Employment and Wages by Major Occupational Group and Industry

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The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates of workers in all U.S. industries. The survey is based on a sample of 1.2 million business establishments and over 80 million workers. The data are collected in six semiannual panels over a 3-year period. This survey design permits estimation and analysis of wage distributions by occupational employment across all industries, as well as within individual industries and by detailed geographic areas. More information about the survey is found in appendix B of this bulletin.
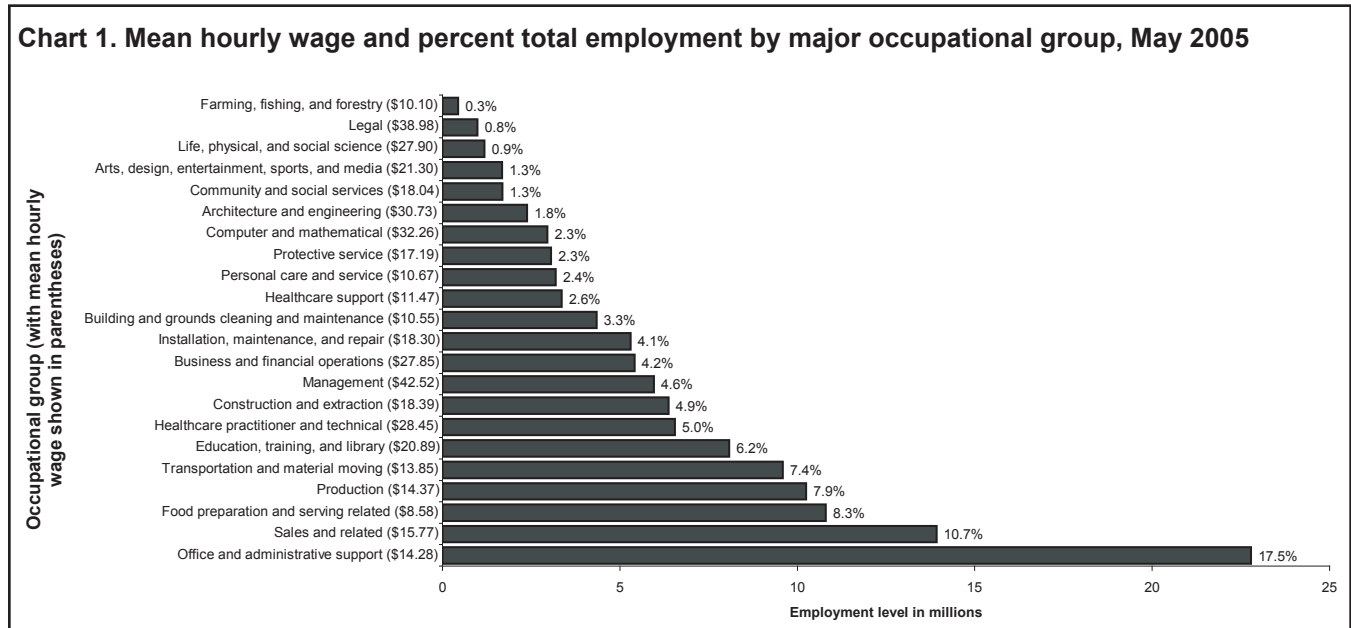
The following analysis examines employment and wages by major occupational group across all industries, as well as wages for detailed occupations in selected industries.

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Employment and wages by major occupational group

The OES survey uses the Standard Occupational Classification system (SOC), which categorizes workers into 801 detailed occupations and aggregates these detailed occupations into 22 major occupational groups. Chart 1 displays total employment for millions of workers, the percentage of total employment, and the mean wage for each group. The chart is organized by employment, with the largest occupational group on the bottom and the smallest group on the top.

In terms of employment level, the 22 occupational groups can be placed into three broad categories. The first consists of five groups with the largest employment. They are office and administrative support; sales and related; food preparation and serving related; production; and transportation and material moving. These groups together account for more than half of total employment, or more than 67 million work-

Chart 1. Mean hourly wage and percent total employment by major occupational group, May 2005

ers. Of the five groups, the office and administrative support group, with about 22.8 million workers, is the largest, and the transportation and material-moving group, with about 9.6 million workers, is the smallest. The mean wage in each of these five major groups is less than the mean wage for all workers across occupational groups ($18.21). The food preparation and serving related group has a mean wage of $8.58 per hour, the lowest among all occupational groups.

The second category consists of six occupational groups with midsize employment. Accounting for about 29 percent of total employment, or about 38 million workers, these groups are education, training, and library; healthcare practitioner and technical; construction and extraction; management; business and financial operations; and installation, maintenance, and repair. The mean wage estimates in these groups range from more than twice the mean wage for all workers to wages that are about the same as the mean for all workers. The management group, with about 6.0 million workers, has the fourth largest employment among the midsize occupational groups and the highest mean wage among occupational groups. The installation, maintenance, and repair group, with 5.3 million workers, has the smallest employment and the lowest mean wage among midsize occupational groups.

The remaining 11 occupational groups account for 19.4 percent of total employment, or 25.3 million workers. Among these, the building and ground cleaning and maintenance group, with around 4.3 million workers, has the largest em-

ployment, and farming, fishing, and forestry, with fewer than 0.5 million workers, has the smallest. Three of the 11 smallest occupational groups—legal; computer and mathematical; and architecture and engineering—have the second, third, and fourth highest mean wage, respectively, among occupational groups. Another three—farming, fishing, and forestry; building and grounds cleaning and maintenance; and personal care and service—have the second, third, and fourth lowest mean wage, respectively, among occupational groups.
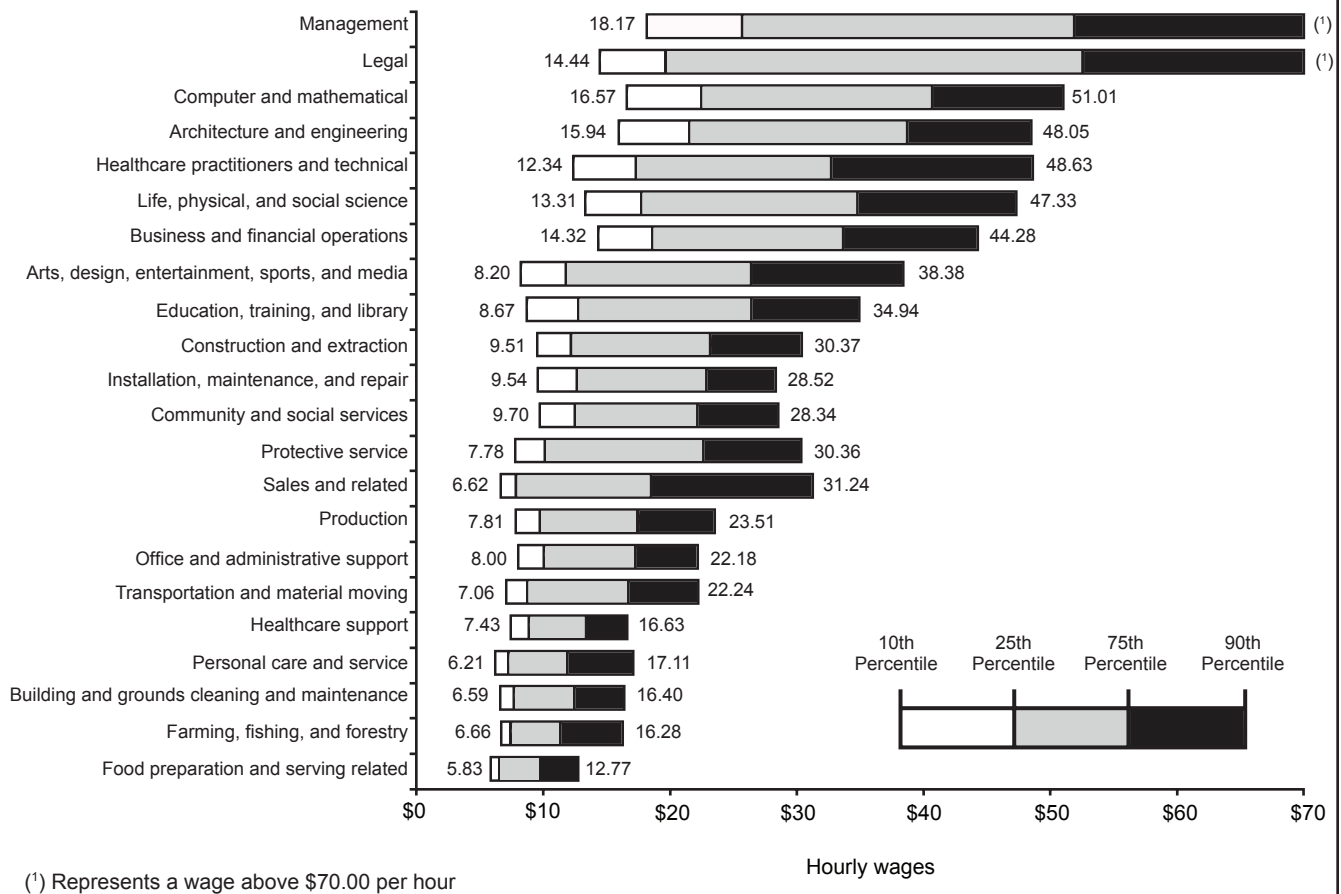
Percentile wages by occupational group

In addition to total employment and mean wage by major occupational group, table 1 displays the 10th-, 25th-, 50th-, 75th-, and 90th-percentile wages for each of the 22 major occupational groups. A percentile wage shows the percentage of workers in an occupation who earn less than a given wage and the percentage who earn more. For example, the 50th-percentile wage, or median wage, is the pay level at which 50 percent of workers earn more and 50 percent earn less. Likewise, 10 percent of workers earn the 10th-percentile wage or less, and 90 percent of workers earn the 90th-percentile wage or less. The middle 80 percent of workers in an occupational group earn wages between these two endpoints.

As indicated earlier, the lowest paid occupational group is food preparation and serving related occupations. This is clearly indicated by the fact that, for each percentile wage shown in the table, the food preparation and serving related group wage is lower than that for any of the other groups. In

Table 1. **Percentile wages by major occupational group, May 2005**

Major occupational group	Employment	Hourly earnings					
		10th percentile	25th percentile	50th percentile	75th percentile	90th percentile	Mean wage
Total	130,307,840	7.26	9.46	14.15	22.20	33.74	18.21
Management	5,960,560	18.17	25.67	37.32	53.73	(1)	42.52
Legal	986,740	14.44	19.64	30.24	52.53	(1)	38.98
Computer and mathematical	2,952,740	16.57	22.47	30.74	40.64	51.01	32.26
Architecture and engineering	2,382,480	15.94	21.52	28.94	38.69	48.50	30.73
Healthcare practitioner and technical	6,547,350	12.34	17.30	23.83	32.69	48.63	28.45
Life, physical, and social science	1,185,730	13.31	17.71	24.78	34.77	47.33	27.90
Business and financial operations	5,410,410	14.32	18.58	24.88	33.62	44.28	27.85
Arts, design, entertainment, sports, and media	1,683,310	8.20	11.78	17.71	26.35	38.38	21.30
Education, training, and library	8,078,500	8.67	12.74	19.04	26.41	34.94	20.89
Construction and extraction	6,370,400	9.51	12.18	16.66	23.12	30.37	18.39
Installation, maintenance, and repair	5,305,260	9.54	12.63	17.25	22.86	28.34	18.30
Community and social services	1,692,950	9.70	12.49	16.52	22.15	28.52	18.04
Protective service	3,056,660	7.78	10.11	15.00	22.60	30.36	17.19
Sales and related	13,930,320	6.62	7.84	10.64	18.48	31.24	15.77
Production	10,249,220	7.81	9.70	12.91	17.43	23.51	14.37
Office and administrative support	22,784,330	8.00	10.03	13.10	17.24	22.18	14.28
Transportation and material moving	9,594,920	7.06	8.74	11.90	16.70	22.24	13.85
Healthcare support	3,363,800	7.43	8.86	10.64	13.34	16.63	11.47
Personal care and service	3,188,850	6.21	7.22	8.89	11.88	17.11	10.67
Building and grounds cleaning and maintenance	4,342,550	6.59	7.66	9.50	12.44	16.40	10.55
Farming, fishing, and forestry	443,070	6.66	7.41	8.41	11.34	16.28	10.10
Food preparation and serving related	10,797,700	5.83	6.53	7.73	9.72	12.77	8.58

Chart 2. Wage distribution by occupational group, 10th percentile to 90th percentile, May 2005

Occupational group	10th percentile	90th percentile
Management	18.17	([1])
Legal	14.44	([1])
Computer and mathematical	16.57	51.01
Architecture and engineering	15.94	48.05
Healthcare practitioners and technical	12.34	48.63
Life, physical, and social science	13.31	47.33
Business and financial operations	14.32	44.28
Arts, design, entertainment, sports, and media	8.20	38.38
Education, training, and library	8.67	34.94
Construction and extraction	9.51	30.37
Installation, maintenance, and repair	9.54	28.52
Community and social services	9.70	28.34
Protective service	7.78	30.36
Sales and related	6.62	31.24
Production	7.81	23.51
Office and administrative support	8.00	22.18
Transportation and material moving	7.06	22.24
Healthcare support	7.43	16.63
Personal care and service	6.21	17.11
Building and grounds cleaning and maintenance	6.59	16.40
Farming, fishing, and forestry	6.66	16.28
Food preparation and serving related	5.83	12.77

Legend: 10th Percentile — 25th Percentile — 75th Percentile — 90th Percentile

Horizontal axis: $0 $10 $20 $30 $40 $50 $60 $70 — Hourly wages

([1]) Represents a wage above $70.00 per hour

addition to being the lowest paid, the food preparation and serving related group has the narrowest distribution of wages of all occupational groups. Ten percent of the workers in this group, approximately 1 million, earn less than $5.83 per hour, while 90 percent of the workers earn less than $12.77 per hour, a difference of only $6.94 per hour.

In addition to having the highest mean wage, management occupations have the highest wages in all percentile wage categories. Also, the group has the second widest distribution of wages between the 10th- and the 90th-percentile wage: 10 percent of workers in this group earn less than $18.17 per hour, while at least 10 percent earn more than $70.00 per hour, a difference of at least $51.83 per hour. The widest distribution of wages is among legal occupations, with a difference of at least $55.56 between the 10th- and 90th-percentile wages.

As shown in table 1, the mean wage in every occupational group is higher than the 50th-percentile, or median, wage for that group, suggesting that workers in the top half have a wider wage distribution than those in the lower half. In other words, the distribution of wages in each occupational group is skewed toward the higher end of the wage range.

Chart 2 uses the percentile wages from table A1 to depict the wage distribution for each major occupational group. Combined, the portions of the bars represent the middle 80 percent of the distribution for each group. The left endpoint of the bar indicates the 10th-percentile wage, and the right endpoint of the bar indicates the 90th-percentile wage. Similarly, the inner bar segment between the 25th and 75th percentiles shows the middle 50 percent of the distribution for each of the occupational groups.

As can be seen from chart 2, the width of the wage distribution for both the middle 80 percent and the middle 50 percent of workers in an occupational group declines with the mean wage of that group. Wages for the middle 50 percent of workers are skewed to varying degrees toward the lower end of the pay distribution for all occupational groups. Most noticeable in this regard are the farming, fishing, and forestry; personal care and service; and sales and related groups, with only 75 cents, $1.01, and $1.22, respectively, separating the 10th-percentile wage from the 25th-percentile wage; the amounts separating the 75th-percentile wage from the 90th-percentile wage in those three occupational groups are, respectively, $4.94, $5.23, and $12.76—at least five times the

Table 2. Mean wages for selected OES occupations and 3-digit NAICS industries, May 2005

Occupation	Industry							
	Support activities for agriculture and forestry	Utilities	Petroleum and coal products manufacturing	Food and beverage stores related activities	Credit intermediation and related	Social assistance	Food services and drinking places	Personal and laundry services
Chief executive	$64.05	$74.94	$78.52	$54.90	$72.12	$48.82	$52.48	$60.18
Computer support specialists.................................	19.35	24.12	22.51	16.24	21.26	17.45	19.30	19.78
Accountants and auditors	27.28	28.22	30.63	23.92	26.73	22.61	22.74	27.93
Sales representatives, wholesale and .... manufacturing, except technical and scientific..... products	24.42	30.64	32.14	24.02	29.08	22.42	19.72	23.48
Secretaries, except legal, medical, and .... executive...	10.91	14.79	14.63	11.08	14.02	12.01	11.41	11.34
Janitors and cleaners, except maids and housekeeping cleaners	9.26	12.28	11.38	9.26	9.28	8.93	8.70	8.57
Security guards..	10.60	18.13	12.45	14.35	14.51	10.57	10.27	14.75
Receptionists and information clerks	10.15	12.32	11.50	9.73	11.06	10.27	10.77	8.85

amounts separating the 10th-percentile wage from the 25th-percentile wage.

By contrast, wages for the middle 50 percent of workers in the computer and mathematical; architecture and engineering; and installation, maintenance, and repair groups are comparatively less skewed toward the lower end of the pay distribution. In these occupational groups, the amounts separating the 75th-percentile wage from the 90th-percentile wage are at most twice the amounts separating the 10th-percentile wage from the 25th-percentile wage.

Major occupational groups incorporate data from as many as 75 specific occupations in their mean hourly wages. Each of these major groups includes employees working in a wide range of occupations, requiring different degrees of training and skill, or involving different work environments. For example, the legal occupations group includes occupations such as lawyers and law clerks. The wages and employment levels for both are included in the overall wage and employment estimates for legal occupations, even though the mean hourly wage of lawyers is almost three times the wage of law clerks. The shares of employment accounted for by these occupations affect the wages for the entire legal occupations group. Because of these variations, comparative wages for detailed occupations in different major occupational groups might not follow the overall pattern of wage differences noted between their respective major groups. Table 1 of this publication shows these variations.

Occupational wages by 3-digit NAICS industry codes

The OES program also produces detailed occupational wages by industry sector and at the 3-digit, 4-digit, and selected 5-digit industry level within the North American Industry Classification System (NAICS). Table 2 shows the mean wage for eight selected OES occupations in eight selected 3-digit industries. Wages for detailed occupations vary according to industry, as illustrated in the table. For example, while chief executives have high overall wages compared with those in other occupations, the mean wage for chief executives itself varies depending on the industry in which they are employed.

In fact, among the occupations for which data are given in table 2, chief executives show the largest variation in wages, with $29.70 separating the highest paying industry from the lowest. The mean wage for chief executives ranges from $48.82 per hour in the social assistance industry to $78.52 per hour in the petroleum and coal products manufacturing industry. Another large difference between industries, $12.42, occurs for the occupation of wholesale and manufacturing sales representatives, except technical and scientific products workers. The hourly mean wage for these workers ranges from $19.72 per hour in the food services and drinking places industry to $32.14 per hour in the petroleum and coal products manufacturing industry. The occupation of receptionists and information clerks exhibits a smaller variation among the selected industries, with $3.47 separating the lowest wage from the highest. The mean wage of this occupation across the eight selected industries ranges from $8.85 per hour in personal and laundry services to $12.32 per hour in utilities.

Similarly, mean wages vary across occupations in an industry. The utilities industry has the highest wages for five occupations among industries shown in table 2. Because table 2 shows only a sample of industries and occupations, it may not reflect the overall wage pattern for a given industry.

Detailed information about occupational employment and wage estimates at the sector, 3-digit, and 4-digit industry levels, as well as for States and metropolitan areas, is available on the OES Web site at **www.bls.gov/oes/**.