RETAILERS-AGRIBUSINESSES-PRODUCERS INTEGRATION AS A KEY FOR COMPETIVINESS IN MEXICO

By

Rigoberto Acosta Tapia[i]

Abstract

Mexico´s economic liberalization process has allowed substantial increases in trade, transforming Mexican agriculture production, food distribution and retailing. Currently, there are more than 4,000 self-service stores in Mexico, stimulating retail chain's competitiveness. This paper describes changes in the profile of the Mexican consumers in order to improve the understanding of retailers' response to consumer behavior. The retail market and its challenges are analyzed with an emphasis on suppliers. This analysis highlights the integration efforts of both private and public sectors in order to stimulate competitiveness within the retail chain.

Introduction

The economic liberalization process in Mexico began in the mid 1980s when it joined the General Agreement on Tariffs and Trade (GATT), this process gradually deregulated domestic commerce, and led to privatization of many state owned enterprises. Later, the North American Free Trade Agreement (NAFTA) between Canada, Mexico and the United Stated became effective in January 1994. Under the agreement, some agricultural commodities and products were fully liberalized from the onset, while others were subject to a process of a year to year liberalization schedule. Thus, full free trade in agriculture was expected to be reached in January 2003 for some products and the remaining in 2008. As for the latter group of commodities, tariff rate quotas (TRQs) and/or seasonal tariffs were applied (Francisco Meré, 2005)[1]. This economic integration process is transforming the Mexican economy, including the agricultural, food distribution, and retail sectors. The flow of foreign direct investment in Mexico has been accelerated in recent years in all sectors *i.e.* food distribution and retailing. In many cases, foreign direct investment has been the vehicle for technology transfer and organizational innovation.

Towards the end of 2003, the advent of The Bioterrorism Act exerted an influence over U.S. import procedures such that the requirements for tracing and identifying manufactures and producers were imposed, reducing the flexibility of import procedures. This has led to an increasing concerns about food safety; consumers demand to know where their food is coming from. BSE (Bovine Spongiform Encephalopathy) cases in Canada and the United States have caused a negative impact on the livestock industries of those countries. Similarly, avian influenza has had a negative impact on the Asian poultry industry. The long-term effects of the Genetically Modified Organisms (GMO) have not yet been totally determined. The U.S. has taken an important step in acknowledging these concerns by creating the "Country of Origin Labeling Requirement" in the Farm Bill. Although Canadian and Mexican agribusiness

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[i] Rigoberto Acosta Tapia currently serves as Director of Advisory Office at FIRA. He was graduated at the University of Chapingo, Mexico, as an agronomist. Mr. Acosta received a Masters Degree on Business Management from the University of Reading in England, and he has attended several courses at the University of California at Berkeley, London School of Economics and Political Science, and Harvard Business School.

companies consider this requirement as a non-trade barrier, neither has challenged the consumers' right to know where their food is coming from.

Finally, the retail environment is constantly evolving, reflecting on-going changes in consumers´ preferences, new product technologies, demographic shifts, economic and business cycles, as well as policy issues that influence labor relations to trade and market access. As a result, farmers, input suppliers, food processors, and retailers are constantly being forced to rethink their business models. Within this context, retailers are searching for economies of scale, chain management improvements, and coordination with other stakeholders.

I. The profile of the consumer is changing in Mexico

During the last two decades, the Mexican economically active population (EAP) has been increasing. In 1970, the EAP was less than ten million people; in 2000, it was around 35 million. Presently, the EAP is growing at 3.5 percent on average per year. An important influence in this change has bee the participation of women. In 1990, only 19.6 percent of women were participating in economic activities, in contrast to 30 percent in 2004. Particularly, 40 percent of women between the ages of 25-44 were involved in economic activities. Women have increased their participation in economic activities, and as a result are devoting less time performing household activities. As a result, in 2004 consumers´ food expenses showed a clear increase in "ready to eat" food.

Middle income population and smaller households in Mexico are growing at a higher rate

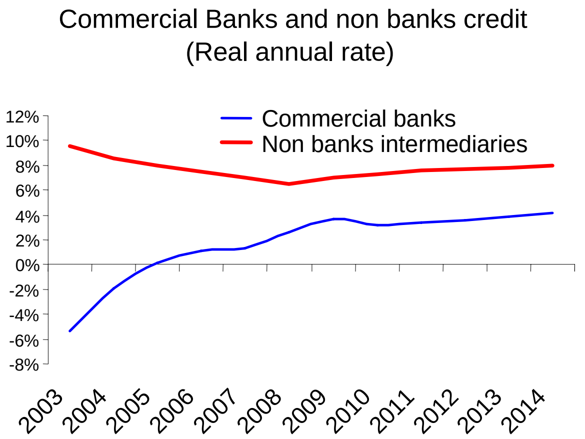
Using data from ACNielsen´s home panel 2004, the proportion of Mexican middle income population in 2003 was 14.6 percent higher than it was in 1998. Conversely, the proportions of low and high income populations in 2003 were smaller in 5 and 10.5 percent, respectively, compared to 1998. Meanwhile, from the current 24.6 million Mexican households, 37 percent have 1 to 3 members, 30.6 percent have 4 or 5 members, and 32.4 percent have 6 or more members. It is estimated that the proportion of smaller households increased 11.03 percent during the period of 1998-2003, while the proportion of medium size households increased 3.13 percent and the proportion of large households decreased 2.3 percent.

Consumption is influenced by an increase of medium sized cities

It is estimated that 75 percent of Mexican consumption is concentrated in cities of 100,000 inhabitants or more. During the last thirty-five years the number of medium sized cities has more than doubled. In 1970, medium sized cities represented 23 percent of Mexican cities, in contrast to 50 percent in 2004. Today, it is estimated that about 50 percent of Mexican cities have more than 100,000 inhabitants. Conversely, the number of cities with 1-2,499 inhabitants represented 41.3 percent in 1970, actually representing 25 percent of the total number of cities.

The number of urban households in Mexico grew about 8 percent from 2000 to 2003. The households index by zone (base=1998) was 105.7 for the three main metropolitan cities, while it was 110.5 for the rest of the cities in the country.

Mexican consumption has been stimulated by the use of credit



Source: FIRA 2005 with Central Bank of Mexico data.

Figure 1

Low inflation rates in Mexico have influenced the decrease of interest rates, which has stimulated the use of credit (figure 1). It was expected that commercial banks´ credit was going to experience a recovery after the Mexican tequila crisis of 1995. This recovery has occurred but not at the desirable rate. Additionally, non bank financial intermediaries have been fulfilling entrepreneurs and consumers credit gaps under different schemes allowing economic growth and consumption increases.

Consumers´ profile is also affected by changes in preferences

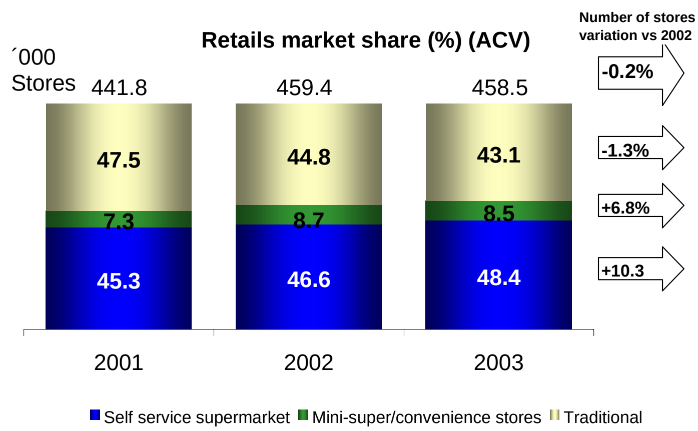
Low income population is introducing more meat, fresh food and dairy products into their diet; simultaneously it is spending less on eggs and fish products (table 1). On the other hand, high income population is showing a clear trend towards a healthier diet, by substantially increasing its consumption of fish products and reducing their consumption of eggs.

Income Segment	Product	Year		Variation	
		1996	2002*	Absolute	%
Low income	**Meat (beef, pork, chicken)**	**$10,108 million**	**$13,908 million**	**$3,800 million**	**38**
	Fresh fruits	$354 million	$575 million	$221 million	63
	Eggs	$902 million	$733 million	($169 million)	(19)
	Dairy products	**$1,270 million**	**$1,756 million**	**$486 million**	**38**
	Fish	$397 million	$360 million	($37 million)	(10)
High Income	**Meat (beef, pork, chicken)**	**$43,989 million**	**$38,909 million**	**($5,080 million)**	**(12)**
	Fresh fruits	$2,294 million	$2,740 million	$446 million	20
	Eggs	**$1,578 million**	**$895 million**	**($683 million)**	**(43)**
	Dairy products	$6,049 million	$6,767 million	$718 million	12
	Fish	**$1,055 million**	**$1,361 million**	**$306 million**	**29**

Source: INEGI 2002.

Table 1

II. Supermarkets comprise 57 percent of total sales within the retail market



Source: Food Index 2001,2002,2003. Sales structure. ACV= All commodity value. AcNielsen

In Mexico, there are about 4,300 supermarkets and mini-super/convenience stores (figure 2). Supermarkets have been increasing their market share and becoming more frequented than traditional stores. From 2001 to 2003, supermarkets increased their market share by 6.84 percent, while traditional stores decreased theirs by 10.2 percent. In 2004, modern supermarkets reached 57 percent of total sales in value within the retail market.

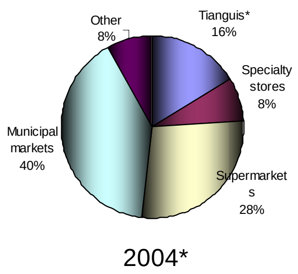
Figure 2

Supermarket chains are rapidly increasing their market share. These developments have been changing the process in which food makes its way from the farm to the Mexican consumer. Mexican and foreign firms are constructing state of the art supermarket chains that challenge the capacity of the country's distribution network. However, small specialized shops and street markets account for the bulk of consumer food and produce purchases.

The growth of supermarket in Mexico is explosive: the number of stores has leapt from less than 700 in 1993 to about 4,300 in 2004. This pace is continuing with several new store scheduled openings each week. Similarly, convenience stores that sell fresh produce, have been expanding rapidly. The combination of these recent developments has stimulated a rapid rate of innovation in the retail sector, which is forcing changes in the distribution chain.

Supermarkets have existed in Mexico for decades, but until the 1980s, they were not numerous and mainly targeted to middle and upper income households. However, recent expansion of the Mexican supermarket sector has extended the customer base to middle and low income households.

Traditional stores are struggling to survive; creating new formats to compete



* Estimated by FIRA with information of Food marketing Institute, Washington, DC.

Most of Mexican consumers purchase fresh produce in street and municipal markets (40 percent) or from mobile street markets known as *"tianguis"* (16 percent) (figure 3). Nevertheless, there is a considerable participation of Mexicans purchasing fresh produce at supermarkets. Traditional stores are under pressure to find a way to compete against supermarkets. Therefore, traditional stores have chosen specialization as a survival strategy.

Figure 3

Mexican retail market has grown explosively in the last decade and Wal-Mart rules

Mexican economic liberalization process over the past decade has encouraged U.S. and European retail chains such as Wal-Mart, Price Club, HEB, Auchan, Carrefour, among others, to establish and expand operations in Mexico often in partnership with existing Mexican supermarket chains. However, some of these ventures have not been successful. A more intense form of competition has forced local stores to enhance their services and efficiency, generating a chain reaction improving service and efficiency of food retailing.

Sophisticated marketing and logistic strategies practiced by supermarkets chains have enable them to capture an increasing portion of low and middle income urban households. Those strategies have generated them a remarkable expansion of retail outlets and selling areas in Mexico and have been reaching into smaller towns since the late 1990´s (Tropp *et al*, 2002)[2].

Mega supermarkets chains have recently introduced a new store format called warehouses which are aimed at lower and middle income households. They offer merchandise in bulk, thousand of different products and weekend sales, creating the perception of a fair price. It is estimated that each year 400,000 Mexican families will become costumers of those supermarkets within the next ten years (Gómez. 2005)[3].

Currently, some retail chains, like HEB, selling high quality products, have been targeting the high and upper middle income population. This group of supermarkets offers a broad line of health food products and emphasizes their own specialty products.

The Mexican retail market is dominated by Wal-Mart, followed by Comercial Mexicana, Gigante, Soriana, which have recently created a joint venture named "Sinergia de Autoservicios", to compete against Wal-Mart. This consortium's sales currently represent 87 percent of Wal-Mart's sales.

In 2003, the top three retail chains owned 45.3 percent of the total supermarket sector in Mexico and accounted for 63 percent of the total sales nationwide. Its growth (as a percent of total sales) mainly occurred out of the most important metropolitan cities: Valle de Mexico, Guadalajara, and Monterrey (Pérez, 2005)[4]. In 2003, Mexico's main medium sized cities, such as Puerto Vallarta, Aguascalientes, Toluca, León, and Culiacán, showed a considerable growth rate in supermarket sales, opening up future retail expansion opportunities (Vázquez, 2004)[5].

Retailer's logistic strategy includes common warehouses and retail link systems for suppliers

Mexican firms are constructing state of the art supermarket structures that are challenging the capacity of the products distribution network. Truck fleets, wholesale markets, packers, shippers, and primary suppliers are all trying to adapt themselves to the new demands as a result of mass marketing.

The main strategy followed by the bigger supermarket chains is to build up centralized distribution centers. In 2004, Comercial Mexicana, Gigante and Soriana created a common distribution center in order to reduce distribution costs and improve their ability to keep up with current market needs and competition.

Additionally, some supermarkets have implemented information systems to control their retail links, which has allowed them to inform their suppliers about how much of their product have been sold and when restocking is required (Leonard, 2003). [6]

Box: **Wal-Mart´s operational strategy in Mexico**

Wal-Mart began its operations in Mexico through a partnership with CIFRA who was the main local retailer in the country. Wal-Mart´s operational strategy has clearly differentiated its suppliers´ network control and its inventories management, which has allowed this firm to achieve a ten times inventory rotation (Wal-Mart´s main competitor, Sinergia Consortium, has had seven times inventory rotation). When inventories increase, retailers are obligated to compete with lower prices. In 2005, Wal-Mart is planning to open 47 new stores in Mexico (24 Warehouse stores, 9 Wal-Mart super centers, 8 Sam´s Clubs and 6 Superamas). Wal-Mart´s investment in Mexico will be about 870 million dollars. Wall Mart strategy of promoting sales of imported products and maintaining low prices, will continue in order to differentiate itself from its rivals. [ii]

[ii] City group: "Mexican food retail sector", March 11st 2005.

The retail sector challenges include offering new shopping formats and improving information management

1. **Targeting new markets requires new formats.** Consumers' profile is influenced by high immigration and economic development of medium sized Mexican cities. In cities with 15,000 to 250,000 inhabitants, traditional stores´ participation in the total market sales is still about 60 percent, while their participation in cities with 250,000 or more inhabitants is struggling close to 30 percent. There is an opportunity for supermarkets to increase their sales in the medium sized cities in Mexico. In these cities the number of supermarkets per person is still low. Targeting this market will require new store formats adapted to the needs of its consumers.

2. **Acquiring consumer information**. The knowledge of clients´ economic behavior helps to improve retailers´ operation and costs. Additionally it helps to determine the products´ life cycle. Improving the understanding of consumers´ buying patterns, would help to optimize sales areas, tracking of inventory products flows, demand forecasts, distribution networks, and employees' performance. This could not be possible without investments in information systems.

3. **Strengthening retailers & suppliers cooperation.** For the retailing sector to be more competitive in the long term, there must be a strategic alliance between retailers and suppliers through cooperation and integration. There are several cases where these efforts have been lowering the costs and increasing competitiveness. Those efforts include the creation of a local network of suppliers, the introduction of quality certification, and credit programs to fulfill suppliers' cash needs through financial factoring schemes.

III. Retailers are becoming more aware of the necessity to integrate with suppliers

Supermarkets have been working to implement several strategies aimed at improving supply mechanisms. Supermarkets´ suppliers are supported by Mexican development banks through special programs that offer credit to micro and small entrepreneurs. The Ministry of Economy of Mexico has recently launched a training program encouraging to develop the quality of suppliers, including food producers. Other supermarkets like Sinergia Consortium (Soriana, Comercial Mexicana and Gigante) are offering special advice to their suppliers to increase the standard of quality in their products [iii]. A notable private effort has been developed by HEB, an American retail chain with operations in Northern Mexico. In 2003, the ITESM (Instituto Tecnológico y de Estudios Superiores de Monterrey) carried out a suppliers' certification program for HEB. The program included suppliers training, plant inspections and the design of the required processes to ensure standards and quality of products as required by HEB. As a result, HEB reached higher quality and lower prices in the products bought from local suppliers, increasing HEB´s competitiveness. [iv]

Public policies target retailers-agribusinesses-producers integration

The enterprise theory explains why some firms decide to carry out some activities and why they decide to outsource others. The theory of transaction costs sustains that the main objective of

[iii] Revista Expansión, 5 de agosto 2004.

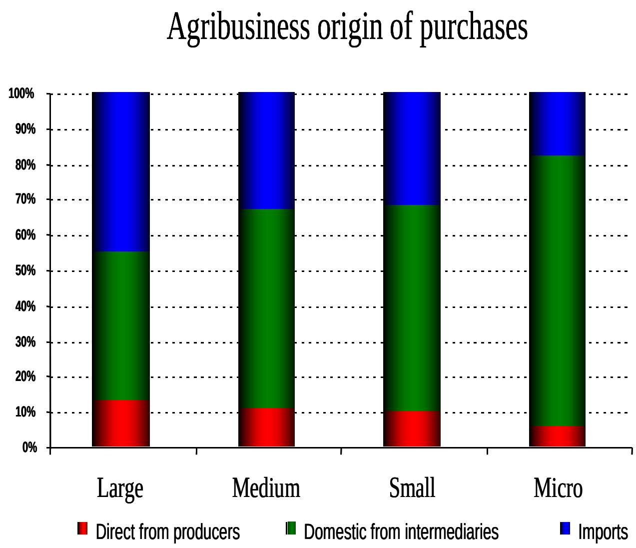
[iv] Tecnológico y de Estudios Superiores de Monterrey. *Convenio Marco Alianza HEB-ITESM: "Fortaleciendo la industria de México para proteger la salud del consumidor",* Junio de 2003.

integration is to minimize the transaction costs such as uncertainty and exchange frequency (Coase, 1937; Williamson, 1975)[7]. The simultaneous firm practices of market contraction and integration would be understood as the solution to asymmetric information between suppliers and clients (Heide, 2003)[8]. Integration has been described as a necessary condition for economic growth (Bruce, 1982)[9]. In the globalization process, integration has been used by industries as a strategy to maintain and reinforce competitiveness (Clancey, 1979)[10].

Public policies have aimed integrating the stakeholders of the Mexican food industry, such as retailers, agribusinesses and producers. There are several public programs that pursue this aim at different levels of the food chain. Development banks lend money to primary producers in order to stimulate cooperation among groups of producers. This mechanism encourages improvement in the production process, standardization and the level of quality demanded by domestic agribusinesses and retailers. In the same way there is a special credit program for micro and small agribusinesses to facilitate their supply to retailers.

Integration between agribusinesses and producers in Mexico needs to be improved.

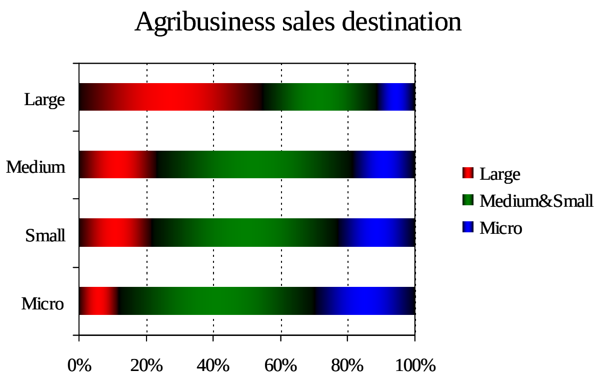
Goch (2001) argues that global integrated firms are a growing market that demands new products (figure 4). Nevertheless, according to data from the **National Survey of Rural Financial Markets in Mexico, developed by FIRA**, integration level between producers and agribusinesses in Mexico is weak. The large agribusiness firms' purchases coming directly from Mexican producers are slightly about 10 percent, which shows that the integration of producers and agribusinesses is still poor. Around 40 percent of agribusinesses´ purchases involve domestic brokers, while 50 percent of agricultural supplies come from imports. The same finding is shown in medium and small sized agribusiness. However, micro enterprises buy their inputs from intermediaries.



Source: FIRA: National Survey of Rural Financial Markets in Mexico.

Large: More than 300 workers; Medium: Less than 300 and more than 50 workers; Small: More than 6 and less than 50 workers; Micro: less than 6 workers.

Figure 4



Source: FIRA: National Survey of Rural Financial Markets in Mexico.

Large: More than 300 workers; Medium: Less than 300 and more than 50 workers; Small: More than 6 and less than 50 workers; Micro: less than 6 workers.

Agribusinesses´ sales destination shows that large enterprises prefer doing business among themselves (figure5). Medium size agribusiness enterprises sell only 24 percent of their output to large enterprises, but they sell close to 70 percent to other medium sized firms. A small percentage of micro-agribusinesses fulfill the needs of large firms.

Figure 5

Producers increase their income as they integrate upwards into the agri-food chain

The econometric results of the National Survey of Rural Financial Markets in Mexico showed that there is an increase in the Mexican producers' income when they integrate upwards in the agri-food chain.

Log producer income

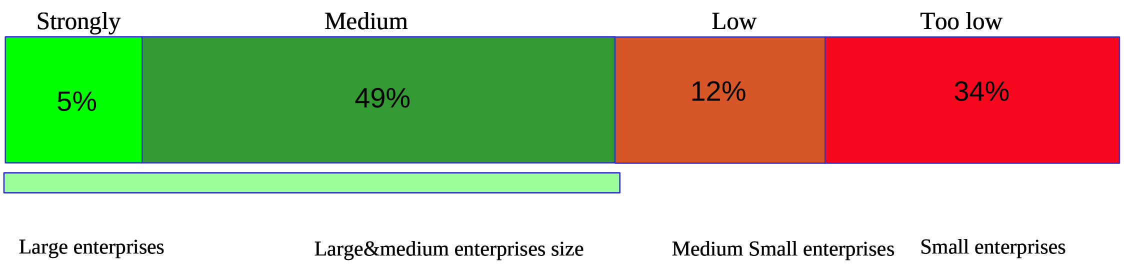
Variable	Coeficient	p value	
Log Education	0.7141	0.0051	***
Log yield (ton/ha)	0.1551	0.0960	*
Gender (D)	1.0141	0.0699	*
Log age (years)	1.3386	0.0000	***
Log enterprise size (ha)	0.3862	0.0001	***
Vertical integration (D)	1.8403	0.0000	***
Region 1: South & Shoutheast (D)	0.9117	0.2759	
Region 2: Center (D)	1.8352	0.0424	**
Region 3: Center-West (D)	1.2032	0.1544	
Region 4: Northwest (D)	1.2172	0.3660	
R-squared	0.1094		

White Heteroskedasticity-Consistent Estándar Error & Covariance
Region 5: Northeast is the cathegory ommited in this regression.
* Significant at 10% level, ** Significant at 5% level.
** Significant at 1% level

Table 2

The results showed the expected positive relationship of producers´ income with education level, age and production yields (table 2). Economies of scale have an important effect on producers´ income. The impact of enterprises size is positive and significant. An increase of 1 percent in the size of enterprises increases 0.39 percent the producers´ income. Producers who are integrated with agribusinesses, food processors or retailers have 5 times higher average income than those who are not integrated.

Nevertheless, not all producers are able to integrate with agribusinesses, food processors and retailers. It is estimated that about 54 percent of Mexican producers are capable of doing so (figure 6). This implies that producers have to fulfill the needs in terms of price, quality, quantity, and schedules required by those stakeholders. As a result, Mexican producers should integrate upwards in the agri-food chain. This would allow them to confront the globalization of the retail chain. The following graph illustrates that the level of integration is proportional to the size of the enterprise. Big producers with large assets, high profits, and innovation processes are able to reach integration with agribusinesses and retailers.



Source: FIRA:National Survey of Rural Financial Markets in Mexico 2002.

**Segmentation realized with K mean cluster analysis (1565 observations)

Figure 6

IV. Conclusion

Retailers in Mexico are becoming the driving force in the market place, showing the path to Mexican agribusinesses, who in turn are trying to keep pace with the market, while producers are lagging behind.

Supermarkets in Mexico are experiencing a high rate of growth. They have taken into account consumers´ preferences and they are gaining an advantage of migration from rural areas to medium sized cities. In order for traditional retailers to survive, specialization efforts need to be implemented, or they will continue experiencing a decrease in their sales participation. Retailers´ schemes aimed at reaching higher supply efficiency will allow offering lower prices to final consumers. A big challenge for the retail industry in Mexico in the following years will be to draw in the low income population, which would generate a considerable impact in sales volume. Integration between producers-agribusinesses-retailers is the key for long term competitiveness in Mexico. Some national producers have been aligning their production to agribusinesses and retailers to increase their income and to have better access to larger amounts of credit in order to compete with international suppliers.

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