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Technical information: (202) 691-6199 • NCSinfo@bls.gov • www.bls.gov/ncs  
Media contact: (202) 691-5902 • PressOffice@bls.gov

## OCCUPATIONAL PAY COMPARISONS AMONG METROPOLITAN AREAS, 2010

Average pay for civilian workers in the San Jose-San Francisco-Oakland, CA metropolitan area was 20 percent above the national average in 2010, one of 77 metropolitan areas studied by the National Compensation Survey (NCS), the U.S. Bureau of Labor Statistics reported today. The Brownsville-Harlingen, TX metropolitan area had a pay relative of 80, meaning workers earned an average of 80 cents for every dollar earned by workers nationwide. Using data from the NCS, pay relatives—a means of assessing pay differences—are available for each of the nine major occupational groups within surveyed metropolitan areas, as well as averaged across all occupations for each area. The average pay relative nationally for all occupations and for each occupational group equals 100. (See table 1.)

A pay relative is a calculation of pay—wages, salaries, commissions, and production bonuses—for a given metropolitan area relative to the nation as a whole. The calculation controls for differences among areas in occupational composition, establishment and occupational characteristics, and the fact that data are collected for areas at different times during the year. Simple pay comparisons calculating the ratio of the average pay for an area to the entire United States in percentage terms would not control for interarea differences in occupational composition and other factors, which may impact pay relatives.

**Chart 1. Pay relatives in selected metropolitan areas, National Compensation Survey, July 2010**

Pay Relative (United States = 100)



Chart 1 above lists selected metropolitan area pay relatives compared to average pay nationally among those studied in the NCS. Table A provides selected metropolitan area pay relatives for each of five major occupational groups. In addition, area-to-area comparisons have been calculated for all 77 metropolitan areas and are available on the BLS website at <http://www.bls.gov/ncs/ocs/payrel.htm>.

**Table A. Selected metropolitan area-to-national pay relatives and major occupational groups, July 2010 (of 77 metropolitan areas surveyed)**

| Major Occupational Group            | Metropolitan Area                                   | Pay Relative |
|-------------------------------------|---|--------------|
| Management, business, and financial | New York-Newark-Bridgeport, NY-NJ-CT-PA             | 120          |
|                                     | Los Angeles-Long Beach-Riverside, CA                | 108          |
|                                     | Reno-Sparks, NV                                     | 108          |
|                                     | Salinas, CA   | 108          |
|                                     | San Jose-San Francisco-Oakland, CA                  | 108          |
| Office and administrative support   | San Jose-San Francisco-Oakland, CA                  | 120          |
|                                     | New York-Newark-Bridgeport, NY-NJ-CT-PA             | 115          |
|                                     | Boston-Worcester-Manchester, MA-NH                  | 114          |
|                                     | Hartford-West Hartford-Willimantic, CT              | 114          |
|                                     | Washington-Baltimore-Northern Virginia, DC-MD-VA-WV | 112          |
| Service                             | San Jose-San Francisco-Oakland, CA                  | 126          |
|                                     | Salinas, CA   | 123          |
|                                     | Seattle-Tacoma-Olympia, WA                          | 123          |
|                                     | Hartford-West Hartford-Willimantic, CT              | 119          |
|                                     | Minneapolis-St. Paul-St. Cloud, MN-WI               | 115          |
|                                     | San Diego-Carlsbad-San Marcos, CA                   | 115          |
| Production                          | Detroit-Warren-Flint, MI                            | 117          |
|                                     | Sacramento-Arden-Arcade-Truckee, CA-NV              | 117          |
|                                     | Bloomington-Normal, IL                              | 116          |
|                                     | Seattle-Tacoma-Olympia, WA                          | 115          |
|                                     | Providence-New Bedford-Fall River, RI-MA            | 113          |
| Transportation and material moving  | Seattle-Tacoma-Olympia, WA                          | 117          |
|                                     | Minneapolis-St. Paul-St. Cloud, MN-WI               | 114          |
|                                     | Boston-Worcester-Manchester, MA-NH                  | 111          |
|                                     | Kansas City, MO-KS                                  | 110          |
|                                     | Salinas, CA   | 109          |
|                                     | San Jose-San Francisco-Oakland, CA                  | 109          |

The pay relative for production occupations in the Detroit-Warren-Flint, MI and Sacramento-Arden-Arcade-Truckee, CA-NV areas was 117, meaning the pay in these two metropolitan areas averaged 17 percent more than the national average pay for that occupational group. By contrast, the pay relative for production workers in the Brownsville-Harlingen, Texas area was 80, meaning pay for workers in those occupations averaged 20 percent less than the national average. (See table 1.)

Statistical significance measures are not available for news release and area-to-area comparison tables.

**NOTICE OF FINAL NEWS RELEASE**

This is the final Occupational Pay Comparisons Among Metropolitan Areas news release. Funding for the Locality Pay Survey program is ending. However, the other programs of the National Compensation Survey, such as the Employment Cost Index, Employer Costs for Employee Compensation, and benefit publications will continue to be produced.

## TECHNICAL NOTE

### Pay relative controls and calculations

Pay relatives control for differences among areas in occupational composition as well as establishment and occupational characteristics. Metropolitan areas often differ greatly in the composition of establishments and occupations that are available to the local workforce. For example, in Brownsville-Harlingen, Texas, the ratio of workers in the high-paying management, business, and financial occupational group to the number of workers in all occupations is under 6 percent, whereas nationally this ratio is nearly 10 percent.<sup>1</sup> In addition to these factors, the NCS collects compensation data for metropolitan areas at different times during the year. Payroll reference dates differ between areas, which makes direct comparisons between areas difficult.

The pay relative approach controls for these differences to isolate the geographic effect on wages. To illustrate the importance of controlling for these effects, consider the following example. The average pay for construction and extraction workers in the New York-Newark-Bridgeport, NY-NJ-CT-PA metropolitan area in 2010 was \$32.54 and in the United States, \$21.18.<sup>2</sup> A simple pay comparison can be calculated from the ratio of the two average pay levels, multiplied by 100 to express the comparison as a percentage. The pay comparison in the example is calculated as:

$$(\$32.54 \div \$21.18) * 100 \cong 154$$

This comparison does not control for differences between New York and the nation in the mix of occupations, industries, and other factors. A more accurate estimate of the geographic effect of wages in New York can be obtained by taking these differences into account. Controlling for differences in occupational composition, establishment and occupational characteristics, and the payroll reference date in New York relative to the nation as a whole, the pay relative for construction and extraction occupations in New York is 129.

### Survey methodology

Pay relatives were estimated using a multivariate regression technique designed to control for interarea differences. This technique controls for the following ten characteristics:

- Occupational type
- Industry type
- Work level
- Full-time / part-time status
- Time / incentive status
- Union / nonunion status
- Ownership type
- Profit / non-profit status
- Establishment employment
- Payroll reference date

Even accounting for the characteristics used in the current regression analysis, there is still wage variation across the areas. The variation is due to differences in wage determinants that were not included in the model. Examples of these determinants include price levels, environmental amenities such as a pleasant climate, and cultural amenities.

Historical pay relatives data are available for the survey years 1992-1996, 1998, 2002, 2004-2009. There are several differences between the recent pay relatives and the pay relatives for earlier years, including different industry and occupation classification systems, varying methodology, and different survey designs. These differences limit comparability. The pay relatives since 2004 have been calculated using the same industry and occupation classification systems, methodology, and survey design. Nonetheless, comparisons between the estimates for these years should be made only with caution.

For more details on survey design, methodology, classification systems, recent changes in the survey, and appropriate uses and limitations of the data, see *BLS Handbook of Methods*, Chapter 8, “National Compensation Measures,” available on the Internet at [http://www.bls.gov/opub/hom/homch8\\_a.htm](http://www.bls.gov/opub/hom/homch8_a.htm), especially the major section “Area-to-Nation and Area-to-Area Pay Comparisons.”

### Obtaining information

Articles, bulletins, and other information from the National Compensation Survey may be obtained by calling (202) 691-6199, sending email to [NCSinfo@bls.gov](mailto:NCSinfo@bls.gov), or visiting the Internet site <http://www.bls.gov/ncs>. Information in this release will be made available to sensory impaired individuals upon request. Voice phone: (202) 691-5200; Federal Relay Service Number: 1-800-877-8339.

<sup>1</sup>Data for this example are based on the May 2010 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, on the Internet at <http://www.bls.gov/oes/current/oessrcma.htm>.

<sup>2</sup> Average pay for construction and extraction workers in New York and for the United States are based on wage estimates published in *New York-Newark-Bridgeport, NY-NJ-CT-PA National Compensation Survey, May 2010* and *National Compensation Survey: Occupational Earnings in the United States, 2010*, on the Internet at <http://www.bls.gov/ncs/ocs/compub.htm>.

Table 1. Pay relatives for major occupational groups in metropolitan areas, National Compensation Survey, July 2010

(Average pay nationally for all occupations and for each occupational group shown = 100.)

| Metropolitan Area <sup>1</sup>                                    | All occupations | Management, business, and financial | Professional and related | Service | Sales and related | Office and administrative support | Construction and extraction | Installation, maintenance, and repair | Production | Transportation and material moving |
|---|-----------------|-------------------------------------|--------------------------|---------|-------------------|-----------------------------------|-----------------------------|---------------------------------------|------------|------------------------------------|
| United States .....   | 100             | 100                                 | 100                      | 100     | 100               | 100                               | 100                         | 100                                   | 100        | 100                                |
| Amarillo, TX .....  | 88              | 94                                  | 79                       | 90      | 96                | 90                                | 88                          | 97                                    | 88         | 92                                 |
| Atlanta-Sandy Springs-Gainesville, GA-AL .....                    | 98              | 101                                 | 101                      | 94      | 95                | 101                               | 86                          | 94                                    | 97         | 105                                |
| Austin-Round Rock-San Marcos, TX .....                            | 94              | 92                                  | 92                       | 91      | 102               | 95                                | 84                          | 108                                   | 90         | 97                                 |
| Birmingham-Hoover, AL .....                                       | 94              | 93                                  | 98                       | 98      | 89                | 97                                | 80                          | 97                                    | 94         | 99                                 |
| Bloomington, IN .....   | 91              | 94                                  | 88                       | 86      | 86                | 92                                | 83                          | 93                                    | 104        | 100                                |
| Bloomington-Normal, IL .....                                      | 100             | 91                                  | 103                      | 99      | 103               | 97                                | 118                         | 86                                    | 116        | 100                                |
| Boston-Worcester-Manchester, MA-NH .....                          | 111             | 102                                 | 111                      | 112     | 107               | 114                               | 115                         | 113                                   | 108        | 111                                |
| Brownsville-Harlingen, TX .....                                   | 80              | 84                                  | 88                       | 88      | 71                | 80                                | 68                          | 79                                    | 80         | 77                                 |
| Buffalo-Niagara-Cattaraugus, NY .....                             | 97              | 95                                  | 90                       | 101     | 92                | 94                                | 107                         | 97                                    | 110        | 101                                |
| Charleston-North Charleston-Summerville, SC .....                 | 94              | 91                                  | 98                       | 88      | 105               | 92                                | 83                          | 95                                    | 108        | 98                                 |
| Charlotte-Gastonia-Rock Hill, NC-SC .....                         | 99              | 101                                 | 97                       | 98      | 103               | 101                               | 87                          | 104                                   | 100        | 95                                 |
| Chicago-Naperville-Michigan City, IL-IN-WI .....                  | 106             | 105                                 | 107                      | 106     | 103               | 107                               | 129                         | 109                                   | 103        | 104                                |
| Cincinnati-Middletown-Wilmington, OH-KY-IN .....                  | 100             | 103                                 | 97                       | 99      | 110               | 100                               | 80                          | 100                                   | 102        | 105                                |
| Cleveland-Akron-Elyria, OH .....                                  | 100             | 102                                 | 98                       | 99      | 98                | 102                               | 109                         | 112                                   | 101        | 101                                |
| Columbus-Marion-Chillicothe, OH .....                             | 100             | 96                                  | 96                       | 102     | 104               | 102                               | 108                         | 102                                   | 104        | 99                                 |
| Corpus Christi, TX .....  | 90              | 80                                  | 91                       | 88      | 90                | 87                                | 96                          | 108                                   | 96         | 91                                 |
| Dallas-Fort Worth, TX .....                                       | 98              | 98                                  | 100                      | 93      | 102               | 99                                | 89                          | 98                                    | 93         | 100                                |
| Dayton-Springfield-Greenville, OH .....                           | 96              | 99                                  | 92                       | 101     | 95                | 92                                | 92                          | 98                                    | 99         | 99                                 |
| Denver-Aurora-Boulder, CO .....                                   | 102             | 97                                  | 101                      | 106     | 106               | 104                               | 94                          | 111                                   | 100        | 101                                |
| Detroit-Warren-Flint, MI .....                                    | 102             | 98                                  | 105                      | 95      | 99                | 100                               | 103                         | 98                                    | 117        | 104                                |
| Elkhart-Goshen, IN .....  | 93              | 97                                  | 90                       | 100     | 95                | 94                                | 103                         | 86                                    | 93         | 100                                |
| Fort Collins-Loveland, CO .....                                   | 101             | 96                                  | 98                       | 102     | 98                | 97                                | 100                         | 133                                   | 107        | 107                                |
| Grand Rapids-Wyoming, MI .....                                    | 100             | 90                                  | 98                       | 101     | 114               | 101                               | 104                         | 91                                    | 102        | 96                                 |
| Great Falls, MT .....   | 91              | 96                                  | 77                       | 103     | 92                | 83                                | 96                          | 95                                    | 83         | 100                                |
| Greensboro-High Point, NC .....                                   | 95              | 100                                 | 98                       | 92      | 93                | 96                                | 87                          | 91                                    | 99         | 103                                |
| Greenville-Mauldin-Easley, SC .....                               | 95              | 99                                  | 93                       | 96      | 93                | 95                                | 77                          | 82                                    | 110        | 98                                 |
| Hartford-West Hartford-Willimantic, CT .....                      | 111             | 107                                 | 109                      | 119     | 107               | 114                               | 112                         | 112                                   | 109        | 107                                |
| Hickory-Lenoir-Morganton, NC .....                                | 95              | 93                                  | 84                       | 94      | 91                | 91                                | 95                          | 93                                    | 104        | 102                                |
| Honolulu, HI .....  | 105             | 104                                 | 101                      | 114     | 104               | 98                                | 115                         | 109                                   | 112        | 95                                 |
| Houston-Baytown-Huntsville, TX .....                              | 99              | 101                                 | 105                      | 91      | 102               | 101                               | 90                          | 97                                    | 98         | 95                                 |
| Huntsville-Decatur, AL .....                                      | 98              | 104                                 | 102                      | 93      | 99                | 95                                | 91                          | 94                                    | 99         | 96                                 |
| Indianapolis-Anderson-Columbus, IN .....                          | 95              | 86                                  | 96                       | 94      | 82                | 97                                | 98                          | 103                                   | 104        | 97                                 |
| Iowa City, IA .....   | 98              | 98                                  | 94                       | 99      | 98                | 103                               | 118                         | 93                                    | 98         | 105                                |
| Johnstown, PA .....   | 88              | 86                                  | 85                       | 94      | 91                | 90                                | 95                          | 78                                    | 88         | 86                                 |
| Kansas City, MO-KS .....  | 99              | 93                                  | 100                      | 96      | 101               | 97                                | 95                          | 101                                   | 106        | 110                                |
| Kennebec-Pasco-Richland, WA .....                                 | 105             | 103                                 | 99                       | 109     | 107               | 104                               | 107                         | 102                                   | 96         | 108                                |
| Knoxville, TN .....   | 90              | 97                                  | 98                       | 78      | 94                | 90                                | 86                          | 92                                    | 91         | 94                                 |
| Lincoln, NE .....   | 87              | 78                                  | 84                       | 91      | 82                | 90                                | 82                          | 88                                    | 92         | 94                                 |
| Los Angeles-Long Beach-Riverside, CA .....                        | 108             | 108                                 | 107                      | 111     | 108               | 107                               | 108                         | 109                                   | 100        | 105                                |
| Louisville/Jefferson County-Elizabethtown-Scottsburg, KY-IN ..... | 96              | 89                                  | 96                       | 99      | 101               | 98                                | 100                         | 92                                    | 103        | 89                                 |

See footnotes at end of table.

Table 1. Pay relatives for major occupational groups in metropolitan areas, National Compensation Survey, July 2010 — Continued

(Average pay nationally for all occupations and for each occupational group shown = 100.)

| Metropolitan Area <sup>1</sup>                               | All occupations | Management, business, and financial | Professional and related | Service | Sales and related | Office and administrative support | Construction and extraction | Installation, maintenance, and repair | Production | Transportation and material moving |
|--|-----------------|-------------------------------------|--------------------------|---------|-------------------|-----------------------------------|-----------------------------|---------------------------------------|------------|------------------------------------|
| Memphis, TN-MS-AR .....                                      | 95              | 96                                  | 95                       | 88      | 99                | 97                                | 92                          | 96                                    | 93         | 92                                 |
| Miami-Fort Lauderdale-Pompano Beach, FL ...                  | 97              | 104                                 | 89                       | 98      | 99                | 99                                | 96                          | 98                                    | 96         | 100                                |
| Milwaukee-Racine-Waukesha, WI .....                          | 102             | 99                                  | 96                       | 99      | 109               | 100                               | 115                         | 100                                   | 108        | 104                                |
| Minneapolis-St. Paul-St. Cloud, MN-WI .....                  | 107             | 102                                 | 102                      | 115     | 107               | 105                               | 111                         | 108                                   | 109        | 114                                |
| Mobile, AL .....   | 90              | 98                                  | 91                       | 90      | 87                | 92                                | 102                         | 82                                    | 96         | 103                                |
| New Orleans-Metairie-Kenner, LA .....                        | 98              | 94                                  | 103                      | 90      | 102               | 99                                | 90                          | 106                                   | 111        | 104                                |
| New York-Newark-Bridgeport, NY-NJ-CT-PA ..                   | 114             | 120                                 | 114                      | 114     | 108               | 115                               | 129                         | 110                                   | 106        | 103                                |
| Ocala, FL .....  | 87              | 84                                  | 85                       | 88      | 89                | 95                                | 81                          | 91                                    | 85         | 93                                 |
| Oklahoma City, OK .....                                      | 92              | 97                                  | 90                       | 95      | 99                | 87                                | 115                         | 84                                    | 81         | 104                                |
| Orlando-Kissimmee-Sanford, FL .....                          | 91              | 89                                  | 84                       | 93      | 94                | 92                                | 95                          | 95                                    | 100        | 105                                |
| Palm Bay-Melbourne-Titusville, FL .....                      | 92              | 81                                  | 87                       | 94      | 96                | 89                                | 97                          | 95                                    | 98         | 102                                |
| Philadelphia-Camden-Vineland,<br>PA-NJ-DE-MD .....           | 104             | 103                                 | 104                      | 101     | 98                | 109                               | 108                         | 107                                   | 99         | 105                                |
| Phoenix-Mesa-Glendale, AZ .....                              | 99              | 105                                 | 103                      | 98      | 101               | 99                                | 86                          | 98                                    | 95         | 99                                 |
| Pittsburgh-New Castle, PA .....                              | 95              | 88                                  | 95                       | 93      | 94                | 95                                | 95                          | 96                                    | 101        | 97                                 |
| Portland-Vancouver-Hillsboro, OR-WA .....                    | 105             | 101                                 | 103                      | 110     | 106               | 106                               | 106                         | 114                                   | 104        | 101                                |
| Providence-New Bedford-Fall River, RI-MA .....               | 104             | 95                                  | 105                      | 105     | 103               | 107                               | 114                         | 110                                   | 113        | 104                                |
| Reading, PA .....  | 101             | 104                                 | 106                      | 97      | 102               | 102                               | 101                         | 96                                    | 102        | 100                                |
| Reno-Sparks, NV .....  | 101             | 108                                 | 98                       | 99      | 103               | 102                               | 98                          | 104                                   | 102        | 101                                |
| Richmond, VA .....   | 98              | 96                                  | 96                       | 94      | 97                | 102                               | 90                          | 102                                   | 100        | 98                                 |
| Rochester, NY .....  | 101             | 103                                 | 101                      | 103     | 105               | 100                               | 101                         | 96                                    | 106        | 107                                |
| Rockford, IL .....   | 98              | 88                                  | 93                       | 101     | 100               | 97                                | 116                         | 95                                    | 99         | 104                                |
| Sacramento-Arden-Arcade-Truckee, CA-NV ...                   | 108             | 104                                 | 110                      | 111     | 109               | 103                               | 117                         | 110                                   | 117        | 108                                |
| Salinas, CA .....  | 113             | 108                                 | 115                      | 123     | 124               | 107                               | 116                         | 119                                   | 93         | 109                                |
| San Antonio-New Braunfels, TX .....                          | 92              | 91                                  | 96                       | 92      | 90                | 94                                | 97                          | 97                                    | 90         | 91                                 |
| San Diego-Carlsbad-San Marcos, CA .....                      | 107             | 105                                 | 106                      | 115     | 108               | 104                               | 106                         | 107                                   | 101        | 102                                |
| San Jose-San Francisco-Oakland, CA .....                     | 120             | 108                                 | 120                      | 126     | 124               | 120                               | 128                         | 124                                   | 109        | 109                                |
| Seattle-Tacoma-Olympia, WA .....                             | 112             | 105                                 | 109                      | 123     | 109               | 108                               | 115                         | 103                                   | 115        | 117                                |
| Springfield, MA .....  | 107             | 97                                  | 110                      | 111     | 99                | 106                               | 114                         | 97                                    | 105        | 106                                |
| Springfield, MO .....  | 89              | 93                                  | 85                       | 89      | 92                | 88                                | 83                          | 86                                    | 97         | 92                                 |
| St. Louis, MO-IL .....                                       | 100             | 96                                  | 101                      | 97      | 99                | 102                               | 107                         | 111                                   | 98         | 97                                 |
| Tallahassee, FL .....  | 88              | 78                                  | 82                       | 92      | 92                | 90                                | 97                          | 90                                    | 85         | 92                                 |
| Tampa-St. Petersburg-Clearwater, FL .....                    | 93              | 95                                  | 88                       | 96      | 92                | 96                                | 93                          | 90                                    | 89         | 93                                 |
| Virginia Beach-Norfolk-Newport News,<br>VA-NC .....          | 92              | 88                                  | 92                       | 90      | 93                | 95                                | 87                          | 97                                    | 91         | 89                                 |
| Visalia-Porterville, CA .....                                | 99              | 87                                  | 105                      | 107     | 102               | 93                                | 95                          | 99                                    | 103        | 99                                 |
| Washington-Baltimore-Northern Virginia,<br>DC-MD-VA-WV ..... | 109             | 105                                 | 111                      | 106     | 109               | 112                               | 106                         | 112                                   | 107        | 105                                |
| York-Hanover, PA .....                                       | 97              | 101                                 | 100                      | 96      | 98                | 95                                | 101                         | 93                                    | 103        | 102                                |
| Youngstown-Warren-Boardman, OH-PA .....                      | 91              | 98                                  | 89                       | 90      | 92                | 92                                | 90                          | 96                                    | 100        | 87                                 |

<sup>1</sup> A metropolitan area can be a Metropolitan Statistical Area (MSA) or Combined Statistical Area (CSA) as defined by the Office of Management and Budget, December 2003.