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Strategic Positioning Under Agricultural Structural Change: A Critique of Long Jump Co-operative Ventures

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Abstract

This study utilizes strategic management theory to analyze the recent proliferation in non-commodity vertical integration producer-owned businesses in the US. The paper introduces the notion of the Value Creation Triad where ownership, competency, and control need to be aligned for success. Very related to the Triad concept is the differentiation in strategy between long and short jumping. The paper presents an empirical case of successful vertical integration by a New Zealand lamb cooperative.

Keywords: strategic management theory, value added agriculture, vertical integration, producer-owned enterprise, core competencies, tacit knowledge, productivity gap, opportunity gap

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Introduction

Structural change is a disruptive process. Whether you are in the steel industry in the 1970's or production agriculture in the 1990's the effects are extremely unsettling (Rose and Thomas, 2000; CP, 2000). Producers are being forced to either exit the industry or adopt new business models, but to accomplish this they are faced with the difficult task of strategically repositioning themselves. Just in the state of Illinois, for example, there were 40 value added processing business plans in development during 2000¹ (Saputo, 2000). These long jump ventures into processing are risky though and raise important fundamental questions about how producers select appropriate strategies, and is the subject of this manuscript.

While there has been research and analysis as to the success factors of new cooperatives (Waner, 2000; Bruynis et al, 2001; Torgerson, 2001; Carlberg et al, 2004), little empirical research has been conducted as to their success and failure rates. Waner (2000) and Torgerson (2001) believe the failure rate to be less than the failure rate of the average startup. Sporleder and Bailey (2001) in their model of new generation equity investment assume a moderate failure rate range of 33% and 50%. The research is clear as to success factors, focusing on the tactical features of the business, i.e., adequate capital, hiring skilled management, and having an engaged board of directors. Left unaddressed in the analysis are the strategic forces that determine success or failure. With this in mind this manuscript analyses the cooperative formation question from a strategic management perspective.

Table 1: Number of Swine Herds in Selected States and the United States (1989 - 1999)

Location	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change
Illinois	16,600	15,300	14,800	13,500	11,500	11,000	9,600	8,800	7,500	7,000	6,500	6.08%
Indiana	15,000	13,000	12,000	12,800	12,300	11,200	9,600	8,500	6,500	6,400	6,200	5.87%
Iowa	37,000	35,000	34,000	35,000	33,000	29,000	25,000	21,000	18,000	17,500	14,500	6.08%
Missouri	16,000	16,000	15,000	13,000	11,000	10,500	8,500	7,000	5,500	5,000	4,000	7.50%
4-State Region	84,600	79,300	75,800	74,300	67,800	61,700	52,700	45,300	37,500	35,900	31,200	6.31%
United States	300,910	268,140	247,090	240,150	218,060	207,980	182,700	157,450	122,160	114,380	98,460	6.73%

Source: NASSa, 2000; NASSb, 2000; NASSc,2000

¹ There were 147 closed-member producer cooperatives engaged in both long and short jump ventures throughout the US in 2003 (Merrett et al, 2003).

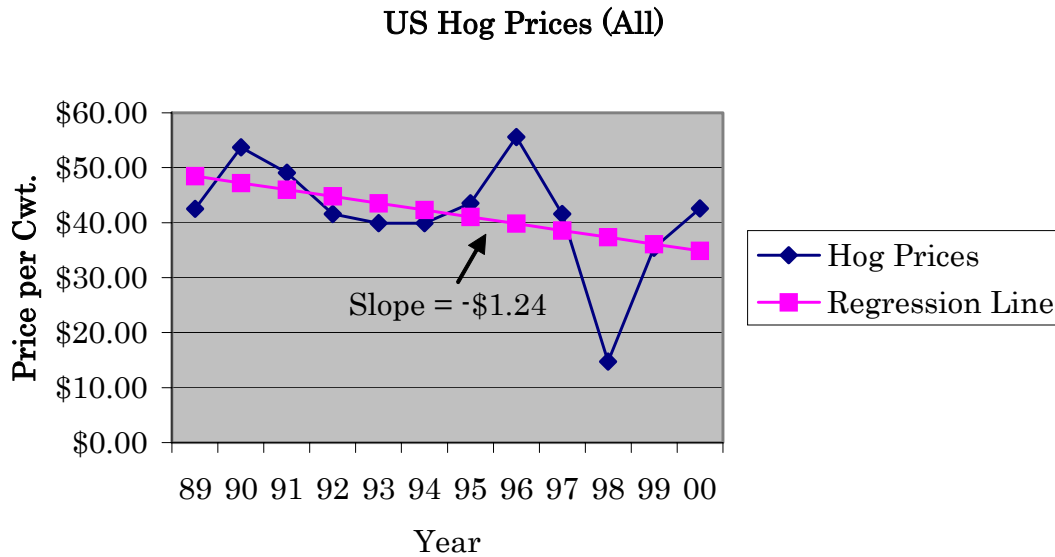


Figure 1: US Hog (All) Price 1989 - 1999

Source: NASSd, 2000

Specifically, this manuscript addresses three aspects of the strategy process. The first analyzes the strategic implications of brick and mortar investments (long jumps). These are of great interest to agricultural producers looking to vertically integrate into food or fuel processing. Second, given this issue of producer vertical integration, the paper conveys how firms develop sound strategy. Finally, a case study of the Atkins Ranch brand, developed and owned by a farmer-owned integrated lamb cooperative from New Zealand, provides an empirical context to better understand the complexities and challenges of long jumping.

The effects of structural change in North America are especially acute for grain farmers and hog producers. The rate of exodus of independent farmers is startling throughout the prairies of Canada and the Midwest U.S. The Canadian press stated that 6,000 farmers were forced out of business in 2000 (CP, 2000) and the industry was suffering a 7% annualized attrition rate (Statistics Canada, 2000). In the United States, the number of hog operations fell at a similar rate, 6.7%, since 1989 (Table 1). Other than a brief respite in 1997, hog prices have fallen over the last 10 years (Figure 1). This is due, in part, to the rapid increase in production capacity by integrated swine systems. Consequently, returns to outdated organizational forms decline and capital leaves searching out superior opportunities. For example, capital continues to flow to integrated systems, such as Smithfield Foods whose market capitalization has risen almost \$1,000,000,000 or 148% since 1996 (Morningstar, 2000).

One of the most common strategic choices for producer groups are producer-built processing plants, e.g. hog slaughter and ethanol. Producers pursuing vertical integration often give three rationales:

- 1) The first is to take control of their own crop (Smith, 1998; Producers Alliance, 1999). Harold Tilstra, a farmer from Luverne, Minnesota is senior vice chair of Cornerstone Cooperative and chair and chief executive officer of Agri-Energy LLC., a producer-owned ethanol company in southern Minnesota. In an interview he commented that

...such a concept (producer-owned value added production) is critical to farmers seeking to survive in the future. Agriculture margins are increasingly narrow ... and...retaining commodity ownership until additional value has been built into their crops means more returns for producers as well as economic growth for their communities.(Tilstra in Smith, 1998)

However, does this strategy really mean “more returns for producers”?

- 2) A second rationale, is that integration allows producers to capture the higher returns and lower price volatility downstream (Forester, 1996; Siebert et al, 1997; Smith, 1998; Smith, 2000; Ball, 2000). Gary Ball, salesman for Ursa Farmer Co-op in Illinois commented:

As a rule, selling pork makes money and when it doesn't, it loses a whole lot less than selling hogs. It is clear the independent pork producer needs to capture a larger portion of the farm to market share. Owning and operating your own packing plant is the most profitable and efficient way to secure a larger slice of the farm to market share. (Ball, 2000: p. 10)

Producers are correct recognizing that an ever-increasing proportion of a food product's final value is produced and captured by enterprises beyond the farm gate (Fabi, 2000). A fundamental question and a question of strategy remains; how best can producers capture a greater proportion of the value in the downstream supply chain?

- 3) Finally, a very practical rationale for integrating downstream is to replace lost markets due to industry consolidation (Illinois Farm Bureau, 1999; Ball, 2000). This has been especially acute for an Illinois group, who has recently formed American Premium Foods. American is a recently established Illinois new generation cooperative (NGC) whose objective was to build a producer-owned hog slaughter plant. This group, like many NGCs, funds itself through producer equity, government grants, and debt capital. In the case of American, 30% was

producer equity, 11% contributed by the state, 14% through capital leasing, and 45% bank financed (Smith, 2000). The company was structured as a new generation cooperative with the average member investing \$23,400 (Smith, 2000). When asked why they thought the construction of a new packing plant was a good idea, members felt they had to do something because their traditional marketing channels and outlets had disappeared (Baumgartner, 1999; American Heritage Farms, Inc., 1999; American Family Farms Co-op, 1999; Baumgartner, 2000;).

This logic is consistent with Sexton and Iskow (1993) that look at cooperatives as solutions to a market failure. Sexton and Iskow (1993) were unable to empirically prove that marketing cooperatives (vertical integration into marketing and or processing) improved economic efficiency or reduced market failures. Theoretically though they argued, consistent with the remarks above; that the role of the vertical move was in fact to eliminate the market failure by disintermediating source of the market abuse.

The logic expressed above by the producers as to their reasons for vertically integrate differ though significantly with others' who looked at incentives within the context of an industrializing agriculture. Boehlje and Schrader (1996 and 1998) analyzed structural changes in the agri-food complex and identified greater coordination and integration as essential features of the modern landscape. The greater coordination from their perspective has two key elements, the first intends to deliver greater value to end user markets by better meeting their needs and the second is that the means to those ends is through enhanced knowledge and information exchange. While the activity of producers integrating is consistent with the increased vertical alignment occurring in the modern agri-food system, the producer rationale for integrating, differs in an important way from this logic. The producers look to vertical integration/coordination to retain greater value for themselves as a response to poor market conditions. Boehlje and Schrader don't look at vertical integration and coordination to help suppliers attain greater market power, but look to these new structures as mechanisms designed "to accommodate...end-user...demands" (Boehlje and Schrader, 1996, p. 335). Using this logic, producer vertical ventures may be operating in a value-vacuum because they are formed un-anchored by end-user demand. This lack of a connection to demand thus may limit a venture's viability.

Strategic Positioning

Strategic Management Theory of Core Competencies and Tacit Knowledge
For producers, the forces of structural change are strong and the need for strategies to participate in downstream markets is critical. Strategic positioning is an adaptive strategy for value creation in response to acute changes in a firm's competitive environment (Rumelt, 1982; Porter, 1980; Itami, 1987; Quinn et al,

1990; Prahalad and Hamel, 1990; D'Aveni and Ilinitich, 1992; Prahalad; 1993; Mintzberg, 1994; Mintzberg et al, 1998). Two of the most compelling concepts from the strategic positioning literature are core competency (Quinn et al, 1990; Prahalad and Hamel, 1990) and tacit knowledge (Itami, 1987; Nonaka and Takeuchi in Mintzberg et al, 1998) These concepts have been very useful explaining why in dynamic environments some firms succeed while others languish.

First, successful adaptors (in our case producers wishing to vertically integrate) understand their capabilities as bundles of competencies, not products or functions (Prahalad and Hamel, 1990; Mintzberg and Quinn, 1996; Barney, 2002). This is especially critical in dynamic industries or periods of structural change where products become outdated and adaptation is required. Competencies are the human capital in the firms, the shared knowledge, the corporate history, communication networks and traditions, organizational structure, and collective learning (Prahalad, 1993). It is all that remains if you were to remove the products. Itami (1987) identifies core competencies as invisible assets, and even though they are difficult to measure, they are the essence of a firm's value. "Invisible assets are the real source of competitive power and the key factor in corporate adaptability for three reasons: they are hard to accumulate, they are capable of simultaneous multiple uses, and they are both inputs and outputs of business activities (Itami, 1987: p14)." When applied to producer ventures; if all producers are attempting to do is vertically integrate through physical asset accumulation, they can be at best no better than anyone else in the market with the same bundle of physical assets. This is the essential strategic notion of real competitive advantage and uniqueness of resources within the industry (Porter, 1980; Barney, 2002).

Key components of core competency are information and knowledge. Managing the flow of information and productivity of these knowledge assets is complex yet critical for strategic repositioning. A firm that has little experience in an industry has little access to critical information flows or experiences to build the intangible assets necessary for competitive success (Prahalad and Bettis, 1986). External information flows originate in the firm and flow to clients and suppliers. Internal flows pass to the firm from clients and suppliers and intra-firm flows occur across functions and divisions within the firm (Itami, 1987). These information flows and management are critical to the learning organization (Mintzberg, 1987; Senge, 1990) and the buildup of, and production from, the stock of invisible assets and the firm's core competencies. Without these experiences the firm cannot create the intangible asset base necessary for competitive success. Firms can purchase hard assets, but as they are not inimitable they do not generate value by themselves but rely on the intangible assets as the source of value (Itami,1987).

The intangible nature of core competencies poses risks to good strategic thinking. When core competencies are tacit, idiosyncratic, and the dominant logic; firms may be myopic about their real value contribution (Barney, 2002). As firms seek to

diversify to exploit these competencies, key is understanding whether the value dimension of the competency is trivial or significant. At a more practical level is the value explicitly able to favorably impact costs and revenues.

This understanding of the significance of the core competencies is consistent with the Nonaka and Takeuchi's (1995) discussion of tacit knowledge and effective decision making. Knowledge is explicit when it is articulated and codified in writing, verbalized or coded in drawings, computer programs or other products. Tacit knowledge however is uncoded and non-verbalized. It reflects the difference between what we know and what we can tell (Polyani, 1966). Thus tacit knowledge may not even be able to be verbalized or articulated. It can be acquired largely through personal experience and is often embedded in the routines of organizations or individuals and therefore difficult to copy and convey. Much of the knowledge needed for successful decision making in a complex world is not explicit. It is made up of unique experiences generated over time and through interactions that cannot be replicated by formal rules (Mintzberg, 1987).

Managers... need to get out of the old mode of thinking that knowledge can be acquired, taught, and trained through manuals, books, or lectures. Instead, they need to pay more attention to the less formal and systematic side of knowledge and start focusing on highly subjective insights, intuitions, and hunches that are gained through the use of metaphors, pictures, and experiences (Nonaka and Takeuchi, in Mintzberg, 1998)

Decisions are made on instinct and common sense, and then they become explicit and finally are judged within the organizational context. Once judged either favorably or unfavorably, they are interpreted and become again part of the tacit knowledge base. This occurs in a spiraling process from tacit to explicit and back again through an important confirmation step (Nonaka and Takeuchi, in Mintzberg, 1998)

Strategy emerges from this incremental process of building experiences and expertise that are brought to bear on the next set of challenges (Quinn, 1977; Mintzberg, 1987). To be successful tacit knowledge is required as it is fundamental to value creation and competitiveness. A firm wishing vertically integrate, say from production to processing, must access the tacit knowledge that produces value in addition to gaining access to physical assets. But by definition a firm undertaking a long jump venture possesses little tacit knowledge overlap with its new endeavor, creating a structurally inconsistent situation. This is the essence of the challenges of long jumping, moving beyond one's core competencies and tacit knowledge.

Strategic Repositioning

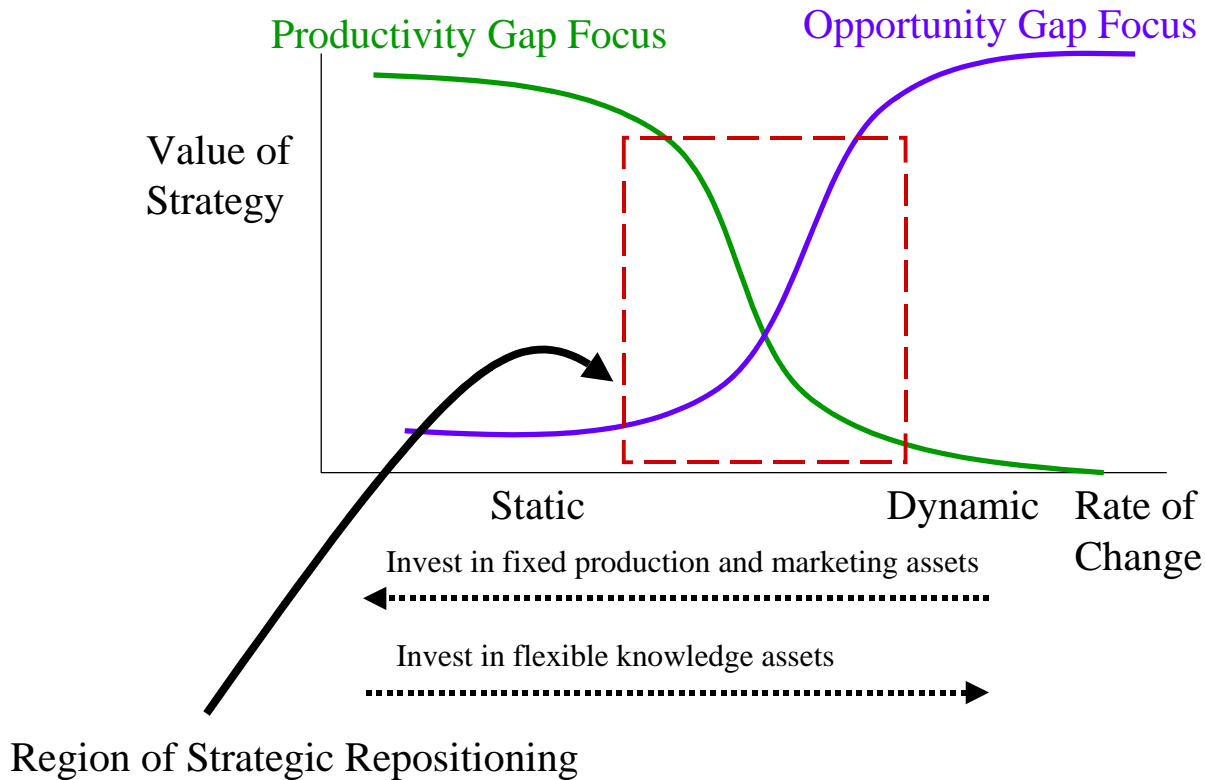


Figure 2: Strategic Repositioning

The Opportunity Gap

Understanding one's own core competencies and access to, or the possession of, tacit knowledge are fundamental to strategic repositioning. Prahalad writings capture the significance of these concepts in his model of the productivity and opportunity gap (Figure 2). A firm has two basic strategic positions, a focus on productivity or a focus on opportunity. Each strategy has its place.

A productivity gap orientation focuses on present routines, processes, products, and markets (Prahalad, 1993). Decisions in such firms involve improving productivity of known systems and routines. This strategy is important for success when markets are static, mature, or fully competitive. In such settings core competency and tacit knowledge advantages are more stable. If preferences remain unchanged or markets are mature, firms are able to invest in assets corresponding to long production runs and lowering marginal costs (Ng and Goldsmith, 1998). This is the case in fully competitive markets where price is exogenous and improving production efficiency and minimizing costs drive profitability.

Historically, commercial agriculture could focus on the productivity gap. The fields of farm management and agricultural economics, based on the neoclassical traditions of Walras (1954 in Varian, 1984) and others, have historically focused on optimizing the input mix and minimizing costs. Example methodologies are the production function approach, linear programming, and measuring productive efficiency. These have been appropriate methodologies because agricultural markets historically have been competitive, dominated by commodities, employed broad and relatively static standards and grades, and involved market prices exogenous to the farm's problem.

The difficulty arises when markets become dynamic and firms enter a period of structural change. Or in the case of US agriculture under globalization markets become more rivalrous. Product or production-based strategies are lost because the markets with which they are associated have now become temporal and difficult to define. This is due to end-user needs becoming temporal and global competitors emerging attempting to serve those needs (Goldsmith and Bender, 2004). Traditional competencies become less effective and tacit knowledge of new markets is insufficient. The comfortable fit between production process, product, and market is altered. In terms of strategic positioning, continued focus on the productivity gap is relatively simpler because it attempts to make known processes better, serve known markets more effectively, and produce known products more efficiently. However, globalization and the structural change that results have seriously challenged the traditional US business model of being the world's low cost producer of commodities. Technology is packaged in ever more useable formats adaptable by almost any producer in the world (Goldsmith and Ramos, 2002). Falling farmer incomes in North America reflect decreasing commodity prices outpacing producers' abilities to increase productivity. The productivity gap strategy can be a failed strategy as costs become harder to reduce, foreign producers are willing to accept lower prices, and commodity's share of total food value declines. This requires that some U.S. producers may need to shift away from the productivity gap and focus on the other half of the value creation equation, defined by Prahalad (1993) as the opportunity gap. This though creates a real challenge because as producers strategically reposition they need to access and leverage the competencies and knowledge necessary to compete in new markets.

To accomplish such a strategic repositioning, a firm assesses itself not on its current or historical production plan, the products that it produces, but on its core competencies. During times of increasing turbulence and instability, firms need to refocus on investment in, and leveraging of, knowledge assets that are inimitable and provide them a competitive advantage in markets where direct competition between firms (rivalry) is the norm. The concept of core competency shifts the strategy process away from the obvious to the yet unexploited. This would apply to long jump strategic repositioning by farmers looking to create more value through

Region of Strategic Repositioning*

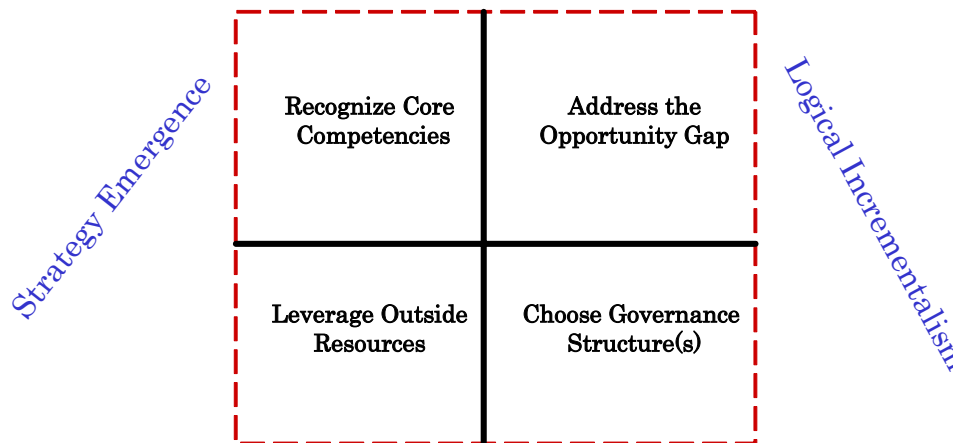


Figure 3: Regions of Strategic Repositioning

*During periods of market turbulence

vertical integration. For producers they would be shifting their focus from the production side of the business to the marketing side. The marketing knowledge gained then feeds back into changes and adaptations to the production plan and asset mix of the vertically integrated endeavor. Joining a firm's understanding of its core competencies with a demand or market perspective allows firms to create value by more directly addressing and incorporating customer needs and opportunities. New opportunities in agriculture arise from the uniqueness of the farm as a resource base when matched with the needs of downstream clients or consumers.

Strategic Architecture

Strategic repositioning during periods of market turbulence involves a four-part process (Figure 3), Prahalad (1993) calls this the strategic architecture.

- 1) The first aspect is to recognize a firm's core competencies. What are the firm's inimitable resources? In the case of a group of agricultural producers, what intangible assets does it bring to the supply chain?
- 2) Second, is for the firm to move beyond the productivity gap and a cost focus, and give attention to the opportunity gap and a value focus. Rackam and Devincentis (1999) call this value chain mapping; a creative process looking for new opportunities involving suppliers and customers. Part of this process involves understanding broad trends and indicators about an industry. More importantly

this involves the supplier (producer group) understanding customers’ needs, challenges, opportunities, and competitive landscape². Farmers as they look to jumping beyond commodity production will be hard pressed to create value without an understanding what clients value.

- 3) The third aspect leverages resources. Firms need to access resources outside their own firm to acquire the necessary tacit knowledge and avoid the managerial burdens of vertical integration. Vertical integration involves conducting business in new stages of the marketing channel. This offers opportunities for higher returns and reduced volatility but also encompasses significant additional managerial responsibilities, new competencies, and unknown tacit knowledge.
- 4) Finally, the firm needs to evaluate the appropriate governance structure to leverage the necessary knowledge and managerial expertise and balance that with ownership and control. In the Atkins Ranch case that follows producers knew what they didn’t know. Then they made sure they acquired the necessary knowledge resources.

Value Creation Triad

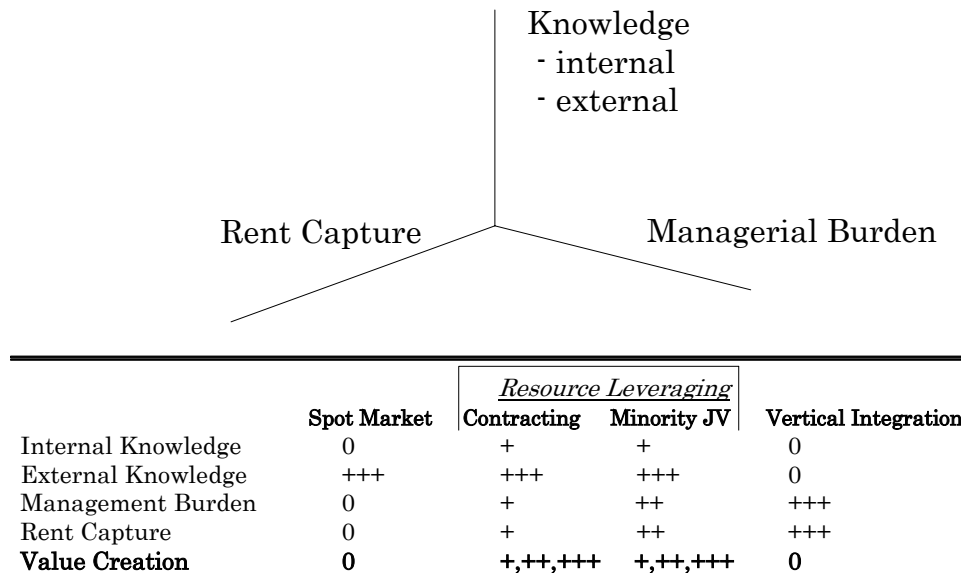


Figure 4: Value Triad

² See Wayland and Cole, 1997; Sherman et al., 2003; Peppers and Rogers, 2004.

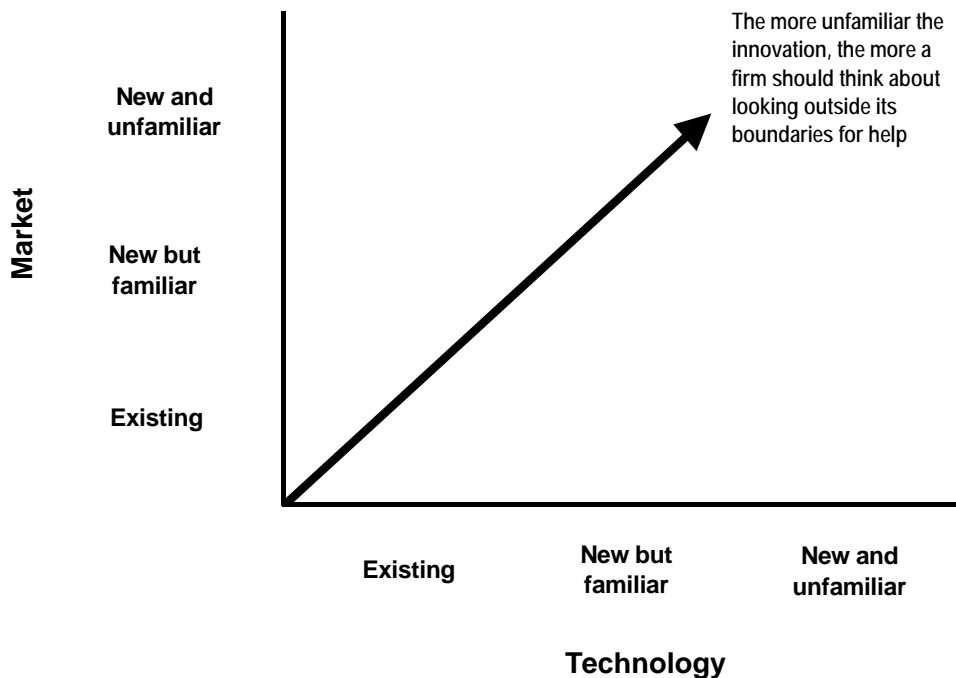


Figure 5: Innovation Adoption under Familiarity Constraints

Source: Adapted from Afuah (1998)

Value Creation Triad

The Value Creation Triad relates the three factors of knowledge, managerial burden, and ownership control to each other as well as with the choice of governance structure and the opportunity to capture the value (Figure 4). By itself governance does not create value but it can be conducive to creating value. The triad models a tradeoff problem between the need for knowledge that can be sourced either internally or externally, the management burden, and the ability to capture rents.

There are numerous governance options open for producers to participate in the supply chain (Adams and Goldsmith, 1999). On one end of the governance continuum resides the spot market strategy option where producers operate decoupled selling commodities. At the other extreme resides the long jump option of full integration where the producers own both sides of the transaction. Interestingly neither extreme strategy on its own contributes the necessary tacit knowledge. In the spot market case, producers' value in the supply chain is captured in the commodities they sell. The marketing stages are decoupled between production and processing. External knowledge may be high but exists with other firms in the marketing channel. None of that tacit knowledge and very little of the explicit knowledge flows back to producers.

With vertical integration, producers would own both sides of the transaction. The ability to capture rents from the new supply chain arrangement is highest because of complete ownership. Correspondingly though, the managerial burden is high. What limits the value creation in this scenario is the inability to source knowledge because producers' internal knowledge base is rooted in production and vertical integration constrains information partnering because by definition the same firm owns both sequential stages of production. Producers, realizing the inconsistency between available knowledge and management responsibility might try to access knowledge outside the firm (Figure 5). But as stated above, tacit knowledge is the source of value and innovation rents, contributors of knowledge will require a premium for the knowledge and innovation they are contributing to the value proposition. Therefore producer vertical moves by necessity will require significant relationships in order to acquire the necessary knowledge resources. These relationships will need to be viewed to be mutually beneficial and will likely involve producers exchanging ownership and/or control of the business to acquire the necessary knowledge. In the Atkins case below the producers paid for the knowledge outright instead of offering an equity stake. The Value Triad captures this tension in the long jump venture where tacit knowledge is at a premium and the entity that owns it deserves to capture the value. This reality can doom a vertical venture to be under capitalized in terms of tacit knowledge. More reasonable, and possibly why they are more common, is quasi-integration, such as contracting and joint ventures. Under these governance structures producer managerial burdens and rent appropriations are appropriately reduced better balancing the knowledge requirements, managerial burden, and rent capture.

We have argued that long jump producer-owned ventures are a difficult means at strategic repositioning. Structural change and economic duress for producers are real though and producers are looking for alternatives to the commodity model. The following case study highlights a New Zealand firm that was able to long jump, acquire the necessary knowledge, maintain control, and most importantly capture value.

Atkins Ranch

Following the wide-ranging economic reforms in the mid 1980's of the New Zealand economy, including the agricultural sector, a small group of Wairarapa³ sheep farmers recognized that they needed to identify and develop an alternative marketing channel for their core product, lamb, as the traditional channels were not providing sufficient economic returns.

After some initial research in 1988, the group recognized that there was a market opportunity in the Bay Area of California providing a high quality chilled lamb

³ From the Wairarapa Valley region of the North Island of New Zealand.

product to the hotel and restaurant trade as well as the supermarkets that were servicing either ethnic communities of traditional lamb consumers or high disposable income consumers. They faced two basic questions 1) how to develop the market in the Bay Area, and 2) how to establish a supply chain flexible enough to ensure a sufficient supply of the specified premium product.

A closed membership cooperative of 106 producers was established to provide the initial financing for the development and establishment of these marketing opportunities. The cooperative members each had to provide an establishment investment of approximately NZD 10,000. This was later increased through two additional funding drives to approximately NZD 40,000. For this equity investment members received the first right of supply for the new marketing channel. The cooperative developed a flexible market driven supply chain starting with information collection and knowledge acquisition from the customer and client in marketplace which then flowed back directly to the individual chain participants including producers. This allowed chain members to adjust their operations to deliver the combination of product and service attributes that maximized their residual claims. The cooperative initially made minimal investments in hard physical assets; effectively all of the financing was used for market development and supply chain relationship development. Bank financing was engaged only after markets were established and product was being produced. This financing was used to support the organizations working capital requirements with inventory providing collateral.

Atkins Ranch's shows their shift to an opportunity gap focus by beginning their strategic repositioning downstream in the areas of distribution and marketing. Consistent with Boehlje and Schrader (1996 and 1998) this exemplifies a proper demand-pull strategy as opposed one of supply-push. Consistent with Barney (1992), Prahalad and Hamel (1990), and Porter (1980), Atkins is challenged how to obtain the critical resources necessary to compete in the marketplace. In Atkins' case the strategic resource is marketing knowledge and cold chain management, which are tacit, and not related to their core competency as a producers' cooperative. Quinn and Mintzberg's theory would constrain the problem for Atkins, arguing that a new strategic architecture should emerge incrementally. That a long jump transformation into meat processing and distribution would be ill-advised. Then how should Atkins proceed? They need to change their strategic architecture somehow. Remaining a traditional producer cooperative in the New Zealand business environment with an oversupply of lamb makes staying the course untenable. Here's how they did it.

First, to assist with the US market development they hired an expatriate international food-marketing consultant based in Berkeley, California. This individual possessed numerous years of international food industry experience as a past executive of a Californian-based international supermarket company. The

consultant provided the cooperative with substantial explicit and tacit knowledge assisting the cooperative in understanding the dynamics and nuances of the market. How supermarkets within the region purchased meat products and how and who managed the in-store product marketing and promotion. The tacit knowledge was critical to the success of the venture as not only was meat distribution vastly different from animal production, but the Californian market differed substantially from the New Zealand market. Second, one of the cooperatives farmer directors relocated to the Bay Area and set up a new business unit. In this way the cooperative could more efficiently import the necessary new knowledge. They would now understand the market better and establish a US office, but they could be located closer to their consultant, strategic partners, and customers. Working closely for over a year and creating the marketing unit facilitated the tacit knowledge transfer to, and learning process by, the cooperative.

Gaining access into the supermarket required not only the regional purchasing managers consent, but it also meant developing individual relationships with the meat department managers in each individual store to obtain preferential meat counter space. This type of relationship development was also imperative in the hotel and restaurant industry, where head chefs make all purchasing decisions. As a consequence, relationship development and management became a strategic initiative of the organization. The relationships were mutually beneficial for both parties. The cooperative received superior market information allowing them to better meet their clients' requirements and product was customized daily to the individual stores' requirements. This reduced the meat managers' labor costs and in-store promotional activities were developed. In return the cooperative usually received preferential meat counter positioning and better market information, both of which translated into increased sales.

Active relationship management has been critical to their operations success. Effective relationship management allows for direct client feedback which can be quickly transformed into value either by slightly altering product mix for the next delivery to better match their client's needs or if substantial market changes are observed, important information flows upchain to operations in New Zealand. The local processor-partner could then alter the product mix or processing schedule and producers would adjust their animal specifications or production practices. Given the 12-week delay between initial slaughter and delivery into the North American market it is important that members at the top of the chain receive information about changes in demand requirements and specifications as soon as possible.

They developed a successful cold chain through a series of mutually beneficial relationships with the chain members. In this way they were able to leverage the tacit knowledge of experienced chain members as a resource for the firm. They rented cooling, fabrication and processing space, utilized labor from a local cool storage facility, and accessed knowledge and services from a local meat processor,

all in the San Francisco area. A solid relationship with the fabrication facility and their butchers was important so that product could be customized on a daily basis to customer needs. This increased the value of the product and services provided to meat managers who soon recognized very little additional in-store skilled labor was necessary.

Similarly, in New Zealand, all the animals were processed into primary cuts, packaged in Captec®, a specialized vacuum-sealed seven-layer foil bag filled with nitrogen, and chilled through a local meat processor. The Captec® technology allowed for the lamb to age without quality deterioration due to oxidation. Meat quality actually improved during the journey across the Pacific, becoming tenderer and decreasing adverse aromas.

The prevailing market dynamics in the Bay Area often resulted in quick and unexpected changes in product requirements so it was necessary that producers were willing to be flexible. As a result, members were required to make moderate changes to their production processes and practices. Lambs could no longer be sold when it suited farmers; instead they were sold to the cooperative when it best suited the market. The increased managerial complexity was more than made up by the returns generated from the overall operation.

The cooperative was able to gain tacit knowledge through its burgeoning network of relationships and its on-site learning in the marketplace. By working directly with the consultant over time, immersion in the marketplace, interacting directly with customers and intermediaries, the company was able to import new and critical tacit knowledge resources. This knowledge not only was strategic for developing the distribution and service aspects of the business the knowledge was able to flow back to producers and packers affecting their offer. If the cooperative had chosen to operate solely from New Zealand it would have attempted to execute a vertical strategy without the most important strategic resource, the tacit knowledge of the market and the cold supply chain.

Conclusion

As described above, agricultural structural change is a powerful force and producer adaptations are necessary to remain competitive. There are numerous strategies available to producer organizations as they attempt to find their place in the supply chain. Strategic management theory suggests that long jump or radical strategic shifts are unlikely to be successful. The logic is that sustained competitive advantage is derived from a firm's ability to produce value. In order to produce this value the firm requires access to knowledge. The type of knowledge that generates innovation rents is knowledge that is inimitable, tacit knowledge. How then does the firm looking to vertically integrate obtain the necessary tacit knowledge? Because this strategic resource is not explicit, it is difficult to acquire.

Firms first must understand their own core competencies, uniqueness in the marketplace, as well as their inadequacies. Emerging from this assessment the firm then needs to access the necessary complementary resources. Through relationship management, supply firms can assess knowledge and participate in value creation without the knowledge and managerial burden of vertical integration. Atkins Ranch, Inc. serves as an example of producers forgoing brick and mortar investment even though doing so would have given them direct control over their product. Instead they invested their limited funds in soft knowledge assets such as market reconnaissance and marketing expertise. They also leveraged significant amounts of tacit resources through their customer and vendor relationships. These investments and relationships served them well by not only generating value at the initial stages but through their flexibility as market conditions changed over time.

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