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Occupational Employment and Wages in Erie – May 2017

Workers in the Erie Metropolitan Statistical Area had an average (mean) hourly wage of \$19.67 in May 2017, 19 percent below the nationwide average of \$24.34, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, 19 of the 22 major occupational groups in the local area were significantly lower than their respective national averages, including arts, design, entertainment, sports, and media; architecture and engineering; and computer and mathematical.

When compared to the nationwide distribution, Erie employment shares were significantly higher in 6 of the 22 occupational groups, including production and personal care and service. Conversely, 11 groups had employment shares significantly below their national representation; these groups included business and financial operations, management, and computer and mathematical. (See [table A](#) and box note at end of release.)

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

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference ⁽¹⁾
Total, all occupations	100	100		\$24.34	\$19.67	*	-19
Management	5.1	3.4	*	57.65	50.39	*	-13
Business and financial operations	5.2	3.4	*	36.70	28.89	*	-21
Computer and mathematical	3.0	1.3	*	43.18	33.41	*	-23
Architecture and engineering	1.8	1.1	*	41.44	30.78	*	-26
Life, physical, and social science	0.8	0.3	*	35.76	28.02	*	-22
Community and social service	1.5	2.1	*	23.10	19.52	*	-15
Legal	0.8	0.3	*	51.62	41.87	*	-19
Education, training, and library	6.1	6.5		26.67	23.91	*	-10
Arts, design, entertainment, sports, and media	1.4	1.1	*	28.34	19.34	*	-32
Healthcare practitioners and technical	6.0	7.2	*	38.83	36.49		-6
Healthcare support	2.9	3.6	*	15.05	14.05	*	-7
Protective service	2.4	2.1		22.69	22.67		0
Food preparation and serving related	9.3	10.2	*	11.88	10.43	*	-12
Building and grounds cleaning and maintenance	3.1	3.3		13.91	11.45	*	-18
Personal care and service	3.6	5.9	*	13.11	11.52	*	-12
Sales and related	10.2	10.0		19.56	15.36	*	-21
Office and administrative support	15.4	15.3		18.24	16.21	*	-11
Farming, fishing, and forestry	0.3	0.0	*	13.87	15.53		12
Construction and extraction	4.0	3.0	*	24.01	22.65	*	-6
Installation, maintenance, and repair	3.9	3.3	*	23.02	20.23	*	-12

Note: See footnotes at end of table.

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

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Erie		United States	Erie		Percent difference ⁽¹⁾
Production	6.3	11.2	*	18.30	16.84	*	-8
Transportation and material moving	7.0	5.4	*	17.82	15.41	*	-14

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Erie 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. Erie had 13,800 jobs in production, accounting for 11.2 percent of local area employment, significantly above the 6.3-percent share nationally. The average hourly wage for this occupational group locally was \$16.84, significantly lower than the national average of \$18.30.

Some of the larger detailed occupations within the production group included assemblers and fabricators, all other, including team assemblers (2,010) and first-line supervisors of production and operating workers (910). Among the higher-paying jobs in this group were first-line supervisors of production and operating workers (\$26.35) and tool and die makers (\$22.89). At the lower end of the wage scale were laundry and dry-cleaning workers and production worker helpers, with mean hourly wages of \$10.74 and \$11.35, respectively. (Detailed data for production occupations are presented in [table 1](#); for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_21500.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 Erie area, above-average concentrations of employment were found in several of the occupations within the production group. For instance, metal and plastic extruding and drawing machine setters, operators, and tenders were employed at 3.5 times the national rate in Erie, and metal and plastic computer-controlled machine tool operators at 6.9 times the U.S. average. On the other hand, printing press operators had a location quotient of 1.1 in Erie, meaning 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 Pennsylvania Department of Labor and Industry.

Note 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 Erie Metropolitan Statistical Area included 1,601 establishments with a response rate of 74 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 **Erie, PA Metropolitan Statistical Area** includes Erie County in Pennsylvania.

Additional information

OES data are available on our regional web page at <https://www.bls.gov/regions/mid-atlantic>. 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, Erie Metropolitan Statistical Area, May 2017

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production occupations	13,800	1.8	\$16.84	\$35,030
First-line supervisors of production and operating workers.....	910	1.7	26.35	54,810
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers.....	350	1.5	14.79	30,770
Structural metal fabricators and fitters.....	70	1.1	17.73	36,880
Assemblers and fabricators, all other, including team assemblers	2,010	1.8	13.79	28,680
Bakers	200	1.3	12.58	26,170
Butchers and meat cutters	50	0.5	15.53	32,290
Food batchmakers.....	380	2.9	14.50	30,160
Food cooking machine operators and tenders.....	70	2.3	15.17	31,560
Computer-controlled machine tool operators, metal and plastic	860	6.9	16.11	33,500
Computer numerically controlled machine tool programmers, metal and plastic	90	4.2	20.00	41,600
Extruding and drawing machine setters, operators, and tenders, metal and plastic	220	3.5	14.09	29,320
Forging machine setters, operators, and tenders, metal and plastic	40	2.6	20.52	42,690
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	350	2.1	15.29	31,810
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	230	3.6	17.79	36,990
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	60	2.3	19.30	40,150
Milling and planing machine setters, operators, and tenders, metal and plastic	40	2.7	22.65	47,120
Machinists	650	2.0	18.81	39,130
Pourers and casters, metal	(5)	(5)	16.93	35,220
Foundry mold and coremakers.....	70	5.5	16.95	35,260
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	330	2.4	14.73	30,640
Multiple machine tool setters, operators, and tenders, metal and plastic	460	4.4	16.01	33,300
Tool and die makers	330	5.1	22.89	47,610
Welders, cutters, solderers, and brazers.....	(5)	(5)	17.51	36,430
Welding, soldering, and brazing machine setters, operators, and tenders	70	2.2	16.70	34,730
Plating and coating machine setters, operators, and tenders, metal and plastic	40	1.2	19.82	41,220
Printing press operators	160	1.1	16.11	33,500
Print binding and finishing workers.....	(5)	(5)	14.14	29,400
Laundry and dry-cleaning workers	140	0.8	10.74	22,340
Cabinetmakers and bench carpenters	(5)	(5)	19.04	39,600
Woodworking machine setters, operators, and tenders, except sawing.....	100	1.5	15.92	33,110
Stationary engineers and boiler operators	40	1.3	30.50	63,430
Water and wastewater treatment plant and system operators	70	0.7	23.53	48,950
Chemical equipment operators and tenders	220	3.2	21.53	44,790
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders.....	50	1.3	17.77	36,960
Grinding and polishing workers, hand.....	40	1.6	9.72	20,230
Mixing and blending machine setters, operators, and tenders	150	1.3	19.75	41,070
Cutting and slicing machine setters, operators, and tenders	30	0.6	14.17	29,480
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	110	1.6	16.58	34,490
Inspectors, testers, sorters, samplers, and weighers.....	640	1.4	15.32	31,860

Note: See footnotes at end of table.

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

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Packaging and filling machine operators and tenders	460	1.3	14.32	29,790
Coating, painting, and spraying machine setters, operators, and tenders	200	2.7	15.84	32,950
Painters, transportation equipment	(5)	(5)	25.66	53,360
Cleaning, washing, and metal pickling equipment operators and tenders	30	2.0	16.84	35,030
Helpers--production workers	560	1.6	11.35	23,610
Production workers, all other	140	0.6	17.33	36,050

Footnotes:

(1) For a complete listing of all detailed occupations in the Erie Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_21500.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.