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*International Food and Agribusiness Management Review*  
Volume 13, Issue 1, 2010

## **Inclusion of Low Income Sectors in Latin American Agribusiness**

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### **Abstract**

We examine three case studies on agribusiness ventures that have included low income sectors (LIS) into value creation activities to reduce poverty in Latin America. While the goal for each agribusiness is economic profit, we find that this goal is not inconsistent with wealth creation among LIS. We use the agribusiness chain analytical framework to identify the roles played by LIS in the ventures studied, and we explore the ways in which LIS inclusion has influenced the performance of the agribusiness chains and contributed to their competitiveness.

**Keywords:** Agribusiness, Poverty reduction, Latin America

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## Introduction

In recent years (Prahalad and Hammond 2002) have proposed the idea that large corporations might “serve the poor profitably” with the purpose of simultaneously developing markets in which the poor reside and reducing poverty in the developing world. The growing body of research in this field of study and practice has been referred to as the “base of the pyramid” (Hart and Christensen, 2002), or “inclusive business” (SEKN, forthcoming) in Latin America. The thrust of this work suggests that where development organizations have been largely ineffective at reducing poverty among the world’s poor, the private sector may hold the key (SEKN, forthcoming). The following case studies on innovative agribusiness ventures that include low income sectors (LIS) may offer new knowledge in the struggle against poverty in Latin America. For more than forty years, Mellor and others have pointed out, with convincing data, that “agricultural growth and only agricultural growth effectively mitigates poverty in low income countries with a substantial agribusiness sector” (Mellor, 1999). Because poverty in developing countries is largely rural, any rural income increase has a disproportionate impact on global poverty (Economist, 2007). Agro-industries have created a demand for agricultural sectors to produce greater quantities of more diverse crops, and, farming employment has grown as a result (Austin, 1992). These processing industries thus hold a promise to drive agricultural growth and rural poverty reduction.

In this paper we examine three case studies on agribusiness ventures that have integrated LIS into value creation activities. These cases were developed by INCAE in collaboration with ten other Ibero-American business schools and Harvard University as part of the Social Enterprise Knowledge Network. The goal for each agribusiness is economic profit, but as we shall see in the cases, this does not imply that wealth creation among LIS is a mutually exclusive goal. Regardless of underlying motivations, the key questions we explore in this paper are,

*How do these agribusiness ventures incorporate LIS into their value chains?*

*What factors are relevant to explaining the success of each venture?*

*Which of these factors are common among the three ventures in creating economic and social value?*

To answer these questions, we shall use the agribusiness chain analytical framework described in the following section, which enables us to identify the roles played by LIS in the ventures studied. After having described the framework, we shall examine the three cases to understand how LIS integration has influenced the structure and performance of each agribusiness system. The final section includes a summary discussion of the success factors in each case and presents some conclusions in reference to our initial questions.

## Analytical Framework for Agribusiness Chains

An agribusiness chain (Austin 1981, 3) includes the raw materials processing stage and any upstream and downstream activities. Thus, agribusiness chains include operations spanning from agricultural input production activities to end product delivery to consumers. These operations

involve the transformation of agricultural products grown on the soil and livestock-derived goods. These transformation processes vary widely, from cleaning and packing to chemical alterations, but they are all characterized by three features of their raw materials. First, raw materials are perishable and cannot be stored for long periods of time, especially fruits and vegetables. Second, most harvests are seasonal, while food product demand is usually stable. Third, farm product quality is much more variable than that of manufactured products. These traits impose logistical and operating challenges for agribusiness management and create opportunities as well as barriers for LIS incorporation as business partners.

The challenges of agribusiness coordination were first studied by Davis and Goldberg (1957), who developed a framework known as “the agribusiness commodity system,” later applied by generations of Harvard Business School students to analyze case studies. In developing nations, James E. Austin (1981,1992) demonstrated the analytical prowess of this framework and elaborated a protocol to evaluate agribusiness projects. We will use the David and Goldberg framework as modified by Austin to examine strategies to integrate the LIS in agribusiness ventures as shown in figure 1.

The three major links in the chain identified by (Austin 1992) include: acquisition (field), transformation (factory), and trade (market). The first refers to product planting, growing and harvesting processes. In the factory link, these agricultural raw materials are transformed, and issues associated with end product packaging, storage and transportation to distributors are addressed. The market link handles matters relating to the identification of consumer preferences, market segmentation, demand forecasting, pricing, the choice of distribution channels, advertising and promotion, and marketing management. The tasks involved in each link are performed by primary actors –farmers, processors, distributors and other parties directly managing products. Support actors in agricultural ministries and financial institutions may provide technical assistance, loans and other services, as well as coordination elements that enable efficient product flow. Close coordination among field, factory and market links becomes crucial due to agribusiness products’ seasonality and perishable nature.

The value of the Austin analytical framework lies in its ability not only to identify value activities carried out by each actor in the chain, but also to determine who holds the greatest negotiating leverage at each stage and why. Indeed, this framework complements the “five forces” industry analysis model introduced by Michael Porter (1980) –competitive pressures among rivals, buyers and suppliers, newcomers and substitute good producers, as well as the value chain with its primary and supporting activities (Porter 1985). These models prove useful for gaining a better understanding of how LIS integration in agribusiness value chains can create both economic and social value.

## **Methodology**

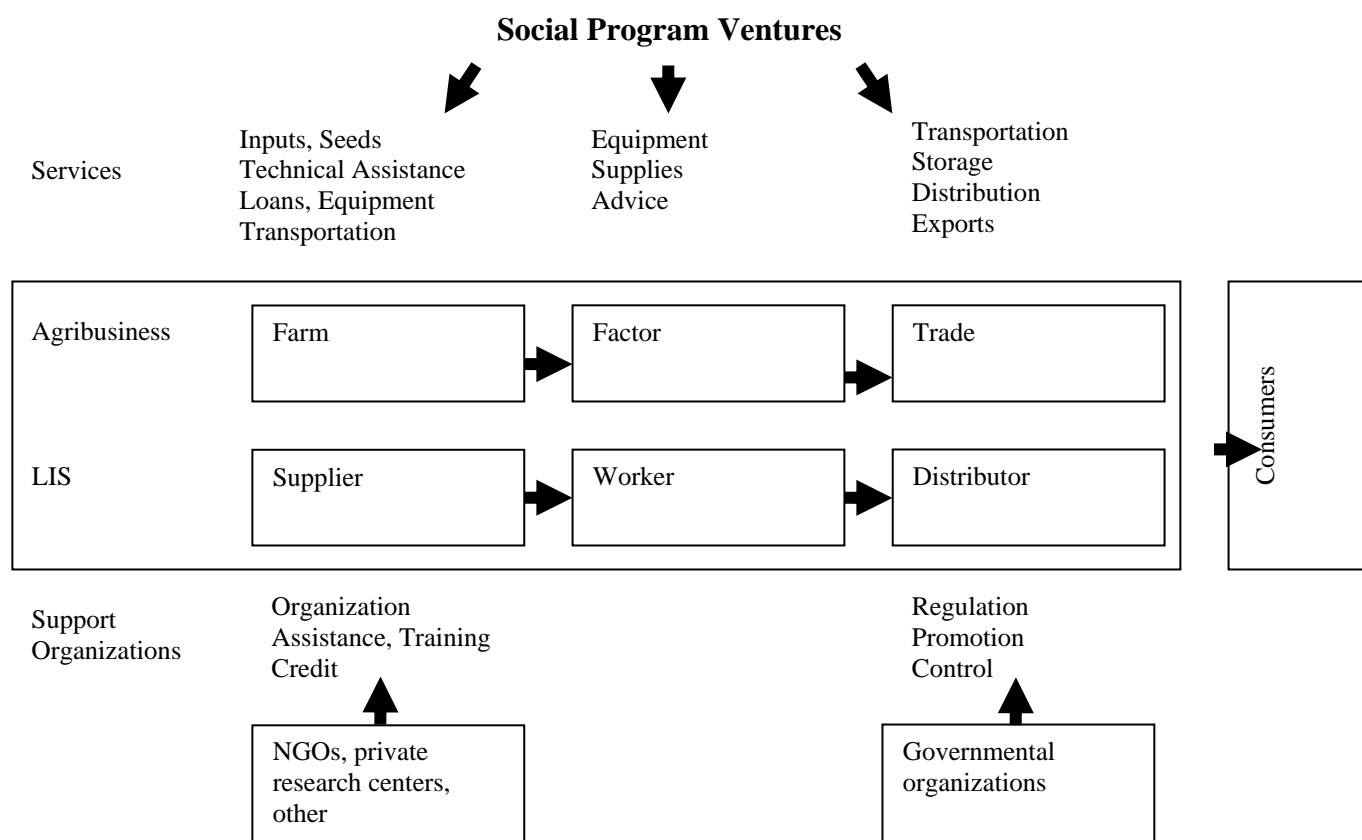
Within the field of agricultural management and economics, case study research has a well-established tradition (Sterns, Schweikhardt, and Peterson 1998). When used in conjunction with a set of well defined objectives, guided by a theoretical framework, the case study methodology has a wide range of scholarly applications for analyzing agribusiness models and thereby contributing to theory building. When rigorous protocol is applied to the case study

methodology many insights not available from historical time series analysis may also be made (Westgren and Zering 1998). We now turn our attention to the specific cases studied by way of introducing each business, the barriers each enterprise encountered implementing their business models with the LIS, the practices used to overcome them, and the economic and social value created.

## Latin American Agribusiness Case Studies in Social Inclusion

Nine of the cases developed in Latin America by the Social Enterprise Knowledge Network reveal a range of roles performed by LIS in agribusiness –mostly at the field link, sometimes at the processing link, and less frequently in the market. We highlight three of those cases in this paper as they typify social inclusion innovations in the critical field link of the agribusiness chain, please see Figure 1.

The case of Tierra Fértil includes the LIS as fresh and perishable product suppliers for Central American supermarket chains. In the two other cases, Irupana and the Costa Rican Entomological Supply (CRES), the LIS also provide perishable produce for downstream processing –organic grains received by Irupana from Bolivian farmers are naturally processed, while butterfly pupae (the correct term for what are commonly called “cocoons”) delivered to CRES by Costa Rica’s breeders are classified, packaged, and exported to exhibitors. In the case of Irupana some farmers become factory employees, doubling their wages as a consequence.



**Figure 1.** Participants in an Agribusiness Ecosystem

### *Tierra Fértil*

The Tierra Fértil Program was created in 1974 by Enrique Uribe, Costa Rican entrepreneur who had founded the CSU supermarket chain, in response to increasing customer demand for freshness, variety, and hygiene in their purchase of fruits and vegetables. Previously, CSU had purchased these items in public markets, where middlemen known as “coyotes” sold produce acquired directly from small farmers, whom they typically visited with pickup trucks and sometimes negotiated the purchase terms before the crops were harvested. The farmers often accepted low prices in exchange for credit with which to purchase agricultural supplies. Tierra Fértil began by introducing safe, hygienic packaging and improving transportation, often picking up produce at small farms. This resulted in a reduction of waste in classification, packing, transportation, reception, placement on shelves from 25% to under 5%. In the 1980s, a campaign to promote rational agrochemical use was orchestrated by Tierra Fértil through an alliance with a public marketing agency, providing information and training to small farmers throughout the country. The potential for export of fresh and processed products to the United States, Canada and Europe prompted CSU to raise its quality, hygiene and service requirements even more in the 1990s, so Tierra Fértil worked with small producers to enhance production discipline and attention to planting, harvest, storage and transportation details.

As the number of CSU outlets continued to grow, it became harder for the company to manage the washing, packing, and storage operations, which required ever greater numbers of employees and more space. The company therefore made the decision to transfer these activities to the farmers, providing the machinery and materials. Farmers who failed to adjust to these heightened demands chose to leave the program, though according to a Tierra Fértil technician, many later returned because they had become accustomed to the orderly and hygienic processes, and “because we are so demanding, they are learning.” CSU applied a “fair price policy,” paying suppliers a price based on the statistical mode of the price paid by the nation’s leading wholesale market, CENADA, plus a premium for compliance with the company’s presentation, safety, and packaging requirements.

By 2007, Tierra Fértil was providing technical assistance and other kinds of support to more than 1,600 small and medium-sized vegetable, fruit and grain producers throughout Costa Rica, most of whom had no previous access to loans, technology, or markets. Tierra Fértil provided advice on what to grow and when, based on CSU’s knowledge of consumer preferences. The program instructed growers on quality and timely planting, so that harvests would help to mitigate supply seasonality.

### *Irupana*

Irupana Andean Organic Foods is a Bolivian company dedicated to the purchase and export of organic agricultural products cultivated by poor farmers of the Andean, Amazonian and Chaco regions of Bolivia. It was founded in 1987 by Javier Hurtado and his wife Martha Cordero with the intent of helping the marginalized poor of rural Bolivia through private business that provided the family farmer access to international markets, financial and technical assistance, and through “fair trade” initiatives sponsored by NGOs (non-governmental organizations) that sought premium prices for quality organic produce.

When Javier started his new venture, one of his first steps was to identify poor coffee producers in the rural communities of the city of Irupana in the Southern Yungas region of Bolivia. These coffee growers possessed farms of less than ¼ hectare and had no access to formal markets, but instead relied on informal markets which offered them few incentives to increase volume or improve quality. This changed when Javier's new company, Irupana, showed interest in contracting with them as suppliers and began to export Bolivia's first 100 percent organic coffee.

Irupana rapidly diversified its product offering and by the 1990s the company was selling 80 different types of organic products, from Andean cereals, such as quinoa, amaranto, cañawa, to organic soy, honey, wheat, and a variety of fruits. Irupana paid its suppliers premiums of up to 20 percent for product quality, cleanliness, and on-time delivery for these organic products. In time, under these policies and with the provision of technical assistance, Irupana's supplier network expanded to reach over one thousand families. Irupana's distributors grew to include 18 storage facilities and 300 retail stores, as well as large supermarket chains in major Bolivian cities such as La Paz, Cochabamba, and Santa Cruz.

As Irupana approached the new millennium, the export of organic produce from Bolivia reached more than 6,700 metric tons with a value of over \$10 million, principally of coffee, quinoa, and castaña. With almost half of Irupana's quinoa exports from 1990 to 2000 destined to the European market and another 41 percent to the United States, the growing international demand for this native Bolivian product was confirmed.

By 2006 Irupana had grown to 150 employees and worked with 1,700 family providers. The economic impact of the business on its providers included premiums of 20 to 25 percent paid to rural farmers for quality produce and on-time delivery. The relationship with Irupana represented a 50 percent increase in family income for these rural family farmers, which prior to their relationship with Irupana was on average \$700 per year, and a secure and growing international market for fair trade produce.

### *CRES*

Costa Rican Entomological Supply (CRES) was started in 1983 when Joris Brinckerhoff, then a Peace Corps volunteer in Costa Rica, was searching for a new venture idea that would contribute to the country's economic development without damaging the ecology, and breeding butterflies for export met his criteria. For seed capital he sold his car in the United States and borrowed some money from his family. An importer and wholesaler from the U.K. visited his installations and agreed to take an initial shipment of live pupae for resale to butterfly exhibitors. Boosted by this success, Joris raised an additional \$25,000 among relatives and purchased land for a new company headquarters in La Guácima, a rural area near the international airport.

During its first year of operations, CRES produced all the pupae that it exported. In 1986, several employees proposed becoming independent, breeding the pupae in their own installations, and selling them to CRES. Joris accepted the proposal, and it was agreed that these new breeder-entrepreneurs would be paid a price equivalent to 70% of the export price, then \$2.40 per unit. The percentage of pupae exports that were acquired from independent breeders increased from 1.2% in 1987 to 18.4% in 1990.

Word of the opportunity for gain from butterfly breeding spread rapidly in the rural areas of Costa Rica, where work was seasonal and few agricultural laborers earned the minimum wage, equivalent to \$235 per month. By 2006, over 97% of the pupae exported by CRES were obtained from suppliers located throughout the country. During the rainy season from May through November, it was common for breeders to produce between 500 and 600 pupae per week whereas in the dry season, production levels of 150-250 pupae per week were more common.

For many years, CRES was the only major exporter. In 1992 a second company entered the industry, and in 2003, a third competitor began a professional advertising campaign with a message that emphasized environmental protection and concern for their employees and suppliers. In addition, numerous individual buyers such as “Andrés,” “Sergio” and “Luis” were beginning to appear in the market, accepting pupae that had been rejected by CRES for cash, at giveaway prices. Costly price wars ensued, with prices collapsing 30% in 2005, but CRES recovered the following year due mainly to an increase in the volumes exported to Europe. CRES seeks to maintain leadership in the industry through the quality and variety of its products and services, permitting the company to set higher prices which, in turn, enabled it to provide adequate remuneration to the national network of suppliers that it has built up over the years. CRES offers 50 species of butterfly pupae from all microclimates of Costa Rica, where the different varieties of food plant needed to support them could be grown. Unless the client gives other instructions, CRES attempts to assemble a shipment that includes 20% of the “premium” species (Morpho and Caligo), and no more than 5% for any one of the remaining 25 to 32 species that are normally included.

## **Factors Contributing to Successful Inclusion**

The many factors contributing to the successful inclusion of LIS by Tierra Fértil, Irupana, and CRES may be clustered into three areas. The first is consistency of the LIS with the requirements of the “business model” or way that each agribusiness system is designed to produce a profit. The second is creation by the LIS of competitive advantage over rivals. The third is execution capacity, by which the barriers to successful inclusion are overcome.

### *Consistency with Business Model Requirements*

The inclusion of LIS was consistent with the requirements of each business model. That of CSU-Tierra Fértil is based on operations that create a superior value perceived by customers as worthy of higher prices. This supermarket chain caters to upper-middle income customers who prefer one-stop shopping and whose diet includes fruits, salads and other healthy foods. Among the few ways to stand out among their competitors is to offer, through a program like Tierra Fértil, fruits and vegetables with variety and freshness. Additional costs incurred to ensure this differentiation include: training for producers, refrigeration, transportation and handling. Higher costs are offset not only by higher prices but also by customers’ choice to do all their shopping at these supermarkets rather than at competing stores.

Irupana’s business model is based on premium prices that a health and ecology-conscious consumer segment is willing to pay for organic products supplied by indigenous farmers in a vast



region that encompasses the Andes, Amazonia and Bolivia's Chaco area. This model differs from that of CSU-Tierra Fértil in that Irupana focuses on a consumer segment, in both domestic and exports markets that values and is willing to pay a premium for a specific product characteristic.

The CRES business model is based on satisfying butterfly exhibitors in Europe and North America with on-time deliveries of live pupae, obtained from a network of breeders of butterfly pupae, in all micro climates of Costa Rica. The CRES business model also includes transformation activities (classification, packing and exports) that are valued by the exhibitor clients. It is innovative but replicable, and threatened by the emergence of new competitors. In each of these agribusiness chains, LIS are fully involved not only in field operations but in an array of activities that include the transformation and, in the case of Irupana, the marketing of agribusiness products. Small farmers have traditionally been excluded from downstream activities in the agribusiness chain, separated by intermediaries and, therefore, uninvolved in supply, manufacturing and marketing operations. The engagement of small producers in Tierra Fértil, Irupana, and CRES business models has enabled their access to greater economic and social benefits.

#### *A Source of Competitive Advantage*

In the previous section, we examined how the integration of LIS suppliers in the agribusiness chains of Tierra Fértil, Irupana, and CRES was consistent with the business model of each company. These case studies also reveal that LIS inclusion has effectively contributed to the competitive advantage of the respective agribusiness systems, creating win-win situations for the LIS and the commercial firms.

The Tierra Fértil program was built in Costa Rica as a result of competitive pressures that fueled the need for a the CSU supermarket chain to ensure an ongoing supply of fresh produce to outdo competitors on superior quality, freshness, assortment, hygiene and safety. LIS integration in the system was essential, as produce variety was only attainable through the acquisition of produce from regions with diverse weather conditions and geographically dispersed small farmers. However, variety in itself is not a source of competitive advantage –it may be purchased in the wholesale market. A true competitive advantage comes from providing a combination of attributes sought by customers. This combination is hard to imitate because it requires investments in training and forging long-term relationships with LIS.

CRES, like Tierra Fértil, introduced a new business model that favored the incorporation of a LIS producers' network. Butterfly exhibitors' demand for a greater variety of species drove this agribusiness to recruit independent breeders from diverse microclimates throughout Costa Rica. Yet, in contrast to the settings where large retail chains like CSU operate, entry barriers in the butterfly farming business are low, and new competitors were able to imitate the CRES model. Now, CRES has focused its efforts on providing customers with detailed information on the geographies and microclimates where its pupae originate. This requires a close collaboration with suppliers who report these data on a continuing basis.

Irupana, a pioneer in organic product manufacture and marketing that has been broadly recognized by organizations such as the World Economic Forum, has pursued a high

segmentation strategy to concentrate on a market niche, offering a wide assortment of organic food products to a narrow segment of European and American customers. These products are elaborated with crops such as highly nutritious quinoa, amaranth, cañawa, soy, wheat and a variety of fruits grown by indigenous farmers in the Andes, Amazonia and Bolivia's Chaco regions. In a market dominated by large single-crop plantations, many subsidized by their government, Irupana targets a niche of consumers who are willing to pay premium prices for organic products with positive social and environmental impact.

Irupana's large assortment of organic crops is made possible by means of an extensive LIS supplier network in eastern Bolivia, where land is least suitable for mechanized farming. Several governments have tried to promote farming in these mountainous, rocky regions to no avail. In fact, the lack or deficiency of natural or basic resources that prevents large scale industrial farming acts as a deterrent for competition, creating an opportunity for Irupana and its organic food business. As in the case of Tierra Fértil, this mountainous terrain turned into an advantage for the production of a vast variety of crops as a result of diverse microclimates. Indigenous farmers' physical dispersion, as well as their ancient natural farming techniques, has become a source of competitive advantage for Irupana's market segment of choice –European and American consumers who are concerned about their health, environmental sustainability and native culture preservation.

By connecting Bolivia's indigenous communities to market segments demanding broad lines of organic products, Irupana has effectively improved farmers' living conditions while preserving their cultural heritage and their traditional crops, while at the same time, avoiding negative environmental impacts. Thus, it has transformed many poor Bolivian farmers, formerly dependent on charity from governments and development agencies, into micro-entrepreneurs. In each of these cases, LIS involvement made possible the preferred access to resources that gave competitive advantage to the commercial enterprise. Moreover, this competitive advantage may be sustainable over time, because competitors are held back by an investment asymmetry: they would incur higher costs if they tried to imitate the leader since those same resources cannot be so easily accessed once the network has been established (Ghemawat 1986).

#### *Execution Capacity: Overcoming Barriers to Social Inclusion*

The three case studies describe formidable barriers to LIS inclusion, among them logistical barriers that are especially severe in the field link, lack of organization among small producers, scant technical knowledge required for growing quality farm products, and cultural distance that hindered the formation of relationships with commercial enterprises. These barriers were overcome by targeted investments in infrastructure, alliances for technical training, initiatives for building trust, and premium pricing.

*Targeted investments.* Effective resource allocation is a powerful key to execution (Ickis, 1997). The Tierra Fértil and Irupana cases demonstrate that even in the face of immovable physical barriers or infrastructure deficiencies that cannot be remedied with available resources, logistics can be enhanced and transaction costs reduced with modest investments in storage and technology centers. It is worth noting that Nestlé, the world's largest dairy product manufacturer, has developed a targeted investment strategy to overcome logistical barriers by building "dairy

districts,” where the company invests in milk collection and refrigeration centers for small dairy farmers’ production, which is later shipped to processing plants (Goldberg and Herman, 2007). Even for CRES, in a small country with an extensive road network, the installation of pick-up points for butterfly pupae on the outskirts of the capital greatly facilitated delivery for breeders.

*Alliances for technical training.* To overcome capability and qualification barriers, all three companies developed support programs intended to improve farmers’ technical readiness and education, often through formal or informal alliances with other actors. The provision of technical training was the original purpose why CSU initiated the Tierra Fértil program. It was a major feature of Tierra Fértil, beginning with instruction on packing for delivery and gradually broadening to include the proper use of agrochemicals and environmentally safe practices. Rather than creating its own program, Irupana formed a partnership with an NGO, Prorural, to overcome poorly educated and technically unprepared suppliers through the provision of technical assistance, production process supervision and harvest planning. CRES benefitted from the efforts of InBio, another NGO, to encourage and train underemployed agricultural workers and their families in butterfly breeding.

*Initiatives for building trust.* Overcoming cultural distance starts with a dialog between producers and companies, sometimes aided by an NGO –as the Prorural did with Irupana. In the Tierra Fértil program, cultural differences with potential suppliers were overcome by hiring a new type of buyer, who had the market and agricultural knowledge to advise LIS producers throughout the farming process and who also possessed the ability to relate to small farmers and a disposition to go out into the field. Irupana’s partner, Prorural, facilitated dialog sessions with the organic farmers, and CRES founder Joris Brinckerhoff held regular workshops with his butterfly breeders.

*Premium pricing.* The cultural differences between company managers and LIS were generally addressed with greater contact and dialog among individuals. It is harder to deal with issues of distrust, often compounded by different values associated with notions such as time, manual work, interpersonal relationships, laws and loyalties (Sathe, 1985). A practice employed to build trust and proximity with LIS farmers was the introduction of pricing policies that reward growers for quality. Tierra Fértil paid premium prices for quality. CRES promoted a policy known as “fair pricing” among its suppliers and overseas customers, a policy that it sought to sustain even as world prices for butterfly pupae were falling. To offset this unfavorable market trend, the company changed its sales policy, offering customers 30% more pupae at the same price, increasing purchase volumes and maintaining overall revenues for butterfly breeders. Additionally, CRES tried to differentiate its supply with an optimum mix in an effort to safeguard higher market prices. Irupana’s business model also featured a premium pricing practice. The company paid providers a 20% premium to reward product quality and on-time delivery. This enabled farmers to increase their income while enjoying recognition for their efforts.

## **Integration of LIS and Social Change**

The practices used to overcome barriers to LIS involvement described in the previous section have often produced changes in the structure of the agribusiness chains, introducing support

organizations and other new actors through social program ventures as shown in Figure 1. Intermediaries and other actors that hindered integration of the LIS in agribusiness chains were eliminated. These changes go beyond alterations in the structure of the commercial system. In all three cases, they have resulted in the formation of networks of extended business value chains and their supporting actors, and changes in the relationships among those actors, as informal markets are replaced by contracts. Relationships built on these ecosystems are hard to replicate by competitors, creating competitive advantages for the firm and social value for the LIS. Such changes do not occur without resistance; they must be managed.

An example of social change management may be seen in the Tierra Fértil program. At the time of its inception, the Costa Rican fruit and vegetable industry featured the presence of intermediaries, known as “coyotes,” who bought and resold products in traditional markets or fairs. The company initially participated in this agribusiness chain, purchasing products for supermarket distribution through these traditional channels. The structure of the agribusiness chain was altered by the arrival of new actors – NGOs that provided support, training, pricing information, and technical assistance to LIS farmers. At the same time, Tierra Fértil reached out to producers, buying directly from them and eliminating two links in the chain –coyotes and wholesalers.

The agribusiness chain for fruits and vegetables in the Bolivian altiplano, in which Irupana participated, underwent a similar structural change. The original chain was characterized by many dispersed, isolated LIS farmers at risk of exploitation by intermediaries. The structure changed with the arrival of Prorural, which, in addition to training and technical support, offered financial and organizational assistance. As a result, Irupana was able to access the producers directly, achieving greater efficiency with benefits for both the company and the LIS.

Whereas Tierra Fértil and Irupana changed the structure of existing agribusiness chains, CRES created a new chain for the breeding and export of butterfly pupae. Many of the current breeders used to be occasional farm laborers or worked in their homes. One woman, interviewed by Italian national television, described how she had begun breeding butterflies and how her husband sitting beside her in the interview, quit his job and joined her to make more money. With the exports of pupae to North American and European butterfly exhibitors, a new business emerged, bringing a new opportunity for LIS in rural Costa Rica. Many of these rural entrepreneurs have started new businesses as butterfly exhibitors or producers of framed butterflies for tourists.

In all these cases, there was a change in the structure or relationships among actors in the agribusiness chains that favored the LIS, moving them from geographical, economic, and cultural isolation to fuller participation. This has constituted social change. These cases also illustrate the key role played by supporting agents –crucial elements in the Austin analytical framework that we have applied to the cases. These support agents include NGOs that work in areas such as technical assistance, training and credit in order to promote and facilitate LIS involvement in the agribusiness chain.

## **Conclusions**

We can now return to the questions posed in the introduction to this study. How do these market-based initiatives incorporate LIS in their value chains? First, they have developed business models that are consistent with the roles played by LIS in the agribusiness value chain, but required the LIS to further integrate into the value chain through actively building closer relationships, rather than further marginalizing them through middlemen. Transforming LIS from “indirect suppliers” into “direct vendors” with no intermediaries in agribusiness chains is a departure from traditional agribusiness operations.

Second, what factors were relevant in explaining the success of each venture? Each commercial enterprise designed a business model that was consistent with LIS incorporation, each agribusiness chain built one or more sources of competitive advantage, and each company in partnership with other actors in the agribusiness chain developed a collective capacity that was effective in overcoming barriers to execution.

Third, these same factors were common to all three ventures: a well-designed business model, a competitive agribusiness chain in which commercial enterprise and LIS both added and captured economic value, and the creation of execution capacity that helped ensure the sustained success of the effort. Non-economic value was created through the emergence of social networks. Integration of the LIS, then, is accompanied by changes in ecosystems through the growth of complex social networks, ranging from the involvement of new actors, such as Prorural or InBio, to the elimination of supply chain links. If these changes are not purposeful, competitive advantages will unlikely arise. The cases suggest that the integration of LIS in agribusiness chains is precisely an ecosystem shift towards greater physical and social proximity as well as a new opportunity to capture shared value.

We believe that LIS inclusion in agribusiness value chains may contribute to building competitive advantage and economic value for the firm and the LIS, and non-economic value that will benefit society. This is both the most meaningful and boldest conclusion drawn from our study. We do, however, offer one caveat: greater LIS inclusion in agribusiness value chains must be well conceived, given the unique context in which they live and the firm operates.

## **Acknowledgements**

This article relies heavily on the findings of the Social Enterprise Knowledge Network (SEKN). From 2004 to 2009, SEKN analyzed the management practices of 30 successful social enterprises in Spain and Latin America. Researchers interviewed hundreds of people, and also reviewed company documents and secondary sources. SEKN was established in 2001 by leading Latin American business schools, the Harvard University Graduate School of Business Administration, and the Avina Foundation. Its research focuses on high-priority areas in the field of social enterprise. Members select a single research topic, design a set of common research questions and methods, and then conduct field-based research. Researchers in each participating country examine in depth at least four cases of social enterprise in the chosen topic area. The findings from each country allow researchers to make comparisons across countries. Harvard

University Press has published SEKN's books, and Harvard Business School Publishing distributes SEKN case studies.

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