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Occupational Employment and Wages In Boston-Cambridge-Quincy - May 2013

Workers in the Boston-Cambridge-Quincy Metropolitan Statistical Area had an average (mean) hourly wage of $29.97 in May 2013, about 34 percent above the nationwide average of $22.33, according to the U.S. Bureau of Labor Statistics. Regional Commissioner Deborah A. Brown noted that, after testing for statistical significance, wages in the local area were significantly higher than their respective national averages in all of the 22 major occupational groups.

When compared to the nationwide distribution, local employment was more highly concentrated in 9 of the 22 occupational groups, including management, computer and mathematical, and business and financial operations. Conversely, eight groups had employment shares significantly below their national representation, including production; transportation and material moving; and installation, maintenance, and repair. (See table A and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and the Boston-Cambridge-Quincy Metropolitan Statistical Area, and measures of statistical significance, May 2013

Major occupational group	Percent of total employment		Mean hourly wage		
	United States	Boston	United States	Boston	Percent difference [1]
Total, all occupations	100.0%	100.0%	$22.33	$29.97*	34
Management	4.9	7.8*	53.15	62.73*	18
Business and financial operations	5.0	7.7*	34.14	40.28*	18
Computer and mathematical	2.8	5.5*	39.43	45.09*	14
Architecture and engineering	1.8	2.3*	38.51	41.96*	9
Life, physical, and social science	0.9	2.1*	33.37	37.96*	14
Community and social services	1.4	1.9*	21.50	23.77*	11
Legal	0.8	1.1*	47.89	56.58*	18
Education, training, and library	6.3	6.2	24.76	32.91*	33
Arts, design, entertainment, sports, and media	1.3	1.8*	26.72	28.52*	7
Healthcare practitioner and technical	5.8	7.1*	35.93	41.08*	14
Healthcare support	3.0	2.8	13.61	16.57*	22
Protective service	2.5	2.5	20.92	23.88*	14
Food preparation and serving related	9.0	8.3*	10.38	12.68*	22
Building and grounds cleaning and maintenance	3.2	3.2	12.51	15.94*	27
Personal care and service	3.0	2.9	11.88	14.58*	23
Sales and related	10.6	9.2*	18.37	25.04*	36
Office and administrative support	16.2	15.1*	16.78	20.49*	22
Farming, fishing, and forestry	0.3	[2]*	11.70	15.03*	28
Construction and extraction	3.8	2.6*	21.94	29.63*	35
Installation, maintenance, and repair	3.9	2.5*	21.35	25.58*	20
Production	6.6	3.5*	16.79	19.40*	16
Transportation and material moving	6.8	3.9*	16.28	17.18*	6

Note: See footnotes at end of table.

Footnotes:
(1) A positive percent difference measures how much the mean wage in Boston 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—computer and mathematical—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Boston-Cambridge-Quincy had 95,850 jobs in computer and mathematical, accounting for 5.5 percent of local area employment, significantly higher than the 2.8-percent share nationally. The average hourly wage for this occupational group locally was $45.09, measurably above the national wage of $39.43.

With employment of 19,550 and 19,340 respectively, systems software developers and software application developers were the largest occupations within the computer and mathematical group followed by computer systems analysts (12,000). Among the higher paying jobs were actuaries and computer and information research scientists, with mean hourly wages of $58.03 and $57.44, respectively. At the lower end of the wage scale were computer user support specialists ($30.58) and operations research analysts ($34.10). (Detailed occupational data for computer and mathematical are presented in table 1 ; for a complete listing of detailed occupations available go to www.bls.gov/oes/current/oes_71654.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 Boston-Cambridge-Quincy Metropolitan Statistical Area, above average concentrations of employment were found in many of the occupations within the computer and mathematical group. For instance, systems software developers were employed at 4.0 times the national rate in Boston, and software applications developers at 2.3 times the U.S. average. On the other hand, computer programmers had a location quotient of 1.3 in Boston, 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 Massachusetts Division of Unemployment Assistance.

OES wage and employment data for the 22 major occupational groups in the Boston Metropolitan Statistical Area were compared to their respective national averages based on statistical significance testing. Only those occupations with wages or employment shares above or below the national wage or share after testing for significance at the 90-percent confidence level meet the criteria.

NOTE: 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 mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. Guam, Puerto Rico, and the Virgin Islands are also surveyed, but their data are not included in the national estimates. OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year for a 3-year period. May 2013 estimates are based on responses from six semiannual panels collected in May 2013, November 2012, May 2012, November 2011, May 2011, and November 2010. The overall national response rate for the six panels is 75.3 percent based on establishments and 71.6 percent based on employment. The sample in the Boston-Cambridge-Quincy Metropolitan Statistical Area included 7,603 establishments with a response rate of 74 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and 821 detailed occupations for the nation, states, metropolitan statistical areas, metropolitan divisions, and nonmetropolitan areas. In addition, employment and wage estimates for 94 minor groups and 458 broad occupations are available in the national data. OES data by state and metropolitan/nonmetropolitan area are available from www.bls.gov/oes/current/oessrcst.htm and www.bls.gov/oes/current/oessrcma.htm, respectively.

The May 2013 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 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 2012 NAICS is available at www.bls.gov/bls/naics.htm.

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 **Boston-Cambridge-Quincy, Mass. Metropolitan Statistical Area** includes Acton town, Andover town, Arlington town, Ayer town, Bedford town, Belmont town, Beverly city, Bolton town, Boston city, Boxborough town, Boxford town, Braintree town, Brookline town, Burlington town, Cambridge city, Canton town, Carlisle town, Carver town, Chelsea city, Cohasset town, Concord town, Dedham town, Dover town, Duxbury town, Essex town, Everett city, Foxborough town, Franklin city, Gloucester city, Groton town, Hamilton town, Hanover town, Harvard town, Hingham town, Holbrook town, Hull town, Ipswich town, Kingston town, Lexington town, Lincoln town, Littleton town, Lynnfield town, Malden city, Manchester by the Sea town, Mansfield town, Marshfield town, Maynard town, Medfield town, Medford city, Medway town, Melrose city, Middleton town, Millis town, Milton town, Needham town, Newbury town, Newburyport city, Newton city, Norfolk town, North Reading town, Norwell town, Norwood town, Pembroke town, Plymouth town, Quincy city, Randolph town, Reading town, Revere city, Rockland town, Rockport town, Rowley town, Saugus town, Scituate town, Sharon town, Sherborn town, Shirley town, Somerville city, and Stoneham town, Stoughton town, Stow town, Sudbury town, Topsfield town, Wakefield town, Walpole town, Waltham city, Watertown city, Wayland town, Wellesley town, Wenham town, Weston town, Westwood town, Weymouth town, Wilmington town, Winchester town, Winthrop town, Woburn city, and Wrentham town, MA.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/new-england. 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/2013/may/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: 1-800-877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Boston-Cambridge-Quincy Metropolitan Statistical Area, May 2013

Occupation [1]	Employment		Mean wages	
	Level [2]	Location quotient [3]	Hourly	Annual[4]
Computer and Mathematical Occupations	95,850	2.0	$45.09	$93,780
Computer and Information Research Scientists	640	2.0	57.44	119,480
Computer Systems Analysts	12,000	1.8	41.42	86,150
Information Security Analysts	1,800	1.8	45.01	93,620
Computer Programmers	5,210	1.3	40.17	83,550
Software Developers, Applications	19,340	2.3	50.75	105,570
Software Developers, Systems Software	19,550	4.0	54.96	114,310
Web Developers	3,130	2.1	37.09	77,140
Database Administrators	3,190	2.1	40.40	84,040
Network and Computer Systems Administrators	6,290	1.3	40.09	83,390
Computer Network Architects	3,420	1.8	54.68	113,730
Computer User Support Specialists	11,250	1.6	30.58	63,610
Computer Network Support Specialists	2,640	1.2	37.76	78,540
Computer Occupations, All Other	3,010	1.2	44.23	92,010
Actuaries	650	2.4	58.03	120,710
Mathematicians	70	1.9	55.32	115,070
Operations Research Analysts	2,210	2.3	34.10	70,930
Statisticians	1,450	4.4	44.11	91,740

Footnotes:
(1) For a complete listing of all detailed occupations in Boston-Cambridge-Quincy, MA NECTA Division, see www.bls.gov/oes/current/oes_71654.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.