



MACHINE SHOP SERVICES IN THE US

Wheels turning: Innovation and a return to manufacturing will likely drive industry rebound
Sean Egan, January 2022

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ABOUT SUNBELT TEXAS

Sunbelt Texas Business Brokers, purchased in 1996 by Dan Elliott, has expanded from 1 broker to 12 business broker experts in Houston. Our brokers are a talented mix of industry professionals, business owners, real estate experts and community leaders. We have over two decades of business sales history and a great deal of experience working with all types of buyers – from strategics to private equity, and family offices to high net worth individuals.

Sunbelt Texas Business Brokers is the world's largest business broker specializing in the confidential sale of privately held businesses in Texas. We have sold over 600 businesses in the local Houston area alone, creating numerous jobs, helping business owners successfully retire, and giving new buyers the opportunity to achieve their entrepreneurial dreams.

We take pride in providing quality services to all buyers and sellers. This ensures that both the buyers and sellers will be left fully satisfied with the transaction whenever Sunbelt Business Brokers is involved. We've worked with all types and sizes of businesses, in a variety of industries and we walk our clients through the steps of how to buy a business.



ABOUT THIS INDUSTRY

INDUSTRY DEFINITION

The Machine Shop Services industry cuts raw materials into specified shapes and sizes using a variety of tools such as lathes, milling machines, grinders and drill presses. Almost all forms of metal product fabrication involve machining, and industry operators may also machine plastic and composite materials.

MAJOR PLAYERS

There are no major players in this industry.

MAIN ACTIVITIES

The primary activities of this industry are:

- Turning services to produce cylindrical components
- Drilling and boring services
- Manual and computer numerical control (CNC) milling services
- Sawing services
- Broaching services to enlarge existing holes
- Fastening services using automatic screw machines
- Grinding and planning services

The major products and services in this industry are:

- Machine centers
- Turning centers and lathes
- Grinding
- EDM and ECM
- Drills
- Other



EXECUTIVE SUMMARY

WHEELS TURNING: INNOVATION AND A RETURN TO MANUFACTURING WILL LIKELY DRIVE INDUSTRY REBOUND

The Machine Shop Services industry has declined after a volatile period over the five years to 2021. Revenue is expected to rise at an annualized rate of 0.8% to an estimated \$40.8 billion during the five-year period. Although nearly all of this industry's downstream markets expanded in the years prior to 2020 and were operating with improved market conditions, falling metals prices and the COVID-19 (coronavirus) pandemic adversely affected industry revenue in 2020. Further, the pandemic caused the price of steel to decrease 9.6% in 2020, spurring industry revenue to drop 4.1% in 2020 alone, tempering prior gains. Meanwhile, downstream industries have conducted layoffs to cut costs, reducing demand for this industry. However, the industrial production index and price of steel in particular are expected to rally in 2021 as the economy reopened and social distancing protocols loosened. Renewed investment and military spending, however, are also expected to support a solid recovery, with revenue anticipated to rise 5.1% in 2021.

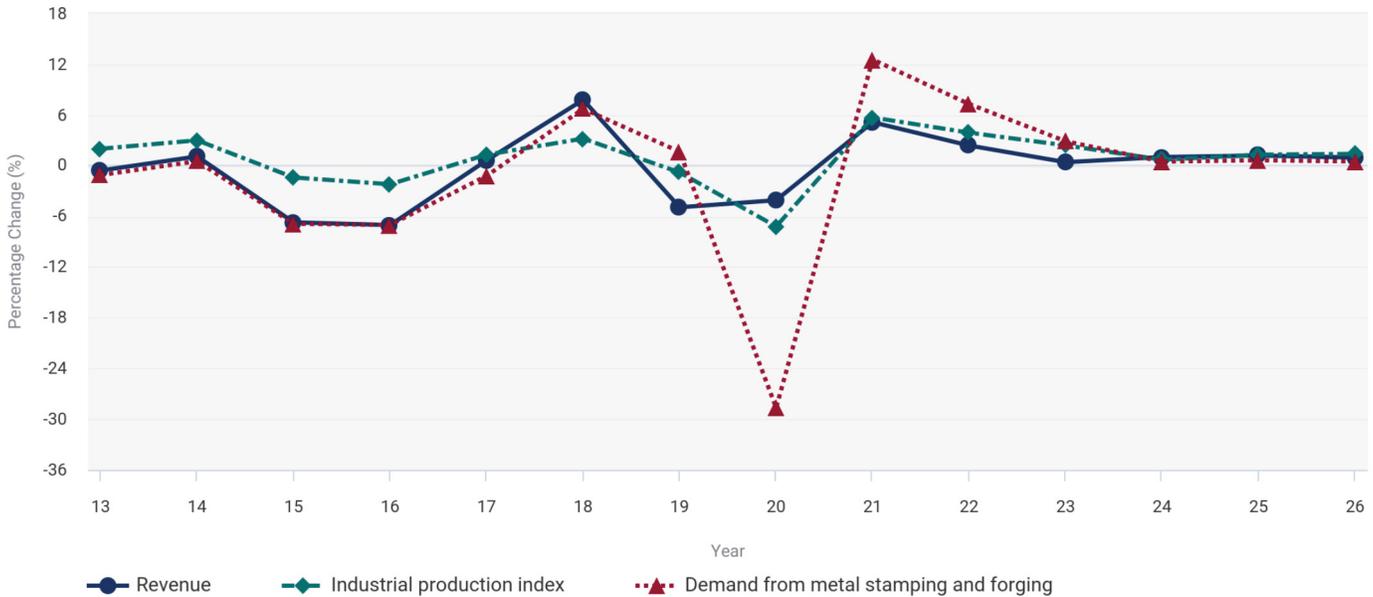
Technological advancement in machining is largely driven by the defense and aerospace markets. These markets require parts that are as lightweight as possible, made to exceptionally tight tolerances and shaped into complex geometries. Industry operators serving these markets have increased their investment in computer numerical control machines that increase automation and precision, leading to a significant rise in the industry's capital costs over the past five years. As a result of rising costs during the period, industry profit is estimated to decrease.

Over the five years to 2026, operators will devote further resources to satisfy projected growing demand from manufacturers in markets such as automobile manufacturing, commercial aircraft manufacturing and metal forging. Demand from medical device manufacturers is also expected to increase due to a progressively aging US population with a growing need for medical care. This trend will heighten the need for micromachined products. Additionally, the effects of the coronavirus pandemic are expected to die down early during the period, rebooting the economy and increasing demand from important downstream industries for industry services. As a result, revenue is forecast to grow at an annualized rate of 1.2% to \$43.3 billion over the five years to 2026.



INDUSTRY PERFORMANCE

Key External Drivers 2013–2026



KEY EXTERNAL DRIVERS

Industrial production index

The industrial production index measures the output from the mining, manufacturing, electric and gas industries. When this index increases, demand for the industry’s machine shop services increases. The industrial production index is expected to rise in 2021.

Demand from metal stamping and forging

Production from the forging, platework, hand tools, and ornamental and fabricated metals industries is a key source of demand for machine shops. Increased metal stamping and forging raises demand for machining services because forged and stamped products are often machined. In addition, machinists create the molds used to forge metals. Demand from metal stamping and forging is expected to rise in 2021.

Demand from car and automobile manufacturing

Machine shops that specialize in the automotive sector generally provide machining for steel and aluminum transmission parts, engine blocks and other car components. Demand from car and automobile manufacturing is expected to increase in 2021, representing a potential opportunity for the industry.



INDUSTRY PERFORMANCE

Price of steel

Machine shops have high steel purchasing costs. As the price of steel rises, machine shops can only pass on some of the cost increases to their customers. As a result, industry operators' profit decrease as steel prices rise. In contrast, declining steel prices tend to raise profit. The price of steel is expected to increase significantly in 2021, posing a potential threat to the industry.

Aggregate private investment

Aggregate private investment, or private fixed investment, includes spending by individuals and businesses on physical structures, equipment and software. As aggregate private investment increases, so too does demand for industry services, and thus revenue. In 2021, aggregate private investment is expected to rise.

Prime rate

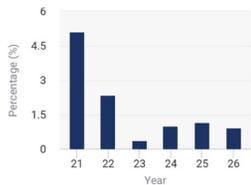
The prime rate refers to the interest rate charged by banks to their most creditworthy and largest corporate customers. A higher prime rate will make it more expensive for companies to fund expansionary activities.



INDUSTRY OUTLOOK

OUTLOOK

Industry Outlook
2021-2026



Over the five years to 2026, the Machine Shop Services industry, which provides machining services to metal machinery operators on a job or order basis, is forecast to grow at an annualized rate of 1.2% to \$43.3 billion.

Once the COVID-19 (coronavirus) pandemic subsides further, the economy is expected to normalize during the outlook period and drive industry growth.

The bulk of industry revenue is derived from downstream manufacturers that use machined parts as intermediate goods or capital.

Heavy machinery manufacturers are a significant source of demand for industry products, and machined goods are found in earthmoving equipment, material-handling equipment and specialized turbines. Heavy machinery manufacturers serve the construction, wholesale, agriculture and energy sectors, which are expected to grow over the next five years as the economy rebounds from the pandemic. As a result, industry demand from heavy machinery manufacturers is expected to increase over the five years to 2026.

Demand from car and automobile manufacturers, which require many machined parts, is also expected to rebound during the five-year period as the economy rebounds and manufacturing operations resume once social distancing protocols are no longer needed.

Machined parts are also critical components of commercial jets due to the weight savings and complex geometries that can be achieved with modern CNC mills. The airline market generates an estimated 8.1% of industry revenue, and the industry will benefit from steady anticipated growth in demand from aircraft engine and parts manufacturing over the next five years.

Demand from medical device manufacturers will significantly increase over the next five years as the US population continues to age and technology further improves, expanding the effectiveness and range of applications for machined medical products.

Demand for spinal implants, stents for clogged arteries and endoscope components will grow in line with the population's average age.

Despite increasing import competition, demand from medical device manufacturers, which currently generates 5.4% of industry revenue, is forecast to grow during the

MANUFACTURING GROWTH TO DRIVE REVENUE

TECH ADVANCEMENT DRIVES DEMAND



INDUSTRY OUTLOOK

outlook period. Spending from this segment will continue to rise due to micromachining technology improvements. Industry operators are expected to invest further in five- and seven-axis machines that bring more automation and tighter tolerances to implant and device manufacturing.

Satellite parts manufacturing will also increase as a share of industry revenue because the market for machined satellite parts is expected to continue growing. The National Defense Authorization Act of 2013 declassified all space-related hardware as weaponry, thereby lifting restrictions on exports of satellite components. Machine Shop Services industry operators have already made gains from their newly expanded export market and will likely continue to do so over the five years to 2026.

In addition, indicators of domestic satellite demand will grow significantly over the next five years. Demand from satellite television providers, satellite telecommunications providers and radar and satellite operations are all expected to increase over the next five years. Increased spending by the military will further contribute to the industry, even as the status of the US military in Afghanistan and other parts of the Middle East remain unclear.



INDUSTRY OUTLOOK

PROFIT AND Sunbelt Texas expects profit to rebound once the economy rebounds.

EMPLOYMENT GROWTH

And as downstream demand increases, industry operators will be able to maintain consistent profit. Moving forward, industry operators will be better able to satisfy growth in demand for their products with investments in machinery and automation. As a result, over the five years to 2026, industry employment is expected to increase at an annualized rate of 0.8% to 248,498 workers due to expected increases in military spending and the industrial production index. Meanwhile, despite improving revenue and high profit, industry participation will be constrained by steady competition and a modest anticipated increase in purchasing costs. As a result, the number of machine shop services companies is forecast to increase only marginally at an annualized rate of 0.2% to 17,636 companies during the five-year period.

Performance Outlook Data

Year	Revenue (\$m)	IVA (\$m)	Establishments (Units)	Enterprises (Units)	Employment (Units)	Exports (\$m)	Imports (\$m)	Wages (\$m)	Domestic Demand (\$m)	Industrial production index (units)
2021	40,766	15,303	17,958	17,487	238,637	N/A	N/A	12,466	N/A	365
2022	41,736	15,768	18,053	17,555	242,026	N/A	N/A	12,667	N/A	261
2023	41,910	15,904	18,022	17,514	242,347	N/A	N/A	12,691	N/A	231
2024	42,338	16,068	18,040	17,518	244,098	N/A	N/A	12,790	N/A	224
2025	42,849	16,226	18,123	17,586	246,567	N/A	N/A	12,925	N/A	229
2026	43,263	16,353	18,185	17,636	248,498	N/A	N/A	13,031	N/A	237
2027	43,673	16,480	18,275	17,716	250,473	N/A	N/A	13,138	N/A	242



COMPETITIVE LANDSCAPE

MARKET SHARE

CONCENTRATION

Concentration in this industry is LOW

The Machine Shop Services industry has low market share concentration, with its three largest companies holding less than 1.0% of the market combined. Market share concentration has remained virtually unchanged over the five years to 2021. The industry is highly fragmented. The vast majority of enterprises are standalone operations with small workforces. These dynamics result from the industry's relatively low barriers to entry. The diversity of services provided and the geographic dispersion of demand have resulted in an array of independent operators competing within the industry. However, independent machine shops have been decreasing as a percentage of total establishments. Former customers are acquiring more machine shops. The frequency of this activity has increased as downstream industries have grown in strength and opted to integrate vertically. The objective of this trend is to cut costs by controlling the different processes and inputs in manufacturing. In addition, certain industry segments have higher market share concentrations than the overall industry because they are more likely to benefit from economies of scale or have higher barriers to entry. For example, there is a higher level of concentration among companies that serve the automotive and aerospace sectors. Considered the pioneers of machining, aerospace machine shops use the most advanced technology to produce ultra-light products with sophisticated geometries. The high level of technical expertise and capital investment in this industry segment restricts participation to a greater degree than other segments. However, the higher market share concentration among machine shops serving aerospace and automotive markets is not sufficient to offset the overall low market share concentration of the industry.

Sunbelt Texas identifies 250 **Key Success Factors** for a business. The most important for this industry are continued on the following page:



COMPETITIVE LANDSCAPE

KEY SUCCESS FACTORS

Ability to quickly adopt new technology:

Industry operators enhance automation and improve product quality by investing in increasingly advanced computer numeric control (CNC) technology.

Effective quality control:

Products that are defective cause a one-time loss of labor costs and machine time and the possible loss of repeat business.

Access to multiskilled and flexible workforce:

The growing sophistication of the industry's technology requires an increasingly skilled workforce. Their skills and knowledge are needed to tailor and configure processes to suit customer requirements.

Ability to vary services to suit different needs:

Industry operators are contracted to manufacture products that meet customer specifications. Also, industry operators must be able to use their CNC machines to serve multiple markets to have a diversified customer base.

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