



2016 Top Markets Report **Manufacturing Technology** Sector Snapshot

Metal-Forming Machine Tools

Metal-forming machine tools are used to manipulate metal workpieces without adding or removing material. There are many processes for forming metal, including bending, pressing, stamping, extrusion and more. Some of the most common metal-forming machine tools are the stamp variety, which uses a production die and downward hydraulic force to stamp pieces of cold sheet metal into different shapes and parts. Other processes may require the workpiece to be heated in a forge before undergoing pressing or hammering, depending on the application or desired properties of the part. Forged steel parts are often very strong, highly resistant to heat stressors, and are often used as load-bearing, structural components of automobile chassis, aircraft, heavy construction equipment and more.

Metal-forming machines are sold based on a variety of needs such as size, speed, accuracy, tonnage, and more. Machines can be stand-alone or more often integrated into systems that occupy entire factory floors. While forming machines can be highly specialized, the basic technology has existed for many years and is more accessible to lower-end manufacturers.

Export Outlook

In 2015, U.S. exports of metal-forming machine tools accounted for \$745.8 million. Mexico was the largest export market for U.S. companies, accounting for \$215.2 million in sales, followed by China at \$114.1

million, and Canada at \$61.9 million. From a regional basis, sales were primarily concentrated in the North American and Asian regions, with Europe accounting for a relatively low 17 percent of total exports. Of note is the relatively high amount of sales made in the Middle East region, which received more forming tools than any other subsector. Within this subsector, Saudi Arabia was the 10th largest export market for U.S. forming machine tools, followed by 20th ranked United Arab Emirates and 35th ranked Iraq. Given recent declines in export volume, ITA expects sales of metal-forming machines to decline slightly through 2017.

For U.S. exporters of metal-forming machine tools, more so than other subsectors, opportunities exist in established trade partners like China and Mexico, as well as some of the lesser developed markets. In the Asia-Pacific region, sales to countries like Thailand and the Philippines will likely continue to grow on the strength of the local automotive industry. Over half of all global exports of metal-forming machine tools originate from Europe, and therefore U.S. exporters may face stiff competition in that region.

Challenges

According to latest available U.N. trade data, global trade for metal-forming machine tools has declined nearly 15 percent since 2012, which has largely been a result of a general global slowdown in metalworking consumption. U.S. exports, meanwhile, have declined at a similar rate over the same period, indicating headwinds for the industry at large.

**Figure 1: U.S. Forming Machine Tool Exports by Subsector, 2015
(in USD Millions)**

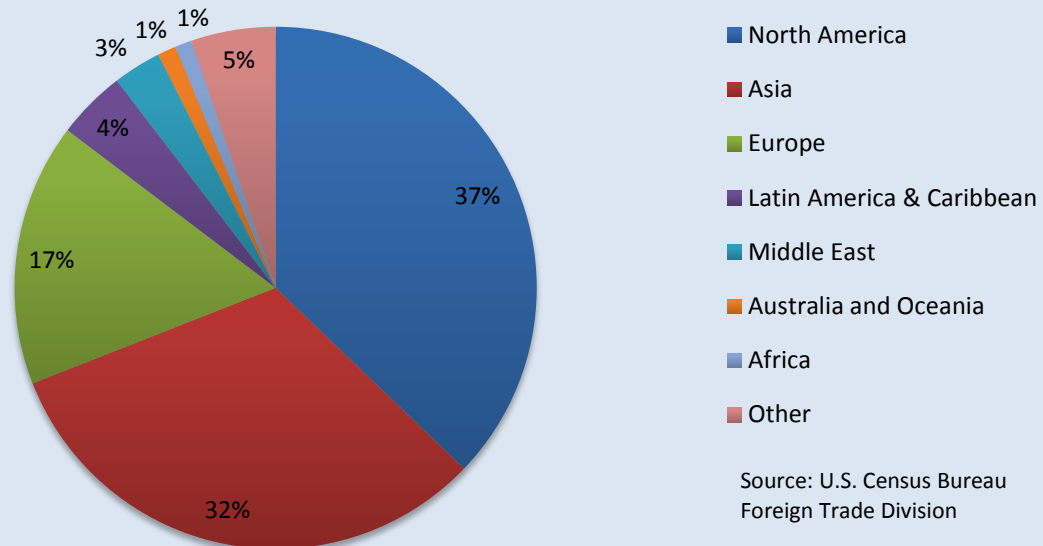


Figure 2: Top Ten U.S. Forming Machine Tool Export Partners, 2015

