New Zealand Agricultural and Resource Economics Society (Inc.)

Niche Agribusiness Supply Chains and the Channel Coordinator's Role in their Creation and Management

Alastair Patterson
Agricultural Specialist, U.S. Embassy, Wellington, New Zealand

Sandra Martin
Division of Agriculture and Life Sciences, Lincoln University, New Zealand

Diane Mollenkopf
Assistant Professor, Department of Marketing and Logistics, University of Tennessee

Niche Agribusiness Supply Chains and the Channel Coordinator's Role in their Creation and Management

Alastair Patterson[1],
Sandra Martin[2]
Diane Mollenkopf[3]

The role of the channel coordinator and the structure of their supply chains are critical to the success of a supply chain that produces a product targeted at a specific market niche. Without the management of the channel coordinator, focussed on delivering a product with specific attributes to the target niche, the supply chain will be incapable of working in concert and creating a cohesive product offering. The supply chain structure is critical to this process. Although these two concepts are often mentioned in the supply chain and associated literature, and despite their importance, there is very little empirical evidence that shows the linkage between the channel coordinator and the supply chain structure.

This paper is based on the analysis of five case studies of small firms that have created supply chains to market a meat product with specialised attributes to a target market niche. A framework is developed to determine the factors that will influence the strategy of a channel coordinator when managing their supply chain, and hence, the way they will structure the supply chain most effectively and profitably to reach the target market niche with the product attributes desired.

Key words: Channel coordinator, supply chain structure, niche markets, New Zealand meat industry

Introduction

Many small organisations in New Zealand begin with an entrepreneur identifying a market niche that they feel they can serve more effectively than existing businesses. Such entrepreneurs are attracted to a specific niche, as they will often lack the resources necessary to compete in the generic market against large, established companies. This is particularly apparent in international markets were New Zealand businesses are generally considered too small to compete. Therefore, it is important to develop an understanding of how such businesses organise themselves to meet the needs of niche markets.

The New Zealand meat industry is one of the country's largest pastoral industries, so its success is important to the economy. In addition, there have been a lot of structural

[1] Agricultural Specialist, Foreign Agricultural Service, U.S. Embassy, P.O. Box 1190, Wellington, New Zealand.
[2] Division of Agriculture and Life Sciences, Lincoln University, P O Box 84, Lincoln University, Canterbury, New Zealand
[3] Assistant Professor, Department of Marketing and Logistics, University of Tennessee, 323 Stokely Management Center, Knoxville, TN 37996-0530.

changes in the meat industry in recent years, with players entering and exiting the industry. As a result, businesses operating in niche markets in this industry will have been exposed to the pressures associated with this volatile environment, and will be seeking sustainable profitability in various ways.

Entrepreneurs in the New Zealand meat industry who operate in specific market niches will conduct their operations as members of a wider supply chain, and will play a key role in these supply chains. While it is often argued that, to be successful, supply chains need to be tightly coordinated to meet the tight product specifications demanded by the modern agribusiness marketplace, de Moura (2002) found that this was not necessarily the case in domestic New Zealand meat chains. Although his study was largely focussed on commodity meat chains catering for the mass market, it also included a niche supply chain. This chain exhibited a structure that was markedly different to the structure of the other supply chains. However, it is not clear whether this niche structure could be indicative of niche chains in general, or whether it was unique to this particular chain.

In order to successfully coordinate a supply chain, the role of the channel coordinator is clearly very important (Lambert and Cooper (2000). In the case of niche chains, some (or all) of the organisations within these supply chains will be working in concert to target a specific market niche. The need to develop a consistent product offering tailored to the demands of this market niche creates the need for centralised management of the supply chain, a role which would be undertaken by the channel coordinator.

Despite the importance of the channel coordinator, there exists very little work on this role. The channel coordinator is often mentioned in passing in the literature on supply chains and the concept is well known; yet it is difficult to find research that specifically focuses on the channel coordinator and their role. The aim of this research is to gain a better understanding of the structure of niche supply chains in the New Zealand meat industry, and the role of the channel coordinator in creating and maintaining these structures.

Literature

The Role of the Channel Coordinator in Supply Chain Structure

Relationship structures between the different levels of a supply chain can vary greatly. They can be mapped on a continuum that extends from the spot market right through to vertical integration (Peterson & Wysocki, 1998). In between, are varying levels of vertical coordination. Organisations will utilise the relationship structure that they perceive best suits their situation. Trade-offs will exist between the increased efficiency of a closer relationship and the costs of creating and maintaining that relationship. Therefore, when making decisions on what level of coordination will be most appropriate, organisations will consider what factors add value to the relationship (Lambert et al., 1996; Spekman et al., 1997).

Such relationship structuring will occur at each level of a supply chain. A channel coordinator may be able to influence the structure of the relationships that make up a supply chain, and may do so in order to make the supply chain as efficient (lowest cost over the chain) and effective (meeting the demands of the targeted end consumer) as possible.

Although there is a large amount of literature discussing the link between an individual organisation's strategy and its structure (Chandler, 1962; Galbraith & Kazanjian, 1986; Galbraith & Nathanson, 1978; Galunic & Eisenhardt, 1994; Miles & Snow, 1978, 1984), there appears to be very little relating to the supply chain as a whole. This is clearly a complex issue, since each individual firm in a supply chain will have its own strategy, but because the supply chain is made of a number of organisations, it is not an entity that has a 'strategy' in its own right. Instead, the strategy of the supply chain results from the alignment of the strategies of the organisations that make up the supply chain. The channel coordinator plays a key role in such alignment. Hence, any relationship between 'strategy and structure' within a supply chain must revolve around the strategy of the most influential organisation in the chain (which is the channel coordinator), how it aligns its strategy with those of the other organisations in the chain, and the supply chain structure.

The channel coordinator (also known as the chain captain and the channel leader) integrates and manages the key business processes across members of the chain. As such, their role in the supply chain is crucial to the performance of the chain as a whole, as well as to the performance of the individual firms within the chain (Lambert & Cooper, 2000, p81); (Fitzpatrick & Burke, 2000)

The channel coordinator will aim to coordinate the supply chain so that its essential functions are performed by the most appropriate organisation. They can ensure that each organisation has a specific role in the supply chain (specialisation) and that all organisations within the chain share common strategic goals, thereby maintaining a supply chain focus (Bowersox & Closs, 1996). This chain coordination can remove non-value adding work, thereby maximising the efficiency of the whole supply chain (Bowersox et al., 2002).

A number of factors can influence channel coordination and how centralised or decentralised it should be. A major factor is obtaining and then sharing information that is scattered throughout the different units of a supply chain (Ertek & Griffin, 2002), since information sharing is important to ensure a consistent approach to strategy across the chain. In order to achieve this chain alignment, the channel coordinator needs to effectively communicate their needs and expectations of the supply chain and to consistently match their own behaviour to their stated strategy. Landeros, Reck, & Plank (1995) discuss this point in relation to individual dyadic relationships, however, this concept can be clearly extended to the supply chain as a whole.

Without some degree of centralised management, organisations within the supply chain may insist on maintaining those resources that strengthen their own independence within the system (Etgar, 1976). There can also be less recognition of common goals as they attempt to enhance their own profitability, often to the

detriment of the supply chain as a whole. Such fragmentation of activities and decisions within the chain may reduce the efficiency of the system as a whole (Etgar, 1976; Ouden et al., 1996), with the result that the supply chain does not achieve its full potential (Coughlan et al., 1996; Little, 1970).

These arguments suggest that more centralised control of the chain is necessary to maintain the unity of the supply chain and the alignment of strategies of individual firms within the chain. However, it can also be argued that supply chains can be better managed when decisions are made closer to the point at which information is generated (Chandrashekar & Schary, 1999); that is, that some degree of decentralisation is appropriate. Resourcing issues might also dictate some degree of decentralisation of chain control. For example, the channel coordinator may choose to develop relationships with key vendors, who then take responsibility for complete subsystems or services, providing resources that the coordinator does not have or freeing up the coordinator's resources (Peck & Juttner, 2000).

It is clear that the channel coordinator is the organisation that has the most control over the supply chain. It exercises this control through its leadership, which then leads to a change in behaviour or perception by any other channel member towards a position or goal desired by the leader (Little, 1970). The channel coordinator can use one or more methods to achieve this: coercion, the use of incentives, and persuasiveness (which relates to the creation of a better understanding of common goals) (Little, 1970).

From the above discussion, it is obvious that the role of a channel coordinator in a supply chain is very important for the efficient functioning of the chain. However, very little empirical work has been done to validate its role in the supply chain. An accurate understanding of this role is made more complex by the fact that many chains can be quite disjointed, with more than one channel coordinator, each of whom controls separate parts of the chain. For niche chains in particular, the channel coordinator might not necessarily be the largest and/or most powerful organisation in the supply chain. An empirical study of the role of the chain coordinator, such as that reported in this paper, will help to bridge this gap in the literature.

Environment and Resource Issues

A key factor that will influence the channel coordinator's strategy and supply chain structure is the environment surrounding the channel coordinator and the supply chain. Organisations adapt to their environment, and in addition, their relationships with other organisations will be influenced by both organisations' interpretation of their environment and their perceptions of what their counterparts needs are (Pels et al., 2000). Hence, supply chain structures may evolve as a result of changing relationships between organisations in a chain, which in turn result from changes in their environment.

This phenomenon has been noted in agribusiness industries in general, and is applicable to the meat industry. Many agribusiness industries are experiencing increasing levels of vertical coordination, which is thought to be influenced by

increasing demand for customised food products and food safety. For example, changing consumer demand is forcing agribusiness firms away from products that are traded in more traditional commodity based spot markets. They are moving to more specialised, low-volume products whose end-use has been determined prior to harvesting or sale. (Sporleder, 1992, p1226). This is thought to lead to greater vertical coordination, although de Moura (2002) found that this is not necessarily always the case.

While the environment will influence the channel coordinator's strategy, and ultimately, the supply chain structure, resource issues will also have a key impact. Resources are used by a supply chain to develop a product offering, and are to be found both within the channel coordinator's organisation and within organisations in the wider supply chain. Because of their key role in the chain, the channel coordinator will have a degree of influence over the resources used in a supply chain and the way in which they are employed. Because of their varying importance, accessibility and the level of control the channel coordinator can exert over them, these chain resources will have an impact on the channel coordinator's strategy.

There are a number of viewpoints on the interrelationships between resources, firm strategy, relationship structures and supply chain structures. In this study, four approaches are reviewed: Porter's approach, the Resource Based View (RBV) of the firm, the Resource Dependency Approach (RDA) and the Supply Chain Management (SCM) view. The SCM view has been briefly touched on in the previous section with the discussion on the role of the channel coordinator in supply chain structure.

Porter (1985) asserts that the strategy of any organisation will be to use its resources to create a competitive advantage for itself; that is, to gain an advantage over a competitor or group of competitors. In the case of niche markets, a firm focusing on one consumer segment can create competitive advantage by using its resources to better tailor its product to its target consumer needs. This differentiates it from mainstream products, and in some cases, may also decrease its costs (Porter, 1985). Moving from the firm to the wider chain, Porter further argues that competitive advantage is not only created within organisations, but also in the links between organisations in a supply chain. Such linkages foster coordination and can lead to optimisation within the supply chain – in terms of cost, inventory and speed of moving product through the supply chain – thereby improving the position of firms within the chain (Porter, 1985).

While insightful, other authors have argued that Porter does not fully explain why a diverse and ever-changing assortment of firms can coexist (Hunt & Morgan, 1995). The Resource Based View (RBV) of the firm claims to address this shortcoming, by attempting to explain the diversity of organisations in a market. Under this framework, every organisation is viewed as having a different assortment of resources that will, in turn, influence its strategy as it tries to match these resources to the best fitting market segment (Hunt & Morgan, 1995; Peteraf, 1993).

The RBV argues that, for an organisation to create competitive advantage, it needs to match its resources to its environment. For this competitive advantage to be sustainable, the results of this matching must be conducted in a superior manner to

other organisations and must be difficult for other organisations to replicate within an acceptable timeframe or cost (Madhok, 2002). Resources can include not only tangible resources, such as land and capital, but also intangibles such as organisational culture, knowledge, and competencies (Hunt & Morgan, 1995).

This creation and successful use of resources that help an organisation to gain sustained competitive advantage can be viewed as an ongoing process. Organisations and their markets are in a constant state of disequilibrium as they attempt to neutralise and/or surpass the competitive advantage of other organisations (Hunt & Morgan, 1995). Hence, the value of resources are continually eroded as competitors find ways to imitate these sources of competitive advantage (Markides & Williamson, 1996).

Thus, resources can be viewed as having different economic lifecycles, and as a result, an organisation's resources will be continually bundled, unbundled, and rebundled, in order to deliver an ongoing stream of revenue from several sources of competitive advantage (Black & Boal, 1994). Therefore, for an organisation to maintain its competitive position, it must not only reduce the likelihood of competitors appropriating these resources (Black & Boal, 1994), but it must also have accumulated competences that allow it to build new strategic assets more rapidly and efficiently than these competitors (Markides & Williamson, 1996).

The RBV focuses on an organisation's own resources and how these can be the source of its competitive advantage. However, organisations are generally unable to internalise all the resources that they need. Therefore, they are motivated to interact with other organisations to gain access to resources external to their organisation. The interaction of these organisations results in them becoming part of a supply chain. The nature of these inter-firm interactions forms the basis for the Resource Dependency Approach (RDA).

The RDA has a different emphasis on an organisation's resources to that of the RBV, although the two approaches are complementary. Under the RDA, an organisation's survival is dependent on its ability to acquire and maintain resources (Pfeffer & Salancik, 1978). However, since organisations are unlikely to control all of the resources that they need, they gain and maintain needed external resources by altering their structure and patterns of behaviour (Ulrich & Barney, 1984). In other words, they purchase resources or work with other organisations that already control the needed resources.

The magnitude of an organisation's dependency on a resource is affected by its relative portion of an organisation's inputs, how critical the resource is to the organisation's production, the availability of the resource (Pfeffer & Salancik, 1978), and the amount of control that the organisation's suppliers have over the resource relative to the organisation (Sporleder, 1992). The RDA can be viewed as a risk management approach (Sporleder, 1992), as organisations make decisions about their boundaries; in other words, whether a resource is so valuable to the organisation that it needs to be controlled within it (Pfeffer & Salancik, 1978; Rasheed & Geiger, 2001).

To ensure their survival, organisations will aim to decrease their dependence on other organisations, while increasing other organisations' dependence on them (Smeltzer & Sifred, 1998; Ulrich & Barney, 1984). The more critical a resource is to an organisation, the stronger the need for that organisation to control the resource instead of having other organisations control it (Smeltzer & Sifred, 1998). Organisations can use one or a combination of approaches to maintain control. These are vertical integration (if they wish to control the resource themselves), horizontal integration (which can make an organisation more powerful and allow it to exert leverage over its trading partners), and diversification (if it wishes to reduce its reliance on a specific resource (Pfeffer & Salancik, 1978).

These different viewpoints on the role of resources can lead to different perspectives on relationships within chains. For example, the RDA approach to relationships appears to conflict with some of the prescriptions from the Supply Chain Management (SCM) approach, which was discussed briefly in the previous section. In the SCM approach, decreasing the number of suppliers is viewed as a method of streamlining a chain and making it more efficient. This is likely to be viewed unfavourably by the RDA, since it would increase the likelihood of an interruption of supply.

Likewise, a SCM approach would favour non-core functions being managed by other specialist organisations that can perform these function more efficiently, with strong relationships being formed to ensure that both organisations benefit from this increased efficiency, and to minimise 'loss of control'. Hence, organisations focus on joint value creation, eliminating the need to expend energy gaining power in the supply chain. On the other hand, the RDA would view such outsourcing to other organisations as increasing an organisation's dependence on other organisations (Smeltzer & Sifred, 1998).

From the RDA perspective, relationships can be viewed as a strategy to gain access to the resources of other organisations, and with the appropriate relationship structure, new sources of competitive advantage can be created for both organisations. The aim of organisations in these relationships is usually to either obtain the other organisation's resources, or to retain and develop the organisation's own resources by combining them with the other organisation's resources. This can be achieved either through ownership or vertical coordination (Das & Teng, 2000).

When organisations reach a certain level of vertical coordination they become more than independent entities who transact together. The relationship between them can become a strategic asset as the resources of each organisation complements the other (Madhok, 2002), creating a competitive advantage for them both. The various views on the impact of the environment and resources in influencing strategy and relationship structures all offer valuable insights into how chains might structure themselves and the role of the channel coordinator in this process. In the following section, the literature is drawn together in the form of a framework that then forms the basis for the empirical investigation.

Framework and Methodology

Framework

In this section, a framework is presented, which argues that the structure of a supply chain is influenced by the channel coordinator's strategy, which is, in turn, influenced by the channel coordinator's motivation and vision, developed as a result of environmental and resource issues (Figure 1). Each part of this framework and the interactions between them will now be discussed.

Figure 1 - Framework based on the Literature
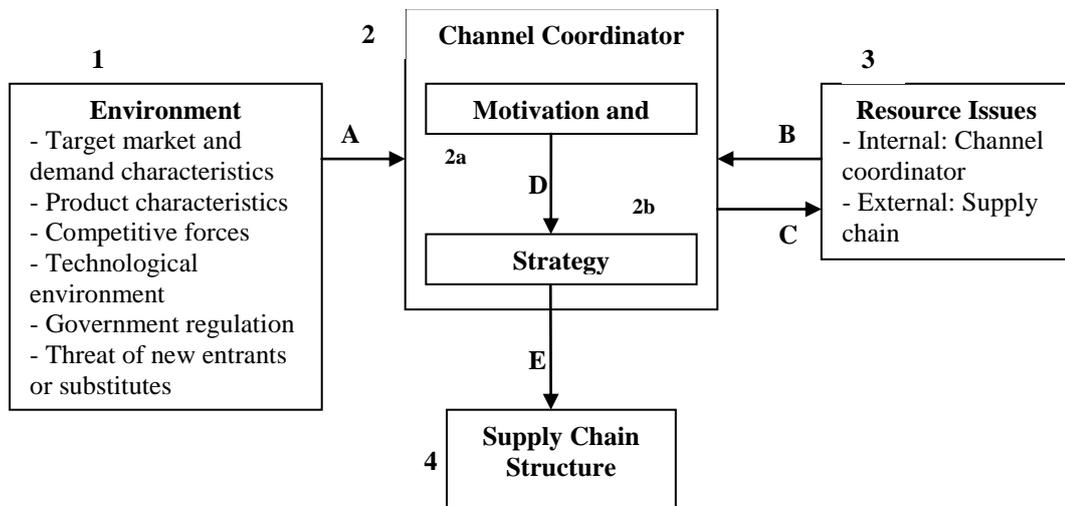
The channel coordinator (box 2) is the link between the environment (box 1), resource issues (box 3), and the supply chain structure (box 4). Through their motivation and vision (box 2a), the channel coordinator identifies a target market in the environment whose needs can be met by combining internal resources (those directly controlled by the channel coordinator) and external resources (those not directly controlled by the channel coordinator) in a suitable manner, and create a product offering that meets the demands of the environment.

The channel coordinator then creates a strategy (box 2b), which in turn, will dictate how they organise the supply chain (Supply Chain Structure, box 4) in a manner that meets the needs of the target market as efficiently and effectively as possible (arrow E) within the boundaries set by the environment and resource issues. The supply chain structure includes all of the organisations involved in the supply chain, and the relationships and coordination structures between each of them.

The channel coordinator's motivation (box 2a) refers to the motivation for being the channel coordinator of the supply chain. This may be created by the channel coordinator having a vision (box 2a), which is, in its turn, a result of a combination of both an opportunity that the channel coordinator has identified in the environment (box 1) and their ability to make profitable use of the organisation's resources (box 3).

The Environment (box 1) refers to the environment that the channel coordinator is operating in and includes several factors. This model depicts a one-way flow of influence from the Environment to the Channel Coordinator (arrow A). This is because, in a niche market, the channel coordinator is thought to have very little influence over his environment as the impact of methods such as advertising and lobbying government will be limited. That is, the channel coordinator can be described as a servant to the market as most of the influence and information flows from the environment to the channel coordinator.

Resource Issues (box 3) encompasses the resources both controlled by the channel coordinator and resources that are controlled by other organisations. There is a two-way flow between the channel coordinator and the resource issues (arrows B and C) due to an ongoing process of feedback and adaptation. The process begins with the channel coordinator determining which resources are needed to fulfil the demands of the environment. There are various methods that the channel coordinator can employ to gain access to resources not under their control that are needed to meet the needs of the target market (arrow B). This will be a mix of internal resources controlled by the channel coordinator and external resources that the channel coordinator will need to acquire (arrow C). Once access to the needed resources has been established (arrow B), the channel coordinator will create a strategy (box 2b) in order to achieve his vision (arrow D). As the environment changes (box 1), the channel coordinator will adapt, changing what resources are needed (arrow C).

The channel coordinator's strategy for meeting the needs of the target market(s) with the resources employed by the supply chain (while also ensuring stability of access to those resources) (box 2b) will influence the supply chain structure (box 4). A key decision faced by the channel coordinator in this regard is the make or buy decision; that is, should a particular step in the value added process be made in-house by the channel coordinator or purchased from another firm, and if purchased from another firm, then how should relationships with them be structured? The resulting supply chain structure could be a mix of vertical integration, vertical coordination and spot markets, depending on the importance and availability of each resource to the channel coordinator.

This process whereby the channel coordinator's strategy influences chain structure is shown by a one-way arrow in the diagram (arrow E). Although the existing supply chain structure will have some influence over the strategy of the channel coordinator, it is argued that this structure is more a result of the channel coordinator's strategy rather than the other way round. The channel coordinator may modify their strategy to a certain extent to get the existing supply chain structure to meet the needs of the market based on a cost/benefit analysis of each modification. However, it is probably the demands of the market and how this influences the channel coordinator's strategy that leads to adaptations in the supply chain structure, not vice versa.

The process depicted in the model is a dynamic one, with the channel coordinator constantly receiving data from its target market. A known characteristic of niche markets is that they can change their makeup and preferences very rapidly. Therefore this information may need to be continually monitored by the channel coordinator,

and the bundle of benefits offered by the supply chain adapted to match these changes.

This makes the cycle between the channel coordinator's vision and strategy and the resource issues a continual process as the channel coordinator assesses what resources are needed to continue to meet the demands of the changing target market and the environment in general. Thus it is argued that the channel coordinator's motivation and vision will be continually influenced by the changing dynamics of the environment, which will probably create the need for ongoing evolution of the channel coordinator's strategy and therefore, supply chain structure. Resources may be constantly bundled, unbundled and rebundled to create the most competitive offering for the target market. This whole process is an ongoing exercise in order for the supply chain to stay one step ahead of competitors and meet the continually changing needs of the target market.

Methodology

The framework discussed above was operationalised using Yin's case study method (Yin, 1984), which is a qualitative methodology. As dictated by the method, a number of propositions were developed to guide the empirical enquiry. These emerged from the framework and were:

Proposition one:
The channel coordinator will have a vision for the supply chain and the target niche market, and;
The channel coordinator will have a range of motivating factors for becoming the channel coordinator;

Proposition two:
The channel coordinator will have a strategy for the supply chain that matches the resources of the chain with the target niche market, which fulfils his vision;

Proposition three:
The nature of niche agribusiness environments affects the vision and motivation, as well as the strategy, of the channel coordinator;

Proposition four:
Resource issues affect the motivation and vision, as well as the strategy, of the channel coordinator;

Proposition five:
The strategy of the channel coordinator influences the structure of its niche agribusiness supply chain.

Since the focus of the research was on the supply chain, and the role of the channel coordinator in the supply chain, the unit of analysis was the supply chain. However, the focus of the empirical work was on the channel coordinator within the supply chain and it was their perspective that was captured. The size of the sample (number

of case studies) was dictated by the principle of saturation. This resulted in five supply chains being investigated (Mason, 1997).

The information for each case study came primarily from focussed in-depth interviews with the channel coordinator of each supply chain. Additional information was gathered from a follow up conversation by telephone with the channel coordinator, as well as written information produced by the channel coordinators and third parties.

A pilot case study was conducted to refine the questioning technique, and further case studies were chosen to ensure that both literal and theoretical replication occurred (Yin, 1984). Interviews covered channel coordinators of niche supply chains who were functioning at different levels in their respective chains – two farmers, one meat processor, one distributor and one manufacturer (these descriptions are based on the main function they performed in their respective supply chains).

The case studies were analysed using standard techniques of qualitative analysis. The most distinctive features of each case study is briefly described and then cross-case analysis is used to compare and contrast the different factors that may have some influence on supply chain structure.

Results and Analysis

In this Section, the most distinctive features of each chain are briefly discussed. This is then followed by a discussion of the results of the cross case comparisons that were undertaken.

Case Study Features

Case 1 is based on a supply chain coordinated by the farmer to sell pig meat of a consistently high quality at a premium price in the New Zealand market. The pigs are raised only on the farmer's piggery and the meat is sold through premium butchers, both directly to consumers and to restaurants. The most noticeable feature of this supply chain is the decentralisation of control. The channel coordinator in case 1 has gained competitive advantage by creating a supply chain that is difficult to replicate, and is based on strong relationship structures with the organisations critical to the supply chain. In particular, the wholesaler and some of the main butchers involved in the supply chain have a strong commitment to the success of the supply chain. The wholesaler also manages part of the supply chain, creating decentralisation of control, thereby reducing resource expenditure by the channel coordinator. In other words, the channel coordinator relies on and trusts other organisations to autonomously perform critical functions in the supply chain. This is important, as it would not be difficult for a motivated organisation to imitate the product produced by this supply chain.

Case 2 is based on a supply chain coordinated by an exporting company owned by two partners. One of the partners is also the farmer through which all of the lambs for

the supply chain are finished on. The lamb is sold to a wholesaler in the U.S., although the channel coordinator has been developing relationships directly with supermarkets not already supplied by the wholesaler. The most noticeable feature of this chain is its immaturity, which seems to have influenced its supply chain structure. In this case, the channel coordinator has used other actors to perform critical functions due to its own lack of knowledge and resources. They invest a lot of resources into communication and monitoring these other actors in the supply chain to overcome the limitations of this approach, and they interact personally with every organisation in the supply chain. This ensures that although they do not have the resource base to vertically integrate any functions, they tightly control all critical functions.

Case 3 is based on a supply chain coordinated by an exporting company that sells consistently high quality cuts of lamb to supermarkets in the United States. The most noticeable feature of the supply chain in case 3 is the channel coordinator's ownership of the distribution function to its retail customers in the United States. The channel coordinator felt that internalising this function gives them competitive advantage through the greater control they have over their supply chain and the knowledge that they have built up performing this function. As part of this process, they have created very strong relationships with the main supermarket chains they focused on supplying. The channel coordinator has not vertically integrated any functions in New Zealand, but does have a strong relationship structure with the meat processor, as this actor's function is considered critical to the success of the supply chain.

Case 4 is based on a supply chain managed by an exporting company, who also acts as the primary meat processor. The channel coordinator sells a mix of certified natural and organic beef to supermarkets in the United States. The channel coordinator stated that they preferred to be low cost rather than to invest in infrastructure. To facilitate this, they have a strong relationship with the main supermarket chains they supply. They utilise the services of a wholesaler to deliver their product to these supermarkets and to consolidate their billing. They also use a leasing arrangement with the meat processor, allowing it to use its own butchers without the need to invest in infrastructure. The channel coordinator states that creating mutually beneficial relationships, rather than using vertical integration, simplifies their processes while still allowing them to retain control of their product and brand over the length of the supply chain.

Case 5 is based on a supply chain managed by the manufacturer. The manufacturer produces high quality meat products made from lamb, beef or chicken. The product is sold to supermarkets in New Zealand. This supply chain is very different to the other four chains. The channel coordinator controls the manufacturing process, purchasing meat with specific product attributes from the spot market, which they then process using their own patented technology. From this, they produce a consistently high quality, processed product. This makes the supply chain very short in comparison to those of the other four cases. As a result, the channel coordinator does not feel the need to control or closely monitor the performance of any other part of the supply chain.

It can be observed that there are quite striking differences in the supply chain structures of the case studies. However, there are also many common features of each supply chain. These similarities and differences are now discussed.

Cross Case Comparisons

As predicted by the framework, differences in the environment (such as the specific product attributes demanded by the target market) and differences in resource issues (such as the extent of the financial resources available to the channel coordinator) influenced the strategies employed by the channel coordinators. These different strategies, in their turn, resulted in differing supply chain structures and relationships, which were based on differing levels of communication, trust, profit and risk sharing and partner autonomy. For example, in case 1 the channel coordinator has a strategy of using other organisations to monitor and manage functions critical to the success of the supply chain (decentralisation of control). Therefore, even though it maintains good communication with other chain actors, it has little need to expend its own limited resources, as other organisations are able to undertake critical functions. In case 2, on the other hand, part of the channel coordinator's strategy is to personally communicate with, and coordinate, every actor in the supply chain and closely to monitor as many functions as they are able.

The environment was shown to have a key influence on the vision and motivation of a channel coordinator; for example, in case 1 the channel coordinator created the supply chain following his discovery that few high quality restaurants offered pork on the menu due the lack of consistently high quality product. There was also evidence that the environment of the channel coordinator can have some influence on their strategy. For example, in case 4, the channel coordinator switched from sourcing steers to bull beef when it was discovered that consumers actually preferred a higher fat content in the product to improve its flavour, even though they had stated the contrary during market research. Product characteristics can also play a role in strategy; for example, the channel coordinator in case 1 went to great lengths not to stress their pigs before slaughter to maintain their pH at an optimum level for their high quality niche market. All channel coordinators faced challenges in managing the perishability of meat and the associated government regulations.

Resource issues were shown to have a very strong influence on the strategy of channel coordinators, and ultimately, on the supply chain structure. In all of the cases, the channel coordinator's strategy overcame his lack of knowledge in certain areas by partnering with an actor knowledgeable in that area. Examples include the partnering of the channel coordinator with the wholesaler in cases 1 and 2, with the customs broker in cases 3 and 4, and with the merchandising company in case 5. Such partnering appears to be particularly important when supply chains are in their development phase, but may continue into the maturity phase. For example, some channel coordinators admitted that they could now perform functions that another actor performs because they had accumulated the necessary knowledge over time to do so. Despite this, they chose to maintain their relationship with their partner, as this

simplified their processes. Examples of this are the relationship between the channel coordinator and the import broker in cases 3 and 4.

All of the channel coordinators ensured that they controlled the functions in the supply chain that were necessary to retain control of their brand and to maintain the consistency of the product marketed under it. That is, they ensured that they had control of those resources that acted as sources of competitive advantage for them. Their control of these key functions came either directly (through ownership of the function) or indirectly (through a relationship with another actor). For example, in case 3 the channel coordinator owns the distribution function in the United States as he sees this as critical to the success of his supply chain, while in case four the channel coordinator works closely with a U.S. distributor while retaining control of the product through to the supermarkets. Controlling key functions through relationships didn't necessarily signify that the channel coordinator lacked the resources to perform this function themselves. As noted above, the channel coordinators in cases 3 and 4 chose to have another party perform a key function despite having been able to acquire the resources to do so themselves. It is interesting to note that the key functions that channel coordinators sought to control occurred at different points in the chain, which reflected those parts of the chain where their competitive advantage lay. For example, the channel coordinator in case 3 owns the U.S. distribution function, while in case 4 the channel coordinator is responsible for the majority of the meat processing function.

All channel coordinators used incentives to motivate the other actors in the supply chain to perform their required functions; usually in the form of a profit incentive. For example, in case 2 the channel coordinator supplies the U.S. distributor (who is also a meat processor) with product, which fills the gap created by the shortfall in American produced lamb, while also taking a percentage of the profits. In some cases this has gone a step further, with the channel coordinator employing a strategy utilising persuasiveness to motivate some actors by creating reciprocal dependency with them. This can be observed in case 1 where the channel coordinator has made it more profitable for the wholesaler to sell the channel coordinator's branded product in place of his own branded product to customers, both new and existing.

Conclusion

The aim of this study was to gain a better understanding of the structure of niche supply chains in the New Zealand meat industry, and the role of the channel coordinator in creating and maintaining these structures. Although it is widely acknowledged that the channel coordinator is a critical player in supply chains, there is very little literature on the role of this organisation.

A framework was devised that linked the channel coordinator to supply chain structure. This framework suggests that the channel coordinator is motivated to scan the environment to identify a niche market opportunity. Its vision emerges from this process and it then formulates a strategy for delivering the requirements of this market niche. In doing so, it must utilise both its own internal resources, and also the

external resources of other chain participants. In doing so, it creates a supply chain structure that can match these resources to the demands of the market.

This reasoning was supported by the empirical investigation of five niche chains in the New Zealand meat industry. This found that the environment had a key influence on the motivation and vision of the channel coordinator, while resource issues had a strong influence on the strategy used to achieve this vision. When a channel coordinator lacked resources, they partnered with other organisations to gain access to required resources. However, they ensured that they retained strong control of those functions and resources that ere sources of competitive advantage to them. They did this through ownership of those functions and resources or by building very strong relationships with other organisations in the chain. They used incentives to motivate these organisations, usually in the form of a profit incentive.

This research has enhanced understanding of the structure of supply chains by its focus on the channel coordinator. In particular, it has drawn a clear link between the role that the channel coordinator plays in matching the needs of the market with the resources available to the chain to meet those needs, and the consequences of this for chain structure. This research has been particularly useful to small firms targeting market niches, as it has developed an understanding of how some firms have overcome their resource limitations to work with larger firms and create a product offering customised for a specific market niche.

References

Black, J. A., & Boal, K. B. (1994). Strategic Resources: Traits, Configurations and Paths to Sustainable Competitive Advantage. *15*(131-148).

Bowersox, D. J., & Closs, D. J. (1996). *Logistical Management*. New York: McGraw-Hill Companies.

Bowersox, D. J., Closs, D. J., & Cooper, M. B. (2002). *Supply Chain: Logistics Management*. New York: McGraw-Hill/Irwin.

Chandler, A. D. (1962). *Strategy and Structure: Chapters in the History of the Industrial Enterprise*. Cambridge, Massachusetts: The Massachusetts Institute of Technology Press.

Chandrashekar, A., & Schary, P. B. (1999). Toward the Virtual Supply Chain: The Convergence of IT and Organization. *The International Journal of Logistics Management, 10*(2), 27-39.

Coughlan, A. T., Anderson, E., Stern, L. W., & El-Ansary, A. I. (1996). *Marketing Channels* (Sixth ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.

Das, T. K., & Teng, B.-S. (2000). A Resource-Based Theory of Strategic Alliances. *Journal of Management, 26*(1), 31-61.

Ertek, G., & Griffin, P. M. (2002). Supplier- and Buyer-driven Channels in a Two-stage Supply Chain. *IIE Transactions, 34*, 691-700.

Etgar, M. (1976). Effects of Administrative Control on Efficiency of Vertical marketing Systems. *Journal of Marketing Research, 13*(1), 12-24.

Fitzpatrick, W. M., & Burke, D. R. (2000). Form, Functions, and Financial Performance Realities for the Virtual Organisation. *S.A.M. Advanced Management Journal, 65*(3), 13-20.

Galbraith, J. R., & Kazanjian, R. K. (1986). *Strategy Implementation: Strucutre, Systems and Process*. St. Paul, MN: West Publishing Company.

Galbraith, J. R., & Nathanson, D. A. (1978). *Strategy Implementation: The Role of Structure and Process*. St. Paul, MN: West Publishing Company.

Galunic, D. C., & Eisenhardt, K. M. (1994). Renewing the Strategy-Structure-Performance Paradigm. *Research in Organizational Behavior, 16*, 215-255.

Hunt, S. D., & Morgan, R. M. (1995). The Comparative Advantage Theory of Competition. *Journal of Marketing, 59*(2), 1-15.

Lambert, D. M., & Cooper, M. C. (2000). Issues in Supply Chain Management. *Industrial Marketing Management, 29*(1), 65-83.

Lambert, D. M., Emmelhainz, M. A., & Gardner, J. T. (1996). Developing and Implementing Supply Chain Partnerships. *The International Journal of Logistics Management, 7*(2), 1-17.

Landeros, R., Reck, R., & Plank, R. E. (1995). Maintaining Buyer-supplier Partnerships. *International Journal of Purchasing and Materials Management, 31*(3), 3.

Little, R. W. (1970). The Marketing Channel: Who Should Lead this Extra-corporate Organization? *Journal of Marketing, 34*(1), 31-38.

Madhok, A. (2002). Reassessing the Fundamentals and Beyond: Ronald Coase, the Transaction Cost and Resource-based Theories of the Firm and the Institutional Structure of Production. *Strategic Management Journal, 23*, 535-550.

Markides, C. C., & Williamson, P. J. (1996). Corporate Diversification and Organizational Structure: A Resource-based View. *Academy of Management Journal, 39*(2), 340-367.

Mason, J. (1997). *Qualitative Researching*. London: SAGE Publications Ltd.

Miles, R. E., & Snow, C. C. (1978). *Organizational Strategy, Structure and Process*. New York, NY: McGraw Hill.

Miles, R. E., & Snow, C. C. (1984). Fit, Failure and the Hall of Fame. *California Management Review, 26*(3), 10-28.

Ouden, M., Dijkhuizen, A. A., Huirne, R. B., & Zuurbier, P. J. (1996). Vertical Cooperation in Agricultural Production-Marketing Chains, with Special Reference to Product Differentiation in Pork. *Agribusiness, 12*(3), 277-290.

Peck, H., & Juttner, U. (2000). Strategy and Relationships: Defining the Interface in Supply Chain Contexts. *The International Journal of Logistics Management, 11*(2), 33-44.

Pels, J., Coviello, N. E., & Brodie, R. J. (2000). Integrating Transactional and Relational Marketing Exchange: A Pluralistic Perspective. *Journal of Marketing Theory and Practice, 8*(3), 11-20.

Peteraf, M. A. (1993). The Cornerstones of Competitive Advantage: A Resource-Based View. *Strategic Management Journal, 14*(3), 179-191.

Peterson, H. C., & Wysocki, A. (1998). *Strategic Choice along the Vertical Co-ordination Continuum*.Unpublished manuscript, Lansing, Michigan.

Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.

Porter, M. E. (1985). *Competitive Advantage. Creating and Sustaining Competitive Advantage.* New York: The Free Press.

Rasheed, H. S., & Geiger, S. W. (2001). Determinants of Governance Structure for the Electronic Value Chain: Resource Dependency and Transaction Costs Perspectives. *Journal of Business Strategies, 18*(2), 159-176.

Smeltzer, L. R., & Sifred, S. P. (1998). Proactive Supply Management: The Management of Risk. *International Journal of Purchasing and Materials Management, 34*(1), 38-45.

Spekman, R. E., Salmond, D. J., & Lambe, C. J. (1997). Consensus and Collaboration: Norm-regulated Behaviour in Industrial Marketing Relationships. *European Journal of Marketing, 31*(11/12), 832-856.

Sporleder, T. L. (1992). Managerial Economics of Vertically Coordinated Agricultural Firms. *American Journal of Agricultural Economics*, 1226-1231.

Ulrich, D., & Barney, J. B. (1984). Perspectives in Organizations: Resource Dependence, Efficiency, and Population. *The Academy of Management Review, 9*(3), 471-481.