World Dairy Production and Trade Trends

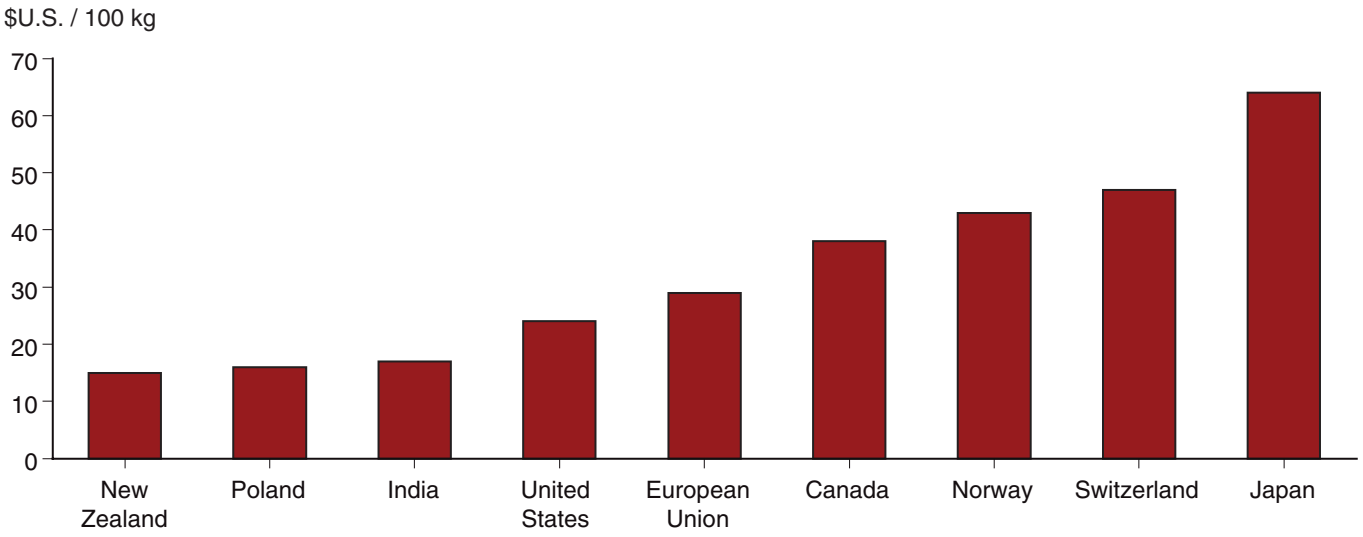
The share of global milk production entering world trade is low, at 7 percent, compared with shares of other farm commodities, such as wheat, coffee, soybeans, or bananas at 30 to 40 percent. Improved refrigeration and transportation technologies have made dairy trade more practicable than in earlier years, though high costs are still a constraint. Almost every country produces milk for local consumption, but production costs vary substantially due to such factors as labor costs, animal genetics, onfarm technology, and the availability of forages and water for livestock. Countries with a dairy surplus tend to be those with relatively abundant, low-cost milk inputs for milk production and comparatively small populations, such as New Zealand, the lowest cost major producer of milk in the world (fig. 6). Japan, Norway, and Switzerland are high-cost milk-producing countries largely due to their lack of land for growing dairy feeds. Poland, with an abundance of forage lands and low wages, provides the most ideal conditions for milk production among all European countries. Canada and the EU lie between the two cost extremes, as does the United States, where the changing structure of the dairy industry may lead to even lower average production costs.

Major Trade Flows in Global Dairy

Dairy-exporting countries are few relative to the number of dairy-importing countries (fig. 7). The three dominant dairy-supplying areas today, as in the past, are the EU, Australia, and New Zealand. Australia and New Zealand, both with low-cost milk production and industries actively involved in international marketing, are prominent suppliers to the Asian markets for cheese and dry milk powders. The EU focuses on nearby traditional markets and trans-Atlantic trade with North America, mainly for cheese.

Figure 6

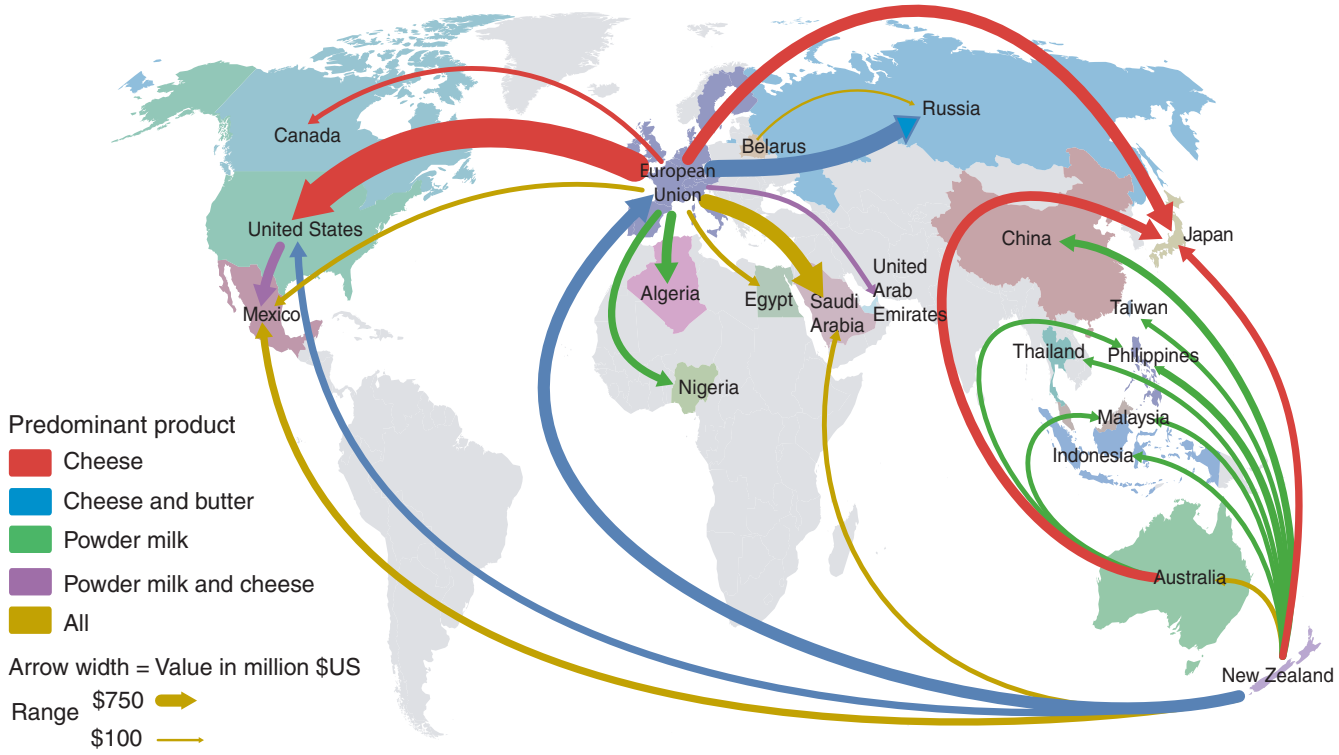
Producer cost estimates of milk production at farm level, 2003



Source: Prepared by USDA, Economic Research Service using data from International Dairy Federation.

Figure 7

Major global trade flows of dairy products in 2004



Source: Prepared by USDA, Economic Research Service using data from United Nations COMTRADE.

One would expect traded dairy products to flow from low-cost production regions to higher cost regions. However, product differentiation and consumer preferences play major roles in shaping dairy product demand and trade flows. All high-income countries, including major dairy producers like New Zealand, import EU cheese. The largest dairy trade flow worldwide is cheese from the EU to the United States, even though milk production costs in the EU are higher than in the United States. Consumer preferences for differentiated products provide suppliers incentives to make such generally higher priced products available even in markets where lower cost alternatives exist.

Shifts in the Direction of Trade Driven by Growth in Demand

Although international trade in dairy products has been viewed as a secondary market to dispose of surplus commodities, this impression is changing. The growth and direction of global dairy trade depend more on the gaps between domestic milk production and dairy product demand in particular countries and the rate at which that gap is growing. Rapid growth in milk-deficit countries is forcing exporting countries to reassess international market opportunities.

Whey products and milk protein concentrates are widely traded, but because they are relatively newer markets, the quantities traded are not as large as those of other dairy products. Dry milk powders are high in demand, particularly in tropical countries, for both commercial and home reconstitution into beverage milks—important products for feeding children. At one time,

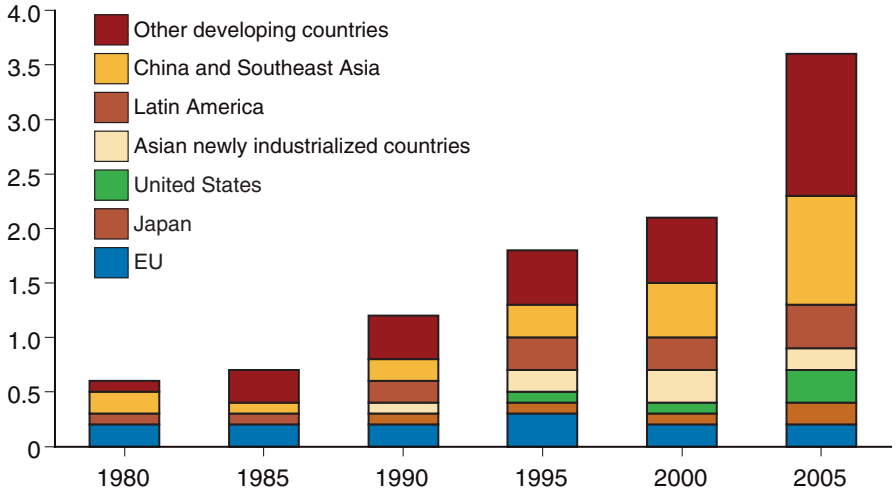
large centralized plants undertook commercial reconstitution using skim milk powder alone, recombined with anhydrous milkfat, or combined with vegetable oil. Increasingly, commercial reconstitution has been decentralized and adapted to use whole milk powder. This shift was facilitated by whole milk powder's greater flexibility for reconstitution, less costly packaging that maintains acceptable flavor, and the lack of any price premium between nonfat and whole milk powders.

The growing demand for milk in developing countries has affected trade patterns. For example, in 1980, the EU was the single largest importer of New Zealand dairy products, accounting for 30 percent of the country's exports; by 2004, that share had declined to 8 percent. Over the period, exports to the EU remained nearly unchanged, while exports to China and other developing countries spiked (fig. 8). In many of the countries triggering New Zealand's shift in dairy trade, the storyline is the same: demand for milk is outstripping the capacity of producers and processors to manufacture and transport finished products to fast-growing urban populations

In some countries, per capita consumption of milk is rising but is still extremely low, compared with the rest of the world. In China, milk production has risen but not at a rate sufficient to meet demand where it is needed the most. The lack of coordination between milk producers and dairy processors in China remains a problem. As in other dairy-resource-scarce countries, the mismatch between domestic supplies and demand fuels increases in imports.

In the previous two decades, the EU was the dominant supplier of dairy products worldwide. Quotas and environmental restrictions, however, have limited the EU's dairy production; moreover, its dairy manufacturing sector has tended to focus on specialty cheeses exported and sold at premium prices. Australia and New Zealand now control a growing share of world trade in dairy products. This transformation in the ranks of top suppliers has also affected global trade flows.

Figure 8
Developing countries driving exports of New Zealand dairy products
U.S. dollars (billions)



Source: Prepared by USDA, Economic Research Service using data from Statistics New Zealand.