
Employment in Michigan's Transportation and Warehousing Industry

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The Transportation and warehousing industry is a vital part of a thriving and dynamic economy. It is the network that links both humans and goods to locations, allowing for increased business activity. This article will examine Michigan employment in this industry and related occupations, while also exploring the industry's strengths and challenges.

Industry Employment – Employment in the Michigan *Transportation and warehousing* industry (NAICS 48 & 49) measured 105,550 jobs in the second quarter of 2014. This comprised 3.0 percent of Michigan's 3,549,200 private jobs.

Michigan's *Transportation and warehousing* industry and Michigan's total private jobs both followed similar employment trends from 2000 until diverging after the Great Recession. Both underwent slow but steady employment declines from the second quarter of 2000 to the second quarter of 2008, each averaging approximately a 1.0 percent contraction per year. During the Great Recession, employment declined heavily in both, leaving total private payrolls 20 percent smaller than 2000 and *Transportation and warehousing* payrolls lower by 17.4 percent. However, since that point, *Transportation and warehousing* has rebounded significantly stronger than the Michigan private economy in terms of employment, growing by 19.5 percent, compared to 12.5 percent for total private

payrolls. As a result, total private employment levels in Michigan are still 10.5 percent below second quarter 2000 highs, but *Transportation and warehousing* employment is only 1.0 percent smaller due to its impressive recovery after the recession.

When compared to the U.S. *Transportation and warehousing* industry, Michigan is smaller, in terms of employment concentration, as evidenced by a 0.79 location quotient (LQ). This metric compares an area's industry employment concentration to that of a larger area; in this case Michigan compared to the U.S. A location quotient of 1 signifies the percent of the smaller area's employment located in an industry is the same as the ratio for the larger area. Thus, Michigan has slightly less of its employment comprised in the *Transportation and warehousing* industry than the U.S. economy.

Michigan's *Transportation and warehousing* industry registered 105,550 jobs in the second quarter of 2014, comprising 3 percent of the Michigan private workforce.

Within Michigan, two Metropolitan Statistical Areas (MSA) stand out in terms of having high levels of employment concentrated in the *Transportation and warehousing* industry; Detroit-Warren-Dearborn MSA (1.10 LQ) and Battle Creek MSA (1.24 LQ). Approximately 50 percent of Michigan's *Transportation and warehousing* employment is located in the Detroit-Warren-Dearborn MSA.

Looking specifically into the subsectors of Michigan's *Transportation and warehousing* industry, *Truck transportation* (NAICS 484) is the

largest. This subsector recorded 43,060 jobs in the second quarter of 2014, with roughly 75 percent of this employment located in *General trucking* and the remaining in *Specialized trucking*. This subsector has seen incredible growth since the second quarter of 2001 and after the Great Recession, increasing employment by 16.7 percent and 28.6 percent, respectively.

The next largest subsector of the Michigan *Transportation and warehousing* industry is *Warehousing*

and storage (NAICS 493), measuring 14,990 jobs in the second quarter of 2014. This subsector was heavily impacted by the Great Recession, contracting by 23.0 percent. However, since that point *Warehousing and storage* has steadily grown and is now only approximately 400 jobs under 2001 employment levels.

Another important *Transportation and warehousing* subsector is *Air transportation* (NAICS 481). Employment in this subsector registered at 13,260 jobs in the second quarter of 2014. However, this subsector has experienced a significant decline in employment since the second quarter of 2001, contracting by 27.4 percent, due to jobs not returning after large layoffs and consolidations at numerous airline companies over the past decade and a half.

Looking towards the future, the *Transportation and warehousing* industry continues to have a favorable growth outlook, as the industry is expected to grow by 10.6 percent from 2012 to 2022. This outpaces Michigan's all industry projected growth of 8.7 percent. Three of the subsectors leading the way for the relatively strong industry growth projection are *Support*

activities for transportation (18.8 percent), *Transit and ground passenger transport* (17.4 percent), and *Truck transportation* (16.0 percent). On the opposite side of the spectrum, the *Air transportation* subsector is expected to contract by 4.9 percent from 2012 to 2022.

However, this growth will not materialize into jobs without a supply of trained labor. A

53.3 percent of the workforce in *Transportation and warehousing* is 45 years or older, while this figure is only 44.9 percent of Michigan as a whole.

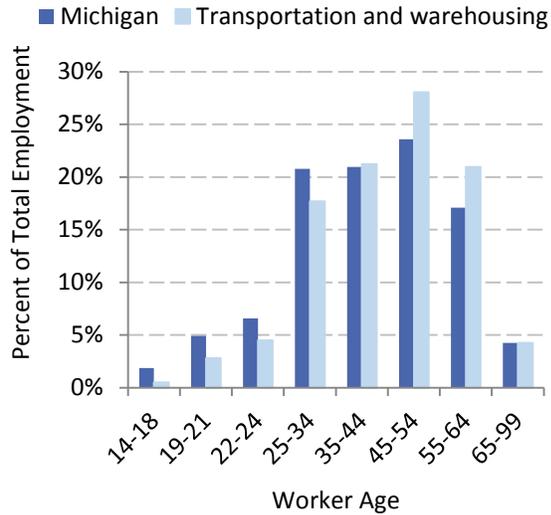
significant challenge this industry will face in continuing its growth is an aging workforce. Through a partnership between the U.S.

Census Bureau and Michigan Bureau of Labor Market Information and Strategic Initiatives, detailed industry age demographics are available. According to this database, 53.3 percent of employment in *Transportation and warehousing* is held by individuals who are 45 and older. This is in stark comparison to Michigan overall, where 44.9 percent of jobs are held by individuals 45 or older. In particular, both the *Air transportation* and *Transit and ground passenger transportation* subsectors significantly employ an older workforce, with 63.5 percent and 67.6 percent of employment being held by individuals 45 or older, respectively. These data are backed up by anecdotes from industry experts noting one of their greatest challenges for long-term viability and growth is attracting a younger workforce.

One way to attract younger workers is through highlighting that these future opportunities are expected to pay slightly above average in addition to requiring moderate levels of education. First looking at pay, in the second quarter of 2014, Michigan private establishments paid out almost \$41 billion in wages to workers, 3.2 percent of which were concentrated in the

Transportation and warehousing industry. This is on par with its share of employment (3.0 percent).

Figure 1: Employment by Age in the Transportation and Warehousing Industry

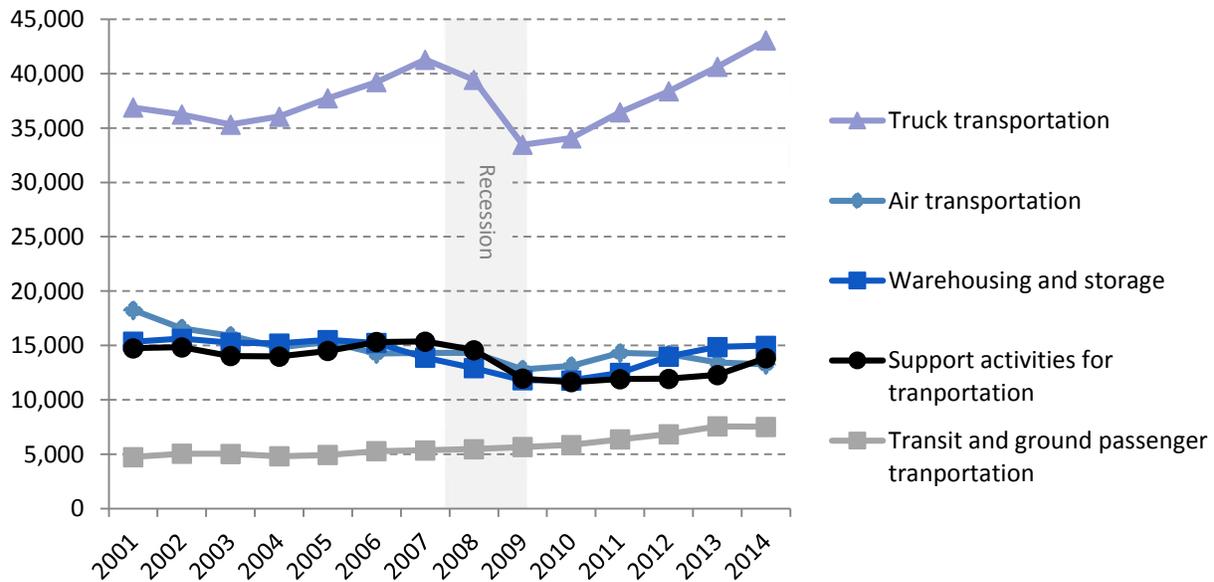


Source: Local Employment and Household Dynamics

Air transportation is the leading subsector in Michigan in terms of paying the largest amount of wages relative to the subsector's employment level. Specifically, in the second quarter of 2014 *Air Transportation* only accounted for 12.6 percent of the *Transportation and warehousing* industry's employment. However, it paid 19 percent of the industry's wages. On the opposite side of the spectrum, *Transit and ground passenger transportation* accounted for 7.1 percent of employment, but only paid 3.5 percent of the industry's total wages.

While the industry's total wages paid is not overwhelming, when coupled with the industry's education levels a competitive advantage is found. In the *Transportation and warehousing* industry only 27 percent of the workforce has a bachelor's degree or higher, whereas for Michigan overall this figure is 37.5 percent. Intuitively, one would expect a less-educated workforce would be correlated with lower-than-average wages. However, in the *Transportation and warehousing* industry this is not the case.

Figure 2: Employment in Selected Transportation Subsectors since 2001 (2nd Quarter)



Source: Quarterly Census of Employment and Wages (QCEW)



Occupational Employment – Of the 4,074,000 employed across over 800 occupations in Michigan in 2014, 120,090 individuals were employed across 141 occupations in the Michigan *Transportation and warehousing* industry. This constituted a 2.9 percent share of all occupational employment.

Two main occupational groups, *Transportation and material moving occupations* (53 percent) and *Office and administrative support occupations* (30 percent), accounted for over 80 percent of the total occupational employment.

The largest single occupation in the industry is *Heavy and tractor-trailer truck drivers*, which employs 28,520 or 23.7 percent of the industry. The next two largest occupations are *Laborers and freight, stock, and material movers, hand* (10,980) and *Light truck or delivery services drivers* (7,290).

Occupations in this industry also pay slightly more than occupations in the economy as a whole. Specifically, jobs pay a \$21.03/hour weighted average in the *Transportation and warehousing* industry compared to a \$20.00/hour weighted average for all occupations. Given that many jobs in the industry do not have strong education demands, as noted above, occupations in *Transportation and warehousing* can provide great opportunities for an individual looking for a well-paying job that does not have high education requirements.

In addition, there are also occupational opportunities for workers with a Bachelor's

degree or above. Particularly high-paying and high-employment occupations that require at least a bachelor's degree include *Transportation, storage, and distribution managers* (\$45.53/hour), *Logisticians* (\$34.70/hour), and *First-line supervisors of mechanics, installers, and repairers* (\$31.60/hour).

New opportunities in the *Transportation and warehousing* industry are expected to require a similar set of key skills to the all occupational average. In fact, four out of the top five most frequently listed skills (active listening, speaking, critical thinking, and reading comprehension) are the same for both *Transportation and warehousing* and the all occupational average. As a result of these requirements, this more universal skill set could allow workers in other industries to transition into the *Transportation and warehousing* industry more quickly

Conclusion - With over 100,000 jobs, it is clear the *Transportation and warehousing* industry is an important sector of the Michigan economy and one that pays relatively well. In addition, it is also projected to continue to be an important industry given its favorable growth outlook. However, the industry will face a major challenge in the coming years with an aging workforce. It is vital that in order for new opportunities to be met with a trained labor supply, potential workers are aware of the strengths the industry has to offer.

Table 1: Estimated Fastest Growing Transportation Related Occupations

Occupation	2014 Employment	Percent Growth 2012 to 2022	Median Hourly Wage	Minimum Training	Top 5 Skills Necessary
<i>Logisticians</i>	1,100	20.6%	\$34.74	Bachelor's degree	Critical Thinking Active Listening Reading Comprehension Monitoring Complex Problem Solving
<i>Cargo and freight agents</i>	1,270	18.3%	\$18.40	High School diploma and Short-term OJT	Speaking Active Listening Critical Thinking Monitoring Service Orientation
<i>Heavy and tractor-trailer truck drivers</i>	28,520	14.3%	\$19.73	Postsecondary non-degree award and Short-term OJT	Operation and Control Operation Monitoring Monitoring Troubleshooting Judgment and Decision Making
<i>Dispatchers, except police, fire, and ambulance</i>	2,350	10.7%	\$17.51	High School diploma and Short-term OJT	Active Listening Speaking Coordination Reading Comprehension Monitoring
<i>General and operations managers</i>	1,570	10.5%	\$50.49	Bachelor's degree	Reading Comprehension Active Listening Speaking Critical Thinking Monitoring
<i>Customer service representatives</i>	1,140	10.3%	\$16.96	High School diploma and Short-term OJT	Active Listening Speaking Service Orientation Reading Comprehension Critical Thinking

Source: Occupational Long-Term Employment Projections 2012-2022

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