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Occupational Employment and Wages in Youngstown-Warren-Boardman — May 2017

Workers in the Youngstown-Warren-Boardman Metropolitan Statistical Area had an average (mean) hourly wage of \$19.88 in May 2017, about 18 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 18 of the 22 major occupational groups, including legal; management; and computer and mathematical. Three occupational groups had wages that were not significantly different from their respective national averages, including production and construction and extraction.

When compared to the nationwide distribution, local employment was more highly concentrated in 7 of the 22 occupational groups, including sales and related; production; and food preparation and serving related. Conversely, 11 groups had employment shares significantly below their national representation, including business and financial operations; computer and mathematical; and management. (See [table A](#) and [box note](#) at end of release.)

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Youngstown	United States	Youngstown	Percent difference ⁽¹⁾
Total, all occupations	100.0	100.0	\$24.34	\$19.88*	-18
Management	5.1	3.5*	57.65	45.55*	-21
Business and financial operations	5.2	3.0*	36.70	29.12*	-21
Computer and mathematical	3.0	1.0*	43.18	31.95*	-26
Architecture and engineering	1.8	1.2*	41.44	34.98*	-16
Life, physical, and social science	0.8	0.2*	35.76	31.35*	-12
Community and social service	1.5	2.0*	23.10	18.95*	-18
Legal	0.8	0.5*	51.62	34.51*	-33
Education, training, and library	6.1	6.0	26.67	31.06	16
Arts, design, entertainment, sports, and media	1.4	0.8*	28.34	17.50*	-38
Healthcare practitioners and technical	6.0	7.0*	38.83	32.74*	-16
Healthcare support	2.9	4.2*	15.05	13.49*	-10
Protective service	2.4	2.9*	22.69	19.79*	-13
Food preparation and serving related	9.3	10.8*	11.88	10.10*	-15
Building and grounds cleaning and maintenance	3.1	3.1	13.91	12.70*	-9
Personal care and service	3.6	3.0*	13.11	11.41*	-13
Sales and related	10.2	12.5*	19.56	15.34*	-22
Office and administrative support	15.4	14.4*	18.24	15.97*	-12

Note: See footnotes at end of table.

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Youngstown	United States	Youngstown	Percent difference ⁽¹⁾
Farming, fishing, and forestry.....	0.3	0.1*	13.87	15.51*	12
Construction and extraction.....	4.0	3.6*	24.01	23.37	-3
Installation, maintenance, and repair	3.9	3.8	23.02	20.90*	-9
Production	6.3	8.6*	18.30	18.90	3
Transportation and material moving.....	7.0	7.7	17.82	16.62*	-7

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Youngstown-Warren-Boardman 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. Youngstown-Warren-Boardman had 18,300 jobs in production, accounting for 8.6 percent of local area employment, significantly higher than the 6.3-percent share nationally. The average hourly wage for this occupational group locally was \$18.90, 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 (2,400); first-line supervisors of production and operating workers (1,640); and cutting, punching, and press machine setters, operators, and tenders, metal and plastic (1,190). Among the higher paying jobs in this group were first-line supervisors of production and operating workers and tool and die makers, with mean hourly wages of \$31.01 and \$26.13, respectively. At the lower end of the wage scale were pressers, textile, garment, and related materials (\$10.04) and laundry and dry-cleaning workers (\$10.35). (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_49660.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 Youngstown-Warren-Boardman Metropolitan Statistical Area, above-average concentrations of employment were found in many 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 Youngstown, and metal-refining furnace operators and tenders, at 7.0 times the U.S. average. On the other hand, electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers had a location quotient of 1.0 in Youngstown, 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 and the Pennsylvania Department of Labor and Industry.

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 Youngstown-Warren-Boardman Metropolitan Statistical Area included 2,850 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 **Youngstown-Warren-Boardman, Ohio-Pa., Metropolitan Statistical Area** includes Mahoning and Trumbull Counties of Ohio, and Mercer County of Pennsylvania.

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, Youngstown-Warren-Boardman Metropolitan Statistical Area, May 2017

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Production occupations	18,300	1.4	\$18.90	\$39,310
First-line supervisors of production and operating workers	1,640	1.8	31.01	64,490
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers ...	390	1.0	16.33	33,980
Engine and other machine assemblers	80	1.4	23.29	48,440
Structural metal fabricators and fitters	180	1.5	22.24	46,250
Assemblers and fabricators, all other, including team assemblers	2,400	1.2	15.99	33,260
Bakers	430	1.6	15.47	32,180
Butchers and meat cutters	150	0.8	16.32	33,940
Food batchmakers	260	1.2	15.35	31,920
Food processing workers, all other	40	0.6	11.39	23,700
Computer-controlled machine tool operators, metal and plastic	480	2.2	18.94	39,400
Extruding and drawing machine setters, operators, and tenders, metal and plastic	680	6.2	17.91	37,250
Forging machine setters, operators, and tenders, metal and plastic	60	2.2	19.38	40,300
Rolling machine setters, operators, and tenders, metal and plastic	370	9.7	19.25	40,040
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	1,190	4.2	17.33	36,040
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	50	3.0	16.92	35,190
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	380	3.4	15.41	32,050
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	40	0.9	18.98	39,480
Milling and planing machine setters, operators, and tenders, metal and plastic	(5)	(5)	20.83	43,320
Machinists	840	1.5	21.25	44,210
Metal-refining furnace operators and tenders	180	7.0	20.52	42,680
Pourers and casters, metal	50	4.3	18.17	37,790
Foundry mold and coremakers	40	1.8	20.11	41,830
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	(5)	(5)	18.30	38,060
Multiple machine tool setters, operators, and tenders, metal and plastic	610	3.3	18.85	39,200
Tool and die makers	540	4.9	26.13	54,360
Welders, cutters, solderers, and brazers	840	1.5	18.61	38,720
Welding, soldering, and brazing machine setters, operators, and tenders	120	2.1	17.05	35,450
Heat treating equipment setters, operators, and tenders, metal and plastic	110	3.7	21.62	44,970
Plating and coating machine setters, operators, and tenders, metal and plastic	120	2.1	18.47	38,420
Metal workers and plastic workers, all other	60	1.9	17.30	35,980
Prepress technicians and workers	40	0.8	18.34	38,140
Printing press operators	320	1.2	18.59	38,660
Laundry and dry-cleaning workers	410	1.3	10.35	21,540
Pressers, textile, garment, and related materials	(5)	(5)	10.04	20,870
Sewing machine operators	100	0.5	12.94	26,910
Upholsterers	(5)	(5)	15.30	31,830
Cabinetmakers and bench carpenters	(5)	(5)	17.75	36,930
Furniture finishers	60	2.2	15.56	32,370
Sawing machine setters, operators, and tenders, wood ..	90	1.1	12.07	25,110
Woodworking machine setters, operators, and tenders, except sawing	160	1.4	14.20	29,530
Stationary engineers and boiler operators	(5)	(5)	23.59	49,070

Note: See footnotes at end of table.

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

Occupation ⁽¹⁾	Employment		Mean wages	
	Level ⁽²⁾	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Water and wastewater treatment plant and system operators	330	1.9	23.38	48,630
Grinding and polishing workers, hand	80	1.7	14.59	30,350
Mixing and blending machine setters, operators, and tenders	70	0.4	17.74	36,910
Cutting and slicing machine setters, operators, and tenders	50	0.6	13.85	28,800
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	130	1.2	18.02	37,470
Furnace, kiln, oven, drier, and kettle operators and tenders	50	2.0	18.20	37,870
Inspectors, testers, sorters, samplers, and weighers.....	1,060	1.3	19.46	40,480
Jewelers and precious stone and metal workers	40	1.0	18.26	37,980
Ophthalmic laboratory technicians	(5)	(5)	12.99	27,020
Packaging and filling machine operators and tenders	340	0.6	14.90	30,990
Coating, painting, and spraying machine setters, operators, and tenders	180	1.4	18.85	39,200
Painters, transportation equipment	60	0.8	20.54	42,720
Molders, shapers, and casters, except metal and plastic	190	3.1	13.41	27,900
Paper goods machine setters, operators, and tenders ...	70	0.5	11.47	23,850
Helpers--production workers	490	0.8	14.28	29,700
Production workers, all other.....	380	1.0	15.76	32,770

Footnotes:

- (1) For a complete listing of all detailed occupations in Youngstown-Warren-Boardman, OH-PA, see www.bls.gov/oes/current/oes_49660.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.