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MIDWEST INFORMATION OFFICE: Chicago, Ill.

Technical information: (312) 353-1880 BLSInfoChicago@bls.gov www.bls.gov/regions/midwest

Media contact: (312) 353-1138

## Occupational Employment and Wages in Detroit-Livonia-Dearborn, Mich. Metropolitan Division – May 2013

Workers in the Detroit-Livonia-Dearborn Metropolitan Division had an average (mean) hourly wage of \$23.60 in May 2013, about 6 percent above the nationwide average of \$22.33, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Charlene Peiffer noted that, after testing for statistical significance, wages in the local area were significantly higher than their respective national averages in 6 of the 22 major occupational groups, including construction and extraction; production; and transportation and material moving.

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, 10 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-Livonia-Dearborn Metropolitan Division, and measures of statistical significance, May 2013**

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%	\$22.33	\$23.60*	6
Management .....	4.9	4.9	53.15	53.81	1
Business and financial operations .....	5.0	4.8	34.14	33.75	-1
Computer and mathematical .....	2.8	3.0	39.43	38.96	-1
Architecture and engineering .....	1.8	3.4*	38.51	38.87	1
Life, physical, and social science .....	0.9	0.5*	33.37	33.40	0
Community and social services .....	1.4	1.6*	21.50	21.64	1
Legal .....	0.8	0.6*	47.89	47.58	-1
Education, training, and library .....	6.3	5.1*	24.76	26.19	6
Arts, design, entertainment, sports, and media .....	1.3	1.1*	26.72	23.74*	-11
Healthcare practitioner and technical .....	5.8	7.3*	35.93	35.89	0
Healthcare support .....	3.0	3.7*	13.61	12.91*	-5
Protective service .....	2.5	2.4	20.92	21.62	3
Food preparation and serving related .....	9.0	8.7	10.38	10.33	0
Building and grounds cleaning and maintenance .....	3.2	2.9*	12.51	13.23*	6
Personal care and service .....	3.0	2.8	11.88	12.00	1
Sales and related .....	10.6	9.0*	18.37	18.15	-1
Office and administrative support .....	16.2	15.1*	16.78	17.40*	4
Farming, fishing, and forestry .....	0.3	(2)*	11.70	13.84	18
Construction and extraction .....	3.8	2.5*	21.94	27.18*	24

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Detroit-Livonia-Dearborn Metropolitan Division, and measures of statistical significance, May 2013 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Detroit	United States	Detroit	Percent difference <sup>(1)</sup>
Installation, maintenance, and repair .....	3.9	3.7*	21.35	22.98*	8
Production .....	6.6	9.2*	16.79	20.62*	23
Transportation and material moving .....	6.8	7.6*	16.28	19.72*	21

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) 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-Livonia-Dearborn had 64,170 jobs in production, accounting for 9.2 percent of local area employment, significantly higher than the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$20.62, measurably above the national wage of \$16.79.

With employment of 20,440, team assemblers was the largest occupation within the production group, followed by first-line supervisors of production and operating workers (4,160) and inspectors, testers, sorters, samplers, and weighers (3,820). Among the higher paying jobs were first-line supervisors of production and operating workers followed by model makers, metal and plastic, with mean hourly wages of \$31.10 and \$30.38, respectively. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$9.01) and photographic process workers and processing machine operators (\$9.50). (Detailed occupational data for production are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/2013/may/oes\\_19804.htm](http://www.bls.gov/oes/2013/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-Livonia-Dearborn Metropolitan Division, above average concentrations of employment were found in some of the occupations within the production group. For instance, heat treating equipment setters, operators, and tenders, metal and plastic were employed at 4.5 times the national rate in Detroit, and tool and die makers, at 4.2 times the U.S. average. On the other hand, grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic 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.

OES wage and employment data for the 22 major occupational groups in the Detroit-Livonia-Dearborn Metropolitan Division were compared to their respective national averages based on statistical significance testing. Only those occupations with wages or employment shares above or below the national wage or share after testing for significance at the 90-percent confidence level meet the criteria.

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. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. 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 for a 3-year period. May 2013 estimates are based on responses from six semiannual panels collected in May 2013, November 2012, May 2012, November 2011, May 2011, and November 2010. The overall national response rate for the six panels is 75.3 percent based on establishments and 71.6 percent based on employment. The sample in the Detroit-Livonia-Dearborn Metropolitan Division included 4,063 establishments with a response rate of 69 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 OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from [www.bls.gov/oes/current/oessrcst.htm](http://www.bls.gov/oes/current/oessrcst.htm) and [www.bls.gov/oes/current/oessrcma.htm](http://www.bls.gov/oes/current/oessrcma.htm), respectively.

The May 2013 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).

### 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-Livonia-Dearborn, 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/2013/may/methods\\_statement.pdf](http://www.bls.gov/oes/2013/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: 1-800-877-8339.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Detroit-Livonia-Dearborn Metropolitan Division, May 2013**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Production Occupations .....	64,170	1.4	\$20.62	\$42,900
First-Line Supervisors of Production and Operating Workers .....	4,160	1.4	31.10	64,690
Electrical and Electronic Equipment Assemblers .....	530	0.5	15.17	31,560
Electromechanical Equipment Assemblers .....	190	0.8	14.01	29,130
Engine and Other Machine Assemblers .....	650	3.1	19.80	41,180
Structural Metal Fabricators and Fitters .....	280	0.7	21.78	45,300
Fiberglass Laminators and Fabricators .....	(5)	(5)	20.09	41,780
Team Assemblers .....	20,440	3.7	21.89	45,540
Assemblers and Fabricators, All Other .....	2,360	1.8	13.90	28,900
Bakers .....	940	1.1	12.96	26,960
Butchers and Meat Cutters .....	390	0.5	14.58	30,320
Meat, Poultry, and Fish Cutters and Trimmers .....	260	0.3	10.08	20,970
Slaughterers and Meat Packers .....	190	0.4	12.86	26,750
Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders .....	(5)	(5)	14.62	30,410
Food Batchmakers .....	300	0.5	14.43	30,020
Food Cooking Machine Operators and Tenders .....	50	0.3	13.29	27,640
Computer-Controlled Machine Tool Operators, Metal and Plastic .....	890	1.2	19.23	39,990
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic .....	230	1.8	23.95	49,810
Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic .....	350	0.9	15.99	33,270
Forging Machine Setters, Operators, and Tenders, Metal and Plastic .....	160	1.4	16.78	34,910
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic .....	2,800	2.8	23.03	47,900
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	240	2.3	14.54	30,240
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	360	1.0	17.41	36,220
Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	310	1.4	18.49	38,450
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic .....	170	1.4	15.88	33,030
Machinists .....	2,840	1.4	21.45	44,620
Model Makers, Metal and Plastic .....	210	6.3	30.38	63,190
Patternmakers, Metal and Plastic .....	30	1.5	24.69	51,350
Foundry Mold and Coremakers .....	(5)	(5)	15.89	33,050
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic .....	730	1.1	14.12	29,360
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic .....	390	0.8	17.94	37,310
Tool and Die Makers .....	1,740	4.2	28.75	59,800
Welders, Cutters, Solderers, and Brazers .....	1,380	0.7	21.13	43,950
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders .....	920	3.4	21.74	45,220
Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic .....	500	4.5	(5)	(5)
Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic .....	290	1.5	14.44	30,030
Tool Grinders, Filers, and Sharpeners .....	80	1.3	23.18	48,200
Metal Workers and Plastic Workers, All Other .....	150	1.3	13.14	27,330
Prepress Technicians and Workers .....	160	0.8	18.85	39,200
Printing Press Operators .....	640	0.7	20.39	42,400
Print Binding and Finishing Workers .....	150	0.6	14.94	31,080
Laundry and Dry-Cleaning Workers .....	1,480	1.4	10.49	21,830
Pressers, Textile, Garment, and Related Materials .....	90	0.3	9.01	18,740

Note: See footnotes at end of table.

**Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Detroit-Livonia-Dearborn Metropolitan Division, May 2013 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Sewing Machine Operators .....	180	0.2	12.77	26,560
Upholsterers .....	(5)	(5)	15.87	33,010
Cabinetmakers and Bench Carpenters .....	100	0.2	16.37	34,050
Woodworking Machine Setters, Operators, and Tenders, Except Sawing .....	60	0.2	12.14	25,240
Power Plant Operators .....	210	1.0	30.34	63,110
Stationary Engineers and Boiler Operators .....	360	1.9	27.31	56,810
Water and Wastewater Treatment Plant and System Operators .....	810	1.4	19.74	41,060
Gas Plant Operators .....	270	3.7	29.69	61,760
Plant and System Operators, All Other .....	130	2.1	25.68	53,420
Chemical Equipment Operators and Tenders .....	170	0.5	21.95	45,660
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders .....	250	1.1	17.35	36,090
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders .....	40	0.3	15.34	31,920
Grinding and Polishing Workers, Hand .....	50	0.3	16.92	35,200
Mixing and Blending Machine Setters, Operators, and Tenders .....	490	0.8	17.02	35,400
Cutting and Slicing Machine Setters, Operators, and Tenders .....	90	0.3	14.95	31,100
Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders .....	110	1.1	19.12	39,770
Inspectors, Testers, Sorters, Samplers, and Weighers ...	3,820	1.5	20.17	41,950
Jewelers and Precious Stone and Metal Workers .....	(5)	(5)	18.43	38,330
Dental Laboratory Technicians .....	300	1.5	18.47	38,420
Packaging and Filling Machine Operators and Tenders ..	1,400	0.7	13.05	27,140
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders .....	250	0.5	15.65	32,540
Painters, Transportation Equipment .....	200	0.8	29.70	61,770
Painting, Coating, and Decorating Workers .....	40	0.5	13.82	28,740
Photographic Process Workers and Processing Machine Operators .....	120	0.6	9.50	19,760
Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders .....	110	1.3	11.83	24,600
Molders, Shapers, and Casters, Except Metal and Plastic .....	90	0.5	15.30	31,820
Paper Goods Machine Setters, Operators, and Tenders ..	430	0.9	12.57	26,150
Helpers--Production Workers .....	1,870	0.8	14.53	30,220
Production Workers, All Other .....	870	0.8	18.59	38,670

Footnotes:

(1) For a complete listing of all detailed occupations in Detroit-Livonia-Dearborn, MI 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) Estimate not released.