INTERNATIONAL TRADE ADMINISTRATION

2016 Top Markets Report Manufacturing Technology Country Case Study

Mexico

Mexico ranks first in the Manufacturing Technology Top Markets Report. With a highly developed industrial base and virtually zero market access barriers, Mexico has received the highest volume of U.S. manufacturing technology exports since 2011 and will remain a top destination for U.S. companies.

Overall Rank	U.S. Exports:	Export Growth:
1	1st	17th
	2012 UNIDO Industrial Competitiveness Ranking: 16th	**UNIDO Industrial Competitiveness Growth Ranking:** 9th

Subsector Rankings

Machine Tools (Cutting):	Machine Tools (Forming):	Welding & Soldering Equipment:	Plastics & Rubber Equipment:	Tools, Dies, Jigs, and Fixtures:	Machine Tool Parts:	Industrial Molds:	Additive Manufacturing Equipment:
1st	**1st**	**2nd**	**1st**	**1st**	**1st**	**1st**	**15th***

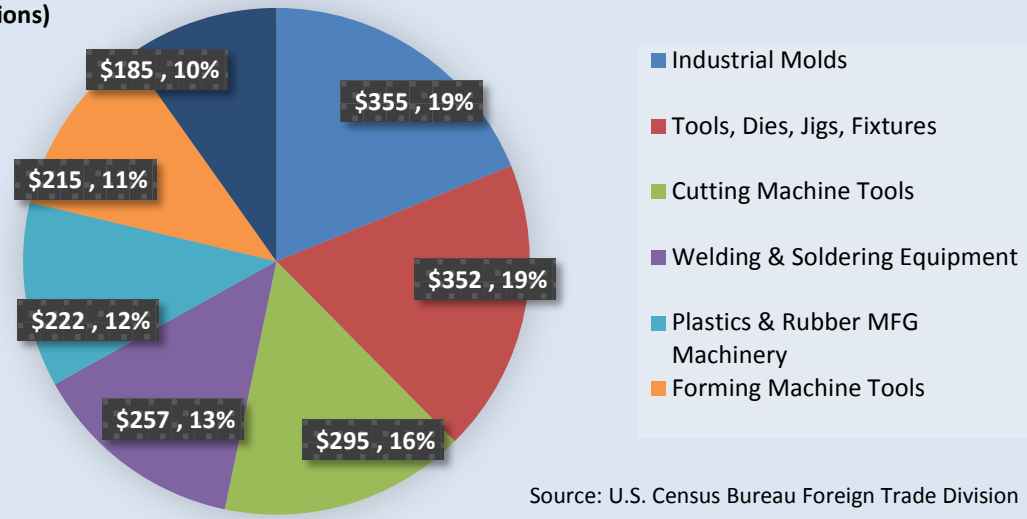
ITA expects that U.S. manufacturing technology exports to Mexico will increase through 2017. Between 2009 and 2015, exports to Mexico grew at an average annual rate (CAGR) of 8.9 percent. Despite experiencing a single year decline between 2013 and 2014, ITA projects that exports to Mexico will increase through 2017 particularly as a result of the automotive sector.

Country Overview

Mexico is a strategic market for U.S. manufacturing technology exporters. Over the past 21 years since entering into the North American Free Trade Agreement (NAFTA), Mexico's economy has increasingly oriented itself away from agriculture and more towards an export-driven manufacturing economy. Between 2002 and 2012, Mexican automotive exports increased by 152 percent from $27.9 billion to $70.3 billion, and electronics increased by 73 percent from $43.3 billion to $74.9 billion.[i]

The growing presence of Mexico's automotive industry is a key factor in increasing U.S. exports of manufacturing technology. The automotive growth forecast for 2016 is 6 percent, and by 2020, the industry will produce 5 million vehicles compared to the 2015 production of 3.4 million vehicles.[ii] Vehicle and parts production is growing particularly in the states of Guanajuato, Aguascalientes, and San Luis Potosi.

Figure 1: U.S. Manufacturing Technology Exports to Mexico, 2015 (in USD Millions)



Source: U.S. Census Bureau Foreign Trade Division

Mexico's major industrial hubs are the metropolitan areas surrounding Mexico City, Guadalajara, and Monterrey. Mexico's 1,900-mile shared border with the United States has also seen an outgrowth of industrial activity, especially as multinational corporations aim to create vertical supply chains, made possible by NAFTA.

As a signatory of NAFTA, Mexico has virtually zero market access barriers with the United States. Mexico is a net importer of machinery, and the United States is Mexico's largest source of imports of these products. According to United Nations trade data, in 2014, U.S. products accounted for 29.2 percent of all manufacturing technology imports into Mexico, followed by Japanese products with 18.3 percent, and German products at 12.5 percent. U.S. exporters face stiff competition from Japanese manufacturers, who benefit heavily from the Japan-Mexico Economic Partnership Agreement. Between 2009 and 2014, U.S. market share declined by over 10 percentage points from 39.3 to 29.2 percent, while Japanese share rose from 9.8 percent to 18.3 percent over the same period.

Export Overview

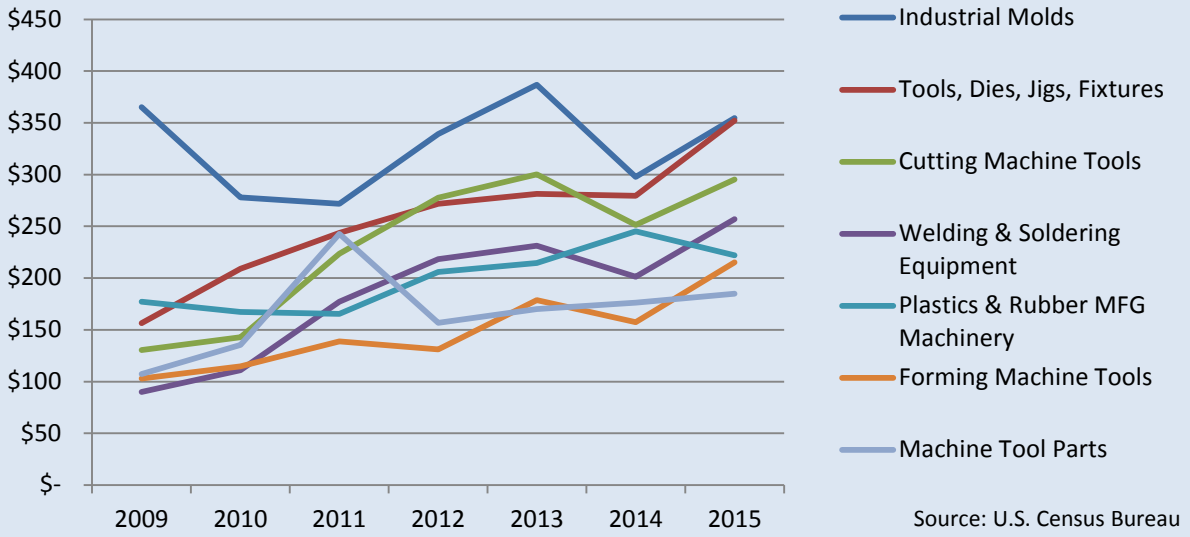
Bolstered by a number of conditions, Mexico was the largest export market for six manufacturing technology product categories in 2015. To begin, Mexico is by far the largest destination for U.S. industrial mold exports. The market accounts for well over half of U.S. exports in the subsector. In 2015, U.S. companies sold $354 million worth of molds to Mexico. Much of this is driven by the Mexican automotive and consumer electronics industries, which draw heavily from mass-produced components made using plastic injection molding, metal die casting, and other processes. While U.S. mold exports have experienced steady declines in recent years, Mexico will continue to be the most important export destination for U.S. mold makers through 2017.

In 2015, Mexico was the largest U.S. export market for machine tool parts, accounting for $184 million in sales. Between 2009 and 2015, average growth (CAGR) in this subsector was 9.5 percent. Growth in U.S. exports has been consistent with growth in the Mexican market, and ITA projects that sales in machine tool parts will continue to grow through 2017.

Mexico is a growing market for tools, dies, jigs, and fixtures. In 2014, U.S. tool and die makers sold $352 million to Mexican end-users, bolstered particularly by sales in dies used in pressing and stamping operations typical of the automotive industry. Between 2009 and 2015, the subsector experienced 14.5 percent average annual growth.

In 2015, Mexico was the largest export market for U.S. machine tool manufacturers, eclipsing China in both cutting and forming machine tool sales. To begin, cutting machine tools exports have experienced double-digit average annual growth in recent years, though the effects of Mexico's 2013 metalworking slowdown were felt particularly in these subsectors. Mexican metal parts suppliers are moving rapidly into laser cutting as a faster and

Figure 2: Annual U.S. Manufacturing Technology Exports to Mexico, by Subsector (in USD Millions)



Source: U.S. Census Bureau
Foreign Trade Division

cleaner process that helps them avoid additional finishing work. Competing brands of laser cutting machines, including AMADA, Trumpf, Mitsubishi, and others, have dealers in the three major cities of Mexico. In 2015, Mexican businesses purchased $295 million of U.S. cutting machine tools and $215 million of forming machine tools, up from just over $251 million and $157 million in 2014, respectively. Owing particularly to headwinds in the Chinese market, ITA believes that sales in machine tools to Mexico will continue to be the largest export market for U.S. machine tools through 2017.

In 2015, Mexico dropped to the second largest U.S. export market for plastics and rubber working equipment. Mexico's automotive industry and its strong food and beverage sectors are major drivers of demand for plastic and rubber products. In 2015, U.S. producers sold $222 million of equipment to Mexico, down from $245 million in 2014. Annual growth in this subsector has been slower than other product categories, averaging 3.8 percent growth annually (CAGR) between 2009 and 2015. Machinery sales continue to outperform sales of parts, which made up roughly 40 percent of exports in this subsector. Thermoplastic extruders experienced strong double digit annual growth between 2009 and 2015, while injection molding machines experienced a steep decline in sales between 2014 and 2015. Despite setbacks in 2015, ITA believes sales in this subsector will continue to grow through 2017 at a moderate pace.

Mexico was the second largest destination for U.S. welding and soldering equipment in 2015, accounting for $256 million in exports. This was up roughly 27 percent from $201 million in 2014 as a result of the general metalworking slowdown in that year. ITA expects sales of U.S. welding and soldering equipment to improve through 2017.

Despite advances in manufacturing capacity, Mexico remains an undeveloped market for additive manufacturing equipment. The 3D printing industry was virtually nonexistent in Mexico until 2013, when it was widely reported that the first 3D printing shop opened in the country.[iii] The market for systems remains undeveloped largely due to low labor costs and a shortage of skilled workers. However, given the success felt by larger multinational companies like Ford or GE who have incorporated additive manufacturing into their U.S. supply chains, it is likely that Mexican subsidiaries will soon follow suit and could provide opportunities for U.S. additive manufacturing companies.

Challenges and Barriers

Mexico is a NAFTA signatory and has eliminated all tariffs on U.S. manufacturing machinery products. U.S. companies should provide a Certificate of Origin to claim preferential tariff treatment for exports under the NAFTA.

The United States and Mexico continue to engage regularly on technical barriers to trade through the

NAFTA Committee on Standards Related Measures. In the past they have also cooperated through the U.S.-Mexico High Level Regulatory Cooperation Council,[iv] as well as the USAID-ANSI Standards Alliance.[v] Mexico provides official standards called *Norma Official Mexicana* (NOMs) as well as voluntary standards (NMX) through the Mexican Standards Catalog.[vi] The U.S. Department of Commerce maintains one of four Standards Attachés worldwide in Mexico City, and most U.S.-domiciled standards developing organizations (SDOs) are engaged with Mexican counterparts.

Know Your Buyer

Due to its close physical and cultural proximity to the United States, the Mexican market is quite similar to the U.S. market in many respects. Direct sales and sales agents are widely used by manufacturing machinery companies due to close proximity and low shipping costs. Owing to the country's geographic size, it may behoove exporters to work with distributors in multiple hub cities like Mexico City, Guadalajara, or Monterrey, as well as population centers along the 1,900-mile stretch of border with the United States.

Government procurement is decentralized, and Mexican government agencies buy through their own purchasing offices. As a result, government tenders vary between agencies. Public tenders are published in the *Diario Oficial* and are published through an online system.[vii]

National and Regional Trade Shows

Expo Manufactura 2016
February 2-4, 2016 – Monterrey, Mexico
http://www.expomanufactura.com.mx/

Plastimagen Mexico 2016
March 8-11, 2016 – Ciudad de Mexico
http://www.plastimagen.com.mx/en/

[MC]^2 Conference
April 19-21, 2016 – Dallas, TX
http://mc2conference.com/

Fabtech Mexico
May 4-6, 2016 – Mexico City, Mexico
http://mexico.fabtechexpo.com/

Rapid 2016 (Additive Manufacturing)
May 16-20, 2016 – Orlando, FL
http://www.rapid3devent.com/

IMTS 2016
September 12-17, 2016 – Chicago, IL
http://www.imts.com/

Fabtech 2016
November 16-18, 2016 – Las Vegas, NV
http://www.fabtechexpo.com/fabtech-2016/

TECMA
March 7-10, 2017 — Expo Bancomer, Santa Fé, Mexico City, Mexico
http://www.tecma.org.mx/

Promat 2017
April 3-6, 2017 – Chicago, IL
http://www.promatshow.com/

FEIMAFE
June 5 - 10, 2017 — Anhembi, São Paulo, Brazil
http://www.feimafe.com.br/en/

SPI National Plastics Expo
May 7-11, 2018 – Orlando, FL
http://www.npe.org/

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[i] Stratfor "Mexico's Manufacturing Sector Continues to Grow" *Forbes.com,* 8 April, 2015. http://www.forbes.com/sites/stratfor/2015/04/08/mexicos-manufacturing-sector-continues-to-grow/

[ii] http://www.somosindustria.com/articulo/se-pronostica-crecimiento-de-596-en-la-industria-automotriz-mexicana/

[iii] JelmerLuimstra "Mexico Has its First 3D Printing Shop" *3DPrinting.com,* 30 November 2013. http://3dprinting.com/news/mexico-first-3d-printing-shop/

[iv] http://trade.gov/hlrcc/

[v] http://standardsalliance.ansi.org/

[vi] http://www.economia.gob.mx/standards/mexican-standards-catalog

[vii] https://compranet.funcionpublica.gob.mx/web/login.html