United States
Department of
Agriculture

Agricultural
Marketing
Service

December 2016

Estimated Impacts of Mexican Transportation Infrastructure Improvements on the U.S. Meat Complex (Summary)

Delmy Salin

This paper is a summary of the: Estimated Impacts of Mexican Transportation Infrastructure Improvements on the U.S. Meat Complex, by David Anderson, Flynn J. Adcock, C. Parr Rosson, III, and Hannah Ahn, CNAS Report 2016-02. The full paper is available at http://cnas.tamu.edu.

What is the Issue?

Mexico is one of the top four export markets for U.S. beef, the others being Japan, South Korea, and Canada. U.S. beef, pork, poultry meat, and edible offal exports to Mexico averaged 3.48 billion pounds per year from 2011 to 2015, valued at $3.01 billion. The United States also imports animals and meat from Mexico, mostly beef and cattle. From 2011to 2015, U.S. imports of live cattle from Mexico averaged 1.2 million head, valued at $692.6 million. These exports and imports cross into and out of Mexico almost entirely over land borders and mostly via truck. Texas is the most important State for U.S. meat and live cattle exports to Mexico. Texas and California are most important for meat imports to the United States from Mexico. New Mexico and Arizona are most important for live cattle imports to the United States from Mexico. As U.S.-Mexico trade in the meat and live animal complex has grown, both countries have significantly improved their infrastructure. Texas AgriLife and Texas A&M University research scientists analyzed the impact of recent Mexican infrastructural improvements on the U.S.-Mexico meat and livestock trade.

What Did the Study Find?

The study found that in Mexico there were significant improvements to the highway system, cold storage network, and the border entry process. Total U.S.-Mexico meat trade reached a high of 4.3 billion pounds in 2014, dropping slightly in 2015, compared with 792 million pounds in 1994. U.S. poultry meat and pork exports have consistently grown, while U.S. beef exports to Mexico have fallen, from 759 million pounds in 2008 to 363 million pounds in 2015. One of the most interesting events in U.S. beef trade is the rise of Mexico as a supplier of beef to the United States. As recently as 1987, the United States imported no beef from Mexico. The rapid growth began over the last decade. Since 2006, imports of Mexican beef increased from 40.8 to 392 million pounds in 2015, or 11.6 percent of all U.S. beef imports.

From the transportation perspective, another way to analyze the growth in trade between the United States and Mexico in the meat complex is by looking at the trend in truck traffic. The number of trucks required to transport U.S. meat exports to and throughout Mexico grew from 46,000 truckloads in 2005 to 94,331 truckloads in 2014, before dipping slightly in 2015. Using an average of 41,000 pounds per truckload, the researchers estimated the number of trucks that were needed. Most of these exports use the Laredo customs district to facilitate the shipments, accounting for more than 70,000 truckloads for both 2014 and 2015, or about 74 percent. This increased number of truckloads, using the Laredo port district as a proxy for the total, emphasizes the importance of infrastructure improvements, particularly in eastern Mexico. Most of the shipments through Laredo and surrounding ports continue south (Highway 85) to Monterrey, Mexico City, and other population centers along the way. Mexico is consistently improving its highway system to facilitate trade growth.

Mexico's main highway network in 2012 and global cold chain alliance members in 2016

Currently, Mexican highways serving major U.S.-Mexico border crossings have many lanes. In addition, there are numerous cities along these routes that now have bypasses. Mexican highways that are oriented east-west have also expanded. Products can now be shipped all the way from Laredo and the Lower Rio Grande Valley to Mazatlán without using the dangerous "Devil's Backbone" set of winding and steep roads between Mazatlán and Durango. The new portion of the east-west Highway 40 covers more than 140 miles and is expected to reduce transportation time by 6 or more hours between South Texas ports and Mazatlán. These improvements allow companies like SuKarne, a meat processor in western Mexico, to have better transportation routes. SuKarne is based in Culiacán, Sinaloa, with plants located in Durango, Michoacán, Nuevo Leon, and Baja California. Companies like SuKarne and others can now reach the north-south corridors more easily, including markets in both Mexico and the United States. Improvements to Highway 40 and other east-west highways created increased competition for U.S. meat exporters in both Mexico and at home.

The Mexican Government and industry successfully increased exports by investing in packing and inspection capacity at meat packing plants eligible to export to the United States and the European Union. This effort resulted in the growth of value-added meat production, increased domestic demand for beef due to rising incomes, and growth in grain-fed cattle feeding infrastructure. The growth in cattle feeding and meat packing has allowed for more exports of middle meats and trimmings to the United States. The growth in immigration to the United States over the same period allowed for the establishment of exports of beef products that are like products "at home" and are destined for the immigrant population.

Findings from discussions with meat trade participants indicate that:

1. The competition from U.S. companies expanding into Mexico forced domestic companies in Mexico to invest in order to survive and compete. But the increased competition also applies to U.S. companies because system improvements allowed Mexican companies to more successfully compete in the United States;

2. A dramatic improvement in border crossing procedures reduced transaction costs. These mechanisms to facilitate the import and export process through government cooperation and border infrastructure investment greatly improved the timeliness and ability to trade and highlighted the continued need for ongoing work to further harmonize trade between the United States and Mexico; and

3. Improvements in infrastructure improved food quality in Mexico.

Cold storage capacity has grown on both sides of the border. The refrigerated capacity in cubic feet in each of the U.S. border States has grown. Over the last decade, the percent of total U.S. cold storage capacity in the States bordering Mexico has grown to just over 20 percent of the nation's capacity. During roughly the same time period, Mexican cold storage capacity grew at an average annual compound rate of more than 26 percent from 2008 to 2014. Lastly, border conflicts can continue to disrupt trade. Port-of-entry closures due to border violence impacted U.S. live cattle imports from Mexico, shifting cattle to different ports of entry. The opening of temporary import facilities allowed cattle to be imported through those ports, but the numbers imported were much smaller.

How Was the Study Conducted?

The study was conducted by gathering and analyzing data from several USDA databases and reports, trade organizations, and private-sector firms to validate trade volumes and entry points for exports from the United States into Mexico. Study authors collected and analyzed Mexico meat infrastructure data from the Global Cold Storage Alliance, and some of the main U.S. meat private-sector exporters to Mexico such as Agri-West, Cargill, and JBS.

Preferred citation:
Salin, Delmy, United States– Estimated Impacts of Mexican Transportation Infrastructure Improvements on the U.S. Meat Complex (Summary), U.S. Department of Agriculture, Agricultural Marketing Service, December 2016. Web. <http://dx.doi.org/10.9752/TS220.10-2016>

Photo credit: USDA