

TEXAS

CHEMICAL PRODUCT MANUFACTURING

This manufacturing subsector creates products essential to our daily needs, such as household cleaning products, beauty products, pharmaceuticals and diagnostic substances, agricultural fertilizers, dyes and paints, adhesives, plastics and much more. As this subsector is tied to many end-use consumer products, its health is highly dependent on global economic growth and an economically stable middle class.



Sources: U.S. Bureau of Economic Analysis, Regional Economic Models, Inc., Emsi, U.S. Department of Commerce International Trade Administration

CHEMICAL PRODUCT MANUFACTURING: BIG IN TEXAS

The basic chemical manufacturing industry — such as petrochemicals, industrial gas and ethyl alcohol — is highly concentrated in Texas. Its share of total employment is 2.87 times greater in Texas than in the U.S. In 2016, 67 percent of all U.S. petrochemical production jobs were in Texas. Such levels of employment concentration can indicate a regional “industry cluster.”

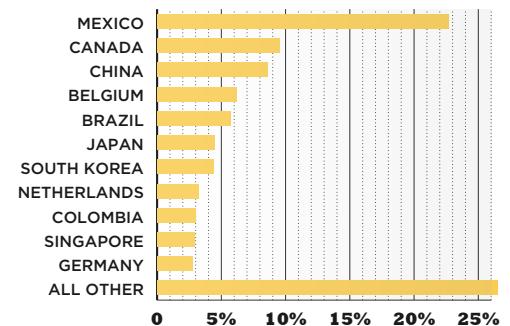
	DIRECT JOBS 2016	JOB CHANGE 2010-2016	AVERAGE TEXAS SALARIES 2016	LOCATION QUOTIENT 2016
SUBSECTOR TOTALS	78,845	12%	\$108,397	1.17
BASIC CHEMICALS	35,376	14%	\$123,588	2.87
RESIN, SYNTHETIC RUBBER AND ARTIFICIAL SYNTHETIC FIBERS AND FILAMENTS	10,242	22%	\$119,391	1.32
PESTICIDE, FERTILIZER AND OTHER AGRICULTURAL CHEMICALS	2,872	-4%	\$85,120	0.97
PHARMACEUTICALS AND MEDICINE	11,502	20%	\$103,186	0.49
PAINT, COATING AND ADHESIVES	5,765	8%	\$77,775	1.13
SOAP, CLEANING COMPOUNDS AND TOILET PREPARATION	4,272	-15%	\$67,282	0.49
OTHER CHEMICAL PRODUCTS AND PREPARATION	8,817	11%	\$89,002	1.31

*Location quotient compares an industry's share of jobs in a specific region with its share of nationwide employment. Source: Emsi

IN TEXAS, THIS SUBSECTOR'S INFLATION-ADJUSTED GDP ROSE BY 60 PERCENT BETWEEN 1997 AND 2015, COMPARED TO U.S. GROWTH OF 20 PERCENT.

Source: U.S. Bureau of Economic Analysis

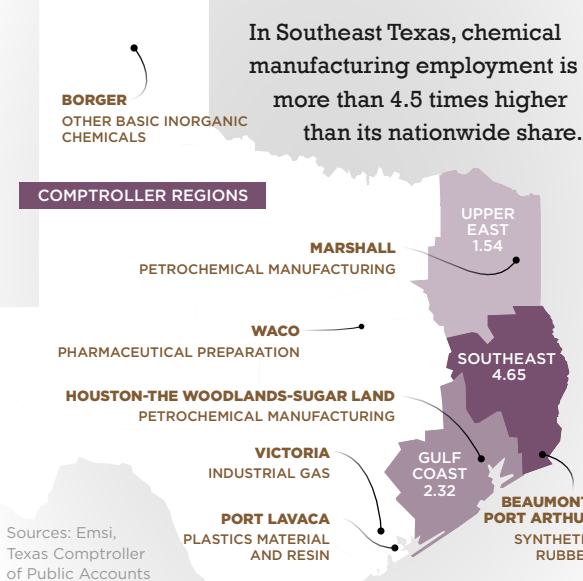
SUBSECTOR EXPORTS FROM TEXAS



Texas exported \$36.6 billion in chemical products in 2016, making this subsector the state's second-largest export market behind computer and electronic parts.

Source: U.S. Department of Commerce International Trade Administration

REGIONAL SUBSECTOR LQs AND AREAS OF INDUSTRY SPECIALIZATION BY METRO AREA



CONCLUSION

Chemical product manufacturing contributes \$55.5 billion to Texas' GDP, the greatest amount of any manufacturing subsector. Industries in chemical manufacturing have experienced increased production, profits and employment in recent years, fueled by lower costs of natural gas, the main feedstock of Texas chemical plants. Chemical manufacturing employment has remained stable since early 2015, alleviating the effects of job losses in other manufacturing subsectors caused by declining crude oil prices.

To see more in-depth Texas manufacturing data, visit:

comptroller.texas.gov/economy/economic-data/manufacturing/

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TEXAS MANUFACTURING

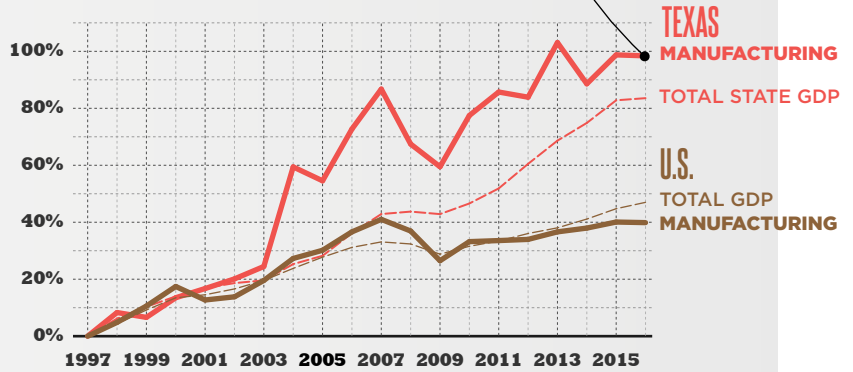
Texas has an extraordinary manufacturing economy. The state's resources make it a natural leader in petroleum and chemical manufacturing; its research institutions have fostered computer-related and other high-tech manufacturing; and a business-friendly environment and skilled labor have helped create a burgeoning automotive manufacturing sector.

IN ALL, MANUFACTURING CONTRIBUTED \$226 BILLION TO TEXAS' GROSS DOMESTIC PRODUCT (GDP) in 2016, an amount larger than the entire economy of Portugal.



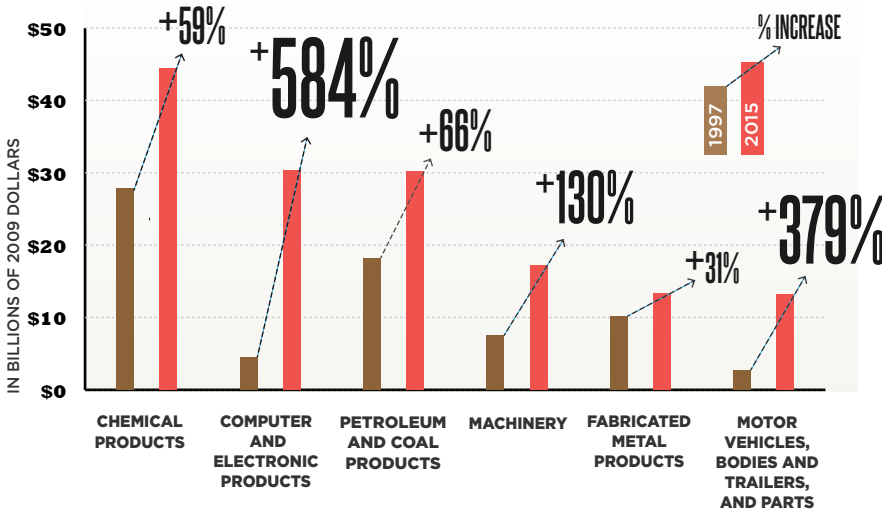
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PERCENT CHANGE IN REAL GROSS DOMESTIC PRODUCT / 1997-2016



Sources: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics

LARGEST MANUFACTURING SUBSECTORS IN TEXAS BY GDP: GROWTH FROM 1997 TO 2015



Sources: U.S. Bureau of Economic Analysis, Texas Comptroller of Public Accounts

TEXAS MANUFACTURING OUTPUT HAS OUTPACED THE TOTAL TEXAS ECONOMY.

TEXAS MANUFACTURING ACCOUNTED FOR 10.4 PERCENT OF U.S. MANUFACTURING GDP IN 2016.

From 1997 through 2016, growth in Texas manufacturers' economic output more than doubled U.S. manufacturing gains of 40 percent.

BETWEEN 1997 AND 2016, MANUFACTURING REAL GDP INCREASED 98 PERCENT, COMPARED WITH AN 84 PERCENT GAIN ACROSS ALL TEXAS INDUSTRIES.

Sources: U.S. Bureau of Economic Analysis, Texas Comptroller of Public Accounts

3,000,000
DIRECT & INDIRECT EMPLOYMENT

\$225.8 Billion
TEXAS MANUFACTURING GDP

\$73,738
AVERAGE ANNUAL WAGE

\$210.3 Billion
EXPORTS

While Texas' manufacturing employment has diminished as a result of automation, technological advances and other factors, its economic output has increased. From 1997 through 2016, Texas' manufacturing job count fell by 19 percent, but its real GDP rose by 98 percent. Texas has **858,000 DIRECT MANUFACTURING JOBS**, as well as another **2.2 MILLION JOBS** indirectly created or supported by manufacturers. In 2016, average annual Texas wages in manufacturing approached **\$74,000**, much higher than the statewide average of \$54,000.

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comptroller.texas.gov/economy/economic-data/manufacturing/

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