WE BUILD MOMENTUM

THE ECONOMIC IMPACT OF THE EQUIPMENT MANUFACTURING INDUSTRY

AEM
Association of Equipment Manufacturers

The Economic Impact of the Equipment Manufacturing Industry

Equipment manufacturers support twelve percent of all manufacturing jobs in the United States. By helping to build, power and feed the world, this equipment positively impacts the lives of every American, every day.

While a combine harvester cutting corn or an excavator digging a trench is a common sight for many Americans, they may not realize what that equipment means to the hard-working Americans who build it and the impact the equipment manufacturing industry has on communities across America. Whether it is the welder controlling a robotic welding machine or the software engineer designing the controls for a new wheel loader, there are millions of jobs and opportunities created by the equipment manufacturing industry.

On behalf of the Association of Equipment Manufacturers (AEM), the North American-based international trade group representing off-road equipment manufacturers and suppliers, we are pleased to share this report, with findings from IHS Markit that shows the significant contributions by our industry to the U.S. economy each year.

About This Report

The economic impact of the equipment manufacturing industry is felt across the United States.

The Association of Equipment Manufacturers commissioned IHS Markit, a global information provider, to complete a report that estimates the contribution of the agriculture, construction and mining equipment manufacturing industry to the U.S. economy.

The report relies upon a well-established approach grounded upon government data and augmented by AEM member data and IHS Markit proprietary industry analysis. The economic contribution of the industry is measured in terms of employment, output, value added (i.e., contribution to GDP), labor income and tax revenue. For each measure, the direct, indirect and induced contributions of the industry are calculated using a combination of the IHS Business Market Insights industry model, Regional economic model, Census metrics and factors derived from the IMPLAN model, an input-output model based on government data.

Direct Contribution

includes the equipment manufacturing industry's own activities, such as the GDP it generates and the number of people it directly employs each year.

Indirect Contribution

includes the activity and employment supported in the industry's broad supply chain, through its procurement of goods and services.

Induced Contribution

includes the wider economic benefits that arise when workers within the equipment manufacturing industry and its supply chain spendtheir earnings – for example, in local retail and leisure establishments.

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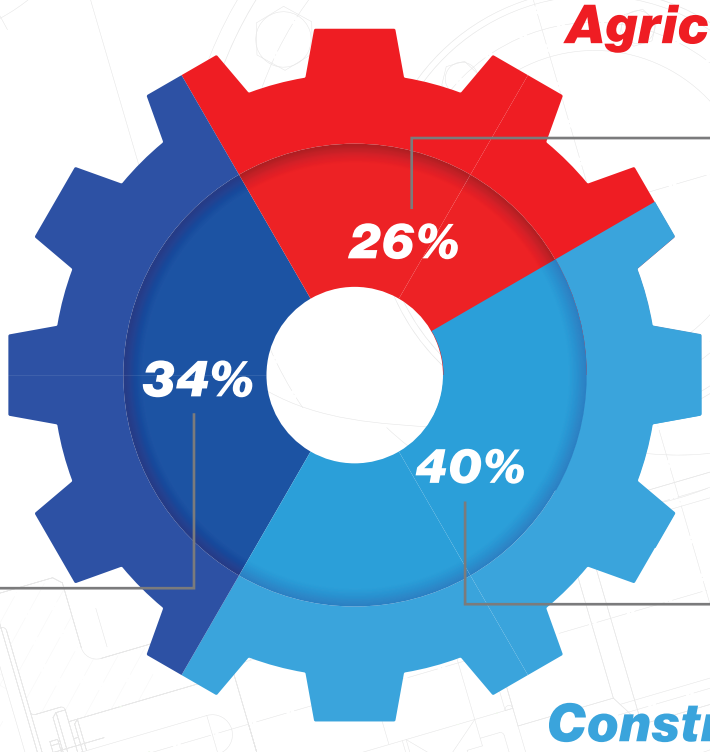
Industry Definition

This report defines the equipment manufacturing industry across three segments:



Factors that impact construction equipment manufacturers include infrastructure investment, home construction, commercial and industrial real estate construction, mine and well construction, and institutional spending.

CONSTRUCTION

Factors impacting mining and energy-related equipment manufacturers include oil and gas prices and production, mineral prices and production, new oil, gas and mineral exploration, export markets and exploration and emission regulations.

MINING

Factors that impact agricultural equipment manufacturers include commodity production and yields, farm incomes, ethanol production, exports, investment in new equipment and regulatory policy.

AGRICULTURE

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Making a Difference for the American Economy

2.8 million jobs across all 50 states

$791 billion generated in total output and sales activity each year

$288 billion contributed each year to GDP

12% of total manufacturing sector jobs are supported by equipment manufacturers

$70,000 is our industry's average annual pay for each employee

$53.7 billion paid each year in federal, state and local tax revenue

"I love my job because I know the work we do makes my community and our nation stronger."

Samantha

Welder

Oregon, IL

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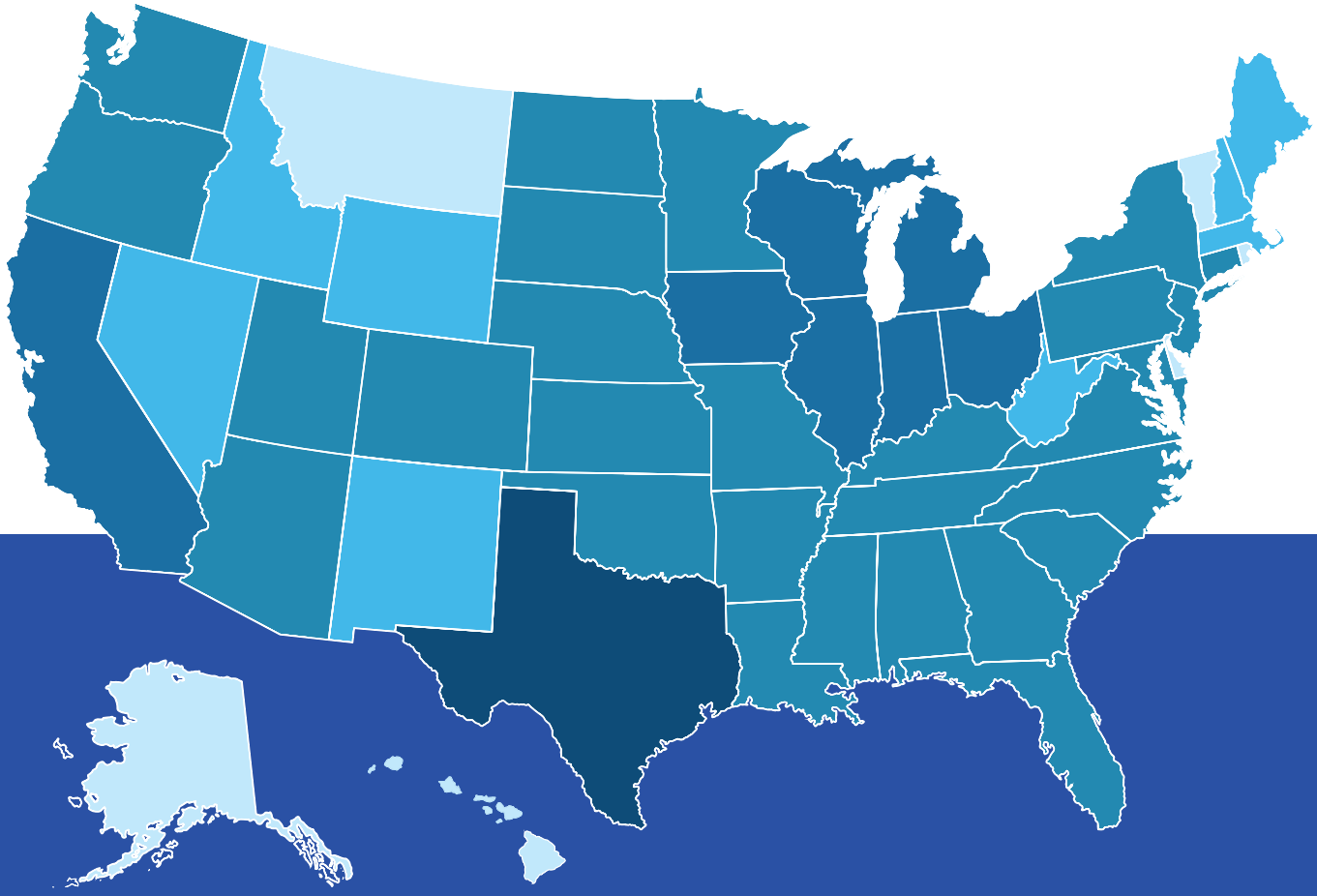
Meaningful Impact from Coast to Coast

The total economic contribution of the equipment manufacturing industry can be seen across the United States. In 44 states, the industry supports at least 1,000 jobs. Texas alone has over 622,000 jobs supported by the equipment manufacturing industry, Illinois has over 245,000 jobs and Wisconsin has over 187,000 jobs.

There are enough jobs supported by equipment manufacturers across the country to place over 6,430 jobs in every U.S. congressional district. There's a job supported by our industry in every district across the country.



Total jobs supported by equipment manufacturers

1 - 1,000 | 1,001 - 10,000 | 10,001 - 100,000 | 100,001 - 500,000 | More than 500,000

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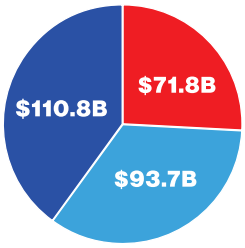
The Ripple Effects of Equipment Manufacturers

The combination of equipment manufacturers' direct, indirect and induced contribution to the U.S. economy each year creates a ripple effect across the country. This includes an economic impact made through total sales activity, total value added to our nation's GDP and the labor income paid to employees.

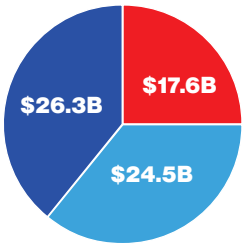
The ripple effect is illustrated below, organized by our industry's three sectors: construction, mining, and agriculture manufacturing.

Direct Impact

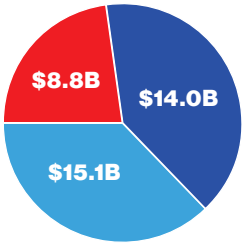
Agriculture Mining Construction



Sales Activity by Equipment Manufacturers
$276 billion



Value Added to National GDP
$68 billion

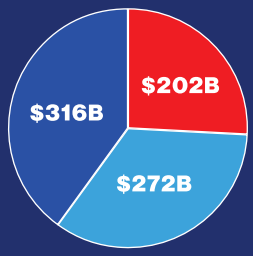


Labor Income
$38 billion

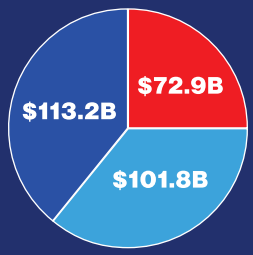
The Ripple Effect

(Direct, Indirect and Induced)

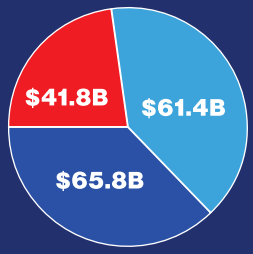
Agriculture Mining Construction



Total Industry Sales Activity
$790 billion



Total Value Added to National GDP
$288 billion

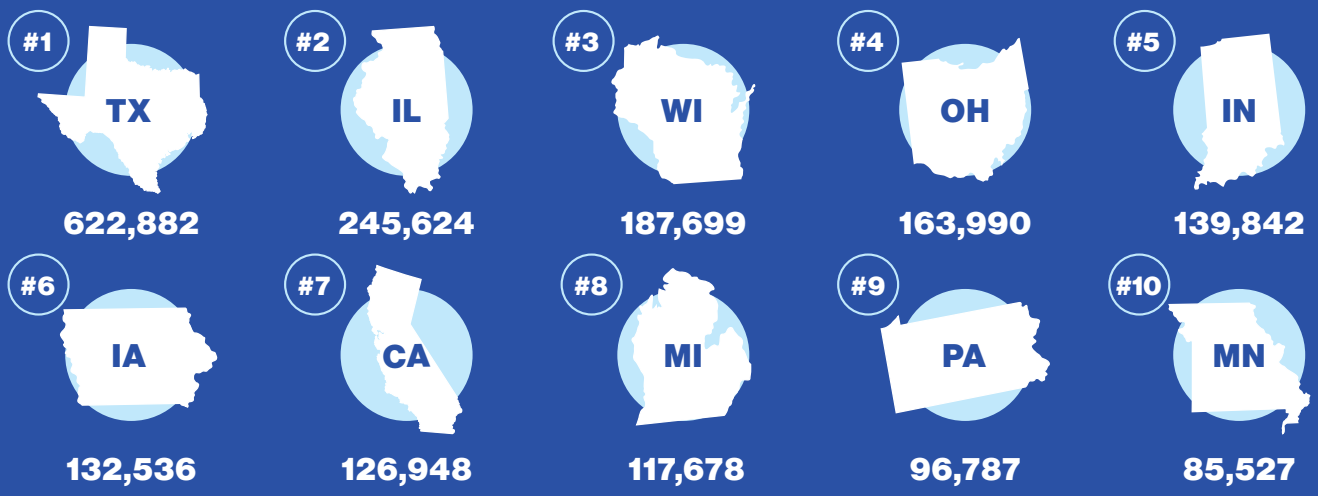


Total Labor Income
$169 billion

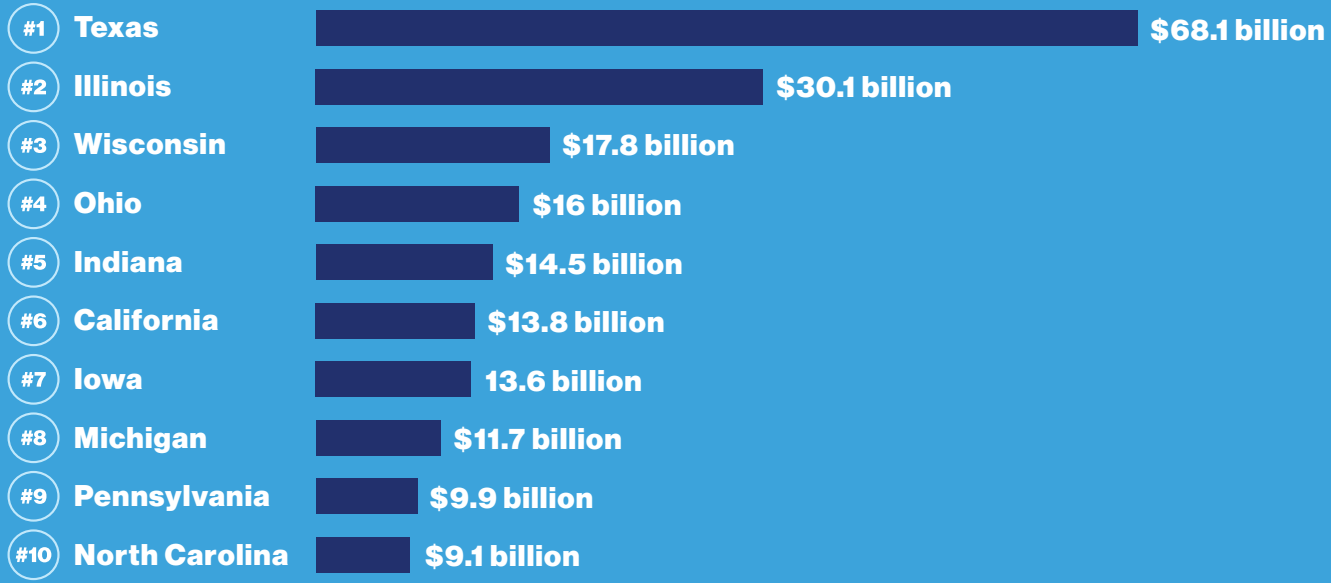
The United States of Equipment Manufacturers

All 50 states benefit from the equipment manufacturing industry's economic activity. Depending on our industry's footprint, our contribution varies from state to state. Below are the states with the most jobs supported by equipment manufacturers and where our industry makes the largest annual contribution to state economies:

Top 10 States for Equipment Manufacturing Jobs



Top 10 States for Total Contribution (GDP) to State Economies



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Carlos

Component Fabricator

Morris, MN

"I take pride in building the equipment our country needs to keep our economy moving."

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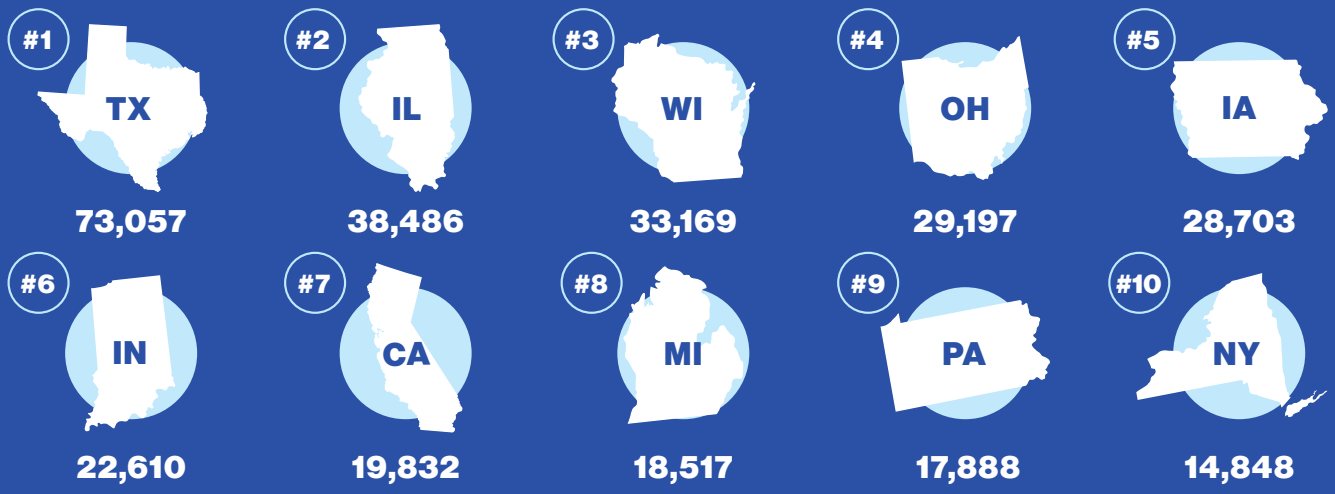
The United States of Equipment Manufacturers

The total number of direct jobs supported by equipment manufacturers is over 476,800.

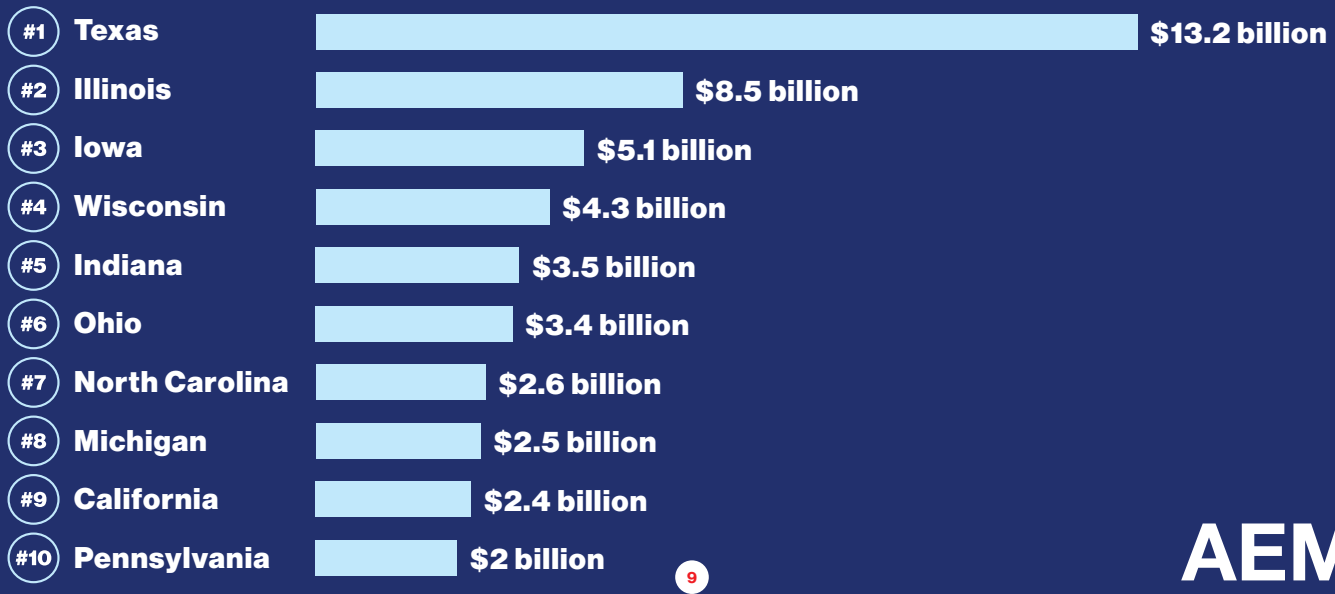
Texas ranks substantially above all other states in terms of direct contributions of the equipment manufacturing industry, with over 73,057 jobs, $7.5 billion of labor income and $13.2 billion in value added in GDP each year. Other states with exceptionally large direct contributions include Illinois, Wisconsin, Ohio and Iowa, each with more than 28,000 jobs directly attributable to equipment manufacturers.

Communities throughout these states widely benefit from the jobs and economic contributions directly made by equipment manufacturers each year.

Top 10 States with Jobs Directly Supported by Equipment Manufacturers



Top 10 States for Direct Contribution (GDP) by Equipment Manufacturers



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Chris

Mechanical Assembler

Peoria, IL

"Every day I think about whether our nation's elected leaders are supporting pro-manufacturing policies that support workers like me."

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Congressional District Impact

Equipment manufacturing industry activity varies considerably across congressional districts.

At the congressional district level, the number of jobs directly attributable to the equipment manufacturing industry is at least 1,000 jobs in nearly two-thirds of every district. Including direct, indirect and induced effects, the industry supports more than 100 jobs in 430 congressional districts.

The top 15 districts with jobs directly supported by equipment manufacturers range from at least 4,000 jobs to over 10,000 jobs. Equipment manufacturers also support more than 2,000 jobs in at least 299 congressional districts.

Below are the 50 districts with the most jobs directly supported by equipment manufacturers.

State	District	Jobs
Iowa	IA-01	10,821
Iowa	IA-02	8,012
Iowa	IA-04	6,602
Wisconsin	WI-06	6,047
South Dakota	at-large	5,698
Oklahoma	OK-01	5,537
Texas	TX-18	5,504
Texas	TX-07	5,346
North Dakota	at-large	5,280
Indiana	IN-02	5,142
Wisconsin	WI-01	4,888
Wisconsin	WI-08	4,595
Illinois	IL-08	4,580
Kansas	KS-04	4,541
Texas	TX-03	4,306
Wisconsin	WI-05	4,304
Texas	TX-33	4,249
Minnesota	MN-03	4,058
Illinois	IL-16	3,840
Nebraska	NE-03	3,822
Wisconsin	WI-07	3,816
Texas	TX-17	3,765
Ohio	OH-07	3,699
Wisconsin	WI-04	3,523
Illinois	IL-17	3,449

State	District	Jobs
Indiana	IN-03	3,426
Texas	TX-04	3,422
Texas	TX-24	3,211
Iowa	IA-03	3,210
Louisiana	LA-03	3,188
Ohio	OH-05	3,169
Illinois	IL-05	3,161
Wisconsin	WI-03	3,130
Ohio	OH-04	3,122
Mississippi	MS-01	3,014
Illinois	IL-10	2,988
California	CA-17	2,970
Ohio	OH-14	2,964
Wisconsin	WI-02	2,865
Oklahoma	OK-02	2,841
Texas	TX-32	2,702
Illinois	IL-15	2,671
Texas	TX-02	2,625
Illinois	IL-14	2,599
Ohio	OH-08	2,555
Nebraska	NE-01	2,552
Indiana	IN-09	2,521
Texas	TX-06	2,521
Oklahoma	OK-03	2,482
Louisiana	LA-01	2,426

Craig

Assembler

Oskaloosa, IA

"The men and women of the equipment manufacturing industry are good, hard-working people."

Our Industry's Policy Priorities

To encourage investment, job growth and development and production of more equipment in the United States, equipment manufacturers need smart laws and effective policies. This is why the Association of Equipment Manufacturers advocates for policies that help make our tax code more competitive, rebuild our nation's infrastructure, open up foreign markets for equipment manufacturers in the United States and keep the U.S. agricultural economy strong.

Infrastructure

Equipment manufacturers need modern infrastructure to compete in the global economy. AEM supports comprehensive legislation to rebuild our infrastructure, create good-paying jobs, grow our economy and help reclaim our infrastructure advantage. AEM believes that the federal government must continue to maintain a strong role in funding U.S. infrastructure construction, maintenance and modernization.

Trade

Pro-growth trade policies keep the U.S. equipment manufacturing industry strong and American workers employed. With about 30 percent of equipment manufactured in the United States destined for export, free and fair trade policies and agreements are vital to the industry's prosperity. AEM urges elected officials to support pro-growth trade policies that keep U.S. equipment manufacturing strong in an increasingly competitive global market.

Tax

Equipment manufacturers support tax and fiscal policies that promote investment, competitiveness and job creation. Recent U.S. tax reform has created a tax code that will help equipment manufacturers compete and win. The full economic effect of tax reform will take years to play out, but it is already making a meaningful difference for the 2.8 million men and women of the equipment manufacturing industry. Any effort to increase the corporate tax rate or repeal the pro-growth provision in tax reform would make equipment manufacturers less competitive, meaning less investment and fewer jobs.

Agriculture

A strong farm economy not only benefits farmers and ranchers, but also helps protect the more than 700,000 agricultural equipment manufacturing jobs across the United States. AEM is a strong proponent of policies that provide a vital safety net for farmers and ranchers to help strengthen the agricultural economy. These important policies enable farmers and ranchers to succeed during difficult times.

Workforce

A pipeline of skilled labor to fill current and future needs is critical to the success of the equipment manufacturing industry. Elected officials should prioritize policies that encourage students to pursue career and technical education and provide the resources necessary to develop and expand federally-supported CTE programs.


"I make America by manufacturing the equipment used by our nation's farmers, ranchers and others who help feed, power and build our nation."
Carly
Assembler, Application Equipment
Jackson, MN

Detailed Methodology

The foundation of the analysis is IHS Markit's proprietary Business Market Insights (BMI) service. This database is developed by IHS Markit industry experts from the U.S. Census, County Business Patterns data and provides employment for all six-digit NAICS categories for the U.S., down to the zip-code level. This analysis leveraged AEM's membership list and secondary research on employment and output by business location. Totaling the employment figures for individual manufacturing plants allowed IHS Markit to fully account for the total contributions of companies that cross state lines.

Business transactions with local suppliers and service providers trigger economic activity. For example, when a supplier sells something to a producer of an end-use good or service, that supplier needs to hire employees to transform inputs into the final product. The economic impact model contains productivity (output per employee) statistics for 536 industry sectors that are produced by IMPLAN, a software package that measures economic impacts. The IHS Markit BMI employment data provided the number of jobs for each industry sector. Industry-specific productivity data could then be applied to employment to quantify the level of output supported by each industry sector. These contributions arise from direct spending with a tier-1 supplier and represent the direct impact.

Sourcing the inputs that a supplier requires to make the product ordered by the producer of an end-use good invokes additional rounds of economic impact. For example, a tier-1 supplier must purchase the inputs needed to produce its final product. Some of these purchases will be imported from outside the U.S. economy and are excluded from this analysis. The remaining purchases stay within the U.S. economy and are counted. Each supplier must, in turn, hire employees and source additional inputs from its suppliers. This effect occurs as a result of transactions between vendors and their supplier networks (interindustry) and represents the indirect economic impact.

Finally, direct and indirect employees spend a portion of their incomes on consumer goods and services. This stimulates yet another round of economic activity, which results in induced effects on employment and other economic measures.

The results from the national model yield output, employment, value added, labor income and tax revenue generated by the equipment manufacturing industry. State-level models were driven by the direct employment determined in the data analysis and segment breakdown. State-level analysis provided industry-specific output, income, employment and value-added data. IHS Markit maintains industry-level data by state for employment and gross state product through its U.S. Regional group. The results of our findings not only capture the overall impact of the industry by segment within the context of each state's unique economy, but also highlight the significance of the industries within each state – i.e., the equipment manufacturing industry provides X% of total manufacturing employment in state Y, while also supporting Z% of professional services employment.

IHS Markit further broke down state-level impacts into U.S. congressional districts. This methodology was an extension of that used for the state-level impacts. The BMI data was aggregated to congressional districts and each district's share of impacted industry segments was utilized to distribute the state-level direct and indirect impacts. Induced impacts at the congressional district level were based on the combined share of direct and indirect impacts, as the income driving induced impacts is based on direct and indirect activity.

The Association of Equipment Manufacturers (AEM) is the North American-based international trade group representing off-road equipment manufacturers and suppliers, with more than **1,000 companies** and more than **200 product lines** in the agriculture and construction-related industry sectors worldwide. The equipment manufacturing industry in the United States supports **2.8 million jobs** and contributes roughly **$288 billion** to the economy every year.

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I MAKE AMERICA


101
103
105
125

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