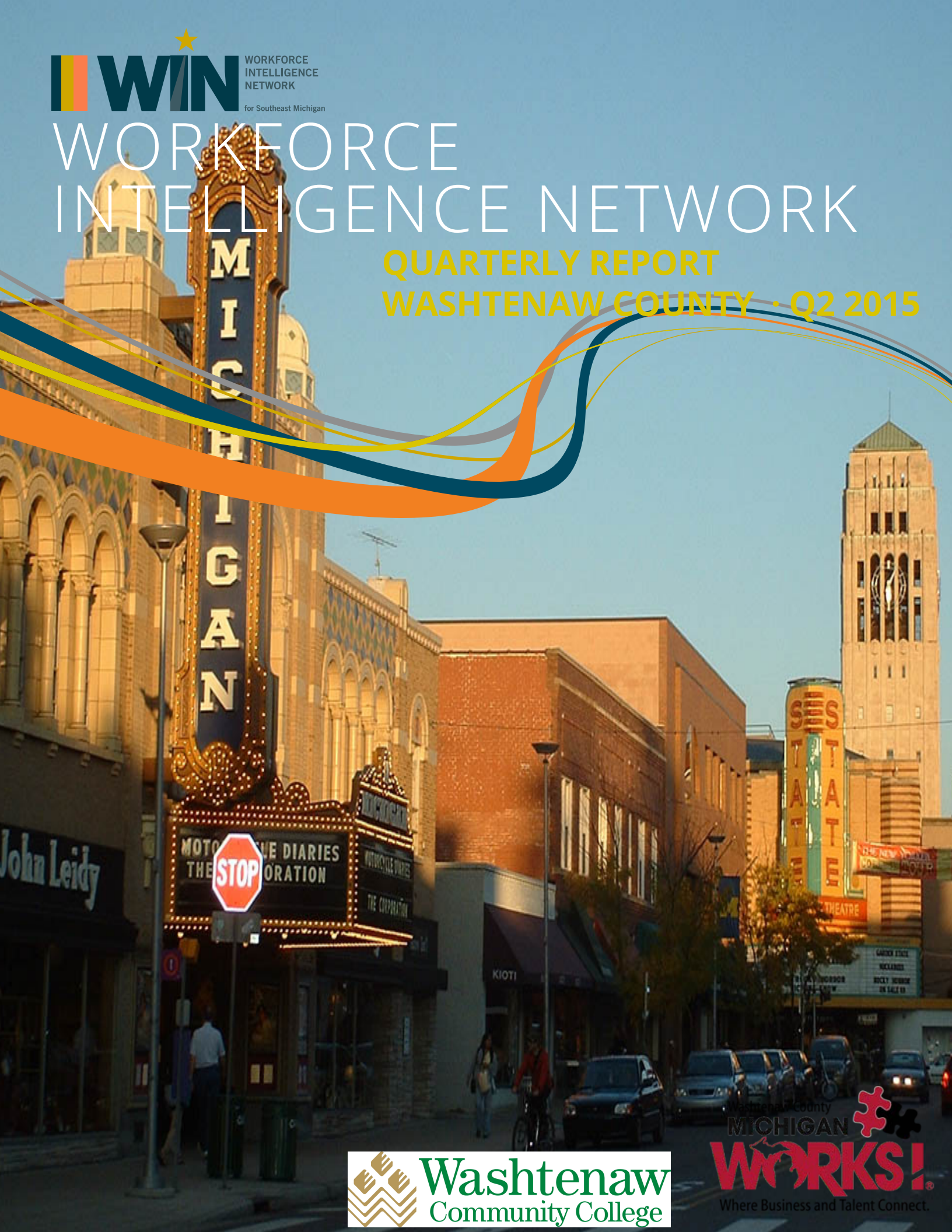


WORKFORCE INTELLIGENCE NETWORK

**QUARTERLY REPORT
WASHTENAW COUNTY · Q2 2015**



CONTENTS

Labor Market and Demand Overview

Occupational Clusters

- Advanced Manufacturing: Skilled Trades & Technicians
- Advanced Manufacturing: Engineers & Designers
- Information Technology
- Health Care
- Retail & Hospitality
- Agriculture

Labor Market and Demand Summary

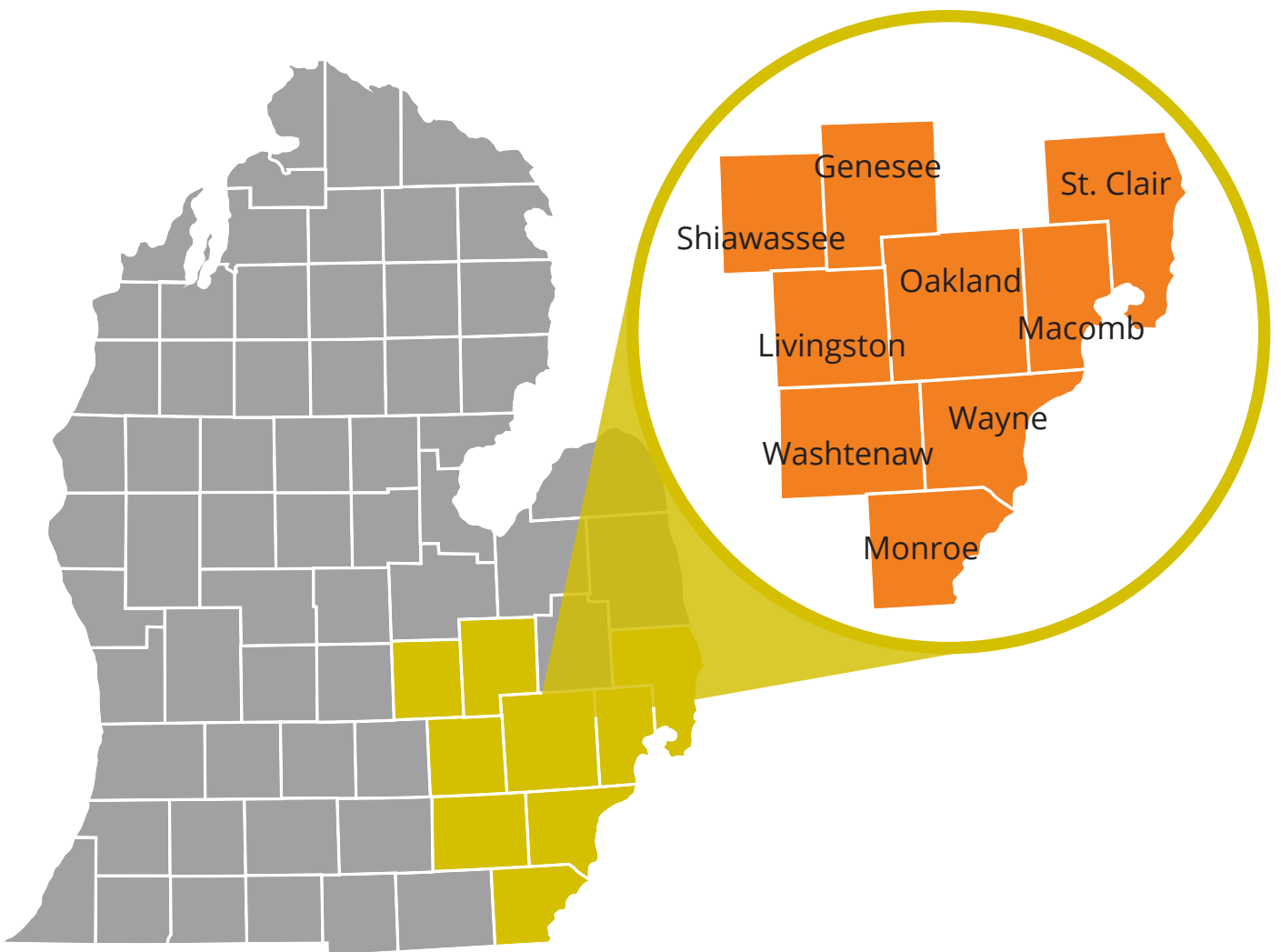
Data Notes and Sources



WIN region includes 9 counties:

**Genesee, Livingston, Monroe, Macomb, Oakland,
Shiawassee, St. Clair, Washtenaw, and Wayne.**

This report focuses on Washtenaw County.





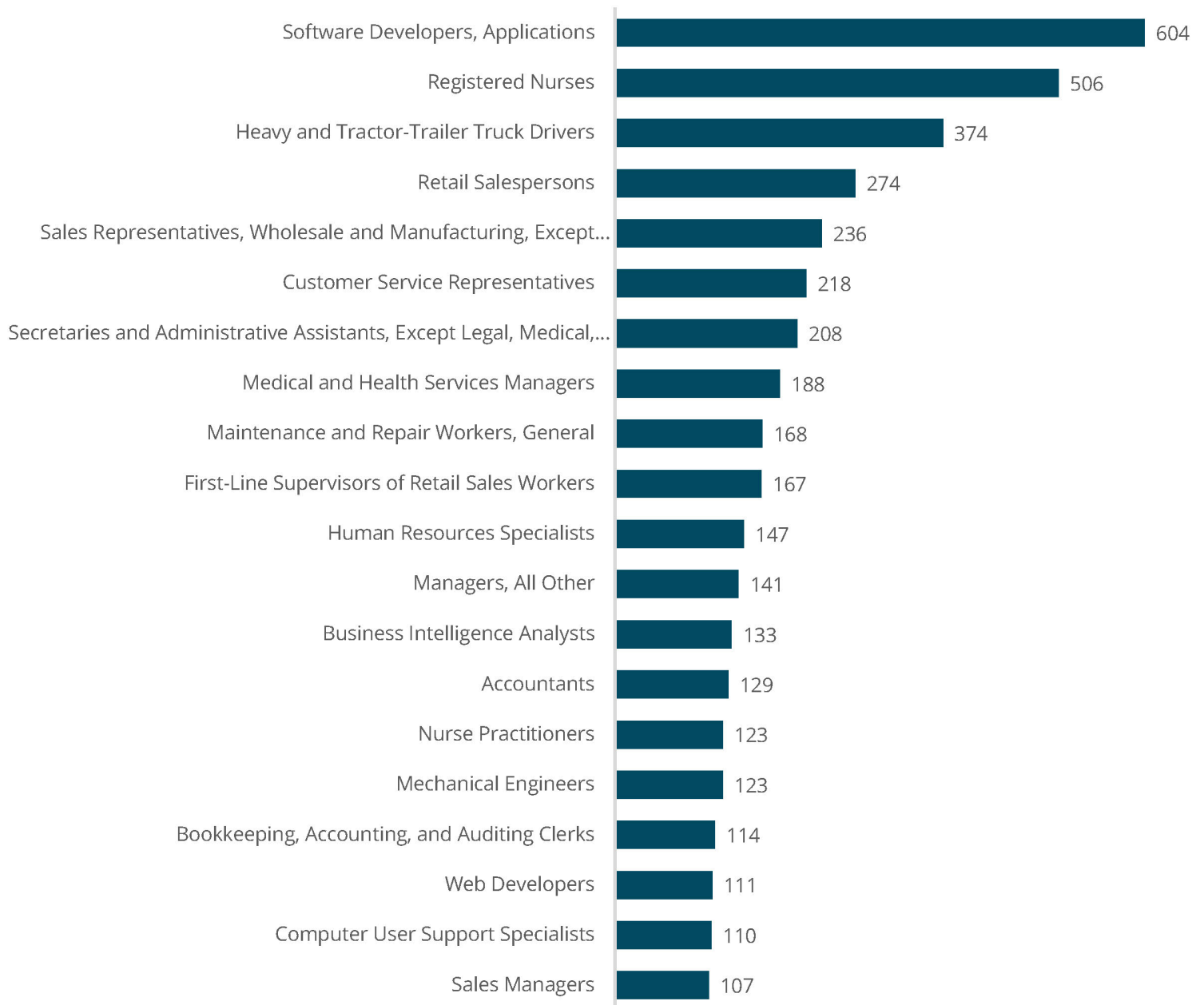
SECTION ONE

LABOR MARKET AND DEMAND OVERVIEW



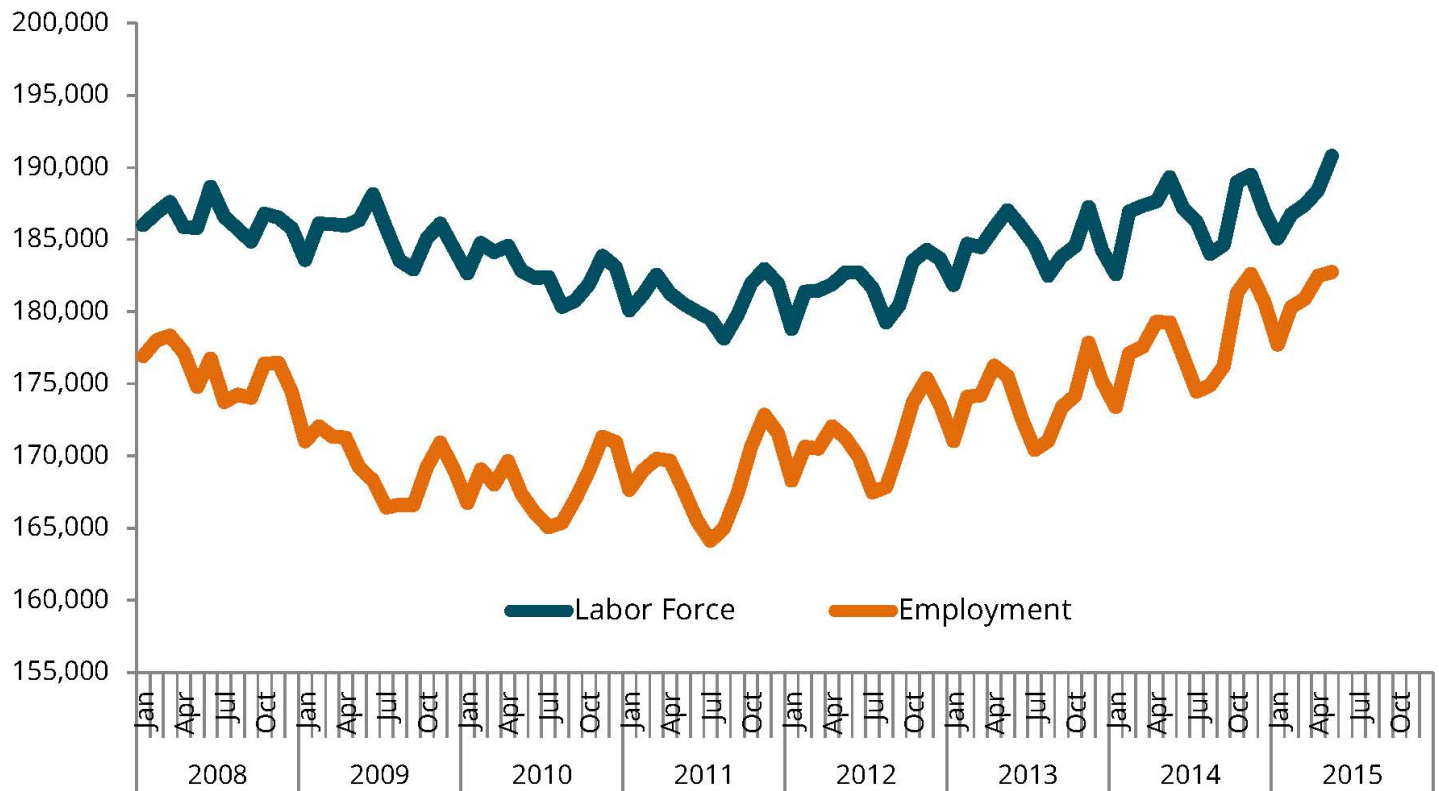
TOP 20 JOBS IN DEMAND

APRIL - JUNE 2015



Software developers, applications remained as the most in-demand occupation according to online job postings in Washtenaw County in Q2 2015 with 604 ads. Other top postings occupations in the county include registered nurses (506 ads), heavy and tractor-trailer truck drivers (374 ads) and retail salespersons (274 ads). These four occupations are consistently included in not only Washtenaw's top jobs but throughout the WIN region as well from quarter to quarter. This continued high level of posting most likely indicates that employers are having a difficult time finding and retaining talent for these positions.

EMPLOYMENT AND LABOR FORCE



Source: Bureau of Labor Statistics

Analysis: Workforce Intelligence Network

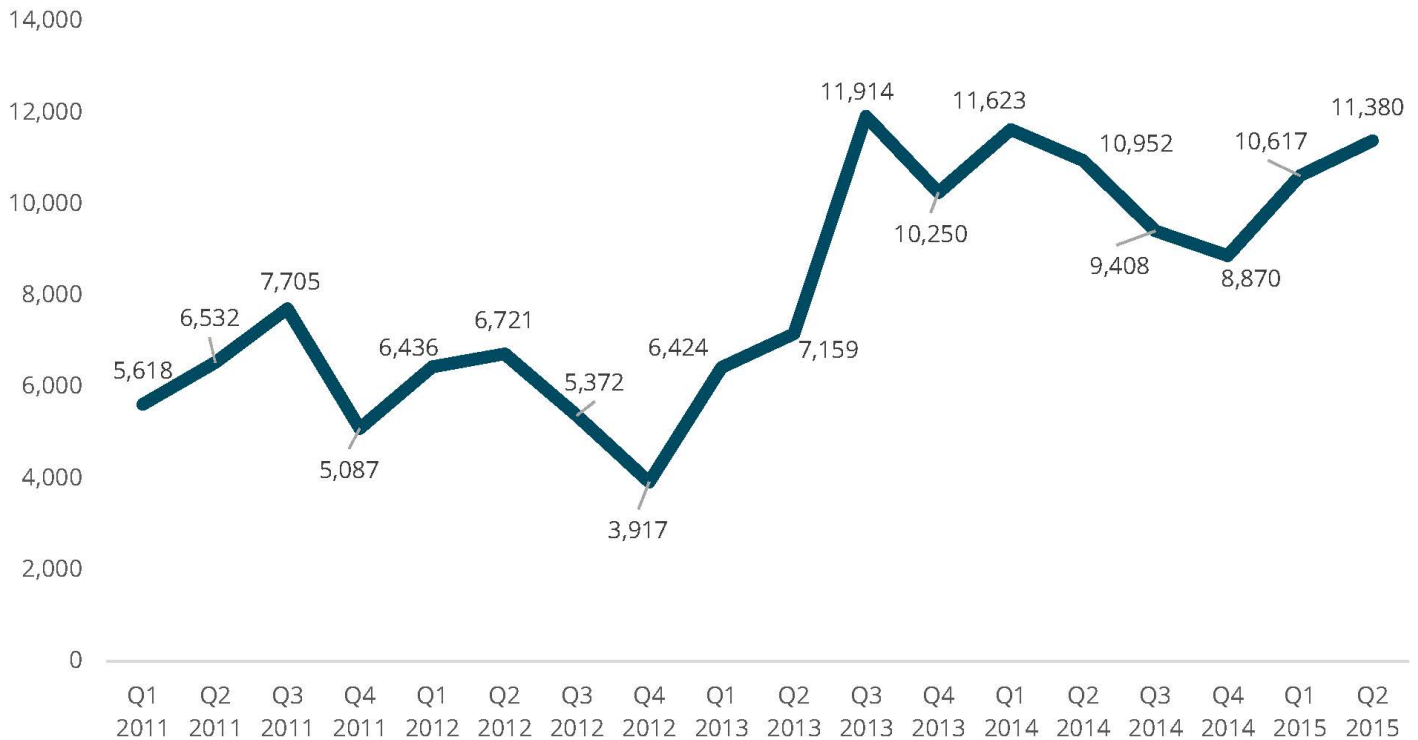
Both the labor force and employment in Washtenaw County grew by 1.7% between Q1 and Q2 2015. The labor force grew by 3,220 individuals while employment grew by 2,973. Typically the labor force and employment levels in Washtenaw County will peak during the summer months due to seasonal employment. There will most likely be a slight decrease next quarter if historic trends continue.

Over the past several years employment has been increasing at a greater rate than the labor force. As a result the unemployment rate has been decreasing. Currently the unemployment rate sits at 3.7% in Washtenaw County. While this rate is impressive, it is also important for the labor force to continue to grow.

EMPLOYER DEMAND

APRIL - JUNE 2015

Washtenaw County Online Job Postings



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Total job postings in Washtenaw County increased for the second consecutive quarter to 11,380 online ads in Q2 2015. This was a 7.2% increase over the 10,617 job postings from Q1 2015. Online ads for Q2 2015 are a 21% increase over the 9,408 ads in Q2 2014, indicating strong growth from year to year.

Postings in Washtenaw County increased in every occupational cluster with exception to IT between Q1 and Q2 2015. The increase or decrease in postings was modest across the board, however, especially when compared to the jumps witnessed between Q4 2014 and Q1 2015.

The Skilled Trades & Technicians and Agriculture clusters saw slight increases in share of postings while IT, Health Care and Retail & Hospitality saw slight decreases. Share of total postings for Engineers & Designers remained unchanged between quarters. Retail & Hospitality maintained the greatest share of postings with 17.8% in Q2 2015. Health Care and IT also retained their large shares of postings with 14.5% and 14.9%, respectively.

The clusters analyzed by WIN in Washtenaw County represent 56.9% of all online job postings in the county.

EMPLOYMENT AND LABOR FORCE OVERVIEW

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 To-Date
Labor Force	182,801	180,826	181,818	184,722	186,775	187,688
Employment	167,969	168,414	170,928	173,822	177,805	180,835
Unemployment	14,832	12,412	10,890	10,900	8,970	6,853
Unemployment Rate	8.1%	6.9%	6.0%	5.9%	4.8%	3.7%

3rd Quarter 2014	4th Quarter 2014	1st Quarter 2015	2nd Quarter 2015	Change from 1st Quarter 2015	Percent Change from 1st Quarter 2015
184,969	188,470	186,400	189,620	3,220	1.7%
175,188	181,528	179,646	182,619	2,973	1.7%
9,781	6,943	6,755	7,002	247	3.7%
5.3%	3.7%	3.6%	3.7%	0.1%	na

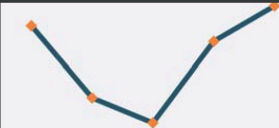







SECTION TWO

OCCUPATIONAL CLUSTERS

WASHTENAW COUNTY DEMAND OVERVIEW

	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Change over time	Share of Total Postings Q2 2015
Total	10,952	9,408	8,870	10,617	11,380		
Skilled Trades & Technicians	268	195	225	291	337		3.0%
Engineers & Designers	331	356	325	493	526		4.6%
IT	1,185	1,125	1,067	1,718	1,697		14.9%
Health Care	1,208	1,453	1,356	1,595	1,646		14.5%
Retail & Hospitality	2,561	1,865	1,385	1,973	2,031		17.8%
Agriculture	388	207	176	212	236		2.1%



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.*

The most postings in the Skilled Trade and Technician cluster during Q2 2015 were for production workers with 63 online ads. Postings for this occupation more than tripled from its 17 ads in Q1 2015. Other top posting occupations include inspectors, testers, sorters, samplers and weighers (52 ads), electronics engineering technicians (40 ads) and first-line supervisors of production and operating workers (40 ads). This is the first quarter since WIN began analyzing job postings in which CNC machinists was not included in the top jobs for Washtenaw County.

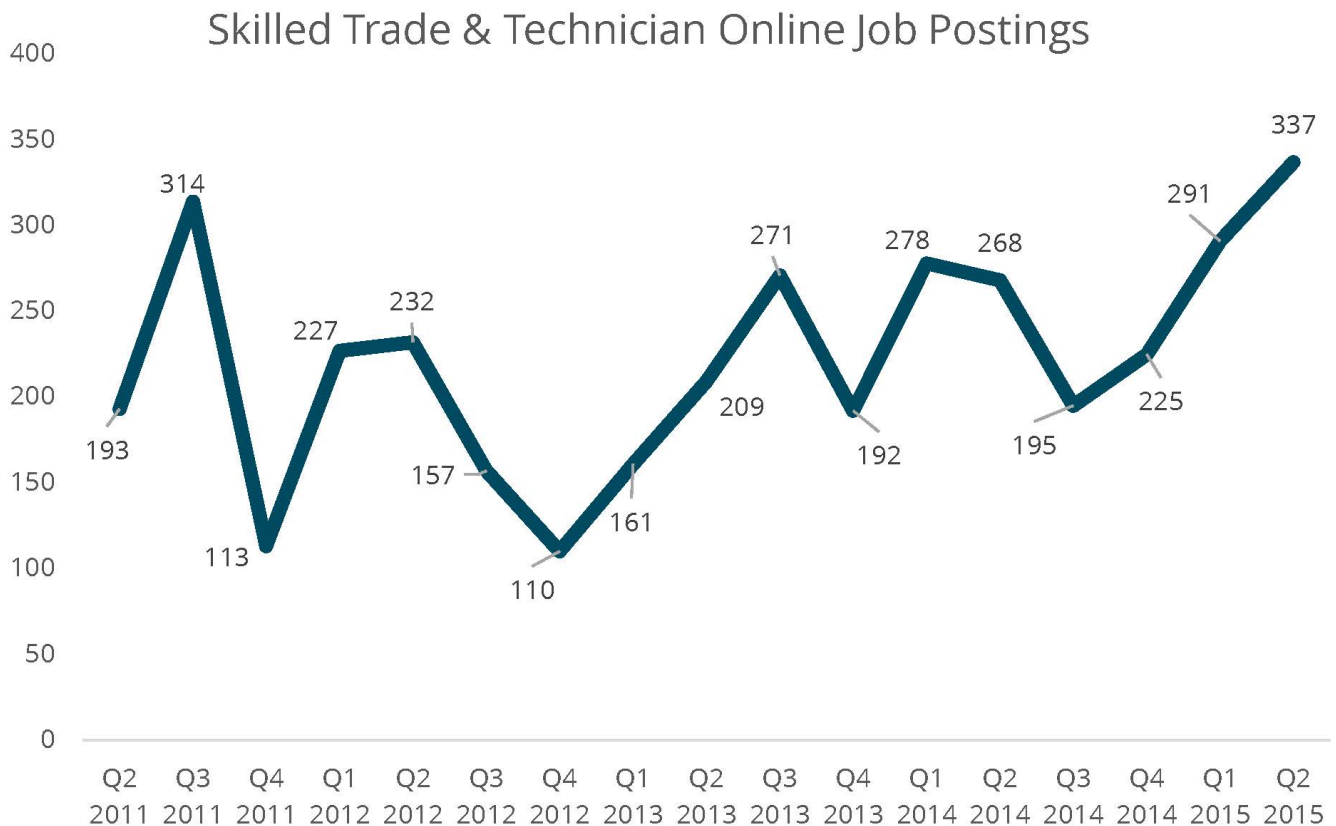
ADVANCED MANUFACTURING

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

Like total postings in the county overall, Skilled Trades and Technician postings have increased since last quarter. Adding 46 postings, levels between Q1 and Q2 2015 increased 15.8%. Growth is also up 25.7% since Q2 2014, on year ago. This is also the highest recorded number of postings for this occupational cluster in the four years of data used by WIN.

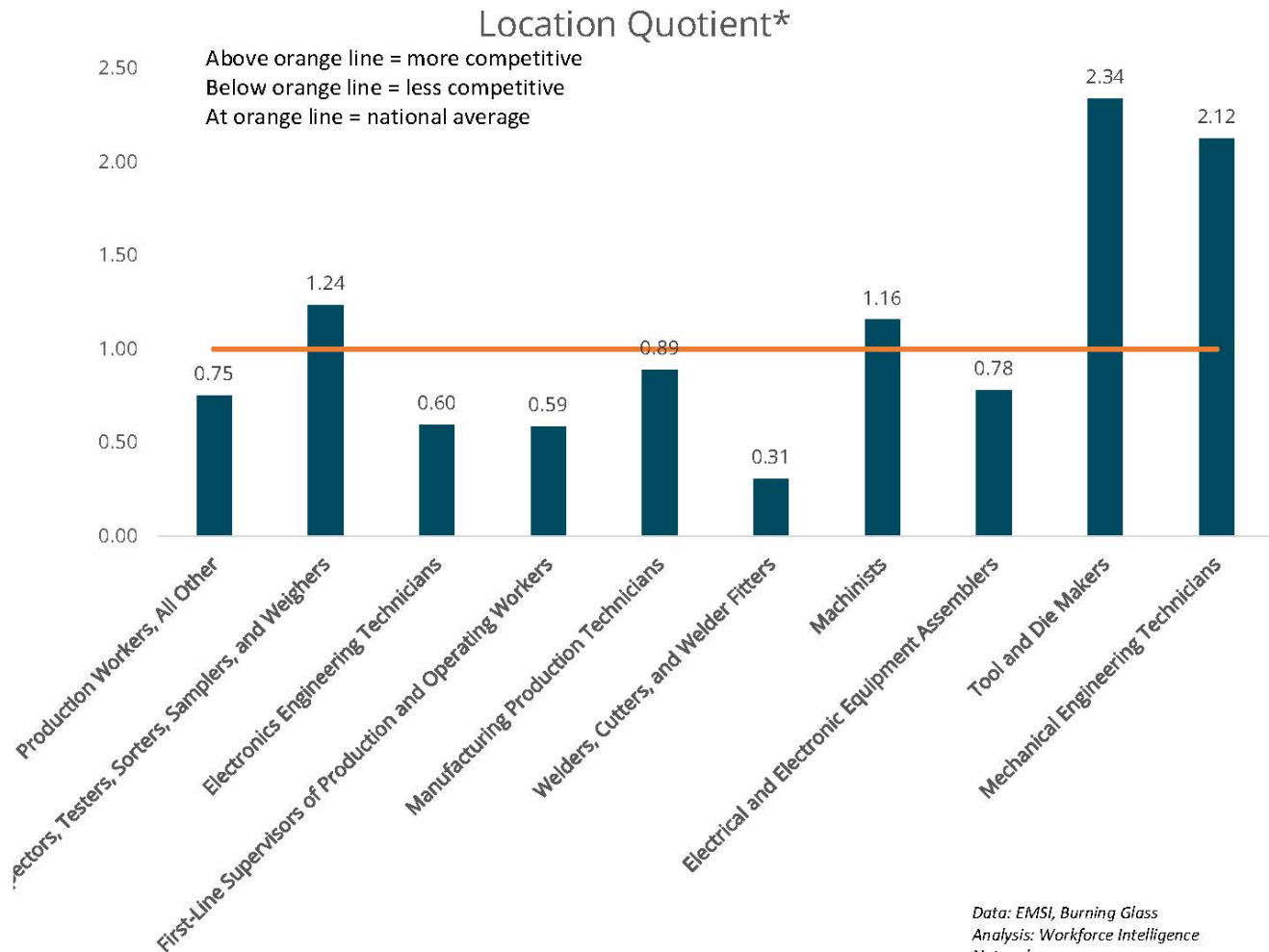
Washtenaw County has a higher concentration of workers than the rest of the nation in some skilled trades occupations but not for all of the most in-demand jobs this quarter. For example, machinists have a location quotient (LQ) of 1.16 meaning that the concentration of these workers in Washtenaw County is 16% higher than the rest of the U.S. on average. On the other hand, the LQ for the top skilled trades occupation—production workers—is just 0.75. This means that the concentration of production workers is 25% lower in the county than the U.S. on average. A lower concentration likely means that employers may have a hard time finding workers to fill open positions.

Skilled trade jobs also allow workers to earn a living wage with the median hourly rate above \$15 for nearly every in-demand job. For tool & die makers and first-line supervisors of production workers the median wage is near or above \$30 per hour, translating to over \$62,000 per year. While not all 10th percentile earnings (entry-level) are as high, all occupations offer upward wage growth opportunities.

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 related training to the top skilled trade jobs, they are not enough to fill all open positions as employers continue to increase worker demand.

ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: TOP 10 JOBS LOCATION QUOTIENT AND WAGES



Data: EMSI, Burning Glass
Analysis: Workforce Intelligence
Network

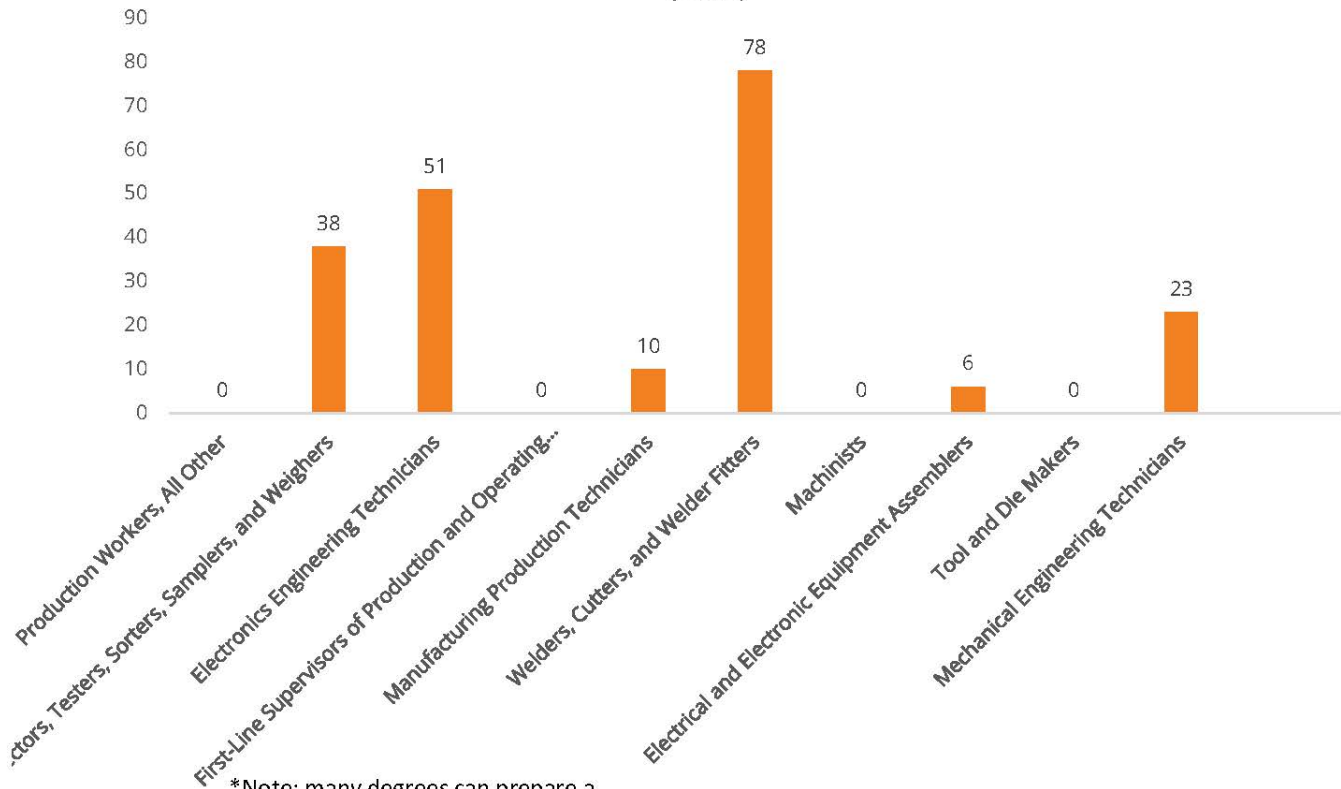
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
51-9199	Production Workers, All Other	\$9.78	\$10.79	\$12.64	\$16.84	\$18.56
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$10.11	\$11.84	\$15.07	\$23.04	\$29.50
17-3023	Electronics Engineering Technicians	\$15.31	\$18.18	\$25.59	\$32.74	\$37.42
51-1011	First-Line Supervisors of Production and Operating Workers	\$19.42	\$23.92	\$29.45	\$36.43	\$43.00
17-3029	Manufacturing Production Technicians	\$13.68	\$18.38	\$26.74	\$35.03	\$38.34
51-4121	Welders, Cutters, and Welder Fitters	\$12.33	\$14.60	\$18.63	\$22.15	\$31.45
51-4041	Machinists	\$13.48	\$18.64	\$24.40	\$27.66	\$29.64
51-2022	Electrical and Electronic Equipment Assemblers	\$9.30	\$12.46	\$17.21	\$22.43	\$27.54
51-4111	Tool and Die Makers	\$17.42	\$22.88	\$32.01	\$34.74	\$36.37
17-3027	Mechanical Engineering Technicians	\$10.67	\$13.29	\$21.58	\$28.40	\$33.96

SKILLED TRADES AND TECHNICIANS: TOP 10 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
51-9199	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
17-3023	Electronics Engineering Technicians	Associate's degree	None	None
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 years	None
17-3029	Manufacturing Production Technicians	Associate's degree	None	None
51-4121	Welders, Cutters, and Welder Fitters	High school diploma or equivalent	None	Moderate-term on-the-job training
51-4041	Machinists	High school diploma or equivalent	None	Long-term on-the-job training
51-2022	Electrical and Electronic Equipment Assemblers	High school diploma or equivalent	None	Short-term on-the-job training
51-4111	Tool and Die Makers	High school diploma or equivalent	None	Long-term on-the-job training
17-3027	Mechanical Engineering Technicians	Associate's degree	None	None

A group of four professionals, three men and one woman, are wearing blue hard hats and business attire. They are looking at a document together, with one man pointing at it. The background is a bright, slightly blurred industrial setting.

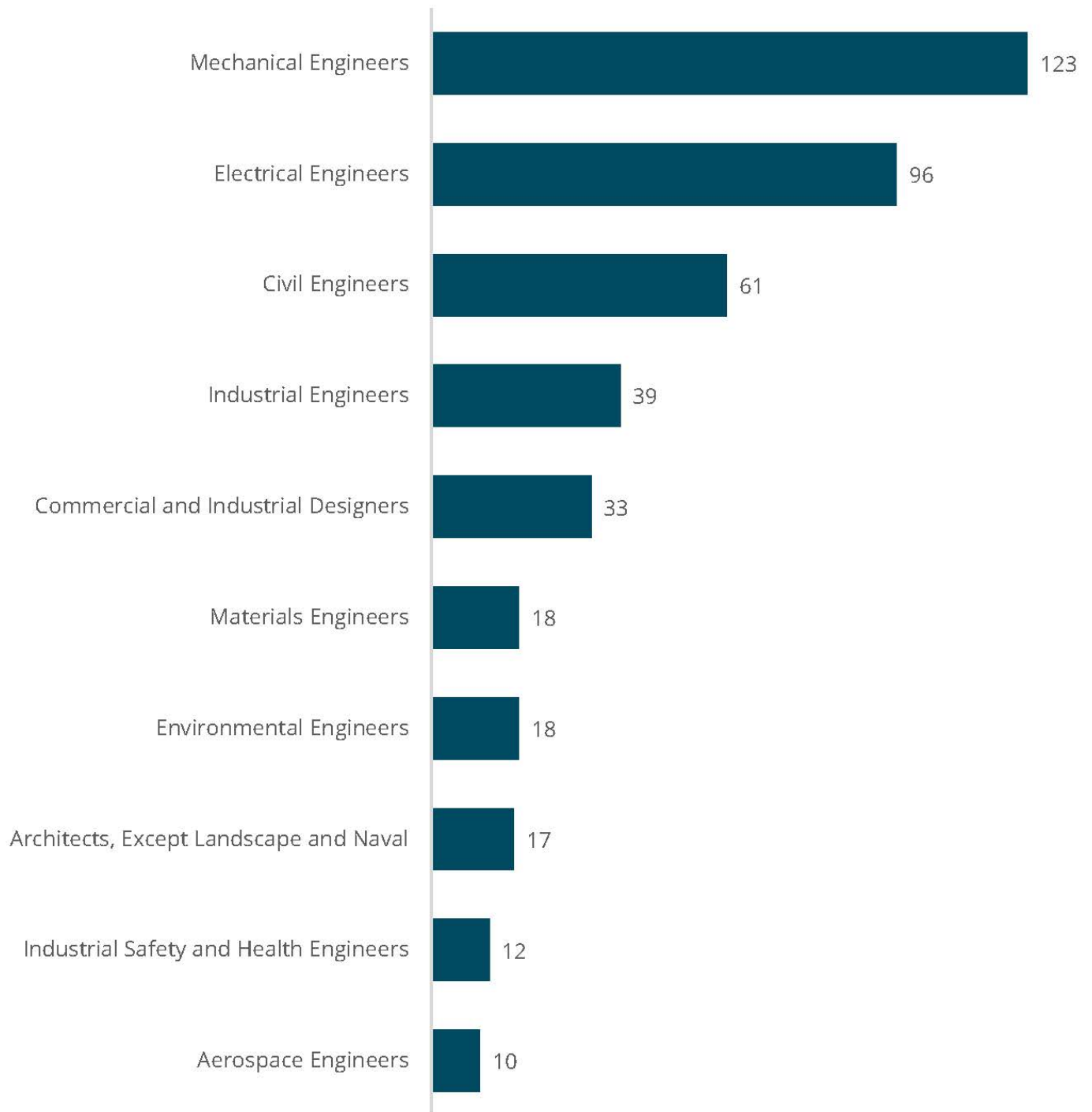
ADVANCED MANUFACTURING

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.*

The top five most in-demand Engineer and Designer jobs remain unchanged in Washtenaw County from Q1 2015. Mechanical engineers once again top the list in this cluster with 123 postings, up 29.5% from the 95 in Q1 2015. The other top posting occupations include electrical engineers (96 ads), civil engineers (61 ads), industrial engineers (39 ads) and commercial and industrial designers (33 ads).

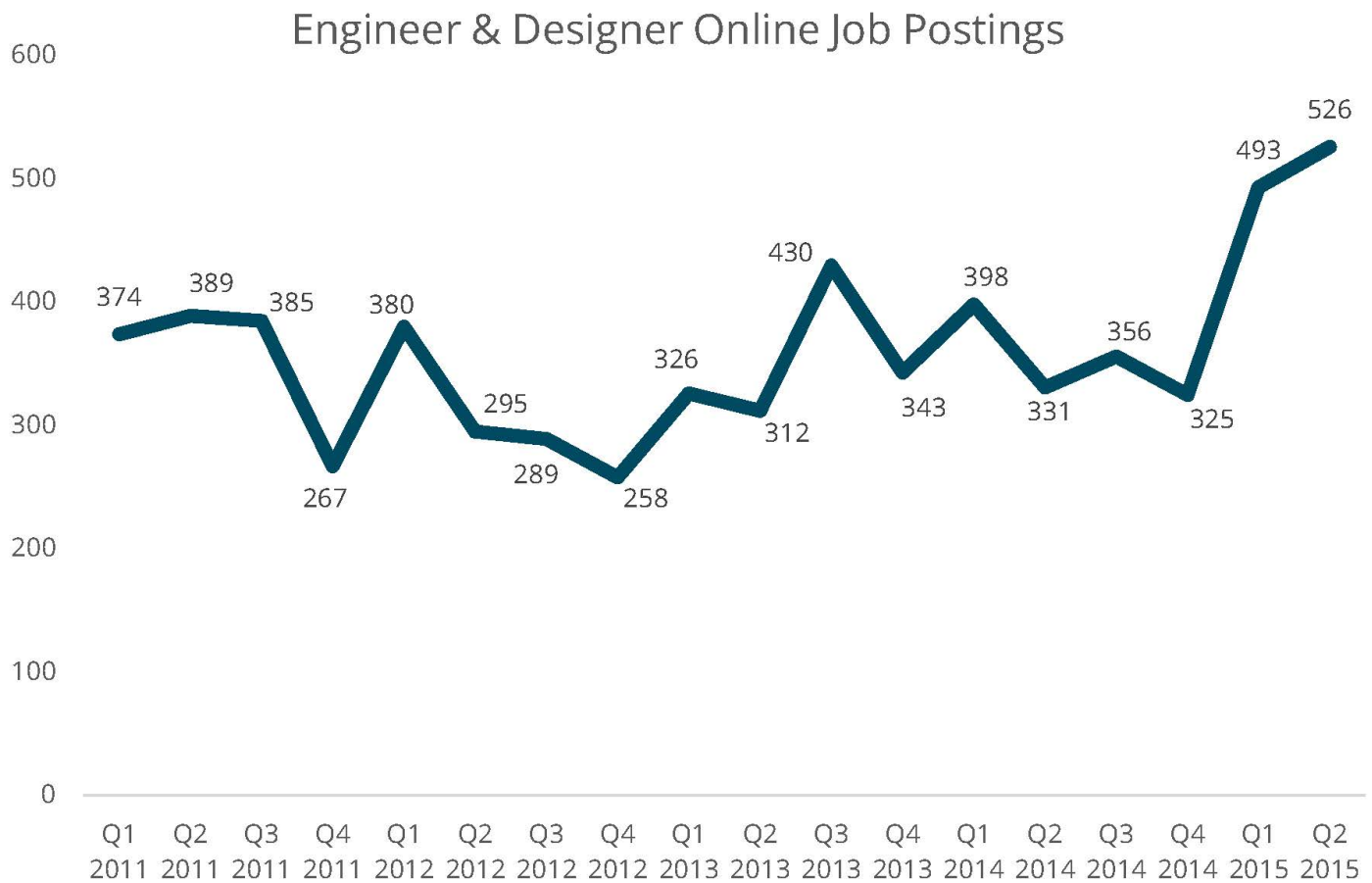
ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: TOP JOBS



ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

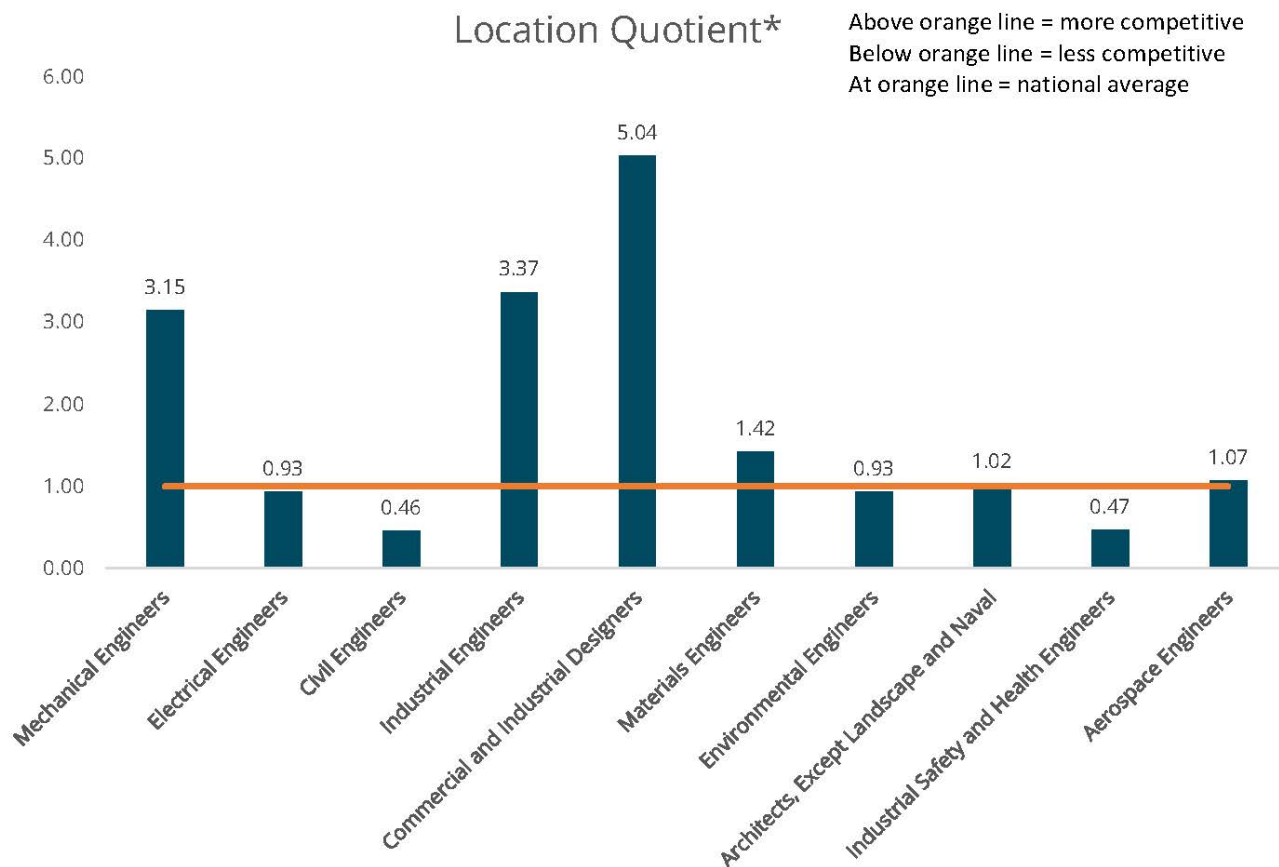
Engineering and Design postings increased for the third consecutive quarter, increasing to 526 postings in Q2 2015. This is a 6.7% increase over the 493 postings during Q1. Q2 2015 also sets another record for number of postings since data began being collected in 2011. The continued high posting levels signal that employers need more workers in these jobs. While postings grew, the rate of growth is slower than the rest of the region.

Washtenaw County, like the WIN region, has a strong presence of engineers and designers with some of the highest concentrations of these workers in the nation. The top job, mechanical engineers, with a location quotient of 3.15, has a 215% higher concentration of these workers in the county than the rest of the U.S. on average. Other occupations with high LQ's in Washtenaw County include industrial engineers (3.37) and commercial and industrial designers (5.04).

Wages for engineers and designers are extremely competitive with nearly all 10th percentile earnings (entry-level) above \$20 and most above \$25. The high wages follow a need for higher education. All of the top jobs in this cluster require a Bachelor's degree for entry into the field.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: TOP 10 JOBS LOCATION QUOTIENT AND WAGES



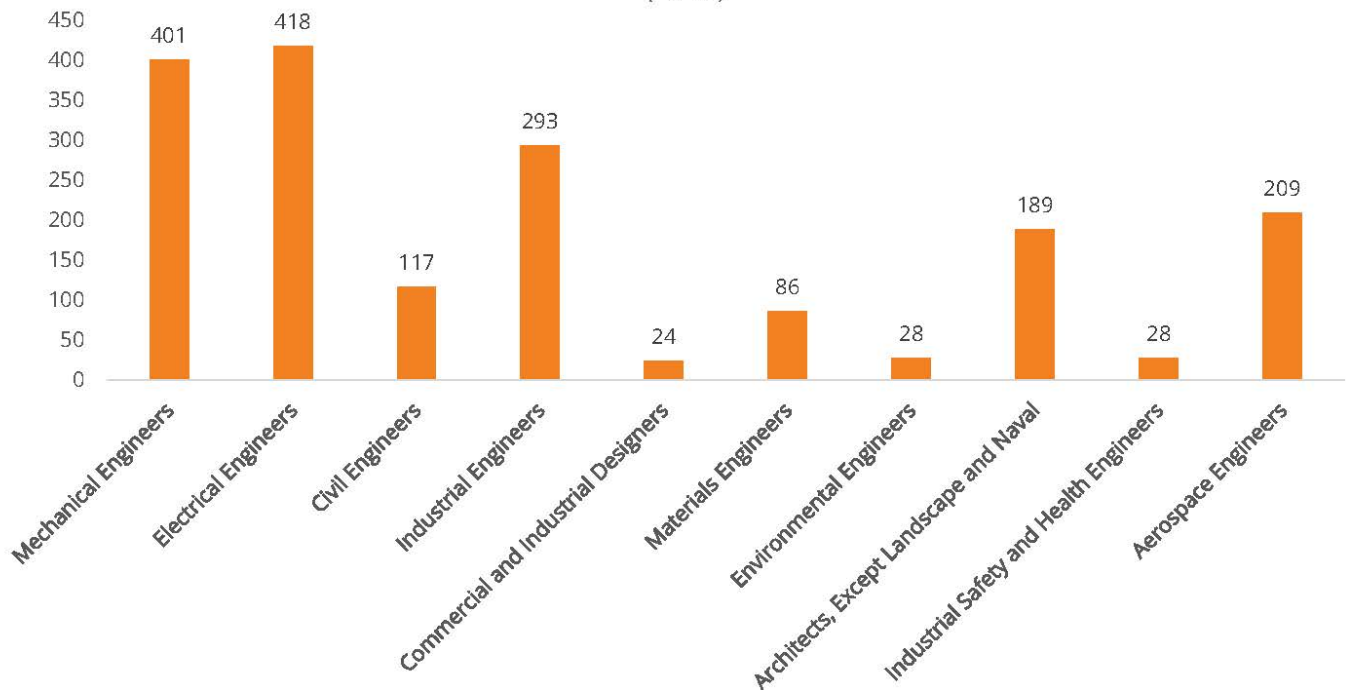
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

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	\$26.82	\$34.70	\$43.13	\$52.18	\$57.90
17-2071	Electrical Engineers	\$32.41	\$37.64	\$46.02	\$54.72	\$61.70
17-2051	Civil Engineers	\$18.95	\$23.93	\$32.21	\$41.40	\$48.23
17-2112	Industrial Engineers	\$25.89	\$30.77	\$35.20	\$41.65	\$51.04
27-1021	Commercial and Industrial Designers	\$24.04	\$29.01	\$31.84	\$34.68	\$40.12
17-2131	Materials Engineers	\$28.75	\$36.09	\$42.73	\$52.90	\$64.52
17-2081	Environmental Engineers	\$26.43	\$32.48	\$38.82	\$48.95	\$56.14
17-1011	Architects, Except Landscape and Naval	\$24.10	\$26.45	\$31.46	\$41.42	\$52.23
17-2111	Industrial Safety and Health Engineers	\$28.10	\$36.33	\$44.99	\$56.65	\$65.94
17-2011	Aerospace Engineers	\$30.41	\$32.92	\$36.51	\$44.50	\$56.10

ENGINEERS AND DESIGNERS: TOP 10 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
17-2141	Mechanical Engineers	Bachelor's degree	None	None
17-2071	Electrical Engineers	Bachelor's degree	None	None
17-2051	Civil Engineers	Bachelor's degree	None	None
17-2112	Industrial Engineers	Bachelor's degree	None	None
27-1021	Commercial and Industrial Designers	Bachelor's degree	None	None
17-2131	Materials Engineers	Bachelor's degree	None	None
17-2081	Environmental Engineers	Bachelor's degree	None	None
17-1011	Architects, Except Landscape and Naval	Bachelor's degree	None	Internship/residency
17-2111	Industrial Safety and Health Engineers	Bachelor's degree	None	None
17-2011	Aerospace Engineers	Bachelor's degree	None	None



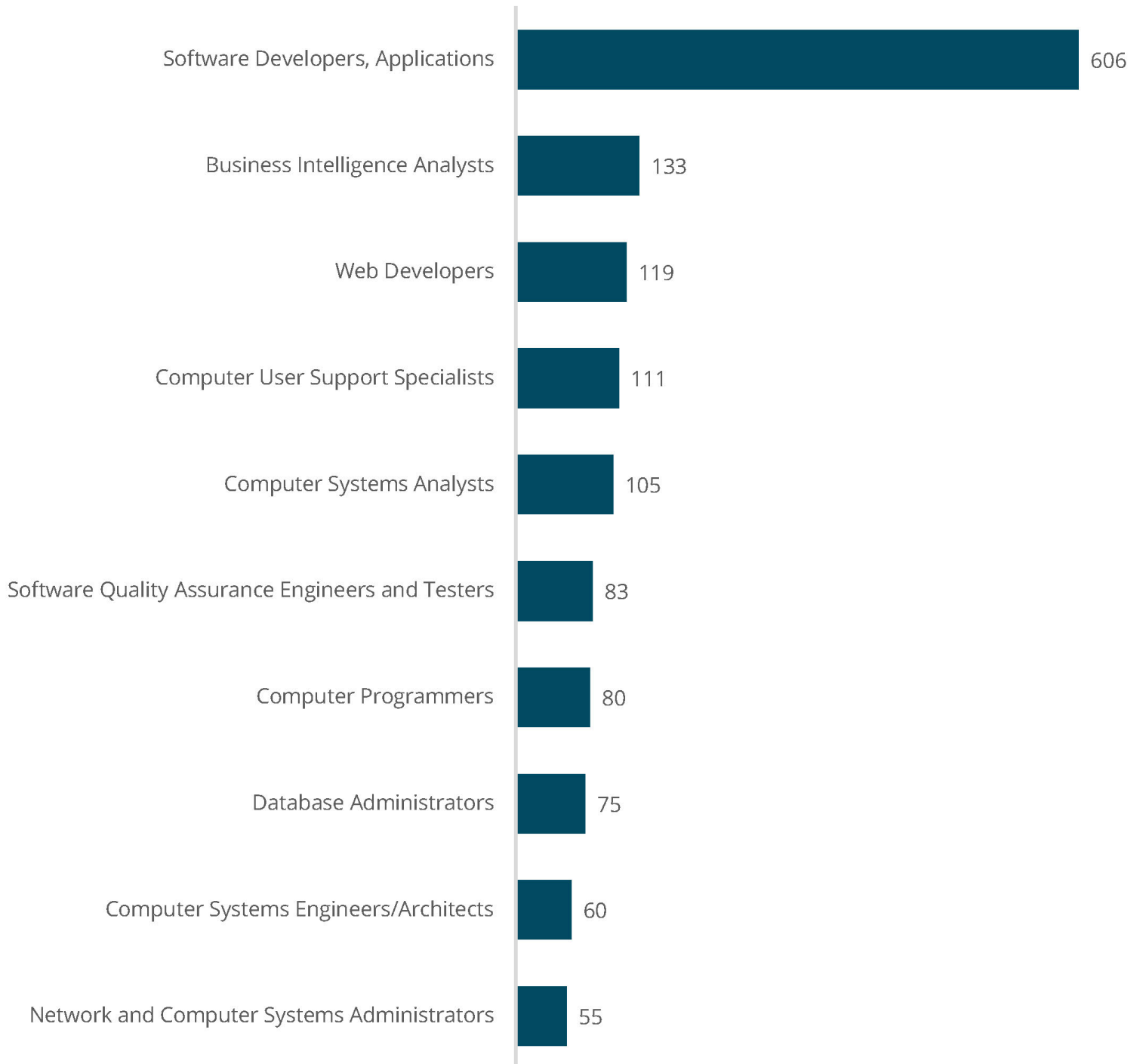
INFORMATION TECHNOLOGY

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.

Despite a slight decrease in total number of postings for the IT cluster many of the top jobs maintained a high number of postings or even increased. Software developers remain the most in-demand occupation with 606 postings, up from 584 in Q1 2015. The second most in-demand job, business intelligence analysts, also saw an increase from 96 postings in Q1 to 133 in Q2 (up 38.5%). Other top jobs for the IT cluster include web developers (119 ads) and computer user support specialists (111 ads).

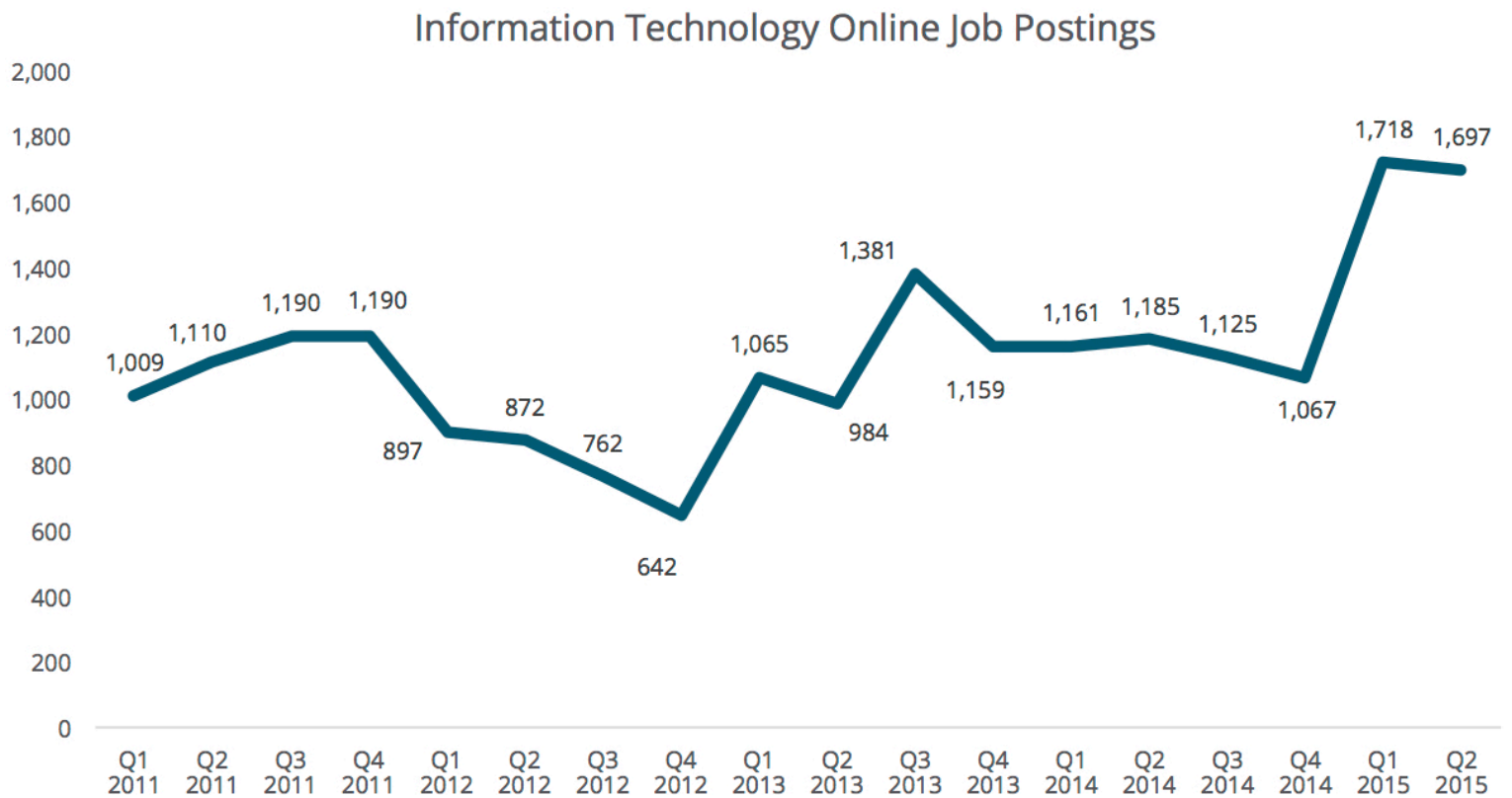
INFORMATION TECHNOLOGY

TOP JOBS



INFORMATION TECHNOLOGY

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Despite the slight decrease in total number of postings for the IT cluster in Washtenaw County the nearly 1,700 in Q2 2015 are well above the 2014 average of 1,150 per quarter. Postings remain near last quarter's record high. The notable jump from Q4 2014 to Q1 2015 and Q2's similar high number of postings could signal new and sustained levels of employer demand for the future.

The concentration of workers in Washtenaw County is higher than the national average for all but two of the top ten IT occupations. Furthermore, the concentration is more than double the national average for the following IT occupations (location quotient greater than 2.0): business intelligence analysts, computer user support specialists, software quality assurance engineers and testers and computer systems engineers/architects.

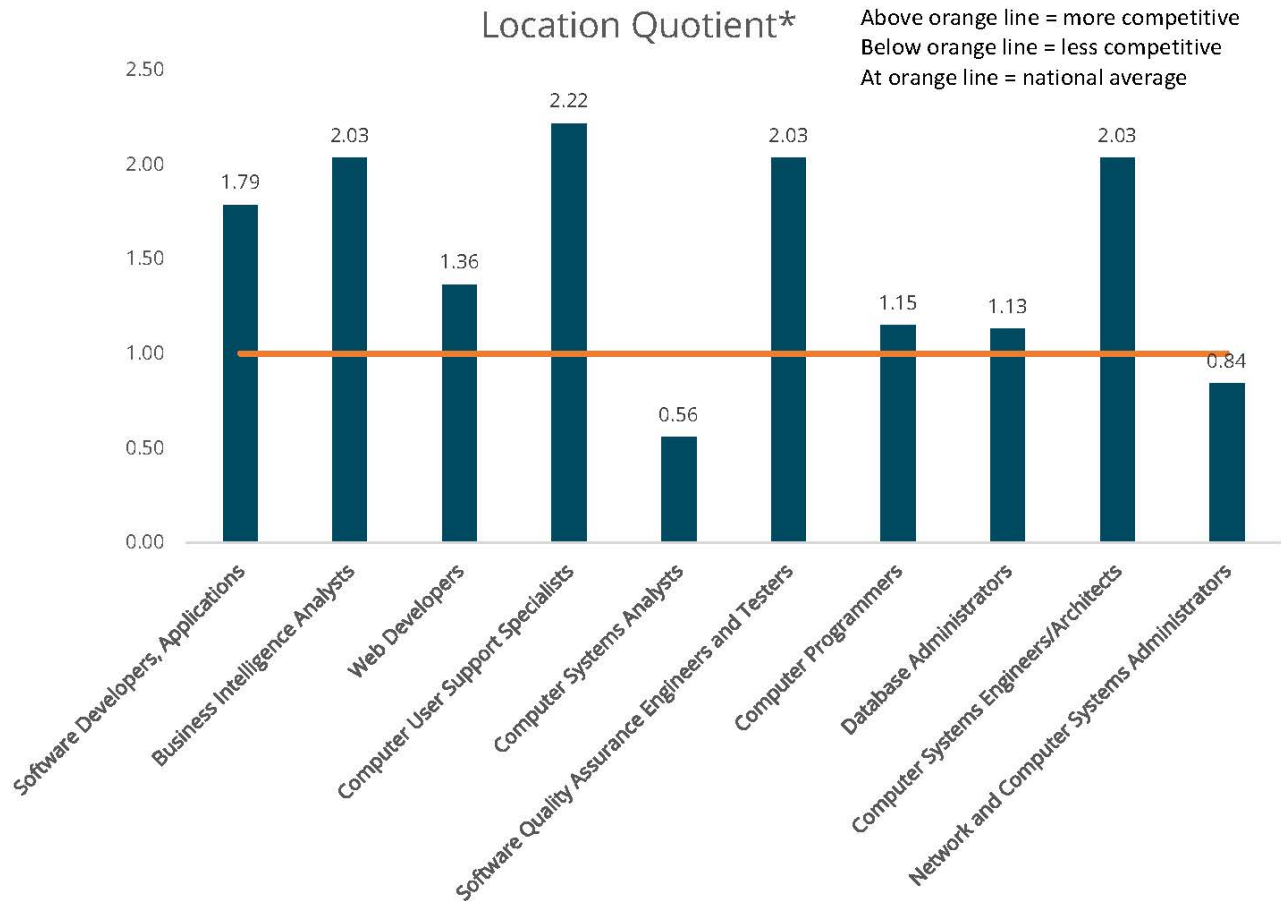
Wages for IT occupations are generally very competitive with 10th percentile earnings (entry-level) near or above \$20 per hour for all but two of the top ten occupations in Washtenaw County. Wages have followed demand and high pay will likely drive more workers into this field in the coming years.

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 that will add to the IT workforce employers desperately need.

At the same time, demand heavily outweighs supply for many of these occupations. Despite the 317 graduates with a degree related to software development in 2013, there were 1,425 online postings for this occupation in Washtenaw County alone in 2014.

INFORMATION TECHNOLOGY

TOP 10 JOBS LOCATION QUOTIENT AND WAGES



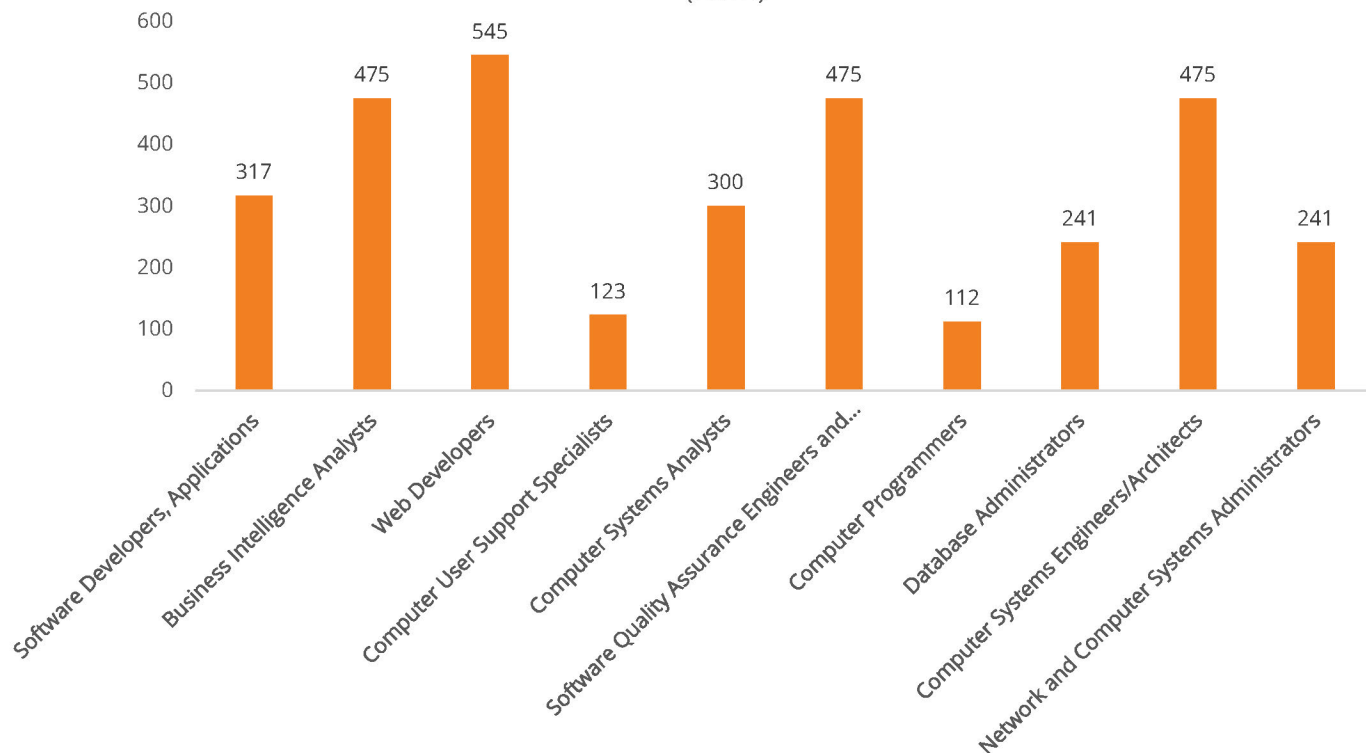
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

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
15-1132	Software Developers, Applications	\$25.59	\$31.19	\$36.52	\$45.10	\$54.00
15-1199	Business Intelligence Analysts	\$20.51	\$26.99	\$35.38	\$44.29	\$51.24
15-1134	Web Developers	\$15.37	\$20.45	\$26.25	\$32.88	\$39.05
15-1151	Computer User Support Specialists	\$10.17	\$12.93	\$18.88	\$25.41	\$32.69
15-1121	Computer Systems Analysts	\$19.91	\$29.14	\$39.45	\$48.27	\$54.15
15-1199	Software Quality Assurance Engineers and Testers	\$20.51	\$26.99	\$35.38	\$44.29	\$51.24
15-1131	Computer Programmers	\$20.12	\$24.40	\$33.40	\$41.47	\$46.61
15-1141	Database Administrators	\$26.96	\$32.00	\$39.69	\$46.03	\$53.88
15-1199	Computer Systems Engineers/Architects	\$20.51	\$26.99	\$35.38	\$44.29	\$51.24
15-1142	Network and Computer Systems Administrators	\$20.29	\$26.03	\$32.57	\$37.61	\$45.14

TOP 10 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
15-1132	Software Developers, Applications	Bachelor's degree	None	None
15-1199	Business Intelligence Analysts	Bachelor's degree	None	None
15-1134	Web Developers	Associate's degree	None	None
15-1151	Computer User Support Specialists	Some college, no degree	None	Moderate-term on-the-job training
15-1121	Computer Systems Analysts	Bachelor's degree	None	None
15-1199	Software Quality Assurance Engineers and Testers	Bachelor's degree	None	None
15-1131	Computer Programmers	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
15-1142	Network and Computer Systems Administrators	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 on the left is wearing red scrubs and has a name tag. The man on the right is wearing blue scrubs and is holding a pen. They are both smiling at the camera. The background is slightly blurred, showing office equipment and papers.

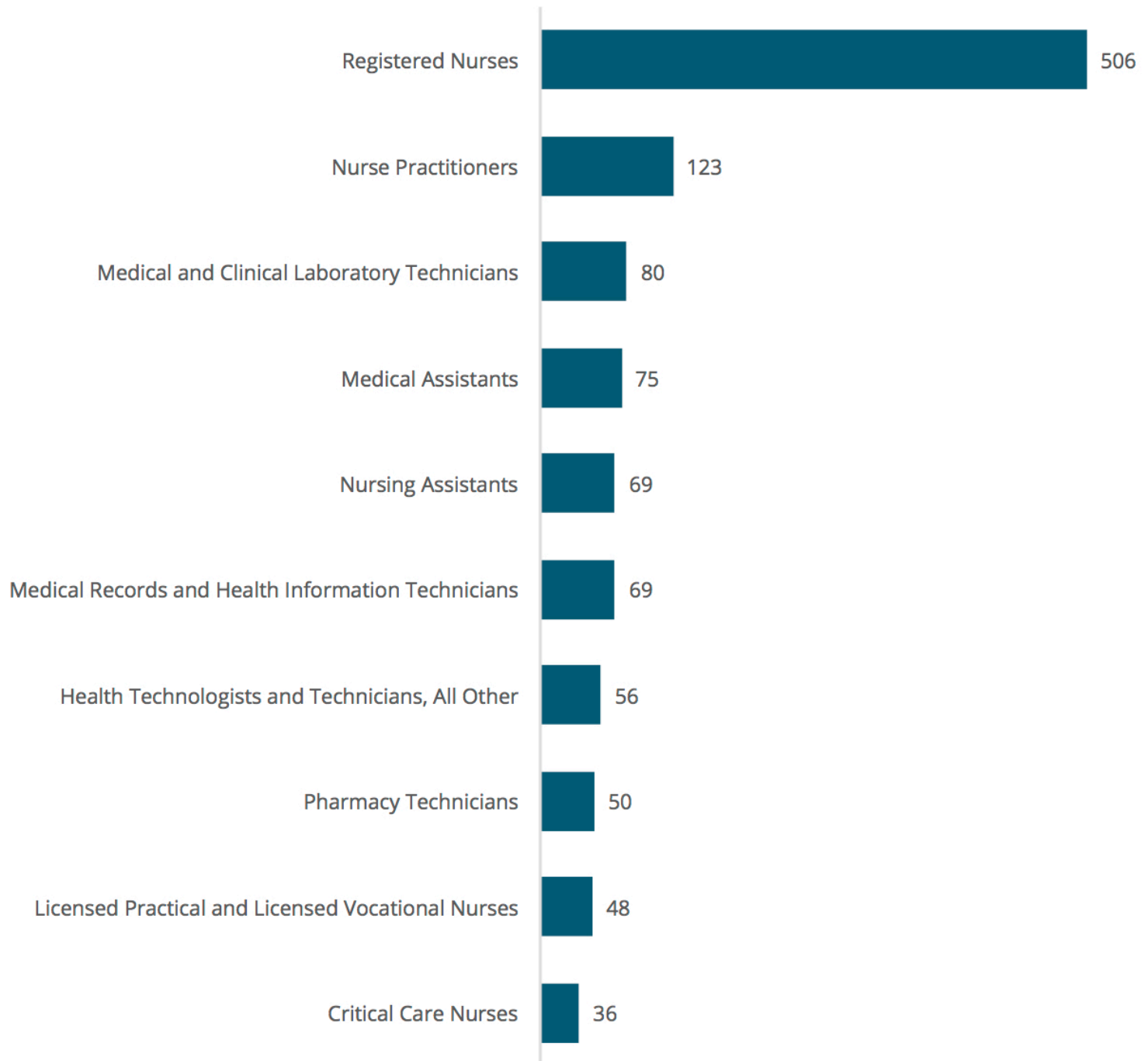
HEALTH CARE

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 job is consistent from quarter to quarter for Health Care. Postings for registered nurses once again top the list with 506 online ads in Q2 2015, an increase of just 12 over Q1 2015. Hospitals in the region have increasingly required nurses to obtain four-year degrees in recent years. There is currently a bill on the state Senate floor that would allow nurses to complete a Bachelor's degree at their local community college, alleviating the monetary and distance issues with attending a four-year university for many.

HEALTH CARE

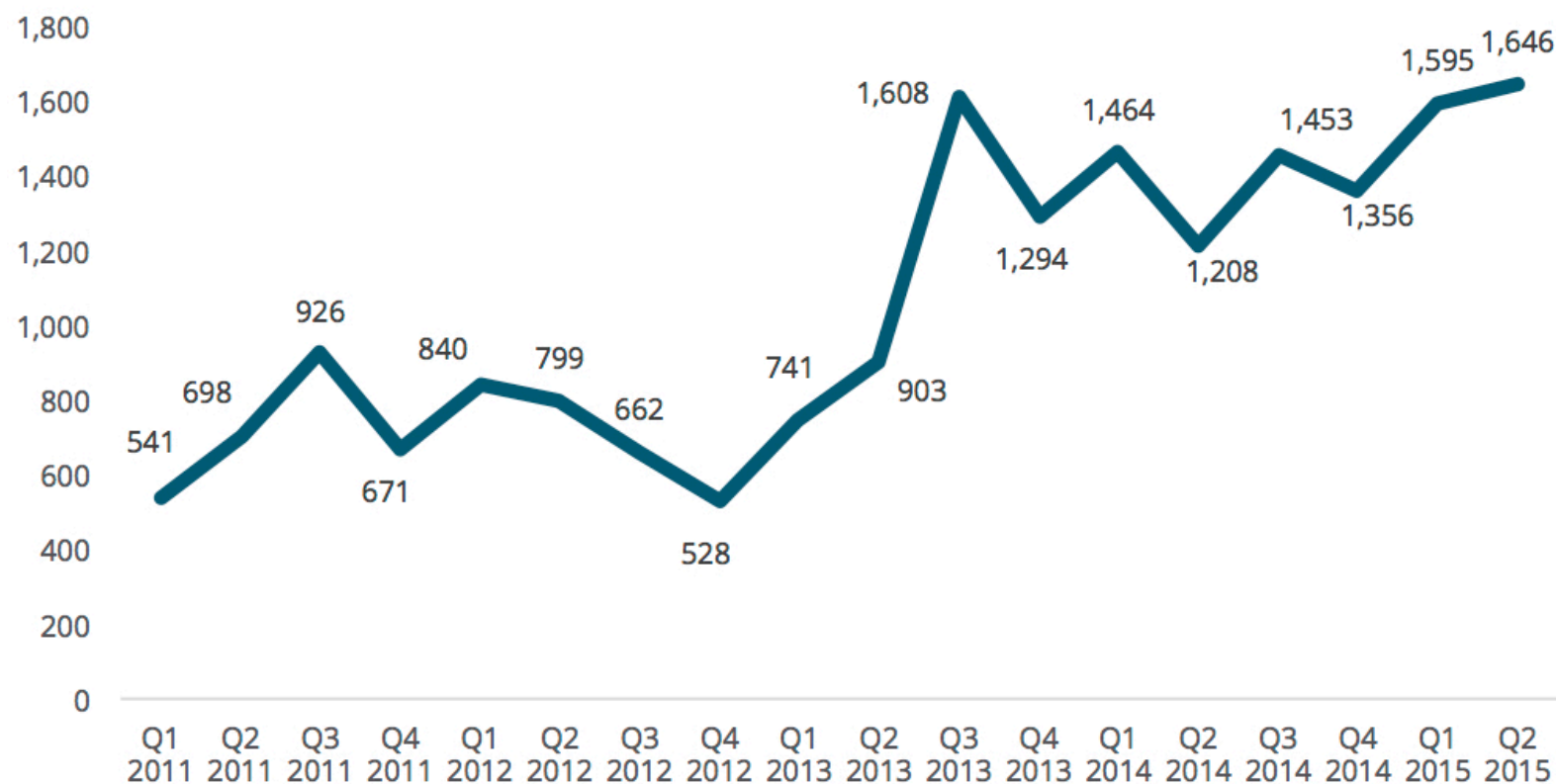
TOP JOBS



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 for a third consecutive quarter. The 1,646 online ads in Q2 2015 surpassed the record of 1,608 in Q3 2013. After several quarters of fluctuation between 1,200 and 1,500 postings it seems that online ads for health care will continue to maintain this higher level in the foreseeable future. While postings grew, the growth is slower than the regional average for this cluster.

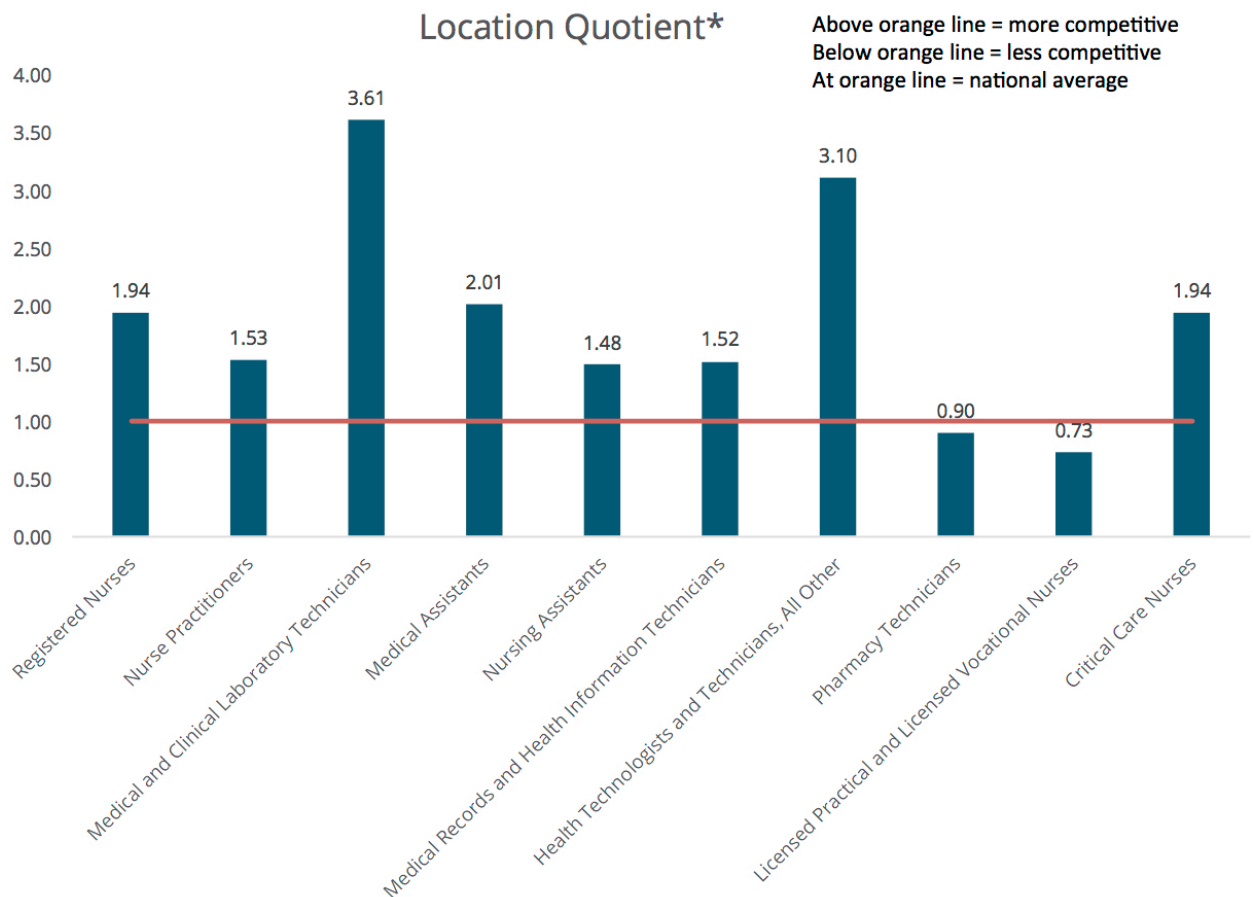
Health Care is a sector that grows in concentration and demand as the local population increases and ages (demanding more services) and as universities and hospitals diversify and increase their reputation for destination care. Both of these are occurring in Michigan with demand for health services increase (as the population ages) and as universities and other hospitals become places of choice for others seeking care from outside the region.

The higher concentration of health care workers is evident in their location quotients. All but two of the most in-demand health care occupations have a higher concentration of workers (LQ greater than 1) than the U.S. on average. Medical and clinical lab technicians have a concentration 261% higher than the U.S. on average while health tech concentration is 210% higher.

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 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 10 JOBS LOCATION QUOTIENT AND WAGES



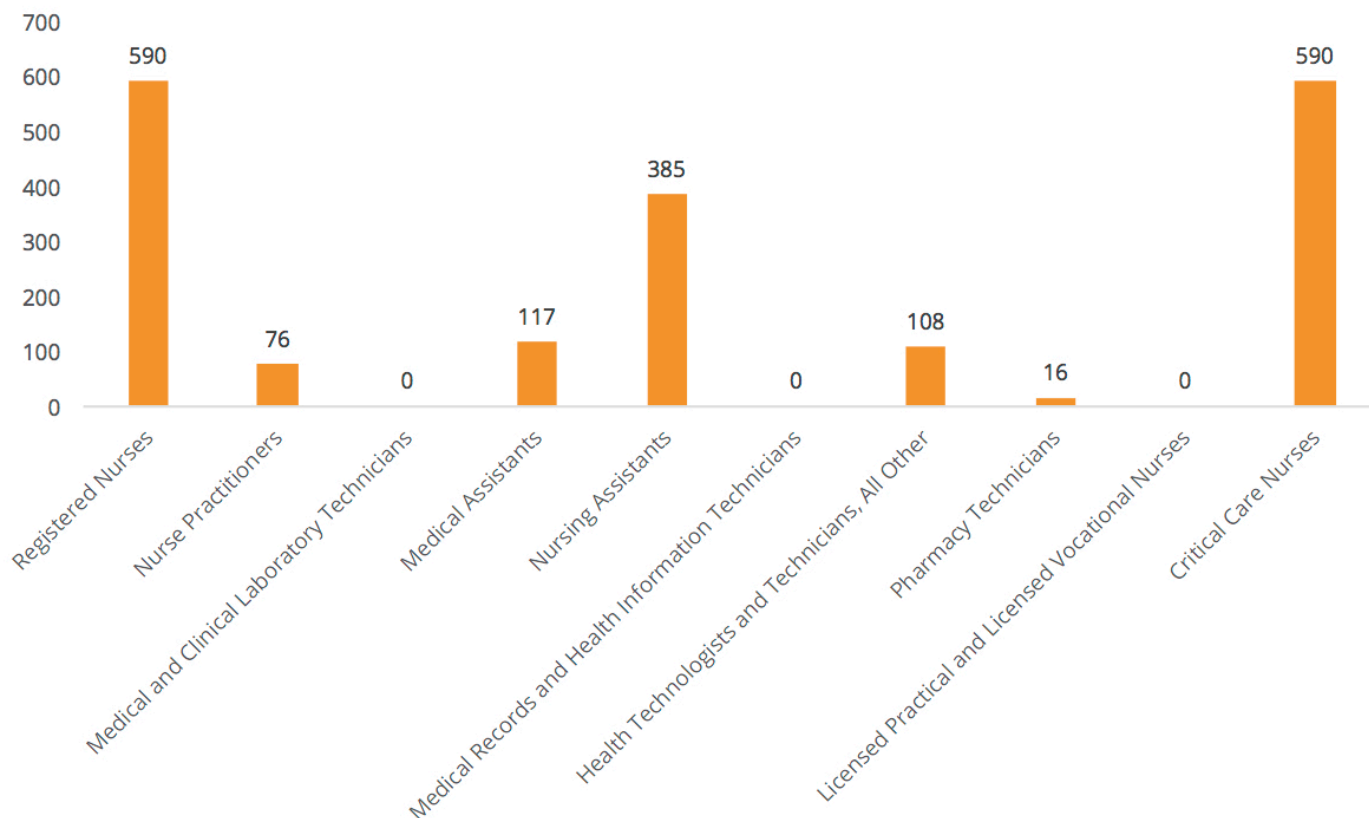
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

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
29-1141	Registered Nurses	\$24.80	\$27.92	\$33.30	\$38.72	\$43.96
29-1171	Nurse Practitioners	\$34.55	\$39.12	\$44.03	\$50.73	\$56.11
29-2012	Medical and Clinical Laboratory Technicians	\$9.02	\$10.72	\$14.18	\$18.91	\$30.41
31-9092	Medical Assistants	\$11.81	\$13.03	\$15.13	\$18.32	\$22.15
31-1014	Nursing Assistants	\$10.19	\$12.28	\$14.14	\$16.58	\$18.33
29-2071	Medical Records and Health Information Technicians	\$14.71	\$18.05	\$23.38	\$27.68	\$30.55
29-2099	Health Technologists and Technicians, All Other	\$11.32	\$14.66	\$21.20	\$27.18	\$31.98
29-2052	Pharmacy Technicians	\$9.02	\$11.06	\$14.95	\$17.81	\$20.27
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.78	\$20.14	\$22.58	\$25.64	\$28.41
29-1141	Critical Care Nurses	\$24.80	\$27.92	\$33.30	\$38.72	\$43.96

TOP 10 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
29-1141	Registered Nurses	Associate's degree	None	None
29-1171	Nurse Practitioners	Master's degree	None	None
29-2012	Medical and Clinical Laboratory Technicians	Associate's degree	None	None
31-9092	Medical Assistants	Postsecondary non-degree award	None	None
31-1014	Nursing Assistants	Postsecondary non-degree award	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
29-2052	Pharmacy Technicians	High school diploma or equivalent	None	Moderate-term on-the-job training
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	None
29-1141	Critical Care Nurses	Associate's degree	None	None



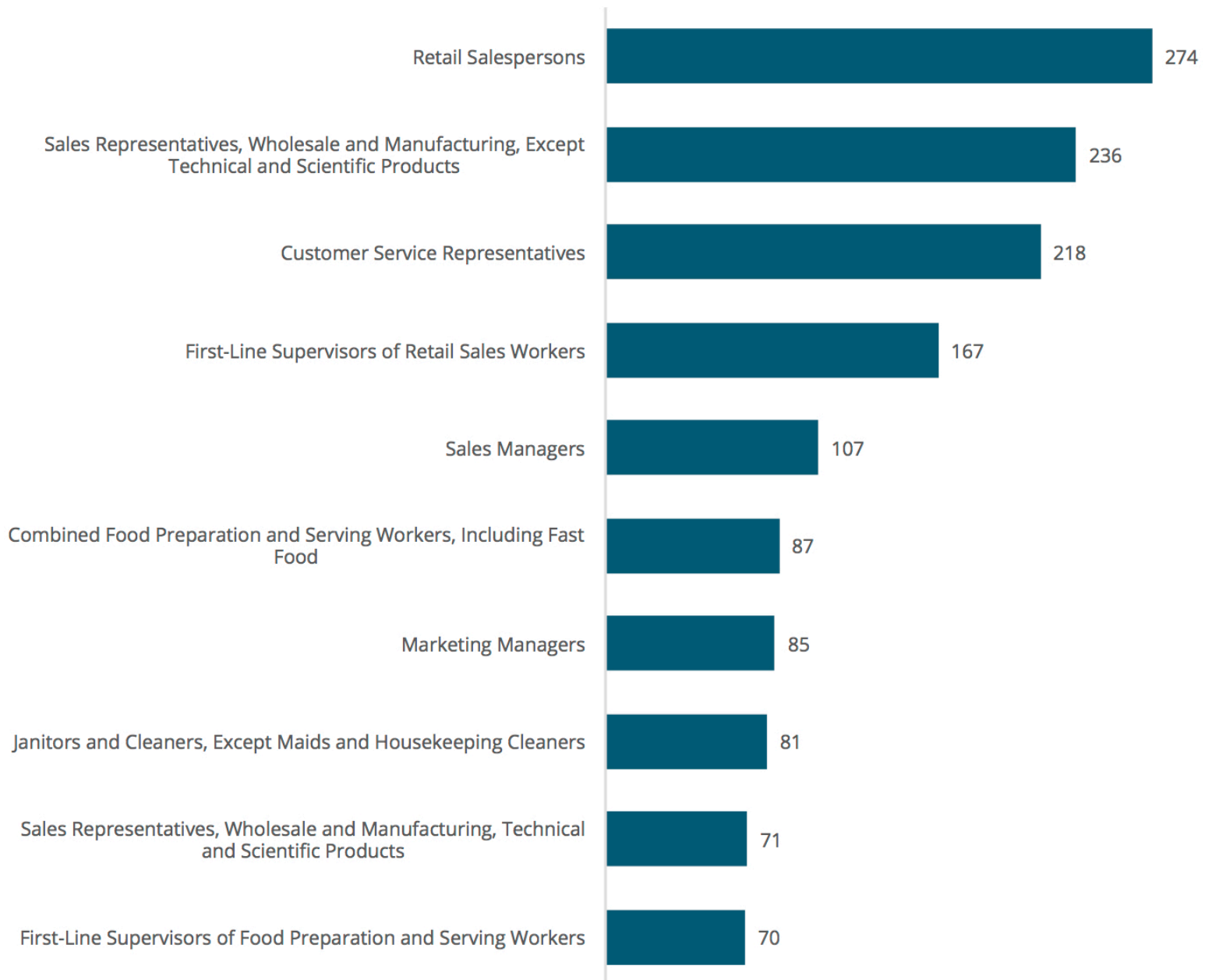
RETAIL AND HOSPITALITY

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.

Retail salespersons once again is the most in-demand Retail & Hospitality occupation in Washtenaw County with 274 online ads in Q2 2015, up from 247 in Q1. The top five occupations in this cluster remain the same with slight arrangement in positioning this quarter compared to last. The other top occupations in this cluster are sales representatives for wholesale and manufacturing (non-technical/non-scientific products) (236 ads), customer service representatives (218 ads), first-line supervisors of retail sales workers (167 ads) and sales managers (107 ads).

RETAIL AND HOSPITALITY

TOP JOBS



RETAIL AND HOSPITALITY

ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Retail and Hospitality postings increased for a second consecutive quarter, reaching 2,031 in Q2 2015. This is a small 3% increase over the 1,973 online ads in Q1 2015. While postings are rebounding following a steep decline in Q4 2014, they have yet to reach the record highs from Q2 2013-Q1 2014.

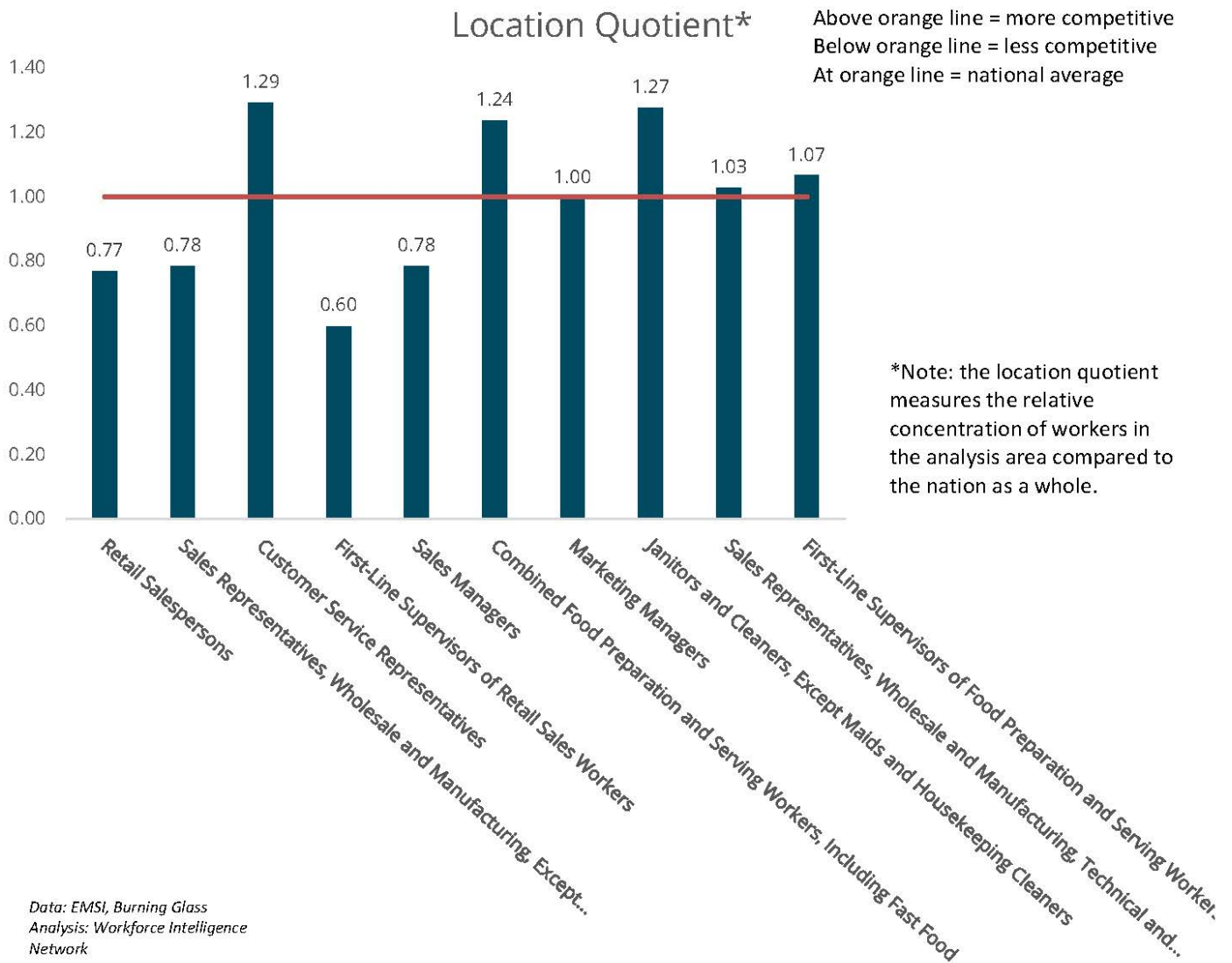
Like other services, health care being one, demand for Retail & Hospitality occupations increase as the population grows and has more money to spend in the economy. Wages in the region have not been growing rapidly but compared to the recession low, wages are up. Some of the top Retail & Hospitality occupations in Washtenaw County are more concentrated than the national average (location quotient greater than one), but none are anywhere near the high concentration of other occupations in other clusters. Customer service representatives have the highest location quotient in the region at 1.29, meaning that there is a 29% higher concentration of these workers in Washtenaw than the U.S. on average.

Retail & hospitality jobs are not often sought after due to high wages. But these jobs 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. Management and supervisory positions tend to have high wages but also require more education.

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

RETAIL AND HOSPITALITY

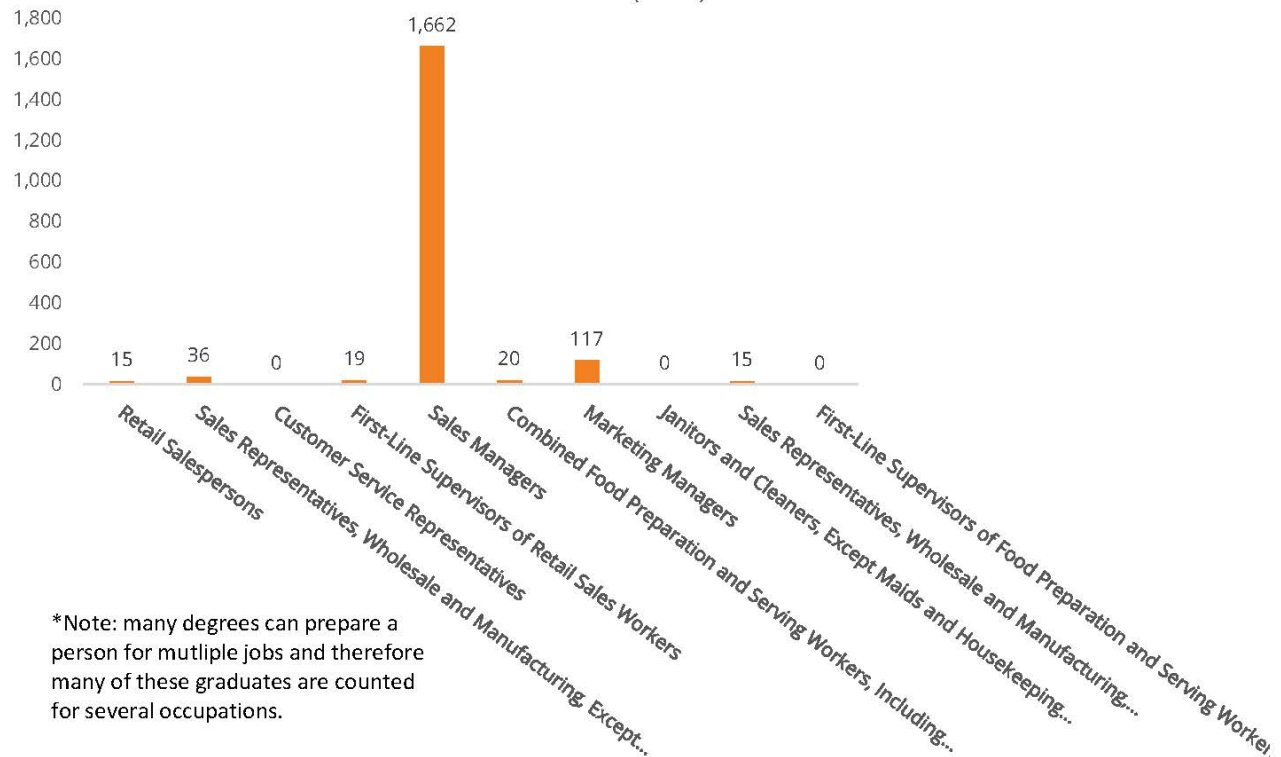
TOP 10 JOBS LOCATION QUOTIENT AND WAGES



ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
41-2031	Retail Salespersons	\$8.21	\$9.07	\$10.97	\$14.02	\$18.81
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$16.50	\$21.45	\$30.42	\$39.97	\$60.03
43-4051	Customer Service Representatives	\$9.37	\$11.64	\$15.84	\$21.06	\$28.28
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.02	\$15.48	\$19.04	\$23.89	\$30.16
11-2022	Sales Managers	\$25.46	\$31.59	\$45.11	\$66.65	\$87.93
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.15	\$8.50	\$9.08	\$9.66	\$11.67
11-2021	Marketing Managers	\$33.92	\$45.10	\$51.14	\$59.72	\$77.21
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$9.11	\$11.96	\$14.84	\$17.07	\$18.42
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$17.93	\$26.14	\$35.58	\$46.29	\$57.16
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$9.00	\$11.08	\$14.72	\$20.50	\$25.82

TOP 10 JOBS RECENT GRADUATES AND EDUCATION AND TRAINING REQUIREMENTS

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



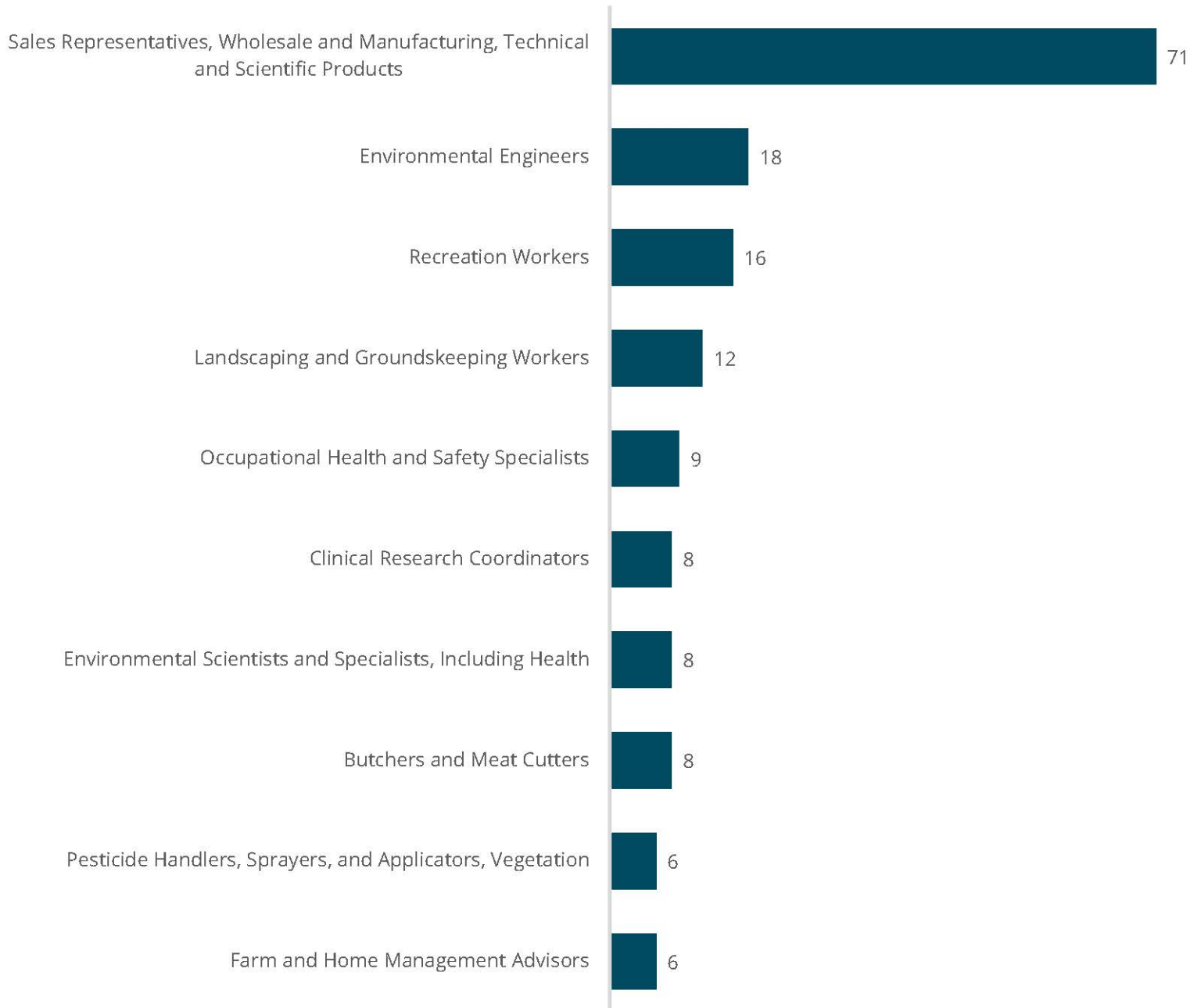
Data: EMSI, Burning Glass, Integrated Post-Secondary Data System
Analysis: Workforce Intelligence Network

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
41-2031	Retail Salespersons	Less than high school	None	Short-term 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
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
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	None	Short-term on-the-job training
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
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	None	Moderate-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



WIN's agriculture cluster brings together occupations that require knowledge of the farming, livestock, the environment, and natural sciences. Occupations range from farm workers, to environmental engineers, to meat butchers, and recreation workers. In 2014, 30,424 individuals were employed in the agriculture cluster in Region 9.

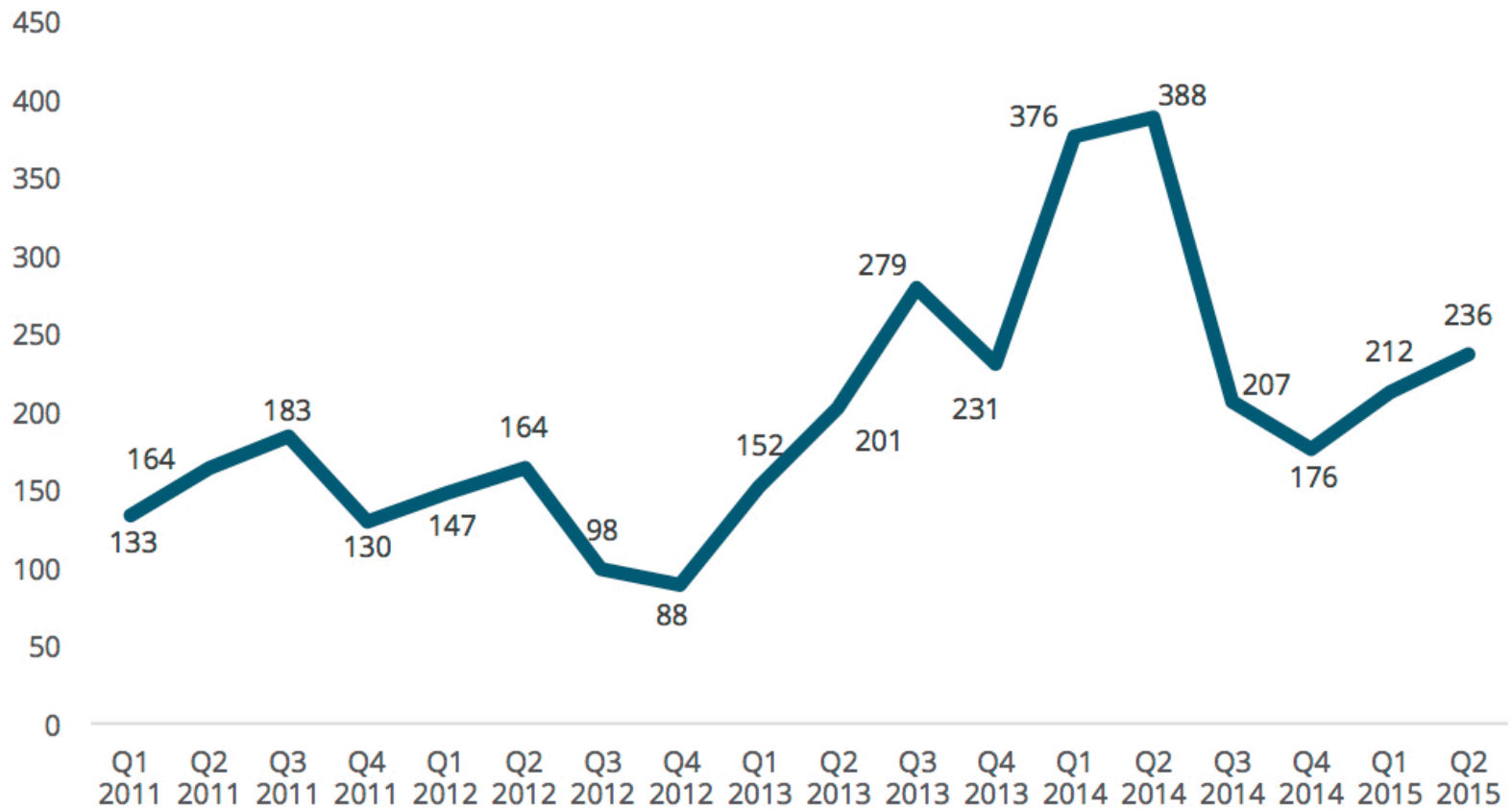
Sales representatives, wholesale and manufacturing, technical and scientific products was, by far, the most in-demand job in the occupational cluster for Washtenaw County in Q2 2015 with 71 postings. The next most in-demand occupations were environmental engineers with 18 postings and recreation workers with 16 postings.



AGRICULTURE

ONLINE JOB POSTINGS OVER TIME

Agriculture Online Job Postings



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Postings for the Agriculture cluster in Washtenaw increased for the third consecutive quarter, up to 236 postings in Q2 2015. This is an increase of 24 ads from Q1 2015's 212 postings (11.3%). Postings typically peak for this cluster in either Q2 or Q3 each year on account of seasonal employment.

Agriculture occupations are the smallest cluster in Washtenaw County, accounting for just 2.1% of all online job ads in the region.

Washtenaw County's employment is similar to the national average for most agriculture occupations. Recreation workers, clinical research coordinators and farm and home management advisors have high concentrations while butchers and meat cutters and occupational health and safety specialists have low concentrations. Farm and home management advisors have an impressive location quotient of 7.61, indicating that the concentration for these workers is 661% higher than the national average.

Median wages for agricultural occupations, like retail and hospitality, represent a large range. Most high-paying jobs in this cluster are in engineering, research, or other STEM professions. Positions in sales are also higher-paying options in this cluster. There is great demand for recreation workers in Washtenaw, however, this occupation has one of the lowest median wages for the agriculture sector.

Many of the in-demand agriculture occupations do not require more than a high school diploma and are attainable with some on-the-job training. The high-paying jobs mentioned above, however, require at least a bachelor's degree.

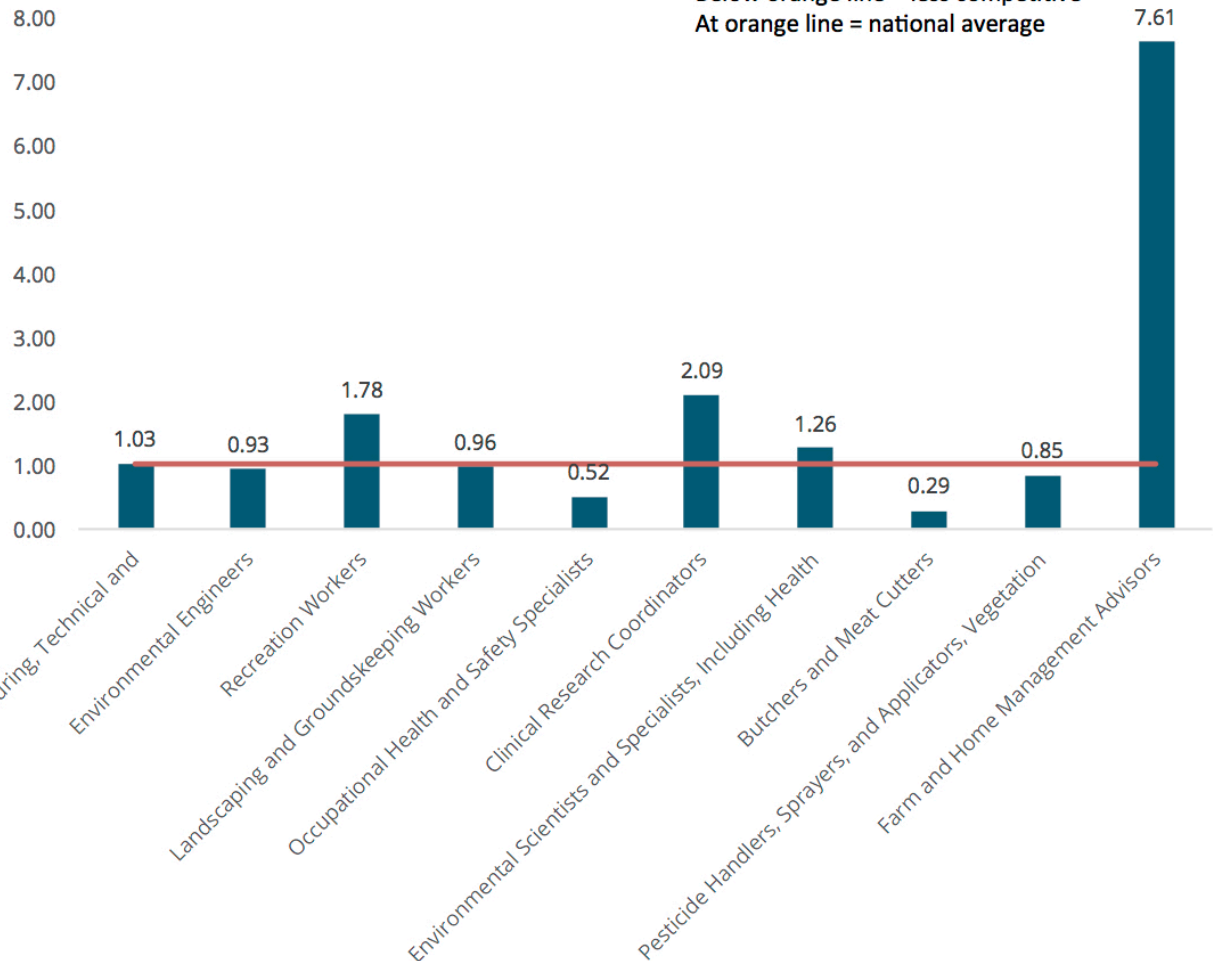
Many degrees can prepare completers for multiple jobs, therefore it is not advantageous to compare completions to demand in a cluster like agriculture where programs do not map perfectly onto occupations and many occupations may not even require a degree.

AGRICULTURE

TOP 10 JOBS LOCATION QUOTIENT AND WAGES

Location Quotient*

Above orange line = more competitive
Below orange line = less competitive
At orange line = national average



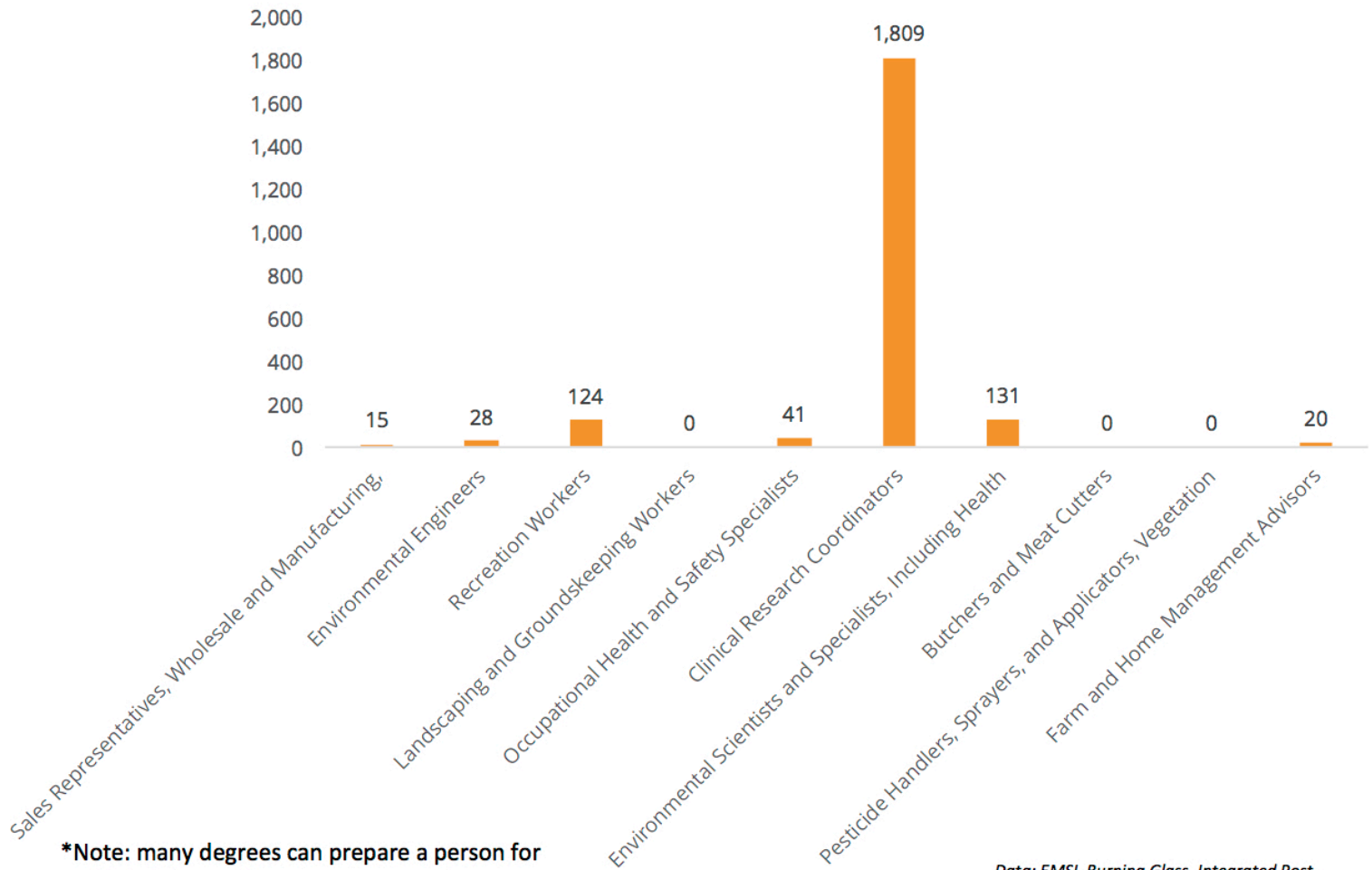
*Note: the location quotient measures the relative concentration of workers in the analysis area compared to the nation as a whole.

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
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$17.93	\$26.14	\$35.58	\$46.29	\$57.16
17-2081	Environmental Engineers	\$26.43	\$32.48	\$38.82	\$48.95	\$56.14
39-9032	Recreation Workers	\$8.10	\$8.62	\$9.47	\$12.10	\$14.95
37-3011	Landscaping and Groundskeeping Workers	\$8.27	\$9.44	\$10.79	\$13.44	\$20.63
29-9011	Occupational Health and Safety Specialists	\$24.50	\$26.45	\$29.95	\$36.52	\$46.90
11-9121	Clinical Research Coordinators	\$35.48	\$41.95	\$49.51	\$62.91	\$75.53
19-2041	Environmental Scientists and Specialists, Including Health	\$22.47	\$26.93	\$38.60	\$55.39	\$73.97
51-3021	Butchers and Meat Cutters	\$11.78	\$15.50	\$17.84	\$20.73	\$22.98
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	\$9.55	\$11.83	\$14.34	\$16.39	\$17.70
25-9021	Farm and Home Management Advisors	\$13.08	\$19.03	\$22.54	\$42.08	\$70.96

TOP 10 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
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree	None	Moderate-term on-the-job training
17-2081	Environmental Engineers	Bachelor's degree	None	None
39-9032	Recreation Workers	Bachelor's degree	None	None
37-3011	Landscaping and Groundskeeping Workers	Less than high school	None	Short-term on-the-job training
29-9011	Occupational Health and Safety Specialists	Bachelor's degree	None	Short-term on-the-job training
11-9121	Clinical Research Coordinators	Bachelor's degree	5 years or more	None
19-2041	Environmental Scientists and Specialists, Including Health	Bachelor's degree	None	None
51-3021	Butchers and Meat Cutters	Less than high school	None	Long-term on-the-job training
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	High school diploma or equivalent	None	Moderate-term on-the-job training
25-9021	Farm and Home Management Advisors	Master's degree	None	None

SECTION THREE

LABOR MARKET AND DEMAND SUMMARY



The top in-demand occupations often remain unchanged from quarter to quarter but do shift in order depending on the point in the business cycle. Software developers – applications, registered nurses, heavy and tractor-trailer truck drivers and retail salespersons are the top in-demand positions once again.

Demand for software developers outpaces all other jobs with 604 online ads. Q2 2015 saw the labor force and employment both grow at a rate of 1.7% compared to Q1. Labor force participation increased to 189,620 individuals while employment increased to 182,619 workers.

Washtenaw's unemployment rate was an average of 3.6% during Q1 2015 and increased by 0.1 percentage points to 3.7% in Q2 2015. Since the labor force increased slightly more than employment in Q2 this increase in unemployment is due to long-term unemployed individuals joining the labor force looking for work.

Total job postings in Washtenaw County increased for the second consecutive quarter to 11,380 online ads in Q2 2015. This is a 7.2% increase over the 10,617 job postings from Q1 2015. Online ads for Q2 2015 are a 21% increase over the 9,408 ads in Q2 2014, indicating strong growth from year to year.

Postings in Washtenaw County increased in every occupational cluster with exception to IT between Q1 and Q2 2015. The Skilled Trades & Technicians and Agriculture clusters saw slight increases in share of postings while IT, Health Care and Retail & Hospitality saw slight decreases. The overall decline in share of postings despite most of the clusters increasing indicates that online ads for occupations outside the five clusters analyzed by WIN increased at a greater rate.

The clusters analyzed by WIN in Washtenaw County represent 56.9% of all online job postings in the county.



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.

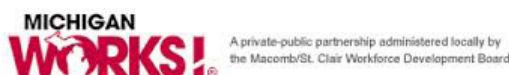
DATA SOURCES

- 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

