DRAFT 2-27

AVERAGE LOCATION

2016

QUOTIENT

2016*

TEXAS SALARIES

TEXAS MACHINERY MANUFACTURING

This subsector manufactures the heavy machinery and equipment used in agricultural, industrial, construction and mining activities, as well as general-purpose machinery such as heating and cooling units, engines and transmissions. It includes several "advanced industries" that invest heavily in research and development and employ an outsized share of scientific and technical workers.

STATE SUBSECTOR GDF

Emsi, U.S. Department of Commerce International Trade Administration

JOB

CHANGE

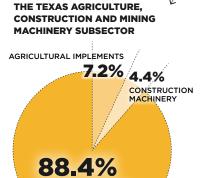
2016 2010-2016

INDUSTRIES IN MACHINERY MANUFACTURING SUBSECTOR

SHARE OF JOBS WITHIN

Agricultural, construction and mining machinery manufacturers provide about half of this subsector's

total jobs. Almost 90 percent of these industries' jobs are in mining (oil and gas) machinery. Texas accounts for about 60 percent of all U.S. jobs in mining machinery manufacturing.



MINING (OIL AND GAS)

MACHINERY

SUBSECTOR TOTALS	88,048	3%	\$83,274	0.99
AGRICULTURE, CONSTRUCTION AND MINING MACHINERY	43,494	-5%	\$99,438	2.54
INDUSTRIAL MACHINERY	6,370	15%	\$85,779	0.69
COMMERCIAL AND SERVICE INDUSTRY MACHINERY	2,413	-2%	\$69,013	0.32
VENTILATION, HEATING, AIR-CONDITIONING AND COMMERCIAL REFRIGERATION EQUIPMENT	10,722	3%	\$60,148	1.00
METALWORKING MACHINERY	5,061	41%	\$53,945	0.34
ENGINE, TURBINE AND POWER TRANSMISSION EQUIPMENT	4,585	11%	\$65,746	0.57
OTHER GENERAL-PURPOSE MACHINERY	15,403	15%	\$69,778	0.72

DIRECT

JOBS

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

Source: Emsi

Texas Comptroller of Public Accounts

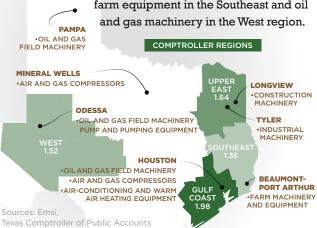
IN 2016, THIS SUBSECTOR PROVIDED 42,500 DIRECT JOBS IN THE HOUSTON METROPOLITAN AREA ALMOST HALF THE STATE TOTAL.

Source: Emsi. Texas Comptroller of Public Accounts

REGIONAL SUBSECTOR LQS AND AREAS OF INDUSTRY SPECIALIZATION BY METRO AREA

This subsector is prevalent in areas outside the Houston metro area, including construction and industrial machinery manufacturing in the Upper East region,

farm equipment in the Southeast and oil



CONCLUSION

Manufacturing continues to drive output and productivity in the Texas economy, creating jobs paying well above the statewide average. It also contributes significantly to job creation in other industries, particularly in design operations and services.

The machinery manufacturing subsector's contribution to Texas GDP rose by 123 percent from 1997 through 2015, compared to a 4 percent increase in the U.S. Its \$20.1 billion in exports from Texas accounted for about 9 percent of total state exports in 2016. The subsector lost 20,500 jobs from 2014 to 2016 — a 19 percent decline — coinciding with declining oil prices. It has recovered slightly in the past year, adding 8,800 jobs from December 2016 to December 2017, a 10.2 percent gain.

To see more in-depth Texas manufacturing data, visit: comptroller.texas.gov/economy/economic-data/manufacturing/