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Occupational Employment and Wages in Cleveland-Elyria — May 2017

Workers in the Cleveland-Elyria Metropolitan Statistical Area had an average (mean) hourly wage of \$23.52 in May 2017, about 3 percent below the nationwide average of \$24.34, 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 lower than their respective national averages in 13 of 22 major groups, including legal; computer and mathematical; and arts, design, entertainment, sports, and media. Two occupational groups, construction and extraction and sales and related, had significantly higher wages than their respective national averages.

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

Table A. Occupational employment and wages by major occupational group, United States and the Cleveland-Elyria Metropolitan Statistical Area, and measures of statistical significance, May 2017

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cleveland	United States	Cleveland	Percent difference ⁽¹⁾
Total, all occupations	100.0	100.0	\$24.34	\$23.52*	-3
Management	5.1	4.6*	57.65	54.90*	-5
Business and financial operations	5.2	5.6*	36.70	34.47*	-6
Computer and mathematical	3.0	3.1	43.18	35.59*	-18
Architecture and engineering	1.8	1.7	41.44	38.97*	-6
Life, physical, and social science	0.8	0.8	35.76	38.88	9
Community and social service	1.5	1.7	23.10	23.52	2
Legal	0.8	0.9*	51.62	39.42*	-24
Education, training, and library	6.1	5.7	26.67	26.38	-1
Arts, design, entertainment, sports, and media	1.4	1.2	28.34	22.08*	-22
Healthcare practitioners and technical	6.0	7.2*	38.83	36.66*	-6
Healthcare support	2.9	3.4*	15.05	13.90*	-8
Protective service	2.4	2.7*	22.69	20.57*	-9
Food preparation and serving related	9.3	8.9*	11.88	11.17*	-6
Building and grounds cleaning and maintenance	3.1	3.0	13.91	13.37*	-4
Personal care and service	3.6	2.7*	13.11	12.60*	-4
Sales and related	10.2	9.6*	19.56	20.51*	5
Office and administrative support	15.4	15.8	18.24	18.10	-1
Farming, fishing, and forestry	0.3	0.1*	13.87	13.16	-5
Construction and extraction	4.0	3.1*	24.01	25.35*	6
Installation, maintenance, and repair	3.9	3.5*	23.02	22.88	-1

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Cleveland-Elyria Metropolitan Statistical Area, and measures of statistical significance, May 2017 - Continued

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cleveland	United States	Cleveland	Percent difference ⁽¹⁾
Production	6.3	8.7*	18.30	18.60	2
Transportation and material moving	7.0	6.0*	17.82	17.02*	-4

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Cleveland-Elyria Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

* 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. Cleveland-Elyria had 89,040 jobs in production, accounting for 8.7 percent of local area employment, significantly higher than the 6.3-percent share nationally. The average hourly wage for this occupational group locally was \$18.60, compared to the national wage of \$18.30.

Some of the larger detailed occupations within the production group included assemblers and fabricators, all other, including team assemblers (10,440); inspectors, testers, sorters, samplers, and weighers (6,480); and machinists (6,220). Among the higher paying jobs in this group were power plant operators with mean hourly wages of \$37.66 and power distributors and dispatchers at \$35.86. At the lower end of the wage scale were laundry and dry-cleaning workers (\$11.21) and pressers, textile, garment, and related materials (\$11.23). (Detailed data for production occupations are presented in [table 1](#); for a complete listing of detailed occupations available go to www.bls.gov/oes/current/oes_17460.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 Cleveland-Elyria Metropolitan Statistical Area, above-average concentrations of employment were found in many of the occupations within the production group. For instance, engine and other machine assemblers were employed at 4.4 times the national rate in Cleveland, and tool and die makers, at 4.3 times the U.S. average. On the other hand, bakers had a location quotient of 1.0 in Cleveland, 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 Ohio Department of Job & Family Services.

Notes on Occupational Employment Statistics Data

With the release of the May 2017 estimates, the OES program has replaced 21 detailed occupations found in the 2010 Standard Occupational Classification (SOC) with 10 new aggregations of those occupations. In addition, selected 4- and 5-digit North American Industry Classification System (NAICS) industries previously published by OES will no longer be published separately. Some of the 4-digit NAICS industries that are no longer being published separately will instead be published as OES-specific industry aggregations. More information about the new occupational and industry aggregations is available at www.bls.gov/oes/changes_2017.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 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 2017 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2017, November 2016, May 2016, November 2015, May 2015, and November 2014. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 72 percent based on establishments and 68 percent based on weighted sampled employment. The unweighted sample employment of 82 million across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Cleveland-Elyria Metropolitan Statistical Area included 5,490 establishments with a response rate of 75 percent. For more information about OES concepts and methodology, go to www.bls.gov/oes/current/oes_tec.htm.

The May 2017 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2017 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 2017 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 **Cleveland-Elyria, Ohio Metropolitan Statistical Area** includes Cuyahoga, Geauga, Lake, Lorain, and Medina Counties of Ohio.

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, Cleveland-Elyria Metropolitan Statistical Area, May 2017

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production occupations	89,040	1.4	\$18.60	\$38,680
First-line supervisors of production and operating workers	5,990	1.4	30.39	63,210
Aircraft structure, surfaces, rigging, and systems assemblers	100	0.4	24.27	50,480
Coil winders, tapers, and finishers	120	1.3	20.76	43,180
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers ...	2,090	1.1	16.32	33,940
Engine and other machine assemblers	1,210	4.4	23.97	49,860
Structural metal fabricators and fitters	400	0.7	19.25	40,030
Fiberglass laminators and fabricators	50	0.3	14.24	29,630
Assemblers and fabricators, all other, including team assemblers	10,440	1.1	15.74	32,750
Bakers	1,280	1.0	12.21	25,390
Butchers and meat cutters	760	0.8	18.88	39,270
Meat, poultry, and fish cutters and trimmers	120	0.1	15.85	32,970
Slaughterers and meat packers	(5)	(5)	13.16	27,370
Food and tobacco roasting, baking, and drying machine operators and tenders	(5)	(5)	15.21	31,630
Food batchmakers	410	0.4	15.63	32,500
Food cooking machine operators and tenders	180	0.8	14.31	29,760
Food processing workers, all other	110	0.4	11.98	24,910
Computer-controlled machine tool operators, metal and plastic	3,390	3.2	19.99	41,580
Computer numerically controlled machine tool programmers, metal and plastic	620	3.6	23.89	49,700
Extruding and drawing machine setters, operators, and tenders, metal and plastic	1,390	2.6	16.61	34,540
Forging machine setters, operators, and tenders, metal and plastic	330	2.5	20.68	43,010
Rolling machine setters, operators, and tenders, metal and plastic	620	3.4	19.32	40,180
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	3,360	2.5	15.99	33,260
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	240	3.1	20.73	43,110
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	1,630	3.0	17.20	35,780
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	520	2.4	19.98	41,550
Machinists	6,220	2.3	19.93	41,450
Metal-refining furnace operators and tenders	440	3.5	15.81	32,890
Pourers and casters, metal	(5)	(5)	17.82	37,070
Model makers, metal and plastic	40	1.0	25.93	53,940
Foundry mold and coremakers	490	4.8	15.61	32,480
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	2,610	2.3	15.90	33,060
Multiple machine tool setters, operators, and tenders, metal and plastic	1,870	2.1	15.95	33,180
Tool and die makers	2,260	4.3	26.63	55,390
Welders, cutters, solderers, and brazers	2,570	0.9	19.23	40,000
Welding, soldering, and brazing machine setters, operators, and tenders	480	1.7	16.89	35,120
Heat treating equipment setters, operators, and tenders, metal and plastic	(5)	(5)	20.40	42,430
Plating and coating machine setters, operators, and tenders, metal and plastic	560	2.1	14.33	29,800
Tool grinders, filers, and sharpeners	140	2.5	18.28	38,020
Metal workers and plastic workers, all other	180	1.1	14.78	30,740
Prepress technicians and workers	510	2.3	19.06	39,640

Note: See footnotes at end of table.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Cleveland-Elyria Metropolitan Statistical Area, May 2017 - Continued

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Printing press operators	1,620	1.3	17.49	36,390
Print binding and finishing workers.....	460	1.3	14.58	30,320
Laundry and dry-cleaning workers	1,100	0.7	11.21	23,320
Pressers, textile, garment, and related materials	420	1.4	11.23	23,360
Sewing machine operators.....	680	0.7	12.59	26,190
Tailors, dressmakers, and custom sewers	(5)	(5)	16.67	34,680
Textile cutting machine setters, operators, and tenders ..	(5)	(5)	15.63	32,520
Cabinetmakers and bench carpenters	690	1.0	17.36	36,100
Furniture finishers.....	270	2.1	16.02	33,330
Woodworking machine setters, operators, and tenders, except sawing.....	670	1.2	16.61	34,560
Woodworkers, all other.....	(5)	(5)	19.19	39,920
Power distributors and dispatchers	180	2.1	35.86	74,580
Power plant operators	(5)	(5)	37.66	78,340
Stationary engineers and boiler operators	260	1.1	28.74	59,770
Water and wastewater treatment plant and system operators	730	0.9	25.18	52,370
Chemical plant and system operators	(5)	(5)	23.77	49,450
Plant and system operators, all other.....	80	0.9	27.83	57,890
Chemical equipment operators and tenders	2,100	3.7	20.61	42,870
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	180	0.5	17.73	36,880
Crushing, grinding, and polishing machine setters, operators, and tenders	220	1.0	16.17	33,630
Grinding and polishing workers, hand	(5)	(5)	15.27	31,750
Mixing and blending machine setters, operators, and tenders	1,530	1.6	18.09	37,630
Cutters and trimmers, hand	60	0.7	13.68	28,460
Cutting and slicing machine setters, operators, and tenders	580	1.3	16.78	34,900
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	900	1.6	15.01	31,230
Furnace, kiln, oven, drier, and kettle operators and tenders	50	0.4	16.48	34,280
Inspectors, testers, sorters, samplers, and weighers	6,480	1.7	20.42	42,470
Jewelers and precious stone and metal workers	50	0.3	15.31	31,850
Dental laboratory technicians	360	1.4	20.83	43,330
Medical appliance technicians.....	200	2.1	14.99	31,180
Ophthalmic laboratory technicians	260	1.2	15.22	31,660
Packaging and filling machine operators and tenders	1,950	0.7	14.16	29,460
Coating, painting, and spraying machine setters, operators, and tenders	1,180	1.9	19.58	40,730
Painters, transportation equipment	160	0.4	19.57	40,700
Photographic process workers and processing machine operators	130	0.8	21.95	45,660
Adhesive bonding machine operators and tenders	190	1.7	14.82	30,830
Cleaning, washing, and metal pickling equipment operators and tenders	160	1.3	16.61	34,550
Etchers and engravers	290	4.7	18.46	38,400
Molders, shapers, and casters, except metal and plastic	(5)	(5)	16.49	34,290
Paper goods machine setters, operators, and tenders ...	660	1.0	17.80	37,020
Helpers--production workers	3,100	1.1	13.98	29,080
Production workers, all other.....	4,280	2.3	13.98	29,080

Footnotes:

(1) For a complete listing of all detailed occupations in Cleveland-Elyria, OH, see www.bls.gov/oes/current/oes_17460.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

Note: See footnotes at end of table.

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.