

Manufacturing in the US Economy — and Our Place in It

Manufacturing is essential to our economy and Precision Machining is just as essential to manufacturing.

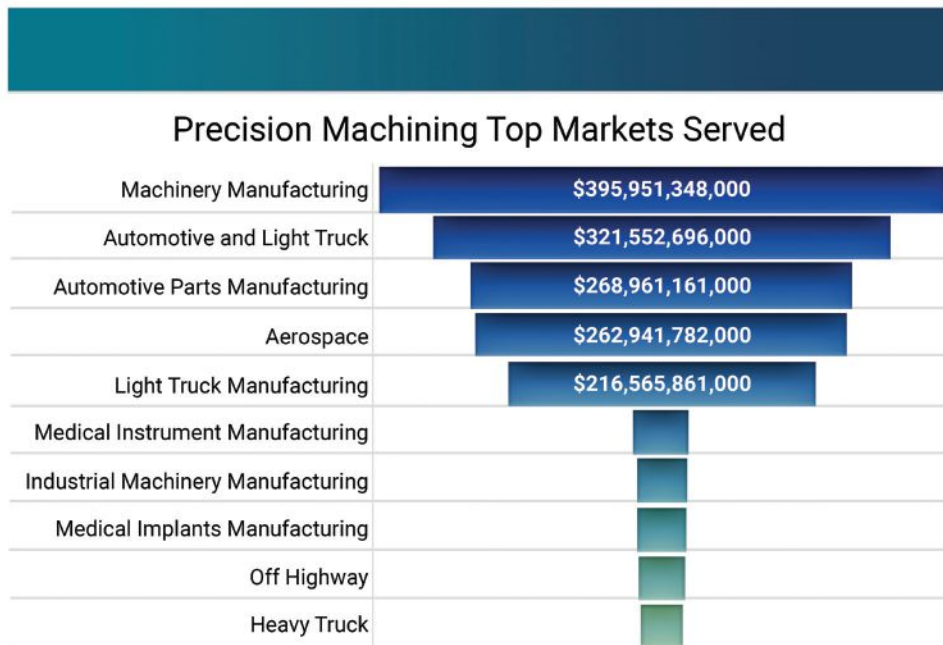


Manufacturing is the fourth largest segment of the U.S. economy. Counted by itself, manufacturing in the U.S. would be the eighth largest economy in the world. Manufacturing created 11% of value added to the U.S. GDP in 2021. In 2020, U.S. manufacturing output was \$2,345 billion. Manufacturing directly accounts for 8.6% of the U.S. workforce (about 12.2 million people), 60% of U.S. exports, 55% of patents and 70% of research and development (R&D) spending, according to the National Association of Manufacturers (NAM) and a McKinsey & Company analysis of U.S. Bureau of Economic Analysis (BEA) and U.S. Bureau of Labor Statistics.

However, manufacturing relies on inputs from other sectors in the U.S. and global economies: energy from fuels and utilities; materials from mines and mills; machines, tools and equipment for production; packaging and freight services for our raw materials and final products; accounting; and other services. All of these are important inputs to manufacturing success. Purchases of these inputs by manufacturers lead to an enhanced final demand in the broad economy. This is called the economic multiplier and the U.S. B.E.A. calculates that one dollar's worth of final demand in manufacturing results in an additional \$2.68 of total impact to the overall economy. Manufacturing investment leads growth.

In the U.S. Midwest, we tend to think that manufacturing is just another word for metalworking. In fact, chemicals, computer and electronic products, and food, beverage and

tobacco products are the top three manufacturing sectors by dollar output. Aerospace and other transportation equipment, motor vehicles and parts, and machinery are segments that we serve — and these all have greater sales than our sector.



Fabricated metals, classified as NAICS 332000, is the name of the industry in which our precision machining/contract manufacturing shops are classified. It is the seventh largest sector in manufacturing — in 2019, fabricated metals products output was \$161.2 billion.

Precision machined products (our industry segment) is classified as NAICS 332721. In 2018, which is the latest data available from the U.S. Census, our industry sales were \$20.8 billion, or almost one-eighth of the output of the fabricated metals industry. Our top 10 largest markets served, according to 2018 U.S. Census data, are shown above.

Manufacturing is *important*. It is the fourth largest segment of the U.S. economy. Arguably, nothing in our economy would function without the critical technologies that our precision machined components enable — machinery, mobility, aerospace and medical. I am fond of quoting Lothar Horn, CEO at PMPA technical member company Horn USA, who stated, “No car runs, no aircraft flies and no hip replacement is fitted by a doctor without precision tools having previously been in use.”

Precision tools are skillfully employed by precision machinists at precision machining contract manufacturing shops like yours. What you make matters. Your decisions on part quality and acceptance make a difference. A difference that matters. We make parts for “can’t fail” applications. Applications where critical human safety is the expected outcome — and one that we take for granted every day.

Our production may be just one-eighth of the seventh largest manufacturing industry, which is itself the fourth largest sector of the U.S. economy. But, every day, people live well because we are the hands of the physician, the enablers of mobility and transportation, and the suppliers of essential and critical infrastructure to keep our economy

thriving. Economics may be a dismal science, but this peek into the economy of manufacturing makes me proud of our performers, their talent and their accomplishments. Precision machinists — we make the things that make a difference. About \$20 billion worth each year! [P](#)

Links

- **NAM**
bit.ly/PMPA-PM1222a
bit.ly/PMPA-PM1222b
- **McKinsey & Company**
mck.co/3DeVk1X
- **Statistica**
bit.ly/PMPA-PM1222c
- **U.S. Census**
bit.ly/PMPA-PM1222d

Miles Free III is the PMPA Director of Industry Affairs with over 50 years of experience in the areas of manufacturing, quality and steelmaking. Miles’ podcast is at pmpa.org/podcast
Email: mfree@pmpa.org — Website: pmpa.org

PMPA
PRECISION MACHINED PRODUCTS ASSOCIATION

Speaking of Precision
Weekly podcasts discussing hot topics, technical, regulatory, safety, business issues and more!

Speaking of Suppliers
Biweekly podcasts where PMPA suppliers share how they can benefit a precision machining shop!

Podcasts are available on major platforms or PMPA.org.

Speaking of Precision
Monday with Miles
Workmanship
Speaking of Precision: Monday With Miles

SPEAKING OF SUPPLIERS
Interview with Dusty Alexander of GIC
Speaking of Suppliers Podcast