



DetroitRegionalChamber

A series of overlapping, wavy lines in shades of blue and green, flowing from the top left towards the bottom right, creating a sense of movement and energy.

State of the
Region
2014



Over the past five years, there has not been a more compelling economic development story than that of the Detroit region. The domestic automotive industry re-engineered from the brink of collapse now exceeds pre-recession production levels. Detroit’s historic exit from bankruptcy has changed the city from the symbol of urban decay to the nation’s underdog upstart.

While those dramatic comebacks were driven by bold leadership, they also required a region with world-class assets. A region with top-notch universities, engineering and talent, manufacturing know-how, business base and the infrastructure to support global commerce. A region now primed for prolonged prosperity.

Leveraging its strengths, the Detroit region is growing and rapidly re-emerging as a national economic leader – outperforming most of the country in many key indicators, including gross domestic product and private sector job growth. It is attracting interest from foreign firms and fostering entrepreneurial growth. It is positioned to incubate the next economic paradigm where entrepreneurship, connected vehicle technology and innovation are melded together in a way that changes the world.

Yet, the global economy has proven there are no foregone conclusions. Change is constant and competition intense. Growth will require continued adaptation and information, and regions must collaborate.

The Detroit Regional Chamber created this inaugural State of the Region to provide an overview of key indicators to drive regional dialogue and better inform economic development champions of Southeast Michigan’s place in the global marketplace. It offers the context for what should be a bright future.

Sandy K. Baruah
President and CEO
Detroit Regional Chamber

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The Detroit region is a united 11-county area, anchored by the city of Detroit that offers a rich array of business opportunities, technological innovation, convenient international access, a robust international logistics infrastructure and numerous educational institutions and resources. Home to more than 300,000 companies, including 13 Fortune 500 companies, and 5.3 million people, the Detroit region has the talent, resources and cutting-edge facilities to drive innovation and offer unrivaled opportunities to compete in the 21st century economy.

The Detroit Regional Chamber is proud to launch the inaugural State of the Region as it promotes and positions the Detroit region as a champion of global connectivity and a premier place to conduct business.

Defining the Detroit Region

Genesee County

Land Area, square miles: 637
 2013 Population, est: 418,306
 2013 Per Capita Income: \$22,164
 2013 GRP, in billions: \$12.2
 2013 Export, in billions: \$21.4
 2009 - 2013 Job Growth: 5.0%

Macomb County

Land Area, square miles: 479
 2013 Population, est: 848,455
 2013 Per Capita Income: \$26,692
 2013 GRP, in billions: \$31.8
 2013 Export, in billions: \$69.2
 2009 - 2013 Job Growth: 10.9%

Shiawassee County

Land Area, square miles: 530
 2013 Population, est: 69,400
 2013 Per Capita Income: \$22,804
 2013 GRP, in billions: \$1.2
 2013 Export, in billions: \$1.8
 2009 - 2013 Job Growth: 1.4%

Lapeer County

Land Area, square miles: 643
 2013 Population, est: 88,226
 2013 Per Capita Income: \$23,887
 2013 GRP, in billions: \$1.7
 2013 Export, in billions: \$3.1
 2009 - 2013 Job Growth: 9.1%

Monroe County

Land Area, square miles: 549
 2013 Population, est: 150,944
 2013 Per Capita Income: \$25,800
 2013 GRP, in billions: \$4.5
 2013 Export, in billions: \$7.2
 2009 - 2013 Job Growth: 7.9%

Washtenaw County

Land Area, square miles: 710
 2013 Population, est: 351,345
 2013 Per Capita Income: \$33,495
 2013 GRP, in billions: \$19.8
 2013 Export, in billions: \$30.8
 2009 - 2013 Job Growth: 7.0%

Lenawee County

Land Area, square miles: 749
 Population: 99,211
 2013 Per Capita Income: \$21,982
 2013 GRP, in billions: \$2.4
 2013 Export, in billions: \$26.6
 2009 - 2013 Job Growth: 4.7%

Oakland County

Land Area, square miles: 867
 2013 Population, est: 1,221,103
 2013 Per Capita Income: \$36,460
 2013 GRP, in billions: \$79.5
 2013 Export, in billions: \$85.5
 2009 - 2013 Job Growth: 10.0%

Wayne County

Land Area, square miles: 612
 2013 Population, est: 1,789,819
 2013 Per Capita Income: \$21,988
 2013 GRP, in billions: \$72.6
 2013 Export, in billions: \$113.4
 2009 - 2013 Job Growth: 5.2%

Livingston County

Land Area, square miles: 565
 2013 Population, est: 183,309
 2013 Per Capita Income: \$31,805
 2013 GRP, in billions: \$5.1
 2013 Export, in billions: \$8.0
 2009 - 2013 Job Growth: 19.3%

St. Clair County

Land Area, square miles: 721
 2013 Population, est: 160,878
 2013 Per Capita Income: \$24,287
 2013 GRP, in billions: \$4.2
 2013 Export, in billions: \$6.6
 2009 - 2013 Job Growth: 1.8%

City of Detroit

Land Area, square miles: 139
 2013 Population, est: 696,922
 2013 Per Capita Income: \$14,464
 2013 GRP, in billions: \$26.3
 2013 Export, in billions: \$52.7
 2009 - 2013 Job Growth: .8%

Source: EMSI, Census Bureau

Opportunity, Investment Lie Beyond Detroit Bankruptcy

Detroit's bankruptcy served as the preeminent story from the region for 2014 with far-reaching economic implications. Site selectors, investors, travelers and talent alike view Detroit as synonymous with Southeast Michigan and the entire state. That perception reflects the reality that the economic futures of the city, region and state are inextricably linked.

In November, Judge Steven Rhodes approved Detroit's exit from bankruptcy positioning the city to move forward on a sustainable path. Through the historic restructuring plan, the city was able to slash more than \$7 billion in unsecured liabilities while freeing up at least \$1.4 billion over 10 years to invest in police, fire, lighting and other services key to revitalizing and growing Detroit.

As part of the exit plan, the Grand Bargain allows the city to accept \$816 million over 20 years from nonprofit foundations, the state of Michigan and Detroit Institute of Arts donors to reduce pension cuts while preserving the museum as an independent institution which will continue to serve as one the region's top amenities and attractions. With the exit plan moving forward, a Financial Review Committee, approved by the Legislature and Governor, will oversee the city's finances as the restructuring plan is implemented.

Detroit's fiscal crisis remained one of the final hurdles to a new era for the city. Before bankruptcy was filed, investor interest from around the nation and the world remained high and continued throughout the process. There has been at least \$2.4 billion announced in Detroit investment and development since January 2013, showing the city as a smart investment and a city seen around the globe as a competitive place to locate and do business.

“Our goal is to restore the vitality of this great city from downtown through the neighborhoods, with the quality of life that Detroit's families deserve. We won't settle for anything less ... Detroit's journey is far from over. But there is no mistaking that Michigan's largest city is stronger. Its brightest days are to come.”

Governor Rick Snyder

Mayor Mike Duggan, Governor Rick Snyder (middle) and Emergency Manager Kevyn Orr provided instrumental leadership as Detroit navigated bankruptcy.





Economic Indicators

The Detroit region remains one of the fastest growing in the nation as the state continues to reinvent itself in the global economy. In many key economic categories, including gross domestic product, private sector job growth and per capita income, the region is outperforming the national average while unemployment rates have decreased to near pre-recession levels.

Detroit ranked **2nd** only to Dallas for GDP growth against peer metropolitan areas.

Real Gross Domestic Product

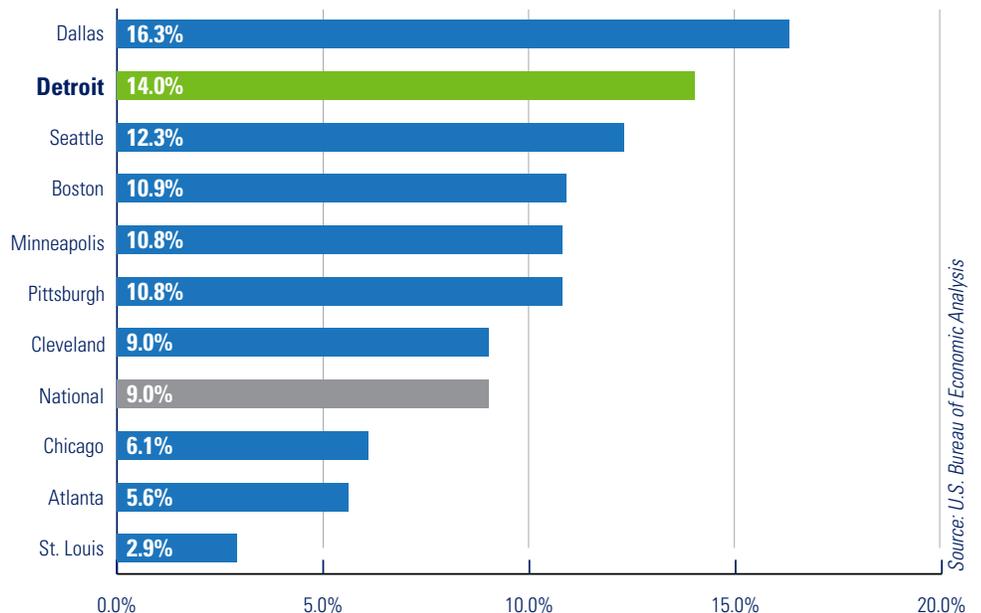
The Detroit region's GDP growth outpaced the national average **by 5 percentage points.**

Among the top 50 MSAs by population, the Detroit MSA has the 10th highest growth in real GDP from 2009 – 2013, at **14.0 percent.**

Detroit ranked second only to Dallas for GDP growth against peer metropolitan areas.

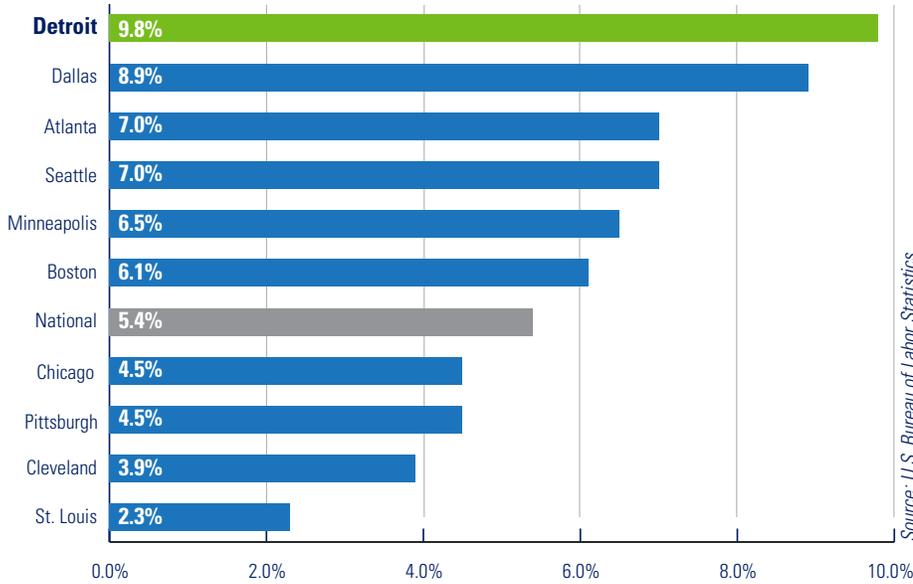
The Detroit MSA has experienced GDP growth each of the five past years greater than 1.3 percent.

2009-2013 Real Gross Domestic Product (GDP) Growth



Source: U.S. Bureau of Economic Analysis

2009-2013 Private Sector Job Growth

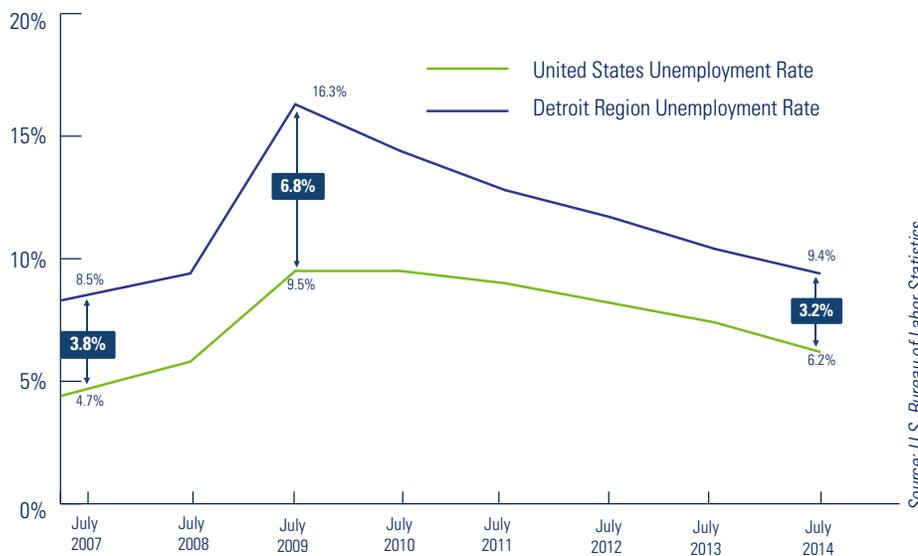


Job Growth

The Detroit MSA gained nearly **150,000** private sector jobs over the past five years, surpassing Atlanta, Washington, D.C., Indianapolis and Philadelphia.

The region has outpaced the national average by **4.4 percentage points**, also leading its peers.

Unemployment Rate, 2007-2014



Unemployment

The regional Detroit unemployment rate, which includes Ann Arbor, Detroit, Flint and Monroe, peaked in July 2009 and has continued to decline, moving closer to the national rate.

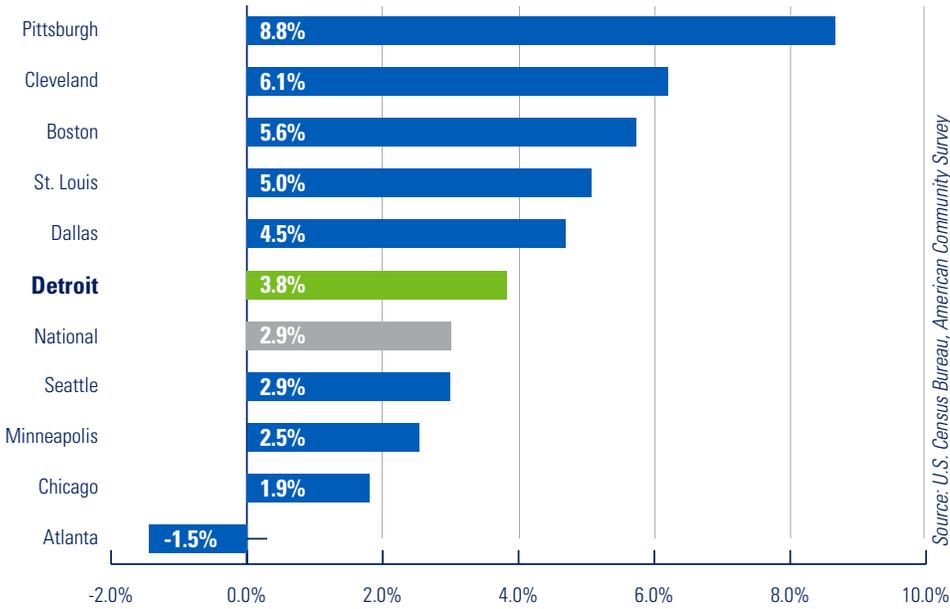
After peaking in 2009 at 6.8 percent, the spread between the national and the regional rate has dropped to **3.2 percent** dipping below the pre-recession level of 3.8 percent in July 2007.

Of the four MSAs in the Detroit region, Ann Arbor continues to record the lowest unemployment rate of 6 percent while Detroit and Flint have unemployment rates just over 9 percent.



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2009-2013 Per Capita Income Growth

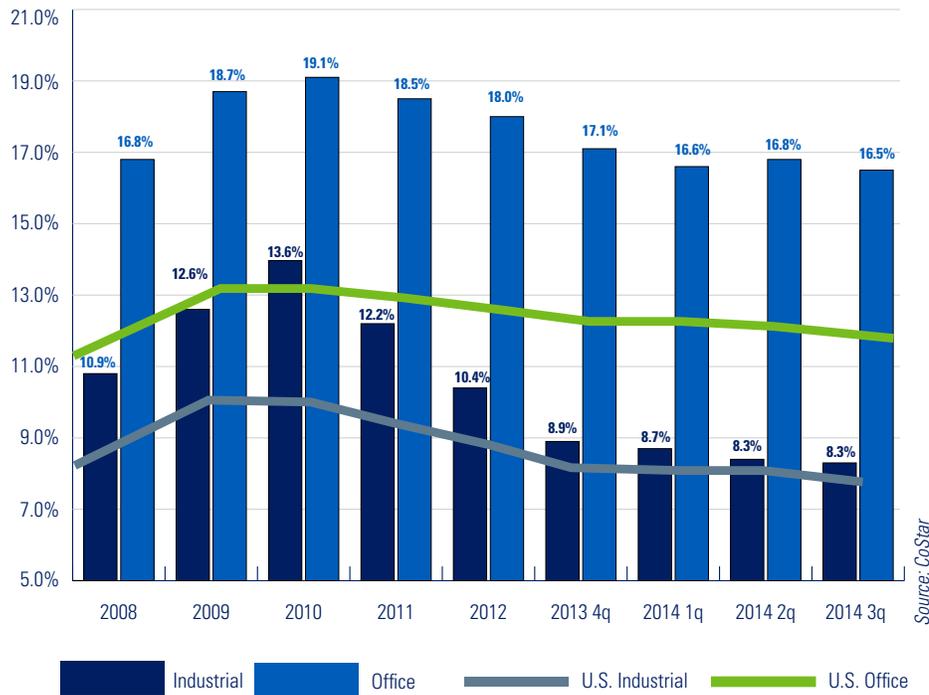


Income Growth

The Detroit region has recorded per capita income growth of **3.8 percent** since 2009, outpacing the national growth rate by nearly 1 percent.

The region experienced a 2 percent decline in median household income dropping from \$52,954 in 2009 to \$51,903 in 2012, ranking the region last when benchmarked against peer regions.

Office and Industrial Vacancy Rates, Detroit Region vs. National



Office and Industrial Real Estate

While vacancy rates are declining at a faster rate than the national average when compared to peer regions, Detroit reports the highest office vacancy rate and the third highest industrial vacancy rate.

For the third quarter of 2014, the Detroit office market posted a vacancy rate of **16.5 percent** compared to a high of 19.1 percent in 2010.

The industrial market has greatly improved with a vacancy rate of **8.3 percent** compared to a high of 13.6 percent in 2010.

In the first three quarters of 2014, more than 86,000 square feet of office space and 358,000 square feet of industrial space has been constructed. An additional 404,000 square feet of office and 1.2 million square feet of industrial space are under construction.

Since 2010, the region's industrial vacancy rate has declined **5.3 percentage points** compared to the national rate of 2.8 percentage points.



© City of Birmingham



Business

Home to 13 Fortune 500 companies, the Detroit region's dynamic business base is anchored by the health care, government and manufacturing sectors. While serving as the epicenter of the global automotive industry, the region continues to attract foreign companies with nearly 1,300 international business locations.

Health care and social assistance is the largest industry, accounting for **14 percent** of the region's employment.

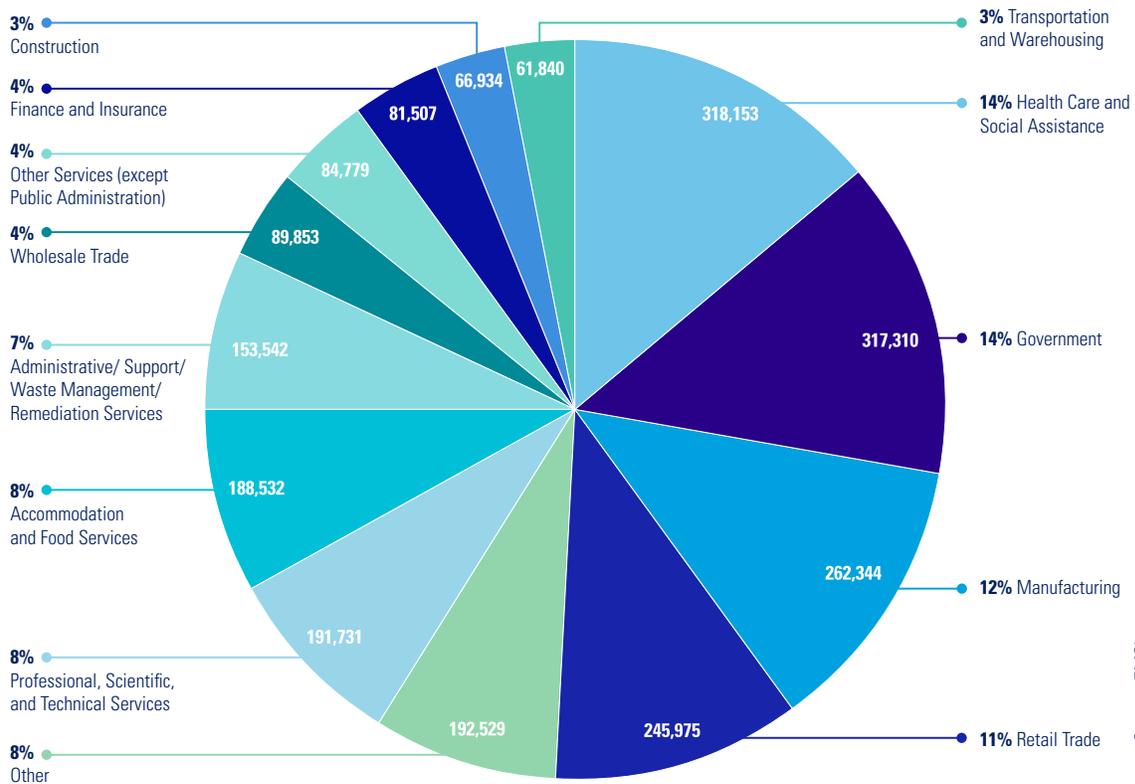
The top three industries, excluding the government sector – health care and social assistance, manufacturing and retail trade – employ more than 825,000 people.

Thirteen of the 19 Fortune 500 companies with headquarters in Michigan are located within the Detroit region. General Motors Co. and Ford Motor Co. rank in the Top 10 Fortune 500 companies.

The region's largest private sector employers include Fiat Chrysler Automobiles, Penske Corp. and Guardian Industries, which have a collective revenue of more than \$92 billion.

The international business presence continues to expand with nearly **1,300** international locations within the region. Japan and Germany combined lead the way with more than **600** operating locations.

Employment by Industry



2014 Fortune 500

Rank	Company	Revenue in billions
7	General Motors Co.	\$155.4
8	Ford Motor Company	\$146.9
165	TRW Automotive Holdings	\$17.4
177	Lear Corporation	\$16.2
194	Penske Automotive Group	\$14.9
273	Ally Financial	\$10.3
290	DTE Energy	\$9.6
310	Autoliv	\$8.8
323	Masco	\$8.4
351	Visteon	\$7.4
352	BorgWarner	\$7.4
464	Con-Way	\$5.4
468	Kelly Services	\$5.4

Source: Fortune magazine

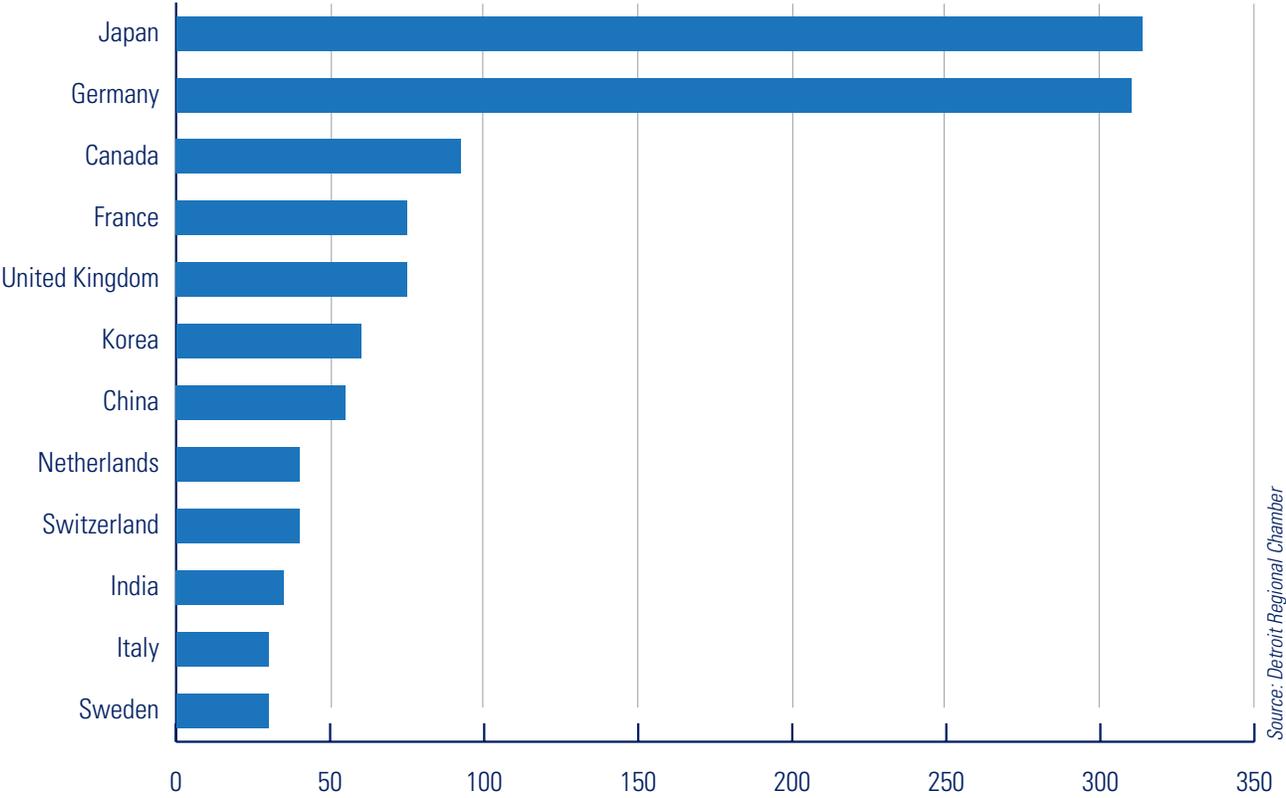
Largest Private Companies

Company	2012 Revenue in billions	Full-Time Employees in Detroit Area Jan. 2013
Fiat Chrysler Automobiles	\$65.8	26,427
Penske Corp.	\$21.3	N/A
Guardian Industries Corp.	\$5.6	N/A
International Automotive Components (IAC)	\$4.7	819
Quicken Loans Inc.	\$3.1	7,426
TI Automotive Ltd.	\$3.0	400
Inteva Products LLC	\$2.8	450
Ilitch Companies	\$2.6	8,700
Plastipak Holdings Inc.	\$2.3	605
Soave Enterprises LLC	\$1.9	696

Source: Crain's Detroit Business

Note: Fiat Chrysler Automobiles went public Oct. 13, 2014.

Top 12 Countries for Foreign-Owned Facilities, Detroit Region



There are nearly **1,300** international business locations from **38** countries in the Detroit region, led by Japan and Germany which together account for more than **600** locations.





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Education

The Detroit region’s universities and colleges feature nationally ranked undergraduate and graduate programs while powering Michigan’s status as a top 10 state for degrees conferred. However, the region falls below the national average for population with a bachelor’s degree or higher.

Ranked Institutions

School	Ranking
National Universities	
University of Michigan - Ann Arbor	29
Michigan State University	85
National Liberal Arts Colleges	
Albion College	99
Midwest Regional Colleges and Universities	
Kettering University	20
Adrian College	22
University of Michigan - Dearborn	35
University of Detroit	41
Lawrence Technological University	54
Rochester College	61
Eastern Michigan University	77
Madonna University	84
University of Michigan - Flint	99

Source: U.S. News and World Report

The Detroit region is home to six universities and colleges with nationally ranked undergraduate engineering programs, two of which have nationally ranked graduate programs.

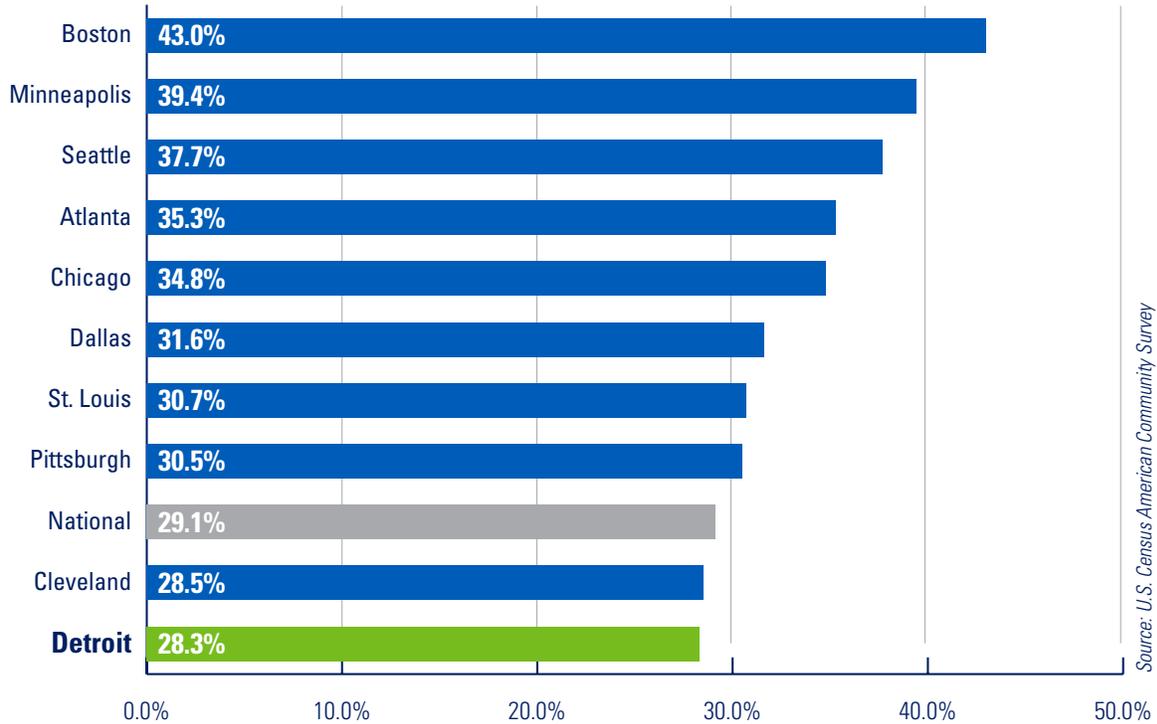
The state of Michigan is ranked **ninth** for the total number of degrees conferred, in addition, Michigan continuously ranks in the top 10 for each type of degree conferred. In 2012, Michigan’s education institutions awarded more than 118,000 degrees.

Nearly **30 percent** of the Detroit region’s population has earned a bachelor’s degree or higher, however the region lags behind all peer regions and sits just below the national average.

Michigan has 10 high schools ranked in the top 500, with the International Academy in Bloomfield Hills ranking as the **ninth** best high school in the nation.

Educational Attainment, 2012

Percentage of Population, 25 Years and Older, With Bachelor's Degree or Higher



The University of Michigan ranks as the 29th best university and **4th** best public university in the nation. The Ross Business School was ranked the best graduate school for entrepreneurship.



© The University of Michigan



Workforce

In 2013, the Detroit region’s labor force exceeded **2.5 million**, including the highly skilled workers that serve as one of the area’s primary assets as a manufacturing location. The region has experienced job growth in the skilled trades while boasting a highly educated foreign-born population that continues to start businesses and drive job growth.

Top 10 Fastest Growing Occupations, Detroit Region

DESCRIPTION	2009 JOBS	2013 JOBS	2009-2013 CHANGE	2009-2013 % CHANGE	2013 LOCATION QUOTIENT
Architecture & Engineering	64,108	82,037	17,929	28%	2.10
Production	163,220	197,838	34,618	21%	1.40
Computer & Mathematical	59,823	67,990	8,167	14%	1.11
Transportation & Material Moving	117,585	130,099	12,514	11%	0.89
Life, Physical & Social Science	14,068	15,518	1,450	10%	0.84
Installation, Maintenance & Repair	73,678	80,843	7,165	10%	0.94
Business & Financial Operations	101,707	111,087	9,380	9%	1.02
Building & Grounds Cleaning/Maintenance	66,174	72,050	5,876	9%	0.93
Management	99,195	107,690	8,495	9%	1.00
Health Care Support	75,250	80,835	5,585	7%	1.21
Total	834,810	945,987	111,179		

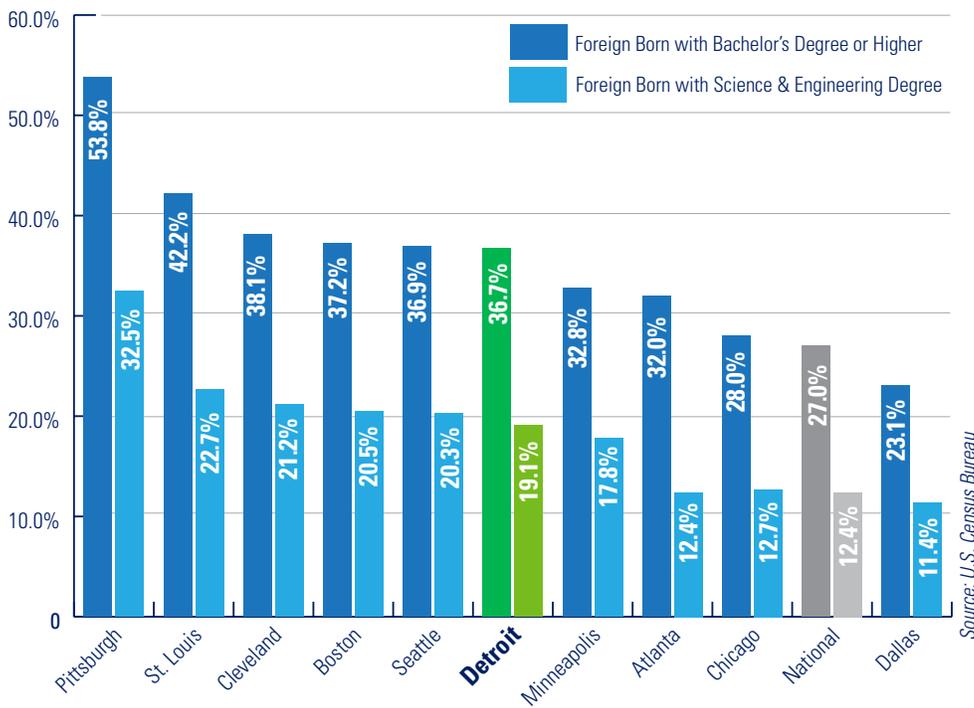
Source: EMSI

Nearly **60,000 jobs** in skilled trades have been created in the region over the past five years with assemblers, machinists and laborers leading that growth.

The fastest growing occupations over the past five years in the Detroit region were architecture and engineering occupations with **28 percent** growth. Production occupations showed the largest net gain in jobs with an increase of more than 34,000.

Projecting to 2018, the top three occupations for job growth within the Detroit region include health care support, personal care and services, and health care practitioners and technical occupations, with health care and technical occupations expected to grow by more than 10,000 jobs.

Foreign Born with Degrees, 2010



As of 2010, **19.1 percent** of the foreign-born population in the Detroit region has a science or engineering degree, whereas the United States average is 12.4 percent.

In addition, **36.7 percent** of the foreign-born population in the Detroit region has a bachelor's degree or higher, whereas the United States average is 27 percent.



© The College for Creative Studies



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Innovation

Michigan's entrepreneurial climate ranking has climbed from **41st** in 2008 to **6th** in the nation in 2013.

The Detroit region is known around the world for its innovation. With leading research universities and a workforce comprised of a high percentage of scientists and engineers, the region continues to produce patents and cutting-edge technology that are redefining the world. That innovation, coupled with a rapidly improving business climate, creates a fertile environment for entrepreneurs and small businesses to thrive in nearly any industry.

According to MiQuest:

Michigan's entrepreneurial climate ranking has climbed from a low of 41st in 2008 (39th in 2009) to **sixth** in the nation in 2013.

Michigan ranks ninth for patents per innovation workers.

Michigan ranks **first** for private lending to small business.

The region is home to the first U.S. Patent and Trademark satellite office outside of Washington, D.C.

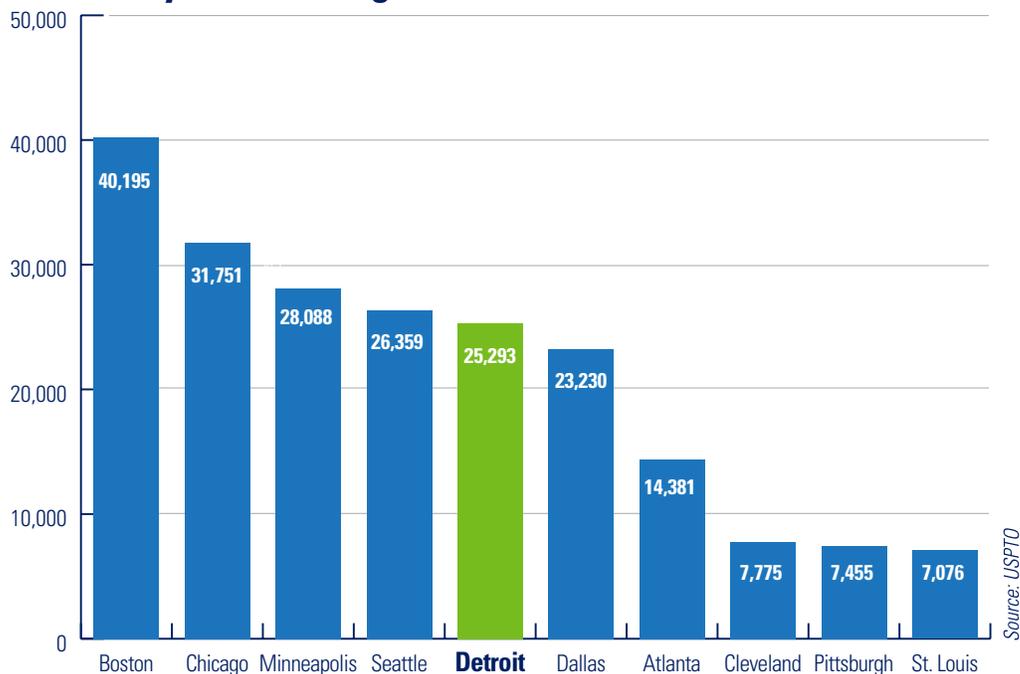
At **five times** the national average, Detroit has the highest share of commercial and industrial designers. From 2009-2013, Detroit has shown the largest growth in traditional design employees at 15 percent.

Kaufmann Index of Entrepreneurial Activity for the 15 Largest MSAs

MSA	2013 ENTREP. INDEX	ENTREP. PER 100,000 PEOPLE
San Francisco-Oakland-Fremont, CA	0.57%	570
Los Angeles-Long Beach-Santa Ana, CA	0.49%	490
Miami-Fort Lauderdale-Pompano Beach, FL	0.43%	430
Houston-Sugar Land-Baytown, TX	0.34%	340
Dallas-Fort Worth-Arlington, TX	0.33%	330
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.32%	320
Atlanta-Sandy Springs-Marietta, GA	0.28%	280
Detroit-Warren-Livonia, MI	0.28%	280
Riverside-San Bernardino, CA	0.27%	270
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.27%	270
Phoenix-Mesa-Scottsdale, AZ	0.25%	250
Boston-Cambridge-Quincy, MA-NH	0.25%	250
Seattle-Tacoma-Scottsdale, WA	0.22%	220
Chicago-Joliet-Naperville, IL-IN-WI	0.20%	200
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.18%	180

Source: Kaufmann Foundation

Utility Patents Originated, 2000–2011





International Gateway

© Delta Air Lines

Sitting along the second busiest border crossing in North America, Detroit is an international gateway to business around the world. With world-class infrastructure, the region is one of the strongest export markets in the nation with millions of dollars of commerce flowing through it daily.

2013 Airport Rankings, Total Movements

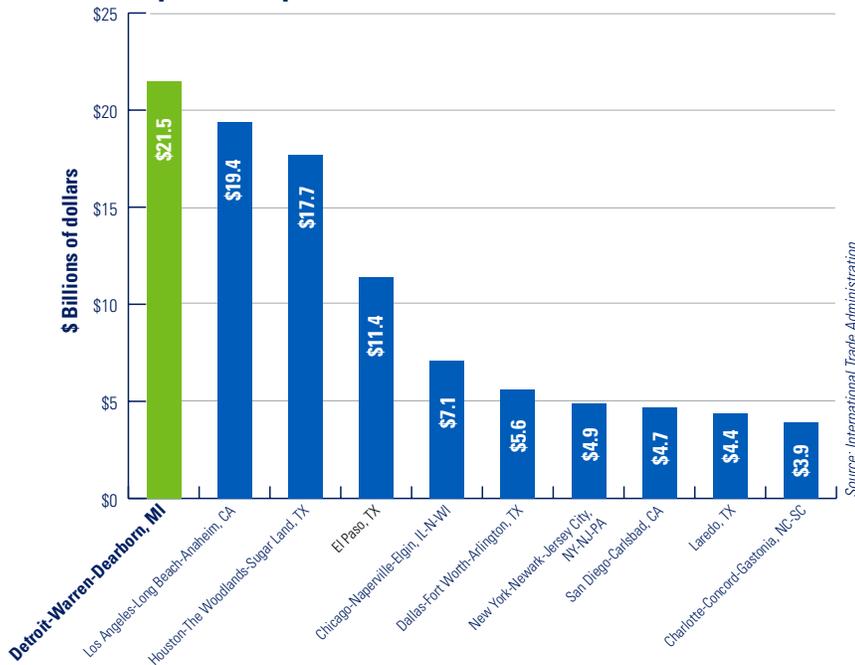
World Rank	N.A Rank	Airport	2012	2013	% Change
1	1	Hartsfield-Jackson Atlanta Int. Airport	930,310	911,074	-2.07
2	2	O'Hare Int. Airport	878,108	883,287	0.59
3	3	Dallas/Ft Worth Int. Airport	650,124	678,029	4.29
4	4	Los Angeles Int. Airport	605,480	614,917	1.56
5	5	Denver Int. Airport	612,557	582,653	-4.88
7	7	Charlotte Douglas Int. Airport	552,093	557,948	1.06
8	8	McCarran Int. Airport	527,739	520,992	-1.28
9	9	George Bush Intercontinental Airport	510,242	506,298	-0.77
14	10	Sky Harbor Int. Airport	450,204	435,887	-3.18
15	11	Philadelphia Int. Airport	443,236	432,884	-2.34
16	12	Minneapolis/St Paul Int. Airport	426,818	432,592	1.35
17	13	Toronto Pearson Int. Airport	433,975	431,358	-0.6
18	14	Detroit Metropolitan Wayne County Airport	427,814	425,732	-0.49
19	15	San Francisco Int. Airport	424,566	421,400	-0.75
20	16	Newark Liberty Int. Airport	414,061	413,581	-0.12

Source: Airports Council International

Detroit Metro Airport is ranked as the **third** best airport in 2012 by Travel and Leisure magazine while also ranking first for terminal cleanliness, design, location, lounges and business centers. Important to business, it also ranks as the airport with the fastest Wi-Fi.

Over the next five years, Detroit Metro and Willow Run airports plan to invest over **\$500 million** in capital improvements to enhance and strengthen the airports. In addition, Detroit Metro and Willow Run have over 1,000 acres of land available for aeronautical or aerospace development.

Top MSA Exporters to Mexico, 2013



In 2013, the Detroit region exported nearly **\$54 billion** in goods representing 72 percent of Michigan's total merchandise exports.

Detroit's top export markets are Mexico and Canada, with **\$37.4 billion** in exports to those markets originating in the Detroit region.

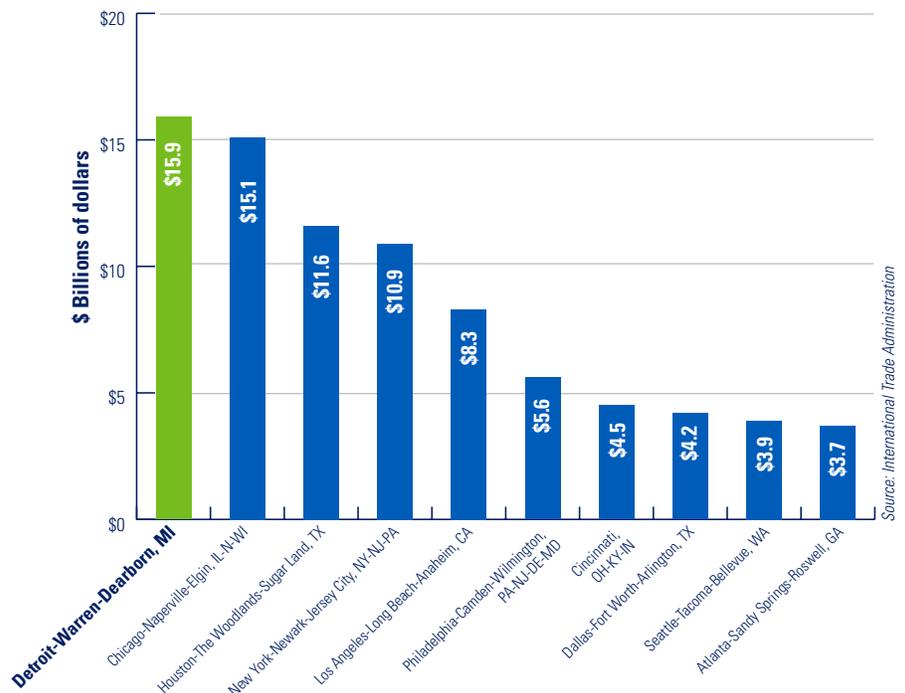
Since 2009, merchandise exports for Detroit have grown by 90 percent or **\$25.5 billion**.

Top 10 Metropolitan Area Exporters, by 2013 Value

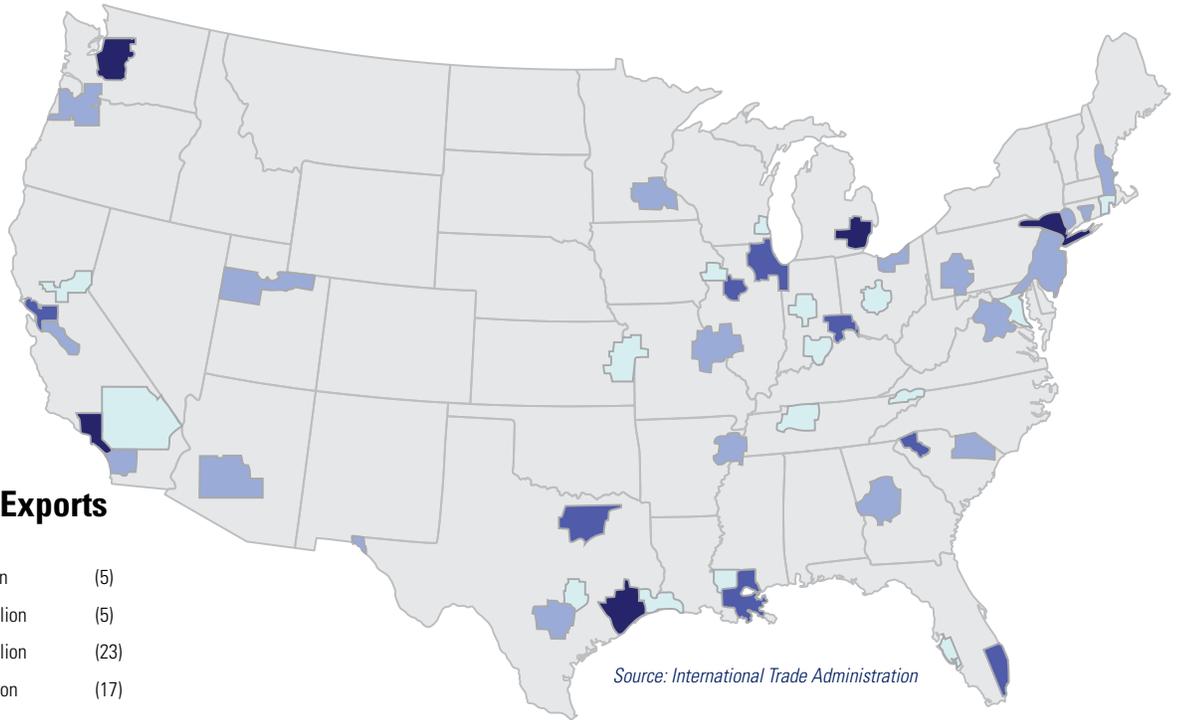
1. Houston-The Woodlands-Sugar Land, TX
2. New York-Newark-Jersey City, NY-NJ-PA
3. Los Angeles-Long Beach-Anaheim, CA
4. Seattle-Tacoma-Bellevue, WA
5. Detroit-Warren-Dearborn, MI
6. Chicago-Naperville-Joliet, IL-IN-WI
7. Miami-Fort Lauderdale-Pompano Beach, FL
8. New Orleans-Metairie, LA
9. Dallas-Fort Worth-Arlington, TX
10. San Francisco-Oakland-Hayward, CA

Source: International Trade Administration

Top MSA Exporters to Canada, 2013



Top 50 Metropolitan Area Exporters Ranked by 2013 Export Values

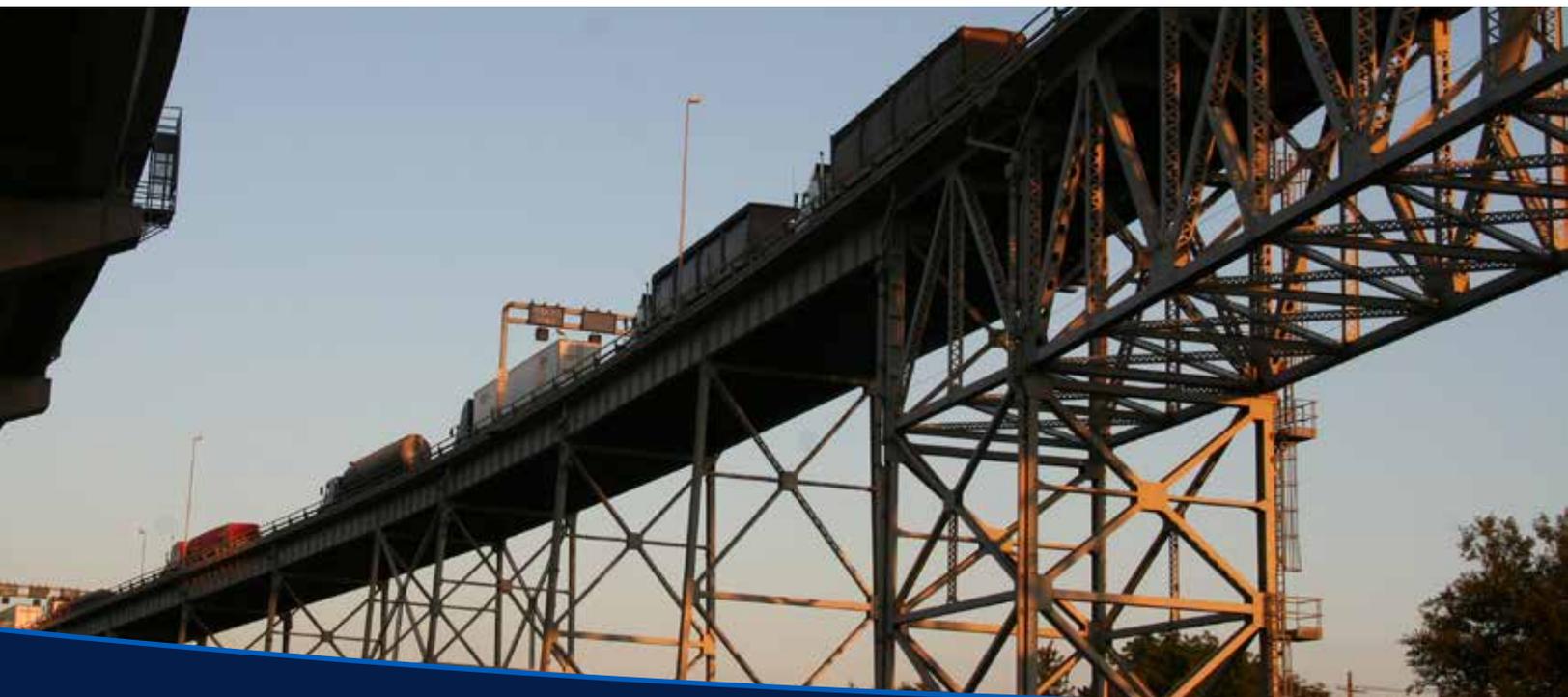


2013 Merchandise Exports

Top 50 Metro Area Exporters

More than \$50 billion	(5)
\$25 billion to \$50 billion	(5)
\$10 billion to \$25 billion	(23)
\$5 billion to \$10 billion	(17)

In 2013, the Detroit MSA was the **5th** largest export market in the United States.





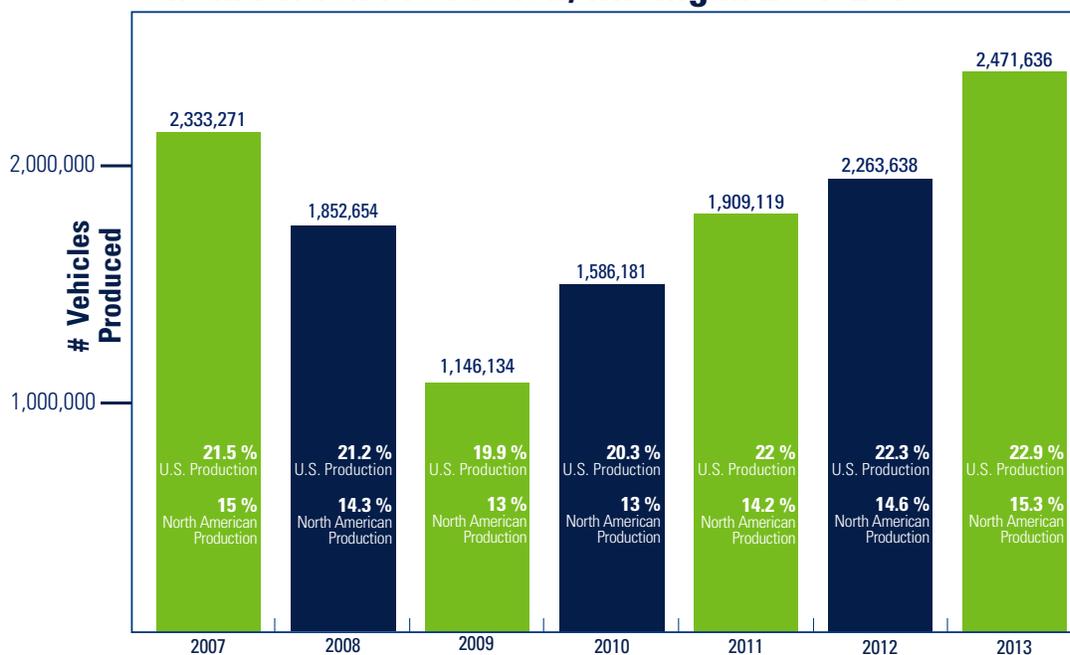
© General Motors

Industry Spotlight: Automotive

The Detroit region is the epicenter of the global automotive industry with unrivaled assets and expertise in manufacturing, engineering, design and research and development. Anchored by the Detroit region, Michigan’s automotive footprint is second to none. The region serves as the global headquarters of Fiat Chrysler Automobiles, Ford Motor Co., and General Motors Co. while **63** of the top **100** automotive suppliers to North America are headquartered in Michigan.

With the most robust industry supply chain in the world, Michigan is ranked **No. 1** for North American car, truck and motor vehicle production, accounting for one in six vehicles made in 2013. Building off a leaner, stronger industry, Michigan vehicle production exceeded pre-recession levels in 2013.

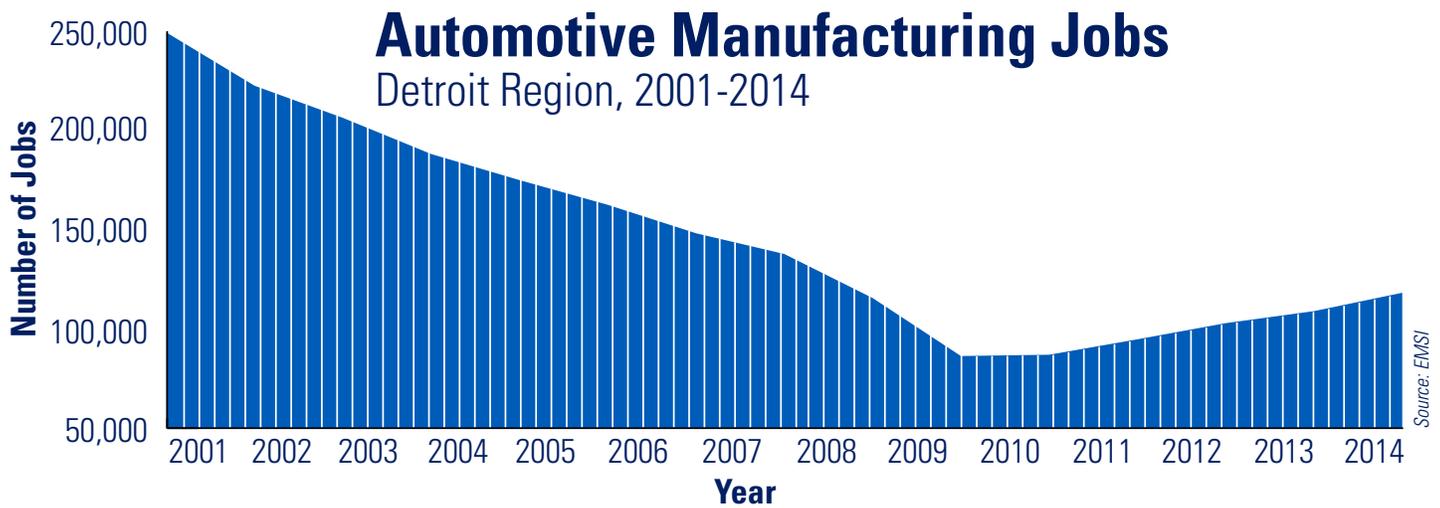
Car and Truck Production, Michigan 2007-2013



Source: Automotive News

Reshaped by the Great Recession, the industry looks much different today than a few short years ago. Despite adding nearly **32,000** automotive manufacturing jobs since the end of the recession, the 120,000 people employed in automotive manufacturing in the region is 100,000 fewer than 2001. The region may not see employment in automotive manufacturing jobs reach 2001 levels due to shifts in the region in increased automation and improved technology.

As that technology increases, the core strength of the region's industry – a well-educated engineering workforce becomes an increasingly valuable asset. The Detroit region has six universities and colleges with nationally ranked undergraduate/graduate engineering programs. Last year, these programs graduated nearly 4,000 engineers and engineering technicians. In 2013, Michigan ranked seventh for engineering degrees conferred. With nearly \$9 billion spent in automotive-related R&D, Michigan businesses lead the nation.



© Ford Motor Company

CASE STUDY: BorgWarner: Anticipating Innovation

BorgWarner Inc. is a leading automotive supplier and innovator with manufacturing and technical facilities in **60** locations in **19** countries, employing **19,700** worldwide. Headquartered in Auburn Hills, after moving from Chicago in 2003, the company delivers innovative powertrain solutions to improve fuel economy, reduce emissions and enhance performance.

With the automotive industry clamoring for new technology, BorgWarner continues to anticipate customers' needs with concepts like EcoFlash, a combustion technology that permits radically lean fuel-to-air mixtures to reduce fuel consumption. This year, BorgWarner President and CEO James Verrier was honored as EY's Automotive Entrepreneur of the Year.



© BorgWarner Inc.

A Leader in Connected Vehicle Technology

Building on its automotive assets, the Detroit region is primed to lead the nation and the world in connected vehicle technology. The region has expanded its automotive R&D capacity to grow connected vehicle technology extensively. To date Michigan boasts:

375 automotive R&D related centers

The largest deployment of video imaging for traffic management worldwide

The second largest system of adaptive traffic signals nationwide

The most extensive Connected Vehicle Test Bed location globally

The University of Michigan is ranked **second** in the nation for its robotics and autonomous vehicle program

Testing and Development

The University of Michigan's Mobility Transformation Center	Provides a 32-acre testing facility for connected technology. Initial partners include: Bosch, Econolite, Ford, GM, Toyota and Xerox.
The Southeast Michigan Test Bed	Provides real-world, operational conditions that offer participants the supporting vehicles, infrastructure and equipment to serve the needs of public and private sector testing and certification activities.
U.S. DOT - Ann Arbor Safety Pilot	Will expand to equip 9,000 cars with wireless communication technology turning the city of Ann Arbor into a living laboratory for connected vehicle driving.
City of Detroit Test Bed	The only urban test bed environment in the United States providing testing in dense settings with urban canyon effect and tunnels.
Michigan International Speedway Testing Facility	Offers its 1,400 acre site to suppliers and automakers to test connected, automated and autonomous technologies.

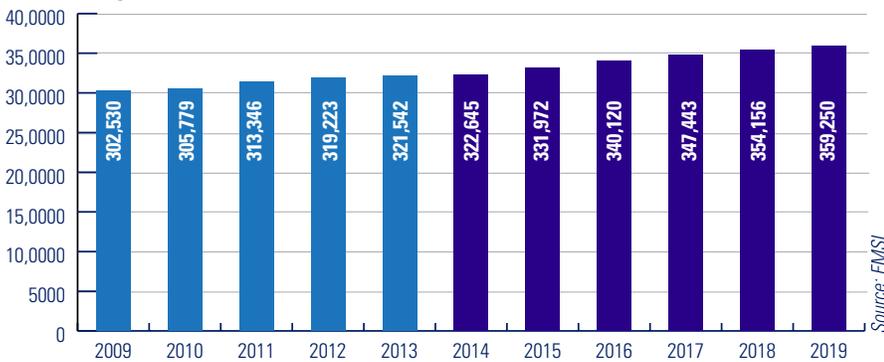


© Henry Ford Health System

Industry Spotlight: Health Care

Health care is the Detroit region's largest industry employing more than **320,000** people including nearly 20,000 physicians and specialists. Featuring **26** nationally recognized hospitals with 22 nationally ranked specialties, and a myriad of highly performing specialties – the region attracts patients from around the world.

Regional Detroit Health Care Job Growth 2009–2019



As the one industry that appeared to be recession proof, health care jobs continued to grow throughout the recent downturn, most likely due to the region's baby boomers and aging population. In 2009, the region employed 302,000 health care workers, and today that number has grown to **323,000**. It is expected to increase to 359,000 by 2019. Over the past five years, the top four fastest growth occupations – home health aides, personal care aides and nursing assistants and registered nurses – added nearly **12,000** jobs.

Looking forward, the region's leadership in health care innovation is expected to continue due in large part to its world-class research institutions. So far this year, the University of Michigan, Michigan State University and Wayne State University have been awarded **\$509.7 million** in funding by the National Institutes of Health (NIH) for research and development. In addition, the University of Michigan is one of the country's top awardees ranking sixth for funding and fourth for number of awards (as of Oct. 13, 2014). Funding by NIH to Michigan R&D facilities for 2013 was more than **\$520 million**, and YTD as of Oct. 13 is \$518 million.

CASE STUDY: Detroit's New Heart Hospital

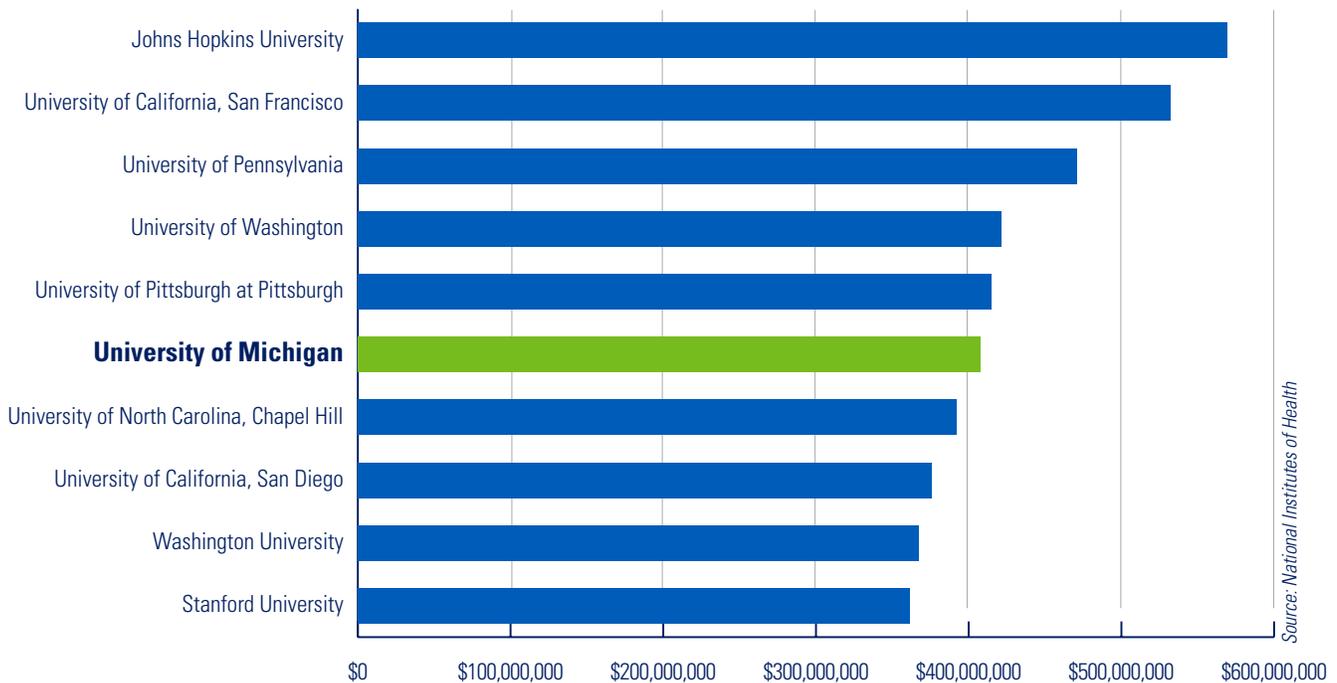
The Detroit Medical Center opened its new Heart Hospital in August housing the Cardiovascular Institute. The **\$78 million** state-of-the-art facility is one of the Great Lakes region's first dedicated cardiovascular care facilities. The 215,000 square-foot six story structure offers comprehensive cardiovascular care, including a wide range of the latest minimally invasive treatment options and preventive services allowing for faster recovery and shorter hospital stays.

The Heart Hospital includes six state-of-the-art catheterization labs and other procedure rooms to open and repair heart arteries, treat heart rhythm abnormalities and restore blood flow to the legs. The facility also has advanced imaging technologies, electrocardiogram and stress testing to diagnose cardiovascular disorders.



© Detroit Medical Center

National Institutes of Health, R&D Funding – YTD, Oct. 13, 2014





Industry Spotlight: Aerospace and Defense

With the presence of military facilities such as TACOM, TARDEC and Selfridge Air National Guard Base, the Detroit region continues to serve as the starting point for the nation’s latest military innovations, particularly in ground vehicle research. It is the place to do business in the industry and secure contracts from the Departments of Defense and Homeland Security. In 2012, more than **\$4.7 billion** in defense contracts were awarded to defense-related businesses according to the Michigan Defense Center.

Aerospace and defense industry companies also look to the Detroit region for innovation. Nearly **33 percent** of the global top 100 aerospace companies have a presence in the Detroit region. Companies such as Boeing, General Dynamic Land Systems and BAE Systems purchase from nearly 4,000 regional Detroit companies for information technology, construction, engineering services, advanced manufacturing and research and development needs.

Since 2009, the region has experienced **15 percent** growth in employment, and today, more than 90,000 people work in the aerospace and defense industry. With the region’s top-notch research universities, including the **No. 1** nationally ranked aerospace engineering graduate program at the University of Michigan, the region offers the talent required by such a high-tech industry. Additional assets such as Michigan’s 24,000 tool, dies and molds workers, the largest pool in the nation, make the region and state a vital supplier to the aerospace and defense industry.

CASE STUDY:**Michigan's Defense Corridor**

Michigan's Defense Corridor is a stretch of six miles in Macomb County that is home to **two-thirds** of all defense contractors in the state. Anchoring the corridor is the headquarters for the U.S. Army TACOM Life Cycle Management Command (LCMC), which manages every aspect of creating and maintaining equipment for the nation's troops.

TACOM LCMC is responsible for the complete life cycle – from concept through production and deployment to disposal – of vehicles, equipment, weaponry and supplies used by soldiers on the ground. It is one of the Army's largest weapon systems research, development, and sustainment organizations, providing cutting-edge ground combat, automotive, marine and armaments technologies.

TACOM LCMC awards contracts in the areas of information technology, construction, advanced engineering and other service-based solutions. In 2014, TACOM LCMC issued about **\$4.17 billion** in contracts to Michigan-based companies, \$109.7 million of which went to small business contractors. This presence provides opportunities for a wide range of companies, not always associated with defense work, such as Kellogg and Herman Miller.



© TACOM

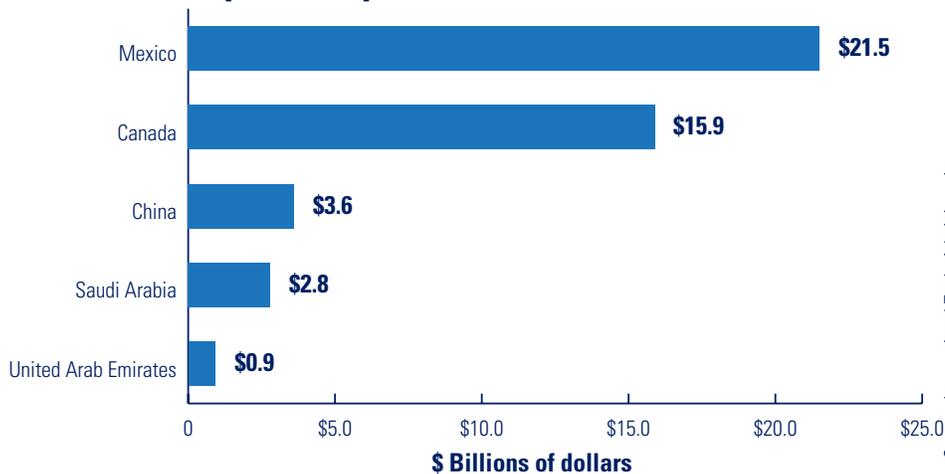
Aerospace and Defense Job Growth, Detroit Region



Industry Spotlight: Transportation, Distribution and Logistics

Serving as an international gateway to the global marketplace, the Detroit region provides first-rate transportation, distribution and logistics (TDL) infrastructure along the busiest northern border crossing on the continent. Sharing an international border with Canada, the United States' largest trade partner, the region is a hub for international trade as more than **11,000** trucks cross through Detroit and Port Huron daily.

Top Five Export Markets, 2013 (Detroit MSA)



Source: International Trade Administration

The region ranks as the fifth largest export market in the United States with companies exporting nearly **\$54 billion** in goods during 2013. That export activity supports nearly 300,000 jobs, ranking Michigan sixth in the nation. Transportation equipment is by far the region's top export, accounting for more than 63 percent of its exports, followed by machinery, excluding electrical and computer and electronic products.

Since 2009, TDL jobs have grown by more than 16 percent or nearly 12,000 jobs. TDL job growth is expected to continue over the next few years but at a slightly slower rate. With respect to the fastest growing

occupations in the industry, commercial pilots lead the way with a forecasted growth of 19 percent between 2014 and 2019, followed by captains, mates and pilots of water vessels, concierges, and avionics technicians.

The state is also home to the nation's top supply chain schools according to U.S. News and World Report. Michigan State University is home to the **No. 1** undergraduate program and **No. 2** graduate supply chain management/logistics schools in the nation.

CASE STUDY: Rush Trucking

Rush Trucking Corp. is a world-class minority owned trucking and freight transportation company headquartered in Wayne, Michigan with additional facilities located in Louisville, Kentucky; Buffalo, West Virginia; and Kansas City, Missouri. What started as a three-truck company, in 1984, has successfully grown to more than **700** tractors, **1,100** trailers, **450** employees/company drivers, and **400** owner-operators.

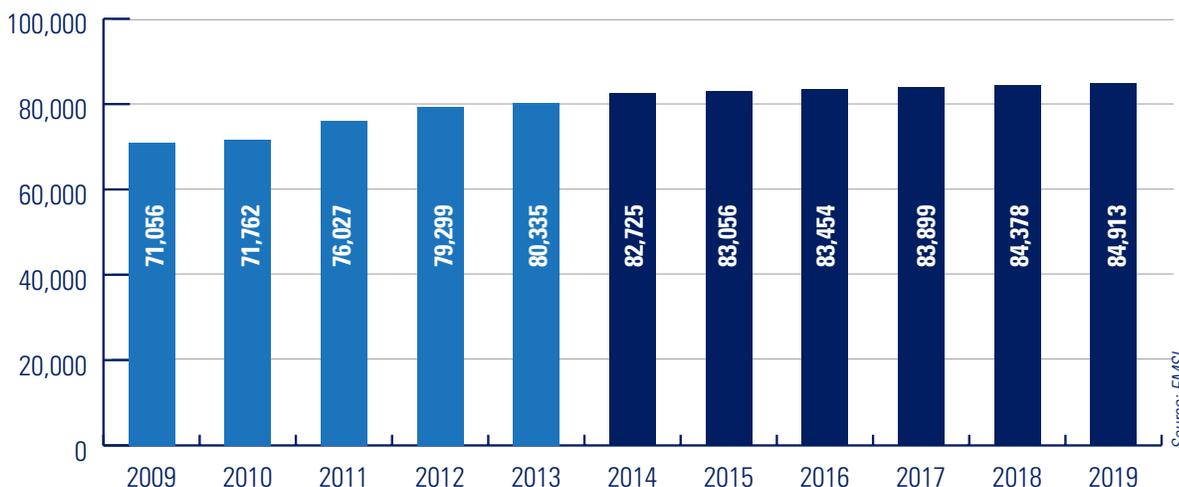
As an industry leader for cost effective truckload and milk-run transportation for short-haul, long-haul and just-in-time operations, Rush continues to serve a growing list of clients including Ford Motor Co., Chrysler Group LLC, General Motors Co., Toyota, Honda, and many Tier 1 automotive suppliers.

Acquisitions over the past decade have expanded The Rush Group to include Blazer Truck Lines, Expedited Delivery Service, Raycan Transport (a Canadian carrier) and Rush Distribution Services. Most recently, The Rush Group has expanded to form a joint venture, Dakkota Integrated Systems LLC., with Intier Automotive, a subsidiary of the Canadian firm Magna International.



© Rush Trucking Corp.

Regional Detroit TDL Jobs Growth (2009–2019)





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Industry Spotlight: Information Technology

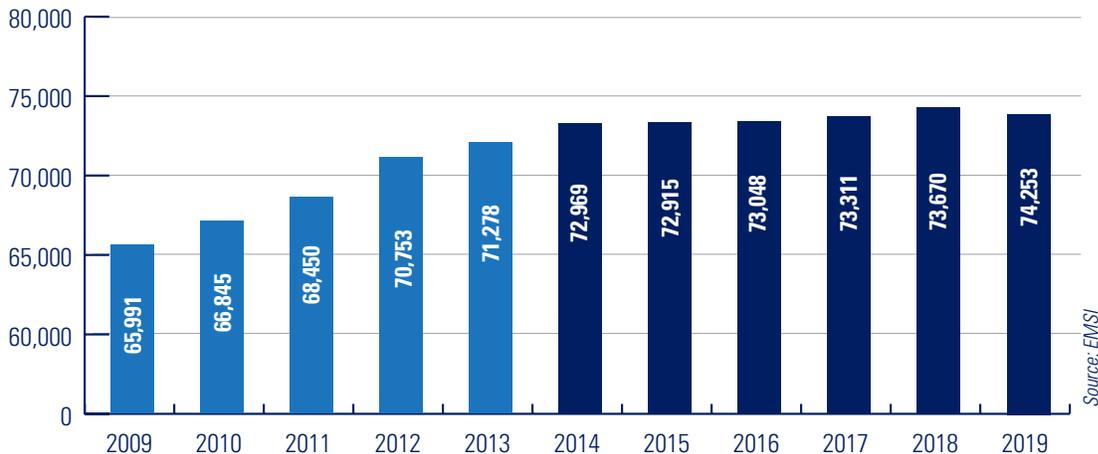
Supported by a highly recruited workforce and renowned institutions of higher education, the Detroit region is emerging as an information technology hotbed with nearly 73,000 individuals working in more than 3,000 IT companies. Since 2009, IT job growth in the region has outpaced the nation by nearly 2.5 percent and is expected to grow another 2 percent by 2019.

From 2009 to 2014, the top five growth IT occupations added nearly 6,000 jobs to the region with CNC machine tool programmers leading that growth at 48 percent, followed by computer controlled machine tool operators, architectural and engineering managers, web developers and software developers. Information security analysts lead the forecasted fastest growing IT occupations into 2019.

The region’s universities and institutions of higher education play an important role in sustaining the talent pipeline for the industry while driving the innovation and research responsible for growth. More than 56 institutions offer computer and information science and support services degrees, graduating more than 2,500 qualified candidates each year to the marketplace.

In addition to graduating highly skilled workers, these institutions power ground-breaking research in the areas of autonomous vehicles, robotics, information, artificial intelligence, machine vision and pattern recognition and software engineering.

Information Technology Jobs Growth 2009–2019



CASE STUDY: Barracuda Networks

With both security and data protection emerging as key drivers of the IT sector, Barracuda is thriving in downtown Ann Arbor, where it employs about 220 workers. The Campbell, California-based security and storage company employs 1,200 globally and supports approximately 150,000 organizations worldwide providing comprehensive content and network security, data protection and application delivery solutions.

Availability of talent in Ann Arbor served as a major factor in Barracuda locating in the region. Fueled by growth in the industry, Barracuda has created a “Silicon Valley-type campus” in the city, where it plans to eventually employ 300 to 500 people. The company creates on-premises, cloud and hybrid solutions designed to help simplify IT for mid-sized organizations. Barracuda offers more than a dozen product lines for network security, email and web filtering, application delivery, backup, archiving, eSignature, and file sync and share - and monitors network attacks 24 hours a day, seven days a week from its Ann Arbor office.



Computer Science and Information R&D Laboratories

Oakland University	Center for Robotics and Advanced Automation (CRAA)
University of Michigan	Artificial Intelligence Laboratory Center for Information Technology Integration (CITI) School for Information Labs
University of Michigan - Dearborn	Database and Multimedia Systems Laboratory Research Laboratory for Sustainable Systems Security and Forensics Research Laboratory Vehicular Networking Systems Research Laboratory Virtual Engineering Laboratory Wireless and Cyber Security Laboratory WiSeMAN Research Lab
University of Michigan - Flint	Undergraduate Research Opportunity Program
Walsh College	Information Assurance Center (National Center of Excellence)
Wayne State University	Institute for Information Technology – 13 laboratories



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