NEWS RELEASE

BUREAU OF LABOR STATISTICS
U.S. DEPARTMENT OF LABOR

BLS

Occupational Employment and Wages in Ann Arbor — May 2020

Workers in the Ann Arbor, MI Metropolitan Statistical Area had an average (mean) hourly wage of $28.46 in May 2020, about 5 percent above the nationwide average of $27.07, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Jason Palmer noted that, after testing for statistical significance, wages in the local area were lower than their respective national averages in 7 of the 22 major occupational groups, including legal; computer and mathematical; and life, physical, and social science. Two groups had significantly lower wages than their respective national averages: construction and extraction and installation, maintenance, and repair.

When compared to the nationwide distribution, Ann Arbor area employment was more highly concentrated in 8 of the 22 occupational groups, including educational instruction and library, healthcare practitioners and technical, and architecture and engineering. Ten groups had employment shares significantly below their national representation, including transportation and material moving, sales and related,and construction and extraction. (See table A.)

Table A. Occupational employment and wages by major occupational group, United States and the Ann Arbor metropolitan area, and measures of statistical significance, May 2020

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Ann Arbor	United States	Ann Arbor	Percent difference [1]
Total, all occupations	100.0	100.0	$27.07	$28.46*	5
Management	5.7	5.4	60.81	61.42	1
Business and financial operations............................	6.0	6.0	38.79	36.30*	-6
Computer and mathematical	3.3	4.4*	46.53	37.10*	-20
Architecture and engineering	1.8	3.3*	43.41	43.30	0
Life, physical, and social science	0.9	1.9*	38.15	33.51*	-12
Community and social service.................................	1.6	2.1*	25.09	22.60	-10
Legal..	0.8	0.5*	54.00	42.00*	-22
Educational instruction and library	6.1	12.6*	28.75	28.72	0
Arts, design, entertainment, sports, and media.......	1.3	1.7*	30.96	29.24*	-6
Healthcare practitioners and technical	6.2	11.1*	41.30	41.02	-1
Healthcare support	4.6	4.9	15.50	16.35	5
Protective service	2.4	1.2*	25.11	24.70	-2
Food preparation and serving related	8.1	6.5*	13.30	13.18	-1
Building and grounds cleaning and maintenance ...	2.9	2.6	15.75	16.32	4
Personal care and service.......................................	1.9	2.9*	15.68	13.73*	-12
Sales and related	9.4	6.6*	22.00	22.65	3
Office and administrative support............................	13.3	11.6*	20.38	19.65*	-4
Farming, fishing, and forestry.................................	0.3	0.1*	16.02	18.79	17
Construction and extraction.....................................	4.3	2.2*	25.93	28.94*	12
Installation, maintenance, and repair	3.9	2.7*	25.17	27.13*	8

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and the Ann Arbor metropolitan area, and measures of statistical significance, May 2020 - Continued

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Ann Arbor	United States	Ann Arbor	Percent difference [1]
Production	6.1	4.9*	20.08	20.42	2
Transportation and material moving........................	8.7	4.9*	19.08	18.70	-2

Footnotes:
(1) A positive percent difference measures how much the mean wage in the Ann Arbor, MI Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.
* 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—educational instruction and library—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Ann Arbor had 26,320 jobs in educational instruction and library, accounting for 12.6 percent of local area employment, significantly higher than the 6.1-percent share nationally. The average hourly wage for this occupational group locally was $28.72, compared to the national wage of $28.75.

Some of the larger detailed occupations within the educational instruction and library group included teaching assistants, postsecondary (12,020); teaching assistants, except postsecondary (1,820); and elementary school teachers, except special education (1,610). Among the higher-paying jobs in this group were archivists and librarians and media collections specialists, with mean hourly wages of $37.28 and $35.18, respectively. At the lower end of the wage scale were substitute teachers, short-term ($13.70) and self-enrichment teachers ($15.91). (Detailed data for the educational instruction and library occupations are presented in table 1; for a complete listing of detailed occupations available go to www.bls.gov/oes/current/oes_11460.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 Ann Arbor area, above-average concentrations of employment were found in many of the occupations within the educational instruction and library group. For instance, teaching assistants, postsecondary were employed at 57.9 times the national rate in Ann Arbor, and mathematical science teachers, postsecondary, at 4.9 times the U.S. average. Teaching assistants, except postsecondary had a location quotient of 1.0 in Ann Arbor, indicating that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment and Wage Statistics (OEWS) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Michigan Department of Technology, Management & Budget.

Occupational Employment and Wage Statistics (OEWS) Name Change

The Occupational Employment Statistics (OES) program has changed its name to Occupational Employment and Wage Statistics (OEWS) to better reflect the range of data available from the program. Data released on or after March 31, 2021, will reflect the new program name. Webpages, publications, and other materials associated with previous data releases will retain the Occupational Employment Statistics name.

Coronavirus (COVID-19) Impact on May 2020 Occupational Employment and Wage Statistics

Due to features of the OEWS methodology, the May 2020 OEWS estimates do not fully reflect the impact of the COVID-19 pandemic. The May 2020 OEWS estimates are based on survey panels collected for May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. Because 5 of the 6 survey panels used to produce the estimates date from before the COVID-19 pandemic, only the most recent (May 2020) survey panel reflects changes in occupational proportions related to the COVID-19 pandemic.

The May 2020 OEWS employment estimates are benchmarked to the average of May 2020 and November 2019 employment from the Quarterly Census of Employment and Wages (QCEW). Although the May 2020 QCEW data reflect the early employment effects of the COVID-19 pandemic, the November 2019 QCEW employment data precede the pandemic, and therefore do not reflect its impact.

In addition, as a result of the pandemic, response rates for the November 2019 and May 2020 panels were lower in some areas. Lower response rates may negatively affect data availability and data quality. More information is available at www.bls.gov/covid19/effects-of-covid-19-pandemic-on-occupational-employment-and-wage-statistics.htm.

Implementing the 2018 Standard Occupational Classification (SOC) System

With the May 2019 estimates, the OEWS program began implementing the 2018 Standard Occupational Classification (SOC) system. Because the May 2019 and May 2020 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. This is the second and final year that the hybrid occupational structure will be used. The May 2021 estimates, to be published in Spring 2022, will be the first OEWS estimates based entirely on survey data collected using the 2018 SOC. For more information on the occupational classification system used in the May 2019 and May 2020 estimates, please see www.bls.gov/oes/soc_2018.htm and www.bls.gov/oes/oes_ques.htm#qf10.

Upcoming Changes to the Occupational Employment and Wage Statistics Methodology

With the May 2021 estimates, to be released in Spring 2022, the OEWS program plans to begin using a new estimation methodology. The new model-based methodology, called MB3, has advantages over the existing methodology, as described in the Monthly Labor Review article at www.bls.gov/opub/mlr/2019/article/model-based-estimates-for-the-occupational-employment-statistics-program.htm. OEWS estimates for the years 2015-2018 were recalculated using the new estimation methodology and are available as research estimates at www.bls.gov/oes/oes-mb3-methods.htm.

Technical Note

The Occupational Employment and Wage Statistics (OEWS) survey is a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OEWS 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. OEWS data are available at www.bls.gov/oes/tables.htm.

The OEWS 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. OEWS estimates are constructed from a sample of about 1.1 million establishments. Each year, two semiannual panels of approximately 180,000 to 185,000 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 2020 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2020, November 2019, May 2019, November 2018, May 2018, and November 2017. The unweighted sample employment of 83 million across all six semiannual panels represents approximately 56 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 69 percent based on establishments and 66 percent based on weighted sampled employment. The sample in the Ann Arbor, MI Metropolitan Statistical Area included 1,682 establishments with a response rate of 69 percent. For more information about OEWS concepts and methodology, go to 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.

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 **Ann Arbor, MI Metropolitan Statistical Area** includes Washtenaw County.

For more information

Answers to frequently asked questions about the OEWS data are available at www.bls.gov/oes/oes_ques.htm. Detailed information about the OEWS program is available at www.bls.gov/oes/oes_doc.htm.

Information in this release will be made available to individuals with sensory impairments upon request. Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data for educational instruction and library occupations, Ann Arbor metropolitan area, May 2020

Occupation [1]	Employment		Mean wages	
	Level [2]	Location quotient [3]	Hourly	Annual [4]
Educational instruction and library occupations	26,320	2.1	$28.72	$59,740
Business teachers, postsecondary..................................	360	3.0	[6]	174,050
Computer science teachers, postsecondary	120	2.5	[6]	121,220
Mathematical science teachers, postsecondary	360	4.9	[6]	126,580
Biological science teachers, postsecondary...................	160	2.1	[6]	108,860
Atmospheric, earth, marine, and space sciences teachers, postsecondary	70	3.9	[6]	120,430
Physics teachers, postsecondary...................................	100	5.0	[6]	113,990
Psychology teachers, postsecondary.............................	150	2.7	[6]	113,300
Sociology teachers, postsecondary................................	90	4.6	[6]	108,020
Health specialties teachers, postsecondary...................	570	1.9	[6]	115,900
Nursing instructors and teachers, postsecondary	310	3.4	[6]	98,800
Education teachers, postsecondary	160	1.8	[6]	96,980
Social work teachers, postsecondary.............................	120	5.9	[6]	110,520
Art, drama, and music teachers, postsecondary.............	460	3.3	[6]	96,500
Communications teachers, postsecondary	40	1.0	[6]	99,160
English language and literature teachers, postsecondary	300	3.1	[6]	99,250
Foreign language and literature teachers, postsecondary	160	4.6	[6]	79,780
History teachers, postsecondary	60	1.9	[5]	[5]
Philosophy and religion teachers, postsecondary...........	[5]	[5]	[6]	96,310
Postsecondary teachers, all other	170	0.6	[6]	77,760
Preschool teachers, except special education	870	1.6	16.06	33,400
Elementary school teachers, except special education ..	1,610	0.8	[6]	72,710
Middle school teachers, except special and career/technical education..	310	0.3	[6]	67,170
Secondary school teachers, except special and career/technical education..	940	0.6	[6]	64,350
Special education teachers, kindergarten and elementary school	150	0.5	[6]	68,240
Special education teachers, secondary school	70	0.3	[6]	64,520
Special education teachers, all other	[5]	[5]	[6]	71,430
Self-enrichment teachers	180	0.6	15.91	33,100
Substitute teachers, short-term	140	0.2	13.70	28,500
Tutors and teachers and instructors, all other	1,890	4.1	[6]	33,480
Archivists	30	3.2	37.28	77,540
Curators...	40	2.4	31.51	65,540
Librarians and media collections specialists	320	1.6	35.18	73,170
Library technicians	80	0.6	21.36	44,430
Instructional coordinators	300	1.2	32.18	66,930
Teaching assistants, postsecondary...............................	12,020	57.9	[5]	[5]
Teaching assistants, except postsecondary...................	1,820	1.0	[6]	29,640
Educational instruction and library workers, all other......	80	0.4	23.08	48,010

Footnotes:

(1) For a complete listing of all detailed occupations in the Ann Arbor, MI Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_11460.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.

(6) Wages for some occupations that do not generally work year-round, full time, are reported either as hourly wages or annual salaries depending on how they are typically paid.