



Beyond averages:

Other ways to look at occupational wages

by Ben Cover

Jobseekers might consider it in choosing a career. Workers refer to it when they negotiate their salaries. Employers consult it to decide whether relocating a business would reduce costs.

The “it” is information on average wages for an occupation. Such information is a useful tool for gauging an occupation’s earnings potential. But data on average wages mask important differences within an occupation. For example, averages don’t tell you what you’ll probably earn as an entry-level worker. And they don’t tell you how high your salary could rise.

Workers in a given occupation may earn more or less than the average because of a number of factors, including their skills and experience, the industry and location in which they work, their specific employer, and, in some cases, their ability to negotiate a higher wage.

To learn that kind of information, you’ll need to look beyond averages. A good place to start is with the U.S. Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) program. OES data on wage

distributions, or percentiles, provide more and better information on wage variability and earnings potential within an occupation. And data showing how wages vary by industry and location give additional details.

Understanding percentiles

The OES program provides estimates of the wages earned by the 10th-, 25th-, 50th-, 75th-, and 90th-percentile workers in each occupation. These data, called percentiles, provide details that averages omit about the range of wages workers can expect.

Interpreting percentiles is straightforward: A percentile shows what proportion of workers in an occupation earned below and above a given amount. (See the box on page 16.) Ten percent of workers in an occupation earned wages at or below that occupation’s 10th percentile, for example, and 90 percent earned above that amount. In the same way, 25 percent of workers earned at or below the 25th percentile, and 75 percent earned above it. And half earned at or below the 50th percentile—also called the median—and half above.

People just starting out in a new career

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might expect to be among the lowest wage earners for their occupation. Thus, the 10th percentile is sometimes used as an estimate—a very rough one—of what starting salaries might be. In contrast, very experienced workers are usually the highest earners in their occupation and are most likely the ones earning wages at or above the 75th percentile.

But wages depend on more than experience. Several factors, such as a job’s location and the industry in which it is found, also affect how much workers earn.

Comparing occupations by their percentile wages can help jobseekers assess an occupation’s potential for high or low wages. Chart 1 shows five occupations that have different potentials for higher wages. All of the occupations in the chart had 10th-percentile wages between \$9.69 and \$9.73 per hour in May 2006, but wages varied considerably at the 90th percentile. For example, the 10th-percentile wages for real estate agents and word processors were nearly the same at \$9.70 and \$9.71 per hour, respectively—but the top-

earning 10 percent of real estate agents (those at the 90th percentile) made at least \$53.61, and the top-earning 10 percent of word processors made at least \$20.83.

Many people use median wages to compare the earning potential of occupations. But occupations with similar median earnings can have widely differing financial prospects.

Consider that the occupations in chart 2 all had median wages between \$30.10 and \$33.35 per hour in May 2006. Some of them offer very different wages to workers at the bottom and top of the earnings spectrum. For example, the hourly wage range for nuclear power reactor operators was much smaller than that for fashion designers: 80 percent of nuclear power reactor operators earned between \$26.05 and \$44.35, but the same percentage of fashion designers earned between \$14.42 and \$56.31.

In general, occupations with higher wages overall have more wage variation than those paying less. Table 1 shows the occupations that had the highest percent earnings variation

Chart 1
Selected occupations with similar wages at the 10th percentile
but wide variation at the 90th percentile, May 2006

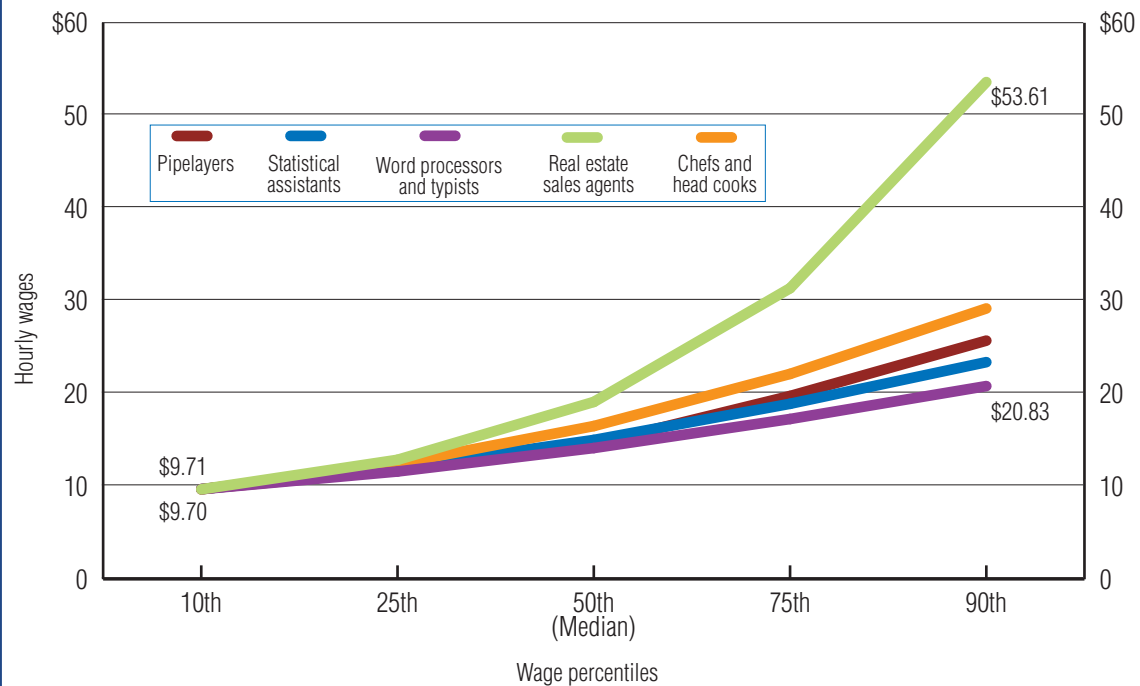


Table 1
Employment and wages for the occupations with the largest wage range percentages, May 2006*

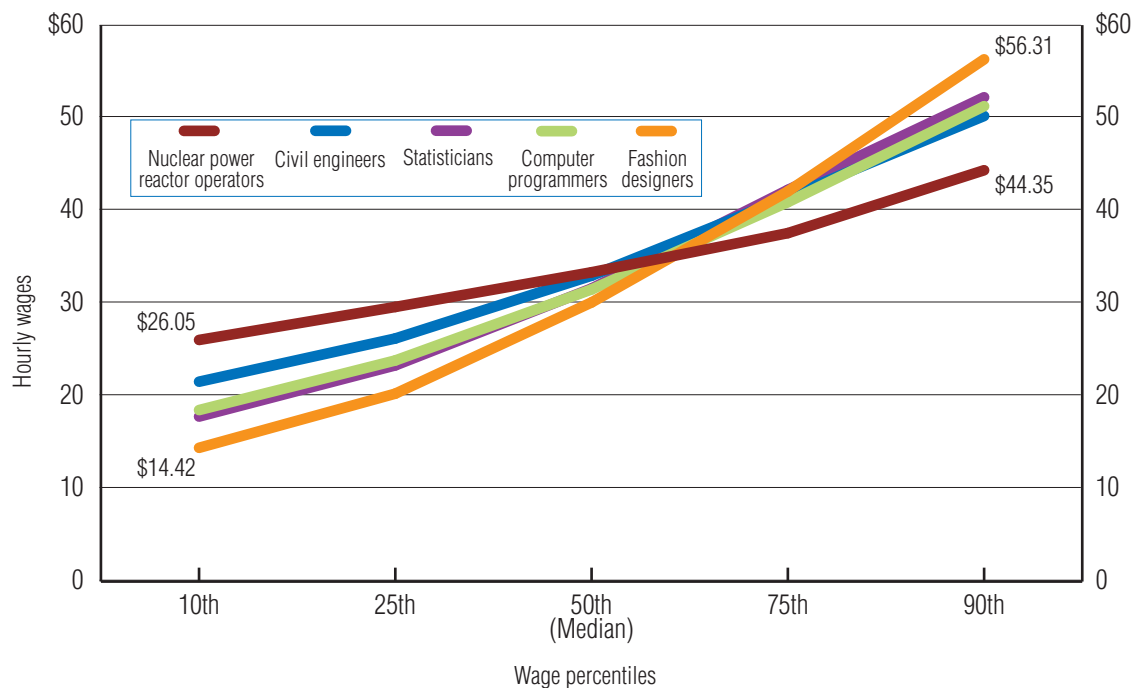
Occupation	Employment	Median wage	75th-percentile wage	25th-percentile wage	Wage range	Wage range percentage
Musicians and singers	46,600	\$19.73	\$36.55	\$10.81	\$25.74	238%
Agents and business managers of artists, performers, and athletes	11,130	31.01	55.00	18.10	36.90	204
Securities, commodities, and financial services sales agents	260,360	32.93	60.72	20.50	40.22	196
Makeup artists, theatrical and performance	1,250	15.30	25.06	8.69	16.37	188
Broadcast news analysts	6,770	22.46	40.08	14.46	25.62	177
Real estate brokers	46,950	29.23	49.13	18.17	30.96	170
Actors	51,880	11.61	22.51	8.47	14.04	166
Personal financial advisors	119,690	31.79	54.93	21.22	33.71	159
Music directors and composers	9,470	19.11	29.02	11.38	17.64	155
Judges, magistrate judges, and magistrates	25,870	48.89	64.91	25.92	38.99	150

Table 2
Employment and wages for the occupations with the smallest wage range percentages, May 2006*

Occupation	Employment	Median wage	75th-percentile wage	25th-percentile wage	Wage range	Wage range percentage
Postal Service clerks	81,670	\$21.54	\$23.03	\$20.06	\$2.97	15%
Postal Service mail sorters, processors, and processing machine operators	203,110	21.10	22.81	19.40	3.41	18
Postal Service mail carriers	346,990	21.32	23.27	19.37	3.90	20
Farmworkers and laborers, crop, nursery, and greenhouse	230,780	7.95	8.85	7.26	1.59	22
Roof bolters, mining	4,240	19.83	22.09	17.70	4.39	25
Nuclear power reactor operators	3,750	33.35	37.57	29.61	7.96	27
Dishwashers	502,770	7.57	8.62	6.78	1.84	27
Shuttle car operators	2,860	18.78	21.12	16.59	4.53	27
Signal and track switch repairers	5,980	24.11	26.97	21.18	5.79	27
Cooks, fast food	612,020	7.41	8.51	6.60	1.91	29

* Not included: occupations for which hourly wage data are not available.

Chart 2
Selected occupations with similar medians but widely varying
wage ranges, May 2006



in May 2006, with musicians and singers topping the list. Of the occupations with the most variation, theatrical and performance makeup artists and actors are the only two that had median wages below the national average for all occupations.

Table 2 shows that occupations with lower average wages tend to show less variation—to a point. Postal service clerks, the occupation with the smallest percentage variation in May 2006, had relatively high average wages. Among the factors contributing to its relatively small wage range is that this occupation has a single employer: the Federal Government.

Wages by industry

Besides a worker's experience, one of the main reasons for wage variation is the industry in which a worker is employed. Employers in different industries often pay different wages. Consider sales managers, for example. In May 2006, median wages in the 10 industries with the highest levels of employment for sales managers varied from \$24.55 in department stores to \$59.94 in computer systems design and related services. (See table 3.)

BLS percentile data can show how wages vary within an industry, too. Sales managers

in computer systems design and related services, for example, had earnings ranging from \$29.88 an hour at the 10th percentile to more than \$70 an hour at the 90th percentile.

Workers in lower paying occupations often have less variability in their wages, even across industries. Dishwashers, for example, had one of the lowest average wages and one of the smallest wage ranges in May 2006. Workers in this occupation saw little difference in average wages from one industry to another. In fact, of the 10 industries that employed the most dishwashers, the median hourly wage varied from \$7.21 in limited-service eating places to \$8.37 in the traveler accommodation industry.

Wages by location

A job's location also affects wages. OES data illustrate how much an occupation's wages can differ by State and metropolitan area.

Table 4 shows wage variation, by location, for securities, commodities, and financial services sales agents in the 10 metropolitan areas that employed them most. In these areas in May 2006, median hourly wages in that occupation varied from \$25.10 in the Phoenix-Mesa-Scottsdale, Arizona, area to more than





\$70 in the Bridgeport-Stamford-Norwalk, Connecticut, area. That's a difference of more than \$44 an hour.

Some lower paying occupations had less variability. Fast-food cooks, for example, had one of the smallest wage ranges in May 2006—both overall and across locations. In the 10 locations with the highest levels of employment for fast-food cooks, the median wage varied by only \$1.08 per hour: from \$6.89 in the Las Vegas-Paradise, Nevada, area to \$7.97 in the Sacramento-Arden-Arcade-Roseville, California, area.

For more information

Visit the OES program's Web site to get wage information for about 800 occupations. The site offers percentile data and data on wages according to industry, State, and more than 480 metropolitan and nonmetropolitan areas. See, for example, the occupational profiles at www.bls.gov/oes/current/oes_stru.htm.

For even more detail, use the “create

your own tables” feature at data.bls.gov/oes/search.jsp?data_tool=OES. This feature allows searchers to get detailed wage data for occupations in different industries and locations.

To learn more—or to get data by phone, fax, or mail—contact the OES office at Occupational Employment Statistics
2 Massachusetts Ave. NE.

Suite 2135

Washington, DC 20212

(202) 691-6569

www.bls.gov/oes

For information about other sources of earnings data, see “Earnings data from BLS: What we have and how to find it” in the summer 2007 issue of the *OOQ*.

And see the *Occupational Outlook Handbook* for more BLS analysis of occupational earnings. The *Handbook* is available at many libraries and career centers and online at

www.bls.gov/oco.

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A look at percentiles

The average annual salary for a reporter or correspondent was \$41,900 in May 2006. A good amount, you think. But when it comes to occupational wage data, averages aren't all you need to know.

For example, the median salary for reporters in May 2006 was \$33,470—more than \$8,400 less than the average. Percentile data provide a broader look at reporters' wages than the average does.

The OES program makes percentile figures available every year for about 800 occupations. Data are presented in a variety of formats, including this one:

Wage estimates for reporters and correspondents, May 2006

Percentile	10th	25th	50th (Median)	75th	90th
Annual salary	\$19,180	\$24,370	\$33,470	\$51,700	\$73,880

Half earned between \$24,370 and \$51,700.

Table 3**Employment and wages for sales managers in the industries with the highest levels of employment of sales managers, May 2006**

Industry	Employment	Median wage	75th-percentile wage	25th-percentile wage	Wage range
Automobile dealers	22,100	\$48.61	\$67.64	\$34.94	\$32.70
Managers of companies and enterprises	21,490	47.23	64.61	33.39	31.22
Wholesale electronic markets and agents and brokers	8,870	51.64	≥70.00	37.42	≥32.58
Professional and commercial equipment and supplies merchant wholesalers	7,690	54.24	≥70.00	39.79	≥30.21
Machinery, equipment, and supplies merchant wholesalers	7,580	44.93	64.15	32.26	31.89
Computer systems design and related services	7,260	59.94	≥70.00	42.58	≥27.42
Insurance carriers	6,950	48.19	69.23	34.81	34.42
Department stores	6,000	24.55	30.13	20.79	9.34
Depository credit intermediation	5,910	45.34	68.18	29.40	38.78
Grocery and related product wholesalers	5,620	39.92	57.59	30.03	27.56

Table 4**Employment and wages for securities, commodities, and financial services sales agents in the metropolitan areas in which they have the highest concentration of employment, May 2006**

Metropolitan area	Employment	Median wage	75th-percentile wage	25th-percentile wage	Wage range
New York-White Plains-Wayne, New York-New Jersey	31,910	\$46.43	≥\$70.00	\$27.90	≥\$42.10
Chicago-Naperville-Joliet, Illinois	13,580	28.81	52.57	19.30	33.27
Los Angeles-Long Beach-Glendale, California	9,580	35.16	62.67	22.38	40.29
San Francisco-San Mateo-Redwood City, California	6,760	55.99	≥70.00	32.88	≥37.12
Minneapolis-St. Paul-Bloomington, Minnesota-Wisconsin	6,680	31.87	57.90	19.95	37.95
Boston-Cambridge-Quincy, Massachusetts	6,400	52.30	≥70.00	26.63	≥43.37
Houston-Sugar Land-Baytown, Texas	4,800	49.28	≥70.00	21.83	≥48.17
Santa Ana-Anaheim-Irvine, California	4,750	31.40	56.90	22.90	34.00
Phoenix-Mesa-Scottsdale, Arizona	4,640	25.10	44.89	15.42	29.47
Bridgeport-Stamford-Norwalk, Connecticut	4,610	≥70.00	≥70.00	45.14	≥24.86