirm rivalry are more pronounced. Managers need to carefully consider how information is shared, how distrust and unwillingness to work together may be overcome, how potential power or capability imbalances between members may be mitigated, how cooperative pressures can be enhanced, how goal congruence can be achieved, and how the group may expand their competitive focus to be more encompassing of value-creation than merely seeking to reduce costs (Wood, 2010a, 2010b).

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

The positioning of coopetitive structures may be nearer to consumers or sources of supply; however, there is evidence that this approach may be suitable for firms involved in aggregating supply over various sources. Similar evidence is provided by Wu, Yue, and Sim (2006), who convincingly argue that similar 'supply clusters' in China provide a foundation for the cost benefits in Chinese manufacturing. Where competitors can align interests and coordinate their activities they can make a positive impact on the operation of the supply chain in the vertical dimension, not just in terms of cost (Wu et al., 2006) but through improved orientation of the chain towards the customer, providing closer alignment with customer requirements driven through enhanced information sharing and improved planning and control of the flow of materials.

CONCLUSIONS

In an environment where individual SMEs may struggle to improve their customer orientation a coopetitive approach may provide significant benefits. Through structured coordination of activities with their competitors the firms comprising FruitCom have been able to ensure more effective supply into new and developing markets for their fruit. It has enabled them to increase their ability to meet customer requirements while also improving returns for themselves, through the creation of increased value in the supply chain.

Coopetitive structures in the supply chain represent a new strategic approach to achieve supply chain outcomes other than the flow of products, and represent a shift away from the dominant vertical dimension of supply chain management that is frequently the only consideration in the literature and practice. Such structures require careful strategic consideration and forethought as to the operational implications and measures that will need to be implemented in order to ensure a greater chance of success. Considerations during operationalisation must include the nature and structure of communications (allowing goal congruence), the development of group pressure (both vertical and horizontal), and the implementation of policies and procedures to manage different types of behaviour of members of the coopetitive venture. It is important to note one significant limitation – the coopetitive structures discussed in this chapter are present in the horticulture industry and the results may not be generalisable to other industries.

Future research

A key area for future research lies in the operationalisation of coopetitive structures intra-firm, recently called for (Bonel & Rocco, 2007), but not yet addressed adequately within the literature. The research may require in-depth case studies within individual firms, yet it is doubtful whether investigations that restrict attention to the boundaries of a single firm will be adequate to address coopetitive issues without considering boundary spanning processes involved in supply chain

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.
DOI: 10.4018/978-1-4666-0246-5.ch005

management. Multiple case studies may be required to understand the subtle duality of competitive and cooperative pressures within a cooperative group. Investigating the changes in processes that occur before and after coopetition ensues would provide significant insight into successful operationalisation of cooperative structures.

REFERENCES

- Ballou, R. H., Gilbert, S. M., & Mukherjee, A. (2000). New managerial challenges from supply chain opportunities. *Industrial Marketing Management*, 29(1), 7-18.
- Bonel, E., & Rocco, E. (2007). Coopeting to survive; Surviving coopetition. *International Studies of Management & Organization*, 37(2), 70-96.
- Boubekri, N. (2001). Technology enablers for supply chain management. *Integrated Manufacturing Systems*, 12(6), 394-399.
- Bovet, D., & Martha, J. (2000). *Value nets: Breaking the supply chain to unlock hidden profits*. New York: Wiley.
- Bowersox, D. J., Closs, D. J., & Cooper, M. B. (2002). *Supply chain logistics management*. Boston: McGraw-Hill/Irwin.
- Brandenburger, A., & Nalebuff, B. J. (1996). *Co-opetition*. New York: Doubleday.
- Burt, D. N., Petcavage, S. D., & Pinkerton, R. L. (2010). *Supply management* (8th ed.). Boston: McGraw-Hill/Irwin.
- Chopra, S., & Meindl, P. (2010). *Supply chain management: Strategy, planning, and operation* (4th ed.). Boston: Pearson.
- Christopher, M., & Towill, D. R. (2000). Supply chain migration from lean and functional to agile and customised. *Supply Chain Management: An International Journal*, 5(4), 206-213.
- Cohen, S., & Roussel, J. (2005). *Strategic supply chain management: The five disciplines for top performance*. New York: McGraw-Hill.
- Dath, T. N. S., Rajendran, C., & Narashiman, K. (2010). An empirical study on Supply Chain Management: the perspective of Logistics Service Providers. *International Journal of Logistics Systems and Management*, 6(1), 1-22.
- Day, G. S., & Klein, S. (1987). Cooperative behaviour in vertical markets: The influence of transaction costs and competitive strategies. *Review of Marketing*, 39-66.
- Ellram, L. M. (1991). Supply chain management: The industrial organisation perspective. *International Journal of Physical Distribution & Logistics Management*, 21(1), 13-22.
- Fawcett, S. E., Magnan, G. M., & McCarter, M. W. (2008). Benefits, barriers, and bridges to effective supply chain management. *Supply Chain Management: An International Journal*, 13(1), 35-48.
- Fine, C. H. (1998). *Clockspeed: Winning industry control in the age of temporary advantage*. Reading, Mass.: Perseus Books.
- Fine, C. H. (2000). Clockspeed-based strategies for supply chain design. *Production and Operations Management*, 9(3), 213-221.
- Fisher, M. L. (1997). What is the right supply chain for your product? *Harvard Business Review*, 75(2), 105-116.
- Frank, L. K. (1925). The significance of industrial integration. *The Journal of Political Economy*, 33(2), 179-195.

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

- Gattorna, J. (2006). *Living supply chains: How to mobilize the enterprise around delivering what your customers want*. Harlow, UK.: Financial Times-Prentice Hall.
- Georgiadis, P., Vlachos, D., & Iakovou, E. (2005). A system dynamics modeling framework for the strategic supply chain management of food chains. *Journal of Food Engineering*, 70(3), 351-364.
- Hamel, G., Doz, Y. L., & Prahalad, C. K. (1989). Collaborate with your competitors-and win. *Harvard Business Review*, 67(1), 133-139.
- Hill, A., & Hill, T. (2009). *Manufacturing operations strategy* (3rd ed.). Basingstoke, U.K.: Palgrave Macmillan.
- Horvath, L. (2001). Collaboration: The key to value creation in supply chain management. *Supply Chain Management: An International Journal*, 6(5), 205-207.
- Hult, G. T. M., Ketchen, D. J., & Arrfelt, M. (2007). Strategic supply chain management: Improving performance through a culture of competitiveness and knowledge development. *Strategic Management Journal*, 28(10), 1035-1052.
- Jain, K., Nagar, L., & Srivastava, V. (2006). Benefit sharing in inter-organizational coordination. *Supply Chain Management: An International Journal*, 11(5), 400-406.
- Jones, C., Hesterly, W. S., & Borgatti, S. P. (1997). A general theory of network governance: Exchange conditions and social mechanisms. *Academy of Management Review*, 22(4), 911-945.
- Jonsson, P. (2008). *Logistics and supply chain management*. London: McGraw-Hill.
- Lu, Q., & Wood, L. (2006). The refinement of DFM: Inclusion of process design. *International Journal of Operations & Production Management*, 26(10), 1123-1145.
- McKenna, M. K. L., & Murray, W. E. (2002). Jungle law in the orchard: Comparing globalization in the New Zealand and Chilean apple industries. *Economic Geography*, 78(4), 494-514.
- Min, S. (2001). Inter-functional coordination in supply chain management. In J. T. Mentzer (Ed.), *Supply Chain Management* (pp. 371-390). Thousand Oaks, Calif.: Sage Publications.
- Monczka, R. M., Handfield, R. B., Giunipero, L., & Patterson, J. (2009). *Purchasing and supply chain management*. Mason, Ohio: South-Western Cengage Learning.
- Oakden, R., & Leonaite, K. (2011). *A framework for supply chains: Logistics operations in the Asia-Pacific region*. North Ryde, NSW, Australia: McGraw-Hill Australia.
- Park, S. H., & Ungson, G. R. (2001). Interfirm rivalry and managerial complexity: A conceptual framework of alliance failure. *Organization Science*, 12(1), 37-53.
- Porter, M. (1998). Clusters and the new economics of competition. *Harvard Business Review*, 76(6), 77-90.
- Porter, M. (2003). The economic performance of regions. *Regional Studies*, 37(6 & 7), 549-578.
- Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2008). *Designing and managing the supply chain: Concepts, strategies, and case studies* (3rd ed.). Boston: McGraw-Hill/Irwin.
- Sobrero, M., & Schrader, S. (1998). Structuring inter-firm relationships: A meta-analytic approach. *Organization Studies*, 19(4), 585-615.
- Stevens, G. C. (1989). Integrating the supply chain. *International Journal of Physical Distribution & Logistics Management*, 19(8), 3-8.
- Stock, J. R., & Lambert, D. M. (2001). *Strategic logistics management* (4th ed.). Boston: McGraw-Hill/Irwin.
- Webster, S. (2008). *Principles and tools for supply chain management*. Boston: McGraw-Hill/Irwin.

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), *Customer-oriented global supply chains: Concepts for effective management*, Hershey, PA: IGI Global, pp. 76-93.
DOI: 10.4018/978-1-4666-0246-5.ch005

Wood, L. C. (2010a). *Effective horizontal coordination in clusters: Bridging the barriers to effective supply chain management*. Doctoral Thesis, The University of Auckland, Auckland.

Wood, L. C. (2010b). *The role of clusters in creating value in supply chains: Evidence from the examination of clusters with RBV*. Paper presented at the ANZAM 2010: Proceedings of the 24th Australian and New Zealand Academy of Management, Adelaide, South Australia.

Wu, L., Yue, X., & Sim, T. (2006). Supply clusters: A key to China's cost advantage. *Supply Chain Management Review*, 10(2), 46-51.

ADDITIONAL READINGS ON COOPETITION

Bengtsson, M., & Kock, S. (2000). "Coopetition" in business networks: To cooperate and compete simultaneously. *Industrial Marketing Management*, 29(5), 411-426.

Bonel, E., & Rocco, E. (2007). Coopeting to survive; Surviving coopetition. *International Studies of Management & Organization*, 37(2), 70-96.

Brandenburger, A., & Nalebuff, B. J. (1996). *Co-opetition*. New York: Doubleday.

Chin, K.-S., Chan, B. L., & Lam, P.-K. (2008). Identifying and prioritizing critical success factors for coopetition strategy. *Industrial Management & Data Systems*, 108(4), 437-454.

Dowling, M. J., Roering, W. D., Carlin, B. A., & Wisniewski, J. (1996). Multifaceted relationships under coopetition: Description and theory. *Journal of Management Inquiry*, 5(2), 155-167.

Luo, Y. (2004). *Coopetition in international business*. Denmark: Copenhagen Business School Press.

Mariani, M. M. (2007). Coopetition as an emergent strategy. *International Studies of Management & Organization*, 37(2), 97-126.

Meyer, H. (1998). My enemy, my friend. *Journal of Business Strategy*, 19(5), 42-46.

Min, Z., Feiqi, D., & Sai, W. (2008). Coordination game model of co-opetition relationship on cluster supply chains. *Journal of Systems Engineering and Electronics*, 19(3), 499-506.

Morris, M. H., Koçak, A., & Özer, A. (2007). Coopetition as a small business strategy: Implications for performance. *Journal of Small Business Strategy*, 18(1), 35-55.

Padula, G., & Dagnino, G. B. (2007). Untangling the rise of coopetition. *International Studies of Management & Organization*, 37(2), 32-52.

Soubeyran, A., & Weber, S. (2002). District formation and local social capital: A (tacit) co-opetition approach. *Journal of Urban Economics*, 52(1), 65-92.

von Friedrichs Grangsjø, Y. (2003). Destination networking: Co-opetition in peripheral surroundings. *International Journal of Physical Distribution & Logistics Management*, 33(5), 427-448.

Walley, K. (2007). Coopetition. *International Studies of Management & Organization*, 37(2), 11-31.

Zineldin, M. (2004). Co-opetition: The organisation of the future. *Marketing Intelligence & Planning*, 22(7), 780-790.

KEY TERMS & DEFINITIONS

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Coopetition: In a group of entities the simultaneous presence of competition and cooperation between the entities.

Information Sharing: In a group of entities the ability and willingness to collate and provide information and data to each other.

Group Pressure: Exertion of a form of control based not on rules or regulations but on social power resting on social relationships.

Horticulture: The industry associated with commercial cultivation and production of crops such as fruits and vegetables.

Clusters: Geographically close groups of firms in a similar field or industry that share many interconnections.

Strategic Supply Chain Management: The use of supply chains as a tool to achieve competitive outcomes.

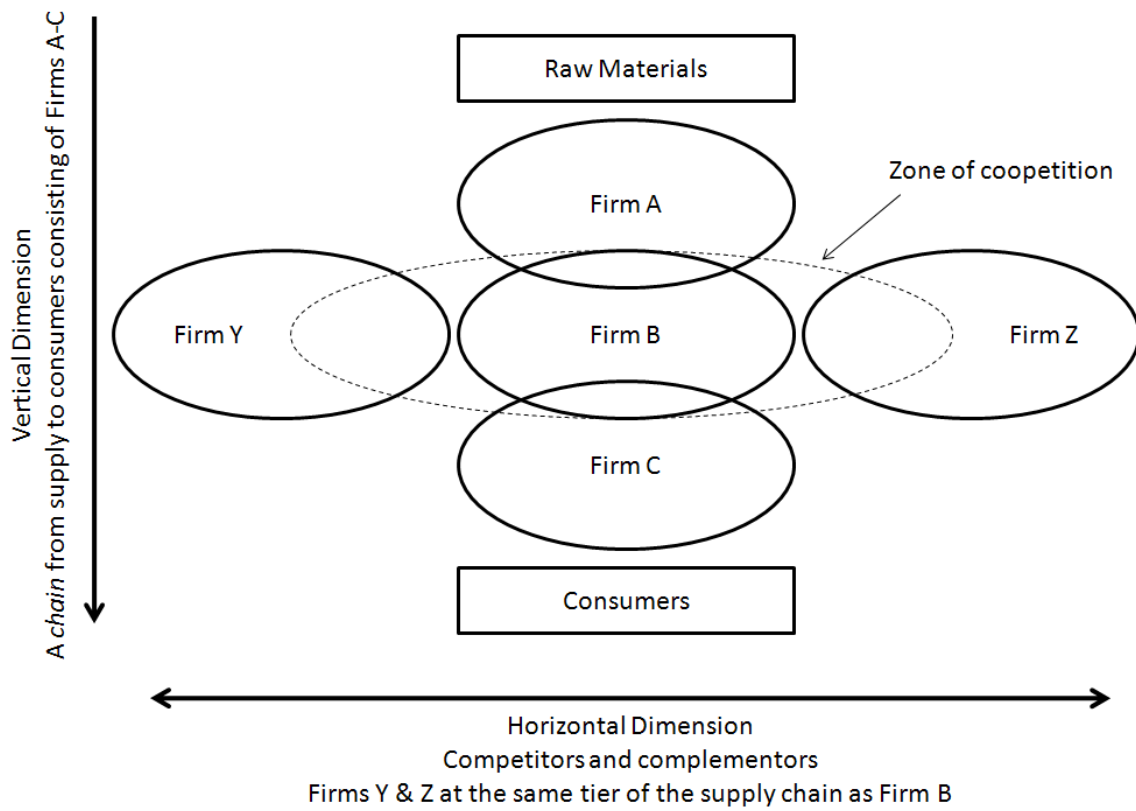
Case Study: An in-depth investigation of a particular phenomenon or entity in management.

This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Figure 1

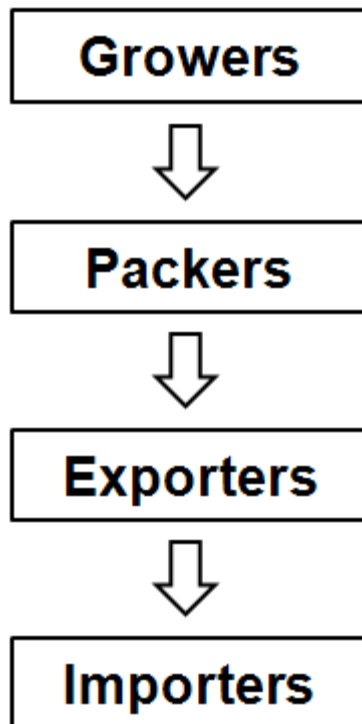


This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Figure 2

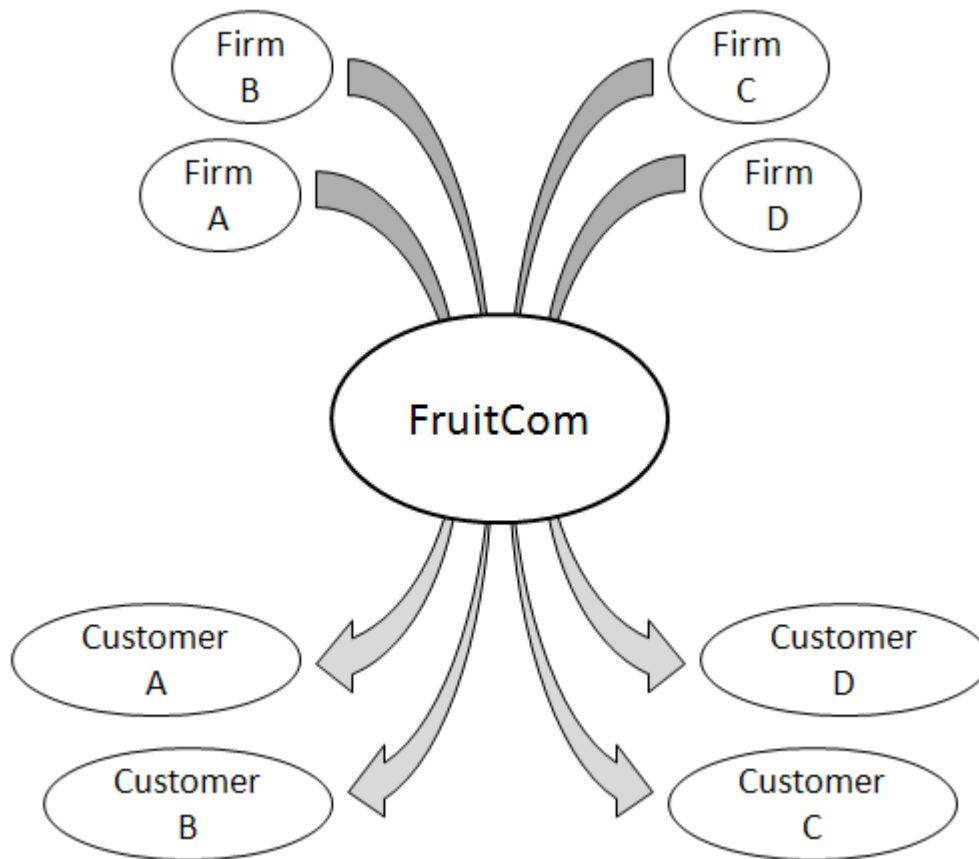


This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Figure 3

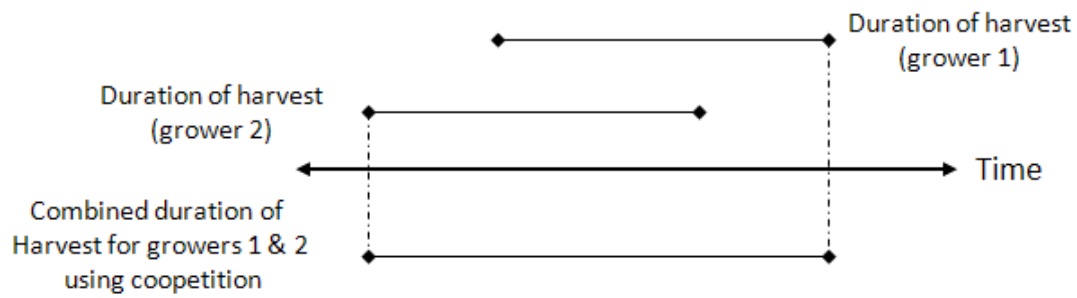


This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Figure 4

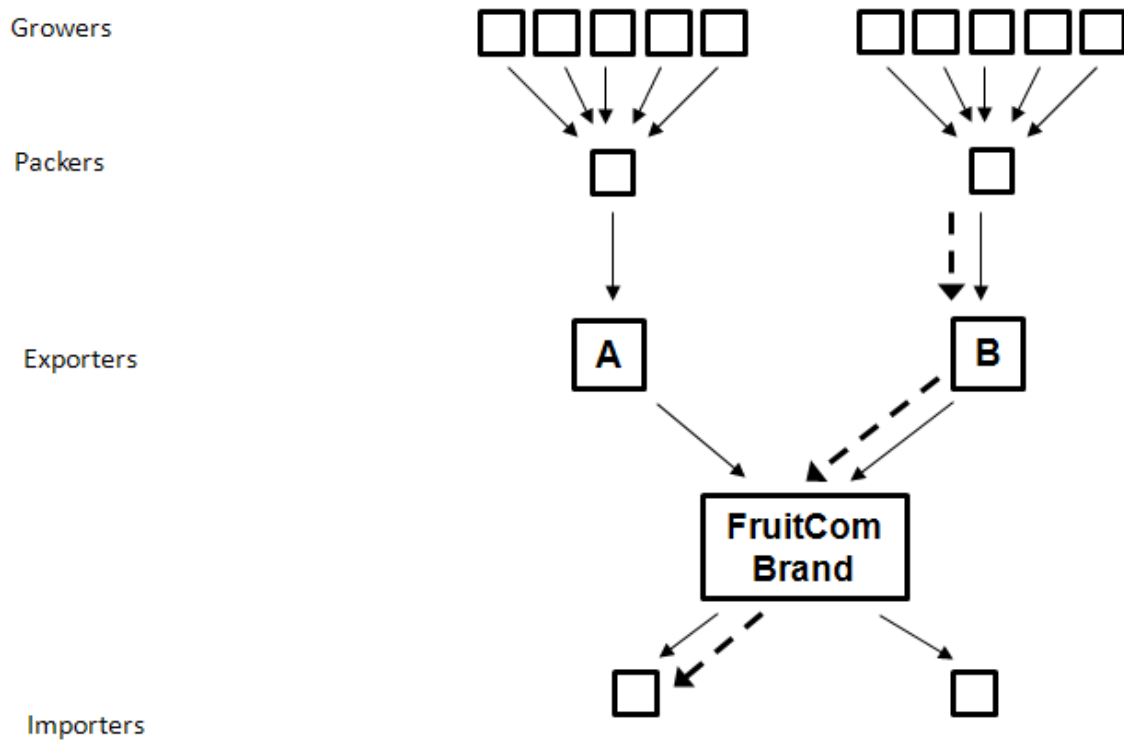


This is a copy of the 'post-print'; i.e., the final draft, post-refereeing. Published as:

Wood, L. C. (2012) Coopetition in supply chains: Structures to improve customer-orientation. In: Eyob, E. and Tetteh, E. G. (Eds.), Customer-oriented global supply chains: Concepts for effective management, Hershey, PA: IGI Global, pp. 76-93.

DOI: 10.4018/978-1-4666-0246-5.ch005

Figure 5



Legend

Normal flow of product



Flow of product from a competitor where exporter A uses supply from Exporter B



ⁱ The specific type of fruit discussed in this chapter has been disguised to provide anonymity to research participants.

ⁱⁱ FruitCom is a pseudonym that is used to provide anonymity to research participants.

ⁱⁱⁱ 'Argy-bargy' is a colloquial phrase that refers to a verbal dispute or argument. Certainly in FruitCom the communications relating to this type of event are primarily verbal as opposed to written messages.

^{iv} This is an idiomatic New Zealand phrase that refers to cricket where 'runs' are the points; to get "early runs on the board" means to gain some early successes.