



WORKFORCE INTELLIGENCE NETWORK

QUARTERLY REPORT · **WIN REGION** · Q2 2015



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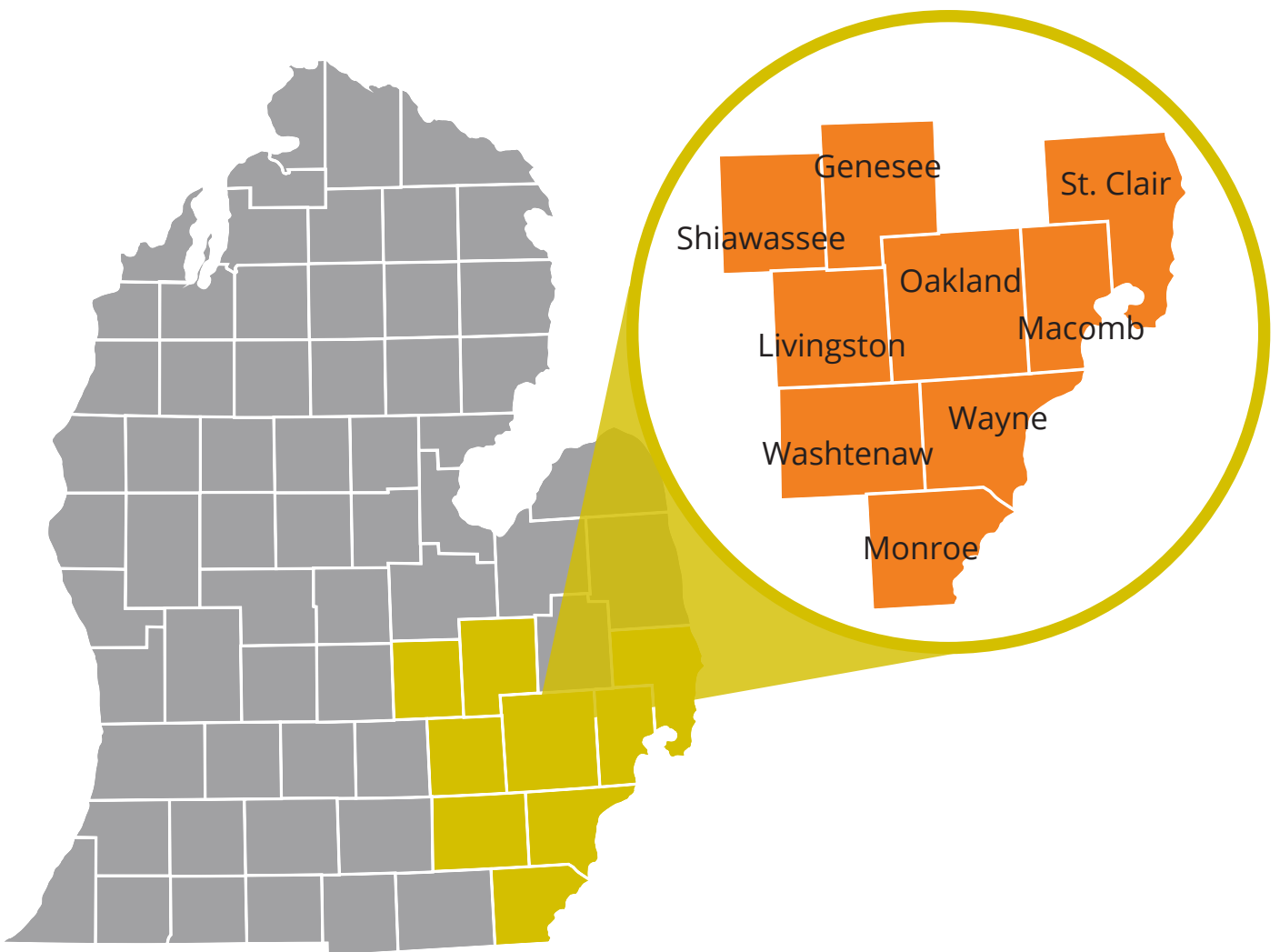
Labor Market and Demand Summary

Data Notes and Sources



WIN region includes 9 counties:

**Genesee, Livingston, Monroe, Macomb, Oakland,
Shiawassee, St. Clair, Washtenaw, and Wayne.**
This report focuses on the 9-county region as a whole.





SECTION ONE

LABOR MARKET AND DEMAND OVERVIEW



TOP 20 JOBS IN DEMAND

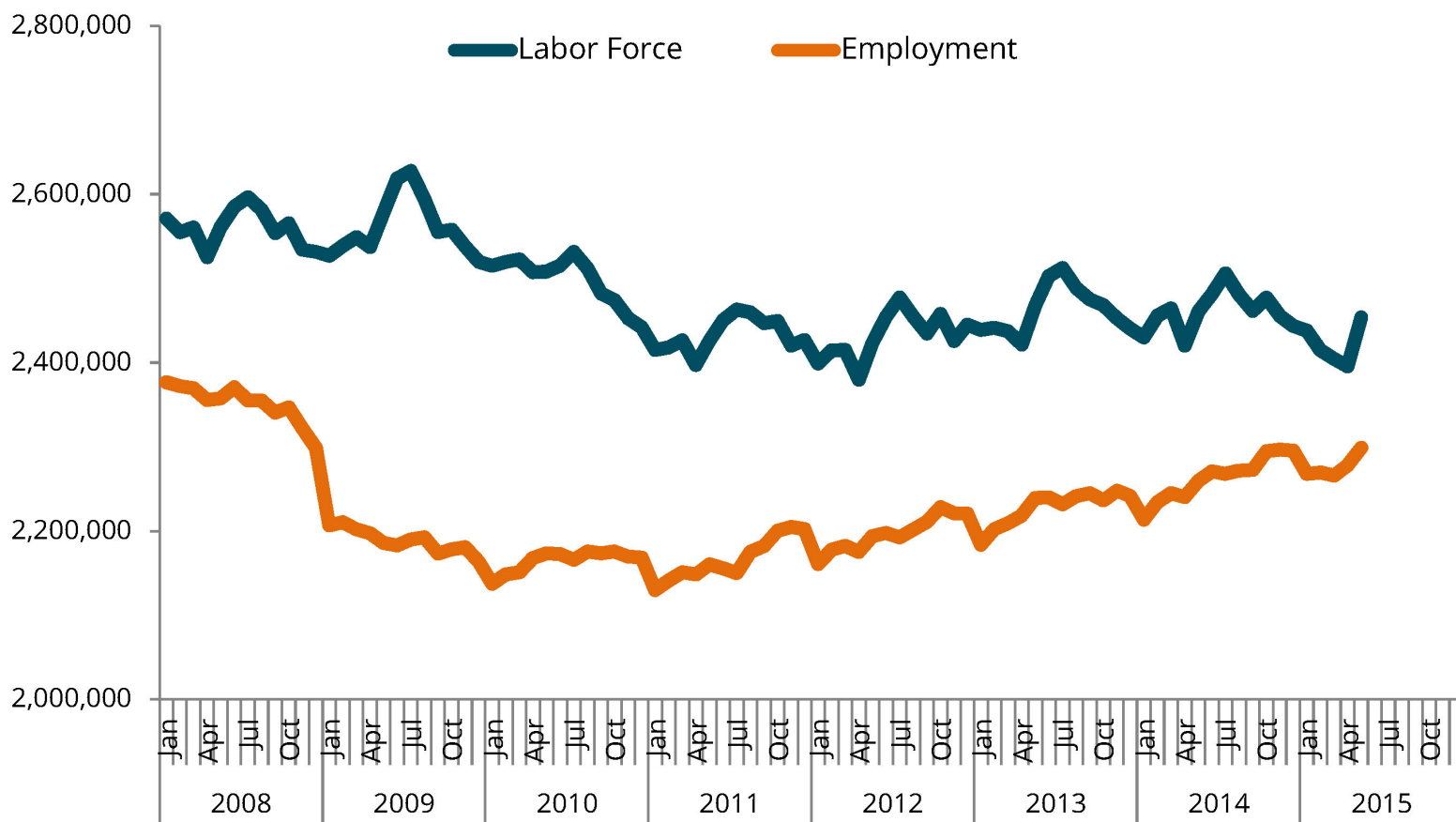
APRIL - JUNE 2015



The WIN region's top in-demand occupations have been relatively unchanged for over a year running, but the occupations that comprise the list shift in rank order depending on the point in the business cycle. Software developers – applications, registered nurses, and heavy and tractor-trailer truck drivers – are the top in-demand positions for another quarter running. During Q2 2015, the most notable shift in the rankings occurred in postings related to sales. Sales representatives, wholesale and manufacturing, rose to the fourth most in-demand occupation with 2,868 postings, up 12% from 2,560 and number 5 in the rankings in Q1 2015). This sales occupation traditionally has ranked just behind retail salespersons. Other notable trends include the following:

- Demand for software developers outpaced all other jobs with 5,649 postings, up from 5,090 online ads (nearly 11%) in Q1 2015.
- Demand for truck drivers surged almost 30% to 4,097 from 3,158 postings in Q1 2015, maintaining its 3rd place position.
- Postings for registered nurses increased almost 22% to 4,519, up from 3,707 postings in Q1 2015, marking yet another new high for the occupation.

EMPLOYMENT AND LABOR FORCE



Source: Bureau of Labor Statistics

Analysis: Workforce Intelligence Network

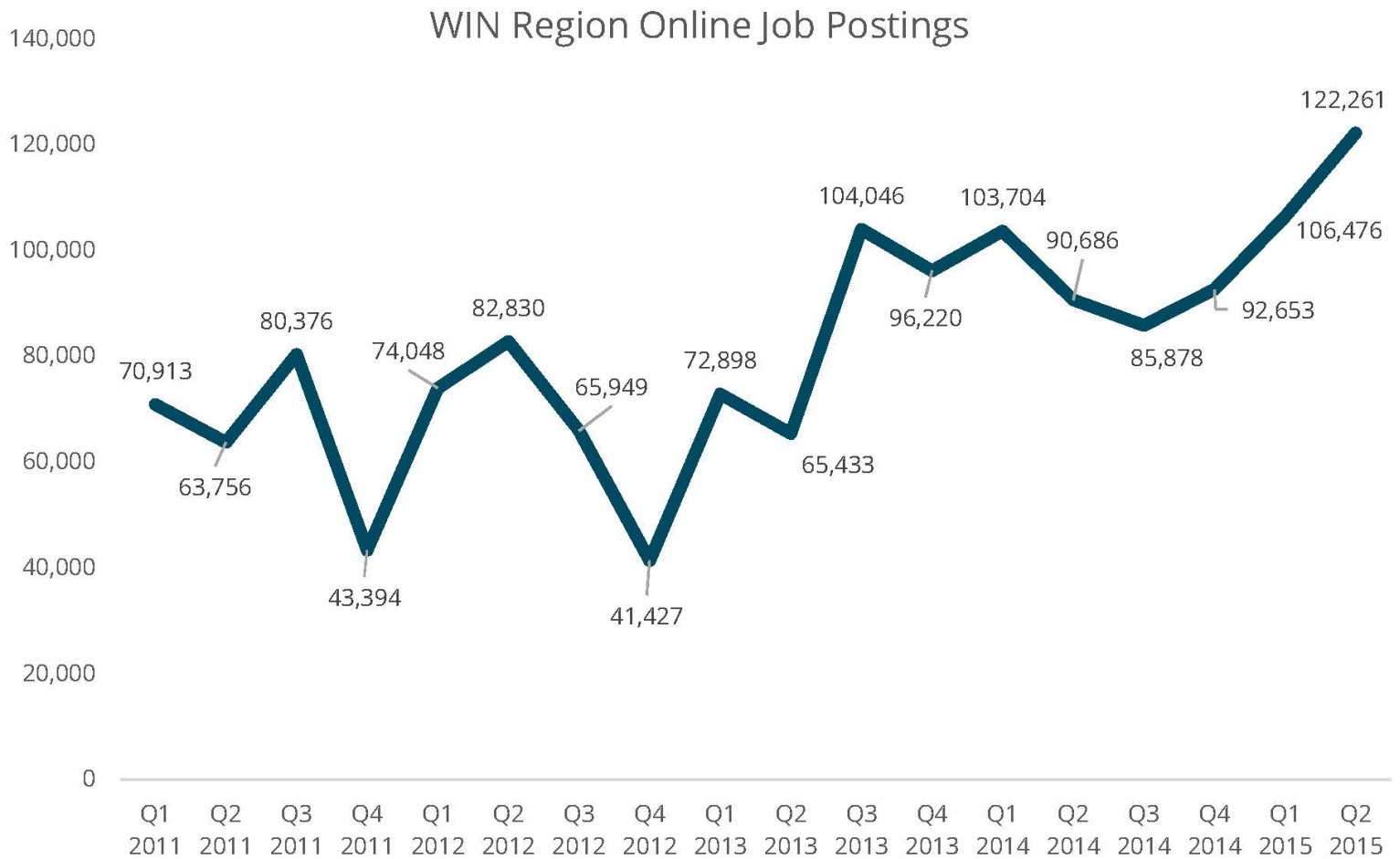
The 2015 data demonstrated further increases in employment in the region and continued stagnation in the labor force. In any given year, the first quarter traditionally reflects the lowest employment throughout the year. The same has held true so far for 2015: Q2 employment expanded 0.9%, adding 20,684 individuals to the region's payrolls. Compared to Q2 2014, average employment is roughly 30,000 individuals higher, a positive outcome over last year.

While employment continued its growth path year over year, the labor force did not. Since 2011, the labor force has fluctuated on a standard business cycle but has not recovered from the large drop experienced during the recession. For the past four years, the labor force has hovered around 2,450,000 individuals, and 2015 data shows no change from this average.

With growing employment and no change in the labor force, the unemployment rate in the region continued to drop. During Q2 2015, the average unemployment rate was 5.6%, close to the state average of 5.5%. As the labor force was unchanged, the drop in unemployment in Q2 2015 can be attributed to job growth.

EMPLOYER DEMAND

APRIL - JUNE 2015



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

With 122,261 online job ads, Q2 2015 postings are at an all-time high. Postings have continued to grow in a linear pattern since the most recent valley in Q3 2014, when the number was only 85,878. Second quarter often marks a decline in job postings compared to first quarter, but 2015 so far has been unusual. WIN anticipates the third-quarter pattern to re-emerge, with postings peaking for the year and marking another quarter of growth.

Every quarter WIN analyzes five occupational clusters: skilled trades, engineering & design, information technology, health care, and retail and hospitality. Together, these clusters accounted for 45% of all Q2 2015 online job ads in the region, and each experienced posting gains, of at least 5% compared to Q1 2015.

During Q1 2015, 100% of the growth in total online job postings occurred in the WIN-analyzed clusters. In Q2 2015, however, only 52% of the increase in online postings occurred in WIN-analyzed clusters. The remaining 48% of posting activity occurred in occupations not included in WIN's occupational clusters, with most notable growth occurring in the following areas: heavy and tractor-trailer truck drivers, maintenance and repair workers, managers, business intelligence analysts, and, administrative assistants

EMPLOYMENT AND LABOR FORCE OVERVIEW

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 To-Date
Labor Force	2,498,558	2,433,313	2,431,877	2,462,206	2,461,351	2,421,299
Employment	2,164,931	2,166,735	2,196,875	2,228,130	2,263,490	2,276,045
Unemployment	333,627	266,577	235,002	234,076	197,861	145,254
Unemployment Rate	13.4%	11.0%	9.7%	9.5%	8.0%	6.0%

EMPLOYMENT AND LABOR FORCE OVERVIEW

3rd Quarter 2014	4th Quarter 2014	1st Quarter 2015	2nd Quarter 2015	Change from 1st Quarter 2015	Percent Change from 1st Quarter 2015
2,482,562	2,458,705	2,419,112	2,424,581	5,469	0.2%
2,270,807	2,295,535	2,267,771	2,288,456	20,684	0.9%
211,754	163,170	151,341	136,125	-15,216	-10.1%
8.5%	6.6%	6.3%	5.6%	-0.6%	na






SECTION TWO

OCCUPATIONAL CLUSTERS

WIN REGION DEMAND OVERVIEW

Clusters	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Change over time	Share of Total Postings Q2 2015	Annual Change Q2 2014-Q2 2015	Quarter Growth Q1 2015-Q2 2015
Total	90,686	85,878	92,653	106,476	122,261			34.8%	14.8%
Skilled Trades & Technicians	3,109	3,030	2,693	3,778	4,020		3.3%	29.3%	6.4%
Engineers & Designers	6,158	6,102	5,578	8,237	10,225		8.4%	66.0%	24.1%
IT	22,291	10,969	10,626	16,905	17,893		14.6%	-19.7%	5.8%
Health Care	8,369	8,815	9,953	12,408	15,170		12.4%	81.3%	22.3%
Retail & Hospitality	21,628	18,492	18,382	19,816	22,037		18.0%	1.9%	11.2%

	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Share of Total Postings Q2 2015	Change Over Time	Annual Change Q2 2014 - Q2 2015	Quarter Growth Q1 2015-Q2 2015
WIN-Region Total	90,686	85,878	92,653	106,476	122,261			34.8%	14.8%
Genesee & Shiawassee	4,966	4,390	4,398	4,250	4,821	3.9%		-2.9%	13.4%
Livingston	1,370	1,379	1,519	1,905	2,102	1.7%		53.4%	10.3%
Macomb	9,437	9,508	9,640	11,737	13,819	11.3%		46.4%	17.7%
Monroe	1,487	1,558	1,834	1,557	1,688	1.4%		13.5%	8.4%
Oakland	28,032	26,831	26,397	33,829	40,337	33.0%		43.9%	19.2%
St. Clair	1,341	1,385	1,612	1,513	1,647	1.3%		22.8%	8.9%
Washtenaw	10,952	9,408	8,870	10,617	11,380	9.3%		3.9%	7.2%
Wayne	33,101	31,419	38,383	41,068	46,093	37.7%		39.2%	12.2%
Detroit	17,493	15,413	20,930	21,859	23,549	19.3%		34.6%	7.7%
Outer Wayne	15,608	16,006	17,453	19,209	22,544	18.4%		44.4%	17.4%



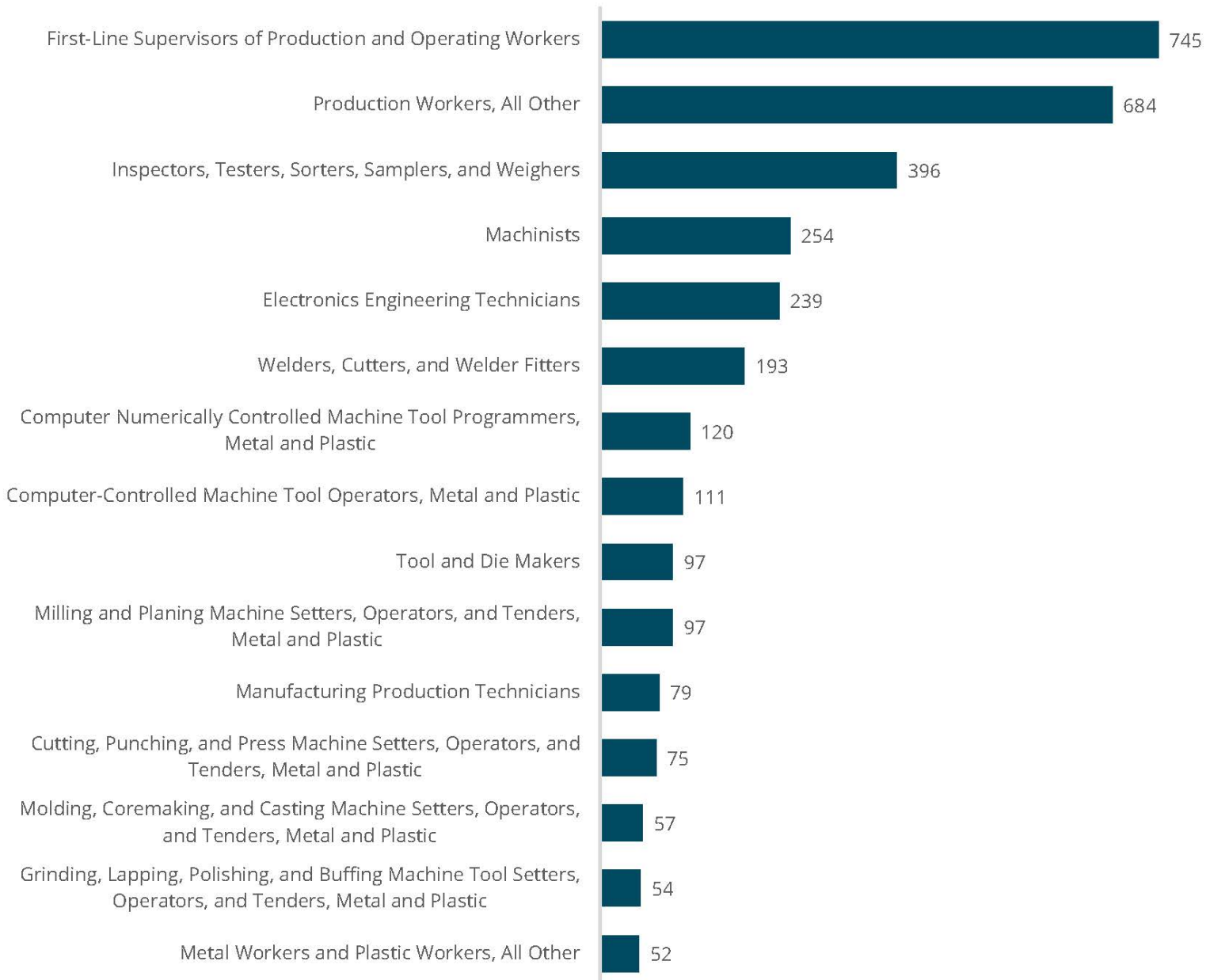
ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS *WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country. In 2014, skilled trades employment reached 104,229 individuals in the WIN region. NOTE: Skilled trades related to construction and repair are not included in this cluster, as the focus is on advanced manufacturing.*

First-line supervisors of production and operating workers is once again the top job in the skilled trades with 745 postings in Q2 2015, up 40% from 533 postings in Q1 2015. This occupation has retained its top position since Q2 2014 and has continued to grow in demand since then, from only 414 postings. Employer postings for this occupation signal a need for management in the skilled trades. CNC machinists were previously the second most in-demand job but have fallen to seventh, moving from 480 postings in Q1 2015 to 120 postings (a 75% decline) in Q2.

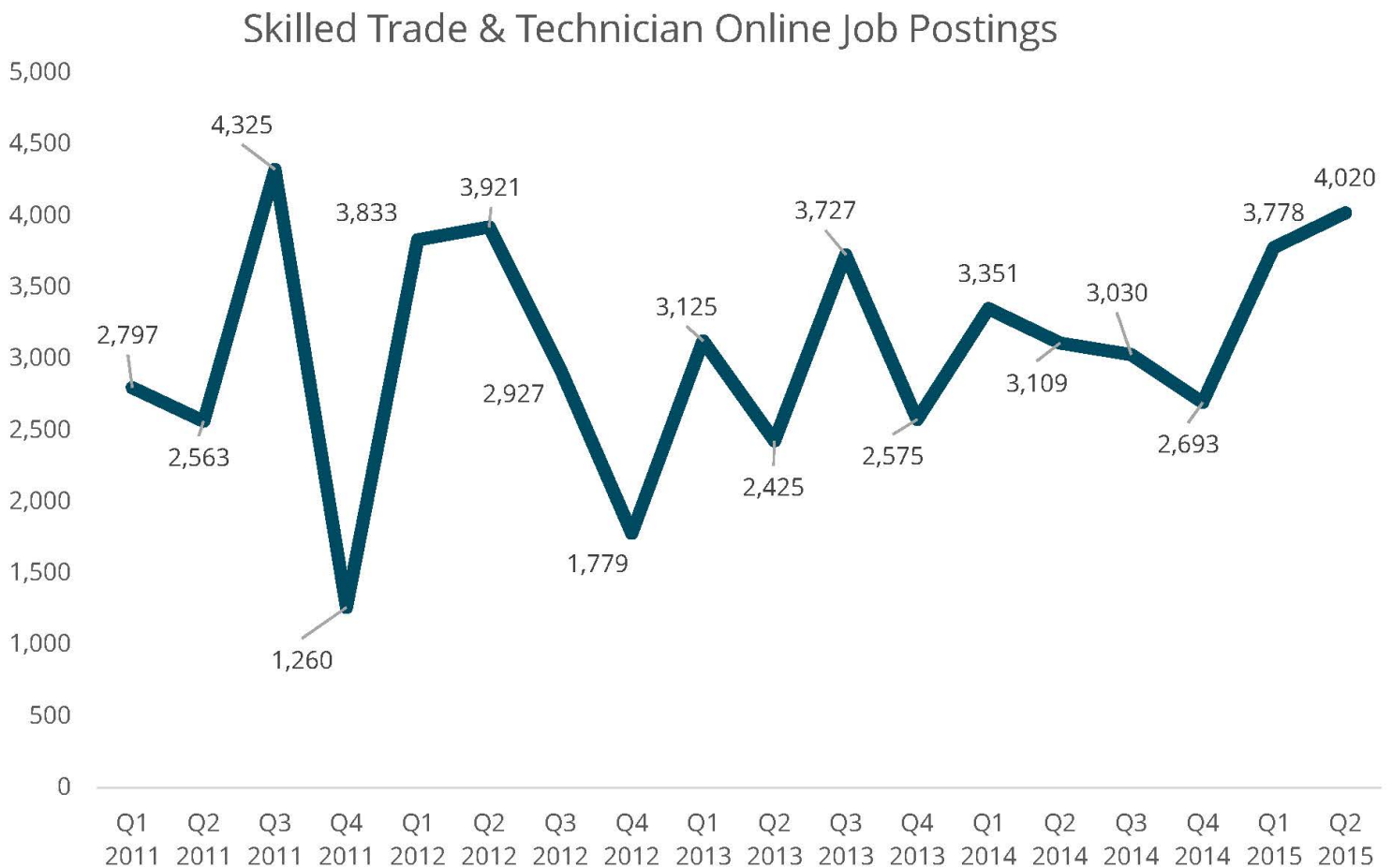
ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: TOP JOBS



ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Similar to the total postings in the WIN region, skilled trade and technician postings have increased since last quarter, but overall growth in demand for this occupational grouping has slowed. In Q1 2015, employers added 1,085 postings, but in Q2 2015, employers added 242 postings (a decrease of almost 78%). While postings have slowed, modest growth continues to signal need for skilled trade workers in manufacturing. Of total job postings in the WIN region, 3.3% are related to skilled trade occupations in manufacturing.

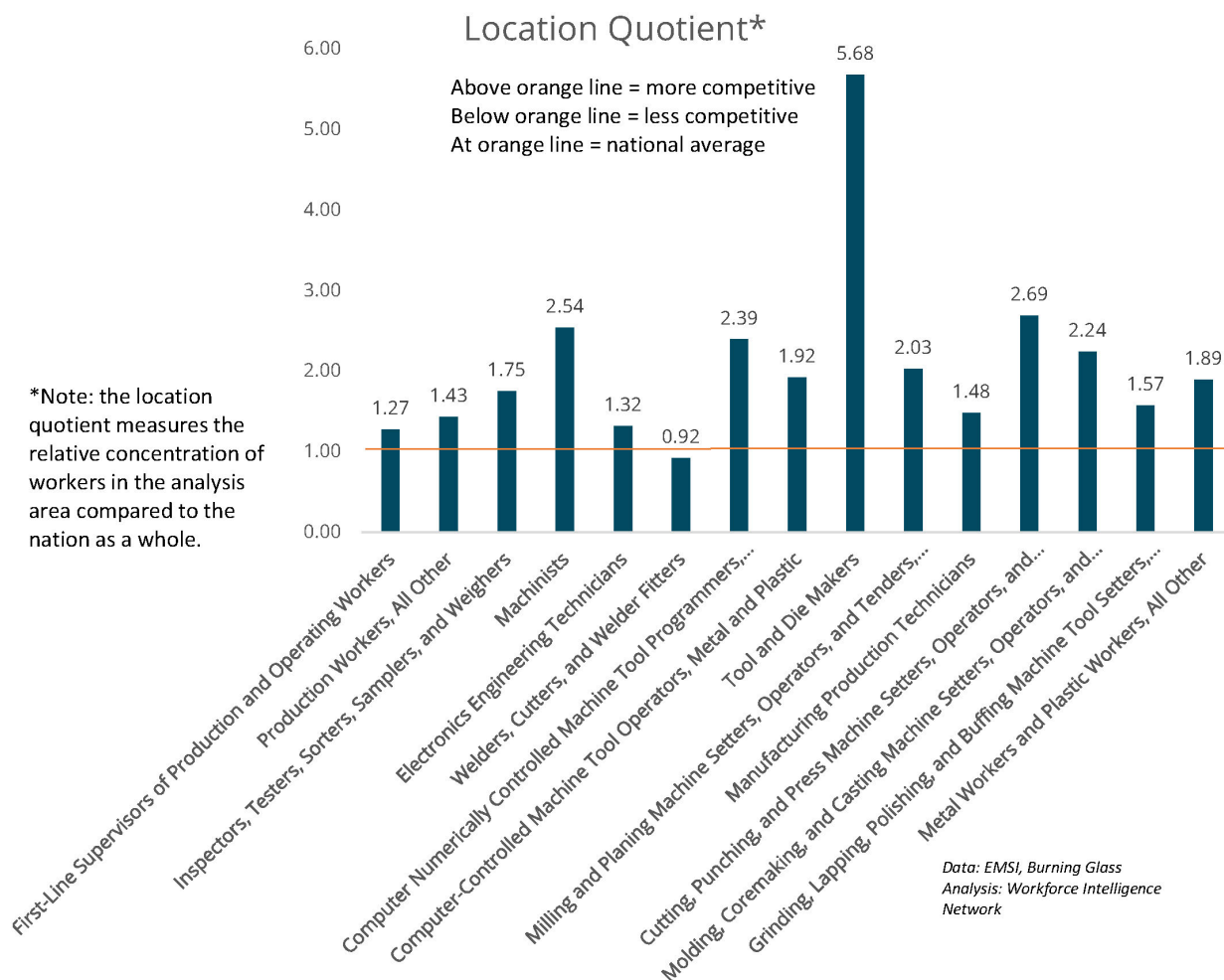
The WIN region has a competitive edge in the skilled trades with nearly every top in-demand job at a higher concentration of workers than the rest of the nation. The fourth most in-demand job, machinists, has a location quotient of 2.54, noting that the region's concentration of machinists is 154% higher than the average U.S. community.

Skilled trade jobs also allow workers to earn a living wage, with the median hourly rate above \$15 for nearly every in-demand job. Starting wages (10th percentile) do not always meet the living wage standard, but all positions offer upward wage growth.

Many skilled trade jobs do not require a degree but instead, a special certification and on-the-job training. Technician positions require an associate's degree in engineering. While there are grads in the area with training related to the top skilled trade jobs, there are not enough to fill all open positions, as employer-demand for workers continues to increase, and the current workforce approaches retirement age.

ADVANCED MANUFACTURING

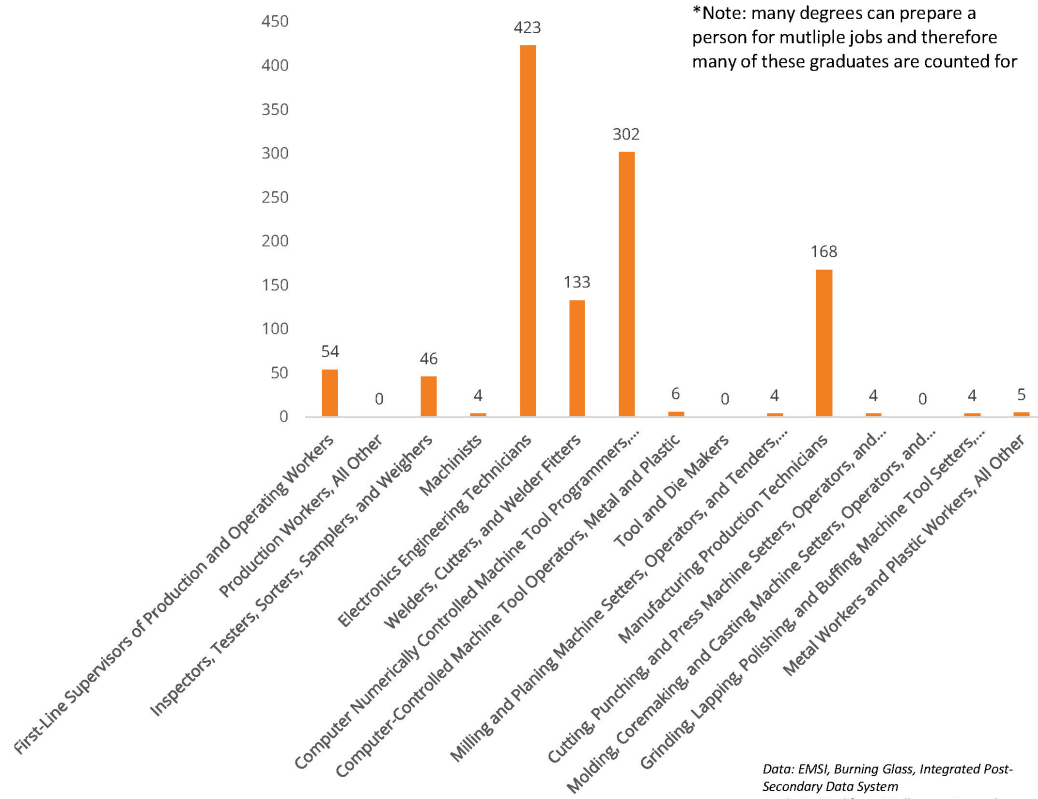
SKILLED TRADES AND TECHNICIANS: TOP 15 JOBS LOCATION QUOTIENT AND WAGES



ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
51-1011	First-Line Supervisors of Production and Operating Workers	\$18.27	\$22.56	\$30.79	\$37.93	\$45.77
51-9199	Production Workers, All Other	\$9.69	\$12.61	\$16.45	\$18.84	\$23.34
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$10.48	\$13.15	\$18.66	\$23.71	\$28.47
51-4041	Machinists	\$12.56	\$16.29	\$21.36	\$26.41	\$32.38
17-3023	Electronics Engineering Technicians	\$14.58	\$17.54	\$23.92	\$30.16	\$35.03
51-4121	Welders, Cutters, and Welder Fitters	\$12.18	\$14.57	\$18.28	\$21.47	\$26.09
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$15.85	\$18.40	\$23.78	\$28.38	\$32.88
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$10.76	\$13.22	\$18.61	\$22.82	\$28.44
51-4111	Tool and Die Makers	\$18.14	\$22.56	\$27.19	\$33.06	\$35.72
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	\$12.17	\$13.91	\$17.83	\$20.87	\$24.28
17-3029	Manufacturing Production Technicians	\$15.51	\$19.77	\$26.98	\$32.75	\$40.61
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$10.98	\$13.51	\$18.73	\$23.78	\$28.89
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	\$8.97	\$10.32	\$13.84	\$15.70	\$20.88
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$11.24	\$15.13	\$17.91	\$21.21	\$24.39
51-4199	Metal Workers and Plastic Workers, All Other	\$9.67	\$11.21	\$14.47	\$17.08	\$20.94


SKILLED TRADES AND TECHNICIANS: TOP 15 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs*
(2013)



Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 years	None
51-4011	Production Workers, All Other	High school diploma or equivalent	None	Moderate-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	None	Moderate-term on-the-job training
51-9199	Machinists	High school diploma or equivalent	None	Long-term on-the-job training
51-4121	Electronics Engineering Technicians	Associate's degree	None	None
17-3023	Welders, Cutters, and Welder Fitters	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4035	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	High school diploma or equivalent	None	Long-term on-the-job training
51-4041	Computer-Controlled Machine Tool Operators, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4012	Tool and Die Makers	High school diploma or equivalent	None	Long-term on-the-job training
51-2092	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4031	Manufacturing Production Technicians	Associate's degree	None	None
51-4111	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4199	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
17-3029	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4072	Metal Workers and Plastic Workers, All Other	High school diploma or equivalent	None	Moderate-term on-the-job training

A group of four professionals, three men and one woman, are wearing blue hard hats and business attire. They are looking down at a document or tablet they are holding together. The background is a bright, slightly blurred outdoor setting.

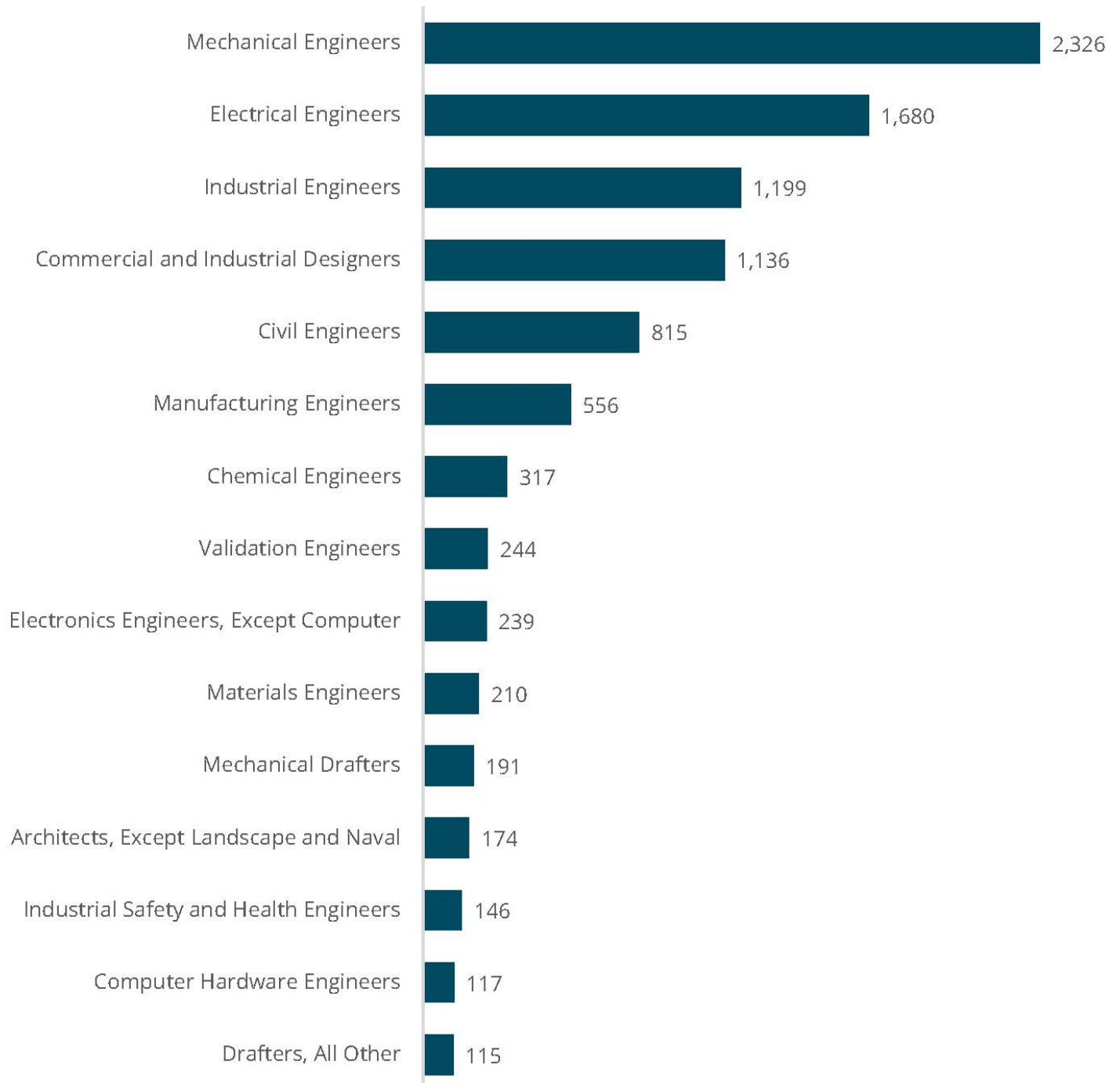
ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS *Jobs in the manufacturing industry can range from assembly and production, to skilled trades and technicians, designers and engineers, and even computer-related occupations such as software development. This section focuses on engineers & designers, which represent 74,198 employed individuals in Southeast Michigan. Demand for engineers in the region has been consistent, and employment has been growing quickly.*

Mechanical engineers once again top the list in this occupational cluster, with 2,326 postings, up 28% from 1,815 postings in Q1 2015. Postings for this occupation remain high every quarter. Other top in-demand jobs include electrical engineers (1,680, up 13.7% from 1,477 postings in Q1 2015), industrial engineers and commercial and industrial designers Demand is up for the two latter occupations by almost 42% and 26% respectively, with nearly every other occupation in the cluster also experiencing some sort of growth in online postings over the previous quarter.

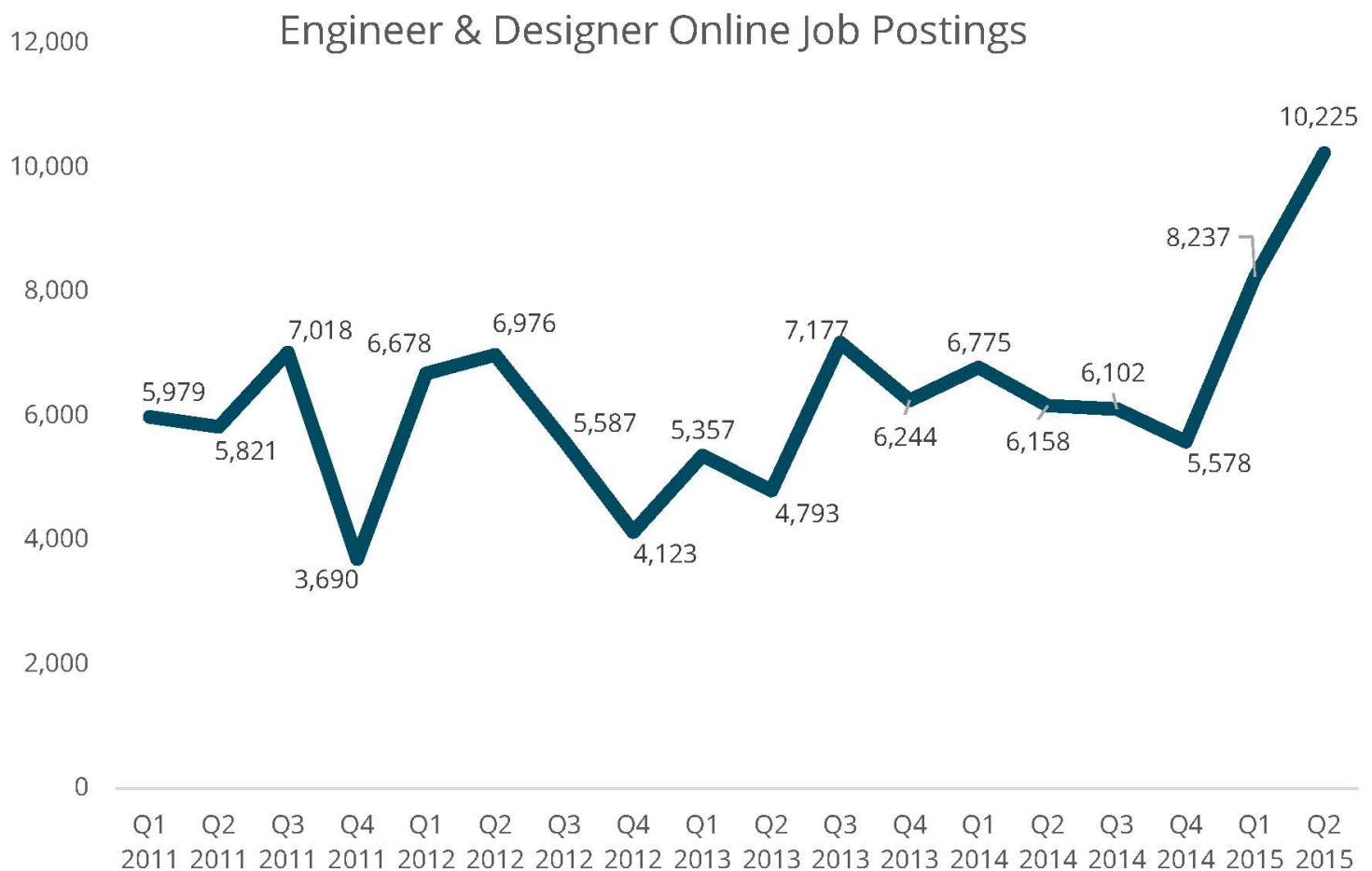
ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: TOP JOBS



ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

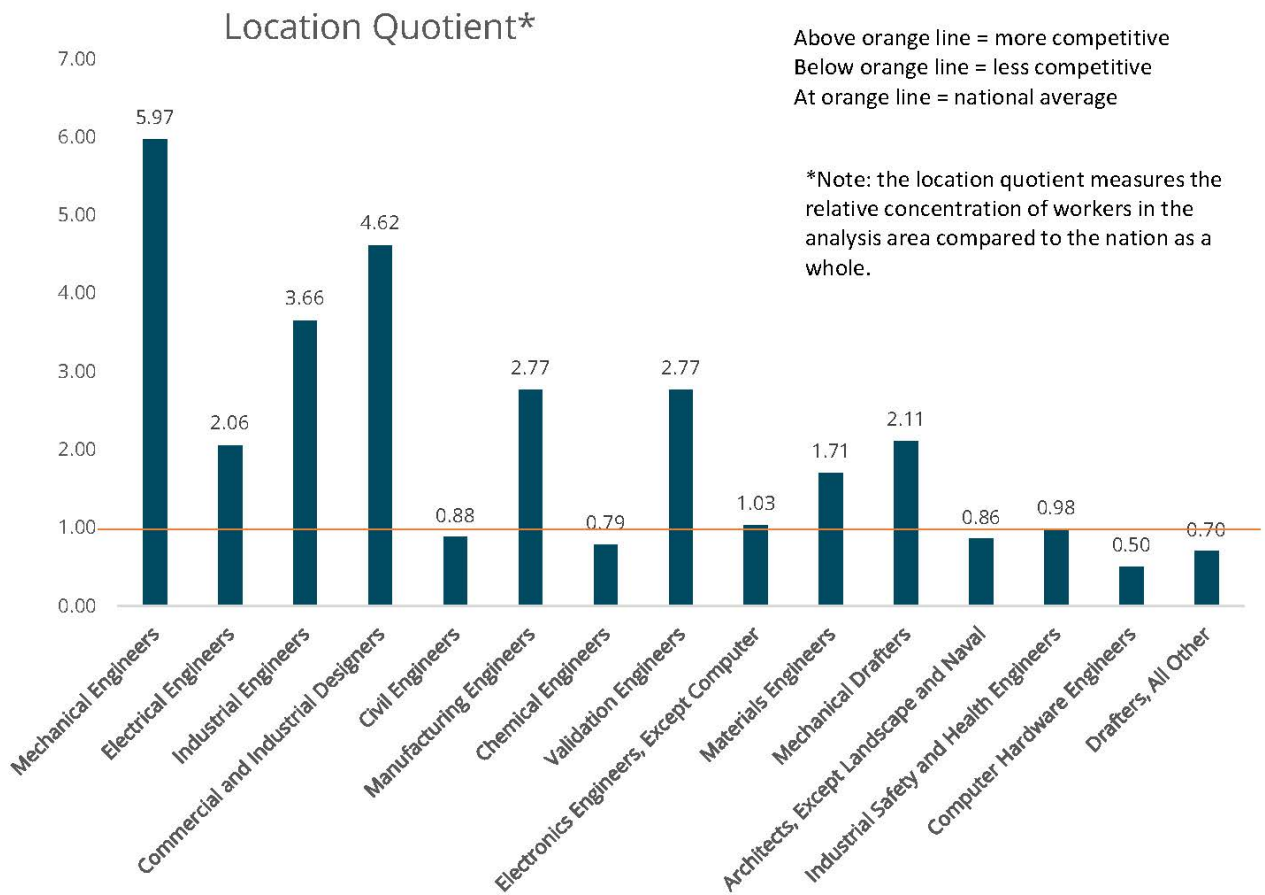
Engineering and design demand followed overall online job demand in the region with a large increase in postings in the second quarter. In fact, Q2 2015 postings for engineers and designers were at a record high, with 10,225 online job ads. Postings for workers in the Engineers & Designers cluster collectively increased 24.1% over Q1 2015 and 66% over Q2 2014, the same time period last year. Postings for engineers and designers were at a record high with 10,225 job ads in Q2 2015. High posting levels are a signal that employers need more workers in these jobs. Of total online job ads in the region, 8.4% are for engineers and designers, up from 7.7% in Q1 2015.

The WIN region has some of the highest concentrations of engineering and design workers in the nation. The top job in this category, mechanical engineers, with a location quotient of 5.97, has a 497% higher concentration in the WIN region than the average U.S. community. Another notable occupation in this cluster is commercial and industrial designers, with a location quotient of 4.62, a regional concentration of workers that is 362% higher than the average U.S. community.

Wages for engineers and designers are extremely competitive. Starting wages (10th percentile) are above \$20 per hour for nearly every top job in the cluster. The high wages follow a need for higher education. For all but one of the top jobs, a bachelor's degree is required for entry into the field.

ADVANCED MANUFACTURING

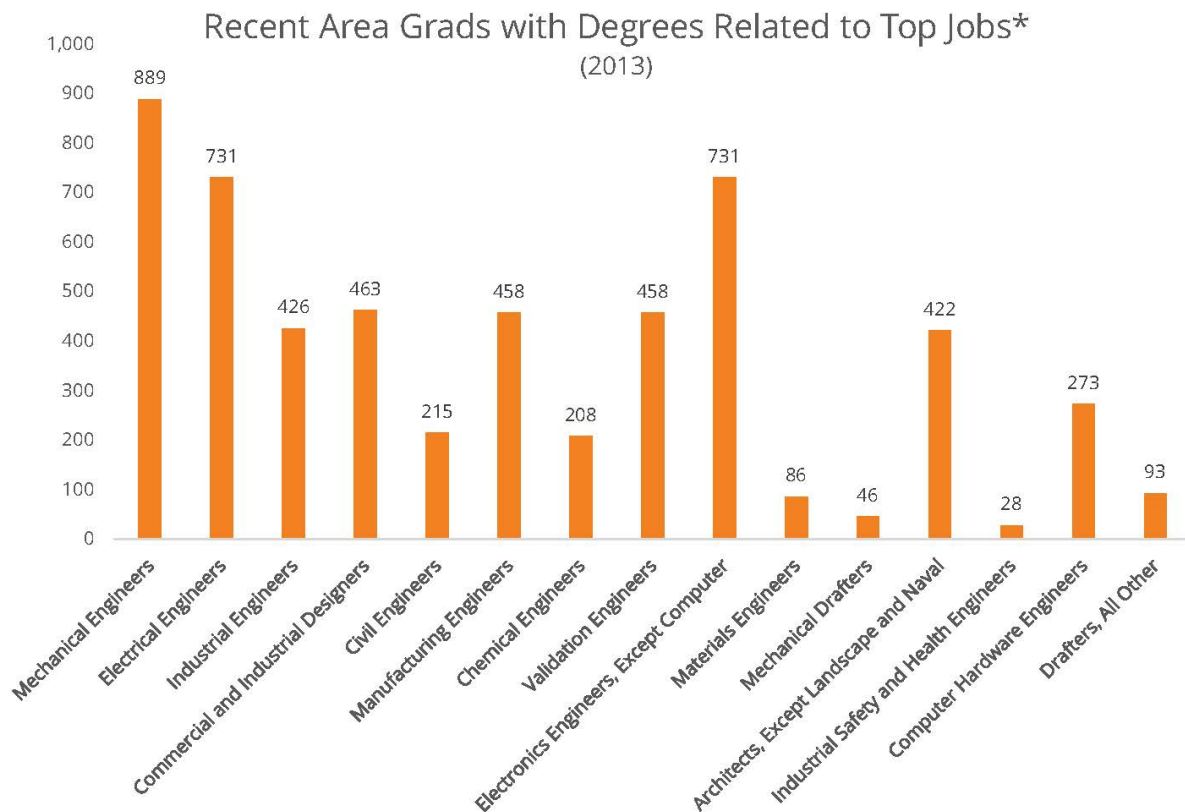
ENGINEERS AND DESIGNERS: TOP 15 JOBS LOCATION QUOTIENT AND WAGES



Data: EMSI, Burning Glass
Analysis: Workforce Intelligence Network

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
17-2141	Mechanical Engineers	\$29.20	\$36.25	\$43.56	\$52.15	\$58.13
17-2071	Electrical Engineers	\$27.49	\$33.03	\$42.84	\$49.69	\$60.26
17-2112	Industrial Engineers	\$26.86	\$32.87	\$39.86	\$46.01	\$54.82
27-1021	Commercial and Industrial Designers	\$23.81	\$30.31	\$35.22	\$41.05	\$45.49
17-2051	Civil Engineers	\$21.97	\$25.89	\$33.08	\$38.18	\$45.65
17-2199	Manufacturing Engineers	\$23.13	\$34.37	\$43.45	\$53.63	\$64.86
17-2041	Chemical Engineers	\$25.93	\$30.45	\$39.72	\$48.75	\$57.98
17-2199	Validation Engineers	\$23.13	\$34.37	\$43.45	\$53.63	\$64.86
17-2072	Electronics Engineers, Except Computer	\$27.55	\$32.12	\$39.04	\$45.23	\$53.64
17-2131	Materials Engineers	\$27.62	\$32.97	\$41.40	\$48.69	\$57.92
17-3013	Mechanical Drafters	\$16.87	\$20.16	\$26.31	\$31.58	\$38.08
17-1011	Architects, Except Landscape and Naval	\$19.55	\$24.76	\$32.34	\$38.95	\$46.70
17-2111	Industrial Safety and Health Engineers	\$27.06	\$32.75	\$41.54	\$50.23	\$59.88
17-2061	Computer Hardware Engineers	\$33.79	\$39.38	\$51.69	\$58.99	\$75.45
17-3019	Drafters, All Other	\$13.89	\$16.07	\$19.73	\$22.49	\$27.88

ENGINEERS AND DESIGNERS: TOP 15 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS



*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.

Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
17-2141	Mechanical Engineers	Bachelor's degree	None	None
17-2071	Electrical Engineers	Bachelor's degree	None	None
27-1021	Industrial Engineers	Bachelor's degree	None	None
17-2112	Commercial and Industrial Designers	Bachelor's degree	None	None
17-2051	Civil Engineers	Bachelor's degree	None	None
17-2199	Manufacturing Engineers	Bachelor's degree	None	None
17-2199	Chemical Engineers	Bachelor's degree	None	None
17-2041	Validation Engineers	Bachelor's degree	None	None
17-2072	Electronics Engineers, Except Computer	Bachelor's degree	None	None
17-2131	Materials Engineers	Bachelor's degree	None	None
17-1011	Mechanical Drafters	Associate's degree	None	None
17-2111	Architects, Except Landscape and Naval	Bachelor's degree	None	Internship/residency
17-3013	Industrial Safety and Health Engineers	Bachelor's degree	None	None
17-3019	Computer Hardware Engineers	Bachelor's degree	None	None
17-2061	Drafters, All Other	Associate's degree	None	None



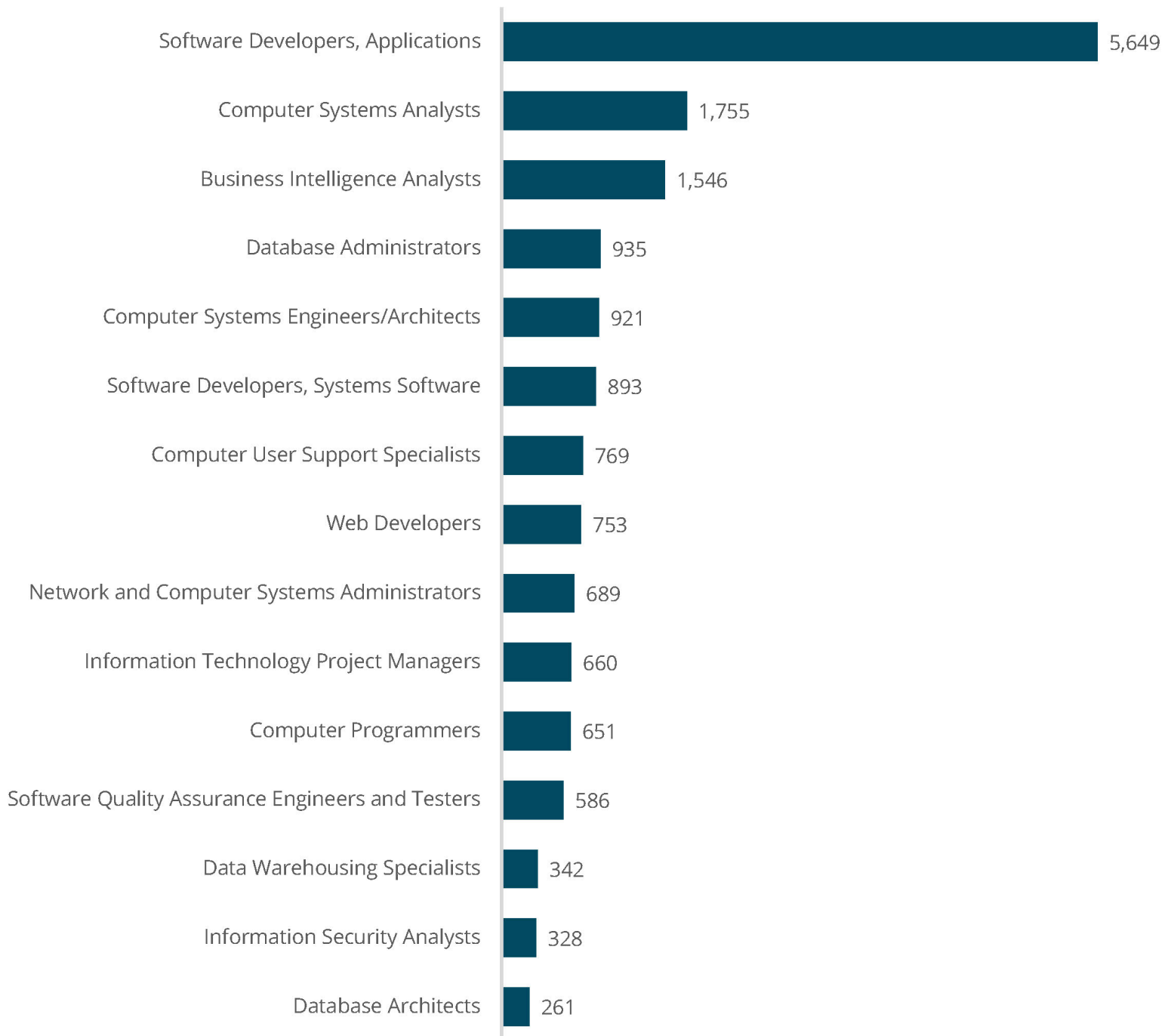
INFORMATION TECHNOLOGY

Information technology jobs include occupations that are associated with entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services. While the information technology cluster does not currently meet the employment levels of the other clusters, it is quickly growing. In 2014, IT occupational employment was 74,309 in the WIN region. Top jobs in this cluster include computer support specialists, computer systems analysts, and software developers for applications.

The top-demand job in the IT cluster is once again software developers for applications, with 5,649 job postings in Q2 2015, up from 5,090 postings in Q1 2015 an 11% increase. This occupation has been at the top of IT postings for several years and outpaces demand for other IT jobs by 3:1. Strong posting behavior for this occupation and other top jobs, such as computer systems analysts (1,755 postings) and business intelligence analysts (1,546 postings, up from 1,323 postings in Q1 2015, a 16.9% increase), signal growing demand from employers. Considering the past posting behavior for these occupations and the direction of the regional economy, the trend of ongoing job demand is expected to continue.

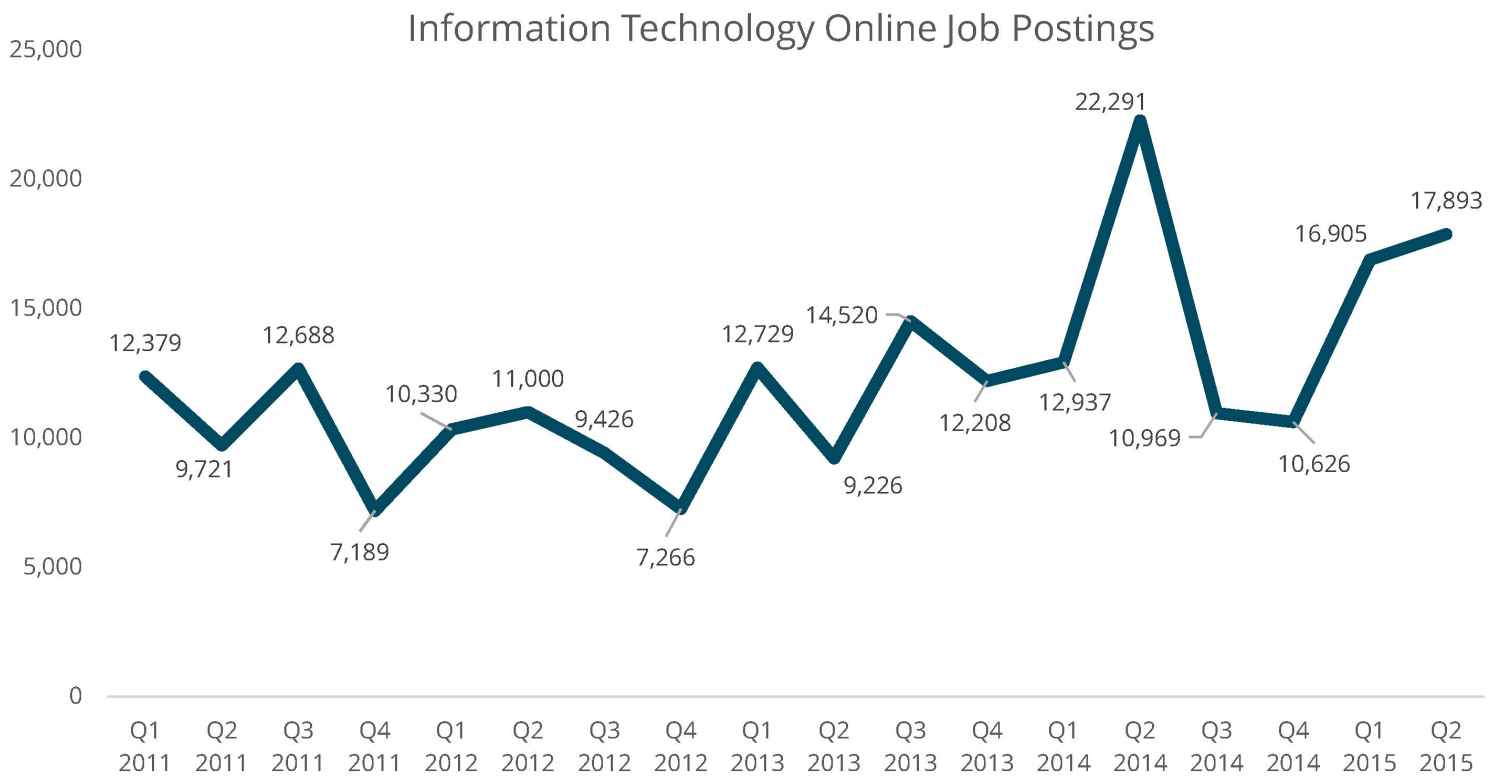
INFORMATION TECHNOLOGY

TOP JOBS



INFORMATION TECHNOLOGY

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Growth in IT postings has slowed this quarter. While 2015 postings climbed by nearly 1,000 from Q1 (16,905) to Q2 (17,893), the rate of increase this quarter (5.8%) is smaller than quarters past (e.g., 59% growth from Q4 2014 to Q1 2015). While postings have not grown as rapidly in IT as in other clusters this quarter, overall postings for the cluster remain high: 14.6% of total postings in the region are for IT occupations.

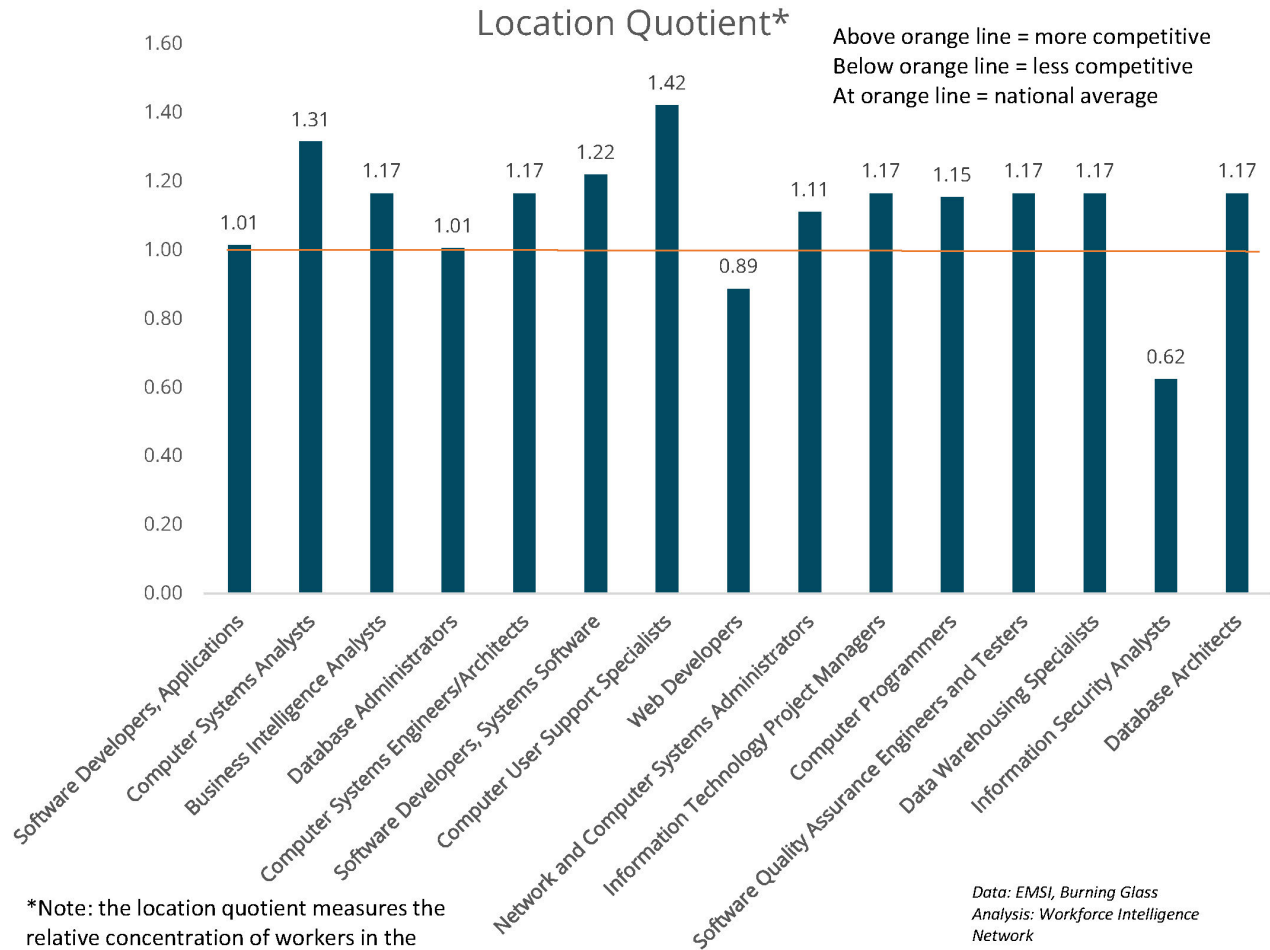
While employer demand for IT workers is strong, the concentration of these workers is still nascent. Many IT occupations in the region have a location quotient higher than “1” (the national average), but none of these occupations has the extreme presence exhibited by the trades and engineering, which have been mainstays of the regional economy for a longer period of time. IT occupations are growing in economic importance as more workers are recruited into this new and growing field.

IT occupations offer extremely competitive wages. Starting rates for IT workers are close to \$25 per hour for many top occupations, with median rates near \$40 per hour. Wages have followed demand, and high pay will likely drive more workers into this field in coming years.

The number of individuals receiving degrees in IT-related fields is also on the rise. Computer engineering, software development, and other fields that often require a bachelor’s degree are attracting more students each year, adding to the IT workforce that employers desperately need.

INFORMATION TECHNOLOGY

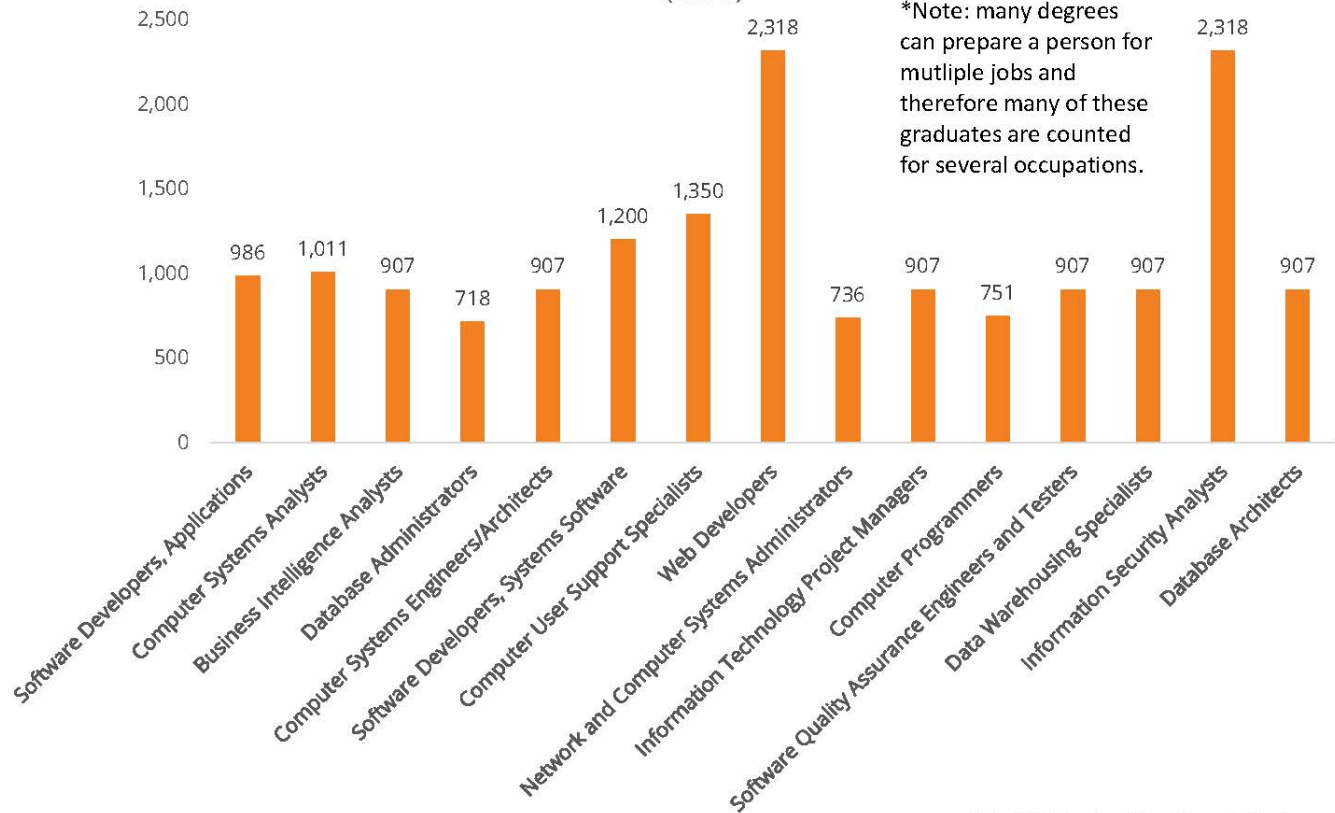
TOP 15 JOBS LOCATION QUOTIENT AND WAGES



ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
15-1132	Software Developers, Applications	\$25.45	\$31.16	\$39.38	\$47.30	\$57.06
15-1121	Computer Systems Analysts	\$25.88	\$32.20	\$38.67	\$45.47	\$53.26
15-1199	Business Intelligence Analysts	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85
15-1141	Database Administrators	\$21.32	\$29.55	\$40.66	\$47.48	\$58.61
15-1199	Computer Systems Engineers/Architects	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85
15-1133	Software Developers, Systems Software	\$28.54	\$34.22	\$43.96	\$52.23	\$62.39
15-1151	Computer User Support Specialists	\$12.50	\$15.74	\$22.42	\$27.57	\$35.56
15-1134	Web Developers	\$15.57	\$20.76	\$26.86	\$32.30	\$39.20
15-1142	Network and Computer Systems Administrators	\$23.26	\$28.84	\$36.04	\$42.74	\$50.64
15-1199	Information Technology Project Managers	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85
15-1131	Computer Programmers	\$22.13	\$27.05	\$33.90	\$40.65	\$48.98
15-1199	Software Quality Assurance Engineers and Testers	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85
15-1199	Data Warehousing Specialists	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85
15-1122	Information Security Analysts	\$24.90	\$29.78	\$40.06	\$50.03	\$58.03
15-1199	Database Architects	\$24.26	\$31.05	\$39.66	\$48.36	\$56.85

TOP 15 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs*
(2013)



Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
15-1132	Software Developers, Applications	Bachelor's degree	None	None
15-1121	Computer Systems Analysts	Bachelor's degree	None	None
15-1199	Business Intelligence Analysts	Bachelor's degree	None	None
15-1141	Database Administrators	Bachelor's degree	Less than 5 years	None
15-1199	Computer Systems Engineers/Architects	Bachelor's degree	None	None
15-1133	Software Developers, Systems Software	Bachelor's degree	None	None
15-1151	Computer User Support Specialists	Some college, no degree	None	Moderate-term on-the-job training
15-1134	Web Developers	Associate's degree	None	None
15-1142	Network and Computer Systems Administrators	Bachelor's degree	None	None
15-1199	Information Technology Project Managers	Bachelor's degree	None	None
15-1131	Computer Programmers	Bachelor's degree	None	None
15-1199	Software Quality Assurance Engineers and Testers	Bachelor's degree	None	None
15-1199	Data Warehousing Specialists	Bachelor's degree	None	None
15-1122	Information Security Analysts	Bachelor's degree	Less than 5 years	None
15-1199	Database Architects	Bachelor's degree	None	None

A photograph of two healthcare workers, a woman and a man, sitting at a desk in a clinical setting. The woman is on the left, wearing red scrubs, and the man is on the right, wearing blue scrubs. They are both smiling and looking towards the camera. The background is slightly blurred, showing office equipment and papers.

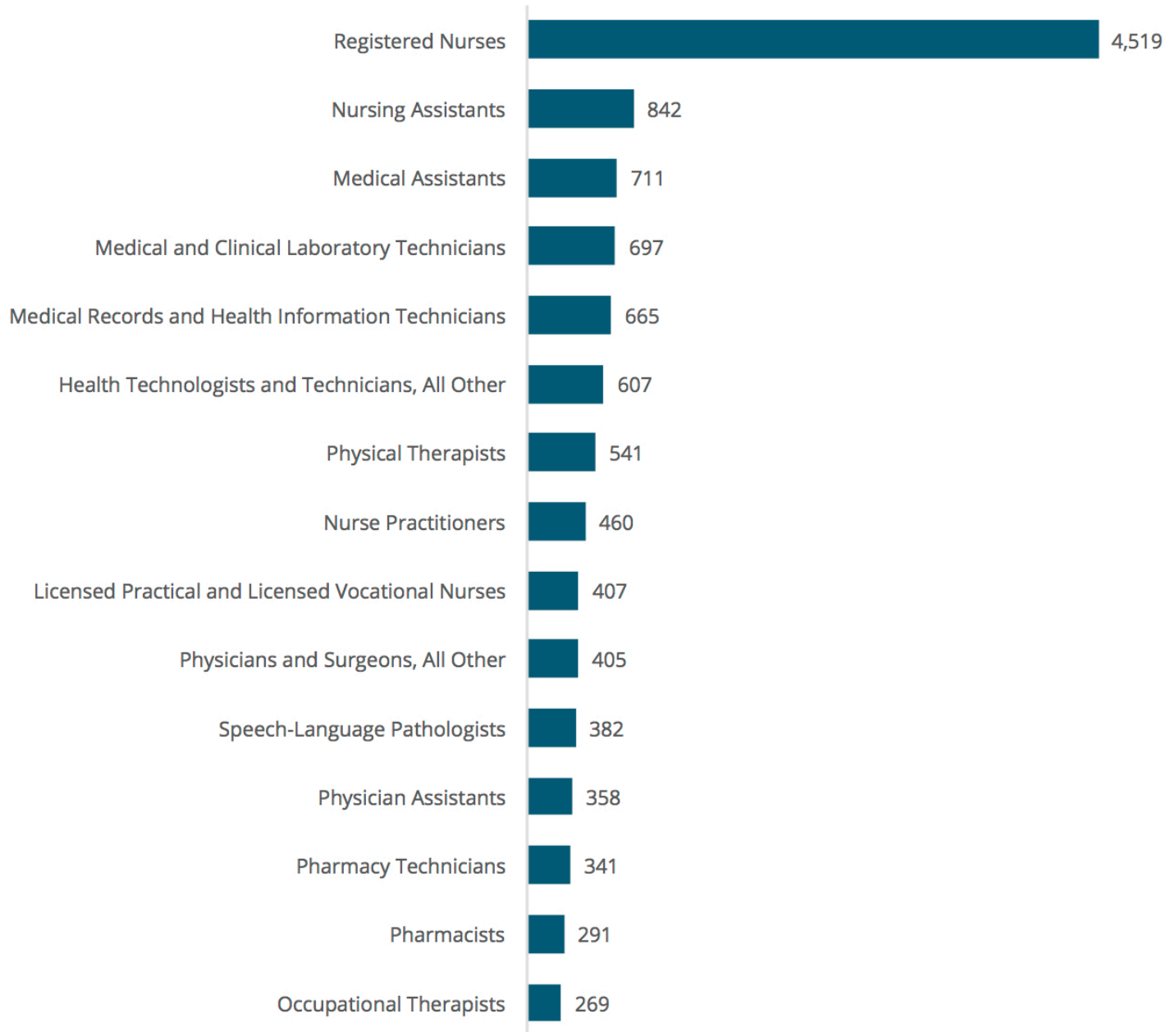
HEALTH CARE

WIN's health care occupation cluster includes jobs related to health care support and practitioners. This cluster is one of Southeast Michigan's largest with, 243,782 employees in 2014. Employment in this cluster has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this cluster.

Like many other clusters, the top-demand job in health care is consistent from quarter to quarter. Postings for registered nurses once again top the health care list, with 4,519 postings in Q2 2015. This is a considerable level of growth compared to the 3,707 postings (up 21.9%) from Q1 2015. This occupation has been the cluster's top-demand job for several years running. Demand for registered nurses is extremely high, especially for those with specialties such as surgery, anesthesia, or labor and delivery. Other top postings in the region include those for nursing assistants (842 postings, down 12.3% from 960 in Q1 2015) and medical assistants (711 postings, up 11.8% from 636 postings in Q1 2015).

HEALTH CARE

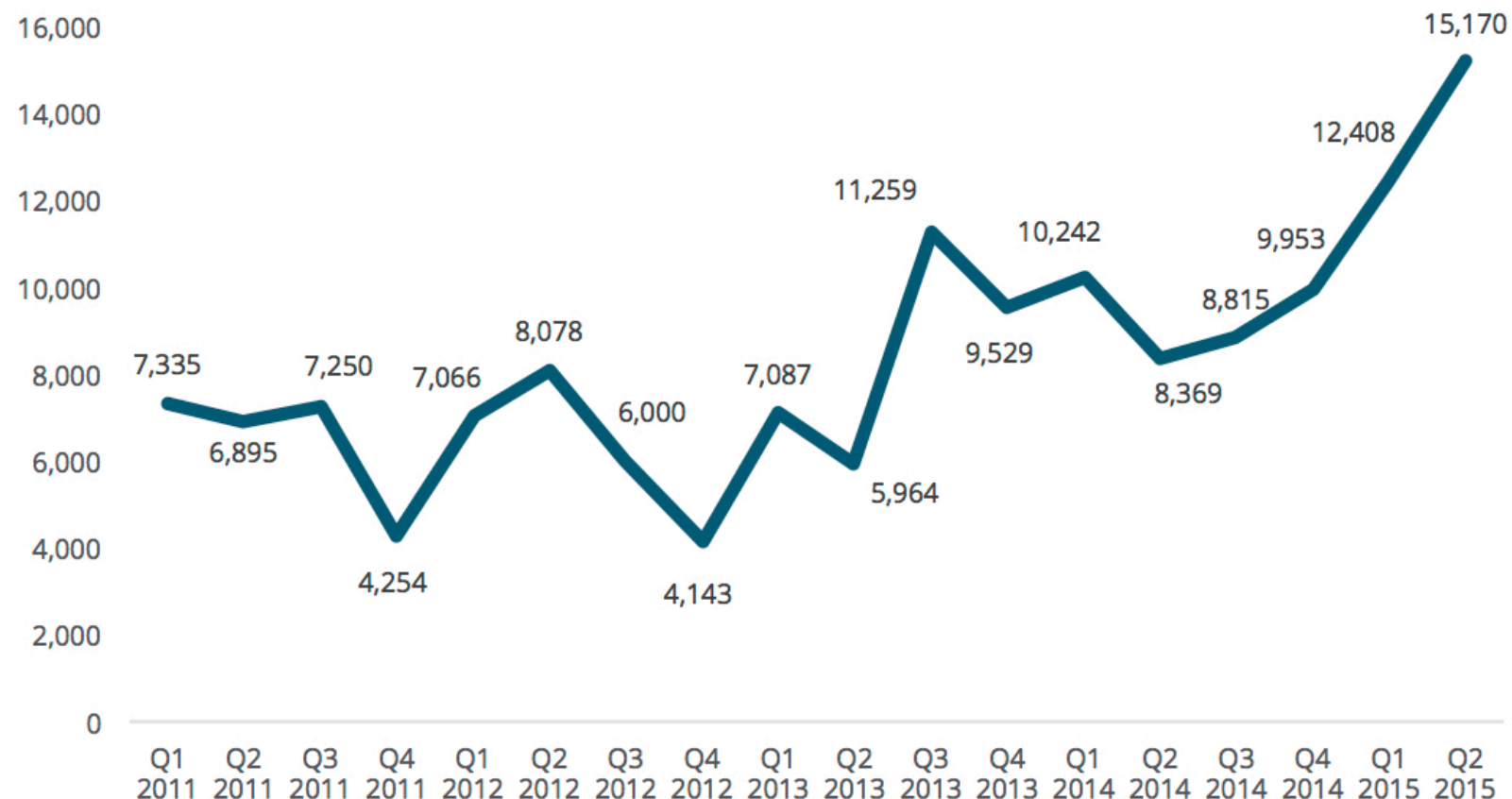
TOP JOBS



HEALTH CARE

ONLINE JOB POSTINGS OVER TIME

Health Care Online Job Postings



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Postings for health care workers have increased this quarter, once again reaching an all-time high, with 15,170 online job ads. This is up 22.3% from 12,408 job ads posted by employers in Q1 2015. This quarter continues a full year of growth, with the number of postings nearly doubling from 8,369 in Q2 2014, the same time period last year. Beginning in 2013, the health care occupational cluster began several quarters of decline (likely due to mergers within the health system and regulatory changes at the federal level) but resumed slow growth early in 2014. Since then, postings have recovered, and health care employers are hiring. Health care occupation online postings represent 12.4% of total postings in the region, up from 11.7% in Q1 2015.

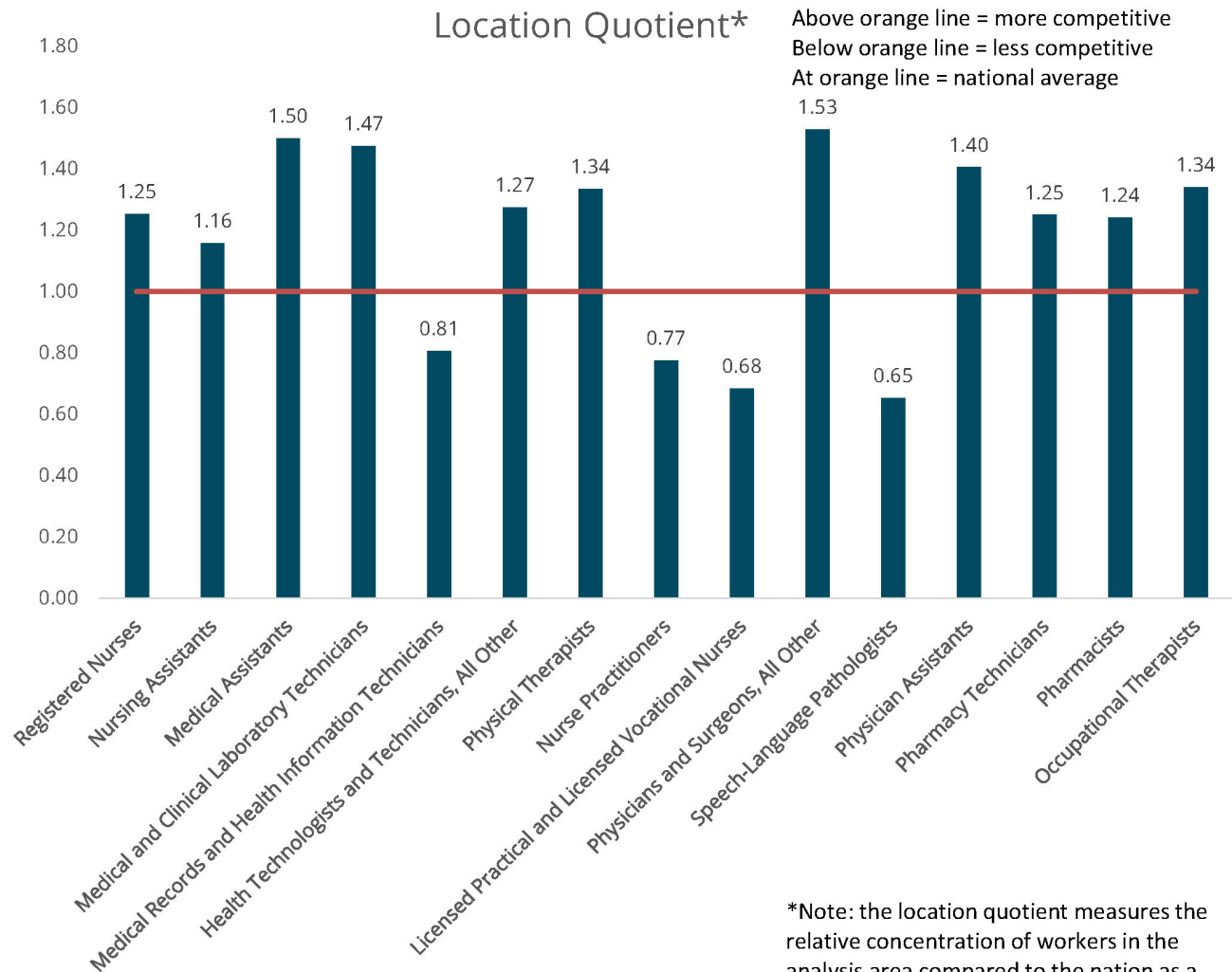
Health care is a sector that grows in concentration and demand as the local population increases and ages (demanding more services) and as universities and hospitals diversify and increase their reputation for destination care. Both of these are occurring in Michigan.

The higher concentration of health care workers is evident in their location quotients. While no health occupation reaches the competitive levels of engineering and skilled trades in Southeast Michigan, the concentration of physicians, medical assistants, laboratory workers, and others is higher than the national average. Medical assistants, for example has a location quotient of 1.5, meaning the concentration of those workers is 50% higher in the WIN region than in the nation, on average.

Many health care jobs are a pathway into the middle class and others, those that require graduate-level training, boast very high salaries. Many workers see the high wage potential and are enrolling in health programs, however, there is still a shortage of many health care workers as evidenced by high posting levels and employment growth.

HEALTH CARE

TOP 15 JOBS LOCATION QUOTIENT AND WAGES



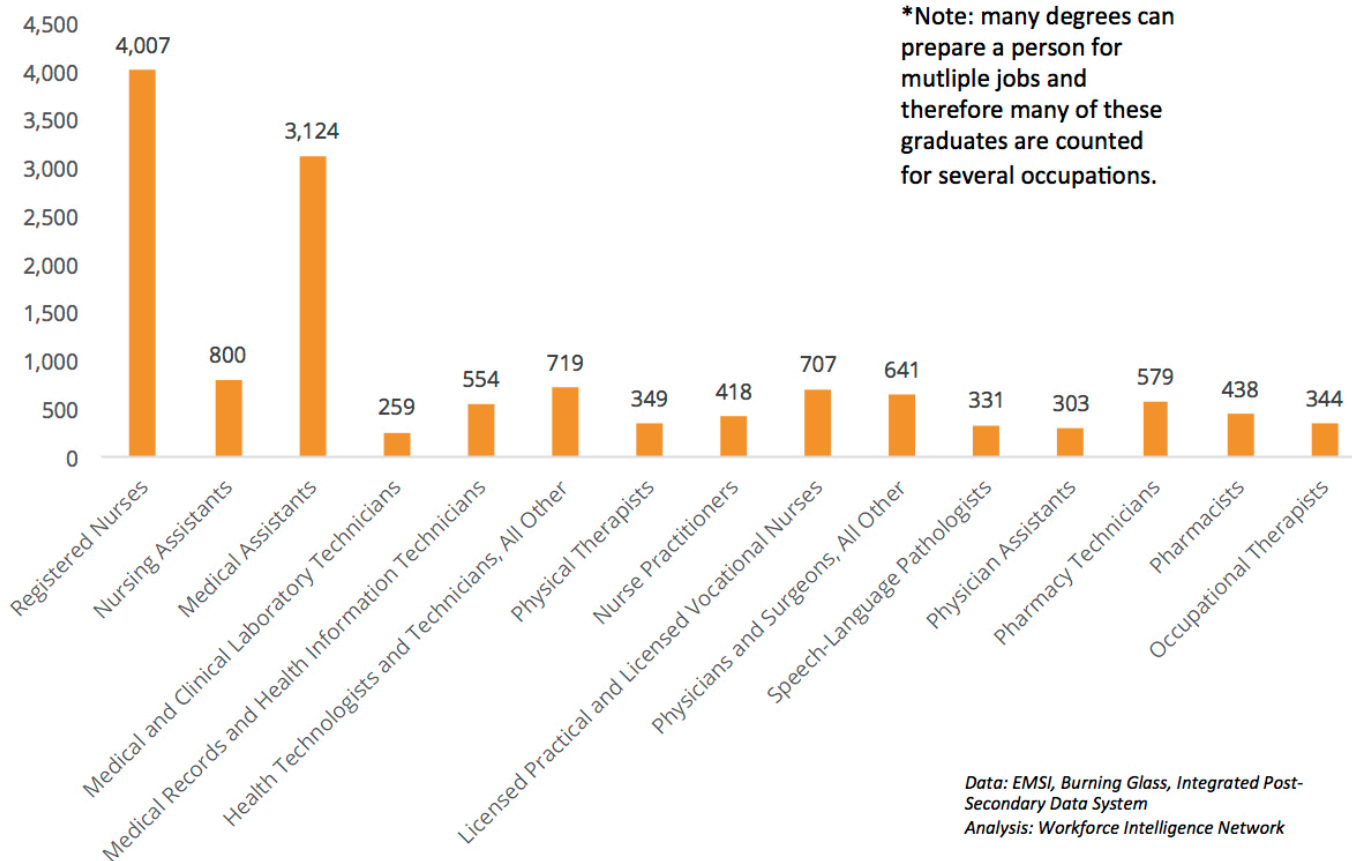
Data: EMSI, Burning Glass
Analysis: Workforce Intelligence

*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
29-1141	Registered Nurses	\$24.80	\$28.55	\$33.32	\$36.94	\$42.72
31-1014	Nursing Assistants	\$9.73	\$11.22	\$13.05	\$14.74	\$16.96
31-9092	Medical Assistants	\$10.30	\$11.93	\$14.07	\$15.99	\$18.48
29-2012	Medical and Clinical Laboratory Technicians	\$12.16	\$13.75	\$17.03	\$19.66	\$24.16
29-2071	Medical Records and Health Information Technicians	\$11.90	\$14.13	\$18.47	\$22.37	\$26.21
29-2099	Health Technologists and Technicians, All Other	\$12.98	\$15.21	\$20.59	\$24.55	\$30.83
29-1123	Physical Therapists	\$29.16	\$33.80	\$40.74	\$44.65	\$59.03
29-1171	Nurse Practitioners	\$33.98	\$38.84	\$44.31	\$50.70	\$57.00
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.19	\$19.09	\$22.36	\$25.77	\$28.20
29-1069	Physicians and Surgeons, All Other	\$27.24	\$38.15	\$71.93	\$95.72	\$124.18
29-1127	Speech-Language Pathologists	\$23.19	\$28.85	\$35.34	\$40.85	\$47.51
29-1071	Physician Assistants	\$30.59	\$39.20	\$46.14	\$53.57	\$59.55
29-2052	Pharmacy Technicians	\$9.11	\$11.10	\$13.75	\$16.30	\$18.41
29-1051	Pharmacists	\$36.91	\$47.70	\$52.27	\$59.50	\$67.56
29-1122	Occupational Therapists	\$22.93	\$26.98	\$33.62	\$38.48	\$48.63

TOP 15 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs*
(2013)



Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
29-1141	Registered Nurses	Associate's degree	None	None
31-1014	Nursing Assistants	Postsecondary non-degree award	None	None
31-9092	Medical Assistants	Postsecondary non-degree award	None	None
29-2012	Medical and Clinical Laboratory Technicians	Associate's degree	None	None
29-2071	Medical Records and Health Information Technicians	Postsecondary non-degree award	None	None
29-2099	Health Technologists and Technicians, All Other	High school diploma or equivalent	None	None
29-1123	Physical Therapists	Doctoral or professional degree	None	None
29-1171	Nurse Practitioners	Master's degree	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	None
29-1069	Physicians and Surgeons, All Other	Doctoral or professional degree	None	Internship/residency
29-1127	Speech-Language Pathologists	Master's degree	None	None
29-1071	Physician Assistants	Master's degree	None	None
29-2052	Pharmacy Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training
29-1051	Pharmacists	Doctoral or professional degree	None	None
29-1122	Occupational Therapists	Master's degree	None	None



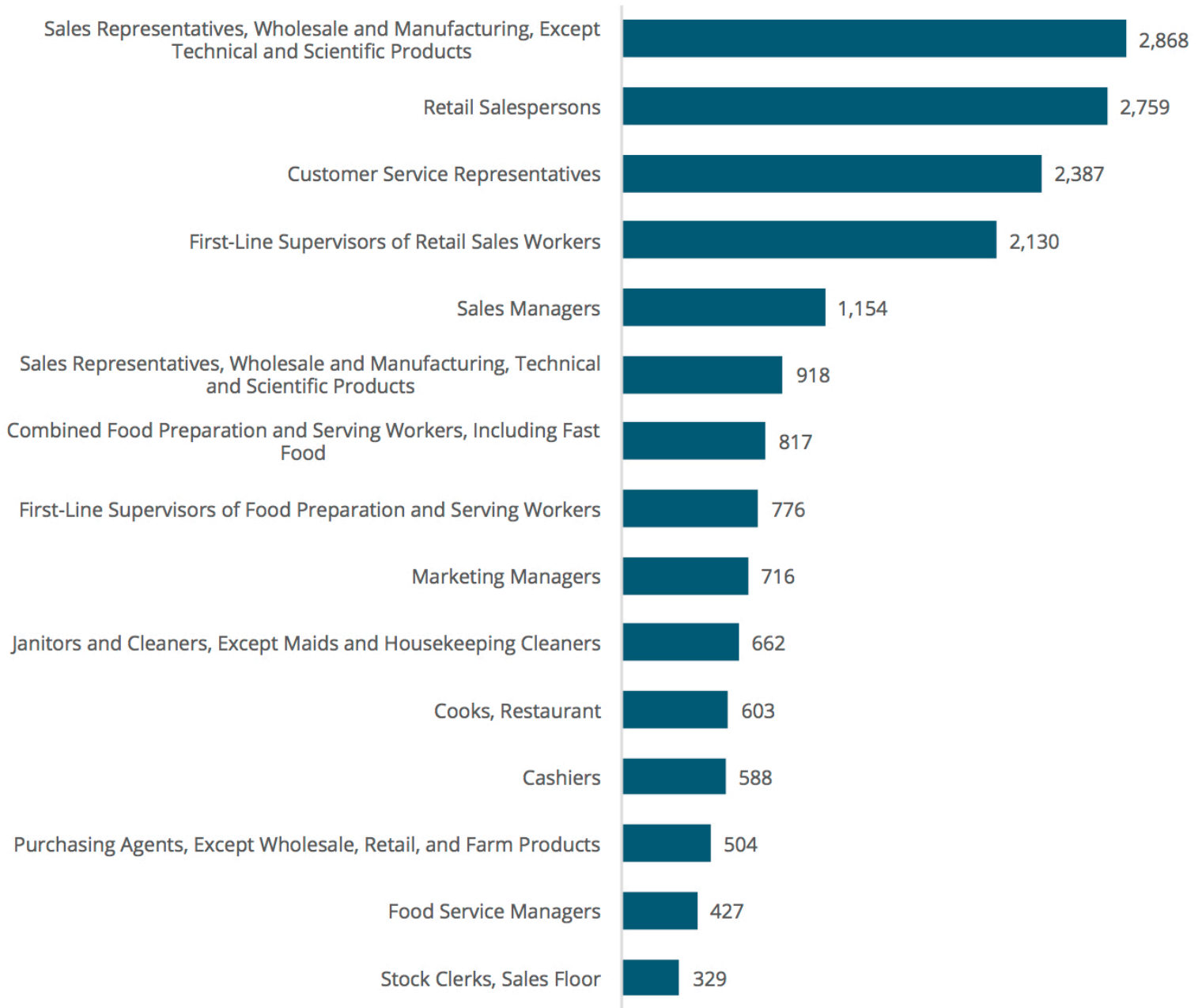
RETAIL AND HOSPITALITY

The retail and hospitality cluster is the largest occupational cluster that WIN analyzes, both in terms of employment and online job postings. This cluster is of very high importance to the region because it is the first to grow when the economy expands and the first to contract in a downturn: It is often a leading indicator. As defined by WIN, the retail and hospitality cluster encompasses all customer service occupations, with skills transferrable across the retail sector, the hotel industry, food and beverage service industry, call centers, and other areas. In 2014, 632,825 individuals were employment in retail and hospitality related occupations in the region.

For the first time since data have been collected, the top retail & hospitality posting is for sales representatives, wholesale and manufacturing, rather than retail salespersons. Postings for this occupation reached 2,868 postings, growing from 2,560 in Q1 2015. This is a considerable, 46.5%, increase from 1,957 postings in Q4 2014. Demand for sales representatives has been growing, signaling the need for more skilled sales workers outside of typical retail positions. Postings for retail salespersons in Q2 2015 did increase to 2,759 from 2,569 in Q1 2015 (7.4%), close to 2014 average levels.

RETAIL AND HOSPITALITY

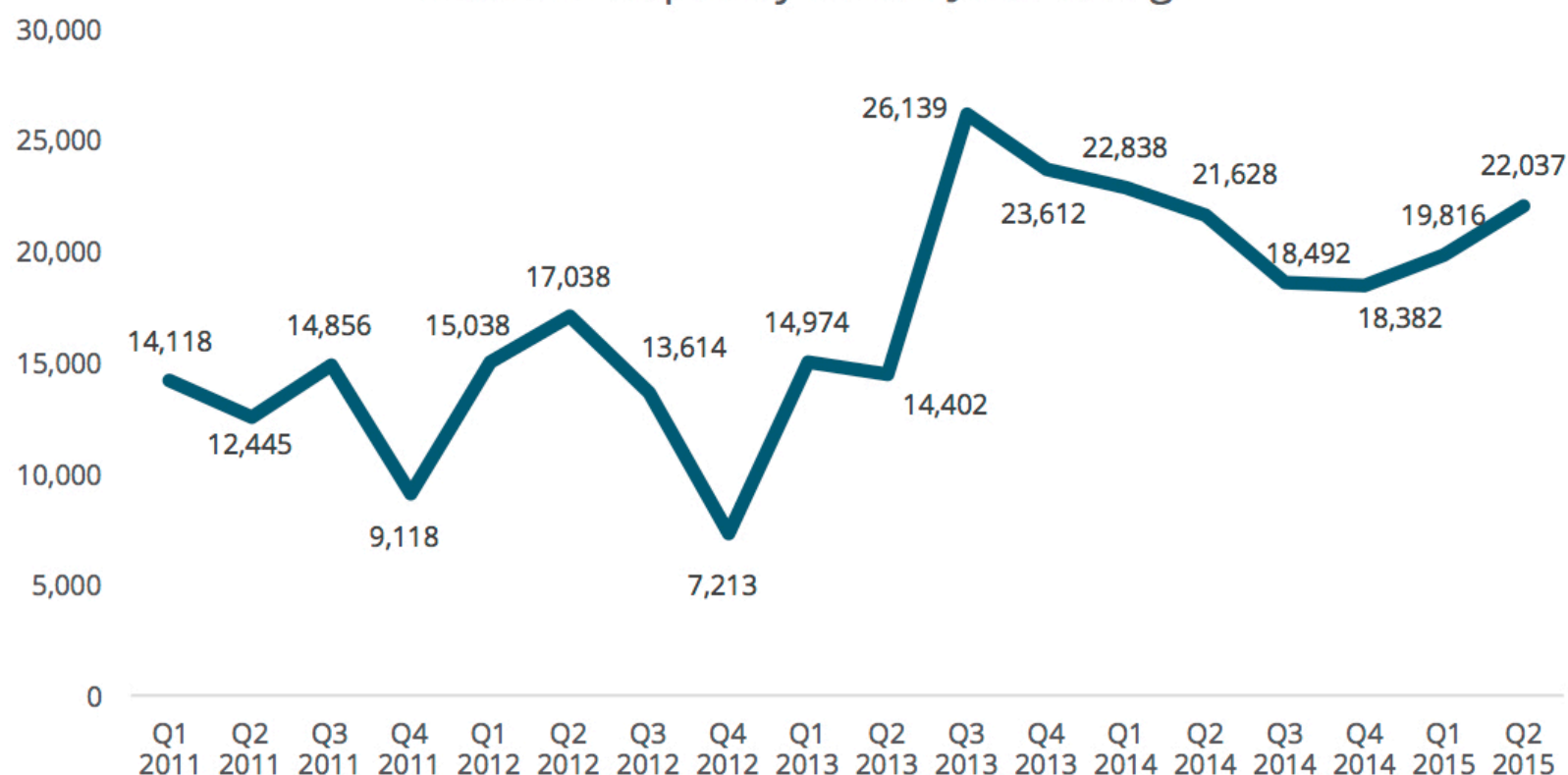
TOP JOBS



RETAIL AND HOSPITALITY

ONLINE JOB POSTINGS OVER TIME

Retail & Hospitality Online Job Postings



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Retail and hospitality postings increased this quarter to 22,037 from 19,816 in Q1 2015, marking a growth of 11.2%. While the current quarter is not a record high, it is approaching peak posting levels last seen in late 2013. Of total postings in the region, 18% are for retail and hospitality positions.

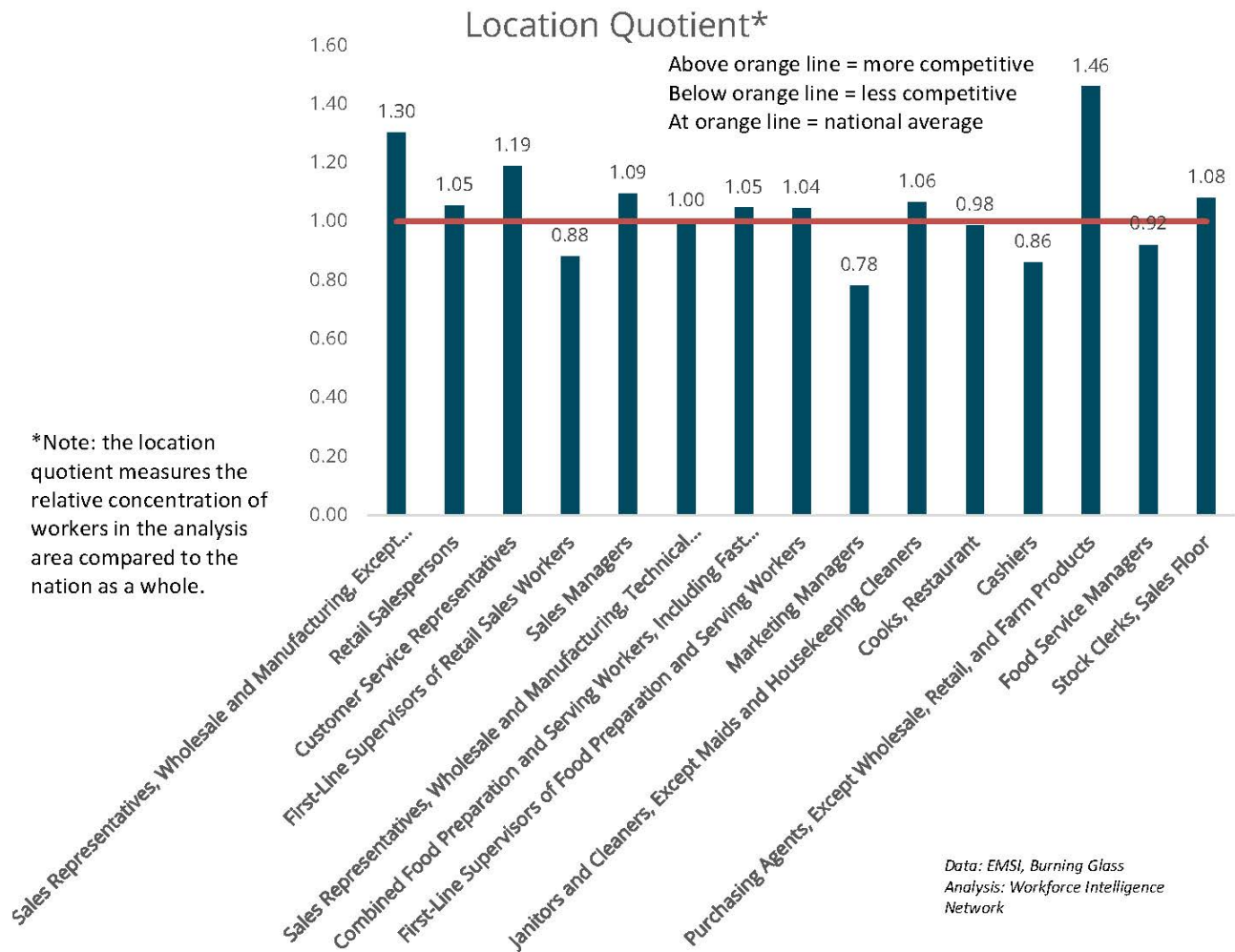
Like other services such as health care, the demand for retail & hospitality occupations increases as the population grows and has more money to spend in the economy. This location quotients for many retail and customer service position hover around 1 or are slightly higher, the national average. Sales representatives for wholesale and manufacturing (non-technical/non-scientific products) has the highest location quotient in the region at 1.3, meaning that there is a 30% higher concentration of these workers in Southeast Michigan than the U.S. on average. This makes sense, given the region's high concentration of manufacturing activity.

Workers do not typically pursue retail and hospitality jobs due to wages, which are relatively low. These jobs do, however, offer great flexibility and have a relatively low barrier to entry. They are often the first step for workers into the labor force where they can learn valuable skills that translate to other occupations that earn a higher wage.

Most retail and hospitality jobs do not require higher education, but many require specialized on-the-job training.

RETAIL AND HOSPITALITY

TOP 15 JOBS LOCATION QUOTIENT AND WAGES



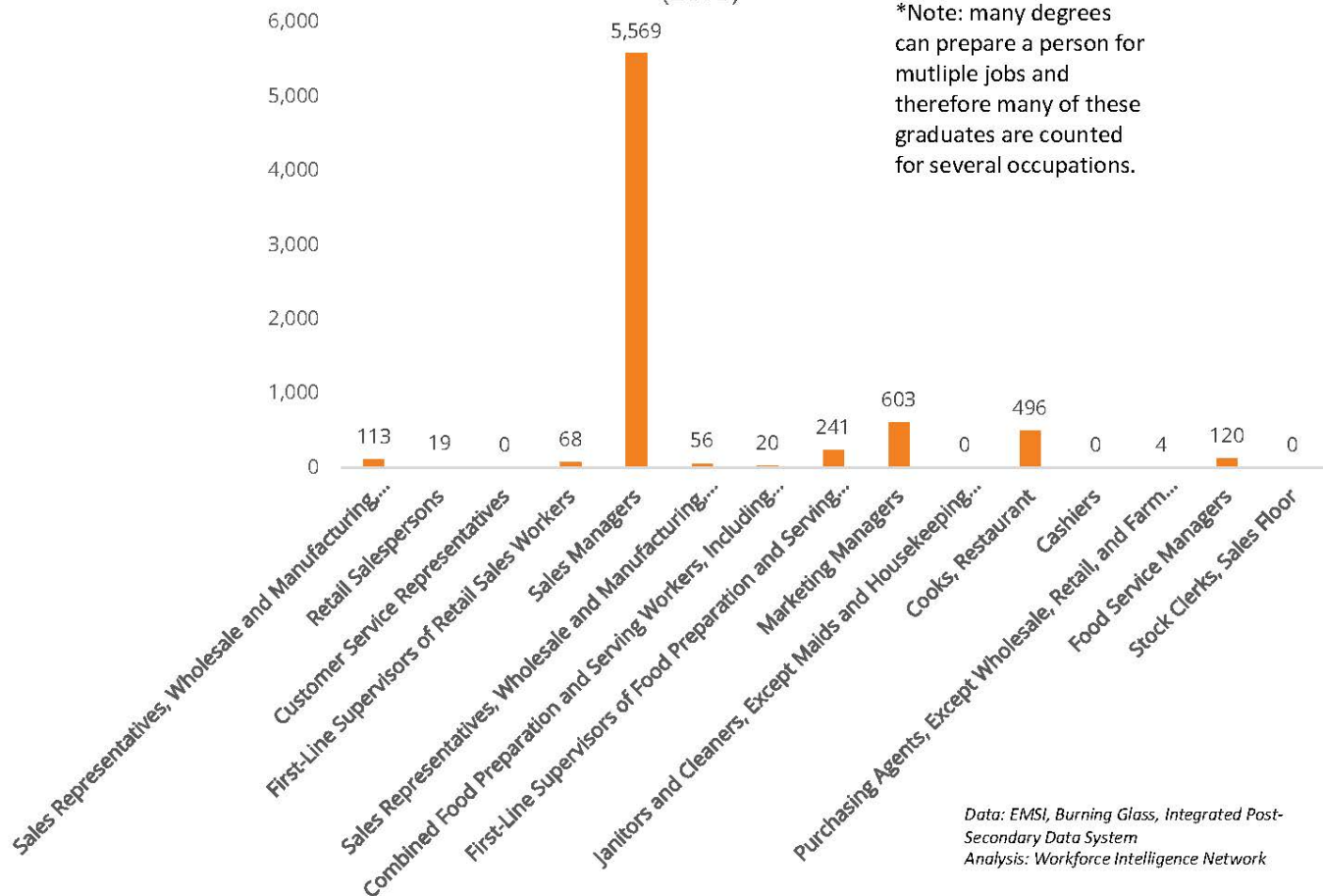
ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$13.29	\$18.97	\$32.28	\$39.07	\$55.63
41-2031	Retail Salespersons	\$8.15	\$8.81	\$12.22	\$13.25	\$18.87
43-4051	Customer Service Representatives	\$9.43	\$11.64	\$16.26	\$19.54	\$24.43
41-1011	First-Line Supervisors of Retail Sales Workers	\$10.78	\$13.21	\$18.63	\$21.81	\$28.06
11-2022	Sales Managers	\$28.07	\$36.90	\$54.42	\$66.76	\$86.14
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$18.15	\$25.94	\$42.24	\$52.04	\$73.10
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$7.85	\$8.23	\$9.18	\$9.66	\$11.72
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$9.17	\$10.75	\$15.27	\$19.03	\$23.01
11-2021	Marketing Managers	\$32.32	\$42.35	\$58.23	\$69.20	\$98.45
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.16	\$9.04	\$12.10	\$14.37	\$17.98
35-2014	Cooks, Restaurant	\$8.27	\$9.29	\$11.27	\$13.03	\$15.01
41-2011	Cashiers	\$8.01	\$8.52	\$10.20	\$11.28	\$14.45
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$19.11	\$23.89	\$33.09	\$41.32	\$50.76
11-9051	Food Service Managers	\$10.91	\$13.44	\$19.21	\$23.69	\$29.88
43-5081	Stock Clerks, Sales Floor	\$8.25	\$9.00	\$12.11	\$14.33	\$18.47

TOP 15 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

Recent Area Grads with Degrees Related to Top Jobs*

(2013)

*Note: many degrees can prepare a person for multiple jobs and therefore many of these graduates are counted for several occupations.



Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	None	Moderate-term on-the-job training
41-2031	Retail Salespersons	Less than high school	None	Short-term on-the-job training
43-4051	Customer Service Representatives	High school diploma or equivalent	None	Short-term on-the-job training
41-1011	First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	Less than 5 years	None
11-2022	Sales Managers	Bachelor's degree	Less than 5 years	None
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	None	Moderate-term on-the-job training
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	None	Short-term on-the-job training
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	None
11-2021	Marketing Managers	Bachelor's degree	5 years or more	None
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Less than high school	None	Short-term on-the-job training
35-2014	Cooks, Restaurant	Less than high school	Less than 5 years	Moderate-term on-the-job training
41-2011	Cashiers	Less than high school	None	Short-term on-the-job training
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	High school diploma or equivalent	None	Long-term on-the-job training
11-9051	Food Service Managers	High school diploma or equivalent	Less than 5 years	None
43-5081	Stock Clerks, Sales Floor	Less than high school	None	Short-term on-the-job training

SECTION THREE

LABOR MARKET AND DEMAND SUMMARY



From Q1 to Q2 2015, postings increased 15% to 122k, the highest ever recorded. All occupational clusters that WIN analyzes in-depth gained postings in the last quarter.

Software developers, applications maintains the top-demand job position, according to online postings. Nurses and truck drivers remain in the top 3.

Of online job ads posted in Q2 2015, 45% are in clusters that WIN analyzes in detail. This is lower than in the past, signaling that jobs in other fields are emerging (for example, truck drivers, maintenance and repair workers, managers) and should be tracked more closely.

Posting growth in the region was led by three occupational clusters: Engineering & Design, Health Care, and Retail & Hospitality. IT maintained high posting numbers, but growth slowed in the previous quarter.

Posting growth geographically was led by Oakland and Wayne Counties (41% and 39.2% of the total regional posting growth, respectively). All counties in the region saw an increase in postings from Q1 to Q2 2015.

Employment is up 1% since Q1 but the labor force is still stagnant with no growth this quarter. The labor force is down 1.2% from last year at this time.

The regional unemployment rate dropped to 5.6% (compared to the state rate of 5.5%). Accounting for more than half of statewide economic activity, trends in the WIN region are likely driving much of the state average. The drop in regional unemployment is due to employment gains as the labor force saw nearly no change from the previous quarter.

For the first time since postings have been tracked, retail salespersons is not the top job in the Retail & Hospitality occupational cluster. The top position goes to sales representatives for wholesale and manufacturing non-technical products. This change could mean a drive toward more skilled and knowledgeable sales workers.



SECTION FOUR

DATA NOTES AND SOURCES

DATA NOTES AND SOURCES

SPECIAL DATA NOTE

- Due to changes in Burning Glass's aggregation, parsing, and deduplication methods implemented in December 2014, data from previously released reports should not be compared to data in reports starting in Q4 2014 and moving forward. For the Q4 2014 report, the WIN team re-gathered and analyzed all of the data (postings from 2011 through 2014) to ensure that all numbers are up-to-date. If you would like information on the differences between the updated data and data from previous reports, please contact WIN's Research Director Colby Spencer Cesaro at colby.cesaro@win-semich.org.
- Wage data that is not labeled as a national average is specific to each report's geography. For example, wage data reported in the WIN Region report is averaged across the 9-county WIN Region. Data in the Wayne County report is wage data solely for Wayne County.
- All numbers included in this report are the correct and updated data.
- Wage and educational attainment data available varies depending on the occupation. All wage and educational attainment data provided is for the 6-digit SOC code. Some 6-digit codes do not have education or wage data available, in this case we leave the information blank.
- Educational attainment data available refers to the share of the current workforce in each bracket, not what is shown in postings. Employers may require different educational attainment than what is in this report.
- Quarterly reports: Due to a data update in Burning Glass Technologies' Labor Insight tool, comparisons should not be made between data from each quarterly report and the annual review data should not be compared to data from previous quarterly reports.
- Adjustments to the labor force information were also made to reflect and incorporate updated inputs, re-estimation, and controlling to new statewide totals. Much of the information related to monthly and quarterly employment is updated several months after the initial release. More information can be found here: <http://www.bls.gov/lau/launews1.htm>

DATA NOTES AND SOURCES

UNDERSTANDING DEMAND VS EMPLOYMENT

- Employment refers to actual employment numbers—the number of people in jobs—in targeted industries or occupations.
- Demand refers to statistics derived from employer job postings, which indicate the potential for employment but may or may not materialize into actual jobs.
- Job posting-related demand, as presented in this report, is measured by online job postings. Employer demand may be larger than what is highlighted in this report if employers find talent by other means.

DATA SOURCES

- Labor market demand data for this report was compiled using Burning Glass Technologies' Labor Insight Tool, and analyzed by the Workforce Intelligence Network. Other data sources include, the Bureau of Labor Statistics, and Economic Modeling Specialists Inc. (EMSI). Check out our website <http://www.win-semich.org> for more data and detailed information about our sources.

UNDERSTANDING CLUSTERS

- Rather than focusing on talent demand within industries (types of firms), WIN generally emphasizes exploring talent demand based on occupations, including the skills, educational credentials, and experience needed to work in them.
- WIN research examines industry data, as the health of companies can be useful for economic development purposes. However, shifting focus from industry to occupation is important as different types of occupations with extremely different skillsets may work within and across industries. For example, accountants, computer specialists, and engineers all may work in the manufacturing industry.
- By clustering occupations, the talent system can identify employer demand for particular skillsets across multiple industry types and develop a response through training and pipeline development to meet that demand.

BOARD ORGANIZATIONS



FOR MORE INFORMATION ABOUT RESEARCH AND DATA,
VISIT OUR WEBSITE:
WWW.WIN-SEMICH.ORG/DATA-RESEARCH

