

National Compensation Survey: Occupational Wages in the United States, 1998



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Summary 99-12

Earnings averaged \$15.72 per hour in 1998 for all private industry and State and local government workers. This summary presents aggregated national earnings data from the National Compensation Survey (NCS) by:

- Sector of the economy (private industry, State and local government, and total)
- Worker characteristics including occupational detail
- Establishment characteristics
- Geographic areas

NCS provides comprehensive measures of occupational earnings, compensation cost trends, and details of benefit provisions.¹ When fully integrated, the NCS will encompass wages as well as benefit costs and provisions. The focus of this summary is occupational earnings.

Data in this summary are a subset of the occupational earnings data tabulated for the National Compensation Survey. Table 1 highlights the major types of data available by sector of the economy, private industry, State and local government, and total. Table 2 shows similar data by metropolitan and nonmetropolitan area. Table 3 provides data for specific occupations for all workers, as well as full- and part-time workers.

Average hourly earnings for private industry workers were lower than for State and local government workers, averaging \$14.95 per hour and \$18.59 per hour, respectively. Part of this difference can be explained by differences in the occupational and industrial composition of the two sectors. For example, professional specialty and technical occupations are proportionally more prevalent in State and local government than in private industry. With the exception of the construc-

tion industry, few State and local government workers are in goods-producing industries.

Worker characteristics. Earnings varied by occupational group; full- and part-time status; union and nonunion status; and time and incentive pay. White-collar pay, which averaged \$19.39 per hour, was the highest. Blue-collar pay averaged \$12.90 per hour, while the average pay of workers in service occupations was \$9.52.

Among occupations, average hourly earnings ranged from \$27.78 for executive, administrative and managerial workers to \$9.52 for service workers. Similarly, there were differences between occupations within occupational groups. Table 3 presents data on hourly earnings for detailed occupations.

Earnings were higher for full-time than part-time workers, averaging \$16.40 per hour and \$9.25 per hour, respectively. This difference reflects, in part, the occupational composition of the two groups. NCS classifies workers as full- and part-time based on the employer's classification of the occupation.

Pay was also higher for union workers (\$17.76 per hour) than for nonunion workers (\$15.10 per hour). Incentive workers (whose wages are based at least partially on productivity payments such as piece rates, commissions, and production bonuses) earned, on average, \$17.14 per hour. In contrast, time workers (whose wages are based solely on an hourly rate or salary) earned \$15.66 per hour.

Establishment characteristics. Earnings generally varied by size of the establishment and industry.² Average hourly earnings ranged from \$13.04 in establishments employing between 50 and 99 workers to \$20.07 in those with 2,500 or more workers. In private industry, workers employed in goods-producing industries earned more than those in service-producing industries, averaging \$16.00 and \$14.40 per hour, respectively.

¹ NCS integrates data from three BLS programs – the Occupational Compensation Survey (OCS), the Employment Cost Index (ECI), and the Employee Benefits Survey (EBS). The OCS provides data on occupational earnings; the ECI measures changes in labor costs as well as the average hourly employer costs for employee compensation, and the EBS provides information on detailed benefit provisions.

² Data collection of industry classification for State and local government does not permit estimates for goods- and service-producing industries.

Geographic area. In general, earnings varied by type of area and geographic region. Workers in metropolitan areas earned on average \$16.40 per hour, while those in nonmetropolitan areas earned \$12.31. By geographic region, average hourly earnings ranged from \$18.10 in the Middle Atlantic region to \$11.87 in the East South Central region.

Additional occupational earnings data. More detailed information on occupational average hourly earnings will be

published in the national bulletin to be released in early 2000. It will include data by:

- Major industry division (such as construction and wholesale trade)
- Occupational detail
- Occupational earnings by work level
- Top 10 metropolitan areas

Table 1. Mean hourly earnings¹ and weekly hours by selected characteristics, private industry and State and local government, United States, National Compensation Survey,² 1998

Worker and establishment characteristics and geographic areas	Total			Private industry			State and local government		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ³ (percent)		Mean	Relative error ³ (percent)		Mean	Relative error ³ (percent)	
Total	\$15.72	0.5	36.5	\$14.95	0.6	36.5	\$18.59	0.6	36.6
Worker characteristics:⁴									
White-collar occupations ⁵	19.39	.5	36.7	18.83	.7	36.8	20.96	.5	36.4
Professional specialty and technical ... Executive, administrative, and managerial	24.10	.6	36.4	23.63	.8	36.7	24.85	.6	35.9
Sales	27.78	.7	40.0	28.63	.9	40.5	24.99	1.1	38.6
Administrative support	13.28	3.6	33.0	13.29	3.6	33.0	12.10	4.8	32.2
Blue-collar occupations ⁵	12.00	.5	37.0	12.00	.6	37.3	12.01	.7	36.3
Precision production, craft, and repair Machine operators, assemblers, and inspectors	12.90	.6	38.5	12.77	.7	38.6	14.44	1.1	37.5
Transportation and material moving ... Handlers, equipment cleaners, helpers, and laborers	16.58	1.0	39.8	16.60	1.1	39.8	16.39	1.5	39.8
Service occupations ⁵	11.59	.9	39.6	11.58	.9	39.6	13.50	6.6	38.3
Full time	13.72	1.1	37.9	13.77	1.2	38.9	13.52	1.7	33.8
Part time	9.69	.7	35.9	9.52	.7	35.7	11.84	2.0	38.4
Union	9.52	.7	33.0	7.85	.6	31.8	13.84	1.3	36.7
Nonunion	16.40	.5	39.6	15.69	.6	39.8	18.97	.7	38.9
Time	9.25	1.0	21.1	8.66	1.0	21.4	12.94	2.2	19.3
Incentive	17.76	.9	36.9	15.81	1.3	37.0	20.44	.7	36.7
	15.10	.6	36.4	14.77	.7	36.4	17.01	.9	36.4
	15.66	.5	36.4	14.84	.6	36.4	18.59	.6	36.6
	17.14	2.7	38.6	17.14	2.7	38.6	-	-	-
Establishment characteristics:									
Goods producing	(⁶)	(⁶)	(⁶)	16.00	.8	39.8	(⁶)	(⁶)	(⁶)
Service producing	(⁶)	(⁶)	(⁶)	14.40	.7	35.0	(⁶)	(⁶)	(⁶)
50-99 workers ⁷	13.04	1.1	35.2	12.96	1.2	35.1	14.40	3.6	36.0
100-499 workers	14.21	.7	36.3	13.82	.8	36.4	17.59	1.3	35.6
500-999 workers	16.45	1.4	37.3	15.82	1.6	37.7	18.83	1.7	35.7
1,000-2,499 workers	16.51	7.3	36.8	15.81	9.3	37.1	18.65	2.0	35.9
2,500 workers or more	20.07	.6	37.3	21.05	1.1	37.0	19.27	.7	37.5
Geographic areas:⁸									
Metropolitan	16.40	.6	36.4	15.67	.7	36.3	19.23	.6	36.6
Nonmetropolitan	12.31	1.2	37.1	11.16	1.3	37.2	15.90	1.8	36.6
New England	17.38	1.4	35.1	16.50	1.7	35.0	21.35	1.3	35.5
Middle Atlantic	18.10	1.5	35.8	17.14	1.8	35.8	21.72	1.6	35.5
East North Central	16.08	.8	36.2	15.44	.9	36.3	19.32	1.5	35.7
West North Central	14.85	1.6	36.5	14.05	1.9	36.3	17.87	1.2	37.0
South Atlantic	14.40	1.0	37.1	13.82	1.1	36.9	16.22	1.4	38.0
East South Central	11.87	2.3	37.7	11.21	2.6	37.9	15.93	2.2	36.8
West South Central	14.62	1.8	37.2	14.27	2.3	36.9	15.63	1.2	38.0
Mountain	14.58	2.7	36.4	13.30	2.9	36.4	18.32	2.9	36.4
Pacific	17.86	1.3	36.2	16.82	1.7	36.4	21.26	1.0	35.5

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, and holidays; nonproduction bonuses; and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² This survey covers all 50 States. Collection was conducted from July 1997 through April 1999. The average reference month was August 1998.

³ The relative standard error (RSE) is the standard error expressed as a percent of the estimate. It can be used to calculate a "confidence interval" around a sample estimate. For more information about RSEs, see Technical Note.

⁴ Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Union workers are those whose wages are determined through collective bargaining. Wages of time workers are based solely on hourly rate or salary; incentive workers are those whose wages

are at least partially based on productivity payments such as piece rates, commissions, and production bonuses.

⁵ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy.

⁶ Classification of establishments into goods-producing and service-producing industries applies to private industry only.

⁷ Establishments classified with 50-99 workers may contain establishments with fewer than 50 due to staff reductions between survey sampling and collection.

⁸ Data are presented for metropolitan and nonmetropolitan area divisions as well as 9 census area divisions. See Technical Note for a list of survey areas and States comprising the 9 census area divisions.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria.

Table 2. Mean hourly earnings¹ and weekly hours by selected characteristics, metropolitan and nonmetropolitan areas,² United States, National Compensation Survey,³ 1998

Worker and establishment characteristics and geographic areas	Total			Metropolitan areas			Nonmetropolitan areas		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
Total	\$15.72	0.5	36.5	\$16.40	0.6	36.4	\$12.31	1.2	37.1
Private industry	14.95	.6	36.5	15.67	.7	36.3	11.16	1.3	37.2
State and local government	18.59	.6	36.6	19.23	.6	36.6	15.90	1.8	36.6
Worker characteristics:⁵									
White-collar occupations ⁶	19.39	.5	36.7	19.93	.6	36.7	15.65	1.5	36.9
Professional specialty and technical ...	24.10	.6	36.4	24.58	.6	36.4	20.76	1.0	36.3
Executive, administrative, and managerial	27.78	.7	40.0	28.35	.7	40.1	22.56	2.6	39.7
Sales	13.28	3.6	33.0	14.12	1.9	32.6	9.10	5.4	35.3
Administrative support	12.00	.5	37.0	12.23	.5	37.0	10.41	2.1	37.5
Blue-collar occupations ⁶	12.90	.6	38.5	13.31	.6	38.4	11.36	2.2	38.9
Precision production, craft, and repair	16.58	1.0	39.8	17.14	.6	39.8	14.09	3.9	40.0
Machine operators, assemblers, and inspectors	11.59	.9	39.6	11.96	.9	39.5	10.49	2.3	39.7
Transportation and material moving ...	13.72	1.1	37.9	13.85	1.0	38.1	13.01	4.2	37.2
Handlers, equipment cleaners, helpers, and laborers	9.69	.7	35.9	9.84	.8	35.5	9.17	2.1	37.2
Service occupations ⁶	9.52	.7	33.0	9.90	1.0	32.6	8.20	1.5	34.6
Full time	16.40	.5	39.6	17.17	.6	39.6	12.64	1.3	39.7
Part time	9.25	1.0	21.1	9.37	1.1	21.1	8.50	1.4	20.9
Union	17.76	.9	36.9	18.14	.7	36.7	15.18	4.6	38.0
Nonunion	15.10	.6	36.4	15.84	.7	36.3	11.70	1.3	36.9
Time	15.66	.5	36.4	16.33	.5	36.3	12.34	1.1	37.0
Incentive	17.14	2.7	38.6	17.91	2.7	38.4	11.21	7.8	40.0
Establishment characteristics:									
Goods producing ⁷	16.00	.8	39.8	17.00	.8	39.8	12.37	2.1	40.0
Service producing ⁷	14.40	.7	35.0	15.05	.8	34.9	10.12	1.1	35.2
50-99 workers ⁸	13.04	1.1	35.2	13.48	1.3	35.1	11.14	2.0	35.2
100-499 workers	14.21	.7	36.3	14.66	.8	36.3	12.19	1.6	36.6
500-999 workers	16.45	1.4	37.3	16.94	1.2	37.1	14.55	3.8	38.2
1,000-2,499 workers	16.51	7.3	36.8	18.25	1.1	36.3	11.30	17.1	38.5
2,500 workers or more	20.07	.6	37.3	20.09	.6	37.2	18.96	4.6	39.7
Geographic areas:⁹									
New England	17.38	1.4	35.1	17.75	1.2	35.2	14.75	3.6	34.2
Middle Atlantic	18.10	1.5	35.8	18.39	1.6	35.7	13.58	1.6	36.2
East North Central	16.08	.8	36.2	16.55	.8	36.2	13.55	1.3	36.5
West North Central	14.85	1.6	36.5	15.83	2.4	36.5	12.10	2.3	36.4
South Atlantic	14.40	1.0	37.1	14.89	.7	37.0	12.00	4.4	37.7
East South Central	11.87	2.3	37.7	13.88	2.2	36.9	9.97	4.3	38.6
West South Central	14.62	1.8	37.2	14.86	2.1	37.2	13.08	5.6	37.1
Mountain	14.58	2.7	36.4	14.73	3.4	36.5	13.99	3.3	36.0
Pacific	17.86	1.3	36.2	18.04	1.3	36.2	14.96	2.8	35.6

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, and holidays; nonproduction bonuses; and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² Metropolitan areas can be a Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) as defined by the Office of Management and Budget, 1994. Nonmetropolitan areas are counties that do not fit the definitions above.

³ This survey covers all 50 States. Collection was conducted from July 1997 through April 1999. The average reference month was August 1998.

⁴ The relative standard error (RSE) is the standard error expressed as a percent of the estimate. It can be used to calculate a "confidence interval" around a sample estimate. For more information about RSEs, see Technical Note.

⁵ Employees are classified as working either a full-time or a part-time schedule

based on the definition used by each establishment. Union workers are those whose wages are determined through collective bargaining. Wages of time workers are based solely on hourly rate or salary; incentive workers are those whose wages are at least partially based on productivity payments such as piece rates, commissions, and production bonuses.

⁶ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy.

⁷ Classification of establishments into goods-producing and service-producing industries applies to private industry only.

⁸ Establishments classified with 50-99 workers may contain establishments with fewer than 50 workers due to reduction in staff from the time of sampling to data collection.

⁹ See Technical Note for a list of survey areas and States comprising the 9 census area divisions.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
All	\$15.72	0.5	36.5	\$16.40	0.5	39.6	\$9.25	1.0	21.1
All excluding sales	15.89	.5	36.8	16.47	.5	39.6	9.67	1.1	21.0
White collar	19.39	.5	36.7	20.09	.5	39.4	11.86	1.3	20.9
White collar excluding sales	20.27	.5	37.3	20.65	.5	39.4	14.55	1.4	20.7
Professional specialty and technical	24.10	.6	36.4	24.43	.6	38.9	19.78	1.4	19.4
Professional specialty	25.90	.5	36.3	26.20	.5	38.9	21.69	1.5	18.8
Engineers, architects, and surveyors	28.97	.7	40.3	28.97	.7	40.4	27.67	8.2	23.2
Architects	25.85	5.7	40.1	25.83	5.8	40.5	—	—	—
Aerospace engineers	30.96	2.5	40.1	30.96	2.5	40.1	—	—	—
Metallurgical and materials engineers	27.28	5.0	40.2	27.28	5.0	40.2	—	—	—
Mining engineers	32.66	7.6	33.3	30.49	5.7	41.4	—	—	—
Petroleum engineers	43.02	4.4	40.5	43.02	4.4	40.5	—	—	—
Chemical engineers	33.37	2.2	40.0	33.37	2.2	40.0	—	—	—
Nuclear engineers	34.60	2.1	40.6	34.60	2.1	40.6	—	—	—
Civil engineers	27.69	2.3	40.1	27.69	2.3	40.2	—	—	—
Electrical and electronic engineers	30.35	1.1	40.3	30.37	1.1	40.4	—	—	—
Industrial engineers	25.26	2.4	40.6	25.26	2.4	40.6	—	—	—
Mechanical engineers	26.26	1.2	40.2	26.28	1.3	40.4	—	—	—
Marine engineers and naval architects	30.54	5.7	41.3	30.54	5.7	41.3	—	—	—
Engineers, n.e.c.	30.11	1.2	40.3	30.10	1.2	40.4	32.46	5.6	24.2
Surveyors and mapping scientists	21.13	4.9	40.1	21.23	5.0	40.4	—	—	—
Mathematical and computer scientists	27.95	1.5	40.0	27.86	1.5	40.1	42.33	28.9	28.8
Computer systems analysts and scientists	27.89	1.3	40.1	27.90	1.3	40.1	25.37	7.6	25.7
Operations and systems researchers and analysts	28.56	6.8	39.6	27.92	6.9	40.0	51.40	27.4	30.7
Actuaries	27.38	9.2	39.4	27.38	9.2	39.4	—	—	—
Statisticians	23.77	8.4	38.0	23.83	8.5	38.2	—	—	—
Mathematical scientists, n.e.c.	24.88	8.2	38.8	24.88	8.2	38.8	—	—	—
Natural scientists	25.48	1.7	39.6	25.45	1.7	40.0	28.39	9.2	20.5
Physicists and astronomers	37.74	7.7	40.4	37.74	7.7	40.4	—	—	—
Chemists, except biochemists	28.62	3.4	40.0	28.69	3.5	40.1	—	—	—
Atmospheric and space scientists	22.91	15.0	41.3	22.91	15.0	41.3	—	—	—
Geologists and geodesists	30.68	6.3	40.4	30.68	6.3	40.4	—	—	—
Physical scientists, n.e.c.	26.56	2.4	39.9	26.56	2.4	39.9	—	—	—
Agricultural and food scientists	22.48	8.5	39.6	22.13	8.8	39.9	—	—	—
Biological and life scientists	21.66	7.3	39.2	21.55	7.3	39.8	—	—	—
Forestry and conservation scientists	20.34	3.5	40.1	20.34	3.5	40.1	—	—	—
Medical scientists	23.14	4.8	38.6	22.97	4.9	39.7	29.60	10.6	18.5
Health related	22.56	1.0	34.2	22.49	1.2	39.5	22.84	1.4	21.2
Physicians	38.55	5.4	39.6	37.20	5.8	43.2	55.99	5.2	19.0
Dentists	34.36	8.6	29.4	34.90	11.4	39.6	33.02	8.1	17.8
Optometrists	38.60	6.1	37.7	38.14	7.7	39.9	—	—	—
Health diagnosing practitioners, n.e.c.	19.82	12.7	33.9	—	—	—	—	—	—
Registered nurses	20.86	.7	33.5	20.71	.7	39.1	21.48	1.3	21.3
Pharmacists	27.35	1.9	34.8	27.87	1.2	40.0	24.97	6.4	21.8
Dietitians	16.70	1.8	36.9	16.54	2.0	39.7	18.36	3.1	20.8
Respiratory therapists	17.76	1.6	34.4	17.84	1.6	39.4	17.37	3.4	21.3
Occupational therapists	23.08	2.9	34.1	22.68	3.4	39.2	25.48	5.2	19.3
Physical therapists	23.92	2.3	34.4	23.48	2.2	39.5	25.66	8.9	22.6
Speech therapists	23.46	6.6	33.8	23.26	7.4	38.1	25.05	4.4	18.1
Therapists, n.e.c.	16.51	3.1	37.0	16.31	3.0	39.3	18.36	12.3	23.8
Physicians' assistants	26.36	4.1	38.3	26.75	4.1	39.6	—	—	—
Teachers, college and university	33.82	1.5	34.1	34.19	1.5	39.3	29.31	5.2	13.3
Earth, environmental, and marine science teachers	33.84	10.4	36.5	33.78	10.6	37.5	—	—	—
Biological science teachers	33.80	8.1	36.5	33.53	8.3	39.8	40.53	20.0	11.8
Chemistry teachers	31.61	7.3	40.4	31.67	7.5	41.7	—	—	—
Physics teachers	47.49	7.0	37.1	47.49	7.0	37.2	—	—	—
Natural science teachers, n.e.c.	38.48	6.3	38.8	38.54	6.3	38.9	—	—	—
Psychology teachers	32.26	6.4	33.5	32.91	6.9	39.4	20.62	9.5	9.1
Economics teachers	46.28	11.2	43.1	46.28	11.2	43.1	—	—	—
History teachers	32.36	5.4	36.6	32.62	5.6	39.8	24.56	14.1	10.6
Political science teachers	33.60	6.2	37.2	33.44	6.2	39.1	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
White collar—Continued									
Professional specialty and technical—Continued									
Professional specialty—Continued									
Teachers, college and university—Continued									
Sociology teachers	\$36.75	8.3	34.6	\$37.33	8.2	38.9	—	—	—
Social science teachers, n.e.c.	32.95	7.2	37.3	33.15	7.4	39.2	\$20.20	29.1	9.1
Engineering teachers	38.51	12.0	37.5	38.55	12.6	40.0	37.80	18.0	17.3
Mathematical science teachers	33.59	6.2	33.3	34.25	6.6	38.8	25.52	9.1	12.2
Computer science teachers	25.48	11.3	30.5	30.11	8.4	37.9	20.42	2.2	25.1
Medical science teachers	44.51	5.8	38.9	42.17	6.5	43.7	68.22	7.3	18.3
Health specialties teachers	33.96	7.5	36.8	34.29	7.5	38.7	21.69	10.9	12.8
Business, commerce, and marketing teachers ..	35.50	6.5	34.8	35.91	7.0	39.4	24.26	8.5	8.4
Agriculture and forestry teachers	42.82	26.4	35.5	42.82	26.4	35.5	—	—	—
Art, drama, and music teachers	29.29	2.9	31.9	29.76	3.4	39.0	26.05	7.8	14.1
Physical education teachers	25.28	8.7	33.4	25.29	9.2	39.8	24.99	14.4	8.6
Education teachers	31.19	9.1	35.1	31.77	9.3	40.4	19.09	10.4	9.5
English teachers	32.60	4.8	33.1	32.90	5.0	38.0	27.32	6.8	10.1
Foreign language teachers	26.29	13.4	33.2	26.62	15.8	40.9	24.38	15.5	15.9
Law teachers	58.19	8.2	35.9	60.32	8.1	39.0	—	—	—
Social work teachers	25.91	7.4	32.7	26.45	7.2	40.5	—	—	—
Theology teachers	35.46	4.2	39.1	35.11	4.2	39.3	—	—	—
Trade and industrial teachers	27.22	3.3	32.4	27.59	3.2	38.0	21.81	8.5	10.2
Home economics teachers	29.92	14.9	30.4	—	—	—	—	—	—
Teachers, post secondary, subject not specified	33.48	7.2	32.1	34.30	7.6	39.0	22.41	7.4	9.4
Teachers, post secondary, n.e.c.	31.26	1.9	31.5	31.72	2.0	38.4	27.26	5.6	12.1
Teachers, except college and university	26.82	.8	34.6	27.27	.8	36.7	16.82	3.3	15.3
Prekindergarten and kindergarten	21.09	3.9	35.1	21.43	4.0	37.2	15.41	13.3	18.4
Elementary school teachers	27.72	.9	36.1	27.75	.9	36.5	25.34	7.9	18.8
Secondary school teachers	27.86	1.2	36.7	27.84	1.2	37.0	29.05	6.0	22.2
Teachers, special education	28.18	1.9	35.5	28.26	1.9	35.9	23.86	16.6	21.8
Teachers, n.e.c.	26.51	2.6	30.8	27.40	2.8	36.3	18.02	7.1	12.5
Substitute teachers	10.00	3.5	16.1	10.90	9.6	33.6	9.84	3.8	14.7
Vocational and educational counselors	24.78	3.8	36.5	24.90	3.9	37.7	21.88	11.8	20.5
Librarians, archivists, and curators	21.39	2.2	36.5	21.69	2.2	38.4	17.25	5.1	21.8
Librarians	21.53	2.3	36.5	21.86	2.3	38.3	17.28	5.3	22.6
Archivists and curators	20.33	7.7	37.1	20.43	7.9	39.2	—	—	—
Social scientists and urban planners	23.65	3.0	36.7	23.83	3.1	39.0	20.74	8.2	18.5
Economists	25.93	3.8	39.8	25.93	3.8	39.8	—	—	—
Psychologists	23.81	5.0	34.6	24.19	5.2	38.3	20.77	8.4	19.4
Sociologists	17.54	3.2	39.3	17.54	3.2	39.3	—	—	—
Social scientists, n.e.c.	16.66	10.9	37.7	16.56	11.1	39.3	—	—	—
Urban planners	22.08	3.5	36.8	22.12	3.5	39.5	—	—	—
Social, recreation, and religious workers	15.87	1.3	37.6	15.92	1.3	39.2	14.88	3.6	19.7
Social workers	16.06	1.3	37.8	16.08	1.4	39.1	15.72	3.9	21.0
Recreation workers	13.11	3.7	33.4	13.39	3.9	39.2	10.88	9.4	15.3
Clergy	15.21	15.8	42.2	15.25	17.0	46.1	14.71	10.1	19.8
Religious workers, n.e.c.	20.55	15.8	36.6	20.63	16.1	39.7	17.24	22.5	8.3
Lawyers and judges	36.62	2.4	40.0	36.87	2.5	41.7	27.03	10.6	15.8
Lawyers	36.30	2.6	40.3	36.52	2.6	41.8	27.44	11.5	16.7
Judges	42.18	7.0	34.7	43.27	6.4	39.6	23.83	25.6	11.3
Writers, authors, entertainers, athletes, and professionals, n.e.c.	23.92	3.8	36.4	24.48	3.9	39.8	16.16	7.7	16.5
Technical writers	21.50	6.8	38.9	21.66	7.0	40.0	17.32	14.0	22.9
Designers	22.27	3.9	39.7	22.49	3.9	40.3	12.78	14.6	24.6
Musicians and composers	36.96	20.4	15.4	39.48	27.1	30.3	33.69	31.2	9.4
Actors and directors	33.29	21.2	34.5	37.17	20.7	40.4	13.53	28.0	19.9
Painters, sculptors, craft artists, and artist printmakers	25.94	23.5	39.6	26.19	23.7	40.2	—	—	—
Photographers	17.11	7.1	38.9	16.94	7.2	40.0	—	—	—
Artists, performers, and related workers, n.e.c.	13.30	9.6	27.1	15.59	11.3	38.4	10.91	10.1	20.7
Editors and reporters	23.14	4.9	38.7	23.35	4.9	39.4	14.63	13.5	22.7
Public relations specialists	20.57	4.9	36.6	20.63	5.2	39.3	19.55	12.8	16.6
Announcers	22.52	21.9	25.7	26.98	23.8	40.9	16.04	26.2	16.7

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
White collar—Continued									
Professional specialty and technical—Continued									
Professional specialty—Continued									
Writers, authors, entertainers, athletes, and professionals, n.e.c.—Continued									
Athletes	\$33.28	40.1	23.9	\$40.88	43.9	40.7	\$12.11	9.3	11.1
Professional, n.e.c.	25.63	3.1	38.9	25.67	3.1	39.8	24.37	16.3	23.9
Technical	17.83	1.2	36.8	18.16	1.3	39.1	13.97	1.7	21.5
Clinical laboratory technologists and technicians									
Dental hygienists	15.39	1.7	37.2	15.41	1.8	39.6	15.12	3.2	20.3
Health record technologists and technicians	19.86	8.2	35.7	19.46	9.5	38.5	—	—	—
Radiological technicians	12.17	3.6	34.6	12.02	3.9	38.6	13.14	7.4	20.2
Licensed practical nurses	16.91	1.7	33.5	16.73	1.6	39.5	17.67	4.4	20.7
Health technologists and technicians, n.e.c.	12.98	.9	34.8	12.92	1.0	39.3	13.32	1.8	22.2
Electrical and electronic technicians	13.35	1.2	35.0	13.57	1.3	39.8	11.84	2.8	19.3
Industrial engineering technicians	18.35	1.8	39.8	18.33	1.8	40.0	19.33	20.5	26.7
Mechanical engineering technicians	18.71	4.6	40.3	18.71	4.6	40.3	—	—	—
Engineering technicians, n.e.c.	19.24	4.0	40.1	19.29	4.0	40.3	—	—	—
Drafters	18.80	1.6	39.3	18.80	1.6	39.8	18.71	5.6	29.4
Surveying and mapping technicians	18.71	3.9	39.6	18.84	4.0	40.1	13.12	17.0	25.5
Biological technicians	15.92	5.6	39.6	16.04	5.5	39.6	—	—	—
Chemical technicians	15.13	4.4	37.1	15.53	4.4	39.8	9.90	6.0	19.9
Science technicians, n.e.c.	17.11	2.3	39.7	17.15	2.4	39.9	—	—	—
Airplane pilots and navigators	18.18	3.2	38.3	18.06	3.3	39.6	—	—	—
Broadcast equipment operators	79.22	9.4	23.6	79.31	9.4	23.6	—	—	—
Computer programmers	17.82	11.0	35.7	19.37	10.3	39.5	7.58	6.5	21.7
Tool programmers, numerical control	22.06	1.9	39.5	22.12	1.9	39.8	17.34	17.2	25.2
Legal assistants	17.32	4.7	40.1	17.32	4.7	40.1	—	—	—
Technical and related, n.e.c.	17.19	2.6	39.3	17.29	2.5	39.4	—	—	—
	18.60	1.7	38.4	18.77	1.7	39.7	14.49	4.8	22.3
Executive, administrative, and managerial									
Executives, administrators, and managers	27.78	.7	40.0	27.83	.7	40.4	20.62	5.4	17.9
Legislators	31.73	.9	40.3	31.78	.9	40.7	22.57	8.2	15.5
Chief executives and general administrators, public administration	15.09	13.3	13.2	12.98	16.9	33.8	17.90	21.2	7.3
Administrators and officials, public administration	60.36	32.1	39.7	60.36	32.1	39.8	—	—	—
Financial managers	25.80	1.7	39.1	25.81	1.7	39.7	24.92	18.3	12.7
Personnel and labor relations managers	32.82	2.3	40.2	32.85	2.3	40.3	25.37	20.8	21.0
Purchasing managers	32.18	3.1	41.1	32.20	3.1	41.2	—	—	—
Managers, marketing, advertising, and public relations	28.91	3.4	41.1	28.91	3.4	41.1	—	—	—
Administrators, education and related fields	35.26	2.0	40.8	35.29	2.0	40.8	—	—	—
Managers, medicine and health	31.96	1.7	39.1	32.08	1.7	39.5	21.79	14.5	19.9
Managers, food servicing and lodging establishments	29.33	2.3	39.7	29.30	2.3	40.0	31.63	15.2	23.1
Managers, properties and real estate	18.24	3.3	42.7	18.29	3.3	43.1	13.47	9.6	23.5
Funeral directors	23.18	8.9	40.5	23.21	8.9	40.6	—	—	—
Managers, service organizations, n.e.c.	25.26	14.3	40.3	25.26	14.3	40.3	—	—	—
Managers and administrators, n.e.c.	23.33	11.6	39.6	23.33	11.8	40.0	23.35	32.7	24.8
Management related	34.38	1.4	41.2	34.39	1.4	41.3	21.99	20.1	17.8
Accountants and auditors	21.88	.8	39.6	21.91	.8	39.9	18.30	4.6	22.0
Underwriters	20.38	1.8	39.6	20.38	1.9	39.8	20.73	3.3	21.1
Other financial officers	25.67	5.0	39.3	25.67	5.0	39.3	—	—	—
Management analysts	24.80	3.4	39.8	24.83	3.4	40.0	18.99	5.0	19.2
Personnel, training, and labor relations specialists	23.54	2.1	40.0	23.49	2.1	40.1	34.42	15.8	23.6
Purchasing agents and buyers, farm products ..	21.11	2.3	39.7	21.16	2.3	40.0	17.55	9.7	26.0
Buyers, wholesale and retail trade, except farm products	18.92	9.5	39.9	18.92	9.5	39.9	—	—	—
Purchasing agents and buyers, n.e.c.	23.20	5.8	40.6	23.23	5.8	41.0	—	—	—
Business and promotional agents	21.84	2.2	39.9	21.85	2.2	39.9	—	—	—
	17.79	5.7	39.7	17.79	5.7	39.7	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
White collar—Continued									
Executive, administrative, and managerial—Continued									
Management related—Continued									
Construction inspectors	\$19.97	3.4	39.5	\$19.94	3.4	40.0	—	—	—
Inspectors and compliance officers, except construction	19.23	3.5	38.9	19.25	3.5	39.3	—	—	—
Management related, n.e.c.	22.31	1.2	39.4	22.37	1.2	39.8	\$16.67	8.5	21.8
Sales	13.28	3.6	33.0	15.26	5.3	40.2	7.12	.9	21.2
Supervisors, sales	20.02	4.0	40.6	20.17	4.1	41.2	10.87	18.7	21.3
Insurance sales	21.59	14.1	36.0	22.57	14.0	39.0	—	—	—
Real estate sales	35.63	18.1	40.3	36.41	17.8	41.2	—	—	—
Securities and financial services sales	37.13	9.6	39.9	37.43	9.5	40.1	—	—	—
Advertising and related sales	19.62	6.4	38.3	20.05	6.7	39.7	8.72	8.0	20.3
Sales, other business services	19.42	5.6	36.7	20.19	5.5	39.5	8.92	8.3	18.7
Sales engineers	27.46	4.4	42.3	27.46	4.4	42.3	—	—	—
Sales representatives, mining, manufacturing, and wholesale	24.77	3.1	40.9	24.92	3.1	41.1	9.06	23.3	27.0
Sales workers, motor vehicles and boats	18.96	3.1	45.0	18.98	3.1	45.0	—	—	—
Sales workers, apparel	8.28	4.0	27.1	9.16	4.3	37.9	7.37	4.8	20.8
Sales workers, shoes	9.65	6.6	27.9	11.53	7.0	38.5	7.39	4.1	21.0
Sales workers, furniture and home furnishings ..	11.02	11.3	29.7	14.02	8.2	39.6	7.00	7.6	22.2
Sales workers, radio, tv, hi-fi, and appliances ...	10.18	6.3	35.4	10.51	6.7	39.2	7.47	4.6	19.6
Sales workers, hardware and building supplies ..	10.95	5.3	36.9	11.51	6.2	40.0	8.25	2.5	26.7
Sales workers, parts	14.38	4.6	38.8	14.85	4.7	40.8	7.66	5.0	22.8
Sales workers, other commodities	9.69	2.1	29.9	10.99	2.7	39.4	7.26	1.1	20.6
Sales counter clerks	8.15	3.1	28.5	9.26	3.5	39.2	6.78	3.2	21.3
Cashiers	7.80	1.3	30.1	8.43	1.6	39.5	6.76	.9	21.6
Street and door-to-door sales workers	12.96	11.6	30.0	16.28	10.2	38.3	8.04	10.8	22.8
News vendors	7.78	11.7	20.9	—	—	—	6.71	3.9	17.9
Demonstrators, promoters, and models, sales ...	9.69	7.7	22.1	12.37	8.2	39.2	7.34	3.5	15.9
Sales support, n.e.c.	12.69	3.1	36.3	13.35	3.1	40.0	8.45	4.8	22.9
Administrative support, including clerical	12.00	.5	37.0	12.24	.5	39.3	9.30	1.2	22.4
Supervisors, general office	16.78	1.4	39.6	16.78	1.4	39.6	15.90	8.2	22.6
Supervisors, computer equipment operators	20.72	3.5	39.9	20.72	3.5	39.9	—	—	—
Supervisors, financial records processing	17.81	1.8	39.5	17.81	1.8	39.6	—	—	—
Chief communications operators	16.89	6.5	40.3	16.89	6.5	40.3	—	—	—
Supervisors, distribution, scheduling, and adjusting clerks	17.67	3.0	40.1	17.69	3.0	40.3	—	—	—
Computer operators	14.08	1.8	39.2	14.14	1.7	39.6	9.49	10.8	22.1
Peripheral equipment operators	10.27	3.5	38.3	10.25	3.5	39.4	—	—	—
Secretaries	13.39	.7	38.2	13.49	.7	39.2	11.18	2.6	24.2
Stenographers	14.15	2.6	36.0	14.27	2.7	39.0	12.90	8.8	20.4
Typists	11.91	1.4	37.1	12.01	1.5	38.7	10.31	3.2	22.7
Interviewers	9.86	1.8	33.9	10.10	2.0	39.2	8.88	4.0	22.0
Hotel clerks	8.58	3.5	36.8	8.73	3.6	39.5	6.99	2.8	22.0
Transportation ticket and reservation agents	11.69	9.9	36.0	11.93	9.7	39.9	10.38	10.9	23.7
Receptionists	9.22	1.1	35.3	9.43	1.3	39.5	8.08	2.1	22.2
Information clerks, n.e.c.	11.77	3.2	36.4	11.76	2.1	39.6	11.84	17.1	25.4
Classified ad clerks	10.38	12.9	35.2	10.58	14.9	38.4	—	—	—
Correspondence clerks	11.94	3.3	38.0	12.02	3.2	39.6	10.14	12.5	20.6
Order clerks	11.94	2.2	37.6	12.30	2.4	39.7	8.43	3.0	24.9
Personnel clerks, except payroll and timekeeping	12.71	1.8	38.0	12.85	1.8	39.6	9.88	3.4	21.2
Library clerks	10.48	1.9	30.0	10.99	2.5	38.1	9.05	2.9	18.8
File clerks	9.08	1.6	35.5	9.21	1.8	39.2	8.16	4.4	21.3
Records clerks, n.e.c.	11.07	1.2	37.8	11.16	1.3	39.4	9.75	4.0	22.9
Bookkeepers, accounting and auditing clerks ...	11.74	.8	38.4	11.86	.7	39.4	9.03	4.2	24.1
Payroll and timekeeping clerks	12.62	1.8	38.2	12.79	1.7	39.7	8.60	10.0	20.4
Billing clerks	11.00	1.5	38.5	11.06	1.5	39.7	9.62	3.4	22.3
Cost and rate clerks	11.76	6.8	39.7	11.76	6.8	39.7	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
White collar –Continued									
Administrative support, including clerical –Continued									
Billing, posting, and calculating machine operators	\$10.15	5.1	33.2	\$10.81	5.9	39.6	\$8.32	3.9	22.9
Duplicating machine operators	9.52	2.4	36.1	9.79	2.7	39.4	8.23	2.4	25.7
Mail preparing and paper handling machine operators	9.36	5.0	35.6	9.59	5.1	39.4	7.63	6.5	20.5
Office machine operators, n.e.c.	8.71	4.6	36.5	8.87	5.3	39.4	7.67	3.3	24.8
Telephone operators	11.48	3.5	36.2	11.82	3.6	39.1	8.37	3.1	21.8
Communications equipment operators, n.e.c. ...	10.41	3.9	33.6	10.67	2.9	39.4	8.83	9.5	17.7
Mail clerks, except postal service	9.10	3.0	36.1	9.46	3.6	39.3	7.50	3.7	26.3
Messengers	8.92	6.8	36.3	9.05	7.8	39.1	7.96	6.3	24.4
Dispatchers	12.92	3.7	38.3	13.08	3.5	40.2	9.80	9.5	20.1
Production coordinators	14.69	1.8	38.9	14.81	1.8	40.0	7.90	8.6	15.1
Traffic, shipping and receiving clerks	11.50	3.0	37.8	11.63	3.2	39.8	–	–	–
Stock and inventory clerks	11.27	1.5	36.2	11.65	1.4	39.8	7.99	3.0	20.4
Meter readers	15.08	3.9	39.5	15.16	4.0	40.0	–	–	–
Weighers, measurers, checkers, and samplers	12.73	5.7	36.3	12.94	5.9	40.0	10.10	13.1	16.5
Expeditors	13.12	3.0	38.0	13.42	3.5	39.8	11.76	7.8	31.7
Material recording, scheduling, and distribution clerks, n.e.c.	11.79	3.3	37.5	12.17	3.3	39.9	7.50	5.1	22.7
Insurance adjusters, examiners, and investigators	14.96	2.9	39.0	14.98	2.9	39.1	10.44	5.3	25.7
Investigators and adjusters, except insurance ...	12.61	2.6	38.3	12.75	2.7	39.8	10.10	4.6	22.8
Eligibility clerks, social welfare	13.02	2.1	38.4	13.08	2.1	38.9	10.35	5.0	24.5
Bill and account collectors	11.65	2.7	38.5	11.77	2.7	39.8	8.73	4.3	21.4
General office clerks	11.25	.8	36.7	11.50	.8	39.4	8.67	2.2	21.7
Bank tellers	8.97	1.4	32.2	9.14	1.6	39.5	8.43	1.6	20.4
Proofreaders	12.53	13.2	38.1	12.75	13.1	39.8	–	–	–
Data entry keyers	10.04	1.4	37.6	10.19	1.5	39.5	8.50	3.0	25.6
Statistical clerks	11.56	3.9	37.2	11.67	4.0	39.2	9.32	5.1	17.9
Teachers' aides	9.52	1.8	30.6	9.21	1.6	35.5	10.40	4.0	21.7
Administrative support, n.e.c.	12.06	1.7	36.6	12.37	1.8	39.4	9.15	3.2	22.0
Blue collar	12.90	.6	38.5	13.17	.7	40.1	8.00	1.3	22.1
Precision production, craft, and repair	16.58	1.0	39.8	16.61	1.0	40.0	11.84	9.9	23.4
Supervisors, mechanics and repairers	21.96	1.7	40.7	21.97	1.7	40.7	–	–	–
Automobile mechanics	17.25	2.7	40.5	17.25	2.7	40.5	–	–	–
Automobile mechanic apprentices	10.43	6.0	39.8	10.47	6.1	40.2	–	–	–
Bus, truck, and stationary engine mechanics	15.45	1.9	40.2	15.44	1.9	40.2	–	–	–
Aircraft engine mechanics	21.79	3.2	40.0	21.80	3.2	40.0	–	–	–
Small engine repairs	12.25	6.1	35.9	12.66	5.9	39.9	–	–	–
Automobile body and related repairers	16.55	5.1	40.8	16.55	5.1	40.8	–	–	–
Aircraft mechanics, except engine	19.28	2.4	40.0	19.28	2.4	40.0	–	–	–
Heavy equipment mechanics	17.28	3.1	40.0	17.30	3.1	40.1	–	–	–
Farm equipment mechanics	14.58	10.6	40.0	14.58	10.6	40.0	–	–	–
Industrial machinery repairers	16.58	1.9	39.9	16.57	1.9	39.9	–	–	–
Machinery maintenance	13.51	2.6	39.8	13.52	2.6	39.9	9.47	6.2	21.9
Electronic repairers, communications and industrial equipment	17.57	3.6	39.4	17.70	3.6	40.0	11.72	19.8	23.7
Data processing equipment repairers	16.57	3.3	37.8	16.26	1.9	40.0	–	–	–
Household appliance and power tool repairers	16.77	6.1	38.3	16.97	6.1	40.0	–	–	–
Telephone line installers and repairers	19.28	3.0	39.6	19.28	3.0	39.9	–	–	–
Telephone installers and repairers	18.00	1.8	39.9	18.00	1.8	39.9	–	–	–
Heating, air conditioning, and refrigeration mechanics	16.16	2.3	39.7	15.90	1.9	40.0	–	–	–
Camera, watch, and musical instrument repairers	16.47	14.1	40.0	16.47	14.1	40.0	–	–	–
Locksmiths and safe repairers	17.30	4.8	40.0	17.30	4.8	40.0	–	–	–
Office machine repairers	16.09	5.0	40.0	16.09	5.0	40.0	–	–	–
Mechanical controls and valve repairers	18.11	4.0	39.5	18.22	4.0	40.0	–	–	–

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
Blue collar —Continued									
Precision production, craft, and repair —Continued									
Elevator installers and repairers	\$19.27	23.4	40.0	\$19.27	23.4	40.0	—	—	—
Millwrights	19.06	5.5	40.1	19.06	5.5	40.1	—	—	—
Mechanics and repairers, n.e.c.	15.62	1.4	39.7	15.67	1.4	39.9	\$10.32	10.8	23.4
Supervisors, brickmasons, stonemasons, and tilesetters	18.44	5.3	40.0	18.44	5.3	40.0	—	—	—
Supervisors, carpenters and related workers	21.04	5.8	40.3	21.04	5.8	40.3	—	—	—
Supervisors, electricians and power transmission installers	22.78	4.8	40.0	22.78	4.8	40.0	—	—	—
Supervisors, painters, paperhangers, and plasterers	18.30	2.3	40.4	18.30	2.3	40.4	—	—	—
Supervisors, plumbers, pipefitters, and steamfitters	23.27	6.6	40.1	23.27	6.6	40.1	—	—	—
Supervisors, construction trades, n.e.c.	18.58	3.1	40.3	18.57	3.1	40.4	—	—	—
Brickmasons and stonemasons	16.56	5.5	40.0	16.56	5.5	40.0	—	—	—
Brickmason and stonemason apprentices	12.73	9.6	40.0	12.73	9.6	40.0	—	—	—
Carpet installers	24.12	4.9	39.0	24.12	4.9	39.0	—	—	—
Carpenters	17.04	2.1	39.6	17.08	2.1	39.8	12.55	13.2	24.8
Carpenter apprentices	12.47	3.6	40.0	12.47	3.6	40.0	—	—	—
Drywall installers	15.46	2.3	39.8	15.46	2.3	40.0	—	—	—
Electricians	18.91	1.9	39.9	18.90	1.9	40.0	—	—	—
Electrician apprentices	13.27	6.3	40.0	13.27	6.3	40.0	—	—	—
Electrical power installers and repairers	21.47	2.7	40.0	21.47	2.7	40.0	—	—	—
Painters, construction and maintenance	15.60	5.7	39.4	15.62	5.7	39.5	—	—	—
Plasterers	18.61	16.4	40.0	18.61	16.4	40.0	—	—	—
Plumbers, pipefitters and steamfitters	20.08	2.0	39.9	20.08	2.0	39.9	—	—	—
Plumber, pipefitter, and steamfitter apprentices	14.33	4.4	39.9	14.33	4.4	39.9	—	—	—
Concrete and terrazzo finishers	14.23	8.3	39.7	14.24	8.6	40.6	—	—	—
Glaziers	17.30	6.6	38.9	17.30	6.6	38.9	—	—	—
Insulation workers	11.88	6.0	35.2	12.13	6.6	39.9	—	—	—
Paving, surfacing, and tamping equipment operators	11.48	12.0	40.0	11.48	12.0	40.0	—	—	—
Roofers	13.64	6.2	34.5	13.64	6.2	34.5	—	—	—
Sheetmetal duct installers	19.43	8.1	38.8	19.43	8.1	38.8	—	—	—
Structural metal workers	16.57	4.6	39.6	16.60	4.8	40.2	—	—	—
Drillers, earth	11.49	10.6	40.0	11.49	10.6	40.0	—	—	—
Construction trades, n.e.c.	14.76	2.8	39.3	14.76	2.8	39.7	—	—	—
Supervisors, extractive	22.05	14.5	41.2	22.96	11.7	42.3	—	—	—
Drillers, oil well	17.37	2.6	41.3	17.37	2.6	41.3	—	—	—
Explosives workers	15.91	16.0	39.6	15.91	16.0	39.6	—	—	—
Mining machine operators	18.63	6.4	40.0	18.63	6.4	40.0	—	—	—
Mining, n.e.c.	19.72	3.6	40.1	19.72	3.6	40.1	—	—	—
Supervisors, production	19.00	2.6	40.7	19.00	2.6	40.7	—	—	—
Tool and die makers	19.72	1.8	40.0	19.72	1.8	40.0	—	—	—
Tool and die maker apprentices	14.33	4.9	40.0	14.33	4.9	40.0	—	—	—
Precision assemblers, metal	16.19	3.0	40.0	16.19	3.0	40.0	—	—	—
Machinists	17.12	1.1	40.0	17.12	1.1	40.0	—	—	—
Machinist apprentices	12.63	4.9	40.0	12.63	4.9	40.0	—	—	—
Boilermakers	18.28	5.2	39.9	18.28	5.2	39.9	—	—	—
Precision grinders, filers, and tool sharpeners ...	14.90	4.7	40.1	14.90	4.7	40.1	—	—	—
Patternmakers and modelmakers, metal	18.21	5.7	40.0	18.21	5.7	40.0	—	—	—
Layout workers	14.87	4.9	40.0	14.87	4.9	40.0	—	—	—
Precious stones and metals workers	8.98	8.8	39.3	8.98	8.8	39.3	—	—	—
Engravers, metal	15.41	22.7	39.2	15.26	23.3	39.8	—	—	—
Sheet metal workers	16.76	5.1	40.0	16.76	5.1	40.0	—	—	—
Sheet metal worker apprentices	13.39	7.0	37.1	13.39	7.0	37.1	—	—	—
Cabinet makers and bench carpenters	11.20	4.7	39.7	11.20	4.7	39.7	—	—	—
Furniture and wood finishers	11.68	2.5	40.0	11.68	2.5	40.0	—	—	—
Tailors	11.86	3.4	39.5	11.86	3.4	39.5	—	—	—
Upholsterers	12.57	9.3	39.6	12.57	9.3	39.6	—	—	—
Hand molders and shapers, except jewelers	16.34	3.1	40.2	16.34	3.1	40.2	—	—	—
Patternmakers, layout workers, and cutters	19.77	7.8	39.9	20.05	7.7	39.9	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
Blue collar—Continued									
Precision production, craft, and repair—Continued									
Optical goods workers	\$11.00	12.8	39.7	\$11.00	12.8	39.7	—	—	—
Dental laboratory and medical appliance technicians	14.47	10.8	39.5	14.47	10.8	39.5	—	—	—
Bookbinders	13.57	6.1	39.4	13.57	6.1	39.4	—	—	—
Electrical and electronic equipment assemblers	9.78	3.0	39.8	9.81	3.0	40.0	\$6.97	6.7	25.3
Miscellaneous precision workers, n.e.c.	15.51	5.4	39.8	15.53	5.4	39.9	—	—	—
Precision food production	10.90	7.3	40.0	10.90	7.3	40.0	—	—	—
Butchers and meat cutters	10.20	3.5	38.5	10.30	3.7	39.6	—	—	—
Bakers	9.82	4.9	36.7	10.00	5.3	39.6	8.26	9.5	22.9
Food batchmakers	10.48	5.2	38.7	10.46	5.1	39.8	—	—	—
Inspectors, testers, and graders	16.37	2.2	40.2	16.40	2.2	40.3	—	—	—
Precision inspectors, testers, and related workers, n.e.c.	19.04	6.6	40.0	19.04	6.6	40.0	—	—	—
Adjusters and calibrators	13.36	14.1	39.6	13.34	14.2	40.0	—	—	—
Water and sewer treatment plant operators	15.53	2.8	39.4	15.69	2.7	40.0	—	—	—
Power plant operators	22.02	1.9	39.7	22.02	1.9	39.7	—	—	—
Stationary engineers	19.02	3.1	39.5	19.01	3.1	39.8	—	—	—
Miscellaneous plant and system operators, n.e.c.	21.34	2.2	40.1	21.34	2.2	40.1	—	—	—
Machine operators, assemblers, and inspectors	11.59	.9	39.6	11.65	.9	39.9	7.47	2.0	23.0
Lathe and turning machine set-up operators	14.03	2.6	40.0	14.03	2.6	40.0	—	—	—
Lathe and turning machine operators	12.83	6.3	39.9	12.83	6.3	39.9	—	—	—
Milling and planing machine operators	13.38	6.9	40.0	13.38	6.9	40.0	—	—	—
Punching and stamping press operators	12.08	3.0	39.8	12.10	3.0	40.0	—	—	—
Rolling machine operators	13.46	6.1	40.3	13.46	6.1	40.3	—	—	—
Drilling and boring machine operators	11.39	12.2	40.0	11.39	12.2	40.0	—	—	—
Grinding, abrading, buffing, and polishing machine operators	11.58	2.9	39.9	11.59	2.9	40.0	—	—	—
Forging machine operators	12.86	4.5	39.9	12.86	4.5	39.9	—	—	—
Numerical control machine operators	13.57	2.1	40.0	13.57	2.1	40.0	—	—	—
Fabricating machine operators, n.e.c.	13.29	2.3	40.0	13.29	2.3	40.0	—	—	—
Molding and casting machine operators	10.36	2.9	39.8	10.41	2.9	39.9	6.65	8.9	32.9
Metal plating machine operators	11.98	3.3	40.0	12.03	3.1	40.3	—	—	—
Heat treating equipment operators	13.78	2.4	40.0	13.78	2.4	40.0	—	—	—
Wood lathe, routing, and planing machine operators	10.60	11.3	37.1	10.63	11.7	39.7	—	—	—
Sawing machine operators	9.14	5.2	39.7	9.14	5.2	40.0	—	—	—
Shaping and jointing machine operators	9.73	6.8	39.9	9.73	6.8	39.9	—	—	—
Nailing and tacking machine operators	9.91	2.3	40.0	9.91	2.3	40.0	—	—	—
Printing press operators	14.64	3.2	39.2	14.69	3.2	39.5	10.03	20.0	22.3
Photoengravers and lithographers	15.22	3.0	38.6	15.31	2.9	39.0	—	—	—
Typesetters and compositors	13.22	4.7	37.7	13.27	4.9	39.3	12.19	9.1	19.4
Winding and twisting machine operators	11.01	7.3	39.9	11.02	7.3	39.9	—	—	—
Knitting, looping, taping, and weaving machine operators	10.10	1.9	40.0	10.10	1.9	40.0	—	—	—
Textile cutting machine operators	8.94	5.4	40.0	8.94	5.4	40.0	—	—	—
Textile sewing machine operators	7.98	2.7	39.7	7.99	2.7	39.9	6.72	7.6	20.3
Shoe machine operators	9.11	8.6	39.9	9.11	8.6	39.9	—	—	—
Pressing machine operators	7.97	6.3	39.2	7.98	6.4	39.8	—	—	—
Laundry and dry cleaning machine operators	7.44	1.7	36.5	7.50	1.8	39.5	6.93	3.8	21.3
Cementing and gluing machine operators	9.58	9.5	40.0	9.58	9.5	40.0	—	—	—
Packaging and filling machine operators	10.55	4.3	39.4	10.56	4.4	40.0	9.67	5.8	21.2
Extruding and forming machine operators	11.28	2.7	39.8	11.28	2.7	39.8	—	—	—
Mixing and blending machine operators	13.28	2.8	39.9	13.27	2.8	40.0	—	—	—
Separating, filtering, and clarifying machine operators	15.83	3.7	39.8	15.85	3.7	39.9	—	—	—
Compressing and compacting machine operators	10.40	2.1	39.5	10.45	2.3	40.0	—	—	—
Painting and paint spraying machine operators	12.11	2.9	40.2	12.11	2.9	40.2	—	—	—
Roasting and baking machine operators, food ..	11.61	5.5	39.4	11.61	5.6	40.0	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
Blue collar —Continued									
Machine operators, assemblers, and inspectors									
—Continued									
Washing, cleaning, and pickling machine operators	\$10.91	9.4	36.5	\$10.98	9.5	40.2	—	—	—
Folding machine operators	11.34	4.0	39.7	11.38	3.9	39.8	—	—	—
Furnace, kiln, and oven operators, except food	13.68	4.4	39.9	13.68	4.4	40.0	—	—	—
Crushing and grinding machine operators	11.89	5.7	39.9	11.89	5.7	39.9	—	—	—
Slicing and cutting machine operators	12.65	3.6	39.9	12.72	3.6	40.0	—	—	—
Motion picture projectionists	13.07	9.6	25.9	—	—	—	—	—	—
Photographic process machine operators	10.42	2.9	38.0	10.64	2.8	39.9	\$7.51	7.3	23.2
Miscellaneous machine operators, n.e.c.	11.97	2.6	39.7	12.00	2.6	39.9	7.62	8.0	26.7
Welders and cutters	14.19	1.9	40.0	14.20	1.9	40.0	—	—	—
Solders and braziers	9.04	8.3	40.0	9.06	8.4	40.0	—	—	—
Assemblers	11.63	2.6	39.3	11.73	2.6	39.9	6.79	2.1	23.1
Hand cutting and trimming	9.51	8.9	39.4	9.55	8.9	39.9	—	—	—
Hand molding, casting, and forming	12.13	9.9	40.0	12.13	9.9	40.0	—	—	—
Hand painting, coating, and decorating	10.21	5.6	38.6	10.22	5.7	40.0	—	—	—
Hand engraving and printing	8.91	3.5	40.0	8.91	3.5	40.0	—	—	—
Miscellaneous hand working, n.e.c.	9.85	3.3	38.8	9.99	3.5	39.9	5.70	3.4	20.7
Production inspectors, checkers and examiners	11.11	2.6	39.8	11.12	2.6	40.0	8.54	7.4	27.3
Production testers	11.73	3.4	39.8	11.75	3.4	40.0	—	—	—
Production samplers and weighers	13.64	4.5	39.6	13.64	4.5	39.6	—	—	—
Graders and sorters, except agricultural	9.19	6.4	39.9	9.21	6.4	40.0	—	—	—
Hand inspectors, n.e.c.	9.27	7.5	39.9	9.27	7.5	39.9	—	—	—
Transportation and material moving	13.72	1.1	37.9	14.08	1.1	40.9	9.94	2.1	21.3
Supervisors, motor vehicle operators	16.46	5.2	41.1	16.57	5.2	41.2	—	—	—
Truck drivers	13.93	1.2	41.4	14.04	1.2	42.7	11.11	4.3	22.1
Driver-sales workers	14.23	4.2	37.6	15.07	3.5	41.4	6.58	8.9	20.5
Bus drivers	12.61	1.6	29.2	13.49	2.1	36.7	11.12	2.0	21.7
Taxicab drivers and chauffeurs	8.32	4.5	30.0	8.81	4.9	38.8	7.26	8.5	20.2
Parking lot attendants	7.04	4.3	28.2	7.73	5.0	39.9	6.22	4.6	20.9
Motor transportation, n.e.c.	8.99	4.6	32.2	9.70	5.6	39.2	6.24	2.1	19.0
Railroad conductors and yardmasters	26.78	4.4	40.2	26.78	4.4	40.2	—	—	—
Locomotive operating	27.74	8.4	40.7	27.75	8.4	40.7	—	—	—
Railroad brake, signal and switch operators	23.30	10.2	40.0	23.30	10.2	40.0	—	—	—
Rail vehicle operators, n.e.c.	21.02	4.4	40.0	21.02	4.4	40.0	—	—	—
Ship captains and mates, except fishing boats ..	16.30	3.8	47.6	16.40	3.9	48.6	—	—	—
Sailors and deckhands	11.39	8.0	43.3	11.24	7.5	45.6	—	—	—
Bridge, lock and lighthouse tenders	11.16	2.1	40.0	—	—	—	—	—	—
Supervisors, material moving equipment	18.74	6.2	40.4	18.74	6.2	40.4	—	—	—
Operating engineers	17.33	8.1	40.0	17.33	8.1	40.0	—	—	—
Longshore equipment operators	26.96	7.6	37.5	—	—	—	—	—	—
Hoist and winch operators	12.94	5.5	40.9	12.94	5.5	40.9	—	—	—
Crane and tower operators	15.61	3.3	40.1	15.61	3.3	40.1	—	—	—
Excavating and loading machine operators	14.17	4.3	40.0	14.17	4.3	40.0	—	—	—
Grader, dozer, and scrapper operators	13.46	6.4	40.0	13.46	6.4	40.0	—	—	—
Industrial truck and tractor equipment operators	12.10	1.8	39.8	12.12	1.8	40.0	10.17	8.2	25.5
Miscellaneous material moving equipment operators, n.e.c.	14.33	3.0	37.8	14.59	3.1	39.9	10.14	1.8	20.5
Handlers, equipment cleaners, helpers, and laborers	9.69	.7	35.9	10.11	.8	39.8	7.12	1.0	22.2
Nursery workers	7.31	3.4	37.9	7.40	3.7	40.1	6.07	3.9	21.7
Supervisors, agriculture-related workers	17.49	4.7	39.9	17.55	4.7	40.1	—	—	—
Groundskeepers and gardeners, except farm ...	9.31	5.2	38.4	9.41	5.8	39.8	7.57	3.6	23.8
Animal caretakers, except farm	10.22	5.8	38.2	10.39	5.6	39.6	—	—	—
Inspectors, agricultural products	7.84	6.1	37.4	8.09	8.8	40.0	—	—	—
Supervisors, handlers, equipment cleaners, and laborers, n.e.c.	14.57	2.6	39.8	14.61	2.6	40.2	—	—	—
Helpers, mechanics and repairers	11.69	4.4	39.1	11.78	4.4	40.0	8.04	6.6	21.0
Helpers, construction trades	10.46	3.8	39.3	10.50	3.8	39.8	8.13	16.1	24.2

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
Blue collar —Continued									
Handlers, equipment cleaners, helpers, and laborers —Continued									
Helpers, extractive	\$15.17	11.8	38.7	—	—	—	—	—	—
Construction laborers	11.34	2.8	39.4	\$11.46	2.9	39.9	\$7.32	6.5	28.5
Production helpers	9.75	3.5	39.0	9.82	3.5	39.8	6.89	3.9	21.6
Garbage collectors	12.63	11.7	39.6	12.82	11.6	40.0	—	—	—
Stevedores	18.83	3.7	39.2	18.82	3.7	39.3	—	—	—
Stock handlers and baggers	8.64	1.4	29.9	9.97	1.7	39.6	6.49	1.2	21.4
Machine feeders and offbearers	9.37	2.6	39.3	9.38	2.6	39.8	8.48	10.2	21.7
Freight, stock, and material handlers, n.e.c.	10.50	2.0	35.5	10.70	2.4	39.8	9.37	2.1	22.1
Garage and service station related	8.25	7.1	34.2	8.57	5.7	38.9	6.93	12.3	22.9
Vehicle washers and equipment cleaners	8.86	3.2	37.4	9.01	3.4	40.0	6.93	4.7	20.6
Hand packers and packagers	8.49	1.7	37.9	8.63	1.8	39.8	6.96	1.8	24.8
Laborers, except construction, n.e.c.	9.57	1.3	37.8	9.81	1.3	39.8	6.90	3.3	24.3
Service	9.52	.7	33.0	10.30	.8	39.1	6.61	.7	20.8
Protective service	14.36	1.6	38.0	14.89	1.6	40.7	8.16	1.9	21.0
Supervisors, firefighters and fire prevention	20.00	2.9	49.2	20.00	2.9	49.3	—	—	—
Supervisors, police and detectives	24.14	2.7	40.1	24.14	2.7	40.2	—	—	—
Supervisors, guards	15.49	7.1	38.4	15.81	7.1	39.4	8.95	6.2	24.9
Fire inspection and fire prevention	18.31	4.8	37.6	18.48	4.8	40.8	—	—	—
Firefighting	15.32	2.5	44.5	15.54	2.2	48.7	7.07	9.0	10.6
Police and detectives, public service	19.49	1.4	39.5	19.57	1.3	40.0	10.97	13.8	18.1
Sheriffs, bailiffs, and other law enforcement officers	15.91	2.6	38.7	16.02	2.7	39.8	12.54	7.5	21.0
Correctional institution officers	14.17	4.3	39.8	14.19	4.3	39.9	10.84	14.9	25.3
Crossing guards	8.73	4.5	17.3	—	—	—	8.35	4.6	16.8
Guards and police, except public service	8.63	1.7	35.1	8.78	1.9	39.4	7.88	1.7	23.2
Protective service, n.e.c.	11.51	4.7	29.1	13.02	5.3	39.6	8.05	7.8	18.1
Food service	6.76	.7	30.1	7.34	.9	38.5	5.66	.8	21.2
Supervisors, food preparation and service	11.45	1.6	38.5	11.82	1.6	40.8	7.55	3.5	24.2
Bartenders	6.31	2.6	29.5	6.71	3.4	37.5	5.76	3.1	22.6
Waiters and waitresses	4.17	3.4	28.8	4.39	3.3	38.1	3.83	2.6	20.8
Cooks	8.67	1.1	34.2	8.97	1.2	38.4	7.39	1.7	23.0
Food counter, fountain, and related	6.12	1.3	25.8	6.42	2.4	37.2	5.90	1.3	21.1
Kitchen workers, food preparation	7.57	1.2	30.1	8.00	1.6	38.7	6.88	1.3	22.1
Waiters'/waitresses' assistants	5.68	2.2	27.7	6.14	3.2	38.0	5.01	2.4	20.1
Food preparation, n.e.c.	6.85	1.3	29.8	7.13	2.8	38.6	6.29	1.1	20.6
Health service	8.77	.8	33.7	8.89	.9	38.8	8.19	1.2	20.7
Dental assistants	10.26	3.7	36.3	10.19	3.9	40.0	—	—	—
Health aides, except nursing	9.79	1.4	33.5	10.03	1.6	38.9	8.44	2.7	19.0
Nursing aides, orderlies and attendants	8.49	.8	33.7	8.58	1.0	38.8	8.13	1.4	21.2
Cleaning and building service	9.03	.9	35.1	9.40	1.0	39.4	6.84	1.1	21.3
Supervisors, cleaning and building service workers	11.15	10.4	39.6	11.23	10.8	40.0	7.84	5.3	28.8
Maids and housemen	7.52	1.9	34.9	7.59	2.1	38.6	7.07	2.4	21.0
Janitors and cleaners	9.09	1.1	34.5	9.55	1.1	39.5	6.77	1.2	21.3
Pest control	12.36	8.5	40.0	12.36	8.5	40.0	—	—	—

See footnotes at end of table.

Table 3. Mean hourly earnings¹ and weekly hours for selected occupations, full-time and part-time workers,² United States, National Compensation Survey,³ 1998—Continued

Occupation ⁴	Total			Full time			Part time		
	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours	Hourly earnings		Mean weekly hours
	Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)		Mean	Relative error ⁵ (percent)	
Service—Continued									
Personal service	\$9.27	1.8	29.6	\$10.10	2.1	37.0	\$7.10	3.7	19.5
Supervisors, personal service	16.56	1.3	38.7	—	—	—	9.42	6.0	22.0
Hairdressers and cosmetologists	—	—	—	—	—	—	8.28	5.4	20.6
Attendants, amusement, and recreation facilities	6.20	5.1	30.1	6.38	4.8	39.5	5.84	6.0	20.4
Guides	9.40	3.5	30.5	10.05	3.8	38.1	7.58	7.1	19.5
Ushers	6.55	5.1	19.3	—	—	—	6.21	3.9	16.2
Public transportation attendants	25.24	6.1	21.1	26.29	5.6	21.4	14.31	17.2	19.2
Baggage porters and bellhops	7.19	6.4	35.6	7.04	7.0	39.4	8.03	7.2	23.3
Welfare service aides	7.55	4.9	28.1	8.46	4.0	39.1	6.30	5.9	20.3
Early childhood teachers' assistants	8.12	1.8	29.1	8.44	2.2	36.8	7.44	2.9	20.1
Child care workers, n.e.c.	8.51	2.3	26.2	8.98	3.8	38.6	7.88	2.9	18.4
Service, n.e.c.	7.54	11.2	31.5	7.49	14.0	39.0	7.74	5.4	18.4

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, and holidays; nonproduction bonuses; and tips. The mean is computed by totaling the pay of all workers and dividing by the number of workers, weighted by hours.

² All workers include full-time and part-time workers. Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Therefore, a worker with a 35-hour-per-week schedule might be considered a full-time employee in one establishment, but classified as part-time in another firm, where a 40-hour week is the minimum full-time schedule.

³ This survey covers all 50 States. Collection was conducted between July 1997 and

April 1999. The average reference period was August 1998.

⁴ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy.

⁵ The relative standard error (RSE) is the standard error expressed as a percent of the estimate. It can be used to calculate a "confidence interval" around a sample estimate. For more information about RSEs, see Technical Note.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria, and n.e.c. means "not elsewhere classified." Overall occupational groups may include data for categories not shown separately.

Technical Note

The data in this report are based on the National Compensation Survey (NCS) conducted by the Bureau of Labor Statistics. The National Compensation Surveys are locality-based and cover establishments in private industry and State and local governments. Agriculture, private households, and the Federal Government are excluded from the scope of the survey.

Survey scope. The NCS studied 18,576 establishments with 50 or more workers¹ representing over 63 million workers within the scope of the survey. (See table below.) For purposes of this survey an establishment is an economic unit that produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. For private industries in this survey, the establishment is usually at a single physical location. For State and local governments, an establishment is defined as all locations of a government entity.

Sampling frame. The list of establishments from which the survey sample was selected (sampling frame) was developed from the State unemployment insurance reports. The reference month for the public sector is June 1994. Due to the volatility of industries within the private sector, sampling frames were developed using the most recent month of refer-

ence available at the time the sample was selected. The reference month for the private sector is March 1996.

Sample design and data collection. The sample for this survey was selected using a three-stage design. The first stage consisted of the selection of areas. The NCS sample consists of 154 metropolitan and nonmetropolitan areas that represent the Nation's 326 Metropolitan Statistical Areas (as defined by the Office of Management and Budget) and the remaining portions of the 50 States. Metropolitan areas are defined as Metropolitan Statistical Areas (MSA), or Consolidated Metropolitan Statistical Areas (CMSA) as defined by the Office of Management and Budget, 1994. Nonmetropolitan areas are counties that do not fit the metropolitan area definition.

In the second stage, the sample of establishments was drawn by first stratifying the sampling frame by industry and ownership. The number of sample establishments allocated to each stratum is approximately proportional to the stratum employment. Each sampled establishment is selected within a stratum with a probability proportional to its employment. Use of this technique means that the larger an establishment's employment, the greater its chance of selection. Weights were applied to each establishment when the data were tabulated so that each establishment represents similar units (by industry and employment size) in the economy which were not selected for collection.

The third stage of sample selection was a probability sample of occupations within a sampled establishment. Collection was conducted between July 1997 and April 1999 with an average reference period of August 1998.

¹ Establishments classified as employing between 50 and 99 workers may include establishments with fewer than 50 workers because staff reductions may have taken place between the time of sampling and the time of data collection.

Number of workers¹ represented by the survey, by occupational group,² United States, National Compensation Survey,³ 1998

Occupational group	All industries	Private industry	State and local government
All	63,368,100	48,783,200	14,584,900
All excluding sales	58,871,800	44,345,500	14,526,300
White collar	33,474,800	23,595,100	9,879,700
White collar excluding sales	28,978,400	19,157,300	9,821,100
Professional specialty and technical	13,157,900	7,384,600	5,773,300
Professional specialty occupations	10,508,500	5,225,600	5,282,900
Technical occupations	2,649,400	2,159,000	490,400
Executive, administrative, and managerial	5,115,400	3,854,500	1,261,000
Sales	4,496,300	4,437,700	58,600
Administrative support, including clerical	10,705,100	7,918,200	2,786,900
Blue collar	17,739,100	16,249,100	1,490,000
Precision production, craft, and repair	5,010,400	4,409,800	600,700
Machine operators, assemblers, and inspectors	5,699,200	5,664,600	34,600
Transportation and material moving	2,514,100	1,987,400	526,700
Handlers, equipment cleaners, helpers, and laborers	4,515,400	4,187,400	328,000
Service	12,154,200	8,939,100	3,215,100

¹ Estimates of the number of workers provide a description of size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison with other statistical series to measure employment trends or levels. Both full-time and part-time workers were included in the survey.

² A classification system including about 480 individual occupations is used to cover all workers in the civilian economy.

³ This survey covers all 50 States. Collection was conducted between July 1997 and April 1999. The average reference period was August 1998.

Occupational selection and classification. Identification of the occupations for which wage data were collected was a four-step process:

1. Probability-proportional-to-size selection of establishment jobs
2. Classification of jobs into occupations based on the Census of Population system
3. Characterization of jobs as full- v. part-time, union v. nonunion, and time v. incentive
4. Determination of the level of work of each job

For each occupation, wage data were collected for those workers who met all the criteria identified in the last three steps. Special procedures were developed for jobs for which a correct classification or level could not be determined.

In step one, the jobs to be sampled were selected at each establishment by a BLS field economist during a personal visit. A complete list of employees was used for sampling, with each selected worker representing a job within the establishment. As with the selection of establishments, the selection of a job was based on probability proportional to its size in the establishment. The greater the number of people working in a job in the establishment, the greater its chance of selection.

The second step of the process entailed classifying the selected jobs into occupations based on their duties. The National Compensation Survey occupational classification system is based on the 1990 Census of Population. A selected job may fall into any one of about 480 occupational classifications, from accountant to wood lathe operator. In cases where a job's duties overlapped two or more census classification codes, the duties used to set the wage level were used to classify the job. Classification by primary duties was the fallback.

In step three, certain other job characteristics of the chosen workers were identified. First, the worker was identified as holding either a full- or part-time job, based on the establishment's definition of those terms. Then the worker was classified as having a time versus incentive job, depending on whether any part of pay was directly based on the actual production of the workers, rather than solely on hours worked. Finally, the worker was identified as being in a union job or a nonunion job.

Data reliability. The data in this summary are estimates from a scientifically selected probability sample. There are two types of errors possible in an estimate based on a sample survey, sampling and nonsampling.

Sampling errors occur because observations come only from a sample and not from an entire population. The sample used for this survey is one of a number of possible samples of the same size that could have been selected using the sample design. Estimates derived from the different samples would differ from each other.

A measure of the variation among these differing estimates is called the standard error or sampling error. It indicates the precision with which an estimate from a particular sample approximates the average result of all possible samples. The relative standard error (RSE) is the standard error divided by the estimate. Tables 1, 2, and 3 contain RSE data for indicated series in this report.

The standard error can be used to calculate a "confidence interval" around a sample estimate. As an example, table 1 shows that mean hourly earnings for all workers was \$15.72 per hour and a relative standard error of 0.5 percent for this estimate. At the 90-percent level, the confidence interval for this estimate is \$15.85 to \$15.59 ($\$15.72 \times 1.645 \times 0.005 = \0.129 , round to \$0.13); ($\$15.72 + .13 = \15.85 ; $\$15.72 - .13 = \15.59). If all possible samples were selected to estimate the population value, the interval from each sample would include the true population value approximately 90 percent of the time.

Nonsampling errors also affect survey results. They can stem from many sources, such as inability to obtain information for some establishments, difficulties with survey definitions, inability of the respondents to provide correct information, or mistakes in recording or coding the data obtained. A Technical Reinterview Program done in all survey areas will be used in the development of a formal quality assessment process to help compute nonsampling error. Although they also were not specifically measured, efforts were made to minimize nonsampling errors by the extensive training of field economists who gathered survey data, computer editing of the data, and detailed data review.

Census area divisions. Data are tabulated by census divisions defined as follows: **New England** - Connecticut, Massachusetts, New Hampshire, Maine, Vermont, and Rhode Island; **Middle Atlantic** - New Jersey, New York, and Pennsylvania;² **East North Central** - Illinois, Indiana, Michigan, Ohio, and Wisconsin;³ **West North Central** - Iowa, Kansas, Minnesota, Missouri, North Dakota, South Dakota, and Nebraska;⁴ **South Atlantic** - Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; **East South Central** - Alabama, Kentucky, Mississippi, and Tennessee; **West South Central** - Arkansas, Louisiana, Oklahoma, and Texas; **Mountain** - Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada; and **Pacific** - Washington, Oregon, California, Hawaii, and Alaska.

² The Middle Atlantic census area division also includes the New York, NY CMSA (which is comprised of parts of New York, New Jersey, Connecticut, and Pennsylvania) and the Philadelphia, PA CMSA (which is comprised of parts of Pennsylvania, New Jersey, Delaware, and Maryland).

³ The East North Central census area division also includes the Cincinnati, OH CMSA (which is comprised of parts of Ohio, Kentucky, and Indiana).

⁴ The West North Central census area division also includes the St. Louis, MO CMSA (which is comprised of parts of Missouri and Illinois).

Additional information about the National Compensation Survey, including a list of occupational classifications and the factors determining work levels, is available by calling (202) 691-6199. You may also write to the Bureau of Labor Statistics at: Division of Compensation Data Analysis and Planning, 2 Massachusetts Ave., NE, Room 4175, Washington, DC 20212-0001, or send E-mail to OCLTINFO@bls.gov.

The data contained in this summary are available on the Bureau's Internet site at: <https://www.bls.gov/ocs/#data> .

Data are in three formats: an ASCII file containing the published table formats; an ASCII file containing positional columns of data for manipulation as a data base or spreadsheet; and a Portable Document Format (PDF) containing the entire summary.

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