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Foreign Direct Investment and Agricultural Trade

The U.S.-Mexico Experience

by Christine Bolling, Javier Calderon Elizalde, and Charles Handy

Some critics of NAFTA are concerned that U.S. Foreign Direct Investment (FDI) in Mexico's food and agricultural sector is replacing U.S. exports, and U.S. imports are replacing domestic production, causing a decline in U.S. jobs. But a closer examination of the effects of FDI points to a different story. On balance, U.S. food companies' investments have increased their sales in Mexico, without cutting into U.S. food exports; and they have stimulated Mexican imports of U.S. agricultural raw materials and semi-processed products like vegetable oil.

The drafters of the North America Free Trade Agreement of 1994 (NAFTA) saw trade liberalization as the principal means toward market integration between the United States, Canada, and Mexico. NAFTA indeed fostered rapid growth in trade among its members, including food and agricultural trade. From 1990 to 1998, U.S. exports of processed food to Mexico grew from $1.1 to $2.8 billion, and Mexican processed food exports to the United States grew from $1.0 billion to $2.3 billion. Meanwhile, FDI between the United States, Canada, and Mexico increased even more rapidly, paving the way for a regional food system with more specialization, greater trade, and changing production and consumption patterns. The importance of U.S. FDI in Mexico is evident, considering that the $6 billion in annual processed food sales generated by these investments—nearly all to the Mexican market—overshadows U.S. exports of processed food products to Mexico by more than 2 to 1. FDI is the major way that U.S. food processing firms have entered the Mexican market (figure 1).

U.S. investment in Mexico's processed food industry

The stock of U.S. investment in Mexico's food processing industry increased from $321 million in 1986 to $5.0 billion in 1997 (figure 2). The trend began when the Mexican government changed investment rules in the late 1980s. Then the enactment of NAFTA in 1994 spurred Mexican economic growth, leading to increased investor confidence and a synergy between trade and investment. Mexico is now the third largest host for U.S. FDI

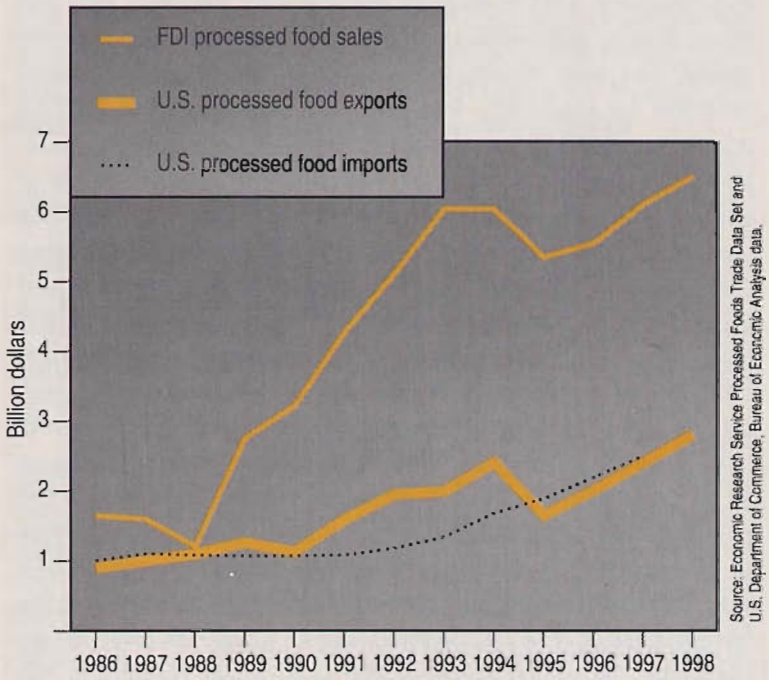

Figure 1. Sales of U.S. affiliates in Mexico overshadow U.S. exports of processed food to Mexico

(after the United Kingdom and Canada). Nearly three-fourths of the U.S. FDI in Mexico's food processing sector is in highly processed foods, including snack foods, edible vegetable oils, mayonnaise and salad dressing, meat, concentrates and flavorings, confectionery products, and pasta and related products. About one-tenth of the U.S. FDI is in grain mill and bakery products; about 15 percent is in beverages. Less than 5 percent is in processed fruits and vegetables (Bureau of Economic Analysis). Mexican sources reported that U.S. foreign direct investment continued to flow into Mexico in 1998, with Coca-Cola undertaking the largest FDI in Mexico's food processing sector (SECOFI).

Corn Products Incorporated recently acquired controlling interest in a joint venture with Arancia-CPC, Mexico's largest corn product processor. Mission Produce recently opened its second avocado processing plant in Mexico. Smithfield Foods is negotiating to buy Grupo Alpro, Mexico's largest pork processing company. Many U.S. food companies, such as Campbell Soup, General Mills, Ralston Purina, Coca-Cola, and PepsiCo, have invested in Mexico for decades. Companies based in Canada, the United Kingdom, the Netherlands, Switzerland, France, and Spain are also making significant investments in Mexico. Between 1994 and 1998, about $1.4 of the total $3.5 billion of new FDI in Mexico's processed food industry came from the United States (SECOFI).

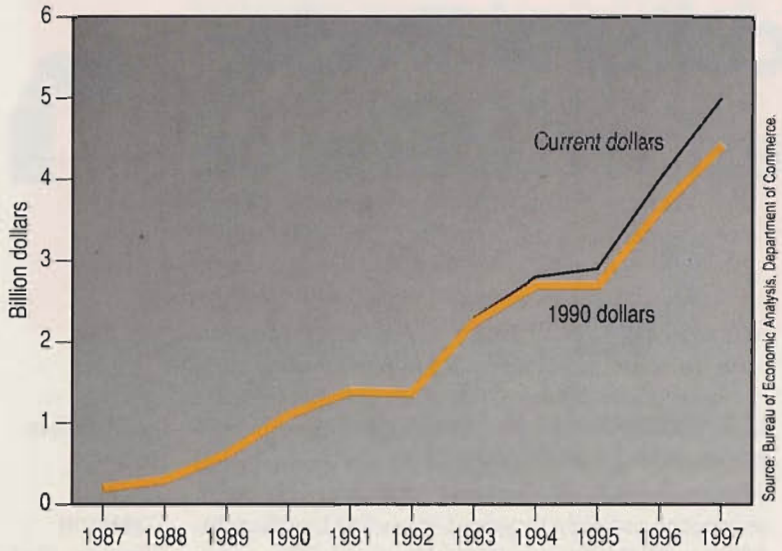

Figure 2. U.S. foreign direct investment in Mexico's processed food industry

How We Analyzed the Effects of Major Macroeconomic Factors on FDI

To assess the factors affecting U.S. FDI in Mexico's processed food industry, and to explore the linkages between FDI and trade, Bolling and Somwaru applied the four-panel econometric model that was developed by Barrell and Pain, and later modified by Gopinath, Pick, and Vasavada, to the NAFTA countries. Bolling and Somwaru used a time-series, cross-section procedure to estimate equations for a panel model of sales attributable to U.S. FDI in Mexico and Canada. Variables such as the price of U.S. processed food exports, wage rates and incomes in the host countries, the level of protection, and the exchange rate were expected to explain changes in FDI and trade. The nature of the products traded and whether the host country was an exporter or importer of processed foods also proved to be important in explaining the direction and size of changes in trade and FDI. Sales from FDI affiliates were shown to be competitive with U.S. exports, as demonstrated by the negative relationship between U.S. affiliate sales and the prices of U.S. exports. But GNP growth in the country receiving FDI was a positive and stronger determinant of affiliate sales. In the special case of NAFTA, demand for FDI funds has been driven principally by appreciation of the U.S. dollar relative to the Mexican peso and Canadian dollar.

Conditions that encouraged FDI in Mexico

The rapid progress of FDI in the late 1980s and 1990s was unleashed by a combination of institutional reforms, which opened Mexico's economy to FDI, and macroeconomic developments, which spurred growth of the domestic market and reduced the dollar cost of acquiring and running food processing firms.

Institutional reforms

Mexico reformed many of its foreign investment laws in the late 1980s. Under the new "Regulations on Foreign Investment," which went into effect in May 1989, foreigners could establish new enterprises in Mexico and hold up to a 100 percent stake in "unrestricted" economic activities, compared with a maximum of 49 percent under earlier regulations. Unrestricted sectors include food and beverages. Investment projects, however, still must be approved by the National Commission of Foreign Investment (CNIE). The NAFTA Agreement further enhanced the legal position of foreign investors, guaranteeing them the right to repatriate their initial investment and profits, granting equal treatment to foreign and domestic investors under the law, and prohibiting new laws that would change the status of foreign investments after they were established.

Macroeconomic developments

Because most processed foods made in Mexico are sold within the country, potential outside investors want evidence that Mexico's economy will con-

tinue to grow. Except for a downturn in 1995 and a slowdown at the close of 1998, the Mexican economy has generally experienced healthy economic growth, outpacing population growth. Higher incomes have led to increased food demand.

The importance of U.S. FDI in Mexico is evident, considering that the $6 billion in annual processed food sales generated by these investments—nearly all to the Mexican market—overshadows U.S. exports of processed food products to Mexico by more than 2 to 1.

Large profits in the food processing industry increased investment, including FDI. The outlook remains optimistic. USDA's Economic Research Service (ERS) and SAGAR (Mexico's Ministry of Agriculture) forecast Mexico's economy to grow by 2–3 percent in 1999, and at a faster rate than expected for the U.S. and Canadian economies during the coming decade.

The depreciation of the peso further encouraged U.S. FDI. The strengthening dollar made the acquisition of Mexican companies less expensive to U.S. investors, and lowered wages and related dollar costs. The drop in effective capital and operating costs encouraged export of agricultural commodities and semiprocessed foods for further processing, rather than first processing in the United States. Even so, Mexico remains a net importer of processed foods from the United States (see figure 1, Economic Research Service, Processed Food Trade Data Base).

The measurable effects of U.S. FDI in Mexico

Effects of the U.S. FDI in Mexico are often hard to measure. The most easily seen are employment in Mexico by U.S. affiliates, and their net earnings. Nearly 84,000 persons earning $772 million were employed by all U.S. affiliates in Mexico's food industry in 1996, compared with 50,000 persons earning $174 million in 1986. U.S. affiliates in Mexico's food processing industry received a net income of $288 million in 1996, part of which was reinvested in Mexico.

FDI reinforces agricultural trade

U.S. exports of agricultural products and processed food to Mexico and U.S. FDI in Mexico's food processing sector have grown simultaneously. What explains this win-win outcome? In part, U.S. affiliates in Mexico import food products for further processing. ERS shows that the United States exports mostly intermediate agricultural products to Mexico, and only limited finished products. The U.S. meat, dairy, vegetable oil, and corn milling

How We Analyzed the Economic Consequences of FDI on the U.S. and Mexican Economies

A computable general equilibrium (CGE) model of the U.S. and Mexican economies developed by the Economic Research Service estimates the effects of foreign investments and foreign income growth on U.S. agriculture. This CGE model also captures the linkages among sectors that operate through the demand for intermediate inputs and can provide insights into how developments in food processing sectors affect output and trade in the rest of the economy.

The twenty-five-sector, two-country CGE model that we apply to analyze the effects of the U.S.-Mexico FTA on agriculture explicitly models agricultural and food policies in both countries, based on 1993 data. The economies are linked through trade and migration flows. Their agricultural policies include tariffs, quotas, input subsidies to farm and food processing sectors, and targeted producer prices. For this study we added the effects of an increase in the Mexican capital stock against the background of the FTA and the 1995 changes in Mexican and U.S. farm programs, the most important being PROCAMPO in Mexico and the 1996 Farm Act in the United States.

The simulation posits a 10 percent increase in the Mexican capital stock in all sectors of the Mexican economy. The capital is added with no change to the U.S. capital stock, which is plausible because the United States is a *net* importer of capital. When investment increases throughout the Mexican economy, U.S. processed food exports to Mexico rise, demonstrating the importance of Mexico's economic growth in creating markets for the United States.

Economic growth increases incomes and domestic demand for processed foods. Despite the growth in domestic production caused by higher investment, there remains excess demand which increases U.S. exports. There is little effect on the U.S. economy beyond increased trade. While some sectors and geographic areas in the United States undergo structural adjustments from the added investment in Mexico, the overall effect on the U.S. economy is nearly neutral (Bolling, Neff, and Handy).

Mexico's FDI in the U.S. Processed Food Industry

Mexico's firms have also increased their investments in U.S. processed food companies. Sales from Mexican companies' affiliates in the United States amounted to $664 million in 1996, having grown from nearly zero in 1990. While they began as a niche market investment to serve the Hispanic market in the United States, GIBSA, a major bread baking company, and Gruma, a major tortilla maker, have the largest Mexican interests in the U.S. processed food industry. Minsa, with six corn milling plants in Mexico, has joined them with two corn milling operations in Texas and Iowa, and DESC acquired Authentic Mexican Food Incorporated, a Mexican-style food company based in Texas. Using FDI in the United States as a hedge against currency fluctuations has been particularly important for companies, like GIBSA, that import most of their inputs—such as wheat and vegetable oil for bread making—and sell to the domestic Mexican market. GIBSA and Gruma are part of the modern Mexican food processing industry that also includes industrial giants such as Ceveceria Modelo, FEMSA Cervesa, and Compania Nestle, all of which have sales in excess of a billion dollars.

sectors provide the most processed food exports to Mexico, where plants there use these ingredients in other processed foods. Consumer goods like soft drinks, mayonnaise, and salad dressing are more likely to be produced in Mexico with FDI than to be traded internationally. U.S. exports have also grown because growth in Mexican per capita income has increased demand for U.S. products in general, including consumer-ready food and agricultural products. ■

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■ For more information

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