NEWS RELEASE
BUREAU OF LABOR STATISTICS
U. S. DEPARTMENT OF LABOR

For Release: Wednesday, May 16, 2018 **18-418-CHI**

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Occupational Employment and Wages in Cincinnati — May 2017

Workers in the Cincinnati Metropolitan Statistical Area had an average (mean) hourly wage of $23.50 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 15 of the 22 major occupational groups, including arts, design, entertainment, sports, and media; legal; and life, physical, and social science. Two occupational groups, sales and related and production, 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; food preparation and serving related; and business and financial operations. Conversely, 10 groups had employment shares significantly below their national representation, including personal care and service; education, training, and library; and construction and extraction. (See table A and box note at end of release.)

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cincinnati	United States	Cincinnati	Percent difference [1]
Total, all occupations	100.0	100.0	$24.34	$23.50*	-3
Management	5.1	5.0	57.65	56.17*	-3
Business and financial operations	5.2	5.9*	36.70	33.68*	-8
Computer and mathematical	3.0	3.1	43.18	38.83*	-10
Architecture and engineering	1.8	1.9*	41.44	40.33	-3
Life, physical, and social science	0.8	0.8	35.76	31.11*	-13
Community and social service	1.5	1.2*	23.10	21.67*	-6
Legal	0.8	0.6*	51.62	46.87*	-9
Education, training, and library	6.1	5.5*	26.67	28.06	5
Arts, design, entertainment, sports, and media	1.4	1.2*	28.34	23.58*	-17
Healthcare practitioners and technical	6.0	6.4*	38.83	35.90*	-8
Healthcare support	2.9	3.0	15.05	14.79	-2
Protective service	2.4	2.1*	22.69	20.00*	-12
Food preparation and serving related	9.3	9.9*	11.88	10.70*	-10
Building and grounds cleaning and maintenance	3.1	2.8*	13.91	13.22*	-5
Personal care and service	3.6	2.8*	13.11	12.54*	-4
Sales and related	10.2	9.6*	19.56	20.61*	5
Office and administrative support	15.4	15.6	18.24	17.91*	-2
Farming, fishing, and forestry	0.3	[2]*	13.87	14.09	2
Construction and extraction	4.0	3.5*	24.01	22.52*	-6
Installation, maintenance, and repair	3.9	4.0	23.02	23.04	0

Note: See footnotes at end of table.

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

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Cincinnati	United States	Cincinnati	Percent difference (1)
Production	6.3	7.6*	18.30	19.03*	4
Transportation and material moving	7.0	7.5*	17.82	16.96*	-5

Footnotes:
(1) A positive percent difference measures how much the mean wage in the Cincinnati Metropolitan Statistical Area 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. Cincinnati had 80,180 jobs in production, accounting for 7.6 percent of local area employment, significantly higher than the 6.3-percent share nationally. The average hourly wage for this occupational group locally was $19.03, significantly above 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 (8,740); packaging and filling machine operators and tenders (5,390); and first-line supervisors of production and operating workers (5,200). Among the higher paying jobs in this group were power plant operators with mean hourly wages of $32.41 and first-line supervisors of production and operating workers at $30.74. At the lower end of the wage scale were laundry and dry-cleaning workers ($10.35) and pressers, textile, garment, and related materials ($10.58). (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_17140.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 Cincinnati Metropolitan Statistical Area, above-average concentrations of employment were found in some of the occupations within the production group. For instance, engine and other machine assemblers were employed at 4.2 times the national rate in Cincinnati, and chemical plant and system operators, at 2.5 times the U.S. average. On the other hand, food batchmakers had a location quotient of 1.0 in Cincinnati, 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, the Kentucky Center for Education and Workforce Statistics, and the Indiana Department of Workforce Development.

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 Cincinnati Metropolitan Statistical Area included 7,292 establishments with a response rate of 73 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 **Cincinnati, Ohio-Ky.-Ind. Metropolitan Statistical Area** includes Dearborn, Ohio, and Union Counties of Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton Counties of Kentucky; and Brown, Butler, Clermont, Hamilton, and Warren 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, Cincinnati Metropolitan Statistical Area, May 2017

Occupation [1]	Employment		Mean wages	
	Level [2]	Location quotient [3]	Hourly	Annual [4]
Production occupations	80,180	1.2	$19.03	$39,590
First-line supervisors of production and operating workers	5,200	1.2	30.74	63,950
Coil winders, tapers, and finishers	150	1.5	21.52	44,750
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers	2,130	1.1	20.37	42,370
Engine and other machine assemblers	1,180	4.2	26.12	54,330
Structural metal fabricators and fitters	420	0.7	15.46	32,170
Assemblers and fabricators, all other, including team assemblers	8,740	0.9	16.08	33,450
Bakers	940	0.7	13.43	27,940
Butchers and meat cutters	900	0.9	16.08	33,450
Meat, poultry, and fish cutters and trimmers	190	0.2	12.25	25,480
Slaughterers and meat packers	710	1.2	13.21	27,480
Food and tobacco roasting, baking, and drying machine operators and tenders	140	0.9	14.58	30,330
Food batchmakers	1,170	1.0	16.06	33,410
Food cooking machine operators and tenders	450	1.8	14.90	30,980
Food processing workers, all other	180	0.6	13.94	28,990
Computer-controlled machine tool operators, metal and plastic	1,690	1.6	21.82	45,380
Computer numerically controlled machine tool programmers, metal and plastic	190	1.1	25.73	53,510
Extruding and drawing machine setters, operators, and tenders, metal and plastic	1,230	2.3	18.02	37,480
Rolling machine setters, operators, and tenders, metal and plastic	(5)	(5)	17.84	37,110
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	2,140	1.5	17.25	35,890
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	110	1.3	18.62	38,730
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	750	1.4	16.90	35,150
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	210	0.9	21.72	45,170
Milling and planing machine setters, operators, and tenders, metal and plastic	130	1.0	20.91	43,490
Machinists	4,720	1.7	22.44	46,670
Metal-refining furnace operators and tenders	130	1.0	20.10	41,810
Pourers and casters, metal	(5)	(5)	21.72	45,180
Foundry mold and coremakers	(5)	(5)	18.12	37,680
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	1,480	1.3	15.33	31,880
Multiple machine tool setters, operators, and tenders, metal and plastic	2,260	2.5	21.45	44,610
Tool and die makers	820	1.5	27.39	56,970
Welders, cutters, solderers, and brazers	3,170	1.1	20.03	41,650
Welding, soldering, and brazing machine setters, operators, and tenders	270	0.9	18.33	38,120
Heat treating equipment setters, operators, and tenders, metal and plastic	270	1.9	20.30	42,230
Plating and coating machine setters, operators, and tenders, metal and plastic	210	0.8	19.67	40,920
Tool grinders, filers, and sharpeners	70	1.2	22.80	47,420
Metal workers and plastic workers, all other	560	3.3	24.23	50,390
Prepress technicians and workers	440	1.9	21.03	43,740
Printing press operators	2,110	1.7	17.77	36,960
Print binding and finishing workers	660	1.8	15.65	32,550
Laundry and dry-cleaning workers	1,660	1.1	10.35	21,530
Pressers, textile, garment, and related materials	(5)	(5)	10.58	22,010

Note: See footnotes at end of table.

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

Occupation [1]	Employment		Mean wages	
	Level [2]	Location quotient [3]	Hourly	Annual [4]
Sewing machine operators	920	0.9	12.95	26,940
Shoe and leather workers and repairers	50	0.9	10.83	22,540
Tailors, dressmakers, and custom sewers	100	0.7	17.42	36,240
Textile cutting machine setters, operators, and tenders	60	0.6	14.69	30,560
Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers	50	0.3	14.89	30,960
Upholsterers	160	0.7	14.73	30,640
Cabinetmakers and bench carpenters	560	0.8	17.83	37,080
Furniture finishers	60	0.4	17.07	35,510
Woodworking machine setters, operators, and tenders, except sawing	520	0.9	14.77	30,730
Power plant operators	280	1.1	32.41	67,410
Stationary engineers and boiler operators	160	0.7	28.37	59,010
Water and wastewater treatment plant and system operators	780	0.9	21.07	43,830
Chemical plant and system operators	570	2.5	29.19	60,710
Gas plant operators	40	0.4	26.18	54,460
Plant and system operators, all other	40	0.4	28.46	59,190
Chemical equipment operators and tenders	1,090	1.9	21.98	45,720
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	550	1.5	17.14	35,650
Crushing, grinding, and polishing machine setters, operators, and tenders	130	0.6	17.33	36,040
Grinding and polishing workers, hand	110	0.5	15.26	31,730
Mixing and blending machine setters, operators, and tenders	1,400	1.5	20.59	42,820
Cutting and slicing machine setters, operators, and tenders	620	1.4	16.41	34,130
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	470	0.8	19.36	40,280
Furnace, kiln, oven, drier, and kettle operators and tenders	140	1.1	17.74	36,900
Inspectors, testers, sorters, samplers, and weighers	4,940	1.2	20.29	42,190
Jewelers and precious stone and metal workers	130	0.7	16.95	35,260
Dental laboratory technicians	180	0.7	20.70	43,060
Packaging and filling machine operators and tenders	5,390	1.9	16.18	33,660
Coating, painting, and spraying machine setters, operators, and tenders	870	1.4	15.99	33,270
Painters, transportation equipment	340	0.9	21.08	43,850
Painting, coating, and decorating workers	50	0.5	15.71	32,680
Photographic process workers and processing machine operators	120	0.7	18.39	38,260
Adhesive bonding machine operators and tenders	240	2.0	17.85	37,120
Cleaning, washing, and metal pickling equipment operators and tenders	80	0.6	17.06	35,480
Cooling and freezing equipment operators and tenders	80	1.3	(5)	(5)
Etchers and engravers	30	0.5	13.36	27,780
Molders, shapers, and casters, except metal and plastic	(5)	(5)	16.20	33,710
Paper goods machine setters, operators, and tenders	1,090	1.6	18.92	39,350
Helpers--production workers	4,260	1.4	15.11	31,440
Production workers, all other	2,170	1.1	17.40	36,200

Footnotes:
(1) For a complete listing of all detailed occupations in Cincinnati, OH-KY-IN, see www.bls.gov/oes/current/oes_17140.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.

Note: See footnotes at end of table.

(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.