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Occupational Employment and Wages in Washington-Arlington-Alexandria – May 2017

Workers in the Washington-Arlington-Alexandria Metropolitan Statistical Area had an average (mean) hourly wage of \$33.27 in May 2017, 37 percent above 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, all 22 major occupational groups in the local area had average wages that were significantly higher than their respective national averages.

When compared to the nationwide distribution, local employment shares were significantly higher in 9 of the 22 occupational groups including business and financial operations, computer and mathematical, and management. Conversely, 12 groups had employment shares significantly below their national representation; these groups included transportation and material moving, office and administrative support, and sales and related. (See [table A](#) and box note at end of release.)

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

Major occupational group	Percent of total employment			Mean hourly wage			Percent difference ⁽¹⁾
	United States	Washington		United States	Washington		
Total, all occupations	100	100		\$24.34	\$33.27	*	37
Management	5.1	7.6	*	57.65	70.43	*	22
Business and financial operations	5.2	9.8	*	36.70	44.99	*	23
Computer and mathematical	3.0	7.3	*	43.18	51.22	*	19
Architecture and engineering	1.8	2.0	*	41.44	49.25	*	19
Life, physical, and social science	0.8	2.1	*	35.76	49.41	*	38
Community and social service.....	1.5	1.3	*	23.10	28.84	*	25
Legal.....	0.8	2.2	*	51.62	69.67	*	35
Education, training, and library.....	6.1	6.2		26.67	31.44	*	18
Arts, design, entertainment, sports, and media.....	1.4	2.4	*	28.34	37.95	*	34
Healthcare practitioners and technical	6.0	4.8	*	38.83	44.52	*	15
Healthcare support	2.9	2.2	*	15.05	16.49	*	10
Protective service	2.4	2.8	*	22.69	27.74	*	22
Food preparation and serving related	9.3	8.3	*	11.88	13.21	*	11
Building and grounds cleaning and maintenance.....	3.1	3.5	*	13.91	14.95	*	7
Personal care and service.....	3.6	3.0	*	13.11	15.12	*	15
Sales and related	10.2	8.6	*	19.56	21.59	*	10
Office and administrative support.....	15.4	13.1	*	18.24	21.41	*	17
Farming, fishing, and forestry.....	0.3	0.1	*	13.87	17.37	*	25

Note: See footnotes at end of table.

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

Major occupational group	Percent of total employment			Mean hourly wage			
	United States	Washington		United States	Washington		Percent difference ⁽¹⁾
Construction and extraction.....	4.0	3.6	*	24.01	24.39	*	2
Installation, maintenance, and repair	3.9	3.1	*	23.02	26.40	*	15
Production	6.3	1.7	*	18.30	20.10	*	10
Transportation and material moving.....	7.0	4.1	*	17.82	20.47	*	15

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Washington-Arlington-Alexandria 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—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Washington had 228,060 jobs in the computer and mathematical group, accounting for 7.3 percent of local area employment, significantly higher than the 3.0-percent share nationally. The average hourly wage for this occupational group locally was \$51.22, significantly higher than the national average of \$43.18.

Some of the larger detailed occupations within the computer and mathematical group in the Washington area included application software developers (32,450) and computer systems analysts (28,940). Among the higher paying jobs in this group were computer and information research scientists and systems software developers, with mean hourly wages of \$60.34 and \$60.10, respectively. At the lower end of the wage scale were computer user support specialists (\$30.42) and computer network support specialists (\$39.14). (Detailed data for computer and mathematical occupations are presented in [table 1](#); for a complete listing of detailed occupations available go to https://www.bls.gov/oes/current/oes_47900.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 as it does nationally. In the Washington metropolitan area, above-average concentrations of employment were found in nearly all of the detailed occupations within the computer and mathematical group. For instance, information security analysts were employed at 5.9 times the national rate in Washington, and statisticians, at 6.0 times the U.S. average. On the other hand, actuaries had a location quotient of 1.0 in Washington, meaning the local employment share in this particular occupation was similar to the national share.

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 District of Columbia Department of Employment Services, the Virginia Employment Commission, the Maryland Department of Labor, Licensing, and Regulation, and WorkForce West Virginia.

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 Washington-Arlington-Alexandria Metropolitan Statistical Area included 16,377 establishments with a response rate of 66 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 **Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area** includes the District of Columbia; Arlington, Clarke, Culpeper, Fairfax, Fauquier, Loudoun, Prince William, Rappahannock, Spotsylvania, Stafford, and Warren Counties, and Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park Cities in Virginia; Calvert, Charles, Frederick, Montgomery, and Prince George's Counties in Maryland; and Jefferson County in West Virginia.

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, Washington-Arlington-Alexandria Metropolitan Statistical Area, May 2017

Occupation ⁽¹⁾	Employment ⁽²⁾		Mean wage	
	Level	Location quotient ⁽³⁾	Hourly	Annual ⁽⁴⁾
Computer and mathematical occupations	228,060	2.5	\$51.22	\$106,550
Computer and information research scientists	3,460	5.7	60.34	125,520
Computer systems analysts	28,940	2.3	49.64	103,240
Information security analysts	13,520	5.9	54.60	113,570
Computer programmers	7,550	1.4	47.56	98,930
Software developers, applications	32,450	1.8	55.89	116,250
Software developers, systems software	26,640	3.1	60.10	125,010
Web developers	4,620	1.7	43.16	89,780
Database administrators	5,600	2.3	48.54	100,960
Network and computer systems administrators	20,720	2.5	49.25	102,440
Computer network architects	10,400	3.0	57.63	119,880
Computer user support specialists	18,560	1.4	30.42	63,280
Computer network support specialists	8,290	2.0	39.14	81,420
Computer occupations, all other	32,840	4.8	55.16	114,740
Actuaries	410	1.0	50.40	104,830
Mathematicians	240	4.0	67.05	139,460
Operations research analysts	8,820	3.8	51.42	106,940
Statisticians	4,760	6.0	49.48	102,930
Miscellaneous mathematical science occupations	250	5.8	32.13	66,820

Footnotes:

(1) For a complete listing of all detailed occupations in the Washington-Arlington-Alexandria Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_47900.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.