



# Exporting Obesity

## HOW U.S. FARM AND TRADE POLICY IS TRANSFORMING THE MEXICAN FOOD ENVIRONMENT

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### SUMMARY

The obesity epidemic affects more than just the United States. Experts increasingly point to the importance of “obesogenic” environments that predispose individuals to physical inactivity and unhealthy diets—these environments cross borders and are shaped by public policy. This paper examines the role of the North American Free Trade Agreement (NAFTA) in the development of an unhealthy food environment in Mexico by increasing the availability of processed foods and meat products derived from cheap commodity grains imported from the U.S. and elsewhere.

### Obesity trends

Public health experts no longer accept that the obesity epidemic can be explained solely as the outcome of poor individual choices. They understand, rather, that the food environments or food “defaults” surrounding people constrain the actual choices people are likely to make, i.e., the number of fast food restaurants and convenience stores that offer little (if any) fresh food, the variety of highly processed food products, and the pervasiveness of food marketing—especially with respect to children. Food environments are created beyond the point of sale. They start much further upstream, on the land. Here, two other major drivers of the food environment come into the picture: the industrialization of agriculture, and trade and investment rules that extend it to developing countries.

### Industrialization, and globalization, of agriculture

There’s little doubt that the industrialization of agriculture in the U.S. has increased calorie output tremendously. One key component was federal investment in, and policies prioritizing certain agricultural research and development—in particular, focused on how to increase production, typically for corn, wheat and livestock commodities.

A second key component has been policies that set out, initially, to protect farm income and, subsequently, policies that promoted commodity production, even when production levels appear to have undercut farm income. In the mid-20th century, for example, U.S. agricultural policy included various mechanisms to manage the farm supply of commodities, in part through limits on production and through price floors. These policies dampened volatility in both commodity supplies and prices. In the last quarter of the 20th century, public policy moved away from supply management.

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Commodity firms and food processors pushed for these changes, precisely because greater production would mean lower prices for these commodities. Low prices, especially for corn and soybeans, in turn attracted livestock and dairy producers to begin using these commodities as feed. Today, meat and dairy producers are the largest end-users of corn and soybeans.

Decreasing commodity prices also led to the proliferation of novel products derived from them, such as high fructose syrup from corn, and hydrogenated vegetable oil from soybeans. These in turn served as inexpensive ingredients in a plethora of processed foods, usually relatively dense in calories but low in nutritive value.

Commodity overproduction and depressed prices for commodities in the U.S. led the government to seek new export markets for U.S. grains (and, more recently, U.S. meat). However, the sale overseas of U.S. commodities at prices less than the cost of domestic production—i.e., “dumping”—has been tied to the loss of economic value from agriculture in developing countries, resulting in hunger and depressed production in rural communities abroad.

Another aspect of globalization of agriculture has been the increased movement of food-related capital, technology, goods and services throughout the globe. This in turn has had a profound effect on the diet and nutrition of individuals. The so-called “nutrition transition” in developing countries is characterized by a shift toward an increased prevalence of excess caloric intake and its associated non-communicable chronic diseases in countries where, until very recently, chronic hunger and malnutrition were the dominant food-related concerns.

## **NAFTA and Mexico's obesity problem**

Mexico faces a significant rise in overweight and obesity over the last quarter century, mirroring the increase in the United States. In 1991, the North American Free Trade Agreement (NAFTA) between the U.S., Canada and Mexico, marked a turning point in multilateral trade agreements in several respects involving food and agriculture. In contrast to previous negotiations, for example, which included concessions for the poorer partner—known as special and differential treatment—NAFTA presumed relative equality between the three countries. Where higher level protection for certain food products remained between Canada and the U.S. (sugar, dairy and poultry), the U.S.-Mexico agreement phased out barriers to imports of corn and beans—key products in the Mexican diet and rural economy.

The agreement also broke new ground in terms of the breadth of issues it addressed: investment, intellectual property rights and government procurement—all opening the door for increased foreign investment including in the food and agriculture sector, while prohibiting certain performance standards, like demanding a minimum amount of domestic content in production by foreign firms. Before the conclusion of the NAFTA negotiations, the Mexican government had also made many unilateral changes to its domestic laws affecting agriculture, including, for example, abolishing laws requiring cattle to be fed grass rather than corn.

As the nature of Mexican agriculture changed dramatically, so did consumption patterns. Mexican diets shifted from traditional food staples toward energy-dense, processed foods and animal-source foods—which tend to be higher in fats and added sweeteners. In fact, from 1988 to 1999—the period in which NAFTA was negotiated, signed and put into effect—the average daily energy obtained from fat in Mexico increased from 23.5 percent to 30.3 percent (a 28.9 percent increase). In the same period,

per capita consumption of total carbohydrates declined (from 59.7 to 57.5 percent) but consumption of refined carbohydrates increased, rising by 6.3 percent between 1984 and 1998 (soda consumption also increased 37.2 percent).

These trends acquire added significance in light of the observation that the timeline of NAFTA implementation, and the more general background of increased deregulation and trade flows with Mexico, has coincided with a significant rise in the incidence of overweight and obesity in Mexico.

## **Implementation of NAFTA: Effects on the flow of food and commodities**

Generally speaking, trade flows between the U.S. and Mexico since the passage of NAFTA have trended toward increases in the amount of seasonal fruits and vegetables flowing north and an increase in the southward flow of commodity crops and livestock products.

### **Corn**

Corn exports nearly quadrupled since the passage of NAFTA compared to the average annual level of corn exports from the U.S. to Mexico during the decade before NAFTA was signed (1984–93). At its highest point in 2008, the U.S. export of corn to Mexico totaled 9.3 million metric tons, equivalent to about 40 percent of Mexican production (compared to 15 percent during 1984–93).

### **Soybeans**

Mexico already imported a large share of its soybeans from the U.S. before the implementation of NAFTA. This tendency was intensified by the removal of Mexican tariffs on soybeans and related products in 2003 as part of NAFTA, along with domestic reforms of crop support programs. Subsequently, imports of U.S. soybeans largely displaced domestic soybean production.

It is likely that this has contributed to a more than tripling of U.S. soybean exports to Mexico since 1993.

### Sugar and sweeteners

In July 2006, the U.S. and Mexico announced they had resolved the latest in a series of disputes regarding the interpretation of NAFTA's sugar and sweetener provisions. The dispute concerned Mexico imposing a sales tax on soft drinks and other beverages that contained any sweetener other than cane sugar. The tax virtually stopped all U.S. exports of high fructose corn syrup (HFCS) to Mexico between 2002 and 2004. Since the resolution of this dispute, the quantity of HFCS exported to Mexico has increased rapidly. Since January 2008, there have been no duties or quantitative restrictions between the U.S. and Mexico on sugar and HFCS trade.

### Ready-to-eat foods

NAFTA has also allowed for the increased flow of "consumer-oriented" (ready-to-eat) products from the U.S. to Mexico. Excluding meat products (discussed below) and fresh fruits and vegetables, the largest volume increases over the NAFTA period have been in dairy products and processed fruits and vegetables, followed by snack foods and other consumer-oriented products.

Growth in the Mexican import market for snack foods has also remained strong. The U.S. has more than a 98 percent share of the import market for snack foods in Mexico. Increases, such as in the average annual sales of 38 percent from 1999 to 2001, are illustrative of the rising domestic demand for snack foods in Mexico.

### Livestock products

Since NAFTA came into effect, there have been huge increases in the amount of livestock products exported to Mexico from the United States. According to the USDA Foreign Agricultural Service, the quantities of beef/veal, chickens and

pork exported increased 234, 307 and 687 percent respectively from 1991–93 to 2007–09. There are also interesting patterns within the meat category, with poultry products used for the creation of processed meats and fast food (e.g., chicken leg quarters, turkey cuts, and other poultry products that have been mechanically deboned) rising markedly since NAFTA came into effect.

### Foreign direct investment (FDI)

By liberalizing investment rules, NAFTA accelerated the trend of rising levels of foreign direct investment in Mexican agro-food industries that began in the 1980s. FDI from U.S. corporations has occurred all along the Mexican food supply chain, from production and processing to restaurants and retail.

U.S. direct investment in Mexico is estimated to be in the hundreds of millions of dollars. Mexican livestock production is highly integrated, due in large part to heavy investment of U.S. firms in industrial livestock operations, particularly in poultry and pork. For example, transnational firms control an estimated 35 percent of Mexico's pork industry.

Mexico is the third largest recipient of U.S. FDI in processed food and beverage industries. A wide array of products—including snack foods and processed meats—are included, but investments in beverages (both soft drinks and malt beverages), oilseed processing, and highly processed foods are the largest. U.S. FDI in non-alcoholic beverage production alone (e.g., sodas) is at least \$179 million annually.

U.S.-based fast food companies have also expanded into Mexico. McDonald's opened their first restaurant in 1985, and today has more than 500 points of sale located in 57 cities in Mexico. Mexico is Yum! Brand Inc.'s (the owner of KFC, Pizza Hut, Taco Bell and Long John Silver's) largest regional market.

Finally, liberalized FDI has also facilitated the entry of large food retailers into Mexico. One example comes from Wal-Mart: The number of Wal-Mart stores grew from 114 to 561 (265 of the stores contain supermarkets) between 1993 and 2001. In 2005, Wal-Mart controlled about 20 percent of the total Mexican food retail sector.

## Changing food consumption in Mexico

Changes in patterns of food consumption and nutritional status in Mexico have no doubt been influenced by a wide range of factors, domestic and foreign. However, the analysis here suggests NAFTA has played a role in some dietary trends. Four are particularly notable:

### Processed dairy products

Between 1989 and 2002, the quantity of dairy products consumed increased significantly in Mexico, and the proportion of households consuming ice cream and frozen desserts tripled. Within the dairy sector, exports of cheese and powdered milk are especially high, both of which are used as ingredients in processed foods.

### Snack foods

Mexico's consumption of snacks increased from \$1.54 billion in 1999 to an estimated \$1.750 billion in 2001. The U.S. is by far the largest exporter of snack foods to Mexico. There are many domestic snack manufacturers in Mexico and competition with U.S. exports has increased the aggressiveness of the sector.

### Soft drinks

One of the major contributors to increased sugar intake in Mexico has been the consumption of soft drinks. U.S.-based soft drink companies, whose investments in Mexico rose significantly in the 1990s, dominate this sector. Between 1999 and 2006, the consumption of high-energy beverages more than doubled for

adolescents and tripled for adult women. The net effect was to more than double the total energy consumed for adolescents and adult women.

### Processed meat

When looked at in total, fresh meat consumption has increased relatively modestly in percentage terms (92.7 to 98.7 grams per household between 1989 and 2002, or 6.5 percent) with the increase coming mainly from lower socioeconomic groups. What this implies is that households that previously did not consume meat (low-income households) are now consuming meat. This is qualitatively different from middle- or high-income households consuming more meat. Yet there are three caveats to this finding. First, in percentage terms, intake of sausages and prepared meat increased much faster (from 15 to 25.4 grams from 1989 to 2002 or 69.3 percent) than intake of other kinds of meat. Second, meat for processing forms a significant proportion of meat imports into Mexico. Third, there are significant differences between bovine meat and poultry: it has been reported that between 1994 and 2003, chicken consumption increased by 50 percent, whereas beef and pork increased by just 14 percent. An increasing amount of chicken is used by the food service and fast food industries. Chicken is also used in prepared meals; the number of households consuming prepared meals almost doubled between 1989 and 2002.

## Discussion

The U.S. has exported increasing amounts of corn, soybeans, sugar, snack foods and meat products to Mexico over the last two decades. These exports, facilitated by NAFTA, are one important way in which U.S. agriculture and trade policy is influencing the Mexican food system.

Coupled with rising imports, Mexico has received significant amounts of cross-border investment, also facilitated by NAFTA, from U.S. agribusinesses

across the spectrum of Mexico's food supply chain. As a result, the Mexican food system looks increasingly like the industrialized food system of the United States—characterized by the overabundance of obesogenic foods.

Mexico has experienced significant changes in food consumption patterns over the last two decades, followed by a rising obesity epidemic in both children and adults. Mexicans, both rich and poor, and from diverse geographic regions, are consuming more added fats and sugars from snack foods, sodas, and processed dairy and meat products. Their health is suffering in the process.

While public health researchers and policymakers are actively debating the relationship between the food system and the U.S. obesity epidemic, the impact of similar forces on the population of U.S. neighbors and trade partners has been less investigated.

## Recommendations

- Require Health Impact Assessments of proposed agricultural trade policies that include the active engagement of the public health communities.
- Reconcile trade goals with programs that aim to strengthen global food security. The Mexican experience under NAFTA suggests that officials need to pay more attention to the nutritional outcomes of U.S. agricultural export expansion in developing countries.
- Expand provisions in pending trade and investment agreements that allow stronger protections for public health, safety and the environment, essentially exempting them from standards in those agreements that would otherwise weaken such protections.

## Conclusion

Officials now are paying more attention to the role the public health community can play in ensuring that trade agreements support healthy food systems and public health. This is an encouraging development. In 2002, the World Health Organization (WHO) and the World Trade Organization (WTO) secretariats undertook a joint study, "to examine the linkages between trade and health policies, so as to enable both trade and health officials to better understand and monitor the effects of these linkages." In 2006, member states at the WHO World Health Assembly adopted a Resolution on International Trade and Health to urge members "to address the potential challenges that trade and trade agreements may have for health." Domestically, too, the health community has been engaged in trade-related issues concerning trade in health services, trade in harmful products, trade and social determinants of health, and food safety. The American Public Health Association, American Medical Association and American Dietetic Association have also published statements in support of healthy food systems and trade systems.

While recognition is growing in the U.S. that to address the root causes of obesity there will need to be significant reform of the dynamics or defaults of the food system, there has been insufficient attention to the impacts of exporting unhealthy food systems to developing countries. Policies that promote key foods and commodity products, as well as influence foreign investment trends, are based on the unexamined assumption that increasing volumes of low-price (and low-quality) food is good for producers and consumers—while failing to account for the very real costs to taxpayers and public health agencies in the U.S. and its trading partners.