

WORKFORCE INTELLIGENCE NETWORK

QUARTERLY REPORT · **ST. CLAIR COUNTY**
Q4 2015 & 2015 Annual Summary

ST. CLAIR
COUNTY
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A private-public partnership administered locally by
the Macomb/St. Clair Workforce Development Board

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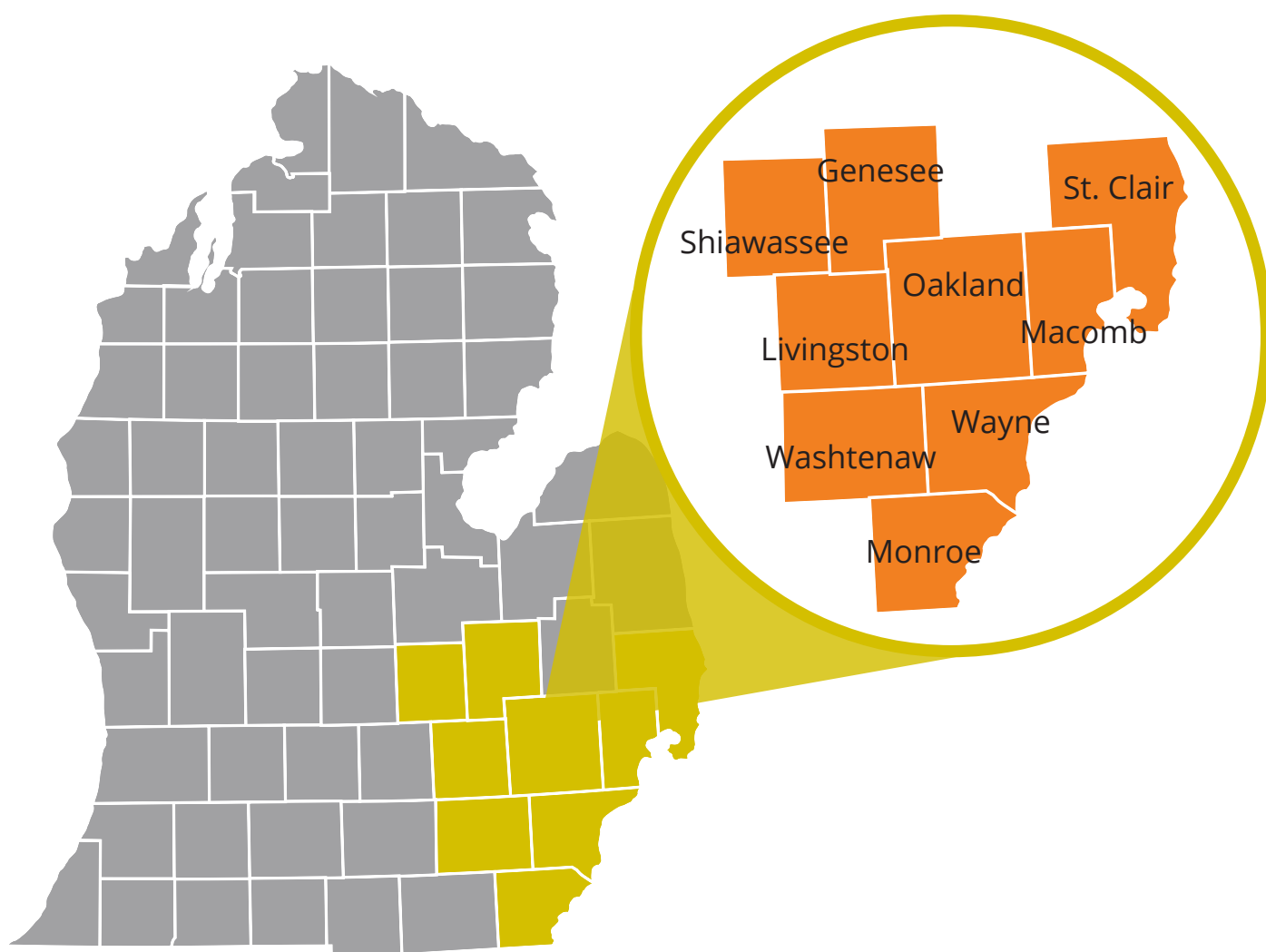
Retail & Hospitality

Data Notes and Sources

Southeast Michigan WIN region includes
9 counties:

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

This report focuses on St. Clair County.



* The original WIN partnership included the 9 counties in this report . The WIN partnership expanded to include 16 counties as of late 2015. Hillsdale, Huron, Jackson, Lapeer, Lenawee, Sanilac, and Tuscola counties were added. While this report is still focused on the original 9-county labor shed, much of the analysis (wages, location quotients, recent graduates, and educational attainment requirements), are shown in all reports for the new broader 16-county area.



SECTION ONE

EXECUTIVE SUMMARY

Employment in St. Clair County is on the rise, but labor force is decreasing (pg. 9-11).

While employment numbers grew month over month through most of 2015 in St. Clair County, labor force has generally been declining, meaning that the decrease in the unemployment rate seen over time could be because of workers leaving the job market rather than gaining employment.

Software developers for applications are quickly becoming one of the most in-demand occupations in southeast Michigan (pg. 32).

Although the small number of postings in the IT cluster makes it difficult to track trends, software developers for applications joined the list of St. Clair County's top Information Technology jobs during 2015.

Demand for registered nurses in St. Clair County continues to rise (pg. 40).

Postings for this occupation grew 23% between Q3 and Q4 2015, from 86 to 112 postings. Over the course of 2015, demand for RNs increased 59%, raising it from the 8th most in-demand occupation during Q4 2014 to 1st in Q4 2015.

EXECUTIVE SUMMARY

Postings in the Retail & Hospitality cluster fell between Q3 and Q4 2015, but still make up a large share of St. Clair County job demand (pg. 49).

Postings in the cluster decreased 27% from 531 postings in Q3 to 390 in Q4 2015. Employer demand has been increasing over time for this cluster but quarterly posting levels stayed above the 350 mark following a spike to 560 postings during Q3 2013. Higher levels of job postings have the potential to push up employment in the Retail & Hospitality cluster slightly.

Retail & Hospitality and Health Care are St. Clair County's largest clusters in terms of demand (pg. 14).

During Q4 2015, St. Clair County employers posted 390 job ads for Retail & Hospitality occupations, 27.3% of total online postings. Demand in the Health Care occupations accounted for 21.0% of total postings for the quarter.





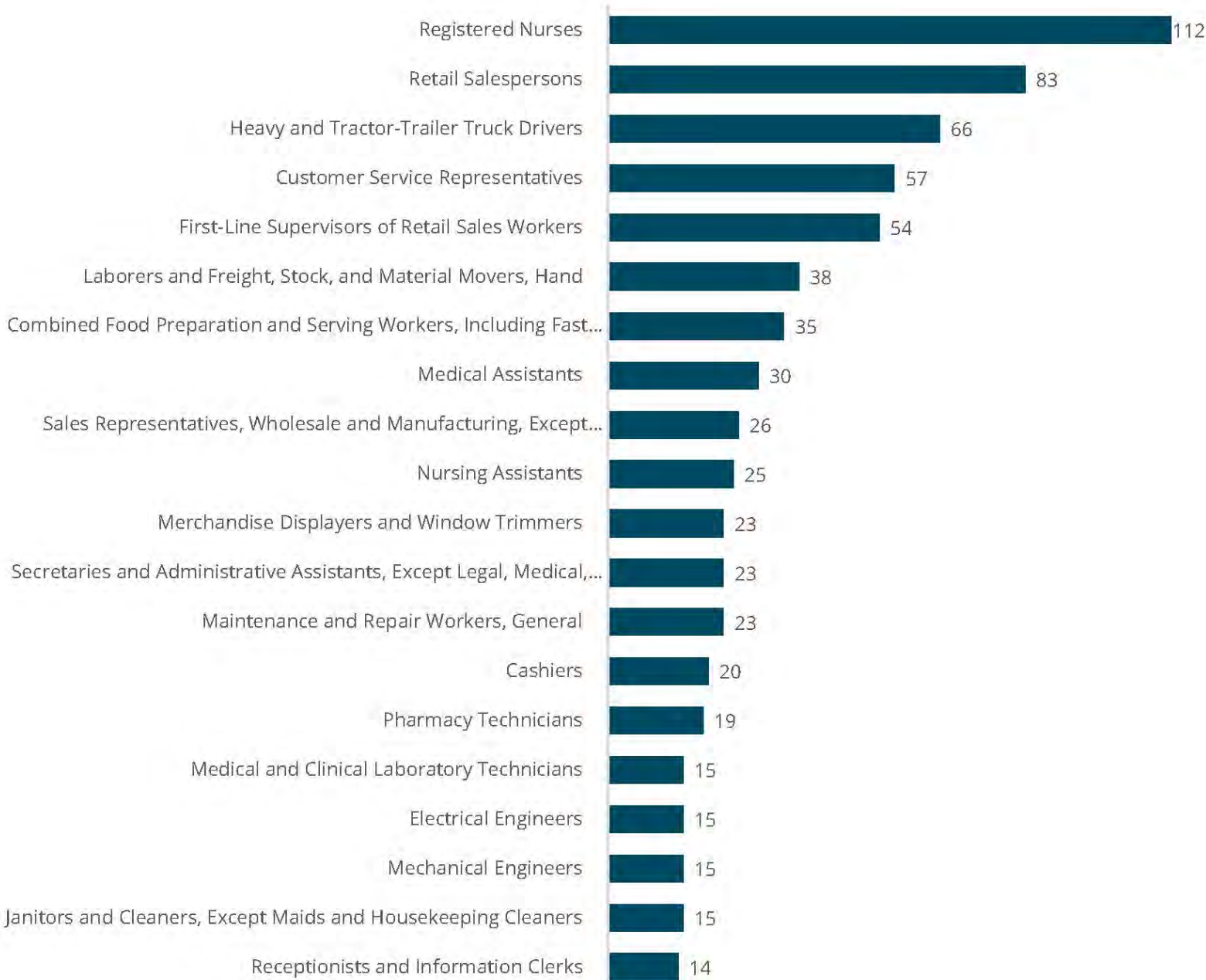
SECTION TWO

LABOR MARKET AND DEMAND OVERVIEW



TOP 20 JOBS IN DEMAND

OCTOBER - DECEMBER 2015



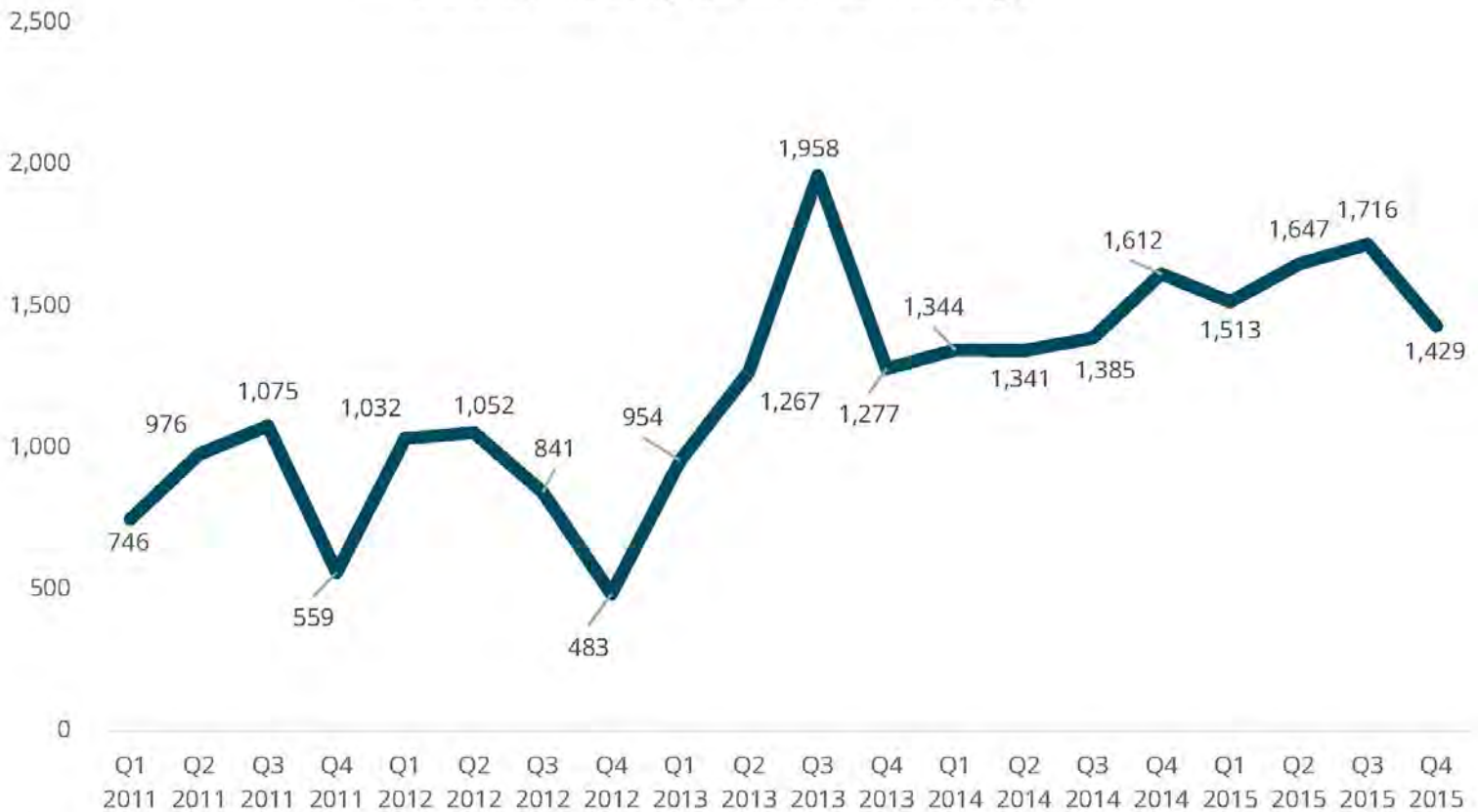
* Data : Burning Glass Technologies

Demand for registered nurses in St. Clair County continues to grow. Postings for this occupation grew 23% between Q3 and Q4 2015, from 86 to 112 postings. Over the course of 2015, demand for RNs increased 59%, raising it from the 8th most in-demand occupation during Q4 2014 to 1st in Q4 2015. Retail salespersons are still in high demand in St. Clair County, with 83 job postings between October and December. Also consistently topping the list, heavy and tractor-trailer truck drivers round out the top three with 66 online job ads during Q4 2015.

EMPLOYER DEMAND

OCTOBER - DECEMBER 2015

St. Clair County Online Job Postings

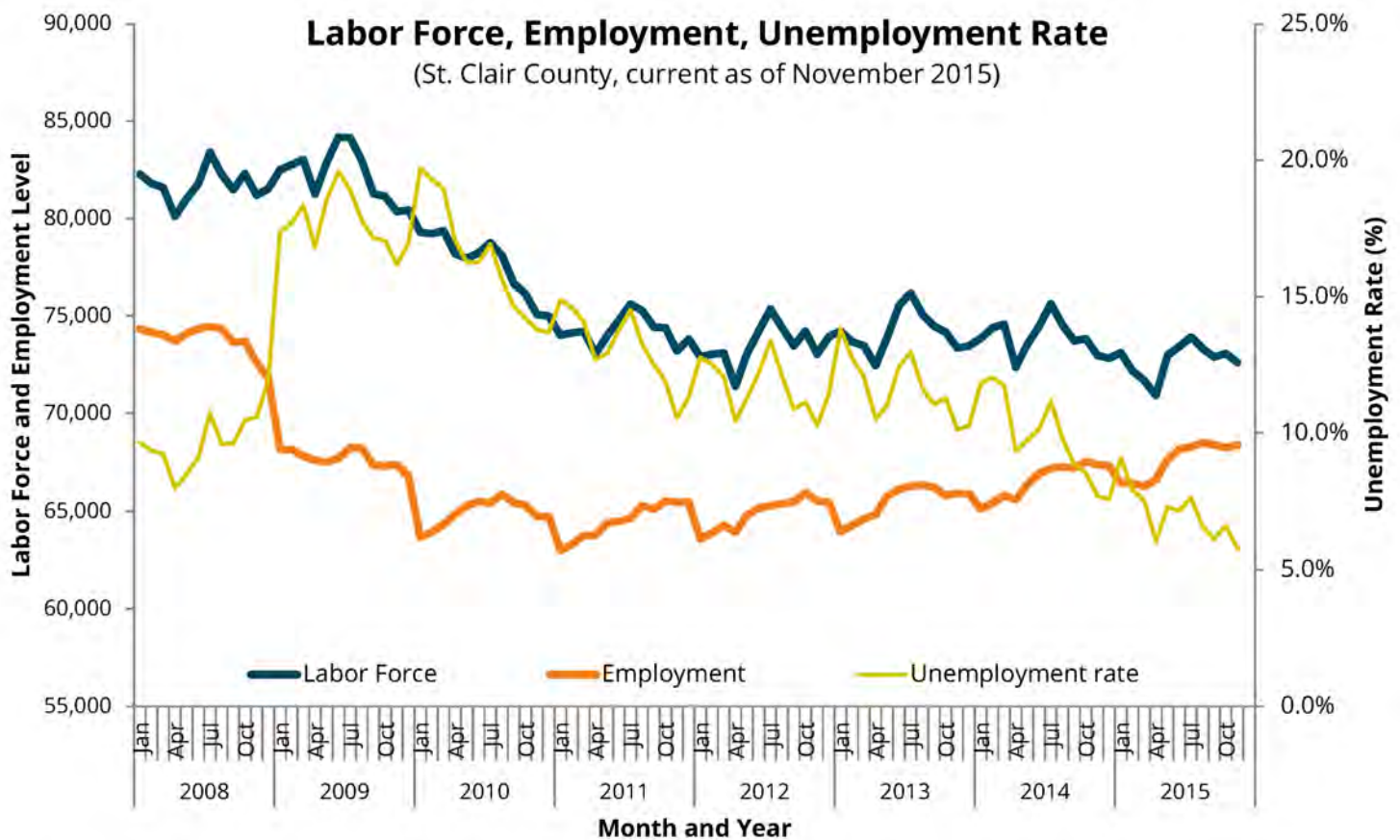


Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Online job ads posted in St. Clair County were down in Q4 compared to Q3, following a typical business cycle pattern. Employer demand dipped 17% with postings dropping to 1,429 from 1,716. Employer demand in St. Clair County has hovered around a quarterly average of 1,498 postings for the past two years, following a peak in online job ads, at 1,958, in Q3 2013, the height of recession recovery.

EMPLOYMENT AND LABOR FORCE



Source: Bureau of Labor Statistics
Analysis: Workforce Intelligence Network

Employment in St. Clair County is on the rise, growing month over month throughout most of 2015. While employment numbers grow in St. Clair County, however, labor force has generally been declining, meaning that the decrease in the unemployment rate seen over time could be because of workers leaving the job market rather than gaining employment.

EMPLOYMENT AND LABOR FORCE OVERVIEW

Annual Labor Market Data

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 To-Date	Change from 2014	Percent Change from 2014
Labor Force	77,674	74,248	73,518	74,172	73,901	72,744	-1,157	-1.6%
Employment	64,934	64,533	64,909	65,518	66,598	67,592	994	1.5%
Unemployment	12,741	9,714	8,609	8,654	7,302	5,152	-2,150	-29.4%
Unemployment Rate	16.4%	13.1%	11.7%	11.7%	9.9%	7.1%	-2.8%	na

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	4th Quarter 2014	1st Quarter 2015	2nd Quarter 2015	3rd Quarter 2015	4th Quarter Esimate	Change from 3rd Quarter 2015	Percent Change from 3rd Quarter 2015
Labor Force	73,223	72,328	72,453	73,384	72,845	-539	-0.7%
Employment	67,404	66,406	67,486	68,394	68,328	-66	-0.1%
Unemployment	5,818	5,922	4,967	4,990	4,517	-473	-9.5%
Unemployment Rate	7.9%	8.2%	6.9%	6.8%	6.2%	0	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics

EMPLOYMENT AND LABOR FORCE OVERVIEW

As of November 2015, 68,410 St. Clair County workers were employed, out of an available labor force of 72,614. November's estimated unemployment rate, was 5.8%, down 3.3 percentage points since January 2015. From Q3 2015, St. Clair's employment numbers decreased by a negligible 0.1%, with a similarly small decrease in labor force. Generally, employment has been on the rise, illustrated by the 1.5% increase in employment from 2014 to 2015. Meanwhile, labor force decreased 1.6% and is a bigger contributing factor to the observed fall in the unemployment rate as fewer St. Clair County workers actively seek employment.

Monthly Labor Market Data

	October 2014	November 2014	December 2014	January 2015	February 2015	March 2015	April 2015	May 2015	June 2015	July 2015	August 2015	September 2015	October 2015	November 2015
Labor Force	73,845	72,991	72,832	73,117	72,171	71,695	70,937	72,985	73,437	73,934	73,329	72,889	73,076	72,614
Employment	67,541	67,364	67,308	66,476	66,453	66,288	66,643	67,649	68,165	68,280	68,493	68,409	68,246	68,410
Unemployment	6,304	5,627	5,524	6,641	5,718	5,407	4,294	5,336	5,272	5,654	4,836	4,480	4,830	4,204
Unemployment Rate	8.5%	7.7%	7.6%	9.1%	7.9%	7.5%	6.1%	7.3%	7.2%	7.6%	6.6%	6.1%	6.6%	5.8%

* Note: Data shown for 14 most recently available months

Data: Bureau of Labor Statistics














SECTION THREE

OCCUPATIONAL CLUSTERS

ST. CLAIR COUNTY DEMAND OVERVIEW

	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Change over time	Share of Total Postings Q4 2015
Total	1,612	1,513	1,647	1,716	1,429		
Skilled Trades & Technicians	77	94	101	92	47		3.3%
Engineers & Designers	32	63	60	40	52		3.6%
IT	28	46	36	34	25		1.7%
Health Care	200	266	282	281	300		21.0%
Retail & Hospitality	508	384	398	531	390		27.3%
TDL	125	119	161	136	123		8.6%
Agriculture	23	45	31	28	23		1.6%



ADVANCED MANUFACTURING

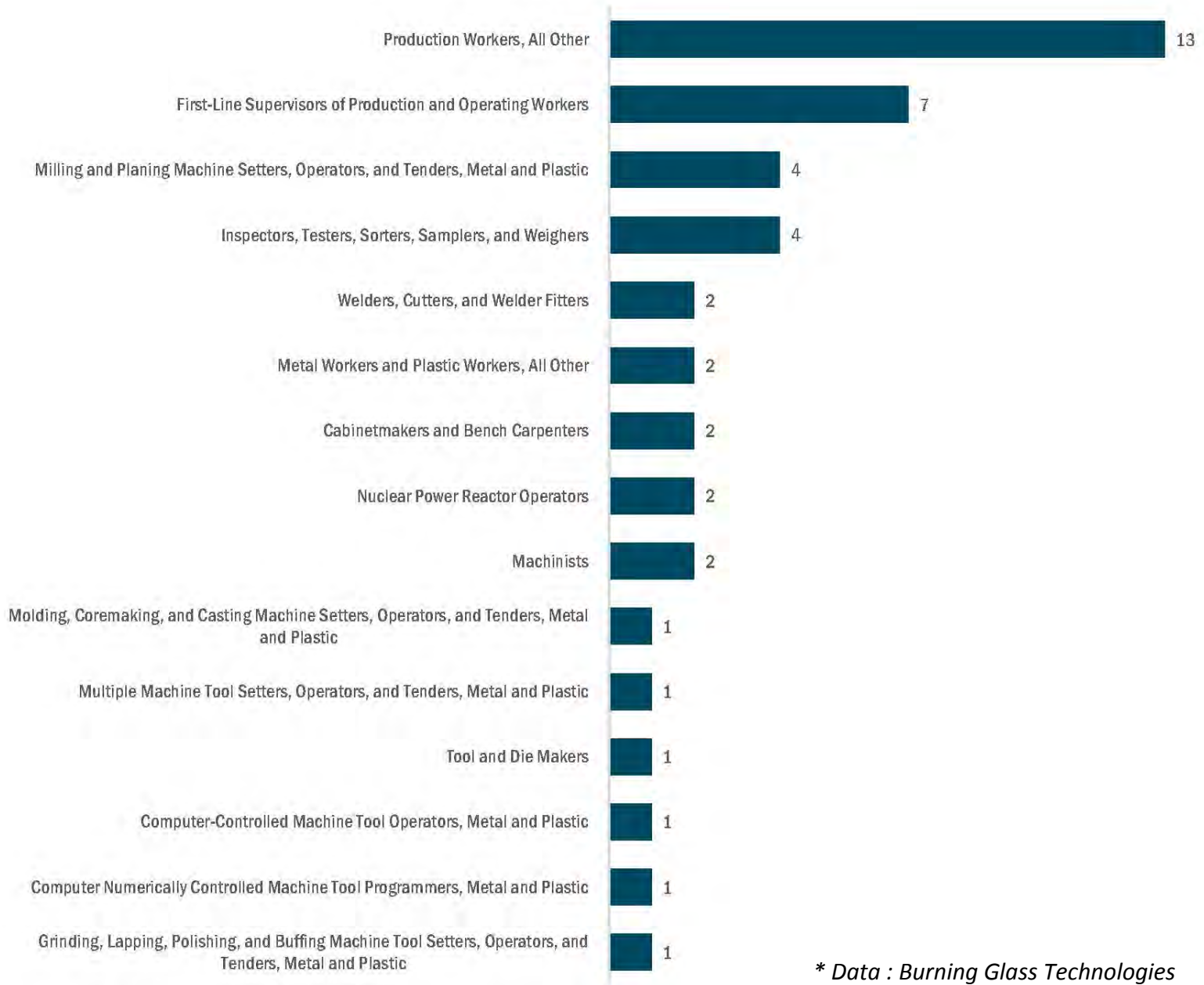
SKILLED TRADES AND TECHNICIANS

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 2015, skilled trades employment reached 2,864 individuals in St. Clair County.

NOTE: Skilled trades related to construction and repair are not included in this cluster, as the focus is on advanced manufacturing.

ADVANCED MANUFACTURING

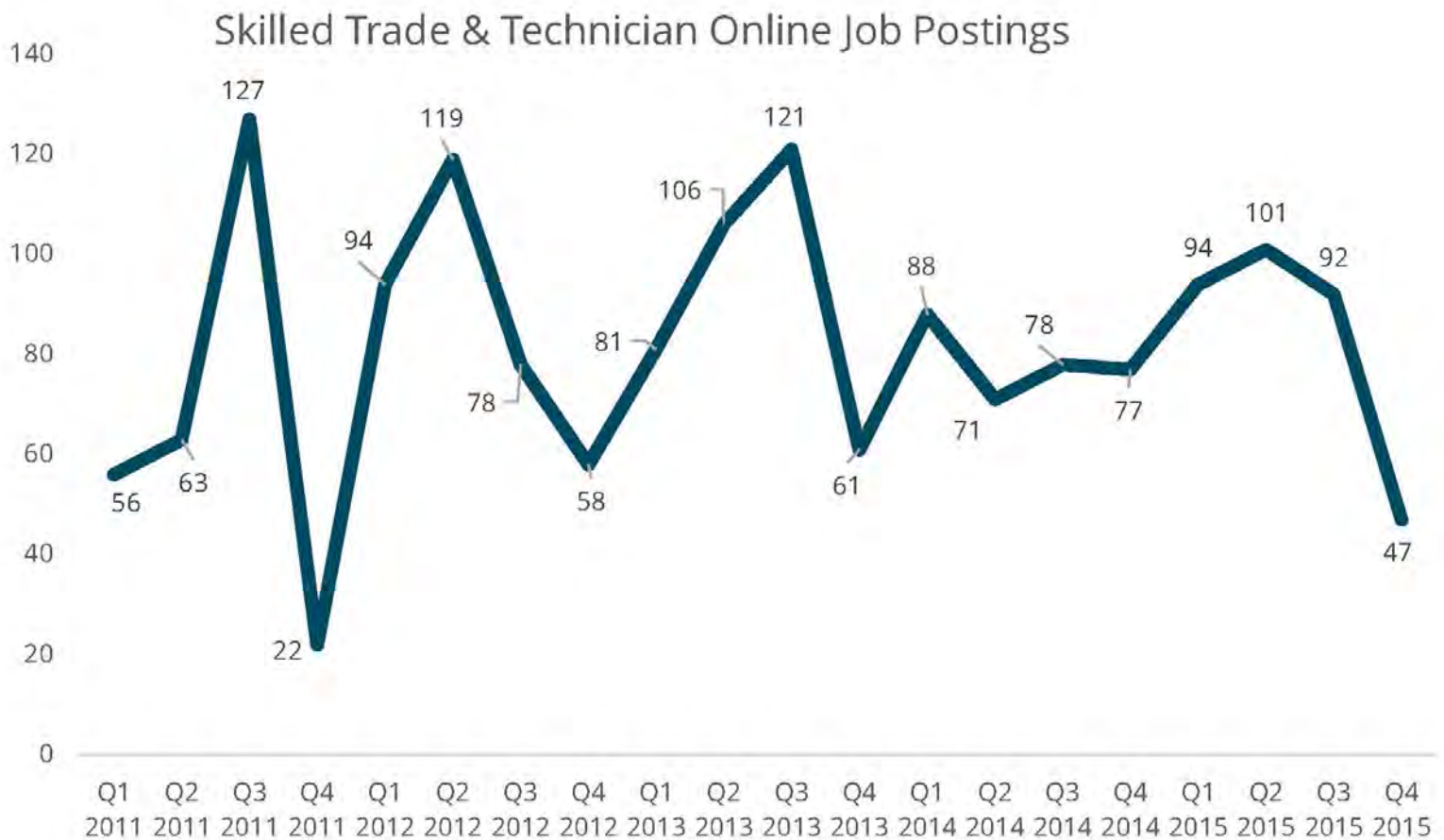
SKILLED TRADES AND TECHNICIANS: TOP JOBS



The most in-demand job for the Skilled Trades & Technicians cluster in St. Clair County during Q4 2015 was production workers, with 13 online job postings. Production workers held the top job spot during Q4 2014, too, with 17 postings. The few postings in this cluster mean that top jobs shift easily. First-line supervisors of production and operating workers (7 postings) and milling and planing machine setters, operators and tenders (4 postings) round out the top 3.

ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies

Analysis: Workforce Intelligence Network

Employer demand in St. Clair County's Skilled Trades cluster was down 49% between Q3's 92 postings and the 47 online job ads posted in Q4 2015. Postings in this cluster tend to be lower during the 4th quarter; job demand can be expected to rise again in Q1 2016. Job postings for the Skilled Trades & Technicians cluster accounted for 3.3% of total online job ads in St. Clair County during Q4 2015.

ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: EMPLOYMENT OVER TIME



Source: EMSI

Analysis: Workforce Intelligence Network

Employment in the Skilled Trades & Technicians cluster continues its gradual recovery in St. Clair County. Employment numbers bottomed out 1,990 in 2009, and have not yet returned to pre-recession levels near 4,000. In 2015, 2,864 St. Clair County workers were employed in Skilled Trades jobs.

ADVANCED MANUFACTURING

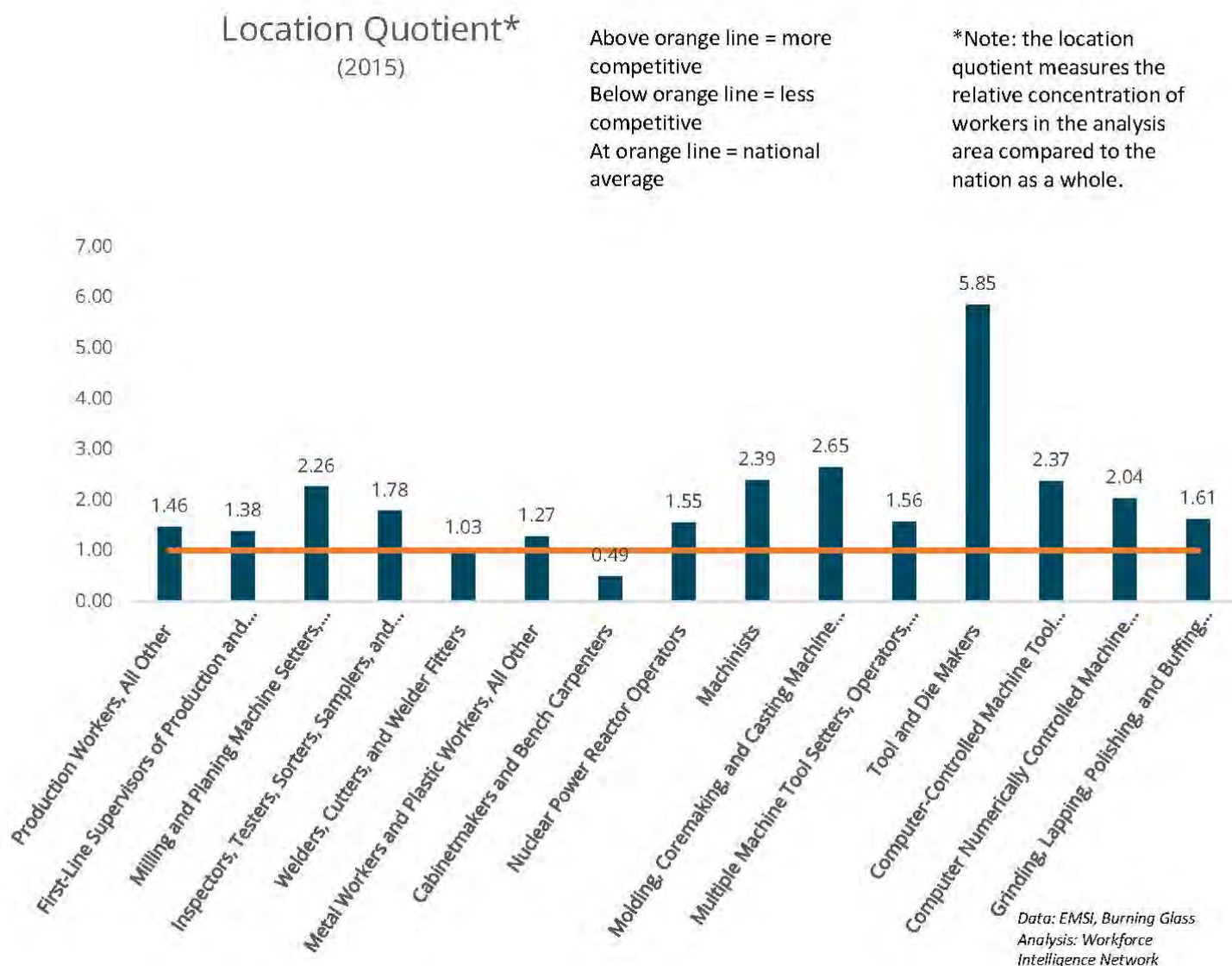
SKILLED TRADES AND TECHNICIANS: TOP JOBS WAGES

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	\$10.31	\$13.11	\$15.94	\$18.96	\$23.51
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.29	\$21.96	\$29.26	\$38.23	\$46.05
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	\$12.32	\$13.99	\$17.56	\$20.92	\$24.08
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.81	\$11.83	\$15.89	\$22.92	\$28.71
51-4121	Welders, Cutters, and Welder Fitters	\$12.37	\$14.81	\$17.64	\$22.22	\$27.73
51-4199	Metal Workers and Plastic Workers, All Other	\$9.62	\$11.15	\$13.96	\$19.70	\$24.17
51-7011	Cabinetmakers and Bench Carpenters	\$11.19	\$12.63	\$16.52	\$19.91	\$21.69
51-8011	Nuclear Power Reactor Operators	\$29.34	\$35.22	\$42.40	\$49.51	\$51.76
51-4041	Machinists	\$12.13	\$15.41	\$19.60	\$25.32	\$30.41
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	\$9.23	\$11.04	\$13.62	\$16.62	\$19.22
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$10.67	\$12.71	\$17.22	\$22.01	\$24.35
51-4111	Tool and Die Makers	\$16.71	\$20.94	\$26.86	\$32.63	\$35.60
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$10.63	\$12.79	\$17.88	\$22.00	\$27.37
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$16.18	\$18.77	\$23.20	\$27.74	\$32.02
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$10.30	\$12.86	\$16.37	\$19.92	\$23.05

Skilled Trades occupations in St. Clair County offer low wages to entry-level workers, but do provide opportunity for upward wage growth. Most of the top 15 jobs offer a median wage over \$15 an hour. St. Clair County employers posted two online job ads for nuclear power reactor operators during Q4, making this occupation an outlier where some entry-level (10th percentile) workers can make \$29.34 per hour. The other high-paying jobs in the Skilled Trades are management roles, like first-line supervisors of production and operating workers, with a median hourly wage of \$29.26.

ADVANCED MANUFACTURING

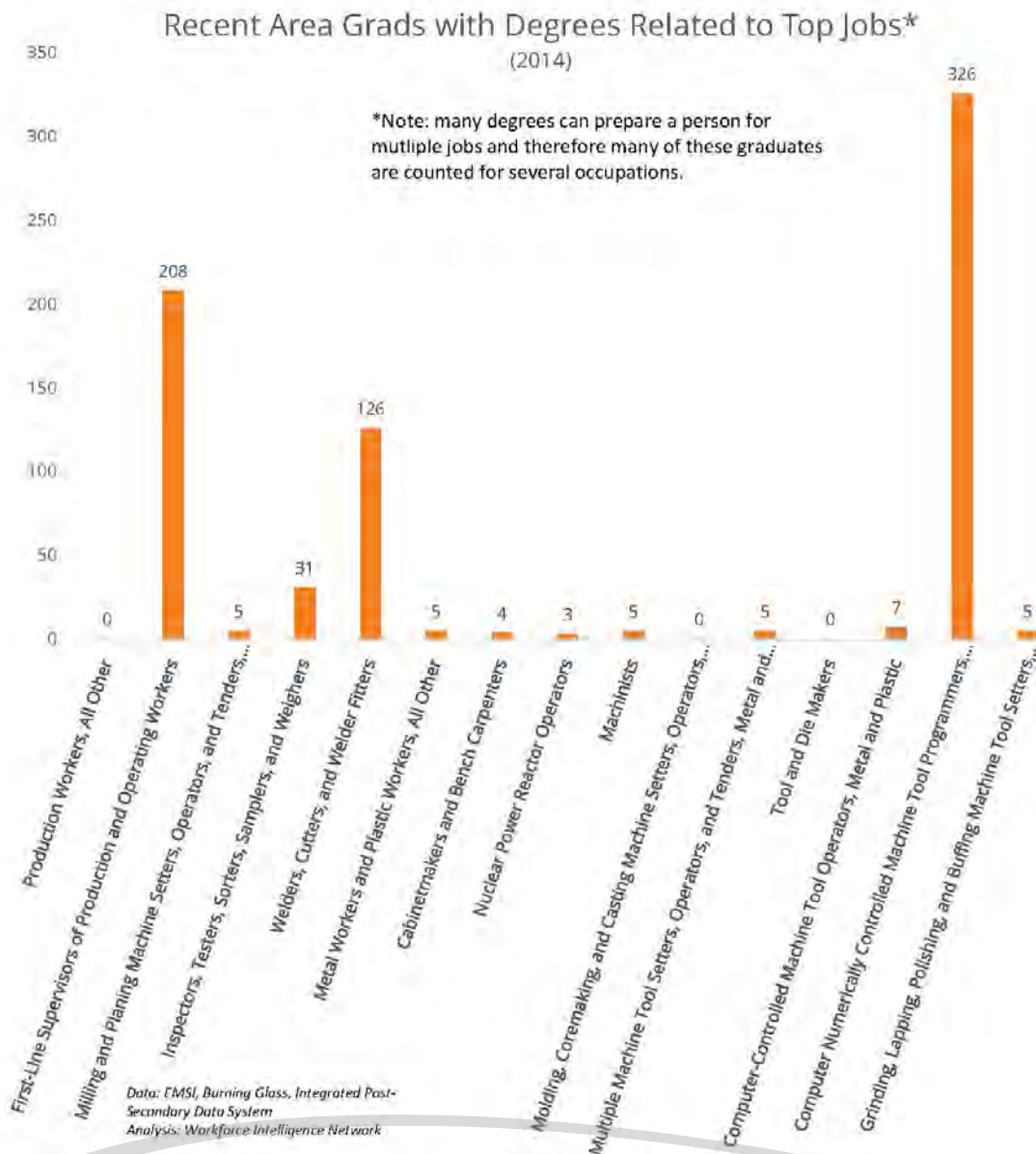
SKILLED TRADES AND TECHNICIANS: TOP JOBS LOCATION QUOTIENT



The location quotient (LQ) is a measure of relative concentration. In this case it measures the relative concentration of workers in an occupation in southeast Michigan compared to the U.S. on average. Higher LQs typically indicate that employers will have an easier time finding talent because those workers are more concentrated in the area; lower LQs will make filling open positions more difficult. For example, tool and die makers have a LQ of 5.85, meaning that these workers are 5.85 times, or 485% more, concentrated in southeast Michigan than the national average. St. Clair County employers looking to hire tool and die makers should have a relatively large number of workers to choose from. At the other end of the spectrum, the concentration of cabinetmakers and bench carpenters (LQ = 0.49) is only 49% of the national average.

ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: TOP JOBS RECENT REGIONAL GRADUATES



Skilled Trades occupations in advanced manufacturing typically do not require education beyond a high school degree, but may require some on-the-job training. Technicians jobs may require at least an associate's degree. Regional degree and certificate completions data for 2014 show that several of the most in-demand Skilled Trades jobs in St. Clair County had large numbers of graduates. Though employer demand in this cluster is small, the few graduates in programs related to careers like tool & die makers or computer-controlled machine tool operators is a cause for concern in the southeast Michigan advanced manufacturing labor market.


Due to the regional nature of the labor force in southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership.

ADVANCED MANUFACTURING

SKILLED TRADES AND TECHNICIANS: TOP JOBS EDUCATION & TRAINING REQUIREMENTS

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	None
51-1011	First-Line Supervisors of Production and Operating Workers	Postsecondary non-degree award	Less than 5 years	Less than 5 years
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	None
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	High school diploma or equivalent	None	None
51-4121	Welders, Cutters, and Welder Fitters	High school diploma or equivalent	None	None
51-4199	Metal Workers and Plastic Workers, All Other	High school diploma or equivalent	None	None
51-7011	Cabinetmakers and Bench Carpenters	High school diploma or equivalent	None	None
51-8011	Nuclear Power Reactor Operators	High school diploma or equivalent	None	None
51-4041	Machinists	High school diploma or equivalent	None	None
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	None
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	None
51-4111	Tool and Die Makers	High school diploma or equivalent	None	None
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	High school diploma or equivalent	None	None
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	High school diploma or equivalent	None	None
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	High school diploma or equivalent	None	None

Although most of St. Clair County's in-demand Skilled Trades & Technicians occupations do not require advanced education or training beyond a high school diploma, employers prefer candidates with experience or specialized training in these fields. Skilled Trades occupations will also require moderate to long-term training. Technician occupations typically require an associate's degree and supervisors need a post-secondary award. As a result of the higher necessary education, these occupations typically lead the Skilled Trades in wages offered.

A photograph of four professionals, three men and one woman, wearing blue hard hats and business attire. They are gathered around a table, looking at and pointing to documents. The image is overlaid with a semi-transparent blue filter. The text 'ADVANCED MANUFACTURING' is written in large, orange, sans-serif capital letters across the middle of the image.

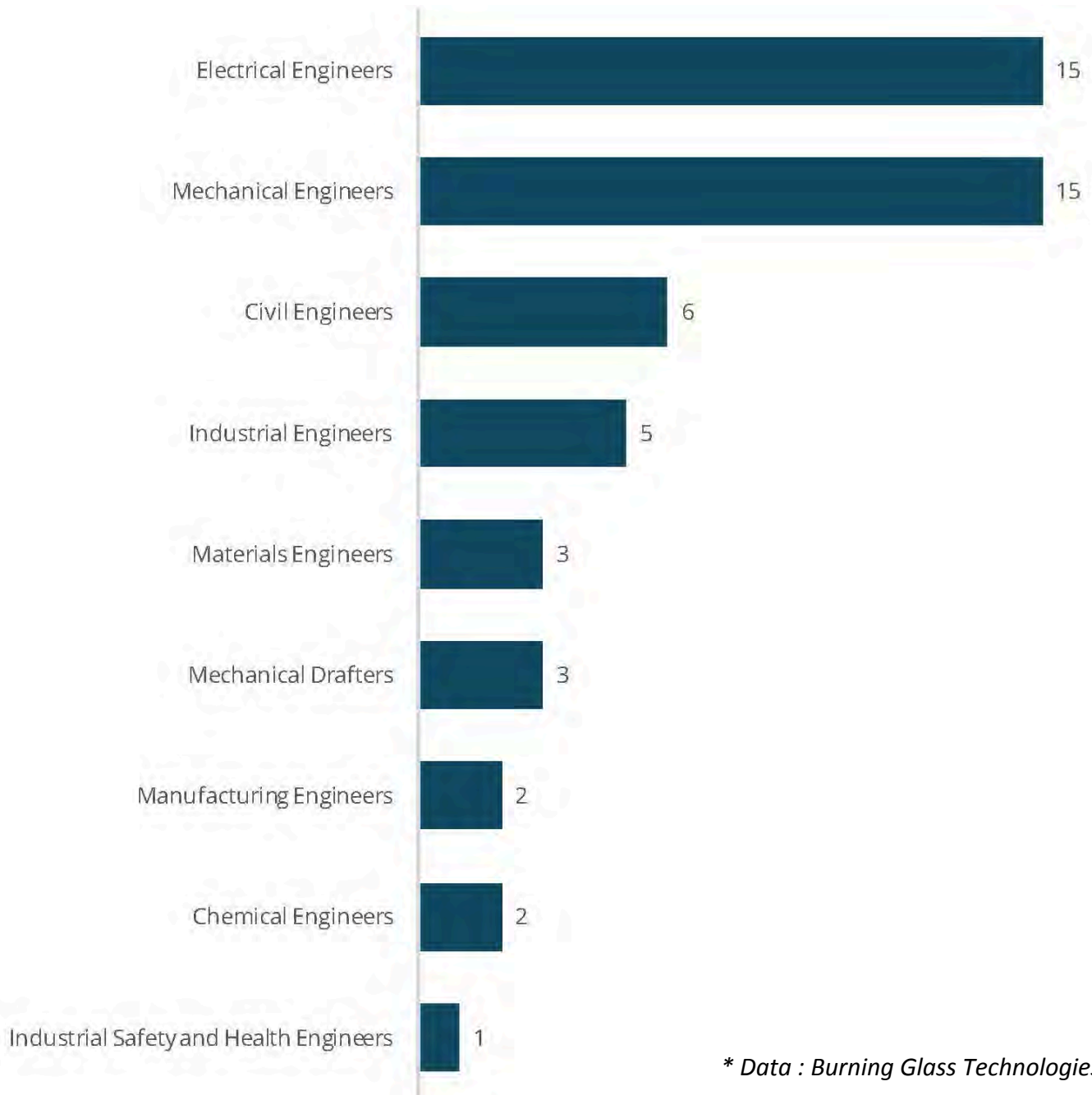
ADVANCED MANUFACTURING

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 1,159 employed individuals in St. Clair County during 2015. Demand for engineers in the region has been consistent, and employment has been growing quickly.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS : TOP JOBS



Electrical engineers and mechanical engineers were at the top of the in-demand jobs list for St. Clair County's Engineering & Design cluster during Q4 2015, with 15 online job postings each. Electrical engineers were also Q3's top job, with 11 postings during the quarter. Rank order for top jobs in this cluster has shifted slightly throughout the year, but civil engineers (6 Q4 postings) and industrial engineers (5 Q4 postings) are also near the top of the list.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS : ONLINE JOB POSTINGS OVER TIME



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Postings in the Engineering & Design cluster were up slightly from 40 in Q3 2015 to 52 in Q4. Online job ad totals in this cluster are lower in St. Clair County than in other Southeast Michigan counties, and therefore are more volatile. Quarterly posting average for 2015 was 53.75. The 52 postings in the Engineering & Design cluster during Q4 2015 represent 3.6% of all online posting activity in the county.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS: EMPLOYMENT OVER TIME

Engineering & Design Occupational Employment



Source: EMSI

Analysis: Workforce Intelligence Network

Engineering & Design employment in St. Clair County grew 3.5% from 2014 to 2015. Employment in the cluster is up to 1,159 from a recession-low of 831. St. Clair County workers in the Engineering & Design occupations seem to have returned to work, with employment estimates for 2015 similar to those seen in 2001-2007, pre-recession.

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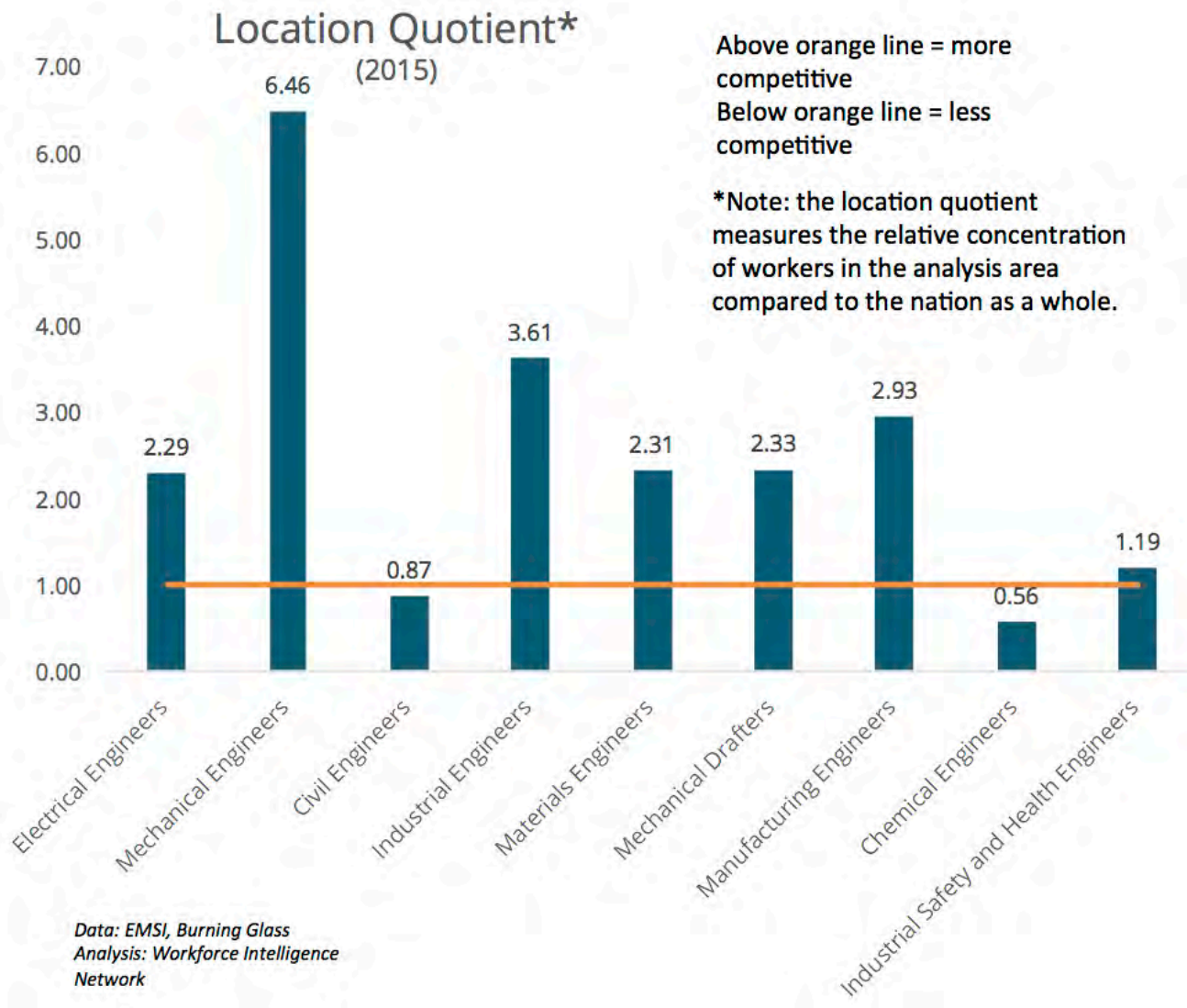
ENGINEERS AND DESIGNERS : TOP JOBS WAGES

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
17-2071	Electrical Engineers	\$28.63	\$34.35	\$41.89	\$49.10	\$57.09
17-2141	Mechanical Engineers	\$29.77	\$36.77	\$44.46	\$53.21	\$59.58
17-2051	Civil Engineers	\$23.14	\$27.72	\$33.64	\$39.22	\$46.33
17-2112	Industrial Engineers	\$27.86	\$33.64	\$40.59	\$47.63	\$55.91
17-2131	Materials Engineers	\$25.60	\$31.02	\$38.44	\$48.01	\$58.55
17-3013	Mechanical Drafters	\$16.44	\$20.81	\$26.26	\$32.63	\$38.29
17-2199	Manufacturing Engineers	\$24.18	\$35.80	\$44.80	\$54.72	\$65.93
17-2041	Chemical Engineers	\$27.53	\$31.53	\$37.82	\$45.31	\$54.09
17-2111	Industrial Safety and Health Engineers	\$29.76	\$36.56	\$45.61	\$55.07	\$63.22

Engineering & Design occupations offer St. Clair County workers with the right education and proper training high paying jobs. All of the top 15 in-demand jobs in this cluster during Q4 advertise wages well above a living wage standard of \$15 per hour, with opportunity for wage growth as workers gain experience.

ADVANCED MANUFACTURING

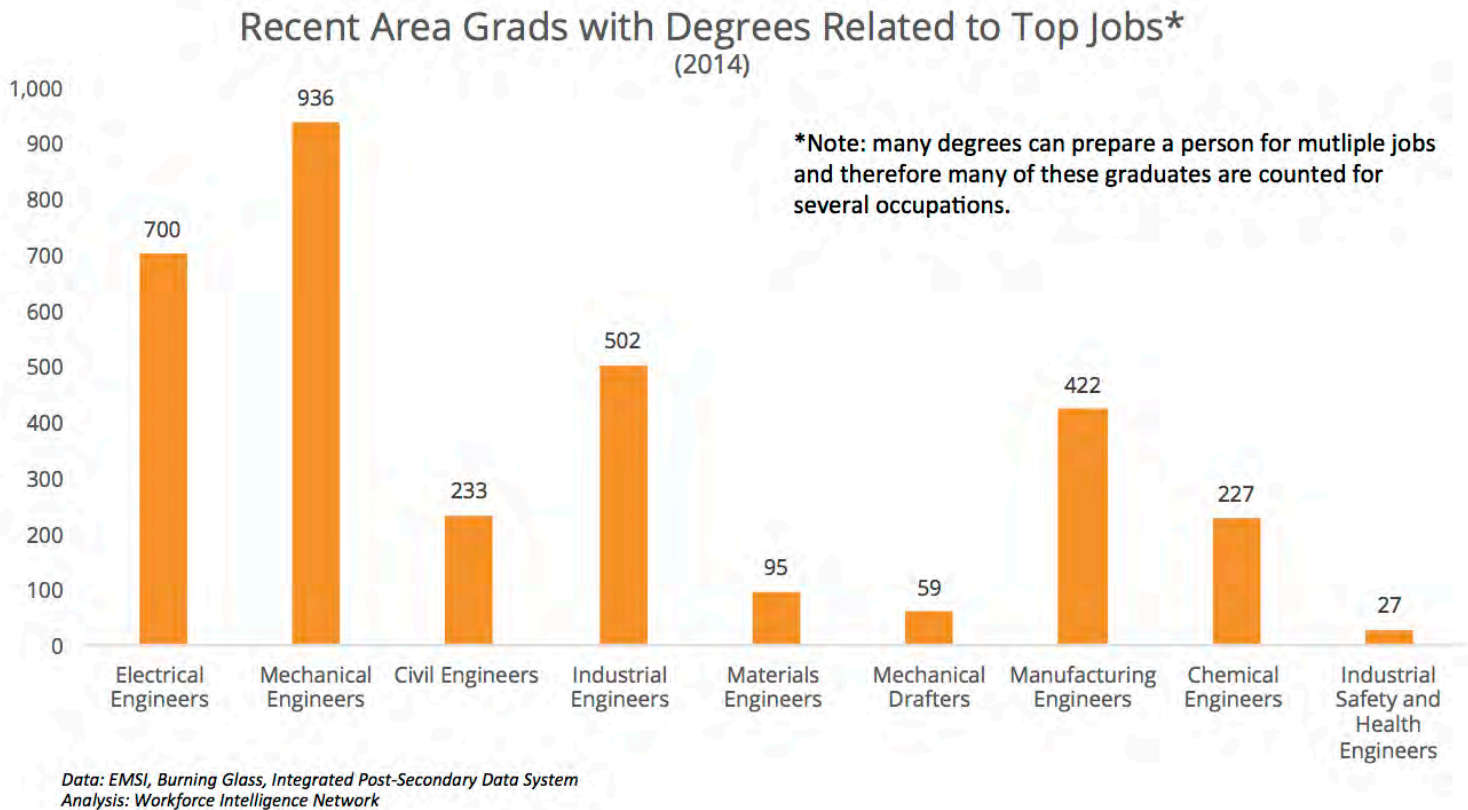
ENGINEERS AND DESIGNERS : TOP JOBS LOCATION QUOTIENT



The location quotient (LQ) is a measure of relative concentration. In this case it measures the relative concentration of workers in an occupation in southeast Michigan compared to the U.S. on average. Higher LQs typically indicate that employers will have an easier time finding talent because those workers are more concentrated in the area; lower LQs will make filling open positions more difficult. For example, mechanical engineers (LQ = 6.46) are 6.46 times, or 546% more concentrated in southeast Michigan than the national average. Chemical engineers in the region, on the other hand, are only at 56% of the national average.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS : TOP JOBS RECENT REGIONAL GRADUATES



Due to the regional nature of the labor force in southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership. 2014 completions data show that Southeast Michigan students are graduating with degrees and certificates applicable to many of St. Clair's most in-demand Engineering jobs. St. Clair County employers who posted 15 online job ads for mechanical engineers had 936 regional 2014 graduates to recruit from.

ADVANCED MANUFACTURING

ENGINEERS AND DESIGNERS : TOP JOBS EDUCATION & TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
17-2071	Electrical Engineers	Bachelor's degree	None	None
17-2141	Mechanical Engineers	Bachelor's degree	None	None
17-2051	Civil Engineers	Bachelor's degree	None	None
17-2112	Industrial Engineers	Bachelor's degree	None	None
17-2131	Materials Engineers	Bachelor's degree	None	None
17-3013	Mechanical Drafters	Associate's degree	None	None
17-2199	Manufacturing Engineers	Bachelor's degree	None	None
17-2041	Chemical Engineers	Bachelor's degree	None	None
17-2111	Industrial Safety and Health Engineers	Bachelor's degree	None	None

Most Engineering & Design occupations require postsecondary educational attainment of applicants. Due to the regional nature of the labor force in southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership. Program completions data from 2014 show that hundreds of southeast Michigan students graduated from programs related to high demand engineering jobs. St. Clair County employers offering competitive wages have many qualified regional workers to choose from when recruiting for Engineering & Design occupations.



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 2015, IT occupational employment was 664 in St. Clair County. Top jobs in this cluster include computer support specialists, computer systems analysts, and software developers for applications.

INFORMATION TECHNOLOGY

TOP JOBS



St. Clair County employers posted 5 online jobs ads each for web developers and database administrators during Q4 2015, making these the most in-demand Information Technology jobs in the county. Although the small number of postings in this cluster make it difficult to track trends, it appears that St. Clair County employers are increasingly looking to recruit software developers for applications (4 postings), one of Southeast Michigan's most in-demand occupations.

INFORMATION TECHNOLOGY

ONLINE JOB POSTINGS OVER TIME

Information Technology Online Job Postings



Source: Burning Glass Technologies

Postings in the Information Technology cluster in St. Clair County decreased throughout 2015. During Q1 2015, local employers posted 46 online job ads for the occupations in this cluster but demand has dropped off to 25 in Q4. Additionally, employer demand for these occupations is small, making for a volatile trend graph. The job postings in the Information Technology cluster accounted for 1.7% of all online posting activity during Q4 2015 in St. Clair County.

INFORMATION TECHNOLOGY

EMPLOYMENT OVER TIME

Information Technology Occupational Employment



Source: EMSI

Analysis: Workforce Intelligence Network

The Information Technology cluster grew by 9 jobs from 2014 to 2015, from 655 workers to 664. St. Clair County's employment peaked for IT in 2008, when the county had 780 workers. Just as postings are few and volatile, the small presence of the IT occupation cluster in St. Clair County means that employment estimates fluctuate from year to year.

INFORMATION TECHNOLOGY

TOP JOBS WAGES

ONET Code	Occupation	10th Percentile Hourly Earnings	25th Percentile Hourly Earnings	Median Hourly Earnings	75th Percentile Hourly Earnings	90th Percentile Hourly Earnings
15-1134	Web Developers	\$18.03	\$21.59	\$27.32	\$33.96	\$40.35
15-1141	Database Administrators	\$23.80	\$31.38	\$41.07	\$50.08	\$58.17
15-1132	Software Developers, Applications	\$25.18	\$31.35	\$39.38	\$49.47	\$58.83
15-1133	Software Developers, Systems Software	\$26.94	\$33.62	\$42.38	\$51.79	\$60.54
15-1131	Computer Programmers	\$23.77	\$28.94	\$34.77	\$43.65	\$51.99
15-1199	Business Intelligence Analysts	\$23.42	\$30.58	\$38.80	\$48.99	\$57.12
15-1142	Network and Computer Systems Administrators	\$21.59	\$27.21	\$35.57	\$43.28	\$51.30
15-1143	Computer Network Architects	\$29.97	\$38.46	\$48.60	\$57.12	\$67.27
15-1151	Computer User Support Specialists	\$12.38	\$15.95	\$21.56	\$29.06	\$36.96
15-1152	Computer Network Support Specialists	\$16.14	\$20.71	\$28.41	\$38.49	\$48.90

The Information Technology cluster grew by 9 jobs from 2014 to 2015, from 655 workers to 664. St. Clair County's employment peaked for IT in 2008, when the county had 780 workers. Just as postings are few and volatile, the small presence of the IT occupation cluster in St. Clair County means that employment estimates fluctuate from year to year.

INFORMATION TECHNOLOGY

TOP JOBS LOCATION QUOTIENT

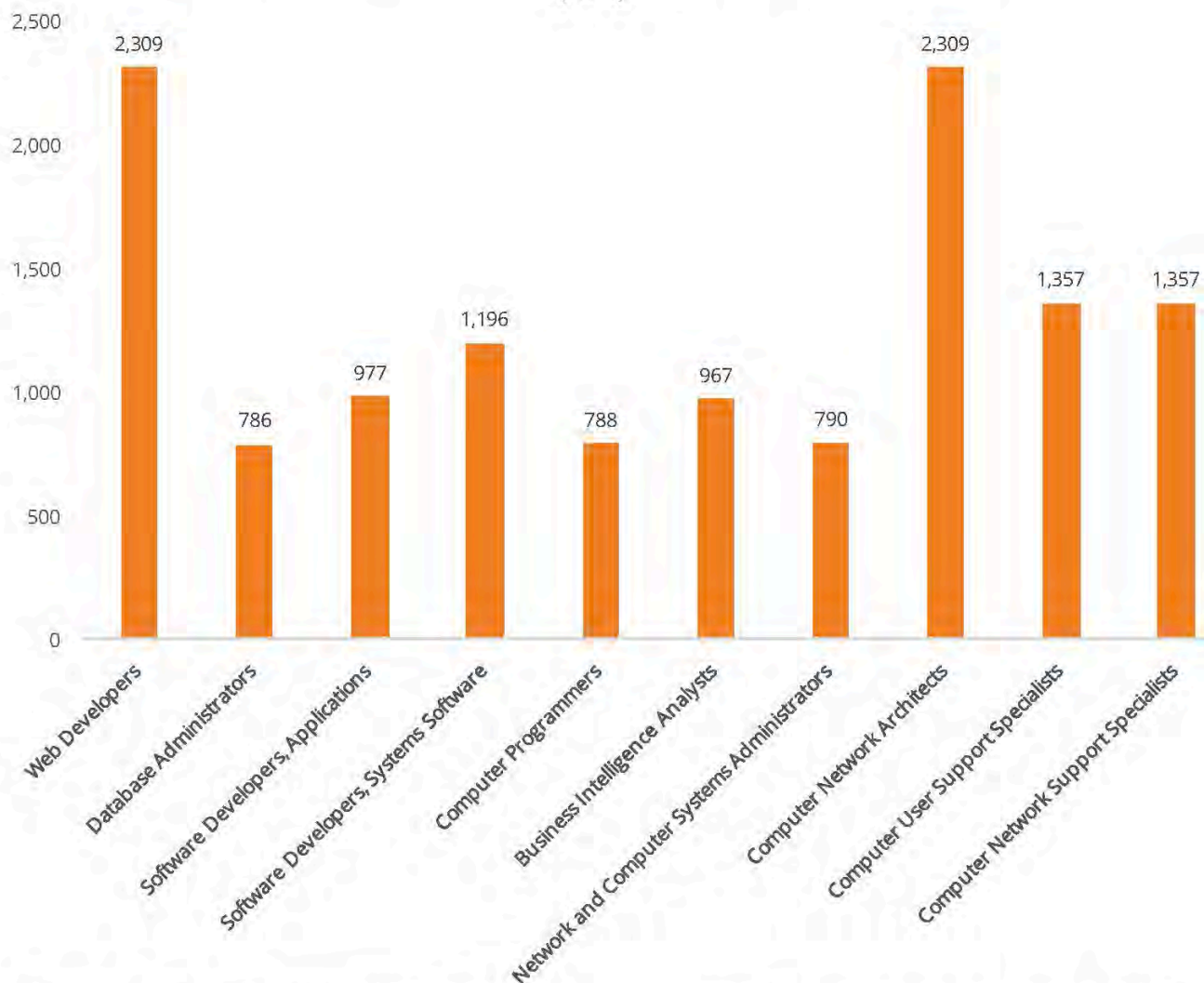


The location quotient (LQ) is a measure of relative concentration. In this case it measures the relative concentration of workers in an occupation in southeast Michigan compared to the U.S. on average. Higher LQs typically indicate that employers will have an easier time finding talent because those workers are more concentrated in the area; lower LQs will make filling open positions more difficult. For example, though IT employment in St. Clair County is small, the concentration of workers like systems software developers (LQ = 1.32) in southeast Michigan is 32% higher than the national average concentration. The St. Clair County employers that posted 2 online job ads for these workers during Q4 should have little trouble recruiting.

INFORMATION TECHNOLOGY

TOP JOBS RECENT REGIONAL GRADUATES

Recent Area Grads with Degrees Related to Top Jobs*
(2014)



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

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

The high paying jobs in the Information Technology, similar to the Engineering & Design occupations, will require higher educational attainment of their candidates. Regional certificate and degree completion data show that many Southeast Michigan students completed programs related to St. Clair County's most in-demand IT careers. St. Clair County employers looking to hire IT workers have many graduates to choose from, but must be competitive themselves as Information Technology workers may choose other Southeast Michigan counties or may leave the state altogether.

Due to the regional nature of the labor force in Southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership.

INFORMATION TECHNOLOGY

TOP JOBS EDUCATION & TRAINING REQUIREMENTS

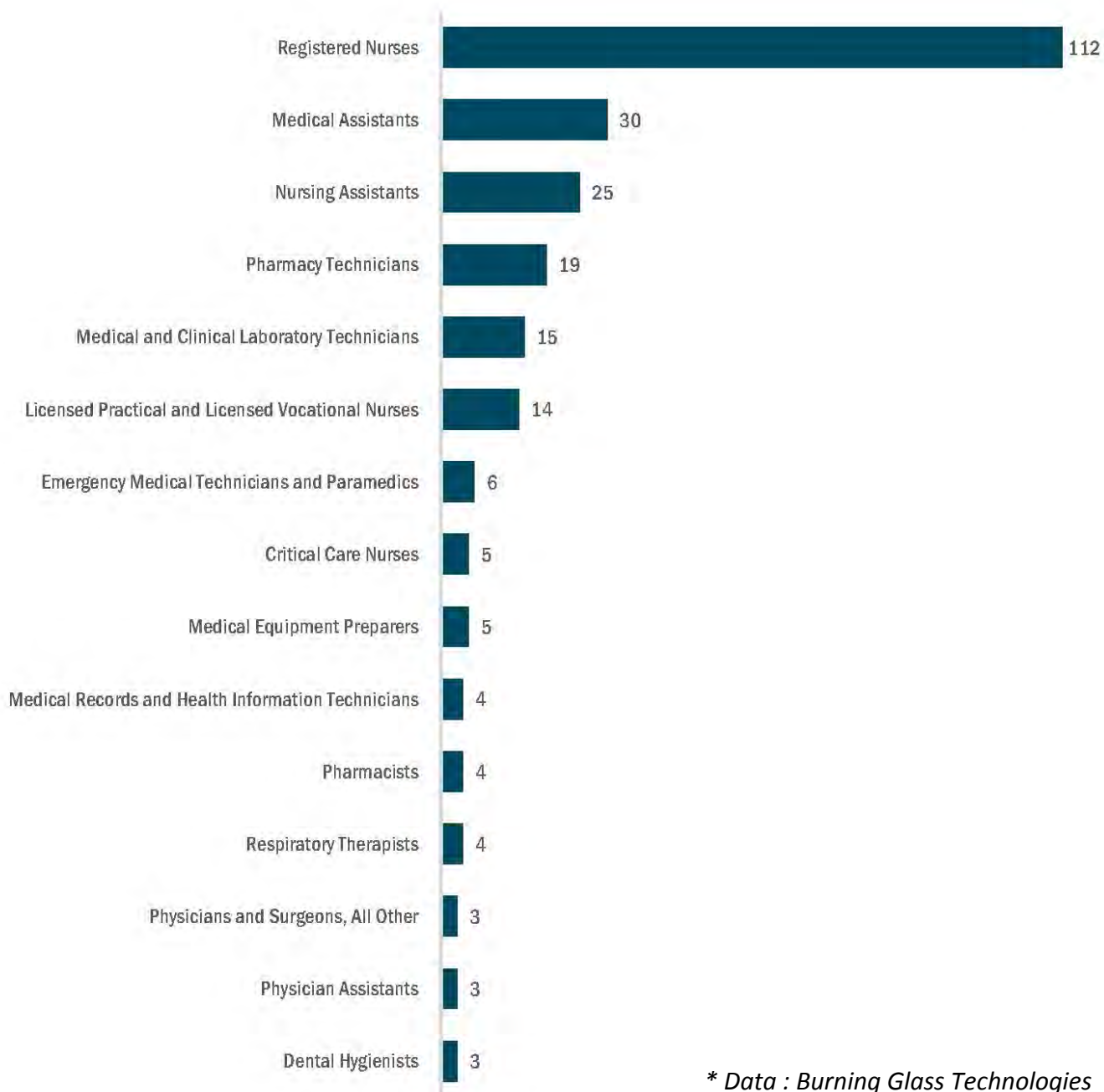
ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
15-1134	Web Developers	Associate's degree	None	None
15-1141	Database Administrators	Bachelor's degree	Less than 5 years	Less than 5 years
15-1132	Software Developers, Applications	Bachelor's degree	None	None
15-1133	Software Developers, Systems Software	Bachelor's degree	None	None
15-1131	Computer Programmers	Bachelor's degree	None	None
15-1199	Business Intelligence Analysts	Bachelor's degree	None	None
15-1142	Network and Computer Systems Administrators	Bachelor's degree	None	None
15-1143	Computer Network Architects	Bachelor's degree	5 years or more	5 years or more
15-1151	Computer User Support Specialists	Some college, no degree	None	None
15-1152	Computer Network Support Specialists	Associate's degree	None	None

Like the Engineering & Design occupations, the Information Technology occupations often require at least a bachelor's degree, and employers are likely to favor candidates with some experience. Careers in computer user support or network support may be attainable with some college or an associate's degree.

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 5,178 employees in 2015 in St. Clair County. Employment in this cluster has been consistently growing, with more health care workers needed to care for Michigan's aging population and as a response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this cluster.



Registered nurses topped the list of St. Clair County's in-demand Health Care occupations during Q4 2015. Employers here posted 112 online job ads for RNs, almost 4 times as many ads as were posted for the next most in-demand job, medical assistants (30 postings). RNs are in high demand across Southeast Michigan, and demand for nurses in St. Clair County has risen 59% since Q4 2014, when employers posted just 46 online job ads for these workers.

HEALTH CARE

ONLINE JOB POSTINGS OVER TIME

Health Care Online Job Postings



Source: Burning Glass Technologies

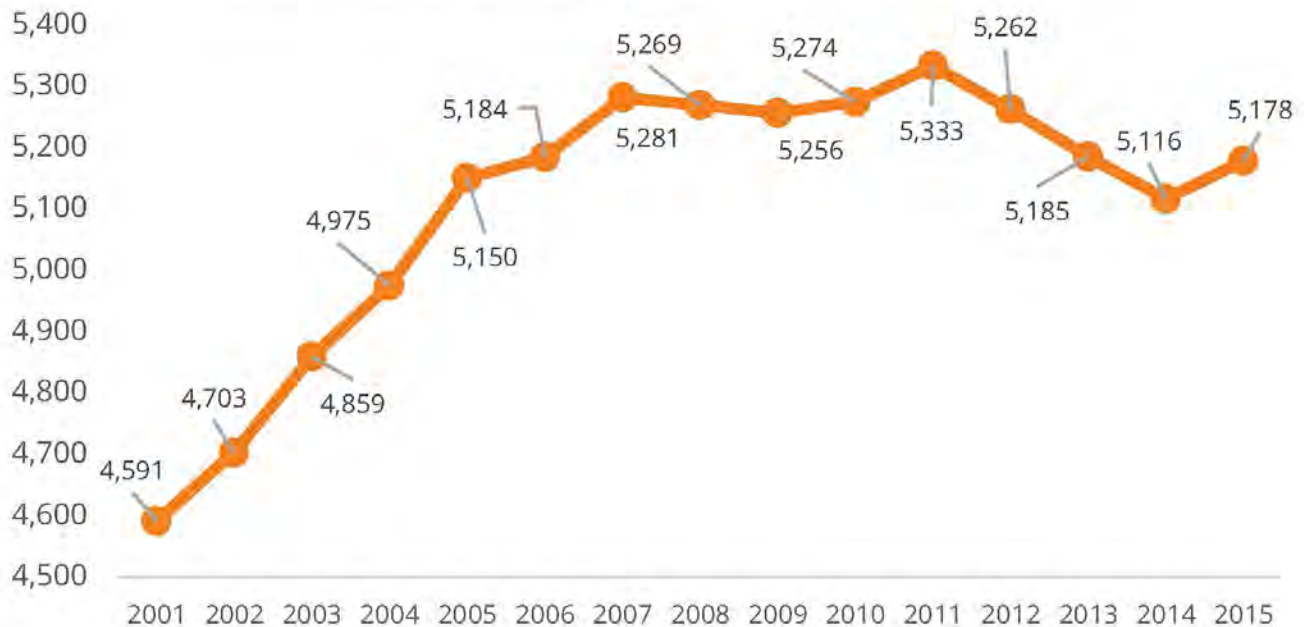
Analysis: Workforce Intelligence Network

With the rising demand for registered nurses and other medical workers, online job postings in the Health Care occupation cluster continue to grow in St. Clair County. Employers posted 300 ads from October to December 2015, a 6% increase over the 281 seen during Q3 2015. Increased employer demand helped push up employment in this cluster in 2015. Employer demand for the Health Care occupations accounted for 21.0% of all online job postings in St. Clair County during Q4 2015, making this the second largest analyzed cluster in terms of demand.

HEALTH CARE

EMPLOYMENT OVER TIME

Health Care Occupational Employment



Source: EMSI

Analysis: Workforce Intelligence Network

Employment in St. Clair County's Health Care cluster grew 1%, from 5,116 to 5,178 jobs, between 2014 and 2015. Overall Health Care employment in the county continues to rise and did not see a large dip during the recession years. Increased demand for Health Care workers, especially registered nurses, will ensure that the general trend of employment growth continues for St. Clair County's Health Care cluster.

HEALTH CARE

TOP JOBS WAGES

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	\$24.99	\$28.50	\$32.85	\$37.31	\$46.89
31-9092	Medical Assistants	\$10.65	\$12.19	\$13.94	\$16.27	\$18.70
31-1014	Nursing Assistants	\$10.13	\$11.69	\$13.42	\$15.30	\$17.31
29-2052	Pharmacy Technicians	\$9.48	\$11.58	\$14.28	\$16.91	\$19.19
29-2012	Medical and Clinical Laboratory Technicians	\$11.24	\$12.90	\$15.76	\$20.29	\$27.64
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.60	\$19.89	\$22.71	\$25.74	\$28.08
29-2041	Emergency Medical Technicians and Paramedics	\$9.79	\$11.62	\$14.50	\$17.69	\$20.73
29-1141	Critical Care Nurses	\$24.99	\$28.50	\$32.85	\$37.31	\$46.89
31-9093	Medical Equipment Preparers	\$12.55	\$14.43	\$16.55	\$18.74	\$20.72
29-2071	Medical Records and Health Information Technicians	\$11.72	\$14.03	\$17.80	\$21.92	\$25.68
29-1051	Pharmacists	\$40.26	\$48.78	\$54.92	\$60.79	\$69.34
29-1126	Respiratory Therapists	\$20.26	\$23.20	\$25.88	\$28.33	\$30.25
29-1069	Physicians and Surgeons, All Other	\$30.16	\$49.14	\$81.42	\$96.19	\$147.67
29-1071	Physician Assistants	\$23.49	\$33.18	\$45.90	\$54.05	\$62.10
29-2021	Dental Hygienists	\$21.68	\$25.08	\$29.46	\$33.87	\$36.74

St. Clair County's most in-demand Health Care occupations offer good wages to entry-level workers, with 8 of the top 15 jobs surpassing the \$15 an hour living wage standard at the 10th percentile. High demand workers like registered nurses can make over \$32 per hour at the median.

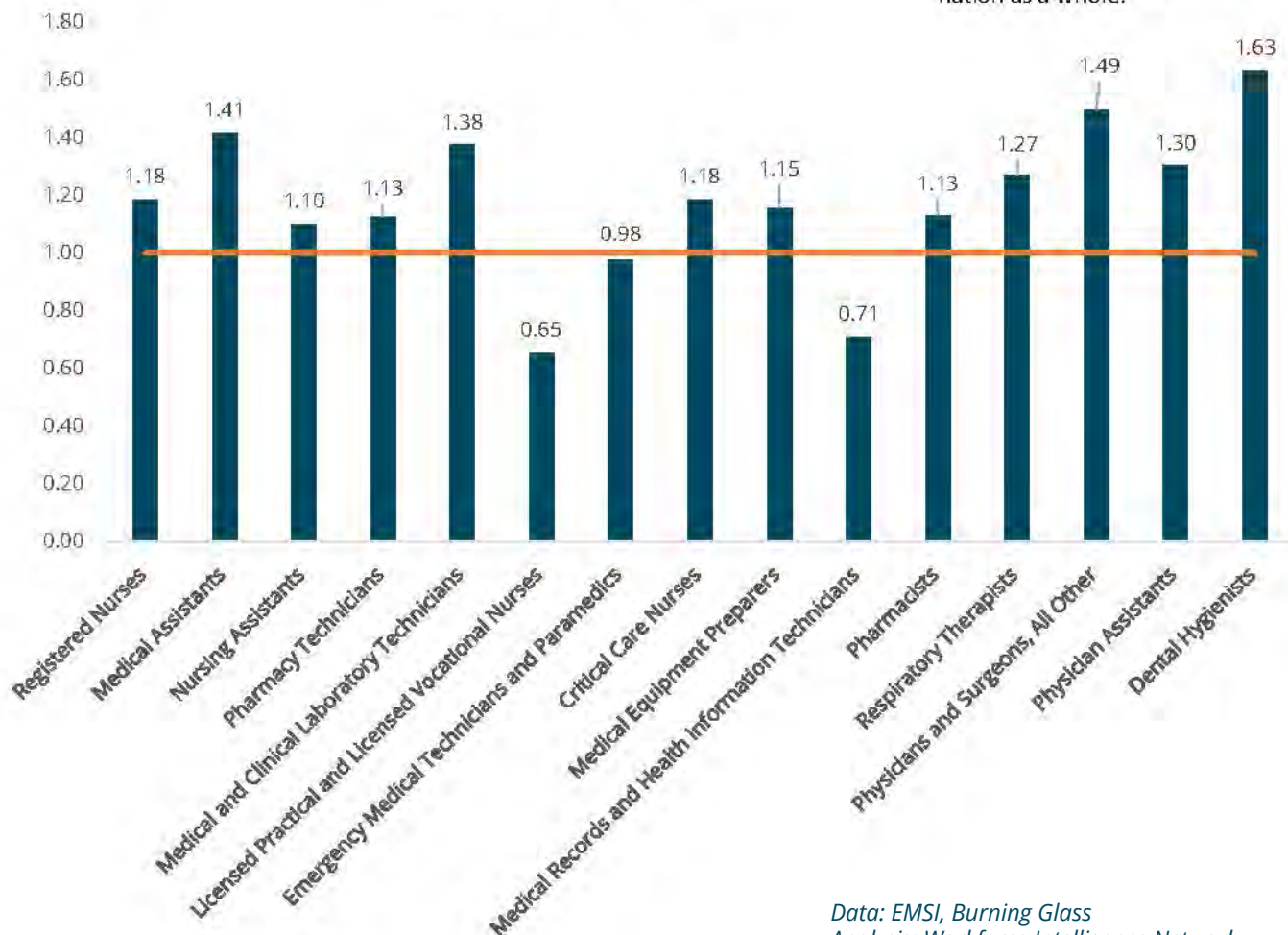
HEALTH CARE

TOP JOBS LOCATION QUOTIENT

Location Quotient*
(2015)

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.

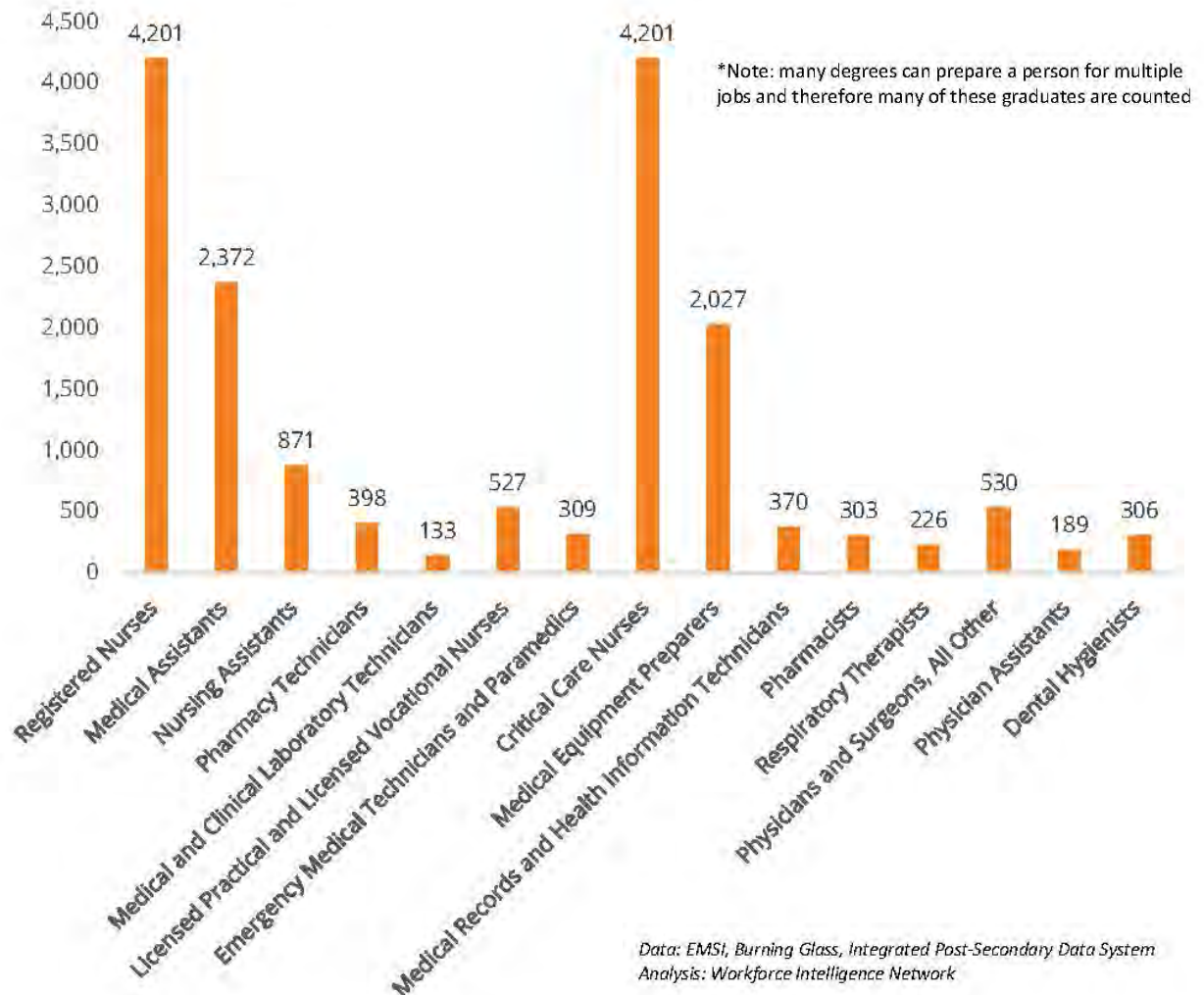


Data: EMSI, Burning Glass
Analysis: Workforce Intelligence Network

The location quotient (LQ) is a measure of relative concentration. In this case it measures the relative concentration of workers in an occupation in southeast Michigan compared to the U.S. on average. Higher LQs typically indicate that employers will have an easier time finding talent because those workers are more concentrated in the area; lower LQs will make filling open positions more difficult. For example, dental hygienists have a LQ of 1.63, meaning that the concentration of dental hygienists in the region is 63% higher than the average concentration across the nation. Licensed practical and licensed vocational nurses in southeast Michigan (LQ = 0.65) are only concentrated at 65% of the national average so St. Clair County employers may find it relatively difficult to recruit these workers.

TOP JOBS RECENT REGIONAL GRADUATES

Recent Area Grads with Degrees Related to Top Jobs*
(2014)



Due to the regional nature of the labor force in southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership. Certificate and degree completions data for 2014 show that many Southeast Michigan students completed programs related to St. Clair County's most in-demand Health Care occupations. The region had 4,201 graduates qualified to become registered nurses, but the sustained high demand for these workers indicates that employers are not satisfied with the training students receive in the program or that graduates are not taking nursing jobs.

HEALTH CARE

TOP JOBS EDUCATION & TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
29-1141	Registered Nurses	Associate's degree	None	None
31-9092	Medical Assistants	Postsecondary non-degree award	None	None
31-1014	Nursing Assistants	Postsecondary non-degree award	None	None
29-2052	Pharmacy Technicians	High school diploma or equivalent	None	None
29-2012	Medical and Clinical Laboratory Technicians	Associate's degree	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	Postsecondary non-degree award	None	None
29-2041	Emergency Medical Technicians and Paramedics	Postsecondary non-degree award	None	None
29-1141	Critical Care Nurses	Associate's degree	None	None
31-9093	Medical Equipment Preparers	High school diploma or equivalent	None	None
29-2071	Medical Records and Health Information Technicians	Postsecondary non-degree award	None	None
29-1051	Pharmacists	Doctoral or professional degree	None	None
29-1126	Respiratory Therapists	Associate's degree	None	None
29-1069	Physicians and Surgeons, All Other	Doctoral or professional degree	None	None
29-1071	Physician Assistants	Master's degree	None	None
29-2021	Dental Hygienists	Associate's degree	None	None

Most of the in-demand Health Care occupations in St. Clair County do not require high educational attainment of their applicants. Registered nurses, medical assistants, and nursing assistants can start working with an associate's degree or a postsecondary certificate, however, many hospitals prefer nurses with 4 year degrees. Health Care occupations that require advanced educational attainment include pharmacists, physicians and surgeons, and physician assistants.

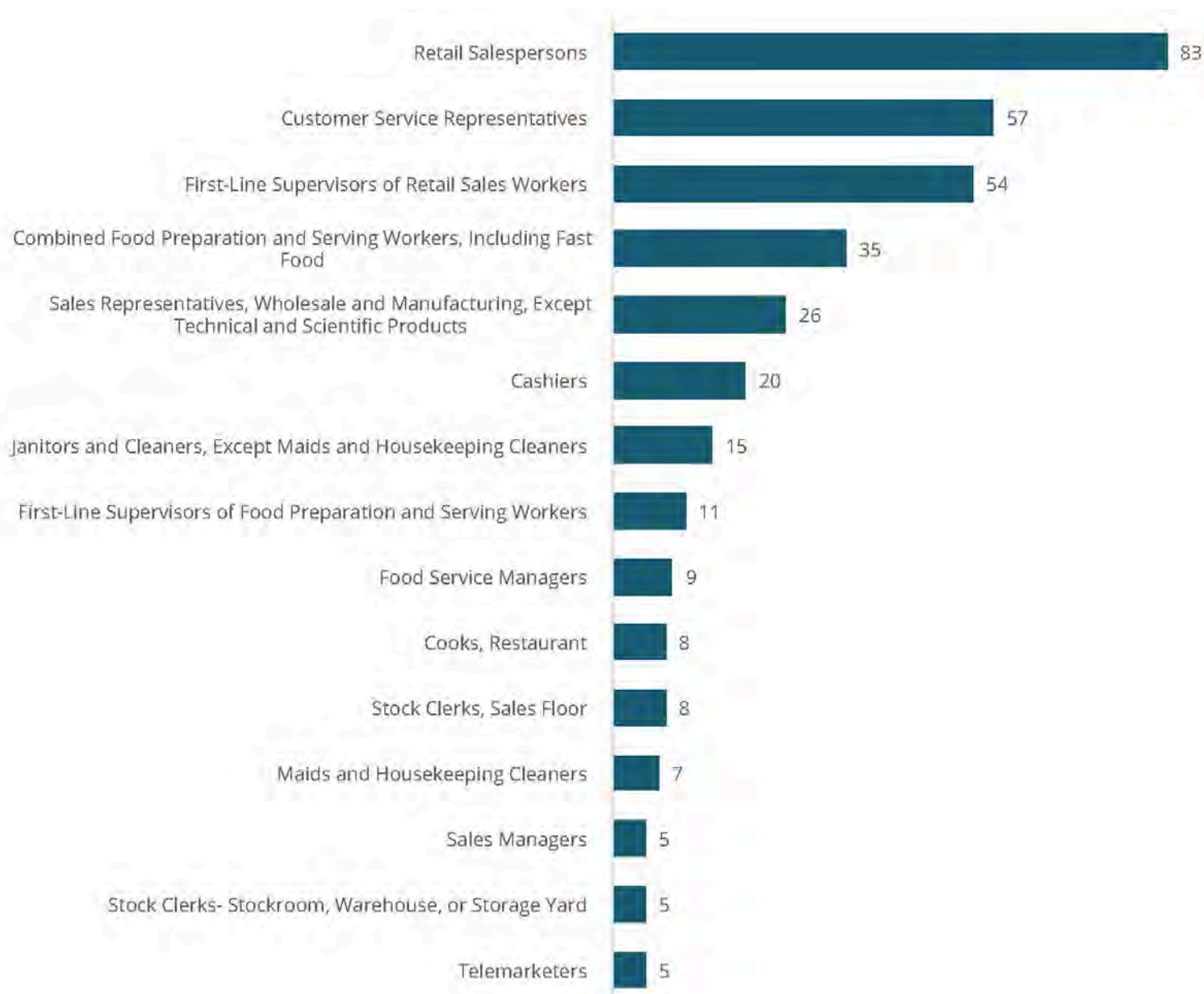


RETAIL AND HOSPITALITY

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 2015, 13,868 individuals were employed in retail and hospitality related occupations in St. Clair County.

RETAIL & HOSPITALITY

TOP JOBS



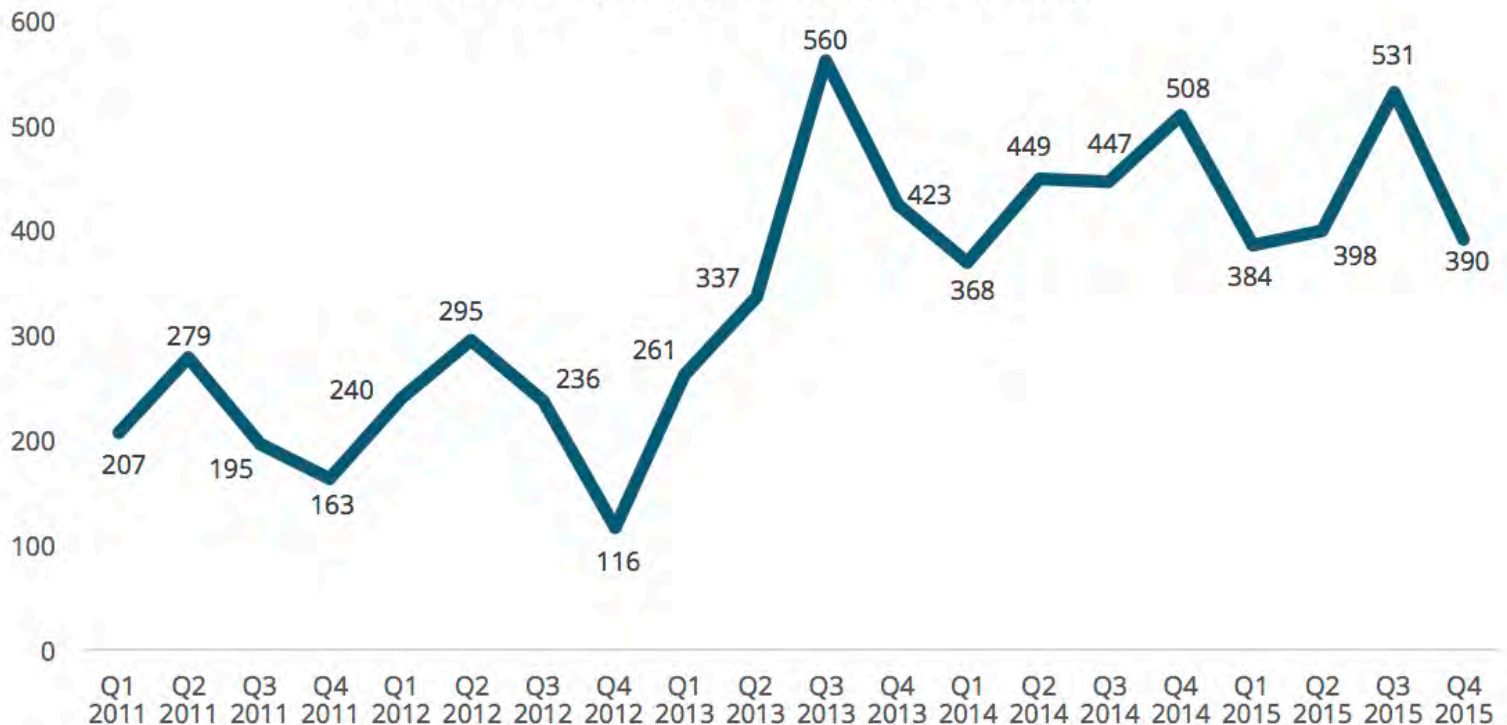
* Data : Burning Glass Technologies

Retail salespersons topped the list of in-demand Retail & Hospitality occupations with 83 online job postings in Q4 2015. Much of the top jobs list remains unchanged, but shuffled in order, with customer service representatives (57 postings), first-line supervisors of retail sales workers (54 postings), and combined food preparation and serving workers (35 postings) at the top of the list.

RETAIL & HOSPITALITY

ONLINE JOB POSTINGS OVER TIME

Retail & Hospitality Online Job Postings



Source: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Postings in St. Clair County's Retail & Hospitality cluster decreased 27% from 531 postings in Q3 to 390 in Q4 2015. Employer demand has been increasing over time for this cluster, with quarterly posting levels staying above the 350 mark following a spike to 560 postings during Q3 2013. Higher levels of job postings have the potential to push up employment in the Retail & Hospitality cluster slightly. The Retail & Hospitality cluster is St. Clair County's largest cluster in terms of demand. The 390 online postings from Q4 2015 accounted for 27.3% of total postings in St. Clair County.

RETAIL & HOSPITALITY

EMPLOYMENT OVER TIME



Source: EMSI

Analysis: Workforce Intelligence Network

St. Clair County's Retail & Hospitality cluster gained 148 in 2015, growing 1% from 2014. Employment in the cluster has struggled a bit to recover after dropping to 13,388 in 2010 in the depths of the recession. Pre-recession employment numbers topped 15,000.

RETAIL & HOSPITALITY

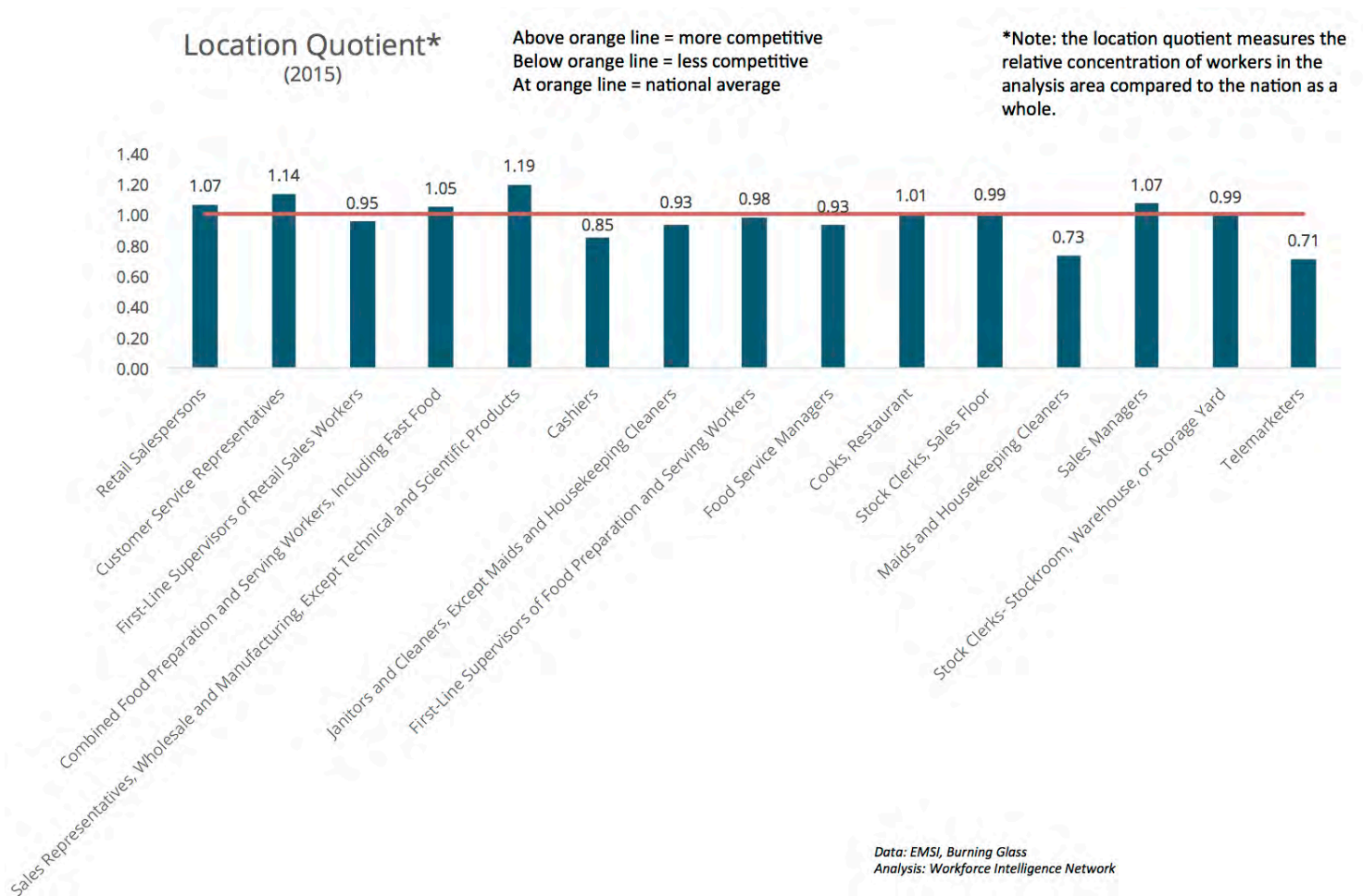
TOP JOBS WAGES

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	\$8.35	\$8.98	\$10.24	\$13.13	\$19.00
43-4051	Customer Service Representatives	\$9.36	\$11.52	\$15.01	\$19.07	\$24.48
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.18	\$13.60	\$17.23	\$21.87	\$27.40
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.15	\$8.52	\$9.14	\$9.92	\$12.12
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$12.94	\$18.83	\$27.15	\$39.50	\$55.51
41-2011	Cashiers	\$8.21	\$8.72	\$9.61	\$11.65	\$15.09
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.37	\$9.47	\$11.71	\$14.97	\$18.31
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$8.92	\$10.54	\$14.22	\$19.22	\$23.99
11-9051	Food Service Managers	\$12.37	\$15.46	\$19.44	\$26.51	\$35.87
35-2014	Cooks, Restaurant	\$8.32	\$9.14	\$10.69	\$12.73	\$14.30
43-5081	Stock Clerks, Sales Floor	\$8.41	\$9.23	\$11.13	\$14.53	\$18.71
37-2012	Maids and Housekeeping Cleaners	\$8.15	\$9.04	\$10.31	\$11.99	\$13.73
11-2022	Sales Managers	\$28.89	\$38.96	\$52.65	\$70.34	\$106.63
43-5081	Stock Clerks- Stockroom, Warehouse, or Storage Yard	\$8.41	\$9.23	\$11.13	\$14.53	\$18.71
41-9041	Telemarketers	\$8.99	\$10.17	\$12.43	\$18.25	\$24.14

Retail & Hospitality cluster jobs offer St. Clair County workers just starting out some of the lowest wages of the WIN-analyzed clusters, but wages increase with experience. Median hourly earnings top the \$15 per hour living wage standard for 5 of the top 15 in-demand occupations and continue to grow from there. Retail management jobs are among the highest paying, with entry-level (10th percentile) sales managers making up to \$28.89 per hour, or \$52.65 at the median.

RETAIL & HOSPITALITY

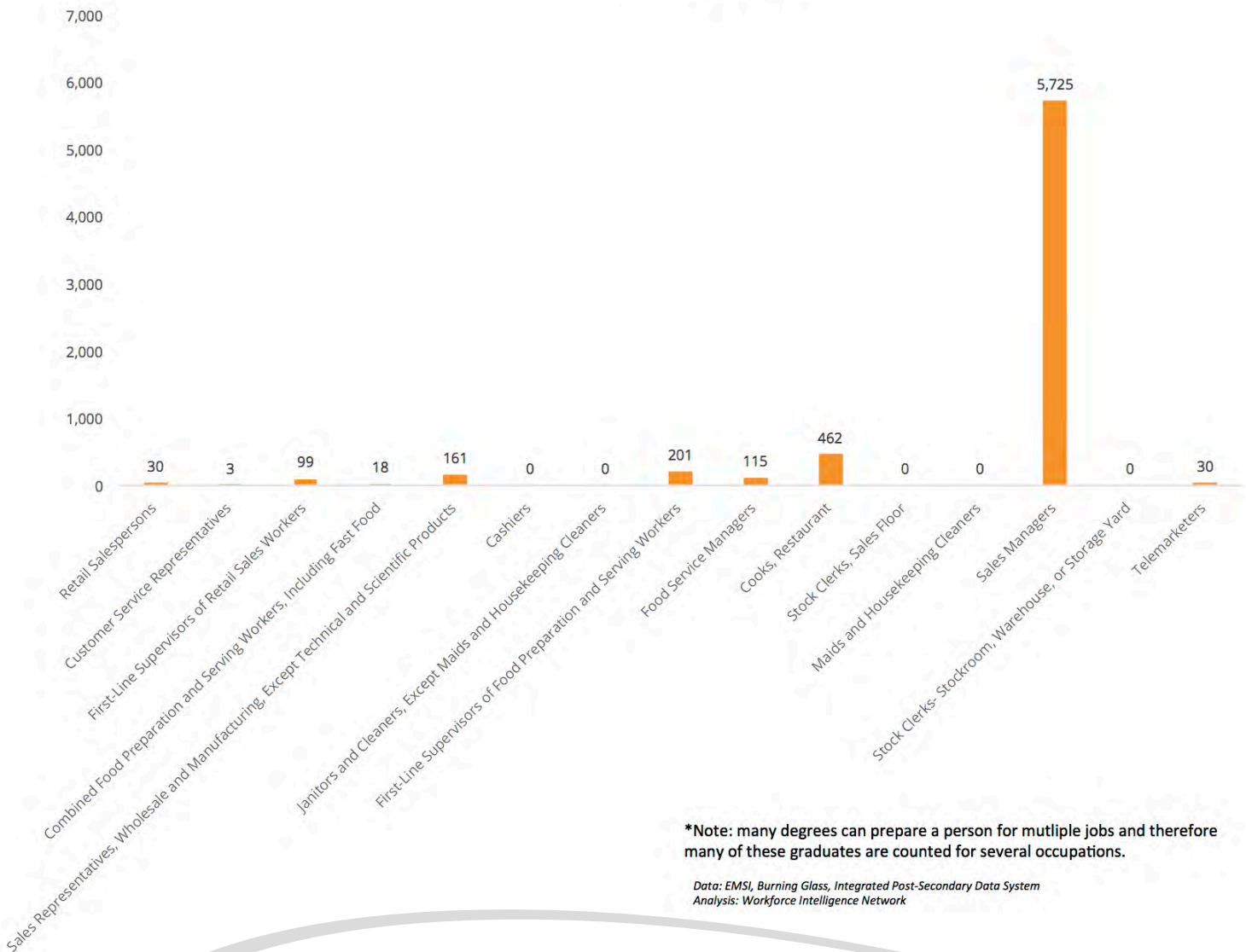
TOP JOBS LOCATION QUOTIENT



The location quotient (LQ) is a measure of relative concentration. In this case it measures the relative concentration of workers in an occupation in southeast Michigan compared to the U.S. on average. Higher LQs typically indicate that employers will have an easier time finding talent because those workers are more concentrated in the area; lower LQs will make filling open positions more difficult. Wholesale and manufacturing sales representatives (except technical and scientific products) have a LQ of 1.19 indicating that the concentration of these workers in the region is 19% higher than the concentration throughout the rest of the nation. St. Clair County employers seeking to hire wholesale sales representatives should have a relatively easy time. The other in-demand Retail & Hospitality workers in are concentrated in southeast Michigan at least at 70% of the national average.

TOP JOBS RECENT REGIONAL GRADUATES

Recent Area Grads with Degrees Related to Top Jobs*
(2014)



Due to the regional nature of the labor force in Southeast Michigan, data is shown for degree and certificate completions awarded by colleges and universities from all 16-counties in the WIN partnership. Furthermore, because many degrees can prepare a person for multiple jobs, the completions data for a particular occupation does not indicate that those graduates will necessarily pursue a career in that occupation. Completions data show that 5,725 Southeast Michigan students completed a program related to a career as a sales manager, so St. Clair County employers should have qualified candidates to choose from, even if all graduates do not seek employment as sales managers.

RETAIL & HOSPITALITY

TOP JOBS EDUCATION & TRAINING REQUIREMENTS

ONET Code	Occupation	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
41-2031	Retail Salespersons	Less than high school	None	None
43-4051	Customer Service Representatives	High school diploma or equivalent	None	None
41-1011	First-Line Supervisors of Retail Sales Workers	High school diploma or equivalent	Less than 5 years	Less than 5 years
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	Less than high school	None	None
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	High school diploma or equivalent	None	None
41-2011	Cashiers	Less than high school	None	None
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	Less than high school	None	None
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	High school diploma or equivalent	Less than 5 years	Less than 5 years
11-9051	Food Service Managers	High school diploma or equivalent	Less than 5 years	Less than 5 years
35-2014	Cooks, Restaurant	Less than high school	Less than 5 years	Less than 5 years
43-5081	Stock Clerks, Sales Floor	Less than high school	None	None
37-2012	Maids and Housekeeping Cleaners	Less than high school	None	None
11-2022	Sales Managers	Bachelor's degree	Less than 5 years	Less than 5 years
43-5081	Stock Clerks- Stockroom, Warehouse, or Storage Yard	Less than high school	None	None
41-9041	Telemarketers	Less than high school	None	None

Retail & Hospitality cluster occupations typically do not require any education or training beyond a high school diploma. Employers may like to see some prior work experience. A high paying job as a sales manager is more likely than other cluster occupations to require a bachelor's degree.

The background of the page is a blurred cityscape with warm, golden-yellow and orange tones. Overlaid on the left side are several thick, flowing, curved lines in orange, dark blue, and yellow. The text is centered in the lower half of the page.

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, location quotient, completion, and education requirement data is shown for the 16 county region that is part of the WIN partnership.
- 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>
- This report uses \$15 as a "living wage" estimate. Any job paying more than this is considered to pay at least a living wage. Below \$15 is less than a living wage. This definition is based on a median household income in Michigan which is close to \$50,000 per year. If we assume that most homes have two income earners and both earn at least \$15 per hour, then that household's annual income would be at least \$62,000 putting these jobs above the median.

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.

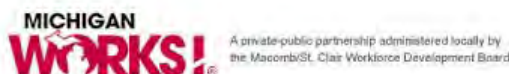
DATA SOURCES

- 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

