

# Chapter 2

## Megatrends

### 2.1 The Globalization Process

Increased integration, free markets, and globalization of production and manufacturing are central features of today's world economy that seem likely to continue as we move into the twenty-first century. Unprecedented levels reached by these tendencies in the course of the last two decades has mainly been impelled by extraordinary advances in information and communication technologies (Amin and Thrift; Castells; Ohmae; and Harris).

Globalization can be characterized as a multi-dimensional process that transcends the economic, political, social and cultural spheres. Economic globalization implies integrating production, marketing, finance, information and technology. According to Castells, the difference between a "world" and "global" economy is its capacity to work as a unit in real time on a planetary scale. Several characteristics and outcomes of the globalization process, both functional and spatial, have been identified. Amin and Thrift identify these characteristics as: i) an increasing centrality of finance; ii) greater reliance on "expert systems"; iii) transnationalization of technology; iv) a rise in global oligopolies; v) increased transnational economic diplomacy and the globalization of state power; vi) an increase in global cultural flows; and vii) the rise of a new global geography, as a result of the processes described above.

With increasing integration of production and trade, and the opening of new markets, competition has also heightened. Some tendencies and challenges resulting from the new environment are: i) higher quality standards; ii) keen competition at every phase from production through final marketing; iii) strategic alliances of global firms; iv) trade among developed countries; and v) neo-protectionism (Presidencia de la República).

### 2.2 Globalization and Agribusiness

The labeling of globalized agriculture has been done to point out that modern agriculture is increasingly constructed from economic and regulatory processes which are global in scope and character (Le Heron). According to Le Heron, the term globalized

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agriculture implies new historical relationships for agri-food systems, including new relationships among nations and states.

Recent trends in the transformation of commodity chains have also had a fundamental impact on agribusiness activity. In this regard, Gereffi argues that many of these commodity chains have become “buyer-driven” rather than “producer-driven” as in the past. The “buyer-driven” commodity chain takes place in a much more decentralized way than the traditional “producer-driven” commodity chain, and the control over production and distribution systems is exerted by firms that specialize in the design and marketing of a specific commodity. Korzeniewicz suggests that this type of decentralization is globally more efficient than the traditional method and can be associated with new organization patterns in the distribution, marketing and consumption processes.

Similarly, Le Heron integrates agro-production systems as the cornerstone of globalized agriculture and he points out that “each chain of agribusiness from the farm to the retail outlet is increasingly an interlocking techno-economic multiregional production system, resting on the addition or substitution of industrial and bio-industrial processes and products.” Finally, as a consequence of this process of globalization and agro-systems integration, classical distinctions between agriculture and agro-industry are becoming more blurred.

### **2.3 Technological Innovation, Transport and Communications**

Increased competitiveness and international market position requires continued updating of technological innovations. In the same way, the incorporation and diffusion of technical progress needs the existence of a suitable technological infrastructure, including qualified human resources for servicing capital (CEPAL). Relatively recent developments in the agribusiness sector have given new dimensions and created major opportunities. Among these developments are engineering, biotechnology, low-cost telecommunications, distribution and management systems, and changing dimensions of market organization (Johnson and Martin).

Biotechnological developments related to vegetative cell cultures and the transfer of genetic material among plants are increasing the genetic pool available for farming (UNCTAD). These developments are intended to increase yields, nutritional value, and/or varieties that are better adapted to specific soil and climate conditions. Other technological innovations that have increased efficiency and productivity include modern irrigation systems (drip, ferti-irrigation, computerized application), plastics, carbon dioxide, and specialized machinery. These technologies have increased yields by up to 50 percent and have resulted in up to a 40 per cent saving in water and chemical (fertilizers, fungicides and insecticides) costs, as well as considerable labor savings (Velázquez, et al.).

Advances in transport and communication technologies have increased the share of high-value good shipments (SEDEVASR, 1996). In general, advances in transportation, communication, and materials-handling technologies have reduced transportation time and cost. Thus, distance is being overcome by transport technology and communications. An example of this process is the advance in maritime transportation of perishable goods, in particular fruits and vegetables. In recent years, leading maritime freight

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companies have increased their operations by investing in land transport equipment. This equipment has automated and integrated ventilation that keeps produce at its required temperature. Optimal refrigeration will reduce enzymatic degradation, humidity losses, growth of microorganisms and bacteria, and the presence of noxious gases such as ethylene (Bringas).

## **2.4 Shifts in Consumption and Dietary Patterns**

Growing per capita incomes, decreasing average household size, and a higher share of women in the labor force, have impacted food consumer behavior and the demand for agricultural products. More recently, additional characteristics in the food market have been added, such as increasing away-from-home food expenditures and a propensity to consume quality convenience foods. These shifts in the major food markets have favored the following tendencies (Von Hesse): i) growing consumption of fresh vegetables and tropical fruits; ii) increasing demand for single-portion products (between 250 and 300 grams or 0.55 and 0.66 lbs.); iii) reductions in sugar consumption; iv) reductions in beef consumption, with increases in white meat; and v) an increase in eating out, particularly fast-food establishments. Also, aspects related to sanitation, pesticides, herbicides, and environmental issues have impacted dietary and food consumption patterns. Advances in organic agriculture emphasize these safety, environmental, and health concerns. Within the context of these global changes, some analysts argue that the recent appearance of the global fresh fruit and vegetable industry is the harbinger of a third food regime (Le Heron).

## **2.5 Protectionism, GATT, and NAFTA**

In relation to world trade, the agricultural sector has been a principal source of trade disputes and controversies with high levels of protectionism. By and large, governments have continued to justify agricultural protectionist policies on the grounds of food security, national defense, and needed employment for rural areas. Thus, an unprecedented level of economic and political attention was given to agriculture in the General Agreement on Tariffs and Trade (GATT) during the Uruguay Round beginning in the mid-1980's.

After almost a decade of negotiations with the Uruguay Round, a consensus was reached for agriculture on defining basic rules of trade practices (Martin and Winters). Some analysts believe the most significant achievement in the Uruguay Round was the negotiation framework developed (Bustrup). Among the outcomes of this process, Bustrup notes that GATT decisions concerning market access and reductions in producer and consumer subsidy equivalents will lead to changes in the competitive position of individual countries in the international market. The World Trade Organization (WTO), GATT's successor will seek to build on what was achieved in the Uruguay Round. An added challenge for the WTO is the "reasonable" regulation of regional free trade areas within a global economy.

One of these regional free trade areas is the North American Free Trade Agreement (NAFTA), that started on January 1, 1994. The general purpose of NAFTA, is the liberal-

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ization of regional trade in goods and services by the lowering or elimination of import taxes, tariffs, and quotas, as well as establishing common sanitary regulations and governmental buying practices. NAFTA can be seen as the formalization of an increasing process of functional integration, in particular between the economies of Mexico and the United States. The agricultural provisions of NAFTA call for the elimination of tariffs and non-tariff barriers among the three member countries over fifteen years, which should lift intra-regional trade in the future. According to some analyses, the traditional role of border protection in agriculture within the NAFTA region will decline (USDA, 1995). As a result, NAFTA partners are changing their agricultural policies in an attempt to ensure the effectiveness of domestic support in a free-trading environment.

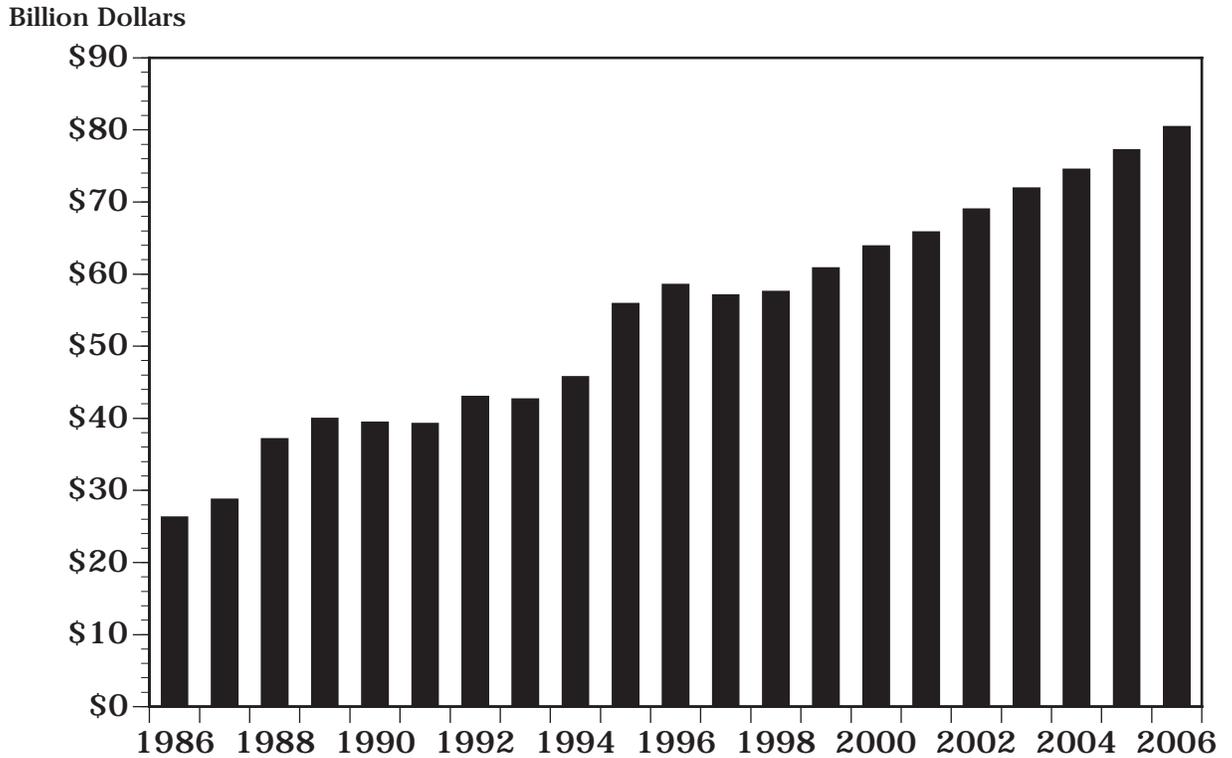
MERCOSUR, the South American Common market reflects a move toward regional free trade among its member countries (Argentina, Brazil, Uruguay, and Paraguay) on that continent. ASEAN, the Association of South East Asian Nations, supports a move toward greater trade liberalization in the dynamic and potentially massive markets of the Pacific Rim. These agreements add up to an already substantially freer market for agricultural commodities with a clear trend toward even lower barriers in the future.

Spurred by these reforms, the globalization of trade in agriculture can only continue at the high rate of the last decade. Trade in the agribusiness sector is expected to grow remarkably over the next decade both within the North American market and between North America and the rest of the world. USDA (1996) estimates that by the year 2005, intra-NAFTA trade in agricultural products will reach \$30 billion, up from about \$19 billion in 1995. Preliminary assessments suggest that the United States will have advantages in the production and trade of staple grains and oil-seeds, whereas Mexico's advantage will be in fruits and vegetables (USITC). Competition is already intensifying for specific commodity markets due to liberalization and specialization. As a result, regional markets are emerging in fruits and vegetables, animals and livestock products, and feed grains as producers take advantage of production complementarities and seasonal variations that transcend national boundaries (USDA, 1996).

Liberalization and globalization of trade are of particular importance as we approach the twenty-first century because the world's demand for food and high-value food products is increasing. The combination of freer markets with the effects of globalization, including improved transportation and communications, as well as continued investment in technology and research and development, should allow these needs to be met. Servicing these expanding markets is a challenge for agricultural producers throughout the world and a very clear opportunity for US agriculture.

Figure 2.5a describes projections for the value of US agricultural exports through 2006 and shows a continuation of recent increases in export growth. Agribusiness firms are finding that there is great potential for profits in every corner of the globe and are going about creating the business infrastructure necessary for such trade. For example, the value of exports in the processed food sector has increased 55 percent in only the last five years (Ruppel). The increase in competition continues to move producers of all types toward greater efficiency and higher productivity.

Figure 2.5a. Value of US Agricultural Exports, 1986-2006.



Source: FAPRI.

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