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STRATEGIC ALLIANCES AND JOINT VENTURES UNDER NAFTA: CONCEPTS AND EVIDENCE

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INTRODUCTION

Cooperative business relationships are dramatically changing the structure of the North American agri-food sector. An examination of recent events in the grain industry reveals the extent to which cooperative ventures are becoming integrated into international agribusiness. When Cargill decided to expand its presence in Canada it participated in several joint ventures, one with Hazzard Farm Services in a grain elevator business, another with Agricore in a Vancouver port terminal and several with retail level dealers. Competitor ADM entered into a joint venture with United Grain Growers (UGG) of Manitoba purchasing 40 percent of UGG. ADM provided an infusion of funds and secured access to 170 grain elevators in the Canadian prairie provinces in return. Among its myriad of other alliances, ADM has an alliance with Grupo Maseca (GRUMA) of Mexico, the market leader in wet corn milling, flour mills and soybean products, and it recently acquired 22 percent of the stock in GRUMA. Meanwhile, Saskatchewan Wheat Pool (SWP) entered into three joint ventures: a port facility in Manzanillo with Comercializadora La Junta (CLJ) of Mexico; a grain elevator in Northgate, North Dakota with General Mills; and a terminal in Gdansk, Poland with European partners. SWP was also involved in a long standing relationship with Canadian competitor, Agricore, to market grain internationally through a joint venture agency, XCAN.

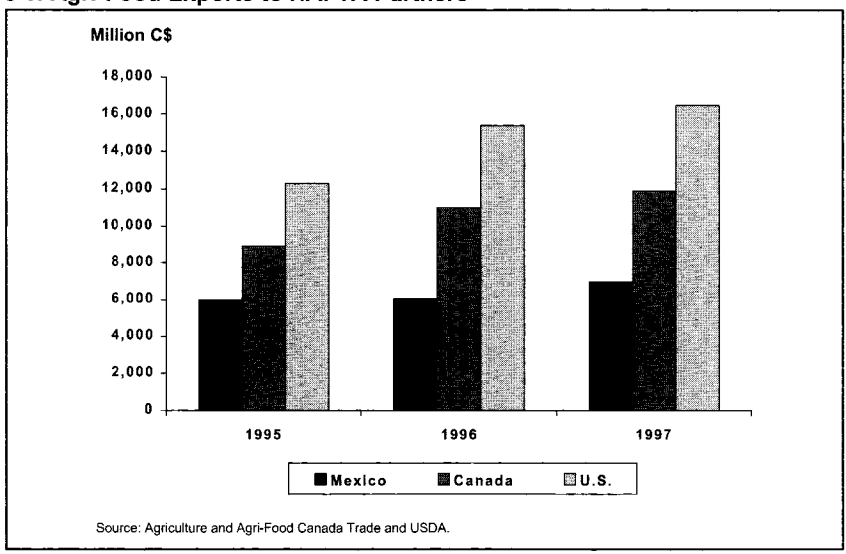
The North American Free Trade Agreement (NAFTA) has reduced or removed many of the impediments to U.S./Canada/Mexico trade. However, it takes more than lower trade barriers to capture the economic benefits from increased agri-food trade. Firms must organize sufficient resources to identify new markets and opportunities and to produce, distribute and service products in those markets. Entering new international markets is beyond the capabilities of many companies, prompting many to look to other organizations for the additional resources and capabilities needed.

Although alliances between trading organizations date back to the time of the Phoenicians, the number of new alliances has grown exponentially in the last decade. In the United States, alliance formations ranged from 55-124 per year in 1970-82 (Ghemawat et al., 1985) to an annual average of 391 during the four year period 1986-89 (Culpan, 1993). In the 1970s and 1980s, domestic joint ventures occurred twice as often in the United States as international joint ventures (Killing, 1983). By 1987, U.S./foreign alliances had overtaken U.S./U.S. alliances (Culpan, 1993). The results of the 1990s are dramatically different. Consultants at Booz, Allen, Hamilton estimate that 32,000 strategic alliances have been created worldwide in the last three years, with three-quarters of them international alliances[1]. Alliances account for at

least half of the market entries into Latin America, Asia and Eastern Europe (Adarkar et al., 1997). Strategic alliances and joint ventures are the new international business norm, not the exception.

Under NAFTA, economic interaction and integration between Canadian, Mexican and U.S. agribusiness firms has increased dramatically. Both agri-food trade (Figure 1) and foreign direct investment have grown substantially (Handy and Bamford, 1999).

Figure 1: Agri-Food Exports to NAFTA Partners



Source: Agriculture and Agri-Food Canada Trade and USDA.

Trade and investment figures tell only part of the story. They track the flow of products and investments, but overlook the flow of knowledge and profits between firms and nations. These flows, so essential to global competitiveness, are facilitated by close corporate interaction, through mergers and acquisitions but also through co-operative relationships, strategic alliances and joint ventures.

The ability to use cooperative inter-firm relationships will be an important factor in corporate success. This paper examines agri-food strategic alliances and joint ventures, beginning with a discussion of alliance types and definitions. A conceptual model, the strategic alliance life cycle, is presented. The nature of NAFTA related agri-food joint ventures and strategic alliances is discussed. An analysis of alliances and joint ventures involving the fresh produce industry in Sinaloa, Mexico are examined at the industry level and at the level of an individual firm. A discussion and conclusions follow.

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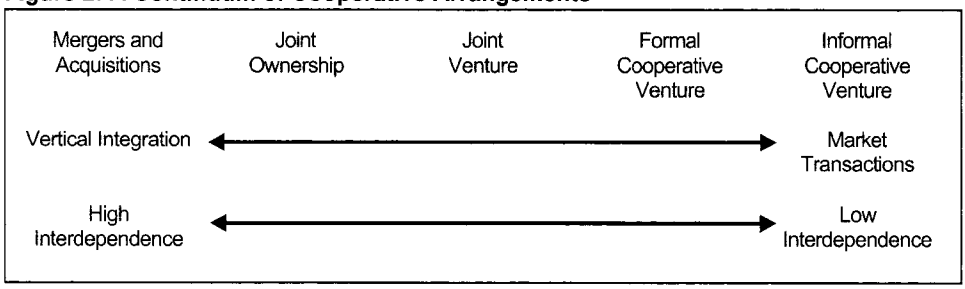
1 The Economist, April 4, 1998, pg. 69.

JOINT VENTURES AND STRATEGIC ALLIANCES - DEFINITIONS

Interactions between organizations can take many forms, from market transactions to relationships so close that it is difficult to distinguish where one organization ends and the next begins. Lorange and Roos (1991) examined inter-firm relationships along two dimensions, first, as a continuum ranging from vertical integration, or hierarchies, at one end to free market transactions at the other and second, by the degree of interdependence (Figure 2).

Figure 2: A Continuum of Cooperative Arrangements



Source: Lorange and Roos 1991.

Definitions of cooperative relationships vary. Joint ventures carry the connotation of shared ownership (Badaracco, 1991). Some authors define a joint venture as a separate legal entity with ownership shared by both partners (Harrigan, 1984, Geringer, 1991). In this paper, a more liberal definition is employed. Joint ventures (JVs) are defined as legal arrangements where ownership and management of an organization are shared by more than one organization. This appears to be consistent with the generally accepted agri-food industry definition of JVs. Many of the grain industry examples cited in the introduction are of this type and are defined by both participants and popular press as joint ventures.

Strategic alliances (SA) are defined more broadly, covering a variety of flexible cooperative arrangements between organizations, from fluid, short term cooperation to long term, formal agreements (Das & Teng, 1998; Murray and Mahon, 1993). In a strategic alliance, partners remain independent after forming the alliance, both share alliance management and benefits, and both contribute to the alliance on a continuing basis (Yashino and Rangan, 1995).

For purposes of this paper, strategic alliances are defined as cooperative relationships between[2] organizations that meet the following criteria:

- Partners share resources, capabilities and/or knowledge on a continuing basis;

[2] Most alliances occur between two organizations but there are many instances of relationships among three or more. Note that in this paper references to alliances between two organizations could also refer to relationships among more than two organizations.

- The alliances have strategic intent for the partners; and
- Alliance objectives include the sharing and/or exchange of products, services, knowledge and profits.

The last criterion encompasses a multitude of cooperative activities ranging from shared research and product development, closer product and information ties, process improvement, to distribution and service integration. Thus, strategic alliances include all forms of cooperative relationships in Figure 2 between market transactions and vertical or horizontal integration, relationships sometimes called "hybrid arrangements" (Borys and Jemison, 1989).

A CONCEPTUAL FRAMEWORK – THE STRATEGIC ALLIANCE LIFE CYCLE

There is an extensive literature addressing the issues concerning strategic alliances and joint ventures. To organize the issues and theory in a manner that provides relevance to academics, policy makers and managers, we examine strategic alliances using a strategic alliance life cycle framework. We will discuss the issues in the order they must be addressed by alliance participants, beginning with the need and motivation for cooperation, progressing through alliance creation, operation and maintenance, and ending with the dissolution of the alliance. Table 1 summarizes the key issues, factors to be considered and theory applicable to each stage of the strategic alliance life cycle.

Motivation For Cooperation

When a firm's corporate strategy includes entry into new international markets or development of new products or services for those markets, one of the first decisions to be made is whether the expansion should be undertaken independently or in cooperation with an external partner. In making this decision several factors come into play.

Interaction of Political and Resource Related Factors. An initial motivational assessment is based on whether the primary motivators for alliance are political or resource related. Political decisions and government regulations shape many international business arrangements. Restrictions on foreign ownership and participation in local economies, financial incentives, rules on knowledge acquisition or relationship preferences of government and quasi-government agencies for domestic partners all play a role in encouraging or coercing foreign firms to partner with local companies. Companies also enter alliances to secure resources needed to meet strategic objectives. Das et al. (1998) categorized resources as financial, production, distribution and managerial. The last category is expanded here to include all technical, managerial and local knowledge related to R&D, design, production and distribution in the new market.

Table 1: Strategic Alliance Life Cycles - A Conceptual Model

Phase	Motivation for Cooperation	Alliance Creation	Alliance Maintenance	Alliance Dissolution
Key Issues	Determining the need to enter into a cooperative venture. Setting objectives	Selecting a partner(s) Format for cooperation and definition of boundaries Clarifying expectations objectives and partner contributions	Control and maintaining smooth operation of venture Extracting profits and knowledge Evolution of relationship	Extracting two organizations from the venture with minimum disruption Sale, absorption or dissolution
Factors	Political Factors Strategic Goals Resource requirements	Nature of planned interaction – product vs. R&D Partner Objectives Partner Requirements Cultural differences	Bargaining power Comparative learning Distribution of benefits Response to environmental changes	Degree of interrelation Rights to jointly developed products, facilities and knowledge Bargaining Power
Underlying Theory	Transaction costs – Kogut (1988) Organizational Theory – Pfeffer and Nowak (1976) Competitive Advantage – Porter (1980) Supply Chain Management and Quality Management	Capabilities and Competencies – Prahalad and Hamil (1990) Risk/Resource Relationships Das and Teng (1998) Networks and social interaction – Gulati (1998) Contracting – Schrader (1986)	Competition for Learning – Private vs Common Benefits – Hamel (1991), Khanna (1998) Agency Theory – Barry et al. (1991) Resource Dependence Strategic interdependence and environmental uncertainty, Kumar & Seth (1998) Cultural and Behavioral Effects – Lane and Beamish, 1990	Property rights Valuation models

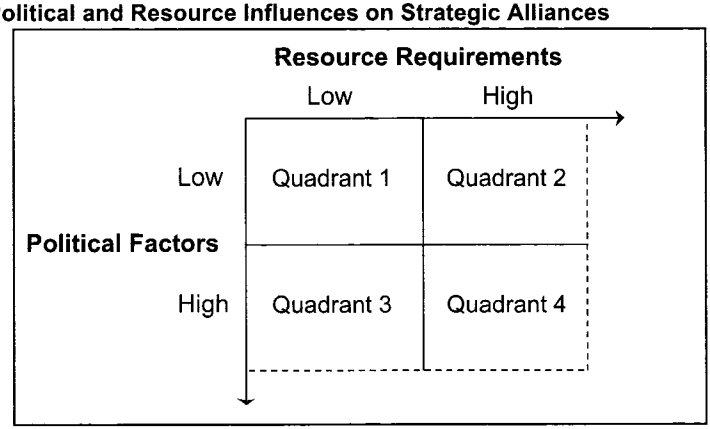
Source: Compiled by authors.

Analysis of the strength and interaction between political factors and resource requirements provides a measure of the need for the alliance and the challenges that will arise in creating and maintaining it. It can also provide insight into strategies for alliance partners. Consider the four quadrants of Figure 3. Firms in quadrant 1 have little internal or external incentive to enter a strategic alliance and should proceed independently. Those in quadrant 2 will use strategic alliances to secure necessary resources, without the distorting effects of political interference. Firms with high political motivation and low resource needs (Quadrant 3) are frequently forced into alliances that they would not otherwise have entered. This may stress the relationship and, since resources are not scarce, organizational compatibility should be the primary focus. Such alliances are at risk when the political situation changes, illustrated by the reversion of ownership to many multinationals when India reversed its regulations against foreign majority ownership of Indian subsidiaries[3].

A quadrant shift appeared possible in 1992 with the Mexican government's reform of Article 27 of the Mexican Constitution. The reform modified Mexico's land tenure and agricultural investment policies and laws, relaxing some restrictions on foreign ownership of land and legalizing the rental of ejido land and the transfer of property rights to private individuals. Many thought the constitutional reform would shift some firms from quadrant 3 to 1, eliminating the incentive for partnering. However, even with the reform investment in farming was still restricted, both for domestic and foreign firms, and so joint ventures and strategic alliances remain the norm. Access to quality land is such an important resource issue that most foreign firms involved in agricultural production in Mexico are in quadrant 4.

Firms in Quadrant 4 have both political and resource incentives for creating an alliance. The final structure of the relationship is often shaped by the political considerations and may evolve as regulations change, but the resource requirements will provide incentive to continue the relationship.

Figure 3: Political and Resource Influences on Strategic Alliances



Source: Compiled by Authors

3 Yashino and Rangan, *Strategic Alliances*, 1995 pg. 5-6.

Objectives for Strategic Alliances. The specific objectives for firms entering strategic alliances may be further analyzed. Agri-food companies enter alliances to secure market access, supply assurance or resources. Four traditional explanations for alliances are discussed in the literature:

- Cartelizing an industry.
- Sharing risk.
- Bringing together complementary resources and capabilities, or
- Surmounting barriers.

To this list Badaracco (1991) adds a fifth - sharing embedded knowledge, knowledge that is found only in the structure, relationships and people of a firm. Embedded knowledge can only be accessed through prolonged close relationships between firms. Sharing knowledge through alliances is becoming a more common theme in the literature (Hamel, 1991, Khanna, 1998).

In international markets the incentives for firms to create alliances to achieve these objectives is magnified. New markets and countries present barriers and risks not found in domestic markets and there are many factors that may be mitigated by working with local organizations. Typically, resource requirements are greater in international markets and both sides have much to learn from each other.

Drivers of Strategic Alliances. Firms enter strategic alliances as part of corporate strategy and that strategy is being driven by several changes in the current operating environment.

- Globalization

Reduced trade barriers, improved logistics capabilities, multiculturalism and increased interest in international foods have all stimulated agri-food trade and alliances.

- Information Systems Capabilities

More flexible and powerful information systems allow easier integration of the information systems of different organizations, reducing the barriers and transactions costs between them.

- Quality/Environmental Systems

HACCP, ISO 9000 and ISO 14000 alter the way organizations think about internal operations and their relationships with partners. The drive for product identity and traceability in food chains provides an added incentive for alliances.

- Supply Chain Management

Maximizing performance across the network of organizations making up a supply chain requires high levels of commitment and cooperation among chain members. As organizations seek to differentiate their products and move away from the price dominated competition of commodities, they inevitably create longer term and closer relationships with both their customers and suppliers. Advances in biotechnology will allow agri-food products to be designed and produced for specific niche markets that will require precise management of the supply chain.

- Understanding Core Competencies and Competitiveness

Managers have developed a greater understanding of the role of core competencies in corporate success. With this awareness has come the realization that competitiveness can be enhanced by combining complementary capabilities and competencies of different organizations in close, long-term relationships.

- National Culture, Policies and Preferences

Although political obstacles to ownership and market entry are diminishing, there are still national and cultural differences that make strategic alliances attractive vehicles for entering new markets.

The need for alliances has several theoretical underpinnings. Transaction cost theory proposes that firms enter alliances to reduce the transaction costs associated with entering new markets (Jarillo and Stevenson, 1991, Kogut 1988). The organizational theory model attributes the formation of strategic alliances to a firm's reliance on other firms in its environment for its resources and the firm's need to reduce uncertainty and to stabilize the process of acquiring those resources (Pfeffer and Nowak, 1976). Porter (1980) suggests that firms enter into alliances in response to competitive pressure in order to achieve competitive advantages through low-cost leadership, differentiation or focus strategies.

At the end of the first phase of the alliance life cycle a firm should understand why an alliance is necessary to implement corporate strategy and be prepared to set alliance resource requirements and objectives.

Alliance Creation

Selecting a Partner. In the second phase of the strategic alliance life cycle, firms select partners and determine alliance structure. Partner compatibility is evaluated on several dimensions - objectives, resources, capabilities and competencies. While objectives for the two partners need not be identical they should be compatible. Partner resources and capabilities should complement those of other alliance members. Partners require a shared vision of where the alliance is heading and whether the needs of partners and the reasons for allying are likely to change. The latter is vital to determining alliance form, longer-term joint venture versus a more fluid and flexible alliance.

Harvey and Lusch (1995) proposed a scoring model for rating partners, analyzing prospects at the macro-economic, industry and firm levels. While scoring

models are useful for selecting the best alternatives from relatively large sets, in most alliance situations the set of suitable candidates is relatively small and issues of compatibility of corporate culture and complementary capabilities are most important. A scoring model does have the advantage of ensuring that all important factors in alliance formation are considered.

Nature of Alliance Flows. Badaracco (1991) categorizes inter-firm relationships as either product or knowledge links. The nature of the linkages is important in determining alliance form. Where linkages and flows between organizations are primarily product based, sharing of knowledge is limited to that required to exchange products, requiring less interaction between partners. In contrast, knowledge links are designed to share the knowledge and skills embedded in the relationships, procedures and people in a firm. This requires prolonged and close interaction, dictating an open and sharing alliance structure often achieved through joint ventures.

The Role of Relationships. Alliances result from the interaction of firms and people operating in a network of related businesses (Gulati,1998; Stabell, 1998). Personal and business relationships influence the form, evolution and ultimate success of an alliance (Gulati, 1998). When searching for alliance partners, companies generally begin (and often end) with the firms and people they are already working with. In less industrialized countries, personal relationship building is frequently an essential precursor to alliances (Lane and Beamish, 1995).

Relationships played a major role in the Saskatchewan Wheat Pool/CLJ joint venture in Manzanillo. Years of market transactions between the two had resulted in a close relationship between the two companies and their leaders. SWP's global expansion strategy dictated securing access to grain terminals in global ports. CLJ understood Western Mexican grain markets and had a plan for establishing an elevator in Manzanillo but lacked financial resources. Based on its favourable relationship with SWP, CLJ approached SWP and a 50/50 JV grain terminal was created.

The impact of relationships on strategic alliance success extends beyond the firms directly involved in the alliance. A less researched aspect of inter-firm relationships is the impact of clusters on organizational success. Porter (1998) defines clusters as "geographic concentrations of interconnected firms and institutions in a particular field."[4] Porter asserts that untangling the paradox of location in a global economy offers insights into how companies continually create competitive advantage. He observes that, "paradoxically, the enduring competitive advantages in a global economy lie increasingly in local things - knowledge, relationships and motivation that distant rivals cannot match."[5]

Clusters exhibit a high degree of competitive success that results from the complex interactions of multiple firms, working together and competing in ways that

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4 M. Porter, *Clusters and the New Economics of Competition*. Harvard Business Review, Nov/Dec. 1998, pg. 78.

5 Same as above.

drive innovation and excellence in the industry as a whole. Examples of agri-food clusters include the California Wine cluster, mid-west grain and meat clusters, the further processing/prepared food cluster in Toronto, and the Sinaloa winter vegetable industry cluster.

Cluster relationships and corporate compatibility were the foundation for a successful food processing joint venture in Ontario. Five small, innovative, food processing companies who dealt with many of the same customers and suppliers recently joined together to create Coming Home Foods, a joint venture producing private label frozen foods for the U.S. market. The JV resulted from a meeting of the company leaders to search for potential synergies and shared opportunities.

Contributions to International Alliances. Contributions by partners in international joint ventures vary. In a study of 70 joint ventures in Argentina, Brazil, Mexico, Turkey, Philippines and India, Miller et al. (1996) compared motivation and issues between industrial country firms and their partners in less industrialized nations (Table 2).

Table 2: Firm Contributions to International Joint Ventures

Less Industrialized Country Firm Contribution	% of JV's citing this category	Industrial Country Firm Contribution	% of JV's citing this category
Knowledge of local politics	70	Process Technology	74
Knowledge of government regulations	68	Product Technology	72
Knowledge of local customs	68	International Reputation	70
Knowledge of local markets	65	Finances	65
Provision of financing	58	Management Knowledge	59
Local reputation	58		
Access to local market	54		

Source: Miller et al. 1996, pp. 6-7.

These findings parallel those of Trevino (1998) for Mexico. Foreign companies enter into ventures with Mexican firms to gain local business and political relationships and expertise in return for technology and expertise in reorganizing organizational structures. In a study of Spanish joint ventures, Llaneza and Garcia-Canal (1998) noted that international JVs tended to focus on acquiring knowledge of local conditions, business practices and culture whereas domestic JVs place more emphasis on sharing R&D knowledge. International JVs tended to have fewer partners and less equitable sharing of equity while domestic alliances tended to be more a sharing between equals. The inequity tends to be exacerbated in JVs in less industrialized countries, a result consistent with Beamish's findings (1988).

Risk and Structure. Alliance risk affects the choice of alliance form and control mechanisms. Das and Teng (1998) divide alliance risk into two categories, relationship and performance risk. Relationship risk is attributable to a firm's involvement with outside organizations. Opportunistic behavior by one firm might allow it to capture resources and knowledge from their partner, often eliminating the need for the alliance. Relationship risk only arises from firm to firm interaction.

Performance risk is attributable to the alliance's interaction with its environment. Even if firms cooperate successfully there are still risks that the venture will not succeed due to partner capability shortcomings, competition, or environmental changes.

Firms enter strategic alliances to reduce performance risk, but the process of integrating operations with a partner exchanges performance risk for relationship risk. Das and Teng (1998) relate these two risks to four resources (financial, technological, physical and managerial) prescribing an alliance orientation depending on a partner's main resource contribution and their most significant risk concern.

Alliance form depends on the nature of flows, objectives and risks involved in the relationship. Joint ventures offer advantages of greater control than less structured alliance forms at a cost of reduced flexibility. Once a form has been agreed upon, finalizing agreements remains a challenge. Miller et al. (1996) reported that in joint venture creation two issues dominated the discussions, equity structure and technology transfer. Equity structure was seen as the most important and most difficult issue to resolve. An important component of any alliance agreement is a well-defined dispute resolution process to mitigate the impact of changing circumstances as well as exit provisions for both parties.

Alliance Management

Issues in Strategic Alliance Management. Although creating alliances is a challenge, maintaining them is far more difficult. Bridging international and organizational cultural differences can stress even the most compatible relationships. The most significant problems for international joint ventures tend to be cultural differences (Miller et al., 1996), although these may not be obvious during the creation phase. As well, differences in corporate culture between family owned vs large multinational or multinational vs state owned bureaucratic companies add to alliance management difficulties (Adarker et al., 1997). Problems related to multi-nationality figure prominently in joint ventures between large multi-national corporations and smaller national companies. Frequently cited issues include export rights, taxes, dividend and investments, differences in size, capabilities, decision-making styles, reporting expectations and ability to invest in the venture.

Maintaining flexibility in a relationship is essential, so that it can evolve as changes in the operating environment or internal capabilities occur. Kumar and Seth (1998) examine the roles of strategic interdependence and environmental uncertainty in control design for managing joint venture-parent relationships. They define strategic interdependence as "a function of the importance and extent of shared resources" and environmental uncertainty as "a function of the extent and importance to the organization of changes in different elements in the task environment"[6]. Joint venture control and coordination mechanisms available to

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[6] Kumar and Seth (1998), pg. 581-2.

parent companies include direct contact and socialization among parent and JV personnel, structure and role of the JV board in JV management, incentives and JV management staffing.

Parent - JV relationships represent a tradeoff between the JV's need for independence to respond to environmental uncertainty and the parent's need to integrate JV activities with its strategy. Kumar and Seth found that the need for strategic interdependence resulted in increased use of all but JV staffing to align JV activities with those of the parent. In situations of high environmental uncertainty JV's require independence and the ability to respond quickly and independently to environmental changes. Such circumstances had a moderating effect on contact and integrative mechanisms and the internal role of the JV board (Kumar and Seth, 1998).

The Role of Learning in Strategic Alliance Evolution. Alliances in which organizations attempt to learn from each other frequently develop into "learning races" where participants seek to learn faster than their partners and internalize the other's competencies (Hamel, 1991; Tei, 1997). Considering the difference between private benefits accruing to a single partner and common benefits accruing to both partners helps put learning races into context (Khanna et al., 1998). Incentives to invest in the alliance depend on the ratio of private to common benefits for the firms involved and their relative progress toward learning objectives. As a firm gets ahead in the learning race, it has more incentive to invest to capture the benefits. The lagging firm has incentive to reduce its investment. Understanding learning races can help participants comprehend the changing nature of their relationship.

Just as changes in political regulations may move firms from quadrants 3 or 4 to 1 or 2, technology advancements, organizational learning and improved internal capabilities may move firms from quadrants 2 to 1 or 4 to 3. Such changes will alter the motivation for the alliance, requiring it to evolve or terminate.

Alliance Dissolution

International expansion is inherently risky and the level of dissatisfaction within strategic alliances has been found to be extremely high. The rate of success for both international alliances and cross-border acquisitions is approximately 50 percent (Bleeke and Ernst, 1991). Even if an alliance is successful, changing environmental conditions or corporate capabilities frequently reduce the need for the alliance for one or both partners. The average life of a strategic alliance is seven years and 80 percent of joint ventures result in the sale by one partner to the other (Bleeke and Ernst, 1991, 1995). Bleeke and Ernst (1995) divided strategic alliances into six categories and concluded that only the alliance of two strong, non-competing firms is likely to result in a sustainable long-term alliance.

Since unanticipated shifts in corporate capabilities, strategy or the environment can change the need for a strategic alliance, it is essential that firms consider strategies for determining when and how an alliance will be dissolved from the beginning. This includes prescribing conditions for reviewing alliance performance, for altering structure and operating agreements and for disentangling

partners from the alliance if necessary. Disengagement strategies can help reduce the financial and operational costs associated with dissolving an alliance.

We will examine characteristics and examples of strategic alliances and joint ventures under NAFTA at three levels. We will begin at the agri-food sector level and then examine experiences within a single industry and region, the Sinaloa vegetable industry. We will end by considering the inter-firm experiences of a single agribusiness family, the Ley family of Mexico. Many of these alliances began prior to NAFTA and may or may not be related to any specific NAFTA effects.

GENERAL CHARACTERISTICS OF STRATEGIC ALLIANCES AND JOINT VENTURES UNDER NAFTA

Motivation for Cooperation

For international partners in NAFTA agri-food alliances, the two primary objectives for forming alliances are either market entry or sourcing related. Domestic partner objectives, on the other hand, tend to be finance, knowledge and technology acquisition but may include sourcing.

The external partner in market entry relationships generally searches for local knowledge, distribution and marketing capabilities and provides domestic partners with technical skills and financing. Market entry alliances are formed at all levels. Food service distributor AmeriServe Food Distribution Inc. joined in a strategic alliance with MetroRichelieu Inc. gaining distribution in the Eastern Canadian market and providing MetroRichelieu with access to AmeriServe's product lines. The alliance is market entry for one partner and sourcing related for the other. Wal-Mart's joint ventures with food retailer Cifra of Mexico secured Wal-Mart's access to the Mexican market in return for capital, and expertise in technology and information systems.

Sourcing related alliances abound at the production and primary distribution levels. The numerous alliances between grain giants ADM and Cargill are examples of arrangements designed to secure grain supplies. The ADM alliance with UGG exhibits the sourcing/finance exchange between internal and external partners. UGG received cash necessary for continued operations from ADM and a Japanese customer Marabuli, for whom UGG was a preferred supplier. ADM and Marabuli secured access to Canadian terminals and grain supplies. Note that ADM's alliances are not restricted to either sourcing or NAFTA jurisdictions. A recent joint venture between ADM and Lesaffre et Compagnie brought operations in France, Canada and the United States into the International Malting Company. This enabled them to globalize brewing and malting capabilities and increase efficiency, while simultaneously securing better access to premium barley supplies and varieties. Similarly Cargill's expansion in Canada through joint ventures with Canadian grain and farm retail companies may be viewed as exchanges of cash and management resources in return for sourcing and marketing opportunities. It is interesting to note

that while the alliances form part of Cargill's Canadian strategy, in Mexico Cargill has chosen to proceed primarily through acquisition.

Alliance Creation

Alliance Structure. Agri-food alliances vary in their organization and structure but common general structures include:

- Licensing agreements

Kerry Foods of Wisconsin and Ireland serviced Canadian ingredients customers through a licensing agreement with Beatrice Foods from 1988 until 1993, when a disagreement caused it to take back its technology. The market demanded a mixture of physical product and knowledge that could only be supplied by a local firm. The product based alliance failed to meet market requirements. Ultimately Kerry acquired a Canadian ingredients company.

- Sole supplier arrangements

For example, Mezban, an Ontario producer of Indian condiments selected W.J. Clark, a Chicago based food product marketing firm, as its sole marketing partner for the U.S. market.

- Strategic alliances

These are non-investment relationships where partners work together in a variety of ways. These are common in relationships focusing on product exchange, such as in the fresh produce industry discussed in the next section.

- Minority investments in domestic firms

Many of the grain examples cited in the introduction fall into this category, as do investments by companies like Labatt's in the Mexican brewing industry.

- Joint ventures resulting in the creation of a new entity

Coming Home Foods of Toronto and XCAN are examples of organizations established to increase scope and reduce transaction costs for partner firms. A significant difference between these two is that the partners in Coming Home Foods offer complementary products to the JV while those of XCAN offer competing products. The latter alliance is coming under increasing pressure as participants like Saskatchewan Wheat Pool move into direct competition with the JV and the other participant Agricore. The venture continues to market canola but the proportion of other grains flowing through the organization is decreasing.

Nature of Alliance Exchanges - Product or Knowledge. The nature of the primary exchanges between partners influences the suitability of the different arrangements. Product-based alliances run the complete range of alliance structures from sole sourcing to joint ventures. These alliances involve lower relationship risks related to unequal learning and thus allow more flexibility in alliance structure.

Knowledge based alliances frequently use an exchange of ownership to control the use and flow of knowledge and technology. Technology alliances are found throughout the agri-food system, from input suppliers to producers and processors. They include technologies ranging from relatively basic process technologies to highly sophisticated production and biotechnologies. For example, Emery Corporation of Toronto supplies the much larger Grupo Vitep's Celatep joint venture with used equipment and expertise in paper carton manufacturing and has an ownership stake in Celatep. Grupo Vitep's Avibel subsidiary has a strategic alliance with Canadian firm Innovatech to acquire expertise and technology in dehydrating egg yolks. This is just one of Grupo Vitep's technology based joint ventures with foreign firms. While there is a preference toward North American partners, Grupo Vitep is also involved in alliances with Swiss, Danish, German and Spanish firms, firms which make everything from mayonnaise to feed and vaccines. UFL Foods of Toronto supplies a combination of ingredients technology and knowledge to its California JV partners Candor/Precision Blending. Much of UFL's international growth may be attributed to its extensive use of alliances and joint ventures.

Alliances and joint ventures among the NAFTA partners have also involved Mexican firms pursuing market access, technology acquisition or other goals in the U.S. and Canadian markets. Empresas La Moderna (ELM), recently renamed Savia, is one of the largest in scope, complexity and investment. In 1985 ELM, led by Alfonso Romo, embarked on a diversification strategy away from its core business of cigarette manufacturing, into agro-biotechnology. ELM entered the vegetable seed industry, by acquiring and merging Asgrow, Peto-seed, and Royal Sluis into its Seminis division. Entrance into the biotech field was achieved via an alliance with, and ultimately complete acquisition of, DNA Plant Technology Corp (DNAP). A network of strategic technology and investment alliances with universities and private firms has enabled ELM to achieve a global position in vegetable biotech and germplasm. ELM has numerous knowledge links with Monsanto. DNAP recently acquired Monsanto's strawberry development program, gaining exclusive rights to existing gene technology and a nonexclusive right to future Monsanto berry technology, of all types. ELM and Monsanto also signed a technology collaboration agreement through which Monsanto will become a "preferred provider" of agronomic quality traits developed through biotechnology.

ELM is also involved in product exchanges. Its position in North American fruit and vegetable production and marketing was established via a series of alliances and acquisitions, all grouped under the Fresh Produce Co. umbrella, a DNAP subsidiary. Partial, and later total, acquisition of a large Sinaloa winter vegetable exporter (RB Packing, Master's Touch label) and joint ventures with growers in the United States widened product lines and extended shipping seasons. ELM integrated forward by acquiring wholesale market operations in the United Sttates and Canada. This represents one of the first times a Mexican produce firm has forward-integrated into the U.S. marketing system beyond the level of a Nogales distributorship.

Alliance Maintenance

Once an alliance is established, it must be managed in the face of both environmental and internal changes. The former may alter the competitive and regulatory environments, and the latter can shift the relative knowledge and resource positions of the partners. Hence, flexibility and planning are assets in alliance survival and evolution. In 1991, when Wal-Mart and Cifra began their joint venture to expand Cifra's stores they included provisions for sharing its future development equally. They later displayed the ability to adapt to unforeseen events. When the Peso collapsed in 1994, Cifra responded by taking full control of the JV while Wal-Mart provided financial backing in return for an increased stockholding position in Cifra. While the partnership continues, its nature has altered from one of shared responsibilities to one approaching an international subsidiary relationship. Reflecting the importance of effective communication in successful relations, Jeronimo Arango, Chairman of Cifra was appointed to the Wal-Mart Board of Directors in 1997.

Another example of providing options is Con Agra's initial JV agreement with Grupo Desc. This involved the purchase of 20 percent of its Universa meat processing subsidiary with the option to purchase 29.9 percent more.

Alliance Dissolution

The reasons for alliance dissolution may be divided into two groups, those related to the performance of the venture and those related to altered partner capabilities or objectives. In the first category, Fleming Cos. Of Oklahoma recently exited its joint venture with Grupo Gigante of Mexico City. Established in 1992, the JV operated five stores. The American store format was not popular with consumers and in 1998 Grupo Gigante purchased Fleming's share of the JV. A production joint venture between Dole and the Canelos Group to produce tomatoes in Mexico ultimately failed because of weather shocks and water shortages which impaired performance. In addition, the expected marketing advantages from Dole's national distribution system and branded marketing program never materialized. Dissolution was facilitated by the fact that it was a product only joint venture and both parties had always met their financial and other obligations to each other. Since the Canelos alliance needs have not changed significantly, the company recently entered an alliance with Chiquita to produce and market tomatoes and other produce.

Similarly, dissolution can occur because the partners evolve in different directions or discover that their objectives are not sufficiently compatible. The ultimate result of many alliances and JVs is the acquisition of alliance assets by one partner. In some cases, sale to a partner was not due to alliance failure, rather, it was but one step in the strategy of either or both parties. In these instances the alliance could be considered a purchase option rather than a true strategic alliance.

INDUSTRY LEVEL EXPERIENCES: THE SINALOA WINTER VEGETABLE INDUSTRY

Firm-level reactions to trade liberalization vary greatly by commodity sector. In the North American fruit and vegetable industry, product perishability and the seasonality of supply and demand are major determinants of industry structure and procedures. Industry fundamentals have caused the North American fruit and vegetable sector to exhibit marked patterns of specialization across several dimensions, including geography, seasons, product lines and markets.

Changes in the last two decades have encouraged joint ventures and strategic alliances between Mexican grower-exporters and U.S. firms, mainly from California, Arizona, Florida and Texas. Consumers demand year-round availability of a wide line of fresh fruits and vegetables with higher expectations of quality and safety. At the same time, consolidation in the grocery and distribution industries has reduced the number of buyers. These buyers expect large volume, year round supply and broader product lines from their suppliers encouraging redundancy in production and geographic diversification of supply. Redundancy through geographic diversification enables shippers to better assure supply in the event of a weather or disease problem in one growing region. The need to trace products through an entire supply chain has also encouraged firms to maintain closer relationships and alliances with their upstream partners.

Product, seasonal and geographic diversification strategies give shippers a competitive advantage and decrease marketing risk but they greatly increase capital requirements and total production risk exposure. To better manage production risk, shippers seek partnerships with knowledgeable growers in different regions, creating upstream joint ventures and alliances with Mexican firms. Although this market-driven trend toward cooperation would have continued in the absence of NAFTA, it has been facilitated and accelerated with Mexico's accession to the GATT in 1986, the implementation of CUSTA and subsequently NAFTA.

The Sinaloa Vegetable Cluster

The state of Sinaloa dominates the Mexican horticultural export industry; accounting for two-thirds of Mexican fruit and vegetable exports and much of the over $1.9 billion in Mexican horticultural export volume covered by strategic alliances and joint ventures. Sinaloa is the principal location for winter production of a narrow line of fresh vegetables, both for export and domestic consumption. These include primarily: tomatoes, bell and other peppers, cucumbers, squash, eggplant, and snap beans.

In "The Competitive Advantage of Nations" (1990), Porter specified the determinants of national competitive advantage as an interaction of four components: firm strategy, structure and rivalry; related and supporting industries, factor conditions and demand conditions. Dynamic domestic demand helps stimulate the development of an industry and vigorous inter-firm rivalry leads to

innovation and productivity gains. Competitive industries must also have advantageous factor conditions and competent related and supporting industries.

High Mexican per capita consumption of tomatoes, sustained rapid population growth, income growth during certain periods, combined with limited competition during the winter months within Mexico, meant that the Sinaloa industry not only benefitted from robust domestic demand, but was essentially a monopoly supplier to its domestic market. On the export side, Sinaloa competed as a duopolist with the Florida winter vegetable industry, originally a much larger and well-financed industry. However, these quasi-monopoly and duopoly positions are only at the industry level, with a high level of inter-firm rivalry within both the Florida and Sinaloa industries. For both industries this has stimulated the adoption of new varieties and technological packages, leading to greater productivity, quality and for Sinaloa, greater market penetration into both the Canadian and U.S. markets.

In recent years, the Sinaloa winter vegetable export industry has evolved as a dynamic cluster. Michael Porter's (1988) message on the importance of clusters and relationships resonates well in the fresh produce industry context, described as a "people" business, with personal relationships and local knowledge predominant. Perishables are non-durable items with rapid sales turnover, so lack of payment cannot be remedied by repossession of goods. Because of the quick, continuous nature of spot market transactions, handshake deals are common. Trust between buyers and sellers is paramount, leading to reliance on intuition and the development of personal relationships.

The need to identify trustworthy, competent partners with local knowledge is especially important to the Mexican and U.S. sourcing interface. In the past, cultural and underlying value differences have complicated business relationships. As the Sinaloa cluster developed, so did a shared experience, which helped to reduce information and other transaction costs and contributed to Sinaloa's ability to attract the bulk of foreign investment in the Mexican horticultural sector.

Ample water supplies, attractive winter growing conditions, minimal freeze risk, an abundant supply of labor, and geographic proximity to the U.S. border (Nogales, Az.) all helped establish the Sinaloa winter vegetable industry. Capital was provided by large Mexican growers and through alliances with U.S. importers seeking year-round availability of product. A cluster evolved, beginning with Sinaloa growers and U.S. firms. Sinaloan firms share knowledge of local growing conditions, legal/institutional frameworks, ways of doing business in Mexico, and access to land, labor and water. U.S. firms share knowledge of the North American distribution system, production financing and in some cases technical production and post-harvest handling assistance.

Allied industries, like input suppliers, have been attracted to this region to serve the industry in its drive to become more intensive in the use of resources. The industry is breaking more new ground by shifting into hothouse production of specialty tomatoes, European cucumbers and specialty Israeli and Dutch varieties of

colored sweet peppers. While hothouse production is very costly from a capital investment and operating cost per hectare basis, the high yields partially compensate, making per unit costs less prohibitive relative to field production. The development of the hothouse industry reflects a strategy for controlling the growing environment, thereby producing more consistent quality and volumes, in response to the growing demand of large buyers for supply consistency.

This emerging "high-tech" industry is attracting new U.S. investors to the Mexican winter vegetable industry, both via acquisition and joint ventures. Alliances and acquisitions are also occurring among input suppliers seeking to capture more of the "value chain" as the industry shifts to more expensive varieties and growing techniques, often with differentiated product attributes.

The establishment of the Sinaloa winter vegetable cluster, with its strong international linkages and investment ties, offers an opportunity to examine the experience with joint ventures and strategic alliances between NAFTA partners, without identifying causality as necessarily related to NAFTA. While Sinaloa experienced foreign investment long prior to NAFTA, the structure of joint ventures and alliances seems to have been gradually changing since NAFTA, although probably more due to independent drivers than to NAFTA itself.

In the past, few arrangements referred to as "joint ventures" involved creating either separate JV entities or long-term alliances. Instead the focus was on simple and seasonal product exchange, with arrangements referred to as "deals." Disputes or changing conditions commonly caused them to be dissolved after only one or two seasons with each party seeking new partners. Deals usually involved the importer (often a U.S. shipper of the same commodities) sharing production costs and market risk with the grower. However, the importer generally charged a marketing commission that included a provision for profit, while the grower might not receive any return if market prices were below the landed cost in Nogales. On the other hand, for products with domestic markets in Mexico, the importer faced the risk associated with the practice of "backdooring." After accepting production advances from the importer, the producer might deliver little product preferring to market it domestically if local prices were higher than export prices. The conflicts associated with these more limited commercial, rather than truly strategic arrangements, made them inherently unstable.

Over time, more strategic arrangements have evolved, where growers and importers have jointly developed production and marketing "programs" designed to meet interdependent strategic objectives for both. These new alliances recognize the mutual dependency of importer and grower and the need to maintain relationships over time, particularly important for firms launching branded or differentiated products, such as high-value hothouse tomatoes and colored peppers. To achieve market success these products must have a consistent marketing presence, in terms of quality, volumes and promotional programs. This requires constant information and technology exchange and investments that can't be realized on a single season basis. Hence, a few formal joint ventures have emerged, involving the creation of

separate joint venture companies, lasting over extended time periods, with a common culture emerging. R & D has become a factor in some of these relationships as seed companies acquire shippers and trace-back capabilities also grow in importance. In other words, the increasing level of technical sophistication in both production and marketing are having an impact.

FIRM LEVEL EXPERIENCES: THE CASE OF THE LEY FAMILY

Insight into strategic alliances may be gleaned by examining the diverse experiences of the Ley family, from Culiacan, Sinaloa. Active at all levels of the Mexican agri-food sector; the Ley family has participated in a series of joint ventures and strategic alliances with U.S. firms over the last twenty years. Many have progressed through their entire life cycle, while others continue. Three cooperative ventures are highlighted here.

Ley/Safeway – Supermarket Joint Venture

In 1979 the Ley family, owners of a supermarket chain, Casa Ley, established a retail joint venture with Safeway. The original motivation for creating the retail joint venture was financial for Casa Ley, and political/market access for Safeway. Casa Ley's need for a strong financial partner emerged in the aftermath of a major devaluation of the peso. Safeway had a strategic interest in international diversification but Mexican law limited foreign ownership in the Mexican food distribution system to 49 percent. Safeway also needed a Mexican partner to learn local business practices, especially given the political and institutional paradigm of public sector direct intervention in the food production and marketing system. In addition, Safeway did not possess the consumer marketing expertise necessary to compete in the newly evolving Mexican supermarket sector.

A separate joint venture was created and new stores were opened. Safeway initially owned 49 percent of the shares, but increased its position to 50 percent when permitted by the 1989 modifications to Mexican foreign investment regulations.

As of 1998 the endeavor had grown to 73 supermarkets located throughout Northwestern Mexico. Growth was financed entirely by reinvestment of joint venture profits. The joint venture has been successfully maintained because the initial objectives were met and the firms have continued to adapt to the dynamic Mexican supermarket, macroeconomic and general policy environment. Safeway continues to benefit from Casa Ley's operational and market expertise while Casa Ley gains Safeway expertise in technical, administrative and corporate structures and systems. The distribution of benefits has been acceptable to both parties, and relatively balanced bargaining power has contributed to a sustainable relationship, despite changes in the institutional/political framework that now permit and simplify direct foreign investment in food retailing.

The fact that alliance success is dependent on the successful alignment of multiple factors is illustrated by the ultimate demise of another Ley/Safeway

relationship. These two partners were unsuccessful in maintaining a vertically oriented joint venture between Safeway and the winter vegetable production operations of the Ley family. Objectives were not sufficiently compatible when one party focused on grower considerations while the other concentrated on its needs as a retailer. Without a shared vision of the relationship and its future as a guide the alliance proved to be short-lived.

Ley/Sun World International Strategic Alliance

Shortly after the Ley/Safeway winter vegetable failure, Ley developed a strategic alliance with U.S. grower-shipper, Sun World International, to produce proprietary varieties of long shelf-life vine-ripe tomatoes and sweet, colored peppers. Sun World International had an exclusive license to seed varieties developed by LSL, an Israeli vegetable seed firm. Access to these differentiated varieties was restricted to grower partners who paid royalties to Sun World for their use. Sun World also had considerable experience in marketing branded high value vegetables in the U.S. market. Ley entered the alliance to secure access to the seed technology and to acquire a U.S. marketing partner. Sun World motivations were sourcing related, securing access to Ley's production capabilities, and a disciplined grower partner for conducting further R&D on their proprietary seed varieties. The ability and willingness of the Ley partners to conduct carefully controlled seed trials was an important motivator for Sun World.

Sun World and Ley structured a production joint venture contract (not a separate entity), sharing operating costs and splitting profits and losses on a 50-50 basis. An alliance also existed on the marketing side, where Sun World was the exclusive marketer for their proprietary varieties and Ley paid a fixed marketing commission per box sold. With the exception of the proprietary varieties and corresponding royalties, the structure of the Sun World-Ley alliance was the norm for the Sinaloa winter vegetable sector.

The alliance operated for several seasons, but at the same time the Leys marketed other varieties independently through their existing Nogales distributorship. This afforded them an opportunity to compare the net returns from both marketing operations. The Ley's concluded that despite the beneficial technical and marketing learning with Sun World, the alliance did not provide sufficient benefits over operating independently. This was in part due to patent complications which caused Sun World to lose exclusive control of the tomato varieties, allowing competing seed firms to offer equal or superior alternatives accessible without royalties. The loss of licensing royalties, legal costs associated with defense against patent infringement, and other business problems contributed to serious financial difficulties for Sun-World. From the Ley perspective, Sun World was no longer a viable partner and the alliance dissolved amicably.

Ley/NT Gargiulo Joint Ventures

Subsequent to the Sun World alliance, an innovative set of joint ventures was established between the Ley family and NT Gargiulo, at the time the largest U.S.

tomato shipper. NT Gargiulo was involved in year-round production and marketing, with production facilities in Florida, California, the East Coast and Puerto Rico.

The Gargiulo family sought redundancy in production to reduce weather-induced marketing risk in supplying national retail and foodservice accounts. For the Gargiulo's, NAFTA apparently was one of several substantive changes affecting their perception of the competitiveness of the Sinaloa industry. To paraphrase Jeff Gargiulo's position at the time, "While my fellow Florida shippers are going to Washington, D.C. to seek governmental redress from the effects of trade liberalization, I was going to Mexico." At the same time, U.S. retail demand for vine-ripe tomatoes, grown primarily in Sinaloa, was rising. By 1994, several years of R&D in Sinaloa had resulted in vine-ripe varieties with improved shelf life, yields, uniformity, flavor and appearance. R & D provided another incentive for the Gargiulo family, who needed different locations to test new varieties resulting from an alliance with Monsanto.

Although NT Gargiulo was a market leader in the production of mature-green tomatoes, it had little experience producing and marketing vine-ripe tomatoes and no experience producing in Mexico. While the 1992 reform to Article 27 of the Mexican Constitution allowed for corporate investment in farming, legal and practical barriers to producing independently still existed. For example, there were limits on the amount of land that any one farmer could own (100 hectares for irrigated row crops), as well as barriers to gaining access to quality land, via rental or ownership arrangements. These barriers, compounded by the need for obtaining local technical production expertise, provided NT Gargiulo with both political and resource incentives to find a local partner in Mexico.

From the Ley perspective, an important motivating factor was to obtain "true" risk sharing. The production of winter vegetables entails sizeable investment and risk. For example, tomato production and packing costs often exceed $12,000/hectare or $1 million/season for even medium scale operators. Ley felt that the typical joint venture contract prevailing in the Sinaloa industry between Mexican growers and U.S. distributors or shippers was not true risk sharing. The marketer (a distributor or shipper) was assured income from the marketing commissions paid by the growers while the grower usually absorbed most of the production risk. Ley was looking for joint ventures that better incorporated both production and marketing risk.

Two separate joint ventures were created, structured to meet the shared objective of a year-round presence of superior quality, branded tomatoes in the North American market. Partner selection was based on the proven history of the firms, their sound financial positions, and on their production, distribution and marketing capabilities. The difficulty in evaluating and sharing ownership in existing physical infrastructure caused them to exclude existing physical investments from the relationship. Instead, they jointly capitalized and shared the operating costs for two separate joint venture entities, one for production and the other for distribution. The new distribution firm became Del Campo Gargiulo, LLC.

Likening an alliance to a marriage, one of the partners noted that "an intrinsic effort is required in keeping it going." Firm type and culture influenced the relationship; the fact that both were growers enabled them to communicate effectively, in contrast to the Ley/Safeway vegetable production alliance. The ongoing exchange of embedded knowledge between these firms over the last six seasons appears to be an important factor contributing to the success of the alliance. Both have improved their competency in producing and marketing branded Sinaloa winter vegetables. The alliance has enabled them to better meet the needs of the consolidating retail sector and together they have increasingly sought contracts with preferred suppliers to guarantee availability, prices and traceback capabilities. Although Gargiulo has learned about producing winter vegetables in Sinaloa, that firm is probably no closer to producing independently there, due to continuing resource and political constraints.

Lessons Learned

Ley's experiences illustrate the benefits and also the difficulties and risks involved in strategic alliances. In the Ley/Safeway alliances both political and resource factors motivated the partners. The supermarket alliance survived because both parties remained committed to the industry and the venture and shared a vision of its future. Conversely, the production/marketing alliance failed because both parties focused on their own needs, which were different from those of their partner. The Ley/Safeway alliances also illustrated the fact that compatibility in one relationship is no guarantee of success in the next.

Complementary capabilities and shared objectives of joint profit maximization helped create and maintain the Ley/Gargiulo alliance. Initial partner requirements included tests of capital, technical expertise, and the ability to produce and market large, consistent volumes of product. Since both firms had core competencies in production and distribution there was no weak link, but each required the other's expertise in their home country. While cultural differences have been somewhat of an issue, this factor has been minimized both by the Ley family's close ties with the U.S. culture and the "grower culture" the partners share.

On the other hand, in the case of Sun World-Ley, joint profit maximization was not a clearly defined goal. Ley learned about branded marketing in the United States from Sun World, lessening Ley's need for the alliance. Issues related to both performance and relationship risk were likely present in the Sun World-Ley alliance.

In the meantime, most players in the Sinaloa/Nogales industry still retain traditional alliances that are limited to commercial sales transactions and are seasonal rather than strategic in nature. These alliances will be tested in future as fewer, larger buyers attempt to develop closer partnerships with preferred suppliers, implementing supply chain management techniques. These new requisites are causing some U.S. shippers to produce directly in Mexico, by renting land and hiring their own managers, as a strategy for maximizing control as part of a year-round program. While this option is permitted by the reform of Article 27, it remains the

exception with both political and resource factors still causing most U.S. firms to share risk with Mexican partners.

SUMMARY AND CONCLUSIONS

The structure of the agri-food sector is evolving dramatically in response to internal and external pressures. The nature of relationships among agri-food organizations at all levels of the food system, from plant and animal genetics through to retail and food-service organizations is changing. Firms are attempting to reduce transaction costs, food safety and other risks, relying less on the spot market, and developing closer ties with suppliers and other partners.

Strategic alliances and joint ventures play an increasingly important role in inter-organizational relationships, allowing firms to capture benefits from new markets more quickly and at lower risk than through horizontal or vertical integration strategies. The rapid rate of change in competitive markets means that companies may not have the time to develop necessary resources and capabilities internally. This is clearly the case among NAFTA participants, as a plethora of alliances were identified in the North American agri-food sector. Incentives to ally will remain and foreign direct investment (FDI) among the NAFTA partners in each other's agri-food systems will continue to grow, along with sales of affiliates in their neighbor's markets. Firms' risk preferences and perceptions, strategic goals and resources will influence their choices of interaction, from spot market transactions to strategic alliances, joint ventures, and integration via mergers and acquisitions. This will in turn shape the future mix of FDI, sales via affiliates, and trade among the NAFTA partners.

However, NAFTA is only one of many factors affecting commercial and investment relationships and generally not the principal one in the agri-food sector. Market and industry changes have encouraged the evolution of inter-firm relationships away from simple product exchanges, toward strategic alliances focused on coordinating and delivering a bundle of assets, including new product development, year-round supply, quality/food safety assurance and risk sharing. These require much greater exchange of embedded information and technology.

Evidence from the internationally focused alliances in Canada/Mexico/United States presented in this paper highlights issues that must be addressed by firms who participate in strategic alliances. The strategic alliance life cycle framework provides a conceptual basis for examining those issues. Alliances vary depending on the strategies, capabilities and objectives of participants, but to persevere they must continue to offer value to all partners. When the fundamental motivators for an alliance disappear, alliance dissolution usually follows shortly thereafter, typically with one of the partners acquiring the venture.

Although managers frequently spend a great deal of time and effort determining why they need to enter into alliances and with whom, their analysis typically ends with alliance creation. The strategic alliance life cycle approach

recommends that organizations consider more than simply those factors leading to alliance formation. Examining the issues and factors affecting all stages of a strategic alliance's life will enhance the understanding of the alliance process and improve the likelihood of increasing both the longevity and the value of alliances to organizations. This analysis will assist organizations in developing plans for navigating all alliance stages. While the rapid rate of change in global business in general, and the agri-food sector in particular, is encouraging greater use of alliances, the changing environment also means that the conditions supporting alliances are also likely to change more quickly. In the future, firms will move through alliance life cycle stages more rapidly than they have in the past. Planning for that progression from the onset is vital to maximizing alliance benefits and value.

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