Chapter 4

Supermarket Expansion in Latin America and Asia

Implications for Food Marketing Systems

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Economic growth and consumer demand have allured supermarkets to developing countries, where they are replacing traditional food retail outlets and dramatically transforming existing food supply chains.

In the past decade, the number of supermarkets[2] increased in the two developing regions that are growing the most rapidly—Latin America and East/Southeast Asia. These two regions are home to 3 billion consumers, including about 700 million middle-class consumers, and are registering the fastest growth in food demand in the world. Rising consumption of fruits and vegetables is a key component of this growth due to factors accounted for in Bennett's Law (Bennett, 1941), which states that the food share of starchy staples declines as incomes increase.

Having rapidly penetrated the food retail sector in the two regions, supermarkets have triggered an upstream transformation of the fruits and vegetables marketing system, all the way to the farmers. Supermarkets have become major buyers of local produce in the two regions, in many cases rivaling or even dwarfing the exports from the region to the rest of the world. In countries with traditional two-tier produce markets (higher quality export market and a lower quality domestic market), local supermarkets have created a third market for intermediate to high quality products. At the same time, retailers are adding upward pressure to improve product quality and food safety in the domestic market, and the difference in quality between products destined for local and export markets is narrowing.

The Rise of Supermarkets in Latin America and East/Southeast Asia

The diffusion and expansion of supermarkets in the developing countries is driven by several factors. These factors are similar across countries and lead to similar results in the evolution of the retail sector. The determinants of the growth of supermarkets include socioeconomic factors, such as rapid urbanization, income growth, and improvements in domestic infrastructure during the 1980s and 1990s. These changes were accompanied by women entering the away-from-home workforce and thus experiencing an increase

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[2] We use the term "supermarkets" to indicate large self-service stores, whether as part of a chain or independent. Supermarkets are generally 350 to 4,000m^2 in size, and have three or more cash registers operating simultaneously, while hypermarkets are larger. Other large format stores include warehouse stores and membership clubs.

in their opportunity cost of time. Lifestyle changes reflected in rapid growth in ownerships of cars, access to affordable urban transport systems, and the acquisition of refrigerators in homes are also associated with supermarket growth. These factors are similar to the factors that have contributed to the growth of supermarkets in the United States over the past six decades.

The in-flow of foreign direct investment (FDI), induced by the liberalization of FDI regulations (APEC, 2003), has also been a key determinant in the introduction and diffusion of supermarkets in the two regions (China in 1992; Brazil, Mexico, Argentina in 1994; Indonesia in 1998). While overall FDI to each region was about $9 billion per year in the early 1990s, by 2000 the figure had grown to roughly $90 billion (UNCTAD, 2001). The pace of growth of U.S. FDI in Asian and Latin American food industries mirrors overall FDI growth in the two regions (BEA, 2000).

Latin America has led the way among developing regions in the growth of the supermarket component of the food retail sector. While a small number of supermarkets existed in most countries during and before the 1980s, they were primarily financed by domestic capital and tended to exist in major cities and wealthier neighborhoods. That is, they were essentially a niche retail market accounting for 10-20 percent of the national food retail sales. However, by 2000, supermarkets had risen to occupy 50-60 percent of national food retail among the Latin American countries, almost approaching the 70-80 percent share for the United States or France. Thus, in little more than a decade, supermarket development in Latin America reached a level that took five decades to reach in the United States.

The supermarket share of food retail store sales for the leading six Latin American countries averages 45-75 percent (table 4-1). Brazil has the highest share, followed by Argentina, Chile, Costa Rica, Mexico, and Colombia. These six countries account for 85 percent of the income and 75 percent of the population in Latin America. Other countries in the region have also experienced rapid growth in their supermarket sectors, but for these countries, expansion of the food retail sector started later and from a lower base. For example, supermarkets accounted for 15 percent of national food retail sales in Guatemala in 1994 and today account for 35 percent.

Table 4-1—Supermarket share in national food retail (Latin America)

	Supermarket share in national retail	
Country	Past	2001
	Percent	
Argentina	17 in 1985	57
Brazil	30 in 1990	75
Chile	NA	50
Colombia	NA	38
Costa Rica	NA	50
Guatemala	15 in 1994	35
Mexico	NA	45
United States	5-10 in 1930	80 in 2000

Note. NA = not available.

Source: Reardon, T., and J.A. Berdegué, 2002.

The development of the supermarket sector in East/Southeast Asia is generally similar to that of Latin America, but the "takeoff" stage of supermarkets in Asia started, on average, some 5-7 years behind that of Latin America, and it has registered even faster growth. The average share of supermarkets in overall food retail sales (urban plus rural, excluding fresh food in the ACNielsen statistics, hence excluding fruits and vegetables, fresh meat, and fish) is 33 percent for several Southeast Asian countries (such as, Indonesia, Malaysia, and Thailand), but is 63 percent for East Asian countries (Republic of Korea, Taiwan, and Philippines). As applicable in Latin America, supermarket share of national retail sales of fresh foods usually is roughly one-half of the share of sales of processed foods, hence the supermarket share is 15-20 percent in Southeast Asia and 30 percent in East Asia, excluding China. In 2001, the supermarket share of Chinese urban food sales was 48 percent, up from 30 percent in 1999 (table 4-2). Assuming the urban share of the total Chinese population to be approximately one-third, the supermarket share of national retail sales of processed foods is around 20 percent, similar to the supermarket share of overall food retail sales for Brazil or Argentina in the early 1990s. However, the rate of growth in the number of stores is three times faster in China than it was in Brazil and Argentina in the 1990s.

Three major trends have characterized the development of the supermarket sector in the two regions. First, the supermarket sector is increasingly foreign owned. In Latin America, for example, global multinationals constitute roughly 70-80 percent of the top five supermarket chains per country on average. The in-flow of FDI in the food retail sector was led by global retail multinationals. For example, in the first eight months of 2002, five global retailers (British Tesco, French Carrefour and Casino, Dutch Ahold and Makro, and Belgian Food Lion) invested 6 billion bhat, or $120 million, in Thailand (Jitpleechep, 2002). Wal-Mart invested $660 million over the past year in Mexico to build new stores. Licensing agreements have also added to the growth of supermarkets in Asia, without requiring FDI.

Second, the supermarket sector is undergoing rapid concentration in the two regions, mirroring trends in the developed regions. In Latin America, the top five chains per country account for 65 percent of the supermarket sector sales (compared with 40 percent in the United States and 72 percent in France). About 3 of every 10 pesos' worth of food expenditures in Mexico are captured by Wal-Mart—rates are similar for Ahold in Costa Rica and

Table 4-2—Supermarket share in national food retail (Asia)

Country	Supermarket share in national retail 1999	2001
	Percent	
China (urban)	30	48
Indonesia	20	25
Korea	61	65
Malaysia	27	31
Philippines	52	57
Taiwan	65	69
Thailand	35	43

Source: Hu et al., 2005.

Carrefour in Argentina. Concentration in the sector results from foreign acquisition of local chains, facilitated by an in-flow of FDI.

Third, supermarkets are no longer niche operations catering only to the rich or even the middle class—they have spread well beyond to penetrate the food markets of the poor. They have also spread from big cities to intermediate towns, and, in some countries, even to small towns in rural areas. About 40 percent of Chile's smaller towns now have supermarkets. And supermarkets are spreading fast beyond the top 60 cities of coastal China to smaller cities, including those in the poorer and more remote northwest, southwest, and the interior.

The success and proliferation of supermarkets are linked to their ability to offer low prices, allowing them to compete with—and beat—wetmarkets (produce markets in central plazas or streets) and small family-run stores. To expand beyond their traditional niches among higher income consumers, supermarket chains in Latin America and Asia emphasize price competitiveness and products of a quality consistently higher than that found in traditional marketplace. The focus on quality and product differentiation, particularly among upper income segments, is similar to supermarket strategies in Europe.[3] Supermarkets have sharpened this focus by improving distributional channels through logistical improvements to the procurement process. These changes are noted both for processed/packaged goods (including processed fruits and vegetables), where large stores have a natural advantage due to economies of scale, and for fresh produce.

[3] The emphasis in Europe is to provide differentiated products that meet consumer perceptions of higher quality, which may generally result in higher prices.

Fruits and Vegetables Retail Sector

The replacement of traditional markets with supermarkets has been slower in the fresh produce sector, compared with other food sectors. Small shops and wetmarkets, such as *feria libres* in Chile or *warungs* in Indonesia, continue to be convenient options for urban residents shopping for produce. However, competitive prices and higher quality produce are helping supermarkets make inroads in this area. Supermarkets offer convenient "one-stop" shopping, with an increasing range of products and services, including banking facilities, food courts, and nonfood products. Additionally, supermarkets are mimicking the sales styles and appearance of wetmarkets as a way to gain competitive edge by presenting a familiar and reassuring atmosphere to customers. In Chile, for example, some supermarkets sell fruits and vegetables in big wooden bins and emphasize personalized attention to shoppers, similar to strategies employed in the traditional feria libres.

Municipal government regulations designed to improve sanitary conditions and reduce urban congestion have added further pressure on wetmarkets, in effect favoring the growth of supermarkets. Wetmarkets in China, for example, are increasingly targets of municipal government regulations and pressures (Moustakerski and Brabant, 2001).

Facing competition from supermarkets and pressures from municipal governments, wetmarkets have been forced to change. In Chile and Malaysia, for example, recent movements to upgrade wetmarket facilities and improve procurement processes are emerging. Some wetmarkets have even adopted hygienic practices and collective, large-volume procurement arrangements employed by supermarkets. Thus, suppliers to the "traditional retail sector" are facing procurement practices very much like those used in the supermarket sector. Therefore, the emergence of supermarkets in developing countries has implications for the entire food marketing system.

In Latin America, the supermarket share of the fruits and vegetables retail sector is about one-half to two-thirds of the supermarket share in overall food retail. For example, supermarkets have 50 percent of the fresh produce market in Brazil but 75 percent of overall food retail. In Argentina, the shares are approximately 30 percent (fresh produce) and 60 percent (overall retail). Still, the growth in supermarket sales of fruits and vegetables, though slower than sales of other food products, has been significant. In Brazil, fresh fruits and vegetables were sold nearly exclusively outside supermarkets during the 1980s, but now make up about 50 percent of total fresh produce sales in the country.

Fresh fruits and vegetables typically constitute about 8-12 percent of total supermarket food sales in Latin America and Asia. Fresh produce is strategically important in attracting customers into the stores. As incomes rise, consumer demand for fresh produce is expected to grow, increasing the importance of this food category to retailers. As the demand for year-round availability of high-quality, diverse, fresh produce and value-added products in the region grows, retailer demand for these products from local producers will also grow. The conventional belief that two produce markets exist—the local market (associated with lower standards) and the export market (associated with high standards)—is changing with the emergence of local supermarkets as a new market for produce. Latin American supermarkets sell roughly 2.5 times more produce to local consumers than the quantity exported from the region to the rest of the world (Reardon and Berdegué, 2002). In Asia, sales of fruits and vegetables through supermarkets are similarly sizeable, with Chinese supermarket sales of fruits and vegetables approximating $2 billion, compared with Chinese exports at $1.7 billion on average over 1995-2000 (Gale, 2002). According to the Food and Agriculture Organization of the United Nations, Indonesian supermarkets sold roughly $500 million of fruits and vegetables (nearly all bought from local farmers) in 2001. Indonesian produce exports during the period were about $286 million.

The Changing Supply Chain

Compared with practices in North America or Europe, produce marketing in Latin America and Asia is constrained by poor institutional support and an inadequate public infrastructure (such as roads). Private infrastructure, such as packing houses, cold chain facilities, and shipping equipment linking suppliers and distributors, may also be inadequate. Risks and uncertainties, both in output and in responsiveness to incentives, prevail. The risks may arise due to lack of timely availability of sufficient credit, third-party certification, inadequate market information, and onerous regulations. These problems constrain supplier response to incentives. For example, vegetable suppliers to Hortifruti, the buying agent for the main supermarket chain in

Nicaragua, are hampered by the country's restrictions on vegetable seed imports (Gonzalez, 2002).

Therefore, supermarkets in these regions face considerable challenges in developing an efficient supply chain to support profitable sales of fruits and vegetables. In Thailand, 250 suppliers delivered perishable products directly to the backdoor of supermarkets (Ahold chain) at least three times a week in 2002. Incidents of out-of-stock were common and shrinkage in the stores was high. The lead times between the farms and supermarket shelves was up to 60 hours, and due to the lack of pre-cooling and cooled transportation, the post-harvest losses were high. It was impossible to trace products back to the farm; there was no insight into farming practices and post-harvest practices. There were no clear uniform product specifications that could be communicated throughout the supply chain (Boselie, 2002, p. 5.)

As supermarkets strive to compete in fruit and vegetables markets and to meet the varied demand of consumers, they must also develop a procurement system that reduces purchase and transaction costs and raises product quality. In many developing countries, supermarkets attempt to do this by implementing a series of changes in the marketing system, ranging from adjustments in the procurement system to technological and institutional changes.

Centralization of Procurement

As the number of stores in a given supermarket chain grows, there is a tendency to shift from a per store procurement system to a centralized distribution system serving several stores in a given zone, district, country, or region (which may cover several countries). Centralization is generally characterized by increased use of centralized warehouses. Additionally, centralization extends to procurement decision-making processes and physical produce distribution processes. Centralization can increase efficiency of procurement by reducing coordination and other transaction costs, although it may increase transport costs by extra movement of the actual products.

Large global retailers have made or are making shifts toward more centralized procurement systems in all the regions in which they operate. Wal-Mart uses a centralized procurement system in most of its operating areas. Carrefour has centralized procurement in France, and is moving quickly to centralize its procurement systems in other countries, such as Brazil, where it established a distribution center in São Paulo to serve three Brazilian States (with 50 million consumers) with 50 hypermarkets in the southeast region, and in China. Ahold centralized its procurement systems in Thailand (Boselie, 2002) and is also moving to centralize its distribution centers in Central America in the next 1-2 years via a specialized wholesaler, Hortifruti (see box on Hortifruti).

Regional chains, such as China Resources Enterprises (CRE) of Hong Kong, which operates Vanguard stores in southern China, are also centralizing their procurement systems. CRE operates approximately 456 food retail outlets in Hong Kong and mainland China, many in the provinces of Shenzhen and Guangdong. In anticipation of growth following its planned $680-million investment in China over the next 5 years, CRE is shifting

Hortifruti, A Specialized Wholesaler for a Central American Regional Chain

Hortifruti is the "buying arm" of most of the stores belonging to the Central American Retail Holding Company (CARHCO). This company comprises 253 stores, with retail store sales of about $1.3 billion per year in five countries. CARHCO is a joint venture of Ahold, with majority interest, and two retail chains in the region, La Fragua (based in Guatemala) in 1999, and CSU (based in Costa Rica) in 2002. Hortifruti has emerged as the regional chain's specialized produce wholesaler for three of the five countries in which the chain operates in the region (all but El Salvador and Guatemala). Hortifruti contracts with farmers and distributes the produce to retail stores with the private label "Hortifruti" on a wide variety of fruits and vegetables. A visit to any of the Hortifruti warehouses can provide a perspective on the large scale of its operation. For example, the Hortifruti warehouse in Nicaragua contains a variety of vegetables from Costa Rica; onions from California and Canada; apples from Michigan, Oregon, Washington, and Chile; and garlic from China. About 30 percent of the produce in CARHCO stores in Nicaragua is currently imported. Although some products may come from countries in Asia, most products are imported from other countries in the region, especially Costa Rica. Most of the imported produce reaches CARHCO's retail shelves through its main buying arm, Hortifruti.

from store-by-store procurement to a centralized system of procurement covering each province. In 2002, CRE completed construction of two large distribution centers.

Logistics Improvements

To defray some of the added transport costs that arise with centralization, supermarket chains have adopted (and required that suppliers adopt) best practice logistical technology. In accordance with these changes, supermarket suppliers are required to adopt practices and make physical investments that enable a more seamless interface with the chain's warehouses. The "Code of Good Commercial Practices" signed by supermarket chains and suppliers in Argentina illustrates the move toward requiring the use of best practice logistics by retail suppliers (Brom, 2002). Similar trends are noted in Asia. For example, Ahold instituted a supply improvement program for vegetable suppliers in Thailand, specifying post-harvest and production practices to ensure consistent supply and improve the efficiency of their operations (Boselie, 2002).

As evident elsewhere,[4] retail chains in Latin America and Asia increasingly outsource logistics and wholesale distribution functions, entering joint ventures with other firms. For example, the Carrefour distribution center in Brazil is the product of a joint venture of Carrefour with Cotia Trading (a major Brazilian wholesaler distributor) and Penske Logistics (a U.S. global multinational firm). Similarly, Wu-mart of China announced in March 2002 (CIES, 2002) that it will build a large distribution center to be operated jointly

[4] For example, several Ahold chains (Stop and Shop, Tops, and Giant) in the northeastern part of the United States outsource wholesale distribution for dry goods with C&S Wholesale Grocers, Inc. located in Vermont.

with Tibbett and Britten Logistics (a British global multinational firm). Ahold's distribution center for fruits and vegetables in Thailand is operated in partnership with TNT Logistics of the Netherlands (Boselie, 2002).

Specialized Wholesalers

Changes in supplier logistics have moved supermarket chains toward new intermediaries, sidestepping or transforming the traditional wholesale system. Supermarkets are increasingly working with specialized wholesalers, dedicated to and capable of meeting retailers' specific needs. These specialized wholesalers cut transaction and search costs and enforce private standards and contracts on behalf of the supermarkets. The emergence and operation of specialized wholesalers has promoted the convergence, in terms of players and product standards, of the export and the domestic food markets.

Supermarkets naturally tend toward relationships with export and agribusiness firms in the belief that these companies can provide the requisite quality assurance, the necessary volumes, and consistent and on-time delivery. Therefore, many supermarket chains in Latin America sought to reduce reliance on traditional wholesale markets (Gutman, 2002; Farina, 2002, Mainville, 2002). Various leading agribusiness firms in the region established new divisions in their companies to cater specifically to supermarkets in their countries (Schwentesius and Gomez, 2002). Moreover, there is emerging evidence that supermarket chains sourcing imported produce tend to do so mainly via specialized importers. For example, hypermarkets in China tend to work with specialized importers/wholesalers of fruit, and in turn sell nearly half of their imported products to supermarket chains (Produce Marketing Association, 2002). Similarly, Hortifruti functions as the buying arm of most stores of the main supermarket chain in Central America (see box on Hortifruti).

However, some traditional wholesalers have upgraded their operation to meet the new demands of the retailers. For example, a number of wholesalers operating in the traditional wholesale market in Brazil set up specialized large-scale operations catering to the supermarkets (Mainville, 2002). A number of grower/packer organizations have made needed investments to interface with the logistics systems of the specialized wholesalers and/or supermarket distribution centers. These alliances between the retailer and the wholesaler or the grower/packer tend to be bound by contractual arrangements. Smaller and more regional/local chains tend to continue to rely on traditional wholesale markets.

Producer Alliances

As supermarkets are driven to reduce transaction costs and seek one-stop alliances with suppliers and wholesalers, there is a concomitant change in the organization of the upstream segments of the supply chain, including among the suppliers. This upstream change is closely associated with retailer strategies. The increasing concentration of the supermarket sector, combined with the goal of supermarkets to have year-round supplies of various fresh products, has induced a growing wave of horizontal joint ventures and other strategic alliances between produce firms in the Northern and Southern Hemispheres. Suppliers in different hemispheres that form partnerships are no longer constrained in meeting the necessary volume and year-round demand of the retail sector. For example, Global Berry Farms was formed in 2000 as a 50/50 joint venture owned by Michigan Blueberry Growers Marketing (a cooperative) and Hortifrut (a private firm) of Chile. Global Berry Farms markets all fresh fruits for Michigan Blueberry Growers worldwide and Hortifrut's fresh fruit in the North American market. In August 2002, the two firms were joined by Naturipe, a strawberry cooperative in California (see box on cross-hemisphere alliance).

Information Exchanges

The use of electronic data exchange (EDI) is becoming increasingly common between large chains and their major suppliers in different regions, particularly dry goods supplies. The EDI system of Wal-Mart has been and is a model for the industry,[5] allowing Wal-Mart to send out orders, verify the receipt of orders by suppliers, schedule delivery, and provide data on sales to enable suppliers to manage inventory.

Internet exchanges are also used by chains globally to reduce coordination costs and outsource logistics operations. Similar to the way they outsource physical procurement logistics through wholesale distributors, retailers may now outsource produce transactions, distribution, and inventories through Internet exchanges.[6] These may include Internet business-to-business (B2B) exchanges, and e-procurement and logistics services. Globally, there are several main "general" Internet B2B exchanges into which large retail chains made major investments during the late 1990s and early 2000s (see box on WorldWide Retail Exchange). Each exchange has a perishables exchange component, generally strengthened by a joint venture with an exchange specializing in perishables. As day-to-day management of perishables transactions is costly, Internet exchange services specializing in fresh produce may likely grow.

Private Standards

While fruits and vegetables retailing in Latin America and Asia previously operated with limited use of certifications and standards, emerging trends signal a rapid rise in the implementation of standards. Retailers use private standards to standardize product requirements over suppliers, who may cover many regions or countries. Standards specify and harmonize the product and delivery attributes, thereby enhancing supply chain efficiency and lowering transaction costs. Private standards of a given chain may also be designed to ensure (at a minimum) that public standards are met in all the markets in which the retail chain operates. Often, retailers may design private standards as substitutes for missing or inadequate public standards (Reardon and Farina, 2002). In this respect, private standards can function as competitive arms against other retail outlets by supporting claims of superior product quality attributes. The private standards may cover detailed quality specifications as well as food safety requirements, normally going beyond public food safety regulations. For example, Ahold's private standards are implemented across its chains in Central America, including Guatemala, where the food safety law enacted in 2001 has yet to be implemented (Flores, 2002).

[5] Wal-Mart China is known to screen suppliers in part on their ability to interface via EDI (*www.walmartchina.com, 2003*).

[6] The exception is Wal-Mart, which exclusively uses its own electronic data exchange system.

Cross-Hemisphere Producer Alliance Assures Year-Round Fruit Supply

Global Berry Farms was formed in 2000 as a joint venture between Michigan Blueberry Growers Marketing and Hortifrut of Chile. Created in 1936 and with sales exceeding $63 million in 2000, Michigan Blueberry Growers is the single largest marketer of fresh and processed cultivated blueberries in North America. It represents over 550 producers in Michigan, Indiana, Georgia, and Florida. Hortifrut (separate from Hortifruti) is a leading bush berry grower in Chile, Mexico, and Spain. In 2002, Global Berry Farms added a strawberry supplier, Naturipe of California, to the joint venture. The combined resources of its founding partners enable Global Berry Farms to offer almost year-round delivery of the complete berry category (blueberries, blackberries, raspberries, and strawberries) to retailers in the Americas and, increasingly, in Europe (Neven and Reardon, 2002).

WorldWide Retail Exchange, the Largest Internet Exchange for Retailers

WorldWide Retail Exchange is the largest Internet-based business-to-business (B2B) exchange for food retailers and their suppliers, with annual transactions of $9 billion. WWRE currently has 62 members including Ahold and Tesco, as key food retail "anchors." WWRE also includes a number of Asian and Latin American retailer participants. Some participating chains from those regions include Dairy Farm International of Hong Kong, which has annual sales of $3.7 billion from 2,160 retail outlets of diverse formats in Southeast Asia, China, and, recently, India; the Lotte Group of South Korea; Makro-Asia (Makro is based in the Netherlands); and Comerci—a joint venture with Costco operating in Mexico.

To improve its services in the fruits and vegetables sector, WWRE entered a joint venture with Agribuys in April 2001. Agribuys is an Internet B2B exchange headquartered in the United States, with offices in the United States and Japan. Agribuys specializes in fresh produce supply chain and transaction management, including orders, deliveries, auctions, and inventories. WWRE also enhanced its supply and delivery management system through a joint venture with *www.globalsources.com*, an Internet B2B network featuring 140,000 Asian suppliers and 369,000 buyers in 230 countries and territories (*www.globalsources.com, 2002a*).

The evolution of private standards in Latin America and Asia is also driven by multinational retailers striving to converge between the private standards applied by the chain in developed countries and in developing countries. At the global level, the Global Food Safety Initiative of CIES (Food Business Forum, headquartered in Paris), the global association of the top 250 retailers and roughly the same number of their major suppliers, seeks to implement a scheme to benchmark food safety standards among retailers and their suppliers worldwide by 2004. European retailers have developed the EUREP GAP standard for farm and post-harvest level food safety and phytosanitary practices. Pick N Pay supermarkets in South Africa impose this standard on local suppliers (Weatherspoon and Reardon, 2003). Convergence of standards and practices is not only driven by retailers but also by consumers and nongovernmental organizations. For example, Greenpeace picketed Carrefour stores in Thailand in 2002 requesting that the Thai stores implement the same biotech labeling as implemented by Carrefour stores in Europe.

Contracts

The "formality" of contracts is relatively new in one of the most personalized, informal markets in the food sector, the produce sector. Produce suppliers in Asia and Latin America traditionally operated under verbal informal contracts, renewed upon continued good performance. This system is increasingly being replaced by formal contracts drawn between retailers and suppliers to guarantee supply volumes with lower risks and reduced transaction costs. Additionally, contracts ensure retailers of on-time delivery and the delivery of products with desired quality attributes. Contracts also serve as incentives to the suppliers to stay with the buyer and, over time, make investments in assets (such as learning and equipment) specific to the retailer's specifications regarding the products.

Although supermarkets in the two regions are increasing their use of contracts, contract use still appears to be patchy. Contract use is generally limited among smaller farmers selling to the supermarkets (Lourenzani et al., 2002; Boselie, 2002). In many cases, the supermarkets may procure their produce from specialized wholesalers (under contract), direct informal relationships with growers, and traditional wholesale markets (see box on procurement strategies). Supermarkets announce the needed volumes, the procurement prices, and the requisite private standards for the products. The suppliers then vie for this market, which offers modest to moderate premiums over the traditional wholesale market. In such an arrangement, formal contracts are not used with growers and suppliers from the traditional wholesale market.

However, in conjunction with the establishment of private standards, contract use is increasing and several supermarket chains have implemented "lead" or "preferred" suppliers programs. These programs involve setting benchmarks and entering into annual contracts with suppliers. Supermarkets often maintain a list of preferred suppliers who meet the necessary specifications and are reliable and consistent. Such programs have been implemented by many multinational retailers. For example, Ahold undertook a vegetable supply chain improvement program in Thailand. This program has evolved from the objective of optimizing chain performance by reducing handling losses to concepts of HACCP management and environmental land-use practices, including reducing pesticide use (Boselie, 2002). The achievement of these later objectives required more formal contractual arrangements.

Supermarket chains may also employ intermediaries, such as Hortifruti in Central America, to set up lists of producers. This system functions as an informal contract in that the growers are selected and provided input credit

Complex Procurement Strategies Meet Supply Requirements

Supermarkets employ complex procurement strategies to meet their supply requirements. At times, these strategies may involve contracts with some suppliers to "lock in" the best suppliers for a portion of their produce and successfully communicate their private standards. This arrangement is illustrated by the citrus market in Mexico (Schwentesius and Gomez, 2002). Supermarket chains in Mexico employ a trifurcated procurement system. For about one-half to two-thirds of oranges, retailers may sign contracts with large-scale suppliers, while for one-third to one-half of the needed supply of oranges, retailers may accept deliveries by medium-sized growers directly to their distribution centers without entering a formal contract. In the latter case, retailers rely on short-term verbal agreements and an implicit understanding that the supplier is required to meet the private standards and the logistics-interface requirements. Finally, for one-tenth to one-fifth of the needed supply of oranges, supermarket procurement agents send trucks to the wholesale (spot) markets and pick the best and cheapest oranges, supplied mainly by smaller growers.

and product specifications. The growers are informed of the needed volumes and prices, delivery dates, and the required private standards of quality and safety. The intermediaries set up collection centers in different growing areas and deliver the produce to the stores from these centers. Suppliers can be delisted if they do not comply with the specifications or pay back their credit.

The changes in the food retail sector have also contributed to the establishment of voluntary codes of conduct between the involved sectors of the food supply chain. These codes, implemented in the private sector, emerged after private sector conflict and negotiations, usually under the regulatory oversight of a government competition commission (Brom, 2002). The codes are "voluntary" versions of similar codes embedded in public regulations, such as PACA (Perishable Agricultural Commodities Act) in the United States. The codes focus on requiring transparent and fair contracts, reasonable payment periods, and investments by both parties to promote convergence of logistical interfaces to increase efficiency in the supply chains. In several countries, such as Argentina (Code of Good Commercial Practices of 2001), the voluntary codes were followed by the enactment of related public regulations. Among other things, the regulations include time limits for retailer payments to suppliers.[7] Similar voluntary codes are emerging in Costa Rica and Colombia and are also currently being considered in Brazil.

[7] Similar regulation was enacted by the Prompt Payment Law of 1993 in the United States.

Looking Ahead

The changes taking place in produce marketing in Latin America and Asia are deeply transforming the sector. A wider variety of products associated with higher quality and safety standards are available year-round at affordable prices. With growing consumer demand and improvements in retailing, local supermarkets have emerged as an important market for locally produced fruits and vegetables. As supermarkets employ quality standards, there is a trend (with the speed varying over countries and zones) toward convergence of local and international standards, with decreasing distinctions between products destined for the local market and the export market.

The general upgrading of standards and the modernization of the sector offers opportunity to those producers who can adapt to the changes. For example, securing contracts with Carrefour has been particularly profitable for melon growers in northeast Brazil, both for sales in Brazil and for sales to Carrefour in other countries through the international procurement system of Carrefour, as local supply contracts can be parlayed into export opportunities. However, increasing use of standards and contracts can present challenges to smaller farmers and firms in marketing their products. The higher standards demanded often require investments that the smaller firms and farms may be unable to undertake. Accordingly, the emerging evidence points to a preference by supermarkets to source from larger producers, and thus, controlling for procurement volumes, to relative exclusion of smaller farmers in Latin America and Asia. For example, ASUMPAL (a cooperative supplying salad tomatoes, with stringent specifications, to McDonald's in Guatemala) experienced a decrease in members from 330 in 2000 to 30 in 2001 to 6 in 2002 (Flores, 2002). Similarly, during the course of the 1990s, the 12 largest milk processors delisted 60,000 small dairy farmers in Brazil (Farina, 2002). The exclusion of smaller suppliers is not limited to Latin America, in 2001, the number of vegetable suppliers to Tops Supermarket (Ahold chain) in Thailand fell from 250 to 60 (Boselie, 2002).

The decline in the number of small producers supplying supermarkets is particularly of concern in Latin America and Asia, where millions of rural poor seek agricultural diversification and urban markets as an escape route from poverty. Therefore, local governments and donors need to consider policies aimed at enhancing the ability of small farmers to compete in the changing retail food sectors. For example, a small-farmer vegetable cooperative in Purranque became the vegetable supplier for a regional chain in southern Chile, with the help of INDAP, the Chilean Agricultural Development Agency.

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