

Bordering on a Boom: Mexico Manufacturing Builds a Future



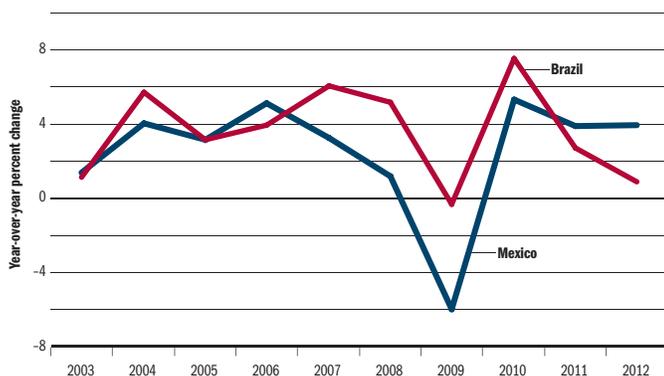
“Made in Mexico” may not be the most common label you see on the back of your television or on your cellphone—yet—but Mexico’s rapid economic growth is making the country a powerful contender in the global economy.

The *Economist* forecasts that by the end of this decade, Mexico will probably be among the world’s 10 biggest economies. The country currently is the world’s largest exporter of flat-screen televisions, BlackBerry smartphones, and refrigerators, according to the *Economist*, and its automotive and aerospace industries are quickly expanding. A number of factors, both internal and external, are driving Mexico’s manufacturing ascendancy. Mexico faces a number of economic challenges, but its gains in a number of measures reflect a positive, promising trend and a new outlook.

Mexican manufacturers multiply

Between 2001 and 2010, Mexico’s economy grew by an average of 1.6 percent a year, less than half the rate of Latin American

Chart 1
Real GDP Growth, Mexico and Brazil



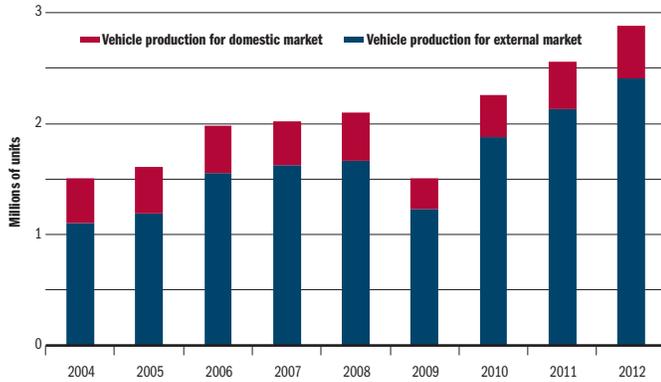
Sources: The National Institute of Statistic and Geography, Brazilian Institute of Geography and Statistics, Haver Analytics

leader Brazil (which owed its strong economic expansion in part to its commodity exporting to China). However, in the last two years, the Mexican economy has grown faster than Brazil’s, with Mexico’s growth rate doubling Brazil’s—4 percent to 2—in 2012 (see chart 1).

Manufacturing is certainly a key component of the current and predicted growth, and foreign demand for Mexican-produced goods has been an important contributor to the continuing expansion of the country’s manufacturing sector. The value of goods exported from Mexico is roughly equal to that of all other Latin American countries combined. As measured by the vast variety and sophistication of exported products, Mexico’s economy is the most complex economy in Latin America and the 20th most complex in the world, according to Harvard University’s *Atlas of Economic Prosperity*. (The *Atlas* defines “complex” as the amount of productive knowledge a country contains.) This complexity is one reason Mexico’s per capita GDP is projected to be the world’s 10th fastest growing between 2009 and 2020.

The most globally prominent industries in Mexico are medical devices, automotive, and aerospace. The auto industry is growing especially fast. Mexico is now the world’s fourth-largest exporter of automobiles. In 2011, Mexican automakers produced almost 2.6 million cars. That number rose to 2.9 million in 2012 and will reach 4 million a year once facilities currently under construction are completed, according to the *Economist*. Seven of the 10 world’s largest auto manufacturers have production facilities in Mexico. These include Honda’s \$800 million plant in Celaya, a \$550 million Volkswagen plant in Silao that opened in January 2013, and two plants scheduled to open later this year: Nissan’s \$2 billion plant in Aguascalientes and Mazda’s \$500 million plant in Salamanca. Mexico is already

Chart 2
Vehicle Production in Mexico



Sources: Mexican Association of the Automotive Industry, Haver Analytics

a strong export base for Nissan, whose Mexican facilities ship to the United States and more than 100 other countries around the globe, according to Bill Krueger, vice chairman of Nissan America (see chart 2).

Additionally, more than 200 companies related to the aerospace industry operate in Mexico, many of them in the manufacturing hub of Querétaro, making it the 12th-largest exporter of aerospace equipment. And the country is the third-largest exporter of medical devices.

China's loss, Mexico's gain

Several prominent forces have fueled Mexico's manufacturing boom, including increased openness to international trade, China's ongoing loss of competitiveness due to rising wages and appreciation of the renminbi, the availability of skilled technical labor, the continuing rise in international logistics and transportation costs, and the geographic proximity to the world's largest market—the United States—at a time when swift responsiveness to market trends is vital.

Whereas Mexico's economy had been an import-substitution manufacturing economy that depended on domestic consumers for business, its openness to international trade has enabled it to

become one that also relies on foreign markets for growth. In 1994, the North American Free Trade Agreement eliminated most tariffs between Mexico, the United States, and Canada, creating a continental market for Mexican goods. Not surprisingly, its North American neighbors accounted for

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a little more than 80 percent of Mexico's export market in 2012. However, that share has come down significantly from the 90 percent it was just a decade ago, as Mexico has opened itself to the world beyond North America. Currently, Mexico has free-trade agreements with 44 countries, more than any other nation. This openness has created preferential access for Mexico's products to more than a billion potential consumers.

Another big factor behind Mexico's growing economic success is the relative loss of appeal of emerging Asia, especially China, as the world's manufacturing hub for global companies. For many years, analysts have noted that Mexican export manufacturing growth would be severely constrained due to competition from China. (See the story in the second-quarter 2011 issue of *EconSouth*, "Trade Strengthens Ties between China and Latin America.") But now the advantage China once enjoyed because of lower labor costs is shrinking. Wages in China have been increasing by an average of 15 percent a year over the past decade, compared with less than a 5 percent rise in Mexico.

The increase in Chinese wages for foreign manufacturers has been exacerbated by the 30 percent appreciation of the Chinese yuan against the dollar since 2005. Mexico's peso actually depreciated against U.S. currency during that period. In 2011, it cost \$1.63 an hour to employ a manufacturing worker in China compared to \$2.10 in Mexico, according to the HSBC. The difference represents a 60 percent drop from what it was in 2000.

Beyond labor costs, skills are becoming increasingly important as companies increase their reliance on robots and machines

Dr. Robert Pastor, director of American University's Center for North American Studies and author of *The North American Vision*, addressed the manufacturing of American automobiles: "Our cars are not American cars, they're North American cars," he said. "They're made in all three countries right now."

that require skilled maintenance and operation. Mexico has skilled labor: Mexican universities offer more than 900 engineering and technology-related postgraduate programs and produce 90,000 engineering and technology graduates each year. For example, a recent Migration Policy Institute report notes that the Mexican state of Chihuahua, a leading manufacturing cluster, is also home to 10 technical institutions that supply manufacturers with at least 1,000 graduates annually. As a result, foreign companies are setting up design and engineering centers, as well as research-and-development centers, in the area.

The price of oil has more than tripled since the turn of the century, adding significantly to the rising costs of transportation and logistics. For companies that produce for the U.S. market, Mexico has become a more attractive manufacturing base than Asia.

Overall, according to the *Economist*, the combined effects of currency movements relative to the U.S. dollar, rising wages in Asia, and increasing logistics costs have made Mexico the cheapest place in the world to manufacture goods for export to the United States—cheaper than China, India, and Vietnam.

Finally, travel time matters. A container can take several

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Production Coming Back Ashore?

Reshoring. Onshoring. Insourcing. These are some terms coined by analysts and journalists that describe a nascent but quickly developing trend in manufacturing—bringing production from emerging economies back to developed countries. Mexico has begun to benefit from the reshoring phenomenon. So has the United States.

Some of the factors that have made Mexico attractive to foreign manufacturers also explain the growing appeal of shifting production back to the United States (or choosing to expand production here instead of chasing lower labor costs in other countries). These forces include rising wages in China and elsewhere in emerging Asia, increased transportation costs, and the need to reduce delivery time to respond quickly to customers' fast-changing needs and wants.

Some factors are more U.S.-specific. The most important of these is the rapidly rising productivity of U.S. workers, which means that labor costs' share of the total cost of finished goods has been shrinking significantly. Between 1996 and 2009, manufacturing productivity in the United States rose a cumulative 69 percent, according to the *Financial Times*. To compare, Germany's productivity managed to grow only 17 percent over the same period. For many companies, the lower wages offered outside the United States do not end up saving them much money.

In addition, many U.S. businesses, especially those that produce complex, high-technology products, have come to realize that innovation suffers from geographically separating their research-and-development functions and production.

Unfortunately, returning production to the United States does not mean recovering all the manufacturing jobs that were lost to offshoring. According to Don Sabbarese, an economics professor at Kennesaw State University, many of the manufacturing jobs that will return to the United States will be in industries that require fewer people. However, although manufacturing itself might employ fewer people than before, the supply chains that follow manufacturing production will be creating new jobs. Moreover, the rapidly rising productivity of U.S. manufacturing workers means that they should continue to be paid better than those in the service sector of the U.S. economy. ■

months to travel by ship from China to the United States compared with a few days' drive from Mexico. According to Nissan's Krueger, having a factory in Mexico shortens the loop between the points of supply and demand, and that shorter loop allows companies to be more responsive to the rapidly changing marketplace. Moreover, in terms of production, companies based in the United States are no more than two time zones away from Mexican plants, allowing for fast and easy communications between design and production facilities.

Other factors that have driven the rise of Mexico's manufacturing sector include the large amount of foreign direct investment, government's support to foreign investors, and improved overall macroeconomic performance (including low inflation). For example, U.S. investment in manufacturing within Mexico rose to \$30 billion in 2011 from less than \$19 billion in 2002. According to the World Economic Forum's global competitiveness report, in 2011–12, Mexico was ranked 36th in terms of strength of investor protections (out of 142 countries) and 39th in terms of macroeconomic environment.

The promise of the North American economy

In a 2012 interview with the Atlanta Fed, Robert Pastor, the founder and director of the Center for North American Studies at American University, said, "When we buy a car in the United States, we no longer buy an American car. We buy a North American car." According to Pastor, auto parts on average have to cross U.S. borders at least seven times.

The HSBC projects that in just six years the United States will be more dependent on imports from Mexico than from any other country. What's important to note, though, is that 40 percent of our imports from Mexico represent goods that originated in the United States and were sent to Mexico for manufacturing. In fact, 13 percent of all our manufacturing exports go to Mexico. (See the sidebar.)

There's a long way to go, however, in terms of reducing trade barriers and achieving economic integration. The journey needs to continue if North America wants to outperform the economies of East Asia and Europe. As Pastor points out, we should "realize that our neighbors should no longer be thought of as foreigners, but as partners." ■

This article was written by Galina Alexeenko, director of the Atlanta Fed's Regional Economic Information Network at the Nashville Branch, and Ed English, a staff writer for EconSouth, with contributions from Stephen Kay, senior economist and coordinator of the Atlanta Fed's Americas Center.