


Occupational Employment and Wages, 2007
U.S. Department of Labor
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Preface

This chart book, Occupational Employment and Wages, 2007, is a product of the Occupational Employment Statistics (OES) program of the U.S. Bureau of Labor Statistics (BLS). The OES program produces employment and wage estimates for more than 800 occupations by geographic area and industry.

For every occupation, the OES program has data on the total U.S. employment and the distribution of wages, including the mean wage and the 10th, 25th, 50th (median), 75th, and 90th percentiles. Occupational data for geographic areas include employment and wages for each of the 50 States, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands. Local area data are available for 375 Metropolitan Statistical Areas (MSAs), 34 metropolitan divisions within 11 of the largest MSAs, and 175 nonmetropolitan areas. National industry-specific estimates are available by industry sector and for 290 detailed industries.

The OES survey is a cooperative effort between BLS and the State workforce agencies. Employment and wage data for more than 800 occupations were collected from a sample of 1.2 million business establishments, employing more than 80 million workers, in 6 semiannual panels between November 2004 and May 2007. Wage data for all establishments were updated to the May 2007 reference period, and employment data were updated to the average of the November 2006 and the May 2007 reference periods. Information on OES sampling and estimation methodology is provided in the survey methods and reliability statement on the enclosed compact disk (CD) and at http://www.bls.gov/oes/current/methods_statement.pdf.

The enclosed CD and OES Web site http://www.bls.gov/oes/ include electronic copies of all charts in this book. Additional data tables include cross-industry occupational employment and wage data for the Nation, States, metropolitan areas, metropolitan divisions, and nonmetropolitan areas; national occupational employment and wage data by industry; and profiles for all occupations. Data users also can create customized tables using the OES database search tool, or download complete OES data in zipped Excel format from http://www.bls.gov/oes/oes_dl.htm.

Material in this publication is in the public domain and, with appropriate citation, may be reproduced without permission. Questions about OES data can be directed to the information phone line at (202) 691-6569 or sent to OESinfo@bls.gov.

## Acknowledgments

The information provided in this chart book is possible due to the cooperation of more than a million business establishments that provide information on their workers to their State workforce agency and the U.S. Bureau of Labor Statistics (BLS). State workforce agencies within each State collect and verify almost all data provided. BLS selects the sample, produces the estimates, and provides technical procedures and financial support to the States. BLS also collects a small portion of the data from employers.

BLS produced this chart book under the general guidance and direction of Dixie Sommers, Assistant Commissioner for Occupational Statistics and Employment Projections, and George D. Stamas, Chief, Division of Occupational Employment Statistics. Laurie Salmon, manager of Publications and Analysis in Occupational Employment Statistics, provided planning and day-to-day direction. Dina Itkin coordinated the production of the chart book. The tables, charts, and maps were prepared by Benjamin Cover, Jeffrey Holt, Dina Itkin, John Jones, Rebecca Keller, Michael Soloy, Zachary Warren, and Audrey Watson. Cover art, typesetting, and layout were furnished by Keith Tapscott, and editorial services were provided by Monica Gabor, Division of Publishing, William Parks II, Chief.



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## Some examples of useful applications of OES data:

 ment employment projections programs use OES data as an input to their employment projections, which can be used to predict training and education demands.- Detailed occupational data can be used by job seekers or employers to show wages for workers in certain occupations and to assess wage variation within, and across, occupations. Wage variation within an occupation can result from several factors, including industry, geographic location, or a worker's particular experience or qualifications. Useful data for job seekers include information on the industries or geographic areas that have the highest employment geographic areas that have the highest employm
or the highest average wages for an occupation. Career and guidance counselors can use OES data to examine possible occupational choices by field of study or training.
- Industry-specific occupational data can be used by human resources professionals in salary negotiations or to ensure that their wages are competitive with those of other businesses in their area or industry. Information on the types of jobs within an industry can Information on the types of jobs within an industry
be used to compare average stafing patterns with that of one's own company. Occupational employment by industry may be useful in assessing the impact of shifts in technology and other macroeconomic trends on the types of jobs available. BLS and State governwithin an occupation can resuit from several factors shifts in technology and other macroeconomic trends
- Geographic area information can be used to assess labor market features of a particular area. OES State level data can be used to make assessments about the diversity of a State's economy or to make comparisons among States. The occupational composition of employment can provide clues to how a State or regional economy can hold up in adverse conditions that affect a certain sector of the economy. Differences in both occupational composition and occupational wage rates also help explain differences in average wages across States. For example, States with high average wages may have larger employment shares of high-paying occupations, higher wages within each occupation, or some combination of both factors.
- Like State data, metropolitan and nonmetropolitan area data can be used to study the diversity of local area economies. Businesses can use data to see whether it might be beneficial to relocate to a particular area. OES occupational employment data may indicate whether workers are available in occupations that the business will need. For example, businesses that require computer specialists or skilled production workers may want to identify areas that have high employment in these occupations. Businesses may also use the data to compare wages between alternative areas.


## Organization of charts and applications of OES data

This chart book's presentation of figures is intended to demonstrate a variety of applications of OES data. Figures are organized into four categories: The first with a focus on detailed occupations, the second highlighting labor patterns of specific industries, and the third and fourth focusing on labor markets of States and local areas.

## OES survey coverage, scope, and concept definitions

The OES survey covers all full- and part-time wage and salary workers in nonfarm industries. The survey does not include the self-employed, owners and partners in unincorporated firms, workers in private households, or unpaid family workers

An occupation is a set of activities or tasks that employees are paid to perform. Employees who perform essentially the same tasks are in the same occupation, whether or not they are in the same industry. Workers who may be classified in more than one occupation are classified in the occupation that requires the highest level of skill. If there is no measurable difference in skill requirements, workers are included in the occupation in which they spend the most time. All occupations are classified by the 2000 Standard Occupational Classification (SOC) system.

An industry is a group of establishments that have similar production processes or provide similar services. For example, all establishments that manufacture automobiles are in the same industry. A given industry, or even a particular establishment in that industry, might have employees in many different occupations. The North American Industry Classification System (NAICS) groups similar establishments into industries.

The employment shown is the average employment for the most recent May and November. Employment is defined as the number of workers who can be classified as full- or part-time employees, including workers on paid vacations or other types of paid leave; workers on unpaid short-term absences; salaried officers, executives, and staff members of incorporated firms; employees temporarily assigned to other units; and employees for whom the reporting unit is their permanent duty station, regardless of whether that unit prepares their paycheck.

Wages for the OES survey are straight-time, gross pay, exclusive of premium pay. Included are base rate; cost-of-living allowances; guaranteed pay; hazardous-duty pay; incentive pay, including commissions and production bonuses; tips; and on-call pay. Excluded are back pay, jury duty pay, overtime pay, severance pay, shift differentials, non-production bonuses, employer cost for supplementary benefits, and tuition reimbursements.

Respondents are asked to report the number of employees paid within specific wage intervals, regardless of part- or full-time status. The responding establishment can reference either the hourly or the annual rate for full-time workers but are instructed to report the hourly rate for parttime workers. Intervals are defined both as hourly rates and the corresponding annual rates, where the annual rate for an occupation is calculated by multiplying the hourly wage rate by a typical work year of 2,080 hours.

Geographic areas are defined by the Office of Management and Budget. Guam, Puerto Rico, and the U.S. Virgin Islands are also surveyed; their data are not included in this publication, but are published on the OES Web site. The nationwide response rate for the May 2007 survey was 77.9 percent based on establishments and 73.5 percent based on employment. More information on sampling and estimation methodology can be found in the survey methods and reliability statement on the enclosed CD and our Web site at: http://www.bls.gov/oes/current/meth ods_statement.pdf.


## Occupation Focus

OCCUPATION FOCUS

Information technology occupations were paid higher wages than the U.S. average.

## FIGURE 1

- Five of the largest IT occupations had wages at least twice the national average for all occupations, $\$ 19.56$. The highest paid IT occupation was computer and information systems managers, which had a mean hourly wage of $\$ 54.75$.
- The largest IT occupation, computer support specialists, had over 500,000 workers and was one of the lowest paying IT occupations, with an average wage of \$21.78, approximately $\$ 2.00$ above the U.S. average.
- Workers in the smallest Occupation shown, computer and information research scientists, were among the highest paid.

Employment and wages of selected information technology (IT) occupations, May 2007



OCCUPATION FOCUS

Many outdoor occupations are related to landscaping, agriculture, utilities, and logging.

## FIGURE 2

- The 19 outdoor occupations listed made up 1.1 percent of total U.S. employment.
- Ten of these 19 occupations earned below the mean hourly
U.S. wage of $\$ 19.56$.
- Most of the outdoor occupations that pay above-average wages are science-related and include forestry and conservation occupations, hydrologists, soil and plant scientists, wildlife biologists, landscape architects, and atmospheric and space scientists.

Wages and employment of selected outdoor occupations, May 2007



OCCUPATION FOCUS

Licensed practical and licensed vocational nurses and pharmacy technicians were among the largest health technologist and technician occupations.

## FIGURE 3

- Dental hygienists and medical and clinical laboratory technologists were among the highest paying technical health occupations, with hourly mean wages of $\$ 20.42$ and $\$ 17.05$, respectively.
- Associate degrees or postsecondary vocational awards were the most significant sources of education or training for most of these occupations, according to the Occupational Outlook Handbook.

Employment and mean wages for the largest health technologist and technician occupations, May 2007



OCCUPATION FOCUS

## FIGURE 4

- The third largest occupation was general office clerks.
- Nine of the 10 largest occupations paid below the U.S. mean hourly wage of $\$ 19.56$. The exception was registered nurses, with a mean wage of $\$ 30.04$ mean hourly wage of $\$ 19.56$.

The 10 largest occupations made up about 17 percent of U.S. employment.
Retail salespersons and cashiers made up about 6 percent of U.S. employment in May 2007.

Employment and hourly mean wages of the largest occupations,
May 2007


## FIGURE 5

- The 10 smallest occupations combined made up 0.01 percent of total U.S. employment.
- More than half of the smallest occupations earned a wage greater than the mean hourly U.S. wage of $\$ 19.56$.
- Many of the smallest occupations tended to be concentrated in a single industry.

Employment and hourly mean wages of the smallest occupations, May 2007


OCCUPATION FOCUS

Administrative and sales occupations are the occupations found in the largest number of business establishments.

## FIGURE 6

- More than 15 percent of business establishments employed general office clerks, and 14 percent employed bookkeeping, accounting, and auditing clerks.
- Retail sales occupations were among the most frequently reported because of the large number of retail establishments. According to the Quarterly Census of Employment and Wages, retail trade accounted for 12 percent of all private business establishments.
- Administrative occupations are among the most frequently reported, because they are found in establishments in all industries.

Occupations most often found in business establishments, May 2007



OCCUPATION FOCUS

## FIGURE 7

- These 10 occupations accounted for 4 percent of all workers in the U.S. in May 2007. - Six of the lowest paid occupations, accounting for almost 5 million jobs, were food service occupations.

The lowest paying occupations were service related.

## Employment and wages for the 10 lowest paying occupations in the United States, May 2007

| Occupation | Hourly mean <br> wage | Employment |
| :--- | :---: | :---: |
| Combined food preparation and serving workers, including fast food | $\$ 8.03$ | $2,602,950$ |
| Cooks, fast food | 8.11 | 575,510 |
| Dishwashers | 8.20 | 509,550 |
| Dining room and cafeteria attendants and bartender helpers | 8.36 | 401,070 |
| Shampooers | 8.41 | 15,310 |
| Hosts and hostesses, restaurant, lounge, and coffee shop | 8.54 | 342,960 |
| Counter attendants, cafeteria, food concession, and coffee shop | 8.57 | 541,370 |
| Ushers, lobby attendants, and ticket takers | 8.60 | 106,700 |
| Gaming dealers | 8.71 | 86,210 |
| Amusement and recreation attendants | 8.76 | 245,380 |



OCCUPATION FOCUS

Workers in occupations with high incidence rates of injuries and illnesses tended to earn below-average wages.

## FIGURE 8

- Carpenters; mobile heavy equipment mechanics, except engines; and industrial machinery mechanics had aboveaverage wages.
- Laborers and freight, stock, and material movers, hand was the largest occupation among those listed, with 2,363,440 jobs.
- Nursing aides, orderlies, and attendants had more than 4 times the incidence rate for all occupations. They also earned a low mean wage relative to other occupations shown.

Wages for occupations with the highest incidence rates of injuries and illnesses, May 2007



OCCUPATION FOCUS

## Average wages rise with education level, but wages vary for different occupations with similar levels of education.

## FIGURE 9

- There is a wide range of opportunities in the labor market for workers in occupations with similar education levels and experience.
- Radiation therapists, for whom the most significant source of education was an associate's degree, earned an average wage higher than that of audiologists, for whom the most significant source of education was a first professional degree.
- Among workers for whom the most significant source of education was a bachelor's degree, substance abuse and behavioral disorder counselors had the lowest average wage. (However, they had a higher average wage than rehabilitation counselors, for whom the most significant source of education was a master's degree.)
continued on next page

Highest and lowest paying occupations by education and training category, May 2007


FIGURE 9 continued

- Air traffic controllers, for whom the most significant source of training was long-term on-the-job training, were paid higher wages than the highest paid occupation in four higher education levels.
- For restaurant cooks, the most significant source of training was long-term on-the-job training, while for combined food preparation and serving workers, including fast food, it was short-term on-the-job training. On average, restaurant cooks were paid almost $\$ 3.00$ more per hour than were combined food preparation and serving workers, including fast food.


OCCUPATION FOCUS

Occupations often chosen by psychology majors have above average wages.

## FIGURE 10

- All occupations shown had a median wage above the U.S. median wage of $\$ 31,410$.
- The occupation shown with the widest wage range was clinical, counseling, and school psychologists. Ten percent earned a wage below $\$ 37,300$ per year, and 10 percent earned more than $\$ 104,520$ per year.

Wage distributions of possible occupations for psychology majors, May 2007


## FIGURE 11

- Business is the most popular field of study among today's undergraduates, according to the U.S. Department of Education. Graduates with a degree in business can work in a variety of business analyst occupations, such as management analysts, market research analysts, operations research analysts, financial analysts, and budget analysts.
- At the 10th percentile, wages of workers in the selected analyst occupations related to business study ranged from $\$ 33,310$ to $\$ 42,280$ per year. The 10 th percentile wages of workers in the selected occupations related to psychology ranged from $\$ 23,780$ to \$40,200.
- At the 90th percentile, wages of workers in the selected analyst occupations ranged from $\$ 97,030$ to $\$ 137,210$ per year. The 90th percentile wages of workers in the selected occupations for psychology majors ranged from $\$ 55,650$ to \$104,520.

Wage distributions of possible occupations for business majors, May 2007


OCCUPATION FOCUS

Occupations where women accounted for more than 90 percent of employment had median wages as low as $\$ 18,350$ and as high as $\$ 64,740$.

## FIGURE 12

- The 10 th through 90 th percentile wage distribution for three of the occupations shown was entirely above the U.S. median wage, while the distribution for other occupations was mostly below the US median.
- Four occupations had a wide wage range. Wages for dental hygienists ranged from \$42,480 annually at the 10th percentile to $\$ 89,590$ annually at the 90th percentile. Speech-language pathologists, kindergarten teachers, and registered nurses also had a wide wage range.
- Most other occupations shown had below-average wages and had a relatively narrow wage distribution.


## Wages for occupations that are predominantly filled by women, May 2007



OCCUPATION FOCUS

Management occupations dominated by women tend to be service related, while those dominated by men tend to be goods producing.

## FIGURE 13

- Women made up 70 percent of human resources managers, which had a median annual wage of $\$ 87,300$.
- Of the management occupations shown, engineering managers had the highest median wage and the highest percent of men.
- The lowest paid management occupation, farmers and ranchers, was predominately made up of men.

Wages for predominantly male and predominantly female management occupations, May 2007*


OCCUPATION FOCUS

Employment and wages of the 2.4 million laborers and freight, stock, and material movers, hand, varied by industry and geographic area.

## FIGURE 14

- The largest employer of hand laborers and movers of freight, stock, and material was the employment services industry, which includes temporary help agencies.
- Ten percent of workers in this occupation earned less than $\$ 7.41$ per hour, and 10 percent of workers earned more than $\$ 17.24$ per hour.
- Motor vehicle manufacturing paid these workers the highest mean wage, $\$ 46,290$ per year. Some of the top-paying areas for this occupation are home to motor vehicle manufacturing or motor vehicle parts manufacturing plants, according to the Quarterly Census of Employment and Wages.
- Workers in this occupation perform unskilled general labor, such as manually moving freight, stock, or other materials.

Profile of laborers and freight, stock, and material movers, hand, May 2007

| National employment estimate and wage estimates for this occupation |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hourly wage |  |  |  |  |  |
| $\underset{2,363,440}{ }$ Employment | $\begin{aligned} & \text { Mean } \\ & \$ 11.00 \end{aligned}$ |  | 25 th percentile $\$ 8.52$ | $\begin{aligned} & \text { Median } \\ & \$ 10.53 \end{aligned}$ | 75th percentile $\$ 13.53$ <br> \$13.53 | 90th percentile \$17.24 |


| Industries with the highest levels of employment |  |  |
| :--- | :---: | :---: |
| Industry | Employ- <br> ment | Hourly <br> mean wage |
| Employment services | 431,790 | $\$ 9.82$ |
| Warehousing and storage | 149,010 | 12.74 |
| Couriers | 148,800 | 12.02 |
| General freight trucking | 75,250 | 14.21 |
| Grocery and related product wholesalers | 72,410 | 12.10 |


| States with the highest concentration of these workers |  |  |  |
| :--- | :---: | :---: | :---: |
| State | Percent of State <br> employment | Employment in <br> occupation | Hourly mean <br> wage |
| Tennessee | 3.02 | 82,600 | $\$ 10.62$ |
| Nevada | 2.61 | 33,480 | 12.07 |
| Louisiana | 2.57 | 47,500 | 10.04 |
| Indiana | 2.39 | 70,040 | 11.59 |
| Arkansas | 2.32 | 27,190 | 10.10 |


| Highest paying industries |  |  |
| :--- | ---: | ---: |
| Industry | Employment | Hourly <br> mean <br> wage |
| Motor vehicle manufacturing | 4,200 | $\$ 22.25$ |
| Support activities for water transportation | 14,720 | 19.30 |
| Metal ore mining | 300 | 18.78 |
| Natural gas distribution | 190 | 18.67 |
| Wired telecommunications carriers | 450 | 18.38 |





## Occupations within Industries

OCCUPATIONS WITHIN INDUSTRIES

Occupations in general merchandise stores with high skill requirements tend to be higher paid and have lower employment levels.

## FIGURE 15

- As salespersons gain experience, training, and seniority, they can move to positions of greater responsibility with higher potential earnings.
- As wages increase, the number of people employed in those occupations tends to decline.
Cashiers made up 19 percent of total employment in general merchandise stores, while their first-line supervisors made up 7 percent.
- Sales occupations with lower mean wages have narrower wage distributions than those with higher mean wages. For instance, the difference between earnings of the top 10 percent and bottom 10 percent of cashiers, counter and rental clerks, and retail salespersons is smaller than that of managers.

Career paths and wage distribution for selected sales occupations in general merchandise stores, May 2007


Occupation

## FIGURE 16

- With additional experience, training, and seniority, advancement opportunities for stock clerks and order fillers include jobs as supervisors, wholesale and retail buyers, or transportation, storage, and distribution managers.
- Transportation, storage, and distribution managers earn, on average, between 3 and 4 times as much as the first three occupations shown.

Career paths and wage distribution for selected logistics occupations in general merchandise stores, May 2007


OCCUPATIONS WITHIN INDUSTRIES

The U.S. economy employed 356,990 loan officers, 172,030 real estate sales agents, and 30,150 loan counselors in May 2007.

## FIGURE 17

- Most real estate sales agents and real estate brokers were employed in offices of real estate agents and brokers, activities related to real estate, and lessors of real estate. Appraisers and assessors of real estate were found primarily in local government and activities related to real estate.
- Real estate brokers and loan officers were among the highest paying real estate-related occupations shown, with mean hourly wages of $\$ 38.36$ and $\$ 30.10$, respectively.

Industry employment of occupations related to real estate sales, May 2007


## FIGURE 18

- Most loan officers and loan interviewers and clerks were employed in depository credit intermediation (e.g., commercial banks), nondepository credit intermediation (e.g., nondepository mortgage lending), and activities related to credit intermediation (e.g., mortgage and nonmortgage loan brokerages).
- Depository and nondepository credit intermediation were also among the largest employers of loan counselors, while most title examiners, abstractors, and searchers were employed in legal services or insurance carriers.

Industry employment of occupations related to real estate lending, May 2007


## Industry

OCCUPATIONS WITHIN INDUSTRIES

STEM (science, technology, engineering, and mathematics) occupations were most often found in research and technical services industries and in government.

## FIGURE 19

- Many of the industries that employed large numbers of STEM workers were found in the professional, scientific, and technical services sector. The Federal Government employed the third largest number of these workers.
- Overall, there were 3.2 million workers in computer and mathematical science occupations, 2.5 in architecture and engineering occupations, and 1.3 million in life, physical, and social science occupations.

Industries with the highest employment of science, technology, engineering, and mathematics (STEM) occupations, May 2007




INDUSTRY FOCUS

Workers constructing buildings earned over $\$ 2.00$ per hour more when constructing nonresidential buildings, on average.

## FIGURE 20

- Carpenters, construction laborers, and construction supervisors were the three largest occupations in both industries.
- The largest staffing differences were in the employment of carpenters, structural iron and steel workers, brickmasons and block masons, and operating engineers and other construction equipment operators.


## Largest construction occupations in residential and nonresidential construction, May 2007




INDUSTRY FOCUS

The largest occupations within the employment services industry (which contains temporary help and professional employer organizations) were production occupations.

## FIGURE 21

- Other large occupations include administrative support and transportation and material moving occupations.
- With one exception, wages for all these employment services occupations are lower than wages for their counterparts in other industries.
- Registered nurses in employment services were paid higher than the average for the occupation.

Largest occupations in the employment services industry, with hourly mean wages, May 2007



## INDUSTRY FOCUS

Nursing aides, orderlies, and attendants made up 37 percent of employment in nursing care facilities, and 4 percent of home health care employment.

## FIGURE 22

- Nursing care facilities employed significant numbers of workers in food preparation and serving related occupations and building and grounds cleaning and maintenance occupations. These occupations are not large in home health care services.
- Two occupations-home health aides and personal and home care aides-made up more than half of employment in home health care services.

Employment by occupational group, nursing care facilities, May 2007


| Occupation | Employment | Percent of industry empoyment | Hourly mean wage |
| :--- | :---: | :---: | :---: |
| Nursing aides, orderlies, and attendants | 589,260 | 37.0 | $\$ 11.05$ |
| Licensed practical and licensed vocational nurses | 199,390 | 12.5 | 19.50 |
| Registered nurses | 123,480 | 7.7 | 27.12 |
| Maids and housekeeping cleaners | 77,680 | 4.9 | 9.35 |
| Home health aides | 61,990 | 3.9 | 10.25 |
| Food preparation workers | 48,070 | 3.0 | 9.36 |
| Cooks, institution and cafeteria | 46,500 | 2.9 | 10.67 |
| Recreation workers | 31,810 | 2.0 | 11.37 |
| Laundry and dry-cleaning workers | 31,750 | 2.0 | 9.19 |
| Food servers, nonrestaurant | 25,250 | 1.6 | 9.46 |

## FIGURE 23

- Nursing care facilities and home health care facilities had similar shares of health care practitioner and technical workers. The largest occupations in this group in nursing care facilities were registered nurses and licensed practical and licensed vocational nurses.
- Registered nurses and licensed practical and licensed vocational nurses made up approximately 20 percent of employment in both industries; however, the ratio of RNs to LPNs is 4 times higher in home health care services.

Employment by occupational group, home health care services, May 2007


| Occupation | Employment | Percent of industry empoyment | Hourly mean wage |
| :--- | :---: | :---: | :---: |
| Home health aides | 254,120 | 28.0 | $\$ 9.88$ |
| Personal and home care aides | 233,480 | 25.8 | 8.06 |
| Registered nurses | 127,230 | 14.0 | 28.43 |
| Licensed practical and licensed vocational nurses | 58,010 | 6.4 | 19.44 |
| Nursing aides, orderlies, and attendants | 35,610 | 3.9 | 10.85 |
| Physical therapists | 17,930 | 2.0 | 38.13 |
| Office clerks, general | 13,950 | 1.5 | 12.27 |
| Medical and public health social workers | 13,360 | 1.5 | 23.57 |
| Medical and health services managers | 12,440 | 1.4 | 38.10 |
| General and operations managers | 8,170 | 0.9 | 41.40 |

INDUSTRY FOCUS

## FIGURE 24

- Total wages are the mean annual straight-time wage multiplied by employment. They are affected by both employment levels and wages and assume workers are full time.
- State governments spent $\$ 10.1$ billion on correctional officers and jailers and $\$ 2.5$ billion on child, family, and school social workers.

Local governments paid $\$ 27.3$ billion for wages and salaries of police and sherifi's patrol officers, while States paid $\$ 3.3$ billion. States spent nearly twice as much on correctional officers and jailers as did local governments.


## FIGURE 25

- State governments spent
$\$ 2.2$ billion on salaries for
32,300 civil engineers, while local governments spent \$3.3 billion on salaries for 100,000 highway maintenance workers.
- Local governments paid more
in total wages to general office clerks and police and sheriff's patrol officers, but State governments paid a higher average wage.

Total annual wages* paid by local government**, for selected occupations, May 2007

*Total wages are the mean annual straight-time wage multiplied by employment; all workers are assumed to work full time.
**Excludes schools and hospitals, which are classified in separate industries.

INDUSTRY FOCUS

## FIGURE 26

- In cut and sew apparel manufacturing, the largest production occupation, sewing machine operators, made up 47 percent of industry employment. In pharmaceutical and medicine manumaceutical and medicine manu-
facturing, the largest production occupation, packaging and filling
machine operators and tenders, machine operators and tenders, made up 8 percent of employment.
- Sales and related occupations accounted for about 3 percent of both industries' employment. The largest sales occupation in the former was sales representatives of technical and scientific products
and the largest sales occupation of technical and scientific products
and the largest sales occupation for the latter was sales representatives for non-technical and non-scientific products.
- Within occupational groups, employment in pharmaceutical and medicine manufacturing was more concentrated in high-tech occupations. The largest occupation within the architectural and engineering occupations group was biomedical engineers in the high-tech industry and industrial engineers in the low-tech industry. empioyment in pharmaceutical

Pharmaceutical and medicine manufacturing, a high-tech manufacturing industry, and cut and sew apparel manufacturing, a low-tech manufacturing industry, employed different types of occupations.

## Largest occupations in selected occupational groups, in a high-tech and a low-tech manufacturing industry, May 2007



INDUSTRY FOCUS

Pharmaceutical and medicine manufacturing, and cut and sew apparel manufacturing, pay different wages to workers who perform similar tasks.

## FIGURE 27

- Cut and sew apparel manufacturing paid higher wages to its sales representatives for non-technical and non-scientific products than did pharmaceutical and medicine manufacturing.
- The mean wage of arts, design, entertainment, sports, and media occupations is high in cut and sew manufacturing because fashion designers in that industry earned $\$ 36.64$ per hour, on average.
- Printing machine operators and inspectors, testers, sorters, samplers, and weighers earned around 1.5 times as much in pharmaceutical and medicine manufacturing than in cut and sew apparel manufacturing.
- Pharmaceutical and medicine manufacturing paid higher wages to workers in most of these occupations than did cut and sew apparel manufacturing.

Wages of selected occupations in a high-tech and a low-tech manufacturing industry, May 2007


## INDUSTRY FOCUS

Changes in occupational composition vary with different rates of productivity growth.

## FIGURE 28

- Two similar industries, automotive parts, accessories, and tire stores, and automotive dealers, had different rates of productivity growth and staffing pattern changes between 2003 and 2007. The former had a decline in productivity and increased its sales force at a higher rate than the latter, which had an increase in productivity.
- Employment of retail salespersons and counter and rental clerks, both increased by 65 percent in automotive parts, accessories and tire stores, while employment in these occupations grew by 5 percent and 11 percent, respectively, in automobile dealers. Employment of parts sales persons increased in the former and declined in the latter.

Occupations with the largest employment changes in the automobile dealers industry, 2003-07


Productivity (output/labor hour) in the automobile dealers industry grew by 9 percent from 2003 to 2007. Total labor hours in this industry decreased by 0.4 percent over this same time period.

## FIGURE 29

- Automobile dealers added many more transportation and material moving occupations $(16,820)$ than did automotive parts, accessories, and tire stores $(2,870)$. These included drivers/sales workers, heavy and tractor-trailer truck drivers, taxi drivers and chauffeurs, and parking lot attendants.
- Employment grew by 13,260 among installation, maintenance, and repair occupations (particularly tire repairers and changers) in automotive parts, accessories, and tire stores, while employment declined by 20,390 among these occupations (particularly automotive body and related repairers) in automobile dealers. Changes in the employment in these labor-intensive occupations might partially explain the productivity changes in these industries.

Occupations with the largest employment changes in automotive parts, accessories, and tire stores, 2003-07


Productivity in the automotive parts, accessories, and tire stores industry declined by 3 percent from 2003 to 2007. Total labor hours in this industry increased by 6 percent over this same time period.

Source of labor productivity data: Division of Industry Productivity Studies, U.S. Bureau of Labor Statistics

INDUSTRY FOCUS

## FIGURE 30

- Computer and peripheral equipment manufacturing, which is projected to have the fastest output growth between 200616, had 13 percent of its workers in production occupations, while footwear manufacturing, which is projected to have the largest decline in output, was made up primarily of production occupations, at 77 percent.
- Modern manufacturing uses
a more diverse mix of labor than traditional manufacturing.
- Nineteen percent of employment in computer and peripheral equipment manufacturing was in architecture and engineering 0ccupations, and 27 percent was in computer and mathematical occupations.
continued on next page

Employment in more traditional manufacturing industries, such as footwear manufacturing, is dififerent than employment in newer industries, such as computer and peripheral equipment manufacturing.

## and



Distribution of employment among occupational groups in the industry with the largest projected output growth (computer and peripheral equipment manufacturing) and the industry with the largest projected output decline (footwear manufacturing), May 2007

Percent of industry employmen

## FIGURE 30 continued

- The industry with the fastest projected output growth also employed a larger proportion of its employees in sales and related; office and administrative; business and financial operations; and management occupations.
- The industry with the largest projected decline in output employed a larger proportion of workers in production; transportation and material moving; and installation, maintenance, and repair occupations.


INDUSTRY FOCUS

Not-for-profit establishments tend to employ more community and social service workers, teachers, healthcare workers, and personal care and service workers.

## FIGURE 31

- Not-for-profits employ far smaller shares of sales workers, food service workers, construction and extraction workers, maintenance workers, production workers and transportation workers.
- The differences between forprofit and not-for-profits vary by industry. For example for-profit and not-for-profit hospitals tend to have similar staffing patterns, but for-profit and not-for-profit banks employ different types of workers.



## FIGURE 32

- Overall, workers in not-forprofit establishments earned slightly more, approximately $\$ 20$ per hour, compared with $\$ 18$ per hour in for-profit establishments, because not-for-profits employed few of the very lowest paying occupations, such as food service workers.
- By occupation, wages between not- and for-profit establishments were comparable. Wages for legal, health care, and management workers were higher in for-profit establishments, while wages for education and architecture and engineering workers were higher in not-for-profits.

Mean hourly wages in not-for-profit, for-profit, and government establishments, May 2007


Source: "Occupational employment in the not-for-profit sector," Monthly Labor Review, November 2008

## State Focus

STATE FOCUS

Protective service occupations comprised 4.2 percent of employment in the District of Columbia and 1.3 percent of employment in North Dakota.

## FIGURE 33

- This map shows the share of the States' employment in protective service occupations ranging from the District of Co lumbia, with the highest percentage, to North Dakota, with the lowest.
- Other States with a high concentration of protective service employment include Hawaii, New York, Nevada, Mississippi, and Louisiana. States with low concentrations include Iowa, South Dakota Vermont, Nebraska, and Utah.


STATE FOCUS

The District of Columbia had the highest average wage for protective service occupations, and Mississippi had the lowest.

## FIGURE 34

- Other States with a high annual mean wage included New Jersey, California, Washington, New York, and Massachusetts. States with a low annual mean wage included Mississippi, West Virginia, Louisiana, Arkansas, and Alabama.
- Wages for the protective service occupations group were related in part to the wages for detailed occupations, and in part due to the composition of the group. For example, Louisiana and Mississippi had high concentrations of correctional officers, a relatively low-paying protective service occupation.


STATE FOCUS

A State's occupational employment distribution is influenced by its demographics and its economic base.

## FIGURE 35

- States with the highest concentration of carpenters generally had increasing populations.
- States with the highest concentrations of accountants and auditors had business and financial centers.

States with the highest and lowest concentrations of accountants and auditors and carpenters, May 2007

| Accountants and auditors |  |  |  |
| :--- | :---: | :---: | :---: |
| Highest concentration | Employment | Mean annual wage | Employment per 1,000 |
| District of Columbia | 11,450 | $\$ 71,170$ | 18.44 |
| Colorado | 26,760 | 65,820 | 11.85 |
| Delaware | 5,020 | 62,450 | 11.79 |
| New York | 96,830 | 75,860 | 11.37 |
| Connecticut | 18,490 | 68,780 | 10.99 |
| Eowest concentration | Employment | Mean annual wage | Employment per 1,000 |
| Mississippi | 4,150 | $\$ 51,740$ | 3.68 |
| Idaho | 2,860 | 53,680 | 4.46 |
| Arkansas | 5,450 | 48,720 | 4.65 |
| Maine | 3,250 | 53,860 | 5.42 |
| Kentucky | 9,790 | 53,870 | 5.43 |


|  | Carpenters |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Highest concentration | Employment | Mean annual wage | Employment per 1,000 |
| Montana | 7,790 | $\$ 33,260$ | 17.89 |
| Nevada | 19,260 | 45,090 | 14.98 |
| Arizona | 37,610 | 34,730 | 14.2 |
| Idaho | 9,100 | 32,930 | 14.18 |
| Wyoming | 3,140 | 37,240 | 11.49 |
| Lowest concentration | Employment | Mean annual wage | Employment per 1,000 |
| District of Columbia | 1,900 | $\$ 49,950$ | 3.06 |
| Texas | 35,790 | 31,040 | 3.56 |
| Tennessee | 11,770 | 31,110 | 4.3 |
| Georgia | 18,030 | 32,430 | 4.44 |
| Oklahoma | 6,970 | 29,470 | 4.56 |

## FIGURE 36

- States with the highest concentration of team assemblers, who work as part of a team having responsibility for assembling an entire product or component of a product, had high manufacturing activity.
- States with the highest concentrations of waiters and waitresses also had high concentrations of tourism.

States with the highest and lowest concentrations of team assemblers and waiters and waitresses, May 2007

| Team assemblers |  |  |  |
| :---: | :---: | :---: | :---: |
| Highest concentration | Employment | Mean annual wage | Employment per 1,000 |
| Indiana | 68,930 | \$30,350 | 23.54 |
| South Carolina | 37,760 | 28,990 | 20.11 |
| Tennessee | 54,680 | 28,740 | 19.96 |
| Kentucky | 32,100 | 27,400 | 17.82 |
| Alabama | 32,310 | 28,480 | 16.72 |
| Lowest concentration | Employment | Mean annual wage | Employment per 1,000 |
| Alaska | 110 | \$35,280 | 0.36 |
| Hawaii | 420 | 31,670 | 0.69 |
| Wyoming | 320 | 25,180 | 1.17 |
| New Mexico | 1,700 | 21,640 | 2.13 |
| Delaware | 1,230 | 31,190 | 2.89 |
| Waiters and waitresses |  |  |  |
| Highest concentration | Employment | Mean annual wage | Employment per 1,000 |
| Nevada | 40,770 | \$18,320 | 31.72 |
| Hawaii | 16,370 | 25,100 | 26.82 |
| Florida | 202,720 | 20,010 | 25.46 |
| Montana | 9,390 | 16,470 | 21.56 |
| Rhode Island | 10,200 | 19,210 | 20.99 |
| Lowest concentration | Employment | Mean annual wage | Employment per 1,000 |
| New Jersey | 54,840 | \$22,780 | 13.78 |
| Alaska | 4,200 | 20,120 | 13.91 |
| Mississippi | 15,880 | 14,620 | 14.07 |
| Alabama | 27,940 | 14,740 | 14.46 |

STATE FOCUS

Relative to its population, Nevada had a high number of food service, construction, sales, and personal care occupations.

## FIGURE 37

- Nationally, construction and extraction occupations represent about 5 percent of employment, while in Nevada, these occupations make up 9.1 percent of State employment. Personal care and service occupations represented about 2.5 percent of employment nationally, but more than double this percentage in Nevada, at 5.6 percent of State employment.

Percent of employment in Nevada by occupation, May 2007


## FIGURE 38

- Nevada had lower than average employment concentrations of production; education, training, and library; and healthcare practitioners and technical occupations.
- In Nevada there were 40,770 waiters and waitresses, the largest food service occupation.

Selected occupations in Nevada, employment and wages, May 2007

| Office and administrative support occupations | Employment | Average wage | 25th percentile wage | 75th percentile wage |
| :---: | :---: | :---: | :---: | :---: |
| Office clerks, general | 22,860 | \$12.86 | \$9.72 | \$15.20 |
| Bookkeeping, accounting, and auditing clerks | 17,460 | 15.53 | 12.34 | 18.30 |
| First-line supervisors/managers, office and administrative support workers | 15,390 | 20.92 | 15.74 | 24.79 |
| Food preparation and serving related occupations | Employment | Average wage | 25th percentile wage | 75th percentile wage |
| Waiters and waitresses | 40,770 | \$8.81 | \$6.52 | \$10.70 |
| Combined food preparation and serving workers, including fast food | 21,830 | 8.11 | 6.58 | 9.18 |
| Dining room and cafeteria attendants and bartender helpers | 15,060 | 9.21 | 6.82 | 11.35 |
| Sales and related occupations | Employment | Average wage | 25th percentile wage | 75th percentile wage |
| Retail salespersons | 38,310 | \$12.03 | \$8.21 | \$13.19 |
| Cashiers | 36,930 | 9.70 | 7.84 | 11.13 |
| First-line supervisors/managers of retail sales workers | 12,940 | 18.73 | 12.74 | 21.50 |
| Construction and extraction occupations | Employment | Average wage | 25th percentile wage | 75th percentile wage |
| Carpenters | 19,260 | \$21.68 | \$16.24 | \$26.72 |
| Construction laborers | 11,560 | 16.24 | 11.86 | 20.10 |
| First-line supervisors/managers of construction trades and extraction workers | 10,410 | 31.18 | 24.10 | 37.52 |
| Transportation and material moving occupations | Employment | Average wage | 25th percentile wage | 75th percentile wage |
| Laborers and freight, stock, and material movers, hand | 33,480 | \$12.07 | \$9.14 | \$13.95 |
| Truck drivers, heavy and tractor-trailer | 13,770 | 19.72 | 16.59 | 22.73 |
| Taxi drivers and chauffeurs | 10,080 | 12.86 | 10.21 | 15.27 |
| Building and grounds cleaning and maintenance occupations | Employment | Average wage | 25th Percentile wage | 75th Percentile wage |
| Janitors and cleaners, except maids and housekeeping cleaners | 29,610 | \$11.58 | \$9.05 | \$13.88 |
| Maids and housekeeping cleaners | 23,310 | 11.57 | 9.34 | 13.87 |
| Landscaping and groundskeeping workers | 13,800 | 11.67 | 8.96 | 13.61 |




Area Focus

AREA
FOCUS

## FIGURE 39

- This map shows the annual average wages for captains, mates, and pilots of water vessels in metropolitan and nonmetropolitan areas along the Mississippi and Ohio Rivers.
- Most areas with high average wages were found in the southern segment of the Mississippi River: Memphis, TN-MS-AR; Baton Rouge, LA; and Lafayette, LA. Workers in this occupation also had a high average wage in the West Kentucky nonmetropolitan area, which borders both rivers.
- Lower wages tended to be found in the northern segment of the Mississippi River: the South Illinois nonmetropolitan area, the Southeast Iowa nonmetropolitan area, and St. Louis, MS-IL.
- Average wages along the Ohio River ranged from a low of $\$ 37,630$ in Evansville, IN-KY to a high of $\$ 67,610$ in the West Kentucky nonmetropolitan area.

Annual average wages of water vessel captains, mates, and pilots employed along the Mississippi and Ohio Rivers ranged from a high of \$79,390 in Memphis, TN-MS-AR to a low of \$36,830 in the south Illinois nonmetropolitan area.


AREA
FOCUS

## FIGURE 40

- Many of the areas with a large share of employment in business and financial operations occupations were capital cities, including Tallahassee, Trenton, Washington, (DC), Olympia, Des Moines, and Sacramento.
- Areas with about 6 percent of their employment in business and financial operations occupations were large areas such as Chicago, Boston, Seattle, Detroit, and San Francisco. - The areas with low concentrations of business and financial operations occupations tended to be nonmetropolitan.
- St. Mary's County, Maryland, was the only nonmetropolitan area among those with the highest concentrations of business and financial operations occupations. The St. Mary's County, Maryland nonmetropolitan area employed a large number of management analysts.
- Warner Robins, Georgia, had the largest employment concentration of logisticians.

Four-and-a-half percent of workers in the United States were in business and financial operations occupations. This varied from over 10 percent in Tallahassee, Florida, and Warner Robins, Georgia, to about 1 percent in several nonmetropolitan areas in the South.



AREA
FOCUS

## FIGURE 41

- Hot Springs, Arkansas, and other areas below the diagonal line in the chart had belowaverage wages to heavy and tractor-trailer truck drivers. These areas also employed proportionately fewer heavy and tractor-trailer truck drivers, as illustrated by the concentration and the size of the circle.
- Fort Smith, AR-OK is another example of an area with a high mean wage and a high concentration of heavy and tractor-trailer truck drivers.

Percent employment of heavy and tractor-trailer truck drivers in
Arkansas, May 2007
employment in the occupation



AREA
FOCUS

## FIGURE 42

- The South Illinois nonmetropolitan area had a higher concentration of employment in education, training, and library occupations, compared with the United States, Illinois, and the Chicago-Naperville-Joliet, IL Metropolitan Division.
- The proportion of business and financial operations Occupations in the Chicago-Na-perville-Joliet, IL Metropolitan Division was more than twice that in the South Illinois nonmetropolitan area.
- Illinois, Chicago, and the South Illinois nonmetropolitan area all had higher shares of production occupations than the United States.

Illinois, the Chicago-Naperville-Joliet, IL metropolitan division, and the South Illinois nonmetropolitan area all had a higher share of production workers than the U.S. average.

Occupational composition of the United States, Illinois, the Chicago-NapervilleJoliet, IL Metropolitan Division, and the South Illinois nonmetropolitan area, May 2007


Illinois | Chicago-Naperville- |
| :--- |
| Joliet, IL |

AREA
FOCUS

The median wage for computer programmers was more than twice the U.S. median wage.

## FIGURE 43

- In Boston and San Francisco, computer programmers were paid less than twice the median wage for those areas.
- Although Seattle had the highest paid computer programmers, median wages in Dallas, Miami, and Los Angeles were higher relative to wages for all workers in the area.
- In Dallas, computer programmers were paid almost 2.5 times the median wage for Dallas.

Ratio of median wages for computer programmers to median wages for all occupations in the largest U.S. metropolitan areas, May 2007



AREA FOCUS

## FIGURE 44

- With the exception of 2 areas, most of the STEM employment in these areas was in computer occupations.
- Huntsville, AL and the St.

Mary's County, Maryland non metropolitan area had more jobs in architecture and engineering occupations than in other STEM occupations. Of the areas shown, Durham, NC had the highest concentration of life, the highest concentration of life,
physical, and social science occupations.

- Of the areas with the highest
concentrations of these occupations, the San Jose-Sunnyvaletions, the San Jose-Sunnyvale-
Santa Clara, CA metropolitan area had the largest level of STEM employment.
- St. Mary's County, Maryland nonmetropolitan area had the
highest concentration of STEM nonmetropolitan area had the
highest concentration of STEM workers.
FIGURE
5.2 percent of jobs in the United States were in science, technology, engineering, and mathematics (STEM) occupations. Seven areas had at least 12 percent of jobs in these occupations.

Metropolitan areas with the highest employment concentration of science, technology, engineering, and mathematics (STEM) occupations, May 2007


## FIGURE 45

- There were almost twice as many workers in architecture and engineering occupations in Los Angeles-Long Beach-Glendale, CA Metropolitan Division and Houston-Sugar Land-Baytown, TX as in the Boston-Cam-bridge-Quincy, MA Division.
- The Washington-ArlingtonAlexandria, DC-VA-MD-WV Metropolitan Division had almost 3 times as many workers in computer and mathematical science occupations as did the Houston-Sugar Land-Baytown, TX metropolitan area.
- Houston, TX and Huntsville, AL, which are home to space research and technology centers, had more employment in architecture and engineering occupations than in computer and mathematical science occupations.

Metropolitan areas with the highest employment levels of science, technology, engineering, and mathematics (STEM) employment, May 2007


AREA
FOCUS

## FIGURE 46

- Delaware, Maryland, New Jersey, and Massachusetts had the highest portion of their employment in biotech occupations.
- Occupations included as biotech are: agricultural engineers; animal scientists; food scientists and technologists; soil and plant scientists; biochemists and biophysicists; microbiologists; biological scientists, all other; epidemiologists; life scientists, all other; and chemists.

California employed more than twice as many biotech workers as any other State.


## FIGURE 47

- The Bethesda-GaithersburgFrederick, MD Metropolitan Division was the area with both the highest employment, and the highest employment concentration of biotech occupations.
- Seven of the 10 metropolitan areas with the most biotech workers were located on the East Coast of the United States.


AREA
FOCUS

## FIGURE 48

Of the three areas shown:

- Indianapolis-Carmel, IN had the highest shares of health care practitioner and technical, production, and transportation and material moving occupations.
- Las Vegas-Paradise, NV had the highest shares of food preparation and serving related, construction and extraction, and personal care and service occupations.
- Austin-Round Rock, TX had the highest shares of business and financial operations; computer and mathematical science; and education, training, and library occupations.

The metropolitan areas of Indianapolis-Carmel, IN; Las Vegas-Paradise, NV; and Austin-Round Rock, TX had similar overall employment levels but different occupational compositions.

Percent of total employment in selected occupational groups in
Indianapolis-Carmel, IN; Las Vegas-Paradise, NV; and
Austin-Round Rock, TX, May 2007
$\square$ Indianapolis-Carmel, IN $\quad$ Las Vegas-Paradise, NV $\quad$ Austin-Round Rock, TX



AREA
FOCUS

In Hawaii, wages in Honolulu were equal to, or lower than, those in the rest of the State for 11 of the 15 largest occupations.

## FIGURE 49

- Despite generally having lower wages in these largest occupations, Honolulu had the higher mean wage, \$19.83 compared with $\$ 18.11$, because Honolulu had more employment in the higher paid occupations, and relatively less in the lowest paying occupations.
- Retail salespersons is the largest occupation in both Honolulu and the nonmetropolitan Hawaii/Maui/Kauai island areas.
- Waiters and waitresses and maids and housekeeping cleaners comprised a smaller percentage of employment in Honolulu than in the rest of the State.
- Hawaii/Maui/Kauai includes all of Hawaii except for the Honolulu metropolitan area.

Wages and percentage of area employment for the 15 largest occupations in Hawaii, May 2007



## Contents of the compact disk

The enclosed compact disk (CD) contains electronic copies of all figures in this book; files with May 2007 OES data for all occupations in all industries, States, and metropolitan and nonmetropolitan areas; and technical notes for the estimates. The CD includes electronic versions of the tables that were published in printed form in previous years. These tables include national cross-industry employment and wage data for all occupations; the largest occupations in over 300 industries; and profiles for all occupations. Current and archived data are available on the Web site www.bls.gov/oes.

The charts are in Portable Document Format (PDF). The PDF files are created by Adobe Acrobat software and can be viewed with Adobe Acrobat Reader. If you do not already have this viewer configured on a local drive, you may download it at no cost from Adobe's Web site: www.adobe.com/products/acrobate/readermain. html.

To open the CD on a Windows PC, do the following:

1. Insert the CD into your CD-ROM drive.
2. Open "My Computer" from either the Start Menu or the Desktop.
3. Double-click on the CD-ROM drive to view its contents.



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