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## Occupational Employment and Wages in Detroit-Dearborn-Livonia — May 2015

Workers in the Detroit-Dearborn-Livonia Metropolitan Division had an average (mean) hourly wage of \$24.51 in May 2015, about 6 percent above the nationwide average of \$23.23, 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 5 of the 22 major occupational groups, including construction and extraction; production; and transportation and material moving. Three groups had significantly lower wages than their respective national averages: legal; computer and mathematical; and healthcare support.

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 education, training, and library. (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 2015**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Detroit	United States	Detroit	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0%	100.0%	\$23.23	\$24.51*	6
Management .....	5.0	5.0	55.30	56.54	2
Business and Financial Operations.....	5.1	5.3	35.48	35.59	0
Computer and Mathematical .....	2.9	2.9	41.43	39.07*	-6
Architecture and Engineering .....	1.8	4.1*	39.89	42.18*	6
Life, Physical, and Social Science.....	0.8	0.5*	34.24	32.50	-5
Community and Social Services.....	1.4	1.7*	22.19	20.98	-5
Legal.....	0.8	(2)	49.74	43.70*	-12
Education, Training, and Library.....	6.2	4.8*	25.48	25.40	0
Arts, Design, Entertainment, Sports, and Media .....	1.3	1.3	27.39	26.79	-2
Healthcare Practitioner and Technical.....	5.8	7.0*	37.40	37.79	1
Healthcare Support .....	2.9	3.3*	14.19	13.56*	-4
Protective Service .....	2.4	2.1	21.45	22.34	4
Food Preparation and Serving Related .....	9.1	8.4*	10.98	11.13	1
Building and Grounds Cleaning and Maintenance .....	3.2	2.8*	13.02	13.13	1
Personal Care and Service .....	3.1	3.1	12.33	12.29	0
Sales and Related .....	10.5	8.5*	18.90	18.51	-2
Office and Administrative Support.....	15.8	14.7*	17.47	17.87	2
Farming, Fishing, and Forestry .....	0.3	(3)*	12.67	14.69	16
Construction and Extraction .....	4.0	2.5*	22.88	25.95*	13
Installation, Maintenance, and Repair.....	3.9	3.9	22.11	23.43*	6

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 2015 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Detroit	United States	Detroit	Percent difference <sup>(1)</sup>
Production .....	6.6	9.7*	17.41	20.36*	17
Transportation and Material Moving .....	6.9	7.6*	16.90	19.82*	17

Footnotes:

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

(2) Estimate not released

(3) Indicates a value of less than 0.05 percent

\* 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 70,100 jobs in production, accounting for 9.7 percent of local area employment, significantly higher than the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$20.36, significantly above the national wage of \$17.41.

Some of the larger detailed occupations within the production group included team assemblers (23,240); first-line supervisors of production and operating workers (4,710); and inspectors, testers, sorters, samplers, and weighers (4,400). Among the higher paying jobs were power plant operators (\$34.98) and first-line supervisors of production and operating workers (\$32.63). At the lower end of the wage scale were pressers, textile, garment, and related materials (\$9.84) and laundry and dry-cleaning workers (\$11.26). (Detailed occupational data for production are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/2015/may/oes\\_19804.htm](http://www.bls.gov/oes/2015/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 9.1 times the national rate in Detroit, and tool and die makers, at 4.7 times the U.S. average. On the other hand, chemical equipment 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.

## Notes on Occupational Employment Statistics Data

With the issuance of data for May 2015, the OES program has incorporated redefined metropolitan area definitions as designated by the Office of Management and Budget. OES data are available for 394 metropolitan areas, 38 metropolitan divisions, and 167 OES-defined nonmetropolitan areas. A listing of the areas and their definitions can be found at [www.bls.gov/oes/current/msa\\_def.htm](http://www.bls.gov/oes/current/msa_def.htm).

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 program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.htm).

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. May 2015 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2015, November 2014, May 2014, November 2013, May 2013, and November 2012. The overall national response rate for the six panels is 73.5 percent based on establishments and 69.6 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 57.9 percent of total national employment. (Response rates are slightly lower for these estimates due to the federal shutdown in October 2013.) The sample in the Detroit-Dearborn-Livonia Metropolitan Division included 3,978 establishments with a response rate of 68 percent. For more information about OES concepts and methodology, go to [www.bls.gov/news.release/ocwage.tn.htm](http://www.bls.gov/news.release/ocwage.tn.htm).

The May 2015 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](http://www.bls.gov/soc) and information about the 2012 NAICS is available at [www.bls.gov/bls/naics.htm](http://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](http://www.bls.gov/regions/midwest). Answers to frequently asked questions about the OES data are available at [www.bls.gov/oes/oes\\_ques.htm](http://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/2015/may/methods\\_statement.pdf](http://www.bls.gov/oes/2015/may/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 2015**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production Occupations .....	70,100	1.5	\$20.36	\$42,340
First-Line Supervisors of Production and Operating Workers .....	4,710	1.5	32.63	67,860
Electrical and Electronic Equipment Assemblers .....	390	0.4	14.65	30,480
Engine and Other Machine Assemblers .....	530	2.6	25.82	53,700
Structural Metal Fabricators and Fitters .....	330	0.8	19.04	39,600
Team Assemblers .....	23,240	4.0	21.10	43,880
Assemblers and Fabricators, All Other .....	1,190	1.0	13.03	27,100
Bakers .....	830	0.9	12.73	26,490
Butchers and Meat Cutters .....	670	0.9	14.24	29,620
Meat, Poultry, and Fish Cutters and Trimmers .....	(5)	(5)	12.28	25,550
Slaughtering and Meat Packers .....	(5)	(5)	13.45	27,970
Food Batchmakers .....	370	0.5	16.83	35,020
Food Cooking Machine Operators and Tenders .....	90	0.5	11.77	24,480
Food Processing Workers, All Other .....	40	0.2	9.87	20,530
Computer-Controlled Machine Tool Operators, Metal and Plastic .....	1,320	1.7	17.93	37,300
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic .....	170	1.3	25.72	53,500
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic .....	410	1.1	17.06	35,490
Forging Machine Setters, Operators, and Tenders, Metal and Plastic .....	290	2.8	15.89	33,060
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic .....	1,520	9.1	22.68	47,170
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic .....	3,710	3.6	20.13	41,880
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	(5)	(5)	21.28	44,270
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	350	0.9	17.50	36,390
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	340	1.6	18.04	37,520
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic .....	180	1.7	15.31	31,840
Machinists .....	3,390	1.6	21.20	44,090
Metal-Refining Furnace Operators and Tenders .....	40	0.4	17.83	37,080
Model Makers, Metal and Plastic .....	220	6.6	32.61	67,830
Foundry Mold and Coremakers .....	70	1.0	15.00	31,200
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic .....	1,040	1.5	14.37	29,880
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	320	0.6	(5)	(5)
Tool and Die Makers .....	1,850	4.7	29.63	61,630
Welders, Cutters, Solderers, and Brazers .....	1,460	0.7	20.59	42,830
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders .....	590	2.1	23.62	49,130
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic .....	160	1.5	17.09	35,550
Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic .....	480	2.6	13.89	28,890
Tool Grinders, Filers, and Sharpeners .....	50	0.9	23.73	49,370
Metal Workers and Plastic Workers, All Other .....	(5)	(5)	19.46	40,470
Prepress Technicians and Workers .....	(5)	(5)	14.90	30,990
Printing Press Operators .....	490	0.6	17.00	35,360
Print Binding and Finishing Workers .....	90	0.3	15.49	32,210
Laundry and Dry-Cleaning Workers .....	1,540	1.5	11.26	23,410
Pressers, Textile, Garment, and Related Materials .....	160	0.6	9.84	20,460
Sewing Machine Operators .....	190	0.3	12.25	25,470

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 2015 - Continued**

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Tailors, Dressmakers, and Custom Sewers .....	(5)	(5)	13.73	28,550
Cabinetmakers and Bench Carpenters .....	70	0.1	14.52	30,200
Patternmakers, Wood .....	60	10.9	25.07	52,150
Sawing Machine Setters, Operators, and Tenders, Wood .....	(5)	(5)	19.83	41,250
Woodworking Machine Setters, Operators, and Tenders, Except Sawing .....	40	0.1	14.18	29,490
Power Plant Operators .....	450	2.3	34.98	72,760
Stationary Engineers and Boiler Operators .....	330	1.8	28.43	59,130
Water and Wastewater Treatment Plant and System Operators .....	250	0.4	23.08	48,000
Chemical Plant and System Operators .....	(5)	(5)	30.30	63,030
Gas Plant Operators .....	(5)	(5)	32.12	66,820
Chemical Equipment Operators and Tenders .....	350	1.0	25.70	53,460
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders .....	170	0.7	18.98	39,480
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders .....	60	0.3	13.65	28,380
Mixing and Blending Machine Setters, Operators, and Tenders .....	710	1.0	17.37	36,140
Cutting and Slicing Machine Setters, Operators, and Tenders .....	280	0.8	12.31	25,590
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders .....	70	0.2	14.70	30,580
Inspectors, Testers, Sorters, Samplers, and Weighers ...	4,400	1.6	18.06	37,570
Jewelers and Precious Stone and Metal Workers .....	(5)	(5)	15.31	31,840
Dental Laboratory Technicians .....	220	1.1	19.34	40,220
Ophthalmic Laboratory Technicians .....	60	0.4	25.50	53,050
Packaging and Filling Machine Operators and Tenders ..	2,460	1.2	12.65	26,310
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders .....	380	0.8	15.45	32,130
Painters, Transportation Equipment .....	200	0.8	25.90	53,870
Painting, Coating, and Decorating Workers .....	40	0.5	16.26	33,820
Photographic Process Workers and Processing Machine Operators .....	40	0.3	18.97	39,460
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders .....	110	1.3	12.10	25,180
Molders, Shapers, and Casters, Except Metal and Plastic .....	140	0.7	14.00	29,130
Paper Goods Machine Setters, Operators, and Tenders ..	450	0.9	13.67	28,440
Helpers--Production Workers .....	1,640	0.7	11.72	24,370
Production Workers, All Other .....	1,430	1.1	17.76	36,930

Footnotes:

(1) For a complete listing of all detailed occupations in the Detroit-Dearborn-Livonia Metropolitan Division, see [www.bls.gov/oes/tables.htm](http://www.bls.gov/oes/tables.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) Estimates not released.