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## Occupational Employment and Wages in Chattanooga — May 2019

Workers in the Chattanooga, TN-GA Metropolitan Statistical Area had an average (mean) hourly wage of \$21.63 in May 2019, about 16 percent below the nationwide average of \$25.72, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Janet S. Rankin noted that, after testing for statistical significance, 1 of the 22 major occupational groups had average wages in the local area that were significantly higher than their respective national averages. Twenty groups had significantly lower wages than their respective national averages, including arts, design, entertainment, sports, and media; healthcare practitioners and technical; and business and financial operations.

When compared to the nationwide distribution, Chattanooga area employment was more highly concentrated in 4 of the 22 occupational groups, including production, and transportation and material moving. Eleven groups had employment shares significantly below their national representation, including business and financial operations, computer and mathematical, 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 Chattanooga, TN-GA Metropolitan Statistical Area, and measures of statistical significance, May 2019**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Chattanooga	United States	Chattanooga	Percent difference <sup>(1)</sup>
Total, all occupations .....	100.0	100.0	\$25.72	\$21.63*	-16
Management .....	5.5	5.3	58.88	50.03*	-15
Business and financial operations.....	5.6	4.2*	37.56	31.56*	-16
Computer and mathematical .....	3.1	1.8*	45.08	38.85*	-14
Architecture and engineering .....	1.8	1.5*	42.69	37.71*	-12
Life, physical, and social science .....	0.9	0.5*	37.28	28.83*	-23
Community and social service.....	1.5	1.3*	24.27	21.51*	-11
Legal.....	0.8	0.6*	52.71	(2)	
Educational instruction and library .....	6.1	4.9	27.75	24.25*	-13
Arts, design, entertainment, sports, and media.....	1.4	1.1	29.79	23.19*	-22
Healthcare practitioners and technical .....	5.9	6.9	40.21	32.88*	-18
Healthcare support .....	4.4	3.9*	14.91	14.13*	-5
Protective service .....	2.4	1.7*	23.98	19.24*	-20
Food preparation and serving related .....	9.2	9.8*	12.82	10.40*	-19
Building and grounds cleaning and maintenance ...	3.0	3.4	15.03	12.32*	-18
Personal care and service.....	2.2	1.7*	15.03	13.29*	-12
Sales and related .....	9.8	10.0	20.70	17.82*	-14
Office and administrative support.....	13.3	13.6	19.73	18.01*	-9
Farming, fishing, and forestry .....	0.3	0.2*	15.07	18.87*	25
Construction and extraction.....	4.2	3.1*	25.28	21.62*	-14
Installation, maintenance, and repair .....	3.9	4.3*	24.10	22.41*	-7

Note: See footnotes at end of table.

**Table A. Occupational employment and wages by major occupational group, United States and the Chattanooga, TN-GA Metropolitan Statistical Area, and measures of statistical significance, May 2019 - Continued**

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Chattanooga	United States	Chattanooga	Percent difference <sup>(1)</sup>
Production .....	6.2	10.5*	19.30	17.55*	-9
Transportation and material moving .....	8.5	9.8*	18.23	17.29*	-5

Footnotes:

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

(2) Estimate not released

\* The mean hourly wage or percent share of employment 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. Chattanooga had 26,500 jobs in production occupations, accounting for 10.5 percent of local area employment, significantly higher than the 6.2-percent share nationally. The local average hourly wage for this occupational group was \$17.55, significantly lower than the national wage of \$19.30.

Some of the larger detailed occupations within the production group included miscellaneous assemblers and fabricators (5,200); first-line supervisors of production and operating workers (1,740); and welders, cutters, solderers, and brazers (1,620). Among the higher-paying jobs in this group were power plant operators and first-line supervisors of production and operating workers, with mean hourly wages of \$38.43 and \$27.45, respectively. At the lower end of the wage scale were laundry and dry-cleaning workers (\$10.20) and sewing machine operators (\$12.94). (Detailed data for the production occupations are presented in [table 1](#); for a complete listing of detailed occupations available go to [www.bls.gov/oes/current/oes\\_16860.htm](http://www.bls.gov/oes/current/oes_16860.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 Chattanooga area, above-average concentrations of employment were found in some of the occupations within the production group. For instance, textile knitting and weaving machine setters, operators, and tenders were employed at 16.5 times the national rate in Chattanooga, and textile winding, twisting, and drawing out machine setters, operators, and tenders, at 12.6 times the U.S. average. Inspectors, testers, sorters, samplers, and weighers had a location quotient of 1.1 in Chattanooga, 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 Tennessee Department of Labor & Workforce Development and the Georgia Department of Labor.

## Changes to the Occupational Employment Statistics (OES) Data

With the May 2019 estimates, the OES program has begun implementing the 2018 Standard Occupational Classification (SOC) system. Each set of OES estimates is calculated from six panels of survey data collected over three years. Because the May 2019 estimates are based on a combination of survey data collected using the 2010 SOC and survey data collected using the 2018 SOC, these estimates use a hybrid of the two classification systems that contains some combinations of occupations that are not found in either the 2010 or 2018 SOC. These combinations may include occupations from more than one 2018 SOC minor group or broad occupation. Therefore, OES will not publish data for some 2018 SOC minor groups and broad occupations in the May 2019 estimates. The May 2021 estimates, to be published in Spring 2022, will be the first OES estimates based entirely on survey data collected using the 2018 SOC.

In addition, the OES program has replaced some 2018 SOC detailed occupations with SOC broad occupations or OES-specific aggregations. These include home health aides and personal care aides, for which OES will publish only the 2018 SOC broad occupation 31-1120 Home Health and Personal Care Aides.

For more information on the occupational classification system used in the May 2019 OES estimates, please see [www.bls.gov/oes/soc\\_2018.htm](http://www.bls.gov/oes/soc_2018.htm) and [www.bls.gov/oes/oes\\_ques.htm#qf10](http://www.bls.gov/oes/oes_ques.htm#qf10).

The May 2019 OES estimates use the metropolitan area definitions delineated in Office of Management and Budget (OMB) Bulletin 17-01, which add a new Metropolitan Statistical Area (MSA) for Twin Falls, Idaho. For more information on the area definitions used in the May 2019 estimates, please see [www.bls.gov/oes/current/msa\\_def.htm](http://www.bls.gov/oes/current/msa_def.htm).

## 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 580 areas, including states and the District of Columbia, metropolitan statistical areas (MSAs), nonmetropolitan areas, and territories; national industry-specific estimates at the NAICS sector, 3-digit, most 4-digit, 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](http://www.bls.gov/oes/tables.htm).

The OES survey is a cooperative effort between BLS and the State Workforce Agencies (SWAs). BLS funds the survey and provides the procedures and technical support, while the State Workforce Agencies collect most of the data. OES estimates are constructed from a sample of about 1.1 million establishments. Each year, two semiannual panels of approximately 180,000 to 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 2019 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2019, November 2018, May 2018, November 2017, May 2017, and November 2016. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 57 percent of total national employment. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 71 percent based on establishments and 68

percent based on weighted sampled employment. The sample in the Chattanooga, TN-GA Metropolitan Statistical Area included 2,568 establishments with a response rate of 72 percent. For more information about OES concepts and methodology, go to [www.bls.gov/oes/current/oes\\_tec.htm](http://www.bls.gov/oes/current/oes_tec.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.

The May 2019 OES estimates are the first set of OES estimates to be based in part on survey data collected using the 2018 SOC. These estimates use a hybrid of the 2010 and 2018 SOC systems. More information on the hybrid classification system is available at [www.bls.gov/oes/soc\\_2018.htm](http://www.bls.gov/oes/soc_2018.htm).

The May 2019 OES estimates are based on the 2017 North American Industry Classification System (NAICS). More information about the 2017 NAICS is available at [www.bls.gov/bls/naics.htm](http://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 **Chattanooga, TN-GA Metropolitan Statistical Area** includes Hamilton, Marion, and Sequatchie Counties of Tennessee and Catoosa, Dade, and Walker Counties of Georgia.

### **For more information**

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 information about the OES program is available at [www.bls.gov/oes/oes\\_doc.htm](http://www.bls.gov/oes/oes_doc.htm).

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 for production occupations, Chattanooga, TN-GA Metropolitan Statistical Area, May 2019**

Occupation (1)	Employment		Mean wages	
	Level (2)	Location quotient (3)	Hourly	Annual (4)
Production occupations .....	26,500	1.7	\$17.55	\$36,500
First-line supervisors of production and operating workers .....	1,740	1.6	27.45	57,100
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers ...	200	0.4	15.28	31,780
Structural metal fabricators and fitters .....	360	2.7	16.90	35,140
Miscellaneous assemblers and fabricators .....	5,200	2.2	16.31	33,930
Bakers .....	510	1.6	12.95	26,930
Butchers and meat cutters .....	210	0.9	14.64	30,460
Food batchmakers .....	340	1.3	16.53	34,390
Food processing workers, all other .....	330	4.5	12.03	25,010
Extruding and drawing machine setters, operators, and tenders, metal and plastic .....	50	0.4	17.07	35,500
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic .....	380	1.1	17.82	37,070
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic .....	(5)	(5)	19.23	39,990
Machinists .....	810	1.2	20.84	43,350
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic .....	180	0.6	16.85	35,050
Multiple machine tool setters, operators, and tenders, metal and plastic .....	360	1.4	14.89	30,960
Tool and die makers .....	130	1.1	23.70	49,290
Welders, cutters, solderers, and brazers .....	1,620	2.3	21.29	44,280
Welding, soldering, and brazing machine setters, operators, and tenders .....	240	4.0	(5)	(5)
Heat treating equipment setters, operators, and tenders, metal and plastic .....	40	1.3	19.46	40,470
Plating machine setters, operators, and tenders, metal and plastic .....	100	1.3	17.30	35,970
Prepress technicians and workers .....	50	1.0	18.44	38,350
Printing press operators .....	520	1.8	17.55	36,510
Print binding and finishing workers .....	(5)	(5)	18.56	38,610
Laundry and dry-cleaning workers .....	480	1.4	10.20	21,210
Sewing machine operators .....	200	0.9	12.94	26,910
Textile cutting machine setters, operators, and tenders ..	(5)	(5)	13.90	28,900
Textile knitting and weaving machine setters, operators, and tenders .....	600	16.5	16.34	33,980
Textile winding, twisting, and drawing out machine setters, operators, and tenders .....	670	12.6	14.70	30,570
Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers .....	(5)	(5)	18.98	39,480
Textile, apparel, and furnishings workers, all other .....	(5)	(5)	11.78	24,500
Cabinetmakers and bench carpenters .....	70	0.4	16.39	34,090
Furniture finishers .....	(5)	(5)	16.87	35,090
Woodworking machine setters, operators, and tenders, except sawing .....	60	0.5	17.81	37,040
Power plant operators .....	40	0.8	38.43	79,940
Water and wastewater treatment plant and system operators .....	170	0.8	19.25	40,030
Chemical equipment operators and tenders .....	(5)	(5)	25.21	52,430
Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders .....	(5)	(5)	19.53	40,620
Crushing, grinding, and polishing machine setters, operators, and tenders .....	110	1.9	17.32	36,020
Mixing and blending machine setters, operators, and tenders .....	180	0.8	17.89	37,220
Cutting and slicing machine setters, operators, and tenders .....	150	1.5	15.88	33,030

Note: See footnotes at end of table.

**Table 1. Employment and wage data for production occupations, Chattanooga, TN-GA Metropolitan Statistical Area, May 2019 - Continued**

Occupation <sup>(1)</sup>	Employment		Mean wages	
	Level <sup>(2)</sup>	Location quotient <sup>(3)</sup>	Hourly	Annual <sup>(4)</sup>
Extruding, forming, pressing, and compacting machine setters, operators, and tenders .....	230	1.9	14.04	29,210
Inspectors, testers, sorters, samplers, and weighers.....	1,040	1.1	18.63	38,740
Dental laboratory technicians .....	110	1.8	22.24	46,270
Ophthalmic laboratory technicians .....	80	1.5	14.56	30,280
Packaging and filling machine operators and tenders ....	(5)	(5)	14.04	29,200
Painting, coating, and decorating workers .....	(5)	(5)	16.12	33,520
Coating, painting, and spraying machine setters, operators, and tenders .....	480	1.9	19.25	40,030
Photographic process workers and processing machine operators .....	(5)	(5)	13.89	28,890
Computer numerically controlled tool operators.....	290	1.1	20.99	43,650
Cooling and freezing equipment operators and tenders .	60	3.8	14.96	31,120
Molders, shapers, and casters, except metal and plastic .....	100	1.3	15.13	31,470
Paper goods machine setters, operators, and tenders ...	(5)	(5)	20.14	41,880
Helpers--production workers .....	650	1.3	14.68	30,540
Production workers, all other.....	(5)	(5)	15.01	31,230

Footnotes:

(1) For a complete listing of all detailed occupations in the Chattanooga, TN-GA Metropolitan Statistical Area, see [www.bls.gov/oes/current/oes\\_16860.htm](http://www.bls.gov/oes/current/oes_16860.htm)

(2) Estimates for detailed occupations may not sum to the totals due to rounding, and because the totals may include occupations that are 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.