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Occupational Employment and Wages in Detroit-Dearborn-Livonia — May 2016

Workers in the Detroit-Dearborn-Livonia Metropolitan Division had an average (mean) hourly wage of \$24.76 in May 2016, about 4 percent above the nationwide average of \$23.86, according to the U.S. Bureau of Labor Statistics. Assistant Commissioner for Regional Operations Charlene Peiffer noted that, after testing for statistical significance, wages in the local area were higher than their respective national averages in 4 of the 22 major occupational groups, including production; construction and extraction; and transportation and material moving. Six groups had significantly lower wages than their respective national averages, including legal; computer and mathematical; and community and social service.

When compared to the nationwide distribution, local employment was more highly concentrated in 6 of the 22 occupational groups, including production; architecture and engineering; and healthcare practitioners and technical. Conversely, eight groups had employment shares significantly below their national representation, including sales and related; construction and extraction; and office and administrative support. (See [table A](#) and [box note](#) at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Detroit-Dearborn-Livonia Metropolitan Division, and measures of statistical significance, May 2016

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Detroit	United States	Detroit	Percent difference ⁽¹⁾
Total, all occupations	100.0	100.0	\$23.86	\$24.76*	4
Management	5.1	4.9	56.74	58.08	2
Business and financial operations.....	5.2	5.3	36.09	36.13	0
Computer and mathematical	3.0	3.0	42.25	39.23*	-7
Architecture and engineering	1.8	3.9*	40.53	41.62	3
Life, physical, and social science	0.8	0.5*	35.06	34.52	-2
Community and social service.....	1.4	1.7*	22.69	21.17*	-7
Legal.....	0.8	(2)	50.95	44.00*	-14
Education, training, and library.....	6.2	4.9*	26.21	25.81	-2
Arts, design, entertainment, sports, and media.....	1.4	1.4	28.07	26.61	-5
Healthcare practitioners and technical	5.9	7.3*	38.06	38.58	1
Healthcare support	2.9	3.2*	14.65	13.92*	-5
Protective service	2.4	2.2	22.03	21.85	-1
Food preparation and serving related	9.2	8.5*	11.47	11.34	-1
Building and grounds cleaning and maintenance ...	3.2	2.6*	13.47	12.93*	-4
Personal care and service.....	3.2	3.0	12.74	12.27	-4
Sales and related	10.4	9.0*	19.50	18.84	-3
Office and administrative support.....	15.7	14.4*	17.91	18.04	1
Farming, fishing, and forestry	0.3	0.1*	13.37	12.07*	-10
Construction and extraction.....	4.0	2.7*	23.51	26.05*	11
Installation, maintenance, and repair	3.9	4.0	22.45	23.52*	5

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Detroit-Dearborn-Livonia Metropolitan Division, and measures of statistical significance, May 2016 - Continued

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Detroit	United States	Detroit	Percent difference ⁽¹⁾
Production	6.5	9.4*	17.88	20.52*	15
Transportation and material moving	6.9	7.5*	17.34	19.85*	14

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Detroit-Dearborn-Livonia Metropolitan Division is above the national mean wage, while a negative difference reflects a lower wage.

(2) Estimate not released

* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Detroit-Dearborn-Livonia had 67,790 jobs in production, accounting for 9.4 percent of local area employment, significantly higher than the 6.5-percent share nationally. The average hourly wage for this occupational group locally was \$20.52, significantly above the national wage of \$17.88.

Some of the largest detailed occupations within the production group included team assemblers (21,470), first-line supervisors of production and operating workers (4,780), and inspectors, testers, sorters, samplers, and weighers (3,990). Among the higher paying jobs were power plant operators with mean hourly wages of \$36.14 and first-line supervisors of production and operating workers, \$33.98. At the lower end of the wage scale were laundry and dry-cleaning workers (\$11.14) and electrical and electronic equipment assemblers (\$11.84). (Detailed occupational data for production are presented in [table 1](#); for a complete listing of detailed occupations available go to www.bls.gov/oes/2016/may/oes_19804.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Detroit-Dearborn-Livonia Metropolitan Division, above-average concentrations of employment were found in some of the occupations within the production group. For instance, rolling machine setters, operators, and tenders, metal and plastic were employed at 9.7 times the national rate in Detroit, and tool and die makers, at 4.7 times the U.S. average. On the other hand, paper goods machine setters, operators, and tenders had a location quotient of 1.0 in Detroit, indicating that this particular occupation’s local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Michigan Department of Labor & Economic Growth.

Note

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES data available from BLS include cross-industry occupational employment and wage estimates for the nation; over 650 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), metropolitan divisions, nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-, 4-, and selected 5- and 6-digit industry levels, and national estimates by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

OES estimates are constructed from a sample of about 1.2 million establishments. Each year, two semiannual panels of approximately 200,000 sampled establishments are contacted, one panel in May and the other in November. Responses are obtained by mail, Internet or other electronic means, email, telephone, or personal visit. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Detroit-Dearborn-Livonia Metropolitan Division included 3,956 establishments with a response rate of 70 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Detroit-Dearborn-Livonia, Mich. Metropolitan Division** includes Wayne County.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/midwest. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Detroit-Dearborn-Livonia Metropolitan Division, May 2016

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Production occupations	67,790	1.5	\$20.52	\$42,690
First-line supervisors of production and operating workers	4,780	1.5	33.98	70,680
Electrical and electronic equipment assemblers	(5)	(5)	11.84	24,620
Structural metal fabricators and fitters	370	0.9	18.92	39,360
Team assemblers	21,470	3.8	21.15	43,990
Assemblers and fabricators, all other	540	0.5	15.09	31,380
Bakers	970	1.1	12.52	26,040
Butchers and meat cutters	660	1.0	14.80	30,790
Meat, poultry, and fish cutters and trimmers	240	0.3	12.74	26,500
Slaughtering and meat packers	(5)	(5)	13.60	28,290
Food batchmakers	410	0.5	16.25	33,800
Food cooking machine operators and tenders	170	0.9	13.36	27,790
Food processing workers, all other	50	0.3	10.69	22,240
Computer-controlled machine tool operators, metal and plastic	1,260	1.7	15.28	31,780
Computer numerically controlled machine tool programmers, metal and plastic	200	1.5	28.27	58,810
Extruding and drawing machine setters, operators, and tenders, metal and plastic	270	0.7	16.66	34,650
Forging machine setters, operators, and tenders, metal and plastic	270	2.7	15.53	32,290
Rolling machine setters, operators, and tenders, metal and plastic	1,440	9.7	23.08	48,010
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	3,150	3.2	20.86	43,390
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	200	3.1	24.65	51,270
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	280	0.7	19.47	40,500
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	240	1.4	19.69	40,960
Milling and planing machine setters, operators, and tenders, metal and plastic	190	2.1	20.46	42,570
Machinists	3,410	1.7	21.35	44,410
Model makers, metal and plastic	220	7.0	33.00	68,640
Foundry mold and coremakers	60	0.9	14.96	31,120
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	840	1.1	16.66	34,660
Multiple machine tool setters, operators, and tenders, metal and plastic	680	1.1	25.00	52,000
Tool and die makers	1,720	4.7	28.80	59,900
Welders, cutters, solderers, and brazers	1,520	0.8	21.26	44,210
Welding, soldering, and brazing machine setters, operators, and tenders	680	2.8	23.81	49,530
Heat treating equipment setters, operators, and tenders, metal and plastic	130	1.3	17.18	35,730
Plating and coating machine setters, operators, and tenders, metal and plastic	430	2.4	14.51	30,180
Tool grinders, filers, and sharpeners	40	0.8	22.95	47,750
Prepress technicians and workers	(5)	(5)	14.86	30,920
Printing press operators	440	0.5	16.23	33,770
Print binding and finishing workers	90	0.4	16.22	33,730
Laundry and dry-cleaning workers	1,640	1.5	11.14	23,170
Sewing machine operators	210	0.3	13.42	27,920
Tailors, dressmakers, and custom sewers	80	0.7	14.70	30,580
Cabinetmakers and bench carpenters	140	0.3	13.33	27,720
Furniture finishers	60	0.6	18.09	37,620
Patternmakers, wood	60	12.9	25.45	52,940

Note: See footnotes at end of table.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Detroit-Dearborn-Livonia Metropolitan Division, May 2016 - Continued

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Sawing machine setters, operators, and tenders, wood .	(5)	(5)	19.61	40,780
Woodworking machine setters, operators, and tenders, except sawing.....	(5)	(5)	15.48	32,190
Power plant operators	340	1.9	36.14	75,170
Stationary engineers and boiler operators	230	1.3	29.88	62,160
Water and wastewater treatment plant and system operators	220	0.4	24.33	50,620
Chemical plant and system operators	70	0.4	(5)	(5)
Gas plant operators	310	3.5	33.56	69,810
Chemical equipment operators and tenders	360	1.0	26.26	54,630
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	(5)	(5)	18.68	38,860
Crushing, grinding, and polishing machine setters, operators, and tenders	40	0.3	15.14	31,500
Mixing and blending machine setters, operators, and tenders	760	1.1	19.26	40,070
Cutting and slicing machine setters, operators, and tenders	300	0.9	12.84	26,710
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	(5)	(5)	16.38	34,080
Inspectors, testers, sorters, samplers, and weighers.....	3,990	1.5	17.93	37,300
Jewelers and precious stone and metal workers	(5)	(5)	15.95	33,180
Dental laboratory technicians	230	1.2	21.12	43,920
Ophthalmic laboratory technicians	(5)	(5)	26.77	55,680
Packaging and filling machine operators and tenders ...	2,310	1.2	13.46	28,000
Coating, painting, and spraying machine setters, operators, and tenders	250	0.6	15.09	31,390
Painters, transportation equipment	220	0.8	27.27	56,730
Photographic process workers and processing machine operators	60	0.5	19.82	41,230
Cleaning, washing, and metal pickling equipment operators and tenders	110	1.2	14.18	29,500
Molders, shapers, and casters, except metal and plastic	110	0.5	15.19	31,600
Paper goods machine setters, operators, and tenders ...	490	1.0	14.60	30,360
Helpers--production workers	1,840	0.8	11.87	24,700
Production workers, all other.....	1,500	1.2	17.71	36,830

Footnotes:

(1) For a complete listing of all detailed occupations in the Detroit-Dearborn-Livonia, MI Metropolitan Division, see www.bls.gov/oes/current/oes_19804.htm

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimate not released.