

Portland-Salem, OR-WA National Compensation Survey August 1997



U.S. Department of Labor
Alexis M. Herman, Secretary

Bureau of Labor Statistics
Katharine G. Abraham, Commissioner

May 1998

Bulletin 3090-33

Preface

This bulletin provides results of an August 1997 survey of occupational pay in the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area (CMSA). Data shown in this bulletin were collected as part of the Bureau of Labor Statistics' (BLS) new program known as the National Compensation Survey (NCS).

The survey could not have been conducted without the cooperation of the many private firms and government jurisdictions that provided pay data included in this bulletin. The Bureau thanks these respondents for their cooperation.

Survey data were collected and reviewed by Bureau of Labor Statistics field economists under the direction of Caryl L. O'Keefe, Assistant Regional Commissioner for Operations of the San Francisco Regional Office. The Office of Compensation and Working Conditions, in cooperation with the Office of Field Operations and the Office of Technology and Survey Processing in the BLS National Office, designed the survey, processed the data, and analyzed the survey results.

For additional information regarding this survey, please contact the BLS San Francisco Regional Office at (415) 975-4350. You may also write to the Bureau of Labor Statistics at: Division of Compensation Data Analysis and Planning, 2 Massachusetts Avenue, NE, Room 4175, Washington, DC 20212-0001, or call (202) 606-6220, or send e-mail to ocltinfo@bls.gov.

The data contained in this bulletin are also available at the BLS Internet site (<http://stats.bls.gov/comhome.htm>). 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 bulletin.

Material in this bulletin is in the public domain and, with appropriate credit, may be reproduced without permission. This information will be made available to sensory impaired individuals upon request. Voice phone: (202) 606-7828; TDD phone: (202) 606-5897; TDD message referral phone: 1-800-326-2577.

Contents

	<i>Page</i>
Introduction.....	1
Wages in the Portland-Salem, OR-WA, CMSA	2
Tables:	
A-1. Hourly earnings for selected occupations, all workers, all industries	4
A-2. Hourly earnings for selected occupations, all workers, private industry and State and local government	7
A-3. Hourly earnings for selected occupations, full-time and part-time workers, all industries	10
A-4. Weekly and annual earnings and hours for selected occupations, full-time workers only, all industries	13
B-1. Mean hourly earnings by occupational group and levels, all industries, private industry, State and local government, full-time and part-time workers.....	16
B-2. Mean hourly earnings for selected occupations and levels, all industries, private industry, State and local government, full-time and part-time workers.....	20
C-1. Mean hourly earnings by occupational group and selected characteristics, all industries	24
C-2. Mean hourly earnings by occupational group and industry division, private industry, all workers	25
C-3. Mean hourly earnings by occupational group and establishment employment size, private industry, all workers	26
C-4. Number of workers represented by occupational group	27
Appendixes:	
A. Technical Note	28
Appendix table 1. Number of establishments studied.....	32
Appendix table 2. Relative standard errors	33
Appendix table 3. Average work levels.....	36
B. Occupational Classifications.....	39
C. Generic Leveling Criteria	47
D. Evaluating Your Firm’s Jobs	53

Introduction

This survey of occupational pay was conducted in the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area (CMSA). The CMSA includes Clackamas, Columbia, Marion, Multnomah, Polk, Washington, and Yamhill Counties, OR; and Clark County, WA.

This bulletin consists primarily of tables whose data are analyzed in the initial textual section. Tabulations provide information on earnings of workers in a variety of occupations and at a wide range of work levels. Also contained in this bulletin is information on the program, a technical note describing survey procedures, and several appendixes with detailed information on occupational classifications and the generic leveling methodology.

NCS design and products

The Bureau of Labor Statistic's (BLS) new National Compensation Survey (NCS) is designed to provide data on the levels and rates of change of occupational wages and employee benefits for localities, broad geographic regions, and the nation as a whole. One output of the NCS will be the Employment Cost Index, a quarterly measure of the change in employer costs for wages and benefits. This bulletin is limited to data on wages and salaries. These data are similar to those released under the Occupational Compensation Survey (OCS), which has been discontinued.

Due to the limited amount of time available to initiate this first phase of the new program, a number of companies were unable to provide complete data before the publication deadline. As a result, some surveys have a high nonresponse rate for the all industries or the private industry iterations. Such instances are noted in the bulletin table footnotes.

NCS more extensive than OCS

The wage data in this bulletin differ from those in previous Occupational Compensation Surveys by providing broader coverage of occupations and establishments within the survey area.

Occupations surveyed for this bulletin were selected using probability techniques from a list of all those present in each establishment. Previous OCS bulletins were limited to a preselected list of occupations, which represented a small subset of all occupations in the economy. Information in the new bulletin is published for a variety of occupation-based data. This new approach includes data on broad occupational classifications such as white-collar workers, major occupational groups such as sales workers, and individual occupations such as cashiers.

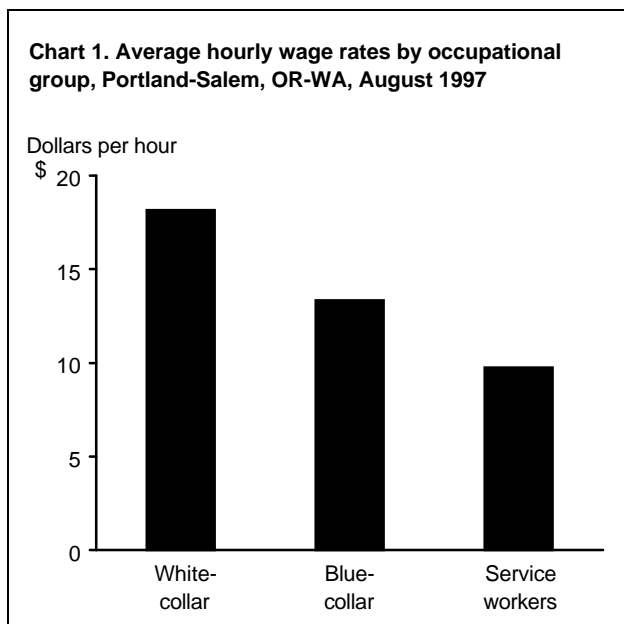
In tables containing work levels within occupational series, the work levels are derived from generic standards that *apply to all* occupational groups. The job levels in the OCS bulletins were based on narrowly-defined descriptions that were not comparable across specific occupations.

Occupational data in this bulletin are also tabulated for other classifications such as industry group, full-time versus part-time workers, union versus nonunion status, time versus incentive status, and establishment employment size. Not all of these series were generated by the OCS program.

The establishments surveyed for this bulletin were limited to those with 50 or more employees. Eventually, NCS will be expanded to cover those now-excluded establishments. Then, virtually all workers in the civilian economy will be surveyed, excluding only agriculture, private households, and employees of the Federal Government.

Wages in the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area

Straight-time wages in the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area averaged \$15.74 per hour during August 1997. White-collar workers had an average wage of \$18.16 per hour. Blue-collar workers averaged \$13.34 per hour, while service workers had average earnings of \$9.75 per hour. (All comparisons in this analysis cover hourly rates for both full- and part-time workers, unless otherwise noted.)



Within each of these occupational groups, average hourly wages for individual occupations varied. For example, white-collar occupations included computer programmers at \$26.80 per hour, registered nurses at \$21.46, and secretaries at \$11.94. The published average hourly wage for physicians, \$19.77 per hour, was lower than expected due to a number of residents and interns surveyed. Among occupations in the blue-collar category, truck drivers averaged \$15.99 per hour while stock handlers and baggers averaged \$8.58. Finally, service occupations included janitors and cleaners at \$9.68 per hour and cooks at \$8.65 per hour. Table A-1 presents earnings data for 100 detailed occupations; data for other detailed occupations surveyed could not be reported separately due to concerns

about the confidentiality of survey respondents and the reliability of the data.

Survey results show that private industry workers in Portland-Salem, OR-WA, earned \$15.00 per hour, while surveyed State and local government workers averaged \$18.41. Table A-2 reports the average hourly rate for white-collar occupations as \$17.67 in private industry and \$19.35 in State and local government. Blue-collar occupations showed an average hourly rate of \$13.11 in private industry and \$16.55 in State and local government. Service occupations within private industry averaged \$7.97 per hour while those found in State and local government averaged \$14.46.

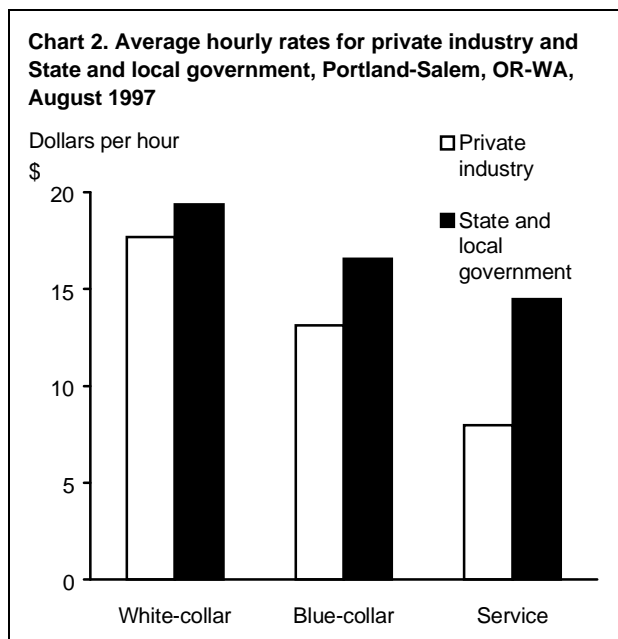
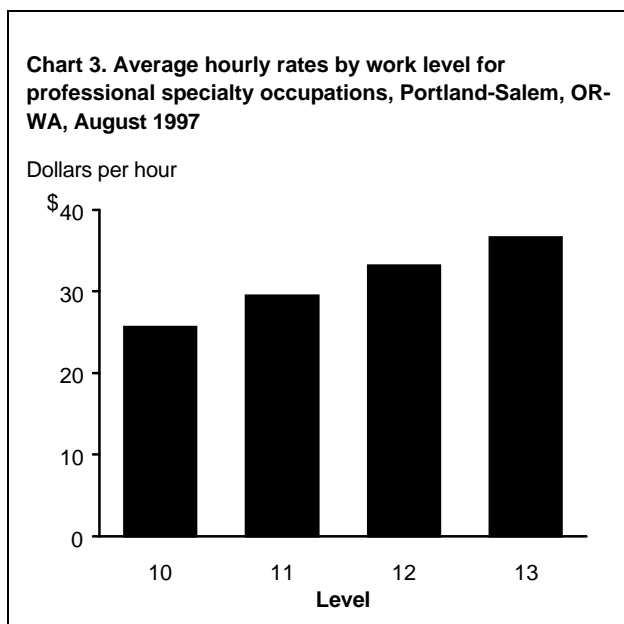


Table A-3 presents data for workers considered by the survey respondents to be either full-time or part-time. Average wages for full-time workers, all occupations, were \$16.25 per hour, compared with an average of \$11.22 per hour for part-time workers.

Data for specific work levels within major occupational groups are reported in table B-1. Occasionally, wage estimates for lower levels of work within major occupational groups are greater than estimates for higher levels. This

can occur due to the mix of specific occupations (and industries) represented by the broad group as well as by the variability of the estimate. Some levels within a group may not be published because no workers were identified at that level or because there were not enough data to guarantee confidentiality and reliability.

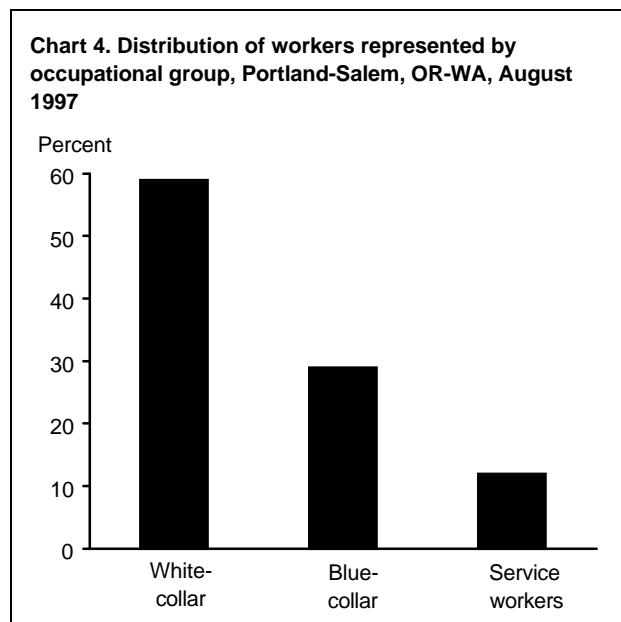
Work levels for all major groups span several levels, with professional specialty occupations and executive, administrative, and managerial occupations typically starting and ending at higher work levels than the other groups. Published data for professional specialty occupations ranged from level 5 to level 13. As illustrated in Chart 3, the average hourly rate was \$25.60 for level 10, \$29.48 for level 11, \$33.13 for level 12, and \$36.60 for level 13.



Surveyed union workers had an average hourly rate of \$16.32, as reported in table C-1. Wages for nonunion workers averaged \$15.45. Time workers, whose wages were based solely on an hourly rate or a salary, averaged \$15.60 per hour, while incentive workers, those whose wages were at least partially based on productivity payments, averaged \$20.86.

Table C-2 shows wage data for specific industry divisions within private industry. In the private sector, hourly wages averaged \$16.47 in all goods-producing industries and \$16.26 in manufacturing industries. Data for other industry divisions did not meet publication criteria.

In Portland-Salem, OR-WA, a total of 442,994 workers were represented by the survey, with 259,778 classified in white-collar occupations, or 59 percent. Table C-4 reports that blue-collar occupations included 128,754 workers, or 29 percent, and service occupations employed 54,461 workers, or 12 percent.



Data are also presented in appendix table 1 on the number of establishments studied by industry group and employment size. The relative standard errors of published mean hourly earnings for all industries, private industry, and State and local government are available in appendix table 2. The average work levels for published occupational groups and selected occupations are presented in appendix table 3.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Portland-Salem, OR-WA, August 1997

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
All occupations	\$15.74	\$7.30	\$9.50	\$13.46	\$19.65	\$27.14
All occupations excluding sales	15.76	7.50	9.74	13.56	19.74	27.08
White-collar occupations	18.16	8.54	11.03	15.48	22.68	31.57
White-collar occupations excluding sales	18.50	9.00	11.54	16.07	23.08	31.39
Professional specialty and technical occupations	22.71	13.33	17.33	21.22	27.32	34.06
Professional specialty occupations	23.96	14.37	18.75	22.37	28.85	34.60
Engineers, architects, and surveyors	27.04	20.19	21.63	25.48	30.58	36.55
Industrial engineers	25.21	19.35	21.39	25.19	28.96	29.95
Mechanical engineers	26.09	20.63	22.79	23.92	28.85	37.00
Engineers, N.E.C.	31.15	20.19	22.27	25.75	41.48	43.75
Mathematical and computer scientists	27.14	16.83	20.96	26.92	32.55	36.78
Computer systems analysts and scientists	27.91	19.71	21.88	27.65	33.38	37.02
Natural scientists	-	-	-	-	-	-
Health related occupations	21.14	15.18	18.00	20.96	23.01	25.90
Physicians	19.77	13.98	14.33	15.18	16.89	39.74
Registered nurses	21.46	17.37	19.05	21.23	23.09	25.24
Teachers, college and university	27.59	11.82	15.80	26.78	37.08	38.97
Teachers, post secondary N.E.C.	20.54	10.63	12.41	14.37	25.86	37.09
Teachers, except college and university	24.68	14.42	19.38	24.48	30.74	34.15
Elementary school teachers	25.49	14.58	19.72	26.25	32.39	34.37
Secondary school teachers	25.59	17.20	19.85	25.72	30.51	34.15
Teachers, special education	25.20	13.63	21.21	24.88	30.07	35.11
Teachers, N.E.C.	21.51	14.42	18.83	21.44	24.35	28.84
Substitute teachers	9.67	6.50	6.63	10.00	11.29	12.94
Vocational and educational counselors	24.01	11.90	20.55	20.55	33.10	35.11
Librarians, archivists, and curators	-	-	-	-	-	-
Social scientists and urban planners	19.59	10.40	16.59	19.65	21.90	27.22
Psychologists	18.39	10.35	14.99	19.34	21.02	26.29
Social, recreation, and religious workers	14.51	9.86	12.30	14.25	18.57	18.74
Social workers	15.50	11.37	13.04	14.78	18.74	19.42
Lawyers and judges	33.89	21.89	29.55	32.55	37.31	45.29
Writers, authors, entertainers, athletes, and professionals, N.E.C.	23.17	16.83	17.40	24.33	27.12	29.60
Designers	22.82	16.98	18.44	24.33	27.12	28.05
Technical occupations	18.08	11.37	13.38	17.06	20.77	25.00
Clinical laboratory technologists and technicians	15.01	10.06	11.61	12.89	19.50	20.62
Licensed practical nurses	14.15	12.00	12.75	14.49	15.00	16.09
Health technologists and technicians, N.E.C.	14.66	10.39	12.48	14.78	16.23	18.03
Electrical and electronic technicians	21.68	15.90	20.00	21.63	24.14	28.16
Computer programmers	26.80	18.27	19.89	25.00	31.90	40.50
Technical and related occupations, N.E.C.	17.17	11.83	13.22	15.63	20.19	25.96
Executive, administrative, and managerial occupations ...	26.70	14.62	18.07	24.35	33.42	40.38
Executives, administrators, and managers	31.19	19.05	23.69	28.27	38.08	41.99
Administrators and officials, public administration	39.52	21.09	28.37	40.93	41.99	79.33
Financial managers	28.35	16.67	20.19	24.95	34.61	45.12
Managers., marketing, advertising and public relations	37.71	33.41	33.65	36.90	40.38	46.00
Administrators, education and related fields	33.46	16.88	20.48	40.24	41.73	41.73
Managers and administrators, N.E.C.	30.73	19.05	23.28	28.27	36.60	39.79
Management related occupations	19.07	14.13	15.11	17.37	21.37	26.35
Accountants and auditors	16.70	12.02	14.13	16.25	19.03	21.37
Other financial officers	23.22	12.10	22.19	25.72	26.22	29.35
Personnel, training, and labor relations specialists	15.53	12.42	15.11	15.53	17.26	17.37
Management related occupations, N.E.C.	22.83	16.26	17.31	19.74	27.80	36.14
Sales occupations	15.42	6.25	7.68	11.40	18.46	35.09
Supervisors, sales occupations	18.82	8.38	10.50	16.35	25.84	35.98
Sales workers, apparel	8.98	6.00	6.65	7.99	9.62	15.15
Sales workers, other commodities	8.19	5.50	5.95	7.10	9.15	13.56
Cashiers	9.00	5.75	6.50	7.46	11.50	14.67
Sales support occupations, N.E.C.	12.68	6.50	8.27	10.10	13.00	23.94
Administrative support occupations, including clerical	11.79	8.00	9.15	11.36	13.64	16.48
Supervisors, general office	16.54	14.32	14.92	14.92	17.32	19.85
Secretaries	11.94	9.14	10.00	11.36	13.06	15.86

See footnotes at end of table.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
White-collar occupations (-Continued)						
Administrative support occupations, including clerical (-Continued)						
Receptionists	\$9.69	\$7.00	\$8.70	\$9.06	\$11.73	\$11.94
Information clerks, N.E.C.	11.80	7.86	9.10	11.30	13.37	17.66
Order clerks	10.41	7.50	8.50	9.79	12.02	12.98
Personnel clerks except payroll & timekeeping	13.43	9.13	9.27	14.23	16.48	16.81
Library clerks	10.99	8.84	9.52	11.43	12.44	12.80
Records clerks, N.E.C.	11.42	9.00	9.85	10.90	12.50	14.26
Bookkeepers, accounting and auditing clerks	11.89	8.80	9.76	11.30	12.79	15.84
Billing clerks	10.47	8.00	8.26	9.00	12.49	14.16
Traffic, shipping and receiving clerks	12.06	8.75	10.00	12.10	13.55	16.68
Stock and inventory clerks	10.07	5.77	7.01	9.19	11.92	17.09
Insurance adjusters, examiners, & investigators ..	15.33	12.61	13.20	14.34	16.27	20.16
Investigators and adjusters except insurance	11.47	8.39	8.71	11.53	13.56	15.91
General office clerks	10.73	7.50	8.54	10.63	12.25	14.20
Data entry keyers	9.50	7.42	7.65	8.00	10.00	15.63
Teachers' aides	11.28	9.77	10.14	10.87	12.20	13.33
Administrative support occupations, N.E.C.	13.65	9.07	11.11	14.09	16.60	17.87
Blue-collar occupations						
Precision production, craft, and repair occupations	13.34	7.25	9.00	12.60	16.48	20.50
Supervisors, mechanics and repairers	15.83	8.31	11.88	15.44	19.61	22.26
Bus, truck, and stationary engine mechanics	20.25	14.42	19.07	19.88	21.33	22.26
Heavy equipment mechanics	15.58	9.25	11.02	15.60	18.81	21.18
Industrial machinery repairers	15.60	13.75	13.75	15.15	17.20	18.32
Mechanics and repairers, N.E.C.	17.58	15.63	15.92	16.48	17.48	22.72
Electricians	14.67	10.31	11.30	14.75	17.75	19.14
Construction trades, N.E.C.	20.73	19.00	21.00	22.08	22.73	23.19
Supervisors, production occupations	16.42	15.00	15.49	16.52	17.10	18.76
Machinists	19.73	14.25	15.32	17.23	22.21	31.30
Electrical and electronic equipment assemblers ..	18.13	13.69	15.00	16.50	20.00	27.10
Inspectors, testers, and graders	10.10	7.25	7.74	9.69	12.20	14.11
Machine operators, assemblers, and inspectors	14.34	10.02	12.64	13.93	16.90	19.74
Fabricating machine operators, N.E.C.	11.84	7.00	8.27	11.12	14.75	17.76
Molding and casting machine operators	14.79	10.33	11.35	13.65	17.85	19.49
Printing press operators	11.07	6.65	6.80	12.31	14.75	15.12
Packaging and filling machine operators	18.84	15.08	17.12	17.43	17.76	27.10
Furnace, kiln, and oven operators, except food ...	10.49	5.75	6.10	8.96	16.54	16.54
Miscellaneous machine operators, N.E.C.	13.62	7.88	12.15	13.65	16.74	18.08
Welders and cutters	11.71	8.21	9.01	11.22	13.00	16.89
Assemblers	15.41	11.85	13.50	15.80	17.05	18.07
Miscellaneous hand working occupations, N.E.C.	10.48	7.10	7.42	9.25	12.13	18.30
Production inspectors, checkers and examiners ..	8.20	5.50	6.00	7.87	10.00	11.10
Production testers	11.65	9.05	9.26	12.20	12.82	13.62
Transportation and material moving occupations	11.93	7.50	8.22	9.50	15.35	18.67
Truck drivers	16.34	10.51	12.74	15.34	19.59	21.58
Bus drivers	15.99	11.50	13.50	15.45	20.86	21.11
Industrial truck and tractor equipment operators ..	13.38	8.45	11.80	13.05	16.77	16.77
Handlers, equipment cleaners, helpers, and laborers	13.51	8.80	9.76	12.96	17.02	17.97
Helpers, mechanics and repairers	10.16	6.25	7.51	9.50	12.32	14.36
Construction laborers	13.75	8.00	8.50	10.00	19.79	19.79
Production helpers	11.69	8.00	10.00	12.00	13.75	16.37
Stock handlers and baggers	10.38	6.90	9.16	11.05	11.36	12.17
Freight, stock, and material handlers, N.E.C.	8.58	5.70	6.25	7.00	8.12	13.10
Hand packers and packagers	10.95	8.00	8.76	11.33	12.42	13.92
Laborers except construction, N.E.C.	8.17	6.00	6.65	7.50	8.12	13.40
Service occupations	10.77	7.50	8.43	10.50	12.46	14.68
Protective service occupations	9.75	5.50	6.49	8.27	11.60	16.74
Guards and police except public service	15.01	6.50	8.75	15.27	19.49	23.91
Food service occupations	9.12	5.80	6.75	8.00	11.90	13.44
Supervisors, food preparation and service occupations	7.39	5.50	5.50	6.50	8.61	10.45
Waiters and waitresses	11.61	8.89	10.45	11.60	12.98	13.94
	5.52	4.90	5.50	5.50	5.50	6.00

See footnotes at end of table.

Table A-1. Hourly earnings¹ for selected occupations, all workers², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries					
	Mean	Percentiles				
		10	25	Median 50	75	90
Service occupations (-Continued)						
Food service occupations (-Continued)						
Cooks	\$8.65	\$6.50	\$7.56	\$8.20	\$9.60	\$10.64
Food counter, fountain, and related occupations	6.19	5.50	5.50	5.75	6.50	7.50
Kitchen workers, food preparation	8.08	6.61	6.94	8.14	8.85	9.80
Waiters/Waitresses' assistants	5.98	5.50	5.50	5.50	6.00	7.00
Food preparation occupations, N.E.C.	6.84	5.50	5.75	6.50	7.75	8.80
Health service occupations	8.96	7.00	7.77	8.25	9.98	11.65
Health aides, except nursing	10.97	7.06	7.77	11.31	12.50	17.10
Nursing aides, orderlies and attendants	8.54	7.00	7.80	8.25	9.19	10.99
Cleaning and building service occupations	9.82	6.00	7.00	9.85	11.79	13.79
Supervisors, cleaning & building service workers	13.20	9.00	11.30	13.10	16.74	16.74
Janitors and cleaners	9.68	6.00	7.00	9.85	11.79	12.99
Personal service occupations	8.28	5.50	6.25	7.59	10.16	11.50
Child care workers, N.E.C.	8.03	5.50	6.25	6.57	10.26	11.22
Service occupations, N.E.C.	10.21	7.59	7.59	9.00	12.08	14.92

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Portland-Salem, OR-WA, August 1997

Occupation ³	Private industry						State and local government					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
All occupations	\$15.00	\$7.00	\$8.85	\$12.69	\$18.52	\$25.95	\$18.41	\$9.81	\$12.24	\$16.52	\$22.11	\$30.39
All occupations excluding sales	14.96	7.00	9.00	12.78	18.53	25.43	18.41	9.81	12.24	16.53	22.13	30.44
White-collar occupations	17.67	8.00	10.31	14.82	22.11	31.25	19.35	10.14	12.27	17.09	24.35	32.61
White-collar occupations excluding sales	18.09	8.65	11.00	15.39	22.56	30.96	19.36	10.14	12.27	17.09	24.35	32.62
Professional specialty and technical occupations	22.58	12.68	17.33	21.28	26.62	33.56	22.91	14.00	17.32	21.08	28.37	34.09
Professional specialty occupations	24.08	14.25	19.19	22.54	28.61	35.49	23.82	14.37	18.74	22.19	29.30	34.37
Engineers, architects, and surveyors	27.17	20.29	21.63	25.56	30.61	36.83	-	-	-	-	-	-
Industrial engineers	25.21	19.35	21.39	25.19	28.96	29.95	-	-	-	-	-	-
Mechanical engineers	26.09	20.63	22.79	23.92	28.85	37.00	-	-	-	-	-	-
Engineers, N.E.C.	31.15	20.19	22.27	25.75	41.48	43.75	-	-	-	-	-	-
Mathematical and computer scientists	27.41	16.48	20.67	27.40	33.38	37.02	-	-	-	-	-	-
Computer systems analysts and scientists	28.27	19.52	21.88	28.28	33.85	37.12	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	21.43	16.07	18.22	21.14	22.77	25.43	20.32	14.33	15.93	20.21	23.59	26.68
Registered nurses	21.01	16.98	18.71	21.19	22.35	24.15	23.62	19.12	20.97	23.17	25.68	28.16
Teachers, college and university	34.42	16.83	22.31	31.19	44.06	60.00	25.67	11.82	14.37	26.50	34.69	37.16
Teachers, post secondary N.E.C.	30.53	18.62	22.11	25.86	37.73	48.80	18.29	10.42	11.82	14.34	25.00	37.09
Teachers, except college and university	20.42	10.82	14.67	19.98	24.35	29.23	25.28	15.18	19.80	25.51	31.45	34.37
Elementary school teachers	15.45	10.76	10.82	12.92	18.86	25.03	25.75	15.80	19.85	26.54	32.42	34.37
Secondary school teachers	21.86	14.67	17.48	20.77	25.93	31.55	25.83	17.50	20.11	25.75	30.74	34.40
Teachers, special education	-	-	-	-	-	-	24.66	13.63	21.21	24.32	29.30	33.43
Librarians, archivists, and curators	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	17.59	9.37	10.40	19.34	22.42	23.92	21.54	16.52	18.00	20.45	21.51	33.35
Psychologists	-	-	-	-	-	-	20.76	16.98	18.00	20.45	21.02	26.29
Social, recreation, and religious workers	12.29	6.19	11.03	12.66	13.99	15.00	16.95	14.09	15.48	18.57	18.74	19.42
Social workers	13.07	11.03	11.37	12.69	13.99	14.68	-	-	-	-	-	-
Lawyers and judges	-	-	-	-	-	-	-	-	-	-	-	-
Writers, authors, entertainers, athletes, and professionals, N.E.C.	23.78	16.83	18.44	24.80	27.12	30.50	-	-	-	-	-	-
Technical occupations	18.84	11.83	13.51	18.55	21.73	25.96	14.76	10.10	12.02	15.03	16.23	18.46
Clinical laboratory technologists and technicians	15.01	10.06	11.61	12.89	19.50	20.62	-	-	-	-	-	-
Licensed practical nurses	14.42	12.25	13.79	14.49	15.05	16.13	-	-	-	-	-	-
Health technologists and technicians, N.E.C.	14.98	11.39	12.60	14.42	17.44	19.14	-	-	-	-	-	-
Electrical and electronic technicians	21.36	14.72	20.00	21.63	23.69	25.75	-	-	-	-	-	-
Computer programmers	26.80	18.27	19.89	25.00	31.90	40.50	-	-	-	-	-	-
Technical and related occupations, N.E.C.	17.52	11.83	13.22	17.13	21.29	25.96	-	-	-	-	-	-
Executive, administrative, and managerial occupations	25.98	14.13	17.31	23.69	33.42	39.50	29.37	18.84	22.10	25.95	37.47	41.99
Executives, administrators, and managers	30.72	18.50	23.22	28.27	36.71	43.37	32.82	22.10	24.35	29.35	41.51	41.99
Administrators and officials, public administration	-	-	-	-	-	-	39.52	21.09	28.37	40.93	41.99	79.33
Financial managers	28.64	16.50	19.81	21.15	36.08	45.12	-	-	-	-	-	-
Managers, marketing, advertising and public relations	37.71	33.41	33.65	36.90	40.38	46.00	-	-	-	-	-	-
Administrators, education and related fields	24.28	13.55	17.99	20.48	26.56	38.46	-	-	-	-	-	-
Managers and administrators, N.E.C.	31.61	19.05	23.22	28.27	37.84	41.79	-	-	-	-	-	-
Management related occupations	18.18	12.42	15.09	17.31	19.52	25.75	22.71	17.18	18.84	21.42	25.95	29.33
Accountants and auditors	16.53	12.02	14.13	15.10	19.23	21.37	-	-	-	-	-	-
Other financial officers	23.22	12.10	22.19	25.72	26.22	29.35	-	-	-	-	-	-
Personnel, training, and labor relations specialists	15.39	12.42	15.00	15.53	17.00	17.37	-	-	-	-	-	-
Management related occupations, N.E.C.	21.85	15.38	17.31	17.31	21.87	36.14	-	-	-	-	-	-
Sales occupations	15.42	6.25	7.63	11.26	18.46	35.09	-	-	-	-	-	-
Supervisors, sales occupations	18.82	8.38	10.50	16.35	25.84	35.98	-	-	-	-	-	-
Sales workers, apparel	8.98	6.00	6.65	7.99	9.62	15.15	-	-	-	-	-	-
Sales workers, other commodities	7.97	5.50	5.75	7.00	8.95	10.94	-	-	-	-	-	-

See footnotes at end of table.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	Private industry						State and local government						
	Mean	Percentiles					Mean	Percentiles					
		10	25	Median 50	75	90		10	25	Median 50	75	90	
White-collar occupations (-Continued)													
Sales occupations (-Continued)													
Cashiers	\$9.00	\$5.75	\$6.50	\$7.46	\$11.50	\$14.67	—	—	—	—	—	—	—
Sales support occupations, N.E.C.	12.68	6.50	8.27	10.10	13.00	23.94	—	—	—	—	—	—	—
Administrative support occupations, including													
clerical	11.57	7.55	8.87	11.00	13.46	16.52	\$12.35	\$8.92	\$10.50	\$12.24	\$14.20	\$16.48	
Supervisors, general office	17.76	14.81	16.03	17.31	19.50	20.84	—	—	—	—	—	—	—
Secretaries	11.94	9.01	10.00	11.28	13.18	15.92	11.93	9.48	10.52	11.99	13.06	14.49	
Receptionists	9.69	7.00	8.70	9.06	11.73	11.94	—	—	—	—	—	—	—
Information clerks, N.E.C.	11.20	7.50	9.10	10.82	13.28	16.64	—	—	—	—	—	—	—
Order clerks	10.20	7.43	8.48	9.75	12.02	12.98	—	—	—	—	—	—	—
Personnel clerks except payroll &													
timekeeping	11.79	9.13	9.13	9.63	13.64	17.60	—	—	—	—	—	—	—
Library clerks	—	—	—	—	—	—	10.99	8.84	9.52	11.43	12.44	12.80	
Records clerks, N.E.C.	10.86	9.00	9.76	10.79	12.50	12.55	—	—	—	—	—	—	—
Bookkeepers, accounting and auditing													
clerks	11.85	8.80	9.51	11.00	12.98	18.68	—	—	—	—	—	—	—
Traffic, shipping and receiving clerks	12.06	8.75	10.00	12.10	13.55	16.68	—	—	—	—	—	—	—
Stock and inventory clerks	9.41	5.77	7.00	8.65	11.06	13.85	—	—	—	—	—	—	—
Insurance adjusters, examiners, &													
investigators	15.33	12.61	13.20	14.34	16.27	20.16	—	—	—	—	—	—	—
Investigators and adjusters except													
insurance	11.47	8.39	8.71	11.53	13.56	15.91	—	—	—	—	—	—	—
General office clerks	10.47	7.30	7.65	9.79	12.62	14.61	11.04	8.54	9.76	10.64	12.24	13.55	
Data entry keyers	9.50	7.42	7.65	8.00	10.00	15.63	—	—	—	—	—	—	—
Teachers' aides	—	—	—	—	—	—	11.27	9.77	10.14	10.75	12.20	13.42	
Administrative support occupations,													
N.E.C.	12.14	7.25	9.22	12.00	14.42	16.60	14.66	11.11	12.24	14.78	17.70	17.87	
Blue-collar occupations	13.11	7.21	8.76	12.32	16.00	20.50	16.55	11.90	14.36	16.53	18.81	21.67	
Precision production, craft, and repair													
occupations	15.57	8.22	11.65	15.07	19.33	22.24	19.48	15.60	16.53	19.07	21.89	22.95	
Supervisors, mechanics and repairers	20.17	14.42	14.92	19.42	21.06	33.03	—	—	—	—	—	—	—
Heavy equipment mechanics	15.60	13.75	13.75	15.15	17.20	18.32	—	—	—	—	—	—	—
Industrial machinery repairers	17.58	15.63	15.92	16.48	17.48	22.72	—	—	—	—	—	—	—
Mechanics and repairers, N.E.C.	14.61	10.31	11.30	14.50	17.88	19.18	—	—	—	—	—	—	—
Electricians	20.23	7.90	20.46	22.73	23.19	23.19	—	—	—	—	—	—	—
Construction trades, N.E.C.	—	—	—	—	—	—	16.28	15.49	15.49	16.52	17.10	17.10	
Supervisors, production occupations ..	19.73	14.25	15.32	17.23	22.21	31.30	—	—	—	—	—	—	—
Machinists	18.13	13.69	15.00	16.50	20.00	27.10	—	—	—	—	—	—	—
Electrical and electronic equipment													
assemblers	10.10	7.25	7.74	9.69	12.20	14.11	—	—	—	—	—	—	—
Inspectors, testers, and graders	14.34	10.02	12.64	13.93	16.90	19.74	—	—	—	—	—	—	—
Machine operators, assemblers, and													
inspectors	11.84	7.00	8.27	11.12	14.75	17.76	—	—	—	—	—	—	—
Fabricating machine operators,													
N.E.C.	14.79	10.33	11.35	13.65	17.85	19.49	—	—	—	—	—	—	—
Molding and casting machine													
operators	11.07	6.65	6.80	12.31	14.75	15.12	—	—	—	—	—	—	—
Printing press operators	18.84	15.08	17.12	17.43	17.76	27.10	—	—	—	—	—	—	—
Packaging and filling machine													
operators	10.49	5.75	6.10	8.96	16.54	16.54	—	—	—	—	—	—	—
Furnace, kiln, and oven operators,													
except food	13.62	7.88	12.15	13.65	16.74	18.08	—	—	—	—	—	—	—
Miscellaneous machine operators,													
N.E.C.	11.71	8.21	9.01	11.22	13.00	16.89	—	—	—	—	—	—	—
Welders and cutters	15.41	11.85	13.50	15.80	17.05	18.07	—	—	—	—	—	—	—
Assemblers	10.48	7.10	7.42	9.25	12.13	18.30	—	—	—	—	—	—	—
Miscellaneous hand working													
occupations, N.E.C.	8.20	5.50	6.00	7.87	10.00	11.10	—	—	—	—	—	—	—
Production inspectors, checkers and													
examiners	11.65	9.05	9.26	12.20	12.82	13.62	—	—	—	—	—	—	—
Production testers	11.93	7.50	8.22	9.50	15.35	18.67	—	—	—	—	—	—	—
Transportation and material moving													
occupations	16.57	10.00	12.50	15.00	20.86	23.55	15.57	10.77	13.05	16.08	16.77	20.36	

See footnotes at end of table.

Table A-2. Hourly earnings¹ for selected occupations, all workers², private industry and State and local government, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	Private industry						State and local government						
	Mean	Percentiles					Mean	Percentiles					
		10	25	Median 50	75	90		10	25	Median 50	75	90	
Blue-collar occupations (-Continued)													
Transportation and material moving occupations (-Continued)													
Truck drivers	\$16.20	\$11.55	\$13.55	\$15.80	\$20.86	\$21.11	—	—	—	—	—	—	—
Bus drivers	—	—	—	—	—	—	\$14.35	\$10.77	\$12.58	\$14.00	\$16.77	\$16.77	—
Industrial truck and tractor equipment operators	13.51	8.80	9.76	12.96	17.02	17.97	—	—	—	—	—	—	—
Handlers, equipment cleaners, helpers, and laborers	9.96	6.25	7.50	9.11	12.10	13.92	14.49	10.06	13.84	14.68	16.32	16.32	—
Construction laborers	11.77	8.00	10.00	12.00	13.75	16.37	—	—	—	—	—	—	—
Production helpers	10.38	6.90	9.16	11.05	11.36	12.17	—	—	—	—	—	—	—
Stock handlers and baggers	8.58	5.70	6.25	7.00	8.12	13.10	—	—	—	—	—	—	—
Freight, stock, and material handlers, N.E.C.	10.95	8.00	8.76	11.33	12.42	13.92	—	—	—	—	—	—	—
Hand packers and packagers	8.17	6.00	6.65	7.50	8.12	13.40	—	—	—	—	—	—	—
Laborers except construction, N.E.C.	10.22	7.46	8.00	9.50	11.65	13.10	—	—	—	—	—	—	—
Service occupations	7.97	5.50	6.00	7.25	9.00	11.79	14.46	8.50	9.84	12.99	18.13	22.48	—
Protective service occupations	7.94	5.75	6.50	7.50	8.75	10.48	18.52	12.42	15.13	18.13	21.69	23.91	—
Guards and police except public service	7.57	5.75	6.10	7.25	8.00	10.11	13.06	10.98	11.94	13.04	13.55	15.85	—
Food service occupations	7.17	5.50	5.50	6.25	8.14	10.43	9.08	7.56	8.20	8.79	9.76	10.69	—
Supervisors, food preparation and service occupations	11.61	8.89	10.45	11.60	12.98	13.94	—	—	—	—	—	—	—
Waiters and waitresses	5.52	4.90	5.50	5.50	5.50	6.00	—	—	—	—	—	—	—
Cooks	8.38	6.15	7.25	8.00	9.25	10.25	9.19	7.56	8.20	9.08	9.76	11.79	—
Food counter, fountain, and related occupations	6.12	5.50	5.50	5.75	6.50	7.50	—	—	—	—	—	—	—
Kitchen workers, food preparation	7.80	6.50	6.75	7.50	8.27	9.80	—	—	—	—	—	—	—
Waiters/Waitresses' assistants	5.72	5.50	5.50	5.50	6.00	6.00	—	—	—	—	—	—	—
Food preparation occupations, N.E.C.	6.62	5.50	5.75	6.35	7.00	8.50	—	—	—	—	—	—	—
Health service occupations	8.80	6.85	7.75	8.15	9.37	11.94	—	—	—	—	—	—	—
Health aides, except nursing	10.99	7.06	7.77	11.65	12.55	17.33	—	—	—	—	—	—	—
Nursing aides, orderlies and attendants	8.34	6.75	7.75	8.00	9.00	10.33	—	—	—	—	—	—	—
Cleaning and building service occupations	9.18	5.76	6.48	8.33	11.79	13.10	11.07	8.73	9.75	10.44	12.69	13.79	—
Janitors and cleaners	8.92	5.65	6.48	8.25	11.79	11.79	10.91	8.72	9.75	10.17	12.69	13.57	—
Personal service occupations	7.79	5.50	6.25	6.86	9.10	10.91	11.67	9.32	9.91	10.46	12.30	14.92	—
Child care workers, N.E.C.	—	—	—	—	—	—	10.86	9.32	9.91	10.36	11.22	14.17	—
Service occupations, N.E.C.	9.08	7.59	7.59	8.00	10.36	12.08	—	—	—	—	—	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Portland-Salem, OR-WA, August 1997

Occupation ³	All industries											
	Full-time						Part-time					
	Mean	Percentiles					Mean	Percentiles				
10		25	Median 50	75	90	10		25	Median 50	75	90	
All occupations	\$16.25	\$7.70	\$10.10	\$14.07	\$20.12	\$27.86	\$11.22	\$5.60	\$7.00	\$8.79	\$12.54	\$20.97
All occupations excluding sales	16.24	7.88	10.31	14.16	20.15	27.65	11.51	5.65	7.25	9.22	12.98	21.31
White-collar occupations	18.68	8.91	11.54	16.05	23.45	32.72	13.48	6.50	8.00	10.25	18.14	22.99
White-collar occupations excluding sales	18.96	9.29	12.02	16.56	23.69	32.51	14.30	7.25	8.33	11.00	19.98	23.24
Professional specialty and technical occupations	23.12	13.51	17.63	21.36	28.00	34.34	19.35	9.86	15.00	20.06	22.65	27.55
Professional specialty occupations	24.33	14.59	18.83	22.76	29.30	35.11	20.39	9.86	17.17	21.03	23.59	28.50
Engineers, architects, and surveyors	27.04	20.19	21.63	25.48	30.58	36.55	-	-	-	-	-	-
Industrial engineers	25.21	19.35	21.39	25.19	28.96	29.95	-	-	-	-	-	-
Mechanical engineers	26.09	20.63	22.79	23.92	28.85	37.00	-	-	-	-	-	-
Engineers, N.E.C.	31.15	20.19	22.27	25.75	41.48	43.75	-	-	-	-	-	-
Mathematical and computer scientists	27.14	16.48	20.82	26.92	32.76	36.78	-	-	-	-	-	-
Computer systems analysts and scientists	27.92	19.71	21.81	27.78	33.63	37.02	-	-	-	-	-	-
Natural scientists	-	-	-	-	-	-	-	-	-	-	-	-
Health related occupations	20.73	14.33	17.10	20.21	22.62	25.90	22.25	18.20	20.21	21.54	23.20	24.74
Registered nurses	21.49	17.01	18.72	21.18	23.19	25.65	21.39	17.69	19.75	21.51	22.96	23.75
Teachers, college and university	28.67	12.98	18.54	27.51	37.09	40.20	20.45	8.91	12.41	18.75	28.85	32.13
Teachers, post secondary N.E.C.	21.73	11.25	13.93	16.34	28.32	37.09	-	-	-	-	-	-
Teachers, except college and university	25.00	15.18	19.69	24.78	30.74	34.15	19.61	6.82	10.95	19.19	28.23	30.74
Elementary school teachers	25.51	14.58	19.72	26.38	32.42	34.37	-	-	-	-	-	-
Secondary school teachers	25.65	17.21	20.11	25.75	30.51	34.15	24.47	17.20	18.94	23.16	30.74	33.22
Teachers, special education	25.00	13.63	21.21	24.67	29.44	35.11	-	-	-	-	-	-
Teachers, N.E.C.	-	-	-	-	-	-	23.49	9.68	18.82	23.90	28.23	29.68
Substitute teachers	-	-	-	-	-	-	9.67	6.50	6.63	10.00	11.29	12.94
Vocational and educational counselors	24.45	13.22	20.55	20.55	33.10	35.11	-	-	-	-	-	-
Librarians, archivists, and curators	-	-	-	-	-	-	-	-	-	-	-	-
Social scientists and urban planners	20.74	15.84	18.00	20.45	22.36	31.37	-	-	-	-	-	-
Psychologists	19.87	10.40	17.98	19.34	21.02	27.22	-	-	-	-	-	-
Social, recreation, and religious workers	14.90	11.03	12.66	14.68	18.74	18.74	-	-	-	-	-	-
Social workers	15.69	11.37	13.04	15.21	18.74	19.42	-	-	-	-	-	-
Lawyers and judges	33.89	21.89	29.55	32.55	37.31	45.29	-	-	-	-	-	-
Writers, authors, entertainers, athletes, and professionals, N.E.C.	23.65	16.83	18.44	24.80	27.12	30.50	-	-	-	-	-	-
Designers	22.82	16.98	18.44	24.33	27.12	28.05	-	-	-	-	-	-
Technical occupations	18.26	11.39	13.37	16.96	20.84	25.60	17.18	10.00	13.55	17.92	20.06	22.65
Clinical laboratory technologists and technicians	14.88	10.06	11.35	12.89	19.58	20.62	-	-	-	-	-	-
Licensed practical nurses	14.17	12.14	12.47	14.35	15.13	16.13	-	-	-	-	-	-
Health technologists and technicians, N.E.C.	14.70	10.37	12.40	14.78	16.23	18.43	14.28	12.60	12.98	14.03	15.04	16.14
Electrical and electronic technicians	21.03	14.72	20.00	21.63	23.62	24.92	-	-	-	-	-	-
Computer programmers	26.80	18.27	19.89	25.00	31.90	40.50	-	-	-	-	-	-
Technical and related occupations, N.E.C.	17.96	11.83	14.24	18.25	21.29	25.96	-	-	-	-	-	-
Executive, administrative, and managerial occupations	26.55	15.09	18.22	24.35	33.42	40.38	-	-	-	-	-	-
Executives, administrators, and managers	31.02	19.05	23.69	28.27	37.84	41.99	-	-	-	-	-	-
Administrators and officials, public administration	34.67	21.09	27.68	39.73	41.99	41.99	-	-	-	-	-	-
Financial managers	28.35	16.67	20.19	24.95	34.61	45.12	-	-	-	-	-	-
Managers, marketing, advertising and public relations	37.71	33.41	33.65	36.90	40.38	46.00	-	-	-	-	-	-
Administrators, education and related fields	33.46	16.88	20.48	40.24	41.73	41.73	-	-	-	-	-	-
Managers and administrators, N.E.C.	30.73	19.05	23.28	28.27	36.60	39.79	-	-	-	-	-	-
Management related occupations	19.00	14.13	15.11	17.37	21.08	26.22	-	-	-	-	-	-
Accountants and auditors	16.70	12.02	14.13	16.25	19.03	21.37	-	-	-	-	-	-
Other financial officers	22.75	12.10	18.84	24.64	25.96	27.23	-	-	-	-	-	-

See footnotes at end of table.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries											
	Full-time					Part-time						
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
White-collar occupations (-Continued)												
Executive, administrative, and managerial occupations (-Continued)												
Management related occupations (-Continued)												
Personnel, training, and labor relations specialists	\$15.53	\$12.42	\$15.11	\$15.53	\$17.26	\$17.37	-	-	-	-	-	-
Management related occupations, N.E.C.	22.83	16.26	17.31	19.74	27.80	36.14	-	-	-	-	-	-
Sales occupations	16.38	6.60	8.38	12.30	18.71	36.06	\$7.07	\$5.50	\$5.70	\$6.50	\$7.50	\$8.27
Supervisors, sales occupations	18.82	8.38	10.50	16.35	25.84	35.98	-	-	-	-	-	-
Sales workers, apparel	9.30	6.25	7.00	8.55	9.63	17.20	-	-	-	-	-	-
Sales workers, other commodities	9.19	5.70	6.85	8.18	9.80	15.87	6.38	5.50	5.50	5.75	7.00	7.73
Cashiers	9.36	6.00	6.90	8.50	13.00	14.67	6.00	5.50	5.75	5.80	6.10	6.50
Administrative support occupations, including clerical	12.15	8.50	9.60	11.82	14.16	16.73	9.23	7.00	7.51	8.83	10.36	12.15
Supervisors, general office	16.54	14.32	14.92	14.92	17.32	19.85	-	-	-	-	-	-
Secretaries	12.26	9.28	10.64	11.82	13.54	15.92	9.71	8.01	9.00	10.00	10.00	10.60
Receptionists	9.90	8.70	8.70	9.06	11.73	11.94	9.32	6.00	7.00	9.85	11.75	11.94
Information clerks, N.E.C.	12.88	9.10	10.00	12.04	16.48	17.85	9.74	5.50	7.75	9.54	12.06	13.37
Order clerks	10.73	8.00	8.94	10.46	12.02	13.11	-	-	-	-	-	-
Personnel clerks except payroll & timekeeping	13.35	9.13	9.27	14.23	16.48	16.81	-	-	-	-	-	-
Records clerks, N.E.C.	11.16	9.00	9.76	10.79	12.50	13.30	-	-	-	-	-	-
Bookkeepers, accounting and auditing clerks	11.98	8.80	9.78	11.32	12.79	16.04	-	-	-	-	-	-
Billing clerks	10.58	8.00	8.26	9.00	12.90	15.85	-	-	-	-	-	-
Traffic, shipping and receiving clerks	12.06	8.75	10.00	12.10	13.55	16.68	-	-	-	-	-	-
Stock and inventory clerks	10.29	5.77	7.11	9.92	11.92	17.09	-	-	-	-	-	-
Insurance adjusters, examiners, & investigators	15.37	12.60	13.21	14.48	16.47	20.16	-	-	-	-	-	-
Investigators and adjusters except insurance	11.43	8.23	8.71	10.89	13.81	16.16	-	-	-	-	-	-
General office clerks	11.10	8.04	9.28	10.64	12.46	14.20	-	-	-	-	-	-
Data entry keyers	11.00	7.42	8.80	9.85	15.63	15.63	-	-	-	-	-	-
Teachers' aides	12.49	10.42	10.74	12.19	13.21	16.05	10.44	9.42	9.82	10.44	10.91	12.22
Administrative support occupations, N.E.C.	14.28	10.00	11.68	14.09	16.83	17.87	7.94	5.25	6.60	8.00	9.44	11.30
Blue-collar occupations												
Precision production, craft, and repair occupations	15.84	8.35	11.88	15.44	19.61	22.26	-	-	-	-	-	-
Supervisors, mechanics and repairers	20.25	14.42	19.07	19.88	21.33	22.26	-	-	-	-	-	-
Bus, truck, and stationary engine mechanics	15.58	9.25	11.02	15.60	18.81	21.18	-	-	-	-	-	-
Heavy equipment mechanics	15.60	13.75	13.75	15.15	17.20	18.32	-	-	-	-	-	-
Industrial machinery repairers	17.58	15.63	15.92	16.48	17.48	22.72	-	-	-	-	-	-
Mechanics and repairers, N.E.C.	14.67	10.31	11.30	14.75	17.75	19.14	-	-	-	-	-	-
Electricians	20.73	19.00	21.00	22.08	22.73	23.19	-	-	-	-	-	-
Construction trades, N.E.C.	16.42	15.00	15.49	16.52	17.10	18.76	-	-	-	-	-	-
Supervisors, production occupations ..	19.73	14.25	15.32	17.23	22.21	31.30	-	-	-	-	-	-
Machinists	18.13	13.69	15.00	16.50	20.00	27.10	-	-	-	-	-	-
Electrical and electronic equipment assemblers	10.10	7.25	7.74	9.69	12.20	14.11	-	-	-	-	-	-
Inspectors, testers, and graders	14.34	10.02	12.64	13.93	16.90	19.74	-	-	-	-	-	-
Machine operators, assemblers, and inspectors	11.90	7.10	8.41	11.20	14.75	17.85	8.45	6.50	6.65	7.35	8.75	13.24
Fabricating machine operators, N.E.C.	14.79	10.33	11.35	13.65	17.85	19.49	-	-	-	-	-	-
Molding and casting machine operators	11.27	6.69	6.80	12.96	14.75	15.12	-	-	-	-	-	-
Printing press operators	19.17	15.08	17.12	17.76	17.76	27.10	-	-	-	-	-	-

See footnotes at end of table.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries											
	Full-time						Part-time					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
Blue-collar occupations (-Continued)												
Machine operators, assemblers, and inspectors (-Continued)												
Furnace, kiln, and oven operators, except food	\$13.62	\$7.88	\$12.15	\$13.65	\$16.74	\$18.08	—	—	—	—	—	—
Miscellaneous machine operators, N.E.C.	11.71	8.21	9.01	11.22	13.00	16.89	—	—	—	—	—	—
Welders and cutters	15.41	11.85	13.50	15.80	17.05	18.07	—	—	—	—	—	—
Assemblers	10.59	7.12	7.42	9.29	12.19	18.30	—	—	—	—	—	—
Miscellaneous hand working occupations, N.E.C.	8.20	5.50	6.00	7.87	10.00	11.10	—	—	—	—	—	—
Production inspectors, checkers and examiners	11.65	9.05	9.26	12.20	12.82	13.62	—	—	—	—	—	—
Production testers	11.93	7.50	8.22	9.50	15.35	18.67	—	—	—	—	—	—
Transportation and material moving occupations	16.87	10.80	13.05	15.80	20.36	22.72	\$11.22	\$8.24	\$9.22	\$11.90	\$12.43	\$13.48
Truck drivers	15.99	11.50	13.50	15.45	20.86	21.11	—	—	—	—	—	—
Bus drivers	—	—	—	—	—	—	11.41	8.24	9.31	11.90	12.43	13.70
Industrial truck and tractor equipment operators	13.51	8.80	9.76	12.96	17.02	17.97	—	—	—	—	—	—
Handlers, equipment cleaners, helpers, and laborers	10.33	6.50	7.68	10.00	12.42	14.36	8.98	5.60	7.00	8.76	10.30	12.87
Helpers, mechanics and repairers	13.75	8.00	8.50	10.00	19.79	19.79	—	—	—	—	—	—
Construction laborers	12.06	8.00	10.00	12.00	13.75	16.37	—	—	—	—	—	—
Production helpers	10.38	6.90	9.16	11.05	11.36	12.17	—	—	—	—	—	—
Stock handlers and baggers	9.10	6.00	6.25	7.00	12.75	13.40	—	—	—	—	—	—
Freight, stock, and material handlers, N.E.C.	11.29	7.50	9.55	11.86	13.00	13.65	—	—	—	—	—	—
Hand packers and packagers	8.06	6.00	6.65	7.50	8.12	13.30	—	—	—	—	—	—
Laborers except construction, N.E.C.	11.00	7.68	8.50	10.50	12.50	14.68	—	—	—	—	—	—
Service occupations	10.55	5.75	6.86	9.00	12.41	18.13	7.29	5.50	5.60	6.90	8.27	9.91
Protective service occupations	15.38	7.00	9.27	15.85	19.97	23.91	7.85	5.50	6.00	7.25	10.01	10.02
Guards and police except public service	9.29	6.00	7.00	8.00	11.94	13.55	—	—	—	—	—	—
Food service occupations	7.72	5.50	5.75	6.98	9.00	11.50	6.86	5.50	5.50	6.00	8.20	9.69
Supervisors, food preparation and service occupations	11.61	8.89	10.45	11.60	12.98	13.94	—	—	—	—	—	—
Waiters and waitresses	—	—	—	—	—	—	5.48	4.90	4.90	5.50	6.00	6.25
Cooks	8.70	6.15	7.25	8.75	9.60	10.92	8.56	7.25	8.00	8.20	9.48	9.76
Food counter, fountain, and related occupations	—	—	—	—	—	—	5.86	5.50	5.50	5.65	5.85	6.50
Kitchen workers, food preparation	7.69	6.50	6.75	7.25	8.50	9.80	—	—	—	—	—	—
Waiters'/Waitresses' assistants	—	—	—	—	—	—	6.43	5.50	5.50	6.00	6.00	8.79
Food preparation occupations, N.E.C.	6.64	5.75	6.00	6.50	7.00	8.25	7.27	5.50	5.50	7.00	8.61	9.69

See footnotes at end of table.

Table A-3. Hourly earnings¹ for selected occupations, full-time and part-time workers², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries											
	Full-time						Part-time					
	Mean	Percentiles					Mean	Percentiles				
		10	25	Median 50	75	90		10	25	Median 50	75	90
Service occupations (-Continued)												
Health service occupations	\$9.06	\$6.50	\$7.50	\$8.50	\$10.31	\$12.00	\$8.65	\$7.50	\$8.00	\$8.00	\$9.00	\$10.99
Health aides, except nursing	10.89	7.06	7.77	10.96	12.39	17.10	-	-	-	-	-	-
Nursing aides, orderlies and attendants	8.56	6.50	7.50	8.40	9.28	11.23	8.51	7.50	8.00	8.00	8.50	10.46
Cleaning and building service occupations	10.33	6.50	7.66	10.25	11.79	14.33	6.75	5.50	5.64	6.00	7.00	9.60
Supervisors, cleaning & building service workers	13.20	9.00	11.30	13.10	16.74	16.74	-	-	-	-	-	-
Janitors and cleaners	10.17	6.50	8.23	10.17	11.79	13.14	6.58	5.50	5.64	5.88	7.00	9.00
Personal service occupations	8.28	6.25	6.50	7.46	9.82	11.04	8.28	5.50	5.50	7.59	10.26	12.08
Child care workers, N.E.C.	-	-	-	-	-	-	8.70	5.50	6.00	9.69	10.46	12.30
Service occupations, N.E.C.	-	-	-	-	-	-	10.14	7.59	7.59	8.00	12.08	15.00

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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. The 10th, 25th, 50th, 75th and 90th percentiles designate position in the earnings distribution. At the 50th percentile, the median, half of the workers receive the same as or more than the rate shown, and half receive the same as or less than the rate shown. At the 25th percentile, one-fourth of the workers earn the same as or less than the rate shown. At the 75th percentile, one-fourth earn the same as or more than the rate shown. The 10th and 90th percentiles follow the same logic.

² 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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Portland-Salem, OR-WA, August 1997

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
All occupations	40.1	\$651	\$561	2,034	\$33,043	\$28,954
All occupations excluding sales	40.0	649	565	2,027	32,917	29,245
White-collar occupations	40.2	750	640	2,011	37,561	32,510
White-collar occupations excluding sales	40.0	759	664	1,997	37,860	33,550
Professional specialty and technical occupations	40.0	925	860	1,914	44,260	42,744
Professional specialty occupations	40.1	975	914	1,880	45,738	43,846
Engineers, architects, and surveyors	40.0	1,081	1,019	2,079	56,224	52,998
Industrial engineers	40.0	1,009	1,008	2,080	52,443	52,395
Mechanical engineers	40.0	1,044	957	2,080	54,269	49,754
Engineers, N.E.C.	40.0	1,246	1,030	2,080	64,795	53,560
Mathematical and computer scientists	39.9	1,083	1,075	2,075	56,326	55,910
Computer systems analysts and scientists	40.0	1,117	1,111	2,080	58,081	57,782
Natural scientists	-	-	-	-	-	-
Health related occupations	41.3	857	839	2,125	44,055	43,618
Registered nurses	39.3	844	846	2,010	43,196	43,285
Teachers, college and university	39.8	1,141	1,100	1,600	45,886	45,580
Teachers, post secondary N.E.C.	39.9	866	654	1,582	34,380	28,105
Teachers, except college and university	39.7	991	976	1,578	39,444	39,387
Elementary school teachers	39.7	1,013	1,044	1,542	39,340	40,553
Secondary school teachers	39.7	1,019	1,007	1,563	40,096	40,058
Teachers, special education	39.0	975	966	1,509	37,718	36,708
Vocational and educational counselors	40.0	978	822	1,648	40,308	35,346
Librarians, archivists, and curators	-	-	-	-	-	-
Social scientists and urban planners	38.3	795	786	1,943	40,307	40,227
Psychologists	37.5	745	774	1,877	37,294	39,686
Social, recreation, and religious workers	40.0	597	587	2,056	30,640	29,640
Social workers	39.7	623	591	2,038	31,981	30,742
Lawyers and judges	39.6	1,342	1,302	2,059	69,779	67,704
Writers, authors, entertainers, athletes, and professionals, N.E.C.	40.7	963	992	2,092	49,478	51,584
Designers	42.0	959	950	2,185	49,856	49,400
Technical occupations	39.7	725	678	2,065	37,712	35,256
Clinical laboratory technologists and technicians	40.0	595	516	2,080	30,955	26,811
Licensed practical nurses	40.0	567	574	2,080	29,481	29,848
Health technologists and technicians, N.E.C.	40.0	588	591	2,080	30,584	30,742
Electrical and electronic technicians	40.0	841	865	2,080	43,750	44,990
Computer programmers	39.9	1,070	1,000	2,076	55,641	52,000
Technical and related occupations, N.E.C.	39.9	717	684	2,075	37,267	35,588
Executive, administrative, and managerial occupations ...	40.7	1,081	975	2,103	55,822	50,710
Executives, administrators, and managers	41.1	1,274	1,131	2,119	65,723	58,802
Administrators and officials, public administration	40.0	1,387	1,589	2,080	72,106	82,638
Financial managers	42.8	1,214	1,058	2,226	63,102	54,990
Managers., marketing, advertising and public relations	40.0	1,508	1,476	2,080	78,437	76,752
Administrators, education and related fields	40.0	1,338	1,610	1,902	63,650	70,822
Managers and administrators, N.E.C.	41.4	1,274	1,115	2,155	66,225	57,990
Management related occupations	40.2	763	695	2,076	39,448	36,130
Accountants and auditors	40.3	673	650	2,095	34,988	33,800
Other financial officers	40.0	910	986	2,080	47,322	51,251
Personnel, training, and labor relations specialists	40.8	634	634	2,121	32,948	32,947
Management related occupations, N.E.C.	39.8	909	770	2,020	46,114	41,350
Sales occupations	41.3	676	483	2,135	34,979	25,006
Supervisors, sales occupations	42.4	799	692	2,207	41,526	36,005
Sales workers, apparel	36.7	341	303	1,910	17,755	15,756
Sales workers, other commodities	38.4	353	327	1,996	18,332	17,014
Cashiers	38.5	360	310	1,932	18,077	14,840
Administrative support occupations, including clerical	39.8	483	470	2,042	24,802	24,086
Supervisors, general office	39.9	659	602	2,072	34,271	31,325
Secretaries	39.6	486	472	1,969	24,137	23,462
Receptionists	40.0	396	362	2,080	20,599	18,845
Information clerks, N.E.C.	40.0	515	482	2,080	26,793	25,043
Order clerks	39.1	420	406	2,036	21,835	21,091
Personnel clerks except payroll & timekeeping	40.0	534	569	2,080	27,762	29,598
Records clerks, N.E.C.	39.7	443	420	1,957	21,855	21,528

See footnotes at end of table.

Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
White-collar occupations (-Continued)						
Administrative support occupations, including clerical (-Continued)						
Bookkeepers, accounting and auditing clerks	40.0	\$479	\$453	2,078	\$24,906	\$23,546
Billing clerks	39.9	422	360	2,075	21,947	18,720
Traffic, shipping and receiving clerks	40.0	483	484	2,080	25,091	25,168
Stock and inventory clerks	40.0	412	397	2,080	21,405	20,634
Insurance adjusters, examiners, & investigators ..	39.5	607	573	2,053	31,561	29,802
Investigators and adjusters except insurance	40.0	457	436	2,080	23,775	22,651
General office clerks	39.9	443	426	2,063	22,901	22,110
Data entry keyers	40.0	440	394	2,080	22,879	20,488
Teachers' aides	37.1	463	455	1,373	17,144	16,718
Administrative support occupations, N.E.C.	40.0	571	564	2,046	29,209	29,307
Blue-collar occupations						
Precision production, craft, and repair occupations	40.1	543	519	2,076	28,108	26,728
Supervisors, mechanics and repairers	39.8	805	822	2,068	41,867	42,765
Bus, truck, and stationary engine mechanics	40.0	623	624	2,080	32,409	32,448
Heavy equipment mechanics	40.0	624	606	2,080	32,445	31,512
Industrial machinery repairers	40.0	703	659	2,080	36,576	34,278
Mechanics and repairers, N.E.C.	41.7	611	590	2,166	31,777	30,680
Electricians	40.0	829	883	2,080	43,119	45,926
Construction trades, N.E.C.	39.9	655	661	2,073	34,043	34,362
Supervisors, production occupations	39.7	783	677	2,063	40,700	35,194
Machinists	39.6	717	663	2,058	37,302	34,466
Electrical and electronic equipment assemblers ..	39.9	403	384	2,073	20,931	19,988
Inspectors, testers, and graders	39.9	572	557	2,075	29,758	28,974
Machine operators, assemblers, and inspectors	40.3	479	455	2,094	24,922	23,660
Fabricating machine operators, N.E.C.	40.0	592	546	2,080	30,772	28,392
Molding and casting machine operators	39.5	445	492	2,054	23,150	25,605
Printing press operators	39.5	757	710	2,055	39,379	36,941
Furnace, kiln, and oven operators, except food ...	40.0	545	546	2,080	28,340	28,392
Miscellaneous machine operators, N.E.C.	40.6	475	468	2,110	24,705	24,357
Welders and cutters	40.0	616	632	2,080	32,050	32,864
Assemblers	40.2	425	370	2,089	22,113	19,240
Miscellaneous hand working occupations, N.E.C. ...	41.0	336	334	2,130	17,464	17,363
Production inspectors, checkers and examiners ..	42.1	491	549	2,191	25,517	28,548
Production testers	40.0	477	380	2,080	24,820	19,760
Transportation and material moving occupations	40.6	685	671	2,088	35,226	34,424
Truck drivers	40.0	640	618	2,080	33,262	32,136
Industrial truck and tractor equipment operators ..	38.9	526	518	2,025	27,363	26,957
Handlers, equipment cleaners, helpers, and laborers	39.3	406	382	2,028	20,952	19,760
Helpers, mechanics and repairers	41.5	571	420	2,158	29,676	21,840
Construction laborers	40.0	482	480	2,080	25,081	24,960
Production helpers	38.4	398	414	1,996	20,711	21,507
Stock handlers and baggers	37.2	338	256	1,934	17,589	13,312
Freight, stock, and material handlers, N.E.C.	40.0	451	474	2,080	23,477	24,669
Hand packers and packagers	39.8	321	300	2,071	16,687	15,600
Laborers except construction, N.E.C.	39.7	437	420	1,997	21,966	21,840
Service occupations						
Protective service occupations	40.7	626	616	2,110	32,453	31,907
Guards and police except public service	39.5	366	320	2,034	18,896	16,640
Food service occupations	38.2	295	262	1,966	15,175	13,520
Supervisors, food preparation and service occupations	41.8	485	500	2,172	25,218	26,000
Cooks	39.3	342	332	2,021	17,586	17,680
Kitchen workers, food preparation	39.4	303	285	1,999	15,380	14,820
Food preparation occupations, N.E.C.	38.3	254	240	1,943	12,907	12,480

See footnotes at end of table.

Table A-4. Weekly and annual earnings¹ and hours for selected occupations, full-time workers only², all industries, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³	All industries					
	Mean weekly hours ⁴	Weekly earnings		Mean annual hours	Annual earnings	
		Mean	Median		Mean	Median
Service occupations (-Continued)						
Health service occupations	39.0	\$353	\$326	2,028	\$18,368	\$16,952
Health aides, except nursing	40.0	435	438	2,080	22,644	22,797
Nursing aides, orderlies and attendants	38.7	331	320	2,014	17,233	16,640
Cleaning and building service occupations	39.9	413	410	2,054	21,218	21,091
Supervisors, cleaning & building service workers	40.0	528	524	2,080	27,455	27,248
Janitors and cleaners	40.0	407	407	2,052	20,872	21,091
Personal service occupations	38.1	316	275	1,983	16,426	14,290

¹ Earnings are the straight-time wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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. The median designates position--one-half of the workers receive the same as or more, and one-half receive the same as or less than the rate shown.

² 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 A classification system including about 480 individual occupations is used

to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ Mean weekly hours are the hours an employee is scheduled to work in a week, exclusive of overtime.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
All occupations	\$15.74	\$15.00	\$18.41	\$16.25	\$11.22
All occupations excluding sales	15.76	14.96	18.41	16.24	11.51
White-collar occupations	18.16	17.67	19.35	18.68	13.48
Level 1	6.91	6.84	—	—	7.01
Level 2	8.18	8.01	8.67	8.51	7.88
Level 3	9.01	8.71	10.25	9.09	8.67
Level 4	11.08	10.64	11.96	11.18	10.18
Level 5	12.73	12.76	12.55	12.67	13.76
Level 6	14.37	14.18	15.31	14.29	15.27
Level 7	17.06	17.52	15.89	16.95	18.68
Level 8	20.41	19.41	22.07	20.53	18.99
Level 9	22.51	21.81	23.36	22.58	21.44
Level 10	26.20	25.36	27.76	26.27	25.25
Level 11	29.26	29.39	28.73	29.30	—
Level 12	34.60	34.16	37.40	34.63	—
Level 13	37.67	37.26	—	38.40	31.39
Level 14	63.18	62.68	—	61.65	—
Not able to be leveled	25.40	14.96	—	31.41	12.88
White-collar occupations excluding sales	18.50	18.09	19.36	18.96	14.30
Level 1	7.21	—	—	—	—
Level 2	8.23	8.07	8.67	8.55	7.96
Level 3	9.51	9.26	10.25	9.49	9.65
Level 4	11.13	10.58	11.96	11.19	10.57
Level 5	12.74	12.78	12.55	12.67	13.76
Level 6	14.19	13.94	15.31	14.09	15.27
Level 7	17.23	17.77	15.90	17.12	18.68
Level 8	20.13	18.73	22.07	20.24	18.99
Level 9	22.50	21.79	23.36	22.57	21.44
Level 10	25.36	23.90	27.76	25.36	25.25
Level 11	28.82	28.85	28.73	28.87	—
Level 12	34.45	33.96	37.40	34.48	—
Level 13	37.67	37.26	—	38.40	31.39
Level 14	63.18	62.68	—	61.65	—
Not able to be leveled	25.50	14.77	—	31.41	—
Professional specialty and technical occupations	22.71	22.58	22.91	23.12	19.35
Professional specialty occupations	23.96	24.08	23.82	24.33	20.39
Level 5	14.87	—	11.37	—	—
Level 6	12.99	12.47	—	13.72	10.02
Level 7	19.32	19.35	—	19.17	—
Level 8	22.02	19.07	23.87	22.50	19.57
Level 9	22.44	21.45	23.18	22.57	21.07
Level 10	25.60	23.88	27.74	25.64	25.25
Level 11	29.48	29.68	28.71	29.59	—
Level 12	33.13	32.82	—	33.13	—
Level 13	36.60	36.79	—	38.09	31.39
Not able to be leveled	31.63	—	—	31.41	—
Engineers, architects, and surveyors	27.04	27.17	—	27.04	—
Level 9	24.18	24.07	—	24.18	—
Level 11	29.24	29.38	—	29.24	—
Level 12	33.50	33.50	—	33.50	—
Mathematical and computer scientists	27.14	27.41	—	27.14	—
Level 9	23.99	24.31	—	23.99	—
Level 11	29.42	29.42	—	29.42	—
Natural scientists	—	—	—	—	—
Health related occupations	21.14	21.43	20.32	20.73	22.25
Level 7	17.61	—	—	—	—
Level 8	19.87	19.04	—	17.97	21.69
Level 9	20.06	20.77	—	19.63	21.49
Level 10	22.14	22.14	—	22.02	—
Level 11	28.92	—	—	28.92	—
Teachers, college and university	27.59	34.42	25.67	28.67	20.45
Level 10	28.54	—	30.66	28.53	—
Level 11	29.15	28.11	—	30.45	—

See footnotes at end of table.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
White-collar occupations (-Continued)					
Teachers, college and university (-Continued)					
Level 12	\$36.59	—	—	\$36.59	—
Teachers, except college and university	24.68	\$20.42	\$25.28	25.00	\$19.61
Level 6	10.18	—	—	—	—
Level 8	28.01	22.38	28.46	29.05	—
Level 9	24.83	20.21	24.99	24.82	25.14
Librarians, archivists, and curators	—	—	—	—	—
Social scientists and urban planners	19.59	17.59	21.54	20.74	—
Level 9	18.33	—	20.48	18.90	—
Social, religious, and recreation workers	14.51	12.29	16.95	14.90	—
Lawyers and judges	33.89	—	—	33.89	—
Writers, authors, entertainers, athletes, and professionals, N.E.C.	23.17	23.78	—	23.65	—
Level 9	22.49	22.49	—	—	—
Not able to be leveled	18.64	—	—	—	—
Technical occupations	18.08	18.84	14.76	18.26	17.18
Level 4	11.54	11.54	—	11.46	—
Level 5	13.15	13.71	—	12.28	15.88
Level 6	15.70	15.49	—	14.91	17.35
Level 7	18.39	20.60	—	18.64	—
Level 8	19.91	21.71	—	19.91	—
Level 9	22.93	22.93	—	22.72	—
Executive, administrative, and managerial occupations ...	26.70	25.98	29.37	26.55	—
Level 6	13.02	13.02	—	13.02	—
Level 7	16.27	15.81	—	16.27	—
Level 8	16.05	15.58	—	16.16	—
Level 9	23.07	22.44	25.02	23.07	—
Level 10	23.39	21.70	—	23.39	—
Level 11	27.84	27.30	—	27.84	—
Level 12	35.41	34.78	—	35.48	—
Level 13	38.61	—	—	38.61	—
Level 14	67.33	67.77	—	65.66	—
Executives, administrators, and managers	31.19	30.72	32.82	31.02	—
Level 9	24.22	23.42	26.48	24.22	—
Level 10	21.70	21.70	—	21.70	—
Level 11	27.81	27.57	—	27.81	—
Level 12	35.70	35.08	—	35.70	—
Level 13	38.61	—	—	38.61	—
Level 14	67.33	67.77	—	65.66	—
Management related occupations	19.07	18.18	22.71	19.00	—
Level 6	14.14	14.14	—	14.14	—
Level 7	16.57	16.09	—	16.57	—
Level 8	16.15	15.65	—	16.15	—
Level 9	21.58	21.24	—	21.58	—
Sales occupations	15.42	15.42	—	16.38	7.07
Level 3	7.44	7.44	—	7.72	6.59
Level 4	10.80	10.80	—	11.10	8.45
Level 5	12.68	12.68	—	12.68	—
Level 6	16.16	16.16	—	16.16	—
Level 8	22.76	22.76	—	22.76	—
Level 11	30.69	30.69	—	30.69	—
Administrative support occupations, including clerical	11.79	11.57	12.35	12.15	9.23
Level 1	7.21	—	—	—	—
Level 2	8.24	8.05	8.78	8.53	7.99
Level 3	9.48	9.21	10.25	9.44	9.65
Level 4	11.14	10.56	11.97	11.21	10.51
Level 5	12.47	12.32	13.27	12.44	—
Level 6	14.07	13.85	15.08	14.07	—
Level 7	16.09	16.28	15.84	16.08	—
Level 8	19.43	19.43	—	19.43	—
Blue-collar occupations	13.34	13.11	16.55	13.54	9.57
Level 1	7.48	7.48	—	7.29	8.17

See footnotes at end of table.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Blue-collar occupations (-Continued)					
Level 2	\$9.00	\$9.00	—	\$9.01	—
Level 3	9.69	9.55	\$11.86	9.63	\$10.08
Level 4	12.23	11.97	14.77	12.23	—
Level 5	13.37	12.97	16.30	13.38	—
Level 6	16.25	16.11	—	16.25	—
Level 7	18.88	18.72	20.83	18.89	—
Level 8	23.35	23.84	—	23.35	—
Level 9	25.89	26.38	—	25.89	—
Precision production, craft, and repair occupations	15.83	15.57	19.48	15.84	—
Level 3	8.42	8.42	—	8.45	—
Level 4	11.86	11.78	—	11.86	—
Level 5	13.09	12.78	—	13.10	—
Level 6	15.40	14.86	—	15.40	—
Level 7	18.82	18.63	20.73	18.82	—
Level 8	24.27	24.27	—	24.27	—
Level 9	22.65	23.08	—	22.65	—
Machine operators, assemblers, and inspectors	11.84	11.84	—	11.90	8.45
Level 1	6.91	6.91	—	6.90	—
Level 2	8.95	8.95	—	8.99	—
Level 3	9.22	9.22	—	9.15	—
Level 4	11.28	11.27	—	11.27	—
Level 5	12.20	12.20	—	12.20	—
Level 6	16.22	16.22	—	16.22	—
Level 7	17.58	17.58	—	17.58	—
Transportation and material moving occupations	16.34	16.57	15.57	16.87	11.22
Level 3	11.19	10.95	11.84	11.82	—
Level 4	15.09	15.55	14.07	15.17	—
Level 5	14.96	14.26	16.38	15.10	—
Level 6	17.46	17.46	—	17.46	—
Handlers, equipment cleaners, helpers, and laborers	10.16	9.96	14.49	10.33	8.98
Level 1	7.78	7.78	—	7.55	8.41
Level 2	9.22	9.24	—	9.25	—
Level 3	9.99	9.94	—	10.04	—
Level 4	12.32	11.67	—	12.30	—
Level 5	13.33	13.24	—	13.33	—
Service occupations	9.75	7.97	14.46	10.55	7.29
Level 1	7.04	6.51	9.35	7.39	6.40
Level 2	8.32	7.86	10.77	8.64	7.52
Level 3	8.21	7.71	9.85	8.49	7.63
Level 4	9.12	8.12	12.50	9.69	7.06
Level 5	13.60	8.26	17.01	13.60	—
Level 6	13.13	10.83	—	13.30	—
Level 7	18.30	13.74	21.01	18.28	—
Protective service occupations	15.01	7.94	18.52	15.38	7.85
Level 3	10.71	—	—	—	—
Level 5	16.36	—	17.01	16.36	—
Level 7	21.05	—	21.05	21.05	—
Food service occupations	7.39	7.17	9.08	7.72	6.86
Level 1	6.29	5.99	—	6.15	6.42
Level 2	6.70	6.41	9.26	6.48	7.08
Level 3	7.25	6.89	—	7.36	7.13
Level 4	7.28	6.92	—	7.80	6.53

See footnotes at end of table.

Table B-1. Mean hourly earnings¹ by occupational group and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupational group ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Service occupations (-Continued)					
Health service occupations	\$8.96	\$8.80	—	\$9.06	\$8.65
Level 2	8.23	—	—	—	—
Level 3	9.29	8.84	—	9.25	—
Level 4	9.24	9.24	—	9.21	—
Cleaning and building service occupations	9.82	9.18	\$11.07	10.33	6.75
Level 1	8.18	7.39	—	9.11	5.96
Level 2	9.95	9.44	—	10.28	—
Level 3	9.43	8.65	—	9.43	—
Personal service occupations	8.28	7.79	11.67	8.28	8.28
Level 3	7.42	6.98	—	7.18	7.92

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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 Each occupation for which wage data are collected in an establishment is evaluated based on 10 factors, including knowledge, complexity, work environment, etc. Points are assigned based on the occupation's ranking within each factor. The points are summed to determine the overall level of the occupation. See technical note for more information.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ 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.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
White-collar occupations:					
Professional specialty and technical occupations:					
Professional specialty occupations:					
Industrial engineers	\$25.21	\$25.21	—	\$25.21	—
Mechanical engineers	26.09	26.09	—	26.09	—
Engineers, N.E.C.	31.15	31.15	—	31.15	—
Computer systems analysts and scientists	27.91	28.27	—	27.92	—
Level 9	23.96	24.30	—	23.96	—
Level 11	29.75	29.75	—	29.75	—
Physicians	19.77	—	—	—	—
Registered nurses	21.46	21.01	\$23.62	21.49	\$21.39
Level 8	20.77	20.16	—	19.41	21.66
Level 9	20.77	20.71	—	20.85	20.54
Teachers, post secondary N.E.C.	20.54	30.53	18.29	21.73	—
Elementary school teachers	25.49	15.45	25.75	25.51	—
Level 9	24.78	—	24.83	24.80	—
Secondary school teachers	25.59	21.86	25.83	25.65	24.47
Level 9	25.26	21.78	25.45	25.28	—
Teachers, special education	25.20	—	24.66	25.00	—
Level 9	23.96	—	23.96	23.72	—
Teachers, N.E.C.	21.51	—	—	—	23.49
Substitute teachers	9.67	—	—	—	9.67
Vocational and educational counselors	24.01	—	—	24.45	—
Psychologists	18.39	—	20.76	19.87	—
Level 9	18.56	—	20.48	19.16	—
Social workers	15.50	13.07	—	15.69	—
Designers	22.82	—	—	22.82	—
Technical occupations:					
Clinical laboratory technologists and technicians	15.01	15.01	—	14.88	—
Licensed practical nurses	14.15	14.42	—	14.17	—
Level 5	13.24	13.54	—	13.31	—
Health technologists and technicians, N.E.C.	14.66	14.98	—	14.70	14.28
Level 5	12.16	—	—	—	—
Electrical and electronic technicians	21.68	21.36	—	21.03	—
Computer programmers	26.80	26.80	—	26.80	—
Technical and related occupations, N.E.C.	17.17	17.52	—	17.96	—
Level 6	13.96	—	—	—	—
Executive, administrative, and managerial occupations:					
Administrators and officials, public administration	39.52	—	39.52	34.67	—
Financial managers	28.35	28.64	—	28.35	—
Managers., marketing, advertising and public relations	37.71	37.71	—	37.71	—
Level 12	38.99	38.99	—	38.99	—
Administrators, education and related fields	33.46	24.28	—	33.46	—
Level 11	38.26	—	—	38.26	—
Level 12	34.87	—	—	34.87	—
Managers and administrators, N.E.C.	30.73	31.61	—	30.73	—
Level 9	23.65	22.51	—	23.65	—
Level 11	26.60	28.73	—	26.60	—
Level 12	34.99	34.99	—	34.99	—
Accountants and auditors	16.70	16.53	—	16.70	—
Level 9	20.11	20.21	—	20.11	—
Other financial officers	23.22	23.22	—	22.75	—
Personnel, training, and labor relations specialists	15.53	15.39	—	15.53	—
Management related occupations, N.E.C.	22.83	21.85	—	22.83	—
Level 8	18.60	—	—	18.60	—
Sales occupations:					
Supervisors, sales occupations	18.82	18.82	—	18.82	—
Sales workers, apparel	8.98	8.98	—	9.30	—
Level 4	11.50	11.50	—	—	—
Sales workers, other commodities	8.19	7.97	—	9.19	6.38
Level 3	6.87	6.87	—	—	—
Level 4	9.11	9.11	—	—	—
Cashiers	9.00	9.00	—	9.36	6.00

See footnotes at end of table.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
White-collar occupations: (-Continued)					
Sales occupations: (-Continued)					
Cashiers (-Continued)					
Level 3	\$7.08	\$7.08	—	—	—
Level 4	11.51	11.51	—	\$11.51	—
Sales support occupations, N.E.C.	12.68	12.68	—	—	—
Administrative support occupations, including clerical:					
Supervisors, general office	16.54	17.76	—	16.54	—
Level 7	16.11	—	—	16.11	—
Secretaries	11.94	11.94	\$11.93	12.26	\$9.71
Level 4	10.41	10.31	10.55	10.50	—
Level 5	12.44	12.04	—	12.46	—
Level 6	13.16	13.02	—	13.16	—
Level 7	15.25	—	—	15.25	—
Receptionists	9.69	9.69	—	9.90	9.32
Level 3	9.82	9.82	—	—	—
Information clerks, N.E.C.	11.80	11.20	—	12.88	9.74
Level 4	12.00	11.55	—	—	—
Order clerks	10.41	10.20	—	10.73	—
Level 3	8.30	8.30	—	8.30	—
Level 4	9.30	9.30	—	9.47	—
Level 5	11.38	11.16	—	11.38	—
Personnel clerks except payroll & timekeeping	13.43	11.79	—	13.35	—
Library clerks	10.99	—	10.99	—	—
Records clerks, N.E.C.	11.42	10.86	—	11.16	—
Level 5	11.60	—	—	—	—
Bookkeepers, accounting and auditing clerks	11.89	11.85	—	11.98	—
Level 3	9.05	9.05	—	9.05	—
Level 4	11.16	10.50	—	11.21	—
Level 5	11.83	11.83	—	11.85	—
Level 6	15.87	15.87	—	15.87	—
Billing clerks	10.47	—	—	10.58	—
Traffic, shipping and receiving clerks	12.06	12.06	—	12.06	—
Level 3	10.74	10.74	—	10.74	—
Level 4	12.48	12.48	—	12.48	—
Stock and inventory clerks	10.07	9.41	—	10.29	—
Level 3	7.96	7.96	—	7.92	—
Level 4	14.09	—	—	—	—
Insurance adjusters, examiners, & investigators ..	15.33	15.33	—	15.37	—
Level 5	14.76	14.76	—	14.76	—
Investigators and adjusters except insurance	11.47	11.47	—	11.43	—
General office clerks	10.73	10.47	11.04	11.10	—
Level 2	7.54	—	—	—	—
Level 3	9.20	8.63	—	9.26	—
Level 4	11.62	11.28	11.80	11.58	—
Level 5	12.61	12.39	—	12.61	—
Data entry keyers	9.50	9.50	—	11.00	—
Teachers' aides	11.28	—	11.27	12.49	10.44
Level 3	11.11	—	11.11	11.53	10.67
Administrative support occupations, N.E.C.	13.65	12.14	14.66	14.28	7.94
Level 4	12.20	—	—	12.43	—
Level 7	16.80	—	—	16.80	—
Blue-collar occupations:					
Precision production, craft, and repair occupations:					
Supervisors, mechanics and repairers	20.25	20.17	—	20.25	—
Level 7	22.01	—	—	22.01	—
Bus, truck, and stationary engine mechanics	15.58	—	—	15.58	—
Heavy equipment mechanics	15.60	15.60	—	15.60	—
Industrial machinery repairers	17.58	17.58	—	17.58	—
Level 7	18.39	18.39	—	18.39	—
Mechanics and repairers, N.E.C.	14.67	14.61	—	14.67	—
Level 7	17.33	17.38	—	17.33	—
Electricians	20.73	20.23	—	20.73	—
Level 7	21.79	21.72	—	21.79	—

See footnotes at end of table.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Blue-collar occupations: (-Continued)					
Precision production, craft, and repair occupations: (-Continued)					
Construction trades, N.E.C.	\$16.42	—	\$16.28	\$16.42	—
Supervisors, production occupations	19.73	\$19.73	—	19.73	—
Level 7	17.96	17.96	—	17.96	—
Machinists	18.13	18.13	—	18.13	—
Level 7	18.95	18.95	—	18.95	—
Electrical and electronic equipment assemblers ..	10.10	10.10	—	10.10	—
Level 3	8.54	8.54	—	8.54	—
Level 4	10.71	10.71	—	10.71	—
Inspectors, testers, and graders	14.34	14.34	—	14.34	—
Machine operators, assemblers, and inspectors:					
Fabricating machine operators, N.E.C.	14.79	14.79	—	14.79	—
Molding and casting machine operators	11.07	11.07	—	11.27	—
Printing press operators	18.84	18.84	—	19.17	—
Packaging and filling machine operators	10.49	10.49	—	—	—
Furnace, kiln, and oven operators, except food ...	13.62	13.62	—	13.62	—
Miscellaneous machine operators, N.E.C.	11.71	11.71	—	11.71	—
Level 2	9.55	9.55	—	9.55	—
Level 4	11.32	11.32	—	11.32	—
Level 5	11.89	11.89	—	11.89	—
Welders and cutters	15.41	15.41	—	15.41	—
Level 7	17.04	17.04	—	17.04	—
Assemblers	10.48	10.48	—	10.59	—
Level 3	9.05	9.05	—	9.05	—
Level 5	12.06	12.06	—	12.06	—
Miscellaneous hand working occupations, N.E.C. ...	8.20	8.20	—	8.20	—
Production inspectors, checkers and examiners ..	11.65	11.65	—	11.65	—
Production testers	11.93	11.93	—	11.93	—
Transportation and material moving occupations:					
Truck drivers	15.99	16.20	—	15.99	—
Level 4	14.88	—	—	14.88	—
Bus drivers	13.38	—	14.35	—	\$11.41
Level 3	11.02	—	11.84	—	—
Industrial truck and tractor equipment operators ..	13.51	13.51	—	13.51	—
Level 4	15.80	15.80	—	15.80	—
Handlers, equipment cleaners, helpers, and laborers:					
Helpers, mechanics and repairers	13.75	—	—	13.75	—
Construction laborers	11.69	11.77	—	12.06	—
Production helpers	10.38	10.38	—	10.38	—
Stock handlers and baggers	8.58	8.58	—	9.10	—
Level 1	6.33	6.33	—	—	—
Freight, stock, and material handlers, N.E.C.	10.95	10.95	—	11.29	—
Level 2	10.28	10.28	—	—	—
Level 3	10.34	10.34	—	—	—
Level 4	12.40	12.40	—	12.40	—
Hand packers and packagers	8.17	8.17	—	8.06	—
Level 2	7.21	7.21	—	7.21	—
Laborers except construction, N.E.C.	10.77	10.22	—	11.00	—
Level 1	7.82	7.82	—	7.77	—
Level 2	13.10	13.10	—	13.10	—
Level 4	12.38	9.40	—	12.46	—
Level 5	11.08	—	—	11.08	—
Service occupations:					
Protective service occupations:					
Guards and police except public service	9.12	7.57	13.06	9.29	—
Level 3	11.01	—	—	—	—
Food service occupations:					
Supervisors, food preparation and service occupations	11.61	11.61	—	11.61	—
Waiters and waitresses	5.52	5.52	—	—	5.48
Cooks	8.65	8.38	9.19	8.70	8.56

See footnotes at end of table.

Table B-2. Mean hourly earnings¹ for selected occupations and levels², all industries, private industry, State and local government, full-time and part-time workers, Portland-Salem, OR-WA, August 1997 — Continued

Occupation ³ and level	All workers ⁴			All industries	
	All industries	Private industry	State and local government	Full-time workers	Part-time workers
Service occupations: (-Continued)					
Food service occupations: (-Continued)					
Cooks (-Continued)					
Level 3	\$8.34	\$7.73	—	\$8.44	\$8.27
Level 4	9.48	9.11	—	9.42	—
Food counter, fountain, and related occupations	6.19	6.12	—	—	5.86
Kitchen workers, food preparation	8.08	7.80	—	7.69	—
Level 2	7.56	—	—	—	—
Level 3	8.38	8.38	—	8.22	—
Waiters/Waitresses' assistants	5.98	5.72	—	—	6.43
Level 1	6.11	5.77	—	—	6.27
Food preparation occupations, N.E.C.	6.84	6.62	—	6.64	7.27
Level 1	6.30	5.99	—	6.11	6.67
Level 2	7.31	7.25	—	6.94	8.16
Health service occupations:					
Health aides, except nursing	10.97	10.99	—	10.89	—
Level 3	8.96	—	—	8.96	—
Nursing aides, orderlies and attendants	8.54	8.34	—	8.56	8.51
Level 2	8.23	—	—	—	—
Level 3	9.43	8.91	—	9.42	—
Level 4	8.64	8.64	—	8.69	—
Cleaning and building service occupations:					
Supervisors, cleaning & building service workers	13.20	—	—	13.20	—
Janitors and cleaners	9.68	8.92	\$10.91	10.17	6.58
Level 1	8.18	7.39	—	9.11	5.96
Level 2	10.25	9.80	—	10.38	—
Level 3	10.38	9.76	—	10.41	—
Personal service occupations:					
Child care workers, N.E.C.	8.03	—	10.86	—	8.70
Level 3	7.91	—	—	—	—
Service occupations, N.E.C.	10.21	9.08	—	—	10.14

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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 Each occupation for which wage data are collected in an establishment is evaluated based on 10 factors, including knowledge, complexity, work environment, etc. Points are assigned based on the occupation's ranking within each factor. The points are summed to determine the overall level of the occupation. See technical note for more information.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

⁴ 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.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table C-1. Mean hourly earnings¹ by occupational group and selected characteristics, all industries, Portland-Salem, OR-WA, August 1997

Occupational group ²	Full-time workers ³	Part-time workers ³	Union ⁴	Nonunion ⁴	Time ⁵	Incentive ⁵
All occupations	\$16.25	\$11.22	\$16.32	\$15.45	\$15.60	\$20.86
All occupations excluding sales	16.24	11.51	16.45	15.40	15.73	22.98
White-collar occupations	18.68	13.48	17.67	18.35	18.01	21.56
White-collar excluding sales	18.96	14.30	18.00	18.71	18.44	-
Professional specialty and technical occupations	23.12	19.35	22.49	22.84	22.71	-
Professional specialty occupations	24.33	20.39	23.30	24.44	23.96	-
Technical occupations	18.26	17.18	14.89	18.73	18.08	-
Executive, administrative, and managerial occupations ...	26.55	-	23.69	26.97	26.45	-
Sales occupations	16.38	7.07	10.51	16.04	12.64	20.41
Administrative support including clerical occupations	12.15	9.23	12.36	11.55	11.79	-
Blue-collar occupations	13.54	9.57	15.60	11.66	13.30	-
Precision production, craft, and repair occupations	15.84	-	18.18	14.12	15.80	-
Machine operators, assemblers, and inspectors	11.90	8.45	14.84	10.58	11.76	-
Transportation and material moving occupations	16.87	11.22	17.40	14.12	16.30	-
Handlers, equipment cleaners, helpers, and laborers	10.33	8.98	11.31	9.25	10.16	-
Service occupations	10.55	7.29	13.16	7.89	9.77	-

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

³ 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.

⁴ Union workers are those whose wages are determined through

collective bargaining.

⁵ Time workers' wages are based solely on an 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.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table C-2. Mean hourly earnings¹ by occupational group and industry division, private industry, all workers², Portland-Salem, OR-WA, August 1997

Occupational group ³	All private industries	Goods-producing industries ⁴				Service-producing industries ⁵				
		Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
All occupations	\$15.00	\$16.47	—	—	\$16.26	—	—	—	—	—
All occupations excluding sales	14.96	16.45	—	—	16.24	—	—	—	—	—
White-collar occupations	17.67	22.61	—	—	22.60	—	—	—	—	—
White-collar excluding sales	18.09	22.71	—	—	22.70	—	—	—	—	—
Professional specialty and technical occupations	22.58	25.63	—	—	25.58	—	—	—	—	—
Professional specialty occupations	24.08	27.41	—	—	27.38	—	—	—	—	—
Technical occupations	18.84	18.62	—	—	18.62	—	—	—	—	—
Executive, administrative, and managerial occupations	25.98	27.86	—	—	28.68	—	—	—	—	—
Sales occupations	15.42	19.00	—	—	19.00	—	—	—	—	—
Administrative support, including clerical occupations	11.57	12.10	—	—	12.10	—	—	—	—	—
Blue-collar occupations	13.11	13.28	—	—	12.62	—	—	—	—	—
Precision production, craft, and repair occupations	15.57	15.45	—	—	14.42	—	—	—	—	—
Machine operators, assemblers, and inspectors	11.84	12.30	—	—	12.26	—	—	—	—	—
Transportation and material moving occupations	16.57	16.50	—	—	13.67	—	—	—	—	—
Handlers, equipment cleaners, helpers, and laborers	9.96	10.73	—	—	10.45	—	—	—	—	—
Service occupations	7.97	12.57	—	—	12.57	—	—	—	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine

major occupational groups.

⁴ Goods-producing industries include mining, construction, and manufacturing.

⁵ Service-producing industries include transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table C-3. Mean hourly earnings¹ by occupational group and establishment employment size, private industry, all workers², Portland-Salem, OR-WA, August 1997

Occupational group ³	All private industry workers	50 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
All occupations	\$15.00	\$13.52	\$15.42	\$13.98	\$17.68
All occupations excluding sales	14.96	12.83	15.47	13.97	17.70
White-collar occupations	17.67	16.09	18.16	16.43	20.60
White-collar excluding sales	18.09	16.03	18.52	16.78	20.73
Professional specialty and technical occupations	22.58	19.26	23.06	21.17	24.20
Professional specialty occupations	24.08	20.32	24.49	21.33	26.15
Technical occupations	18.84	17.93	19.06	20.82	17.53
Executive, administrative, and managerial occupations ...	25.98	21.44	27.55	27.42	27.81
Sales occupations	15.42	16.19	14.49	14.18	16.40
Administrative support, including clerical occupations	11.57	11.47	11.59	11.15	12.51
Blue-collar occupations	13.11	12.42	13.24	12.53	14.29
Precision production, craft, and repair occupations	15.57	16.24	15.43	15.92	14.95
Machine operators, assemblers, and inspectors	11.84	10.05	12.03	11.94	12.15
Transportation and material moving occupations	16.57	14.75	16.85	13.69	21.48
Handlers, equipment cleaners, helpers, and laborers	9.96	9.37	10.13	9.88	11.07
Service occupations	7.97	7.18	8.49	8.01	11.10

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, hazard pay, and on-call pay. Excluded are premium pay for overtime, vacations, 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 A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Table C-4. Number of workers¹ represented by occupational group, Portland-Salem, OR-WA, August 1997

Occupational group ²	All workers		
	All industries	Private industry	State and local government
All occupations	442,994	335,797	107,197
All occupations excluding sales	415,821	308,713	107,108
White-collar occupations	259,778	177,417	82,361
White-collar excluding sales	232,605	150,334	82,272
Professional specialty and technical occupations	102,701	57,006	45,696
Professional specialty occupations	82,763	40,961	41,802
Technical occupations	19,939	16,045	3,894
Executive, administrative, and managerial occupations ...	30,106	23,225	6,880
Sales occupations	27,173	27,083	—
Administrative support including clerical occupations	99,798	70,103	29,695
Blue-collar occupations	128,754	119,011	9,743
Precision production, craft, and repair occupations	36,854	34,410	2,444
Machine operators, assemblers, and inspectors	38,357	38,149	—
Transportation and material moving occupations	21,133	15,616	5,517
Handlers, equipment cleaners, helpers, and laborers	32,411	30,836	1,575
Service occupations	54,461	39,368	15,093

¹ Both full-time and part-time workers were included in the survey. 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 establishment, where a 40-hour week is the minimum full-time schedule.

² A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Appendix A: Technical Note

This section provides basic information on the procedures and concepts used to produce the data contained in this bulletin. It is divided into three parts: Planning for the survey; data collection; and processing and analyzing the data. While this section answers some questions commonly asked by data users, it is not a comprehensive description of all the steps required to produce the data.

Planning for the survey

The overall design of the survey, which was based on the type of data to be produced, had to be developed before data collection could begin.

Survey scope

This survey of the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area covered establishments employing 50 workers or more in goods-producing industries (mining, construction and manufacturing); service-producing industries (transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and services industries); and State and local governments. Agriculture, private households, and the Federal Government were excluded from the scope of the survey. For purposes of this survey an establishment was an economic unit which 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 was usually at a single physical location. For State and local governments, an establishment was defined as all locations of a government entity.

The Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area includes Clackamas, Columbia, Marion, Multnomah, Polk, Washington, and Yamhill Counties, OR; and Clark County, WA.

Sampling frame

The list of establishments from which the survey sample was selected (sampling frame) was developed from the State unemployment insurance reports for the Portland-Salem, OR-WA, Consolidated Metropolitan Statistical Area. 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 reference available at the time the sample was selected. The reference month for the private sector is May 1995. The sampling frame was reviewed prior to the survey and, when necessary, missing establishments were

added, out-of-business and out-of-scope establishments were removed, and addresses, employment levels, industry classification, and other information were updated.

Sample design

The sample for this survey area was selected using a two stage stratified design with probability proportional to employment sampling at each stage. The first stage of sample selection was a probability sample of establishments. 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 it represents similar units (by industry and employment size) in the economy which were not selected for collection. See appendix table 1 for a count of establishments in the survey by employment size. The second stage of sample selection, detailed below, was a probability sample of occupations within a sampled establishment.

Data collection

The collection of data from survey respondents required detailed procedures. Collection was the responsibility of the field economists, working out of the Regional Office, who visited each establishment surveyed.

Occupational selection and classification

Identification of the occupations for which wage data were to be collected was a multi-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-time 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 the 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 number of jobs collected in each establishment was based on an establishment's employment size as shown in the following schedule:

<i>Number of employees</i>	<i>Number of selected jobs</i>
50-99	8
100-249	10
250-999	12
1000-2,499	16
2,500+	20

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.

Each occupational classification is an element of a broader classification known as a major occupational group (MOG). Occupations can fall into any of the following MOG's:

- Professional specialty and technical
- Executive, administrative, and managerial
- Sales
- Administrative support including clerical
- Precision production, craft, and repair
- Machine operators, assemblers, and inspectors
- Transportation and material moving
- Handlers, equipment cleaners, helpers, and laborers
- Service occupations

A complete list of all individual occupations, classified by the MOG to which they belong, is contained in appendix B.

In step three, certain other job characteristics of the chosen worker were identified. First, the worker was

identified as holding either a full-time 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 worker, rather than solely on hours worked. Finally, the worker was identified as being in a union job or a nonunion job. See the "Definition of Terms" section on the following page for more detail.

Generic leveling through point factor analysis

In the last step before wage data were collected, the work level of each selected job was determined using a "generic leveling" process. Generic leveling ranks and compares all occupations randomly selected in an establishment using the same criteria. This is a major departure from the method used in the past in the Bureau's Occupational Compensation Surveys which studied specifically defined occupations with leveling definitions unique to each occupation.

For this survey, the level of each occupation in an establishment was determined by an analysis of each of 10 leveling factors. Nine of these factors are drawn from the U.S. Government Office of Personnel Management's Factor Evaluation System, which is the underlying structure for evaluation of General Schedule Federal employees. The tenth factor, supervisory duties, attempts to account for the effect of supervisory duties. It is considered experimental. The 10 factors are:

- Knowledge
- Supervision received
- Guidelines
- Complexity
- Scope and effect
- Personal contacts
- Purpose of contacts
- Physical demands
- Work environment
- Supervisory duties

Each factor contains a number of levels and each level has an associated written description and point value. The number and range of points differ among the factors. For each factor, an occupation was assigned a level based on which written description best matched the job. Within each occupation, the points for 9 factors (supervisory duties was excluded) were recorded and totaled. The total determines the overall level of the occupation. Appendix table 3 presents average work levels for published occupational groups and selected occupations. A description of the levels for each factor is shown in appendix C.

Tabulations of levels of work for occupations in the survey follow the Federal Government's white-collar General Schedule. Point ranges for each of the 15 levels are

shown in appendix D. It also includes an example of a leveled job and a guide to help data users evaluate jobs in their firm.

Wage data collected in prior surveys using the new generic leveling method were evaluated by BLS researchers using regression techniques. For each of the major occupational groups, wages were compared to the 10 generic level factors (and levels within those factors). The analysis showed that several of the generic level factors, most notably knowledge and supervision received, had strong explanatory power for wages. That is, as the levels within a given factor increased, the wages also increased. Detailed research continues in the area. The results of this research will be published by BLS in the future.

Collection period

The survey was collected from June 1997 through February 1998. The average payroll reference month was August 1997. For each establishment in the survey, the data reflect the establishment's practices on the day of collection.

Earnings

Earnings were defined as regular payments from the employer to the employee as compensation for straight-time hourly work, or for any salaried work performed. The following components were included as part of earnings:

- Incentive pay, including commissions, production bonuses, and piece rates
- Cost-of-living allowances
- Hazard pay
- Payments of income deferred due to participation in a salary reduction plan
- Deadhead pay, defined as pay given to transportation workers returning in a vehicle without freight or passengers
- On-call pay

The following forms of payments were *not* considered part of straight-time earnings:

- Shift differentials, defined as extra payment for working a schedule that varies from the norm, such as night or weekend work
- Premium pay for overtime, holidays, and weekends
- Bonuses not directly tied to production (e.g., Christmas bonuses, profit-sharing bonuses)
- Uniform and tool allowances
- Free room and board
- Payments made by third parties (e.g., tips, bonuses given by manufacturers to department store salespeople, referral incentives in real estate)

In order to calculate earnings for various time periods (hourly, weekly, and annual), data on work schedules were also collected. For hourly workers, scheduled hours worked per day and per week, exclusive of overtime, were recorded. Annual weeks worked were determined. Because salaried workers, exempt from overtime provisions, often work beyond the assigned work schedule, their typical number of hours actually worked was collected.

Definition of terms

Full-time worker. Any employee that the employer considers to be full time.

Incentive worker. Any employee whose earnings are tied, at least in part, to commissions, piece rates, production bonuses, or other incentives based on production or sales.

Level. A ranking of an occupation based on the requirements of the position. (See the description in the technical note and the example for more details on the leveling process.)

Nonunion worker. An employee in an occupation not meeting the conditions for union coverage (see below).

Part-time worker. Any employee that the employer considers to be part-time.

Straight-time. Time worked at the standard rate of pay for the job.

Time-based worker. Any employee whose earnings are tied to an hourly rate or salary, and not to a specific level of production.

Union worker. Any employee is in a union occupation when all of the following conditions are met:

- A labor organization is recognized as the bargaining agent for all workers in the occupation.
- Wage and salary rates are determined through collective bargaining or negotiations.
- Settlement terms, which must include earnings provisions and may include benefit provisions, are embodied in a signed mutually binding collective bargaining agreement.

Processing and analyzing the data

Data were processed and analyzed at the Bureau's National Office following collection.

Weighting and nonresponse

Sample weights were calculated for each establishment/occupation in the survey. These weights reflected

the relative size of the occupation within the establishment and of the establishment within the sample universe. Weights were used to aggregate the individual establishment/occupations into the various data series. Of the establishments surveyed, 29.9 percent (representing 167,279 employees) refused to supply information. If data were not provided by a sample member, the weights of responding sample members in the same or similar “cells” were adjusted to account for the missing data. This technique assumes that the mean value of the nonrespondents equals the mean value of the respondents at some detailed “cell” level. Responding and nonresponding establishments were classified into these cells according to industry and employment size. Responding and nonresponding occupations within responding establishments were classified into cells which were additionally defined by major occupation group and job level.

Establishments which were determined to be out of business or outside the scope of the survey (3.4 percent of the total sample) had their weights changed to zero. If only partial data were given by a sample establishment or occupation, or data were missing, the response was treated as a refusal.

Estimation

The wage series in the tables are computed by combining the wages for individual establishment/occupations. Before being combined, individual wage rates are weighted by: number of workers; the sample weight adjusted for nonresponding establishments and other factors; and the occupation work schedule, varying depending on whether hourly, weekly, or annual rates are being calculated.

Not all series that were calculated met the criteria for publication. Before any series was published, it was reviewed to make sure that the number of observations underlying it was sufficient. This review prevented publishing a series that could have revealed information about a specific establishment.

The number of workers estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because occupational structures among establishments differ, estimates of the number of workers obtained from the sample of establishments serve only to indicate the relative importance of the occupational groups studied.

Data reliability

The data in this bulletin 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. Appendix table 2 contains RSE data for selected series in this bulletin. RSE data for all series in this bulletin are available on the Internet web site and by request to the BLS National Office.

The standard error can be used to calculate a “confidence interval” around a sample estimate. As an example, suppose table A-1 shows that mean hourly earnings for all workers was \$12.79 per hour, and appendix table 2 shows a relative standard error of 3.6 percent for this estimate. At the 90-percent level, the confidence interval for this estimate is \$13.55 to \$12.03 (\$12.79 plus and minus 1.645 times 3.6 percent times \$12.79). 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 were not specifically measured, the nonsampling errors were expected to be minimal due to the extensive training of the field economists who gathered the survey data by personal visit, computer edits of the data, and detailed data review.

Appendix table 1. Number of establishments studied by industry division and establishment employment size, and number of establishments represented, Portland-Salem, OR-WA, August 1997

Industry	Number of establishments represented	Number of establishments studied				
		Total studied	50 - 99 workers	100 workers or more		
				Total	100 - 499 workers	500 workers or more
All industries	2,950	258	71	187	114	73
Private industry	2,788	224	70	154	106	48
Goods-producing industries	630	68	14	54	32	22
Mining	5	3	2	1	1	-
Construction	119	4	2	2	2	-
Manufacturing	505	61	10	51	29	22
Service-producing industries	2,159	156	56	100	74	26
Transportation and public utilities	211	11	3	8	3	5
Wholesale and retail trade	1,005	50	27	23	21	2
Finance, insurance and real estate	156	13	3	10	5	5
Services	787	82	23	59	45	14
State and local government	162	34	1	33	8	25

NOTE: Dashes indicate that no data were reported. Overall industry and industry groups may include data for categories not shown separately.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Portland-Salem, OR-WA, August 1997

(in percent)

Occupation ³	All industries	Private industry	State and local government
All occupations	1.9	2.5	2.2
All occupations excluding sales	1.8	2.3	2.2
White-collar occupations	2.3	3.0	2.8
White-collar occupations excluding sales	2.1	2.8	2.8
Professional specialty and technical occupations	2.0	2.5	3.5
Professional specialty occupations	2.3	2.8	3.6
Engineers, architects, and surveyors	2.7	2.8	—
Industrial engineers	5.6	5.6	—
Mechanical engineers	4.7	4.7	—
Engineers, N.E.C.	9.8	9.8	—
Mathematical and computer scientists	3.9	4.0	—
Computer systems analysts and scientists	3.7	3.9	—
Natural scientists	—	—	—
Health related occupations	3.0	3.0	7.7
Physicians	16.4	—	—
Registered nurses	1.8	1.5	4.2
Teachers, college and university	5.9	10.8	7.4
Teachers, post secondary N.E.C.	11.8	15.8	14.5
Teachers, except college and university	5.2	5.8	5.9
Elementary school teachers	6.5	14.2	6.6
Secondary school teachers	4.4	8.1	4.7
Teachers, special education	7.2	—	7.3
Teachers, N.E.C.	1.8	—	—
Substitute teachers	7.4	—	—
Vocational and educational counselors	13.4	—	—
Librarians, archivists, and curators	—	—	—
Social scientists and urban planners	9.6	17.4	6.6
Psychologists	12.2	—	5.0
Social, recreation, and religious workers	7.8	7.4	3.0
Social workers	7.0	4.9	—
Lawyers and judges	8.9	—	—
Writers, authors, entertainers, athletes, and professionals, N.E.C.	5.2	5.0	—
Designers	7.8	—	—
Technical occupations	5.4	6.0	5.4
Clinical laboratory technologists and technicians	5.6	5.6	—
Licensed practical nurses	3.1	2.7	—
Health technologists and technicians, N.E.C.	5.7	5.5	—
Electrical and electronic technicians	5.2	5.6	—
Computer programmers	13.1	13.1	—
Technical and related occupations, N.E.C.	6.3	6.9	—
Executive, administrative, and managerial occupations ...	3.1	3.7	6.2
Executives, administrators, and managers	3.7	4.1	9.2
Administrators and officials, public administration	12.6	—	12.6
Financial managers	11.7	12.6	—
Managers., marketing, advertising and public relations	4.3	4.3	—
Administrators, education and related fields	10.1	16.2	—
Managers and administrators, N.E.C.	5.9	6.3	—
Management related occupations	2.9	3.2	5.1
Accountants and auditors	3.9	4.1	—
Other financial officers	5.2	5.2	—
Personnel, training, and labor relations specialists	3.7	4.2	—
Management related occupations, N.E.C.	8.0	10.5	—
Sales occupations	10.5	10.5	—
Supervisors, sales occupations	11.6	11.6	—
Sales workers, apparel	14.3	14.3	—
Sales workers, other commodities	8.3	8.0	—
Cashiers	9.4	9.4	—
Sales support occupations, N.E.C.	19.7	19.7	—
Administrative support occupations, including clerical	1.9	2.3	3.2
Supervisors, general office	5.1	3.2	—

See footnotes at end of table.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Portland-Salem, OR-WA, August 1997 — Continued

(in percent)

Occupation ³	All industries	Private industry	State and local government
White-collar occupations (-Continued)			
Administrative support occupations, including clerical (-Continued)			
Secretaries	3.0	3.9	3.7
Receptionists	5.1	5.1	—
Information clerks, N.E.C.	8.0	9.6	—
Order clerks	4.5	4.4	—
Personnel clerks except payroll & timekeeping	9.5	10.5	—
Library clerks	4.2	—	4.2
Records clerks, N.E.C.	4.0	3.2	—
Bookkeepers, accounting and auditing clerks	3.3	4.0	—
Billing clerks	11.2	—	—
Traffic, shipping and receiving clerks	4.9	4.9	—
Stock and inventory clerks	7.2	6.0	—
Insurance adjusters, examiners, & investigators ..	5.5	5.5	—
Investigators and adjusters except insurance	7.6	7.6	—
General office clerks	3.5	5.6	3.3
Data entry keyers	12.4	12.4	—
Teachers' aides	3.2	—	3.2
Administrative support occupations, N.E.C.	6.9	6.9	9.2
Blue-collar occupations			
Precision production, craft, and repair occupations	2.9	3.1	2.8
Supervisors, mechanics and repairers	4.3	4.6	4.2
Bus, truck, and stationary engine mechanics	7.0	9.0	—
Heavy equipment mechanics	11.4	—	—
Industrial machinery repairers	5.8	5.8	—
Mechanics and repairers, N.E.C.	4.4	4.4	—
Electricians	5.2	5.3	—
Construction trades, N.E.C.	5.6	8.2	—
Supervisors, production occupations	2.5	—	1.9
Machinists	7.6	7.6	—
Electrical and electronic equipment assemblers ..	9.8	9.8	—
Inspectors, testers, and graders	5.4	5.4	—
Machine operators, assemblers, and inspectors	4.6	4.6	—
Fabricating machine operators, N.E.C.	4.4	4.4	—
Molding and casting machine operators	14.2	14.2	—
Printing press operators	16.0	16.0	—
Packaging and filling machine operators	7.3	7.3	—
Furnace, kiln, and oven operators, except food ...	23.5	23.5	—
Miscellaneous machine operators, N.E.C.	13.6	13.6	—
Welders and cutters	5.1	5.1	—
Assemblers	3.8	3.8	—
Miscellaneous hand working occupations, N.E.C.	8.0	8.0	—
Production inspectors, checkers and examiners ..	10.1	10.1	—
Production testers	6.1	6.1	—
Transportation and material moving occupations	13.5	13.5	—
Truck drivers	4.2	5.4	3.7
Bus drivers	5.3	5.5	—
Industrial truck and tractor equipment operators ..	8.0	—	5.3
Handlers, equipment cleaners, helpers, and laborers	9.3	9.3	—
Helpers, mechanics and repairers	3.5	3.7	3.0
Construction laborers	21.8	—	—
Production helpers	5.4	5.4	—
Stock handlers and baggers	6.1	6.1	—
Freight, stock, and material handlers, N.E.C.	10.1	10.1	—
Hand packers and packagers	4.6	4.6	—
Laborers except construction, N.E.C.	7.5	7.5	—
	4.0	4.0	—
Service occupations			
Protective service occupations	3.7	2.4	4.7
Guards and police except public service	9.7	8.4	3.5
Food service occupations	11.3	6.9	3.5
	2.9	3.0	3.0

See footnotes at end of table.

Appendix table 2. Relative standard errors of mean hourly earnings¹ for selected occupations, all industries, private industry, and State and local government, all workers², Portland-Salem, OR-WA, August 1997 — Continued

(in percent)

Occupation ³	All industries	Private industry	State and local government
Service occupations (-Continued)			
Food service occupations (-Continued)			
Supervisors, food preparation and service occupations	4.6	4.6	—
Waiters and waitresses	2.0	2.0	—
Cooks	2.5	3.2	5.1
Food counter, fountain, and related occupations	2.8	2.7	—
Kitchen workers, food preparation	4.0	4.1	—
Waiters/Waitresses' assistants	5.0	2.1	—
Food preparation occupations, N.E.C.	3.3	3.3	—
Health service occupations	3.3	3.6	—
Health aides, except nursing	9.2	10.0	—
Nursing aides, orderlies and attendants	2.6	2.6	—
Cleaning and building service occupations	4.5	6.4	3.7
Supervisors, cleaning & building service workers	6.6	—	—
Janitors and cleaners	4.9	7.5	3.6
Personal service occupations	6.6	6.7	9.2
Child care workers, N.E.C.	11.2	—	6.2
Service occupations, N.E.C.	11.6	8.5	—

¹ The relative standard error is the standard error expressed as a percent of the estimate. Hourly earnings for these occupations are presented in Tables A-1 and A-2. Reliable relative standard errors could not be determined for all occupations.

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 A classification system including about 480 individual occupations is used to cover all workers in

the civilian economy. Individual occupations are classified into one of nine major occupational groups.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Overall occupational groups and occupational levels may include data for categories not shown separately. N.E.C. means "not elsewhere classified." IN THIS SURVEY, THE NONRESPONSE RATE FOR ALL INDUSTRIES AND PRIVATE INDUSTRY EXCEEDED REGULAR SURVEY STANDARDS FOR PUBLICATION. ACCORDINGLY, USERS SHOULD INTERPRET THESE RESULTS WITH THIS LIMITATION IN MIND.

Appendix B. Occupational Classifications

NOTE: The 4-digit code before each occupation title is used to classify it into one of three major groups. **White-collar** workers include those classified in Major groups A through D. **Blue-collar** workers include those classified in Major groups E through H. **Service** workers are classified in Major group K.

Major group A:

PROFESSIONAL SPECIALTY AND TECHNICAL OCCUPATIONS

PROFESSIONAL SPECIALTY OCCUPATIONS

ENGINEERS, ARCHITECTS, AND SURVEYORS

- A043 Architects
- A044 Aerospace Engineers
- A045 Metallurgical and Materials Engineers
- A046 Mining Engineers
- A047 Petroleum Engineers
- A048 Chemical Engineers
- A049 Nuclear Engineers
- A053 Civil Engineers
- A054 Agricultural Engineers
- A055 Electrical and Electronic Engineers
- A056 Industrial Engineers
- A057 Mechanical Engineers
- A058 Marine Engineers and Naval Architects
- A059 Engineers, n.e.c.¹
- A063 Surveyors and Mapping Scientists

MATHEMATICAL AND COMPUTER SCIENTISTS

- A064 Computer Systems Analysts and Scientists
- A065 Operations and Systems Researchers and Analysts
- A066 Actuaries
- A067 Statisticians
- A068 Mathematical Scientists, n.e.c.

NATURAL SCIENTISTS

- A069 Physicists and Astronomers
- A073 Chemists, Except Biochemists
- A074 Atmospheric and Space Scientists
- A075 Geologists and Geodesists
- A076 Physical Scientists, n.e.c.
- A077 Agricultural and Food Scientists
- A078 Biological and Life Scientists
- A079 Forestry and Conservation Scientists
- A083 Medical Scientists

HEALTH RELATED OCCUPATIONS

- A084 Physicians
- A085 Dentists
- A086 Veterinarians
- A087 Optometrists
- A088 Podiatrists
- A089 Health Diagnosing Practitioners, n.e.c.
- A095 Registered Nurses
- A096 Pharmacists
- A097 Dietitians
- A098 Respiratory Therapists
- A099 Occupational Therapists
- A103 Physical Therapists
- A104 Speech Therapists
- A105 Therapists, n.e.c.
- A106 Physicians' Assistants

TEACHERS, COLLEGE AND UNIVERSITY

- A113 Earth, Environmental and Marine Science Teachers

¹ n.e.c. in an occupation title means not elsewhere classified.

A114 Biological Science Teachers
A115 Chemistry Teachers
A116 Physics Teachers
A117 Natural Science Teachers, n.e.c.
A118 Psychology Teachers
A119 Economics Teachers
A123 History Teachers
A124 Political Science Teachers
A125 Sociology Teachers
A126 Social Science Teachers, n.e.c.
A127 Engineering Teachers
A128 Mathematical Science Teachers
A129 Computer Science Teachers
A133 Medical Science Teachers
A134 Health Specialties Teachers
A135 Business, Commerce and Marketing Teachers
A136 Agriculture and Forestry Teachers
A137 Art, Drama, and Music Teachers
A138 Physical Education Teachers
A139 Education Teachers
A143 English Teachers
A144 Foreign Language Teachers
A145 Law Teachers
A146 Social Work Teachers
A147 Theology Teachers
A148 Trade and Industrial Teachers
A149 Home Economics Teachers
A153 Teachers, Post Secondary, n.e.c.
A154 Post Secondary Teachers, Subject not specified

TEACHERS, EXCEPT COLLEGE AND UNIVERSITY

A155 Prekindergarten and Kindergarten Teachers
A156 Elementary School Teachers
A157 Secondary School Teachers
A158 Teachers, Special Education
A159 Teachers, n.e.c.
A160 Substitute Teachers
A163 Vocational and Educational Counselors

LIBRARIANS, ARCHIVISTS AND CURATORS

A164 Librarians
A165 Archivists and Curators

SOCIAL SCIENTISTS AND URBAN PLANNERS

A166 Economists
A167 Psychologists
A168 Sociologists
A169 Social Scientists, n.e.c.
A173 Urban Planners

SOCIAL, RECREATION, AND RELIGIOUS WORKERS

A174 Social Workers
A175 Recreation Workers
A176 Clergy
A177 Religious Workers, n.e.c.

LAWYERS AND JUDGES

A178 Lawyers
A179 Judges

WRITERS, AUTHORS, ENTERTAINERS, ATHLETES AND PROFESSIONALS, N.E.C.

A183 Authors
A184 Technical Writers
A185 Designers
A186 Musicians and Composers
A187 Actors and Directors
A188 Painters, Sculptors, Craft-Artists, and Artist Print-Makers
A189 Photographers
A193 Dancers
A194 Artists, Performers, and Related Workers, n.e.c.
A195 Editors and Reporters
A197 Public Relations Specialists
A198 Announcers
A199 Athletes
A999 Professional Occupations, n.e.c.

TECHNICAL OCCUPATIONS

HEALTH TECHNOLOGISTS AND TECHNICIANS

A203 Clinical Laboratory Technologists and Technicians
A204 Dental Hygienists
A205 Health Record Technologists and Technicians
A206 Radiologic Technicians
A207 Licensed Practical Nurses
A208 Health Technologists and Technicians, n.e.c.

ENGINEERING AND RELATED TECHNOLOGISTS AND TECHNICIANS

A213 Electrical and Electronic Technicians
A214 Industrial Engineering Technicians
A215 Mechanical Engineering Technicians
A216 Engineering Technicians, n.e.c.
A217 Drafters
A218 Surveying and Mapping Technicians

SCIENCE TECHNICIANS

- A223 Biological Technicians
- A224 Chemical Technicians
- A225 Science Technicians, n.e.c.

MISCELLANEOUS TECHNICIANS

- A226 Airplane Pilots and Navigators
- A227 Air Traffic Controllers
- A228 Broadcast Equipment Operators
- A229 Computer Programmers
- A233 Tool Programmers, Numerical Control
- A234 Legal Assistants
- A235 Technical and Related Occupations, n.e.c.

Major group B:

EXECUTIVE, ADMINISTRATIVE, AND MANAGERIAL OCCUPATIONS

EXECUTIVES, ADMINISTRATORS, AND MANAGERS

- B003 Legislators
- B004 Chief Executives and General Administrators, Public Administration
- B005 Administrators and Officials, Public Administration
- B007 Financial Managers
- B008 Personnel and Labor Relations Managers
- B009 Purchasing Managers
- B013 Managers; Marketing, Advertising and Public Relations
- B014 Administrators, Education and Related Fields
- B015 Managers, Medicine and Health
- B016 Postmasters and Mail Superintendents
- B017 Managers, Food Serving and Lodging Establishments
- B018 Managers, Properties and Real Estate
- B019 Funeral Directors
- B021 Managers, Service Organizations, n.e.c.
- B022 Managers and Administrators, n.e.c.

MANAGEMENT RELATED OCCUPATIONS

- B023 Accountants and Auditors
- B024 Underwriters
- B025 Other Financial Officers
- B026 Management Analysts
- B027 Personnel, Training, and Labor Relations Specialists

- B028 Purchasing Agents and Buyers, Farm Products
- B029 Buyers, Wholesale and Retail Trade, Except Farm Products
- B033 Purchasing Agents and Buyers, n.e.c.
- B034 Business and Promotion Agents
- B035 Construction Inspectors
- B036 Inspectors and Compliance Officers, Except Construction
- B037 Management Related Occupations, n.e.c.

Major group C:

SALES OCCUPATIONS

- C243 Supervisors: Sales Occupations

FINANCE AND BUSINESS SERVICES, SALES REPRESENTATIVES

- C253 Insurance Sales Occupations
- C254 Real Estate Sales Occupations
- C255 Securities and Financial Services Sales Occupations
- C256 Advertising and Related Sales Occupations
- C257 Sales Occupations, Other Business Services

SALES REPRESENTATIVES, COMMODITIES EXCEPT RETAIL

- C258 Sales Engineers
- C259 Sales Representatives; Mining, Manufacturing, and Wholesale

RETAIL AND PERSONAL SERVICES SALES WORKERS

- C263 Sales Workers, Motor Vehicles and Boats
- C264 Sales Workers, Apparel
- C265 Sales Workers, Shoes
- C266 Sales Workers, Furniture and Home Furnishings
- C267 Sales Workers, Radio, TV, Hi-Fi, and Appliances
- C268 Sales Workers, Hardware and Building Supplies
- C269 Sales Workers, Parts
- C274 Sales Workers, Other Commodities
- C275 Sales Counter Clerks
- C276 Cashiers
- C277 Street and Door-To-Door Sales Workers
- C278 News Vendors

SALES RELATED OCCUPATIONS

- C283 Demonstrators, Promoters, and Models, Sales
- C284 Auctioneers
- C285 Sales Support Occupations, n.e.c.

Major group D:

**ADMINISTRATIVE SUPPORT OCCUPATIONS,
INCLUDING CLERICAL**

**SUPERVISORS, CLERICAL AND ADMINISTRATIVE
SUPPORT**

- D303 Supervisors: General Office
- D304 Supervisors: Computer Equipment Operators
- D305 Supervisors: Financial Records Processing
- D306 Chief Communications Operators
- D307 Supervisors: Distribution, Scheduling, and
Adjusting Clerks

COMPUTER EQUIPMENT OPERATORS

- D308 Computer Operators
- D309 Peripheral Equipment Operators

SECRETARIES, STENOGRAPHERS, AND TYPISTS

- D313 Secretaries
- D314 Stenographers
- D315 Typists

INFORMATION CLERKS

- D316 Interviewers
- D317 Hotel Clerks
- D318 Transportation Ticket and Reservation Agents
- D319 Receptionists
- D323 Information Clerks, n.e.c.

**RECORDS PROCESSING CLERKS, EXCEPT
FINANCIAL**

- D325 Classified-Ad Clerks
- D326 Correspondence Clerks
- D327 Order Clerks
- D328 Personnel Clerks, Except Payroll and Time-
keeping
- D329 Library Clerks
- D335 File Clerks
- D336 Records Clerks, n.e.c.

FINANCIAL RECORDS PROCESSING CLERKS

- D337 Bookkeepers, Accounting and Auditing Clerks

- D338 Payroll and Timekeeping Clerks
- D339 Billing Clerks
- D343 Cost and Rate Clerks
- D344 Billing, Posting, and Calculating Machine
Operators

**DUPLICATING, MAIL, AND OTHER OFFICE
MACHINE OPERATORS**

- D345 Duplicating Machine Operators
- D346 Mail Preparing and Paper Handling Machine
Operators
- D347 Office Machine Operators, n.e.c.

COMMUNICATIONS EQUIPMENT OPERATORS

- D348 Telephone Operators
- D353 Communications Equipment Operators, n.e.c.

**MAIL AND MESSAGE DISTRIBUTING
OCCUPATIONS**

- D354 Postal Clerks, Except Mail Carriers
- D355 Mail Carriers, Postal Service
- D356 Mail Clerks, Except Postal Service
- D357 Messengers

**MATERIAL RECORDING, SCHEDULING, AND
DISTRIBUTING CLERKS**

- D359 Dispatchers
- D363 Production Coordinators
- D364 Traffic, Shipping, and Receiving Clerks
- D365 Stock and Inventory Clerks
- D366 Meter Readers
- D368 Weighers, Measurers, Checkers, and Samplers
- D373 Expeditors
- D374 Material Recording, Scheduling, and Distrib-
uting Clerks, n.e.c.

ADJUSTERS AND INVESTIGATORS

- D375 Insurance Adjusters, Examiners, and Investi-
gators
- D376 Investigators and Adjusters, Except Insurance
- D377 Eligibility Clerks, Social Welfare
- D378 Bill and Account Collectors

**MISCELLANEOUS ADMINISTRATIVE SUPPORT
OCCUPATIONS**

- D379 General Office Clerks
- D383 Bank Tellers
- D384 Proofreaders
- D385 Data Entry Keyers

- D386 Statistical Clerks
- D387 Teachers' Aides
- D389 Administrative Support Occupations, n.e.c.

Major group E:

PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS

MECHANICS AND REPAIRERS

- E503 Supervisors: Mechanics and Repairers
- E505 Automobile Mechanics
- E506 Automobile Mechanic Apprentices
- E507 Bus, Truck, and Stationary Engine Mechanics
- E508 Aircraft Engine Mechanics
- E509 Small Engine Repairers
- E514 Automobile Body and Related Repairers
- E515 Aircraft Mechanics, Except Engine
- E516 Heavy Equipment Mechanic
- E517 Farm Equipment Mechanics
- E518 Industrial Machinery Repairers
- E519 Machinery Maintenance Occupations
- E523 Electronic Repairers, Communications and Industrial Equipment
- E525 Data Processing Equipment Repairers
- E526 Household Appliance and Power Tool Repairers
- E527 Telephone Line Installers and Repairers
- E529 Telephone Installers and Repairers
- E534 Heating, Air Conditioning, and Refrigeration Mechanics
- E535 Camera, Watch, and Musical Instrument Repairers
- E536 Locksmiths and Safe Repairers
- E538 Office Machine Repairers
- E539 Mechanical Controls and Valve Repairers
- E543 Elevator Installers and Repairers
- E544 Millwrights
- E547 Mechanics and Repairers, n.e.c.

SUPERVISORS, CONSTRUCTION TRADES

- E553 Supervisors: Brickmasons, Stonemasons, and Tilesetters
- E554 Supervisors: Carpenters and Related Workers
- E555 Supervisors: Electricians and Power Transmission Installers
- E556 Supervisors: Painters, Paperhangers, and Plasterers
- E557 Supervisors: Plumbers, Pipefitters, and Steamfitters
- E558 Supervisors: Construction Trades, n.e.c.

CONSTRUCTION TRADES OCCUPATIONS

- E563 Brickmasons and Stonemasons
- E564 Brickmason and Stonemason Apprentices
- E565 Tile Setters, Hard and Soft
- E566 Carpet Installers
- E567 Carpenters
- E569 Carpenter Apprentices
- E573 Drywall Installers
- E575 Electricians
- E576 Electrician Apprentices
- E577 Electrical Power Installers and Repairers
- E579 Painters, Construction and Maintenance
- E583 Paperhangers
- E584 Plasterers
- E585 Plumbers, Pipefitters, and Steamfitters
- E587 Plumber, Pipefitter, and Steamfitter Apprentices
- E588 Concrete and Terrazzo Finishers
- E589 Glaziers
- E593 Insulation Workers
- E594 Paving, Surfacing, and Tamping Equipment Operators
- E595 Roofers
- E596 Sheetmetal Duct Installers
- E597 Structural Metal Workers
- E598 Drillers, Earth
- E599 Construction Trades, n.e.c.

EXTRACTIVE OCCUPATIONS

- E613 Supervisors: Extractive Occupations
- E614 Drillers, Oil Well
- E615 Explosives Workers
- E616 Mining Machine Operators
- E617 Mining Occupations, n.e.c.

PRECISION PRODUCTION OCCUPATIONS

- E628 Supervisors: Production Occupations

PRECISION METAL WORKING OCCUPATIONS

- E634 Tool and Die Makers
- E635 Tool and Die Maker Apprentices
- E636 Precision Assemblers, Metal
- E637 Machinists
- E639 Machinist Apprentices
- E643 Boilermakers
- E644 Precision Grinders, Filers, and Tool Sharpeners
- E645 Patternmakers and Modelmakers, Metal
- E646 Layout Workers

E647 Precious Stones and Metals Workers
E649 Engravers, Metal
E653 Sheet Metal Workers
E654 Sheet Metal Worker Apprentices

PRECISION WOODWORKING OCCUPATIONS

E656 Patternmakers and Modelmakers, Wood
E657 Cabinet Makers and Bench Carpenters
E658 Furniture and Wood Finishers

PRECISION TEXTILE, APPAREL, AND FURNISHINGS MACHINE WORKERS

E666 Dressmakers
E667 Tailors
E668 Upholsterers
E669 Shoe Repairers

PRECISION WORKERS, ASSORTED MATERIALS

E675 Hand Molders and Shapers, Except Jewelers
E676 Patternmakers, Layout Workers, and Cutters
E677 Optical Goods Workers
E678 Dental Laboratory and Medical Appliance Technicians
E679 Bookbinders
E683 Electrical and Electronic Equipment Assemblers
E684 Miscellaneous Precision Workers, n.e.c.

PRECISION FOOD PRODUCTION OCCUPATIONS

E685 Precision Food Production Occupations, n.e.c.
E686 Butchers and Meat Cutters
E687 Bakers
E688 Food Batchmakers

PRECISION INSPECTORS, TESTERS, AND RELATED WORKERS

E689 Inspectors, Testers, and Graders
E690 Precision Inspectors, Testers, and Related Workers, n.e.c.
E693 Adjusters and Calibrators

PLANT AND SYSTEM OPERATORS

E694 Water and Sewage Treatment Plant Operators
E695 Power Plant Operators
E696 Stationary Engineers
E699 Miscellaneous Plant and System Operators, n.e.c.

Major group F:

MACHINE OPERATORS, ASSEMBLERS, AND INSPECTORS

METALWORKING AND PLASTIC WORKING MACHINE OPERATORS

F703 Lathe and Turning-Machine Set-Up Operators
F704 Lathe and Turning-Machine Operators
F705 Milling and Planing Machine Operators
F706 Punching and Stamping Press Operators
F707 Rolling Machine Operators
F708 Drilling and Boring Machine Operators
F709 Grinding, Abrading, Buffing, and Polishing Machine Operators
F713 Forging Machine Operators
F714 Numerical Control Machine Operators
F717 Fabricating Machine Operators, n.e.c.
F719 Molding and Casting Machine Operators
F723 Metal Plating Machine Operators
F724 Heat Treating Equipment Operators

WOODWORKING MACHINE OPERATORS

F726 Wood Lathe, Routing, and Planing Machine Operators
F727 Sawing Machine Operators
F728 Shaping and Joining Machine Operators
F729 Nailing and Tacking Machine Operators

PRINTING MACHINE OPERATORS

F734 Printing Press Operators
F735 Photoengravers and Lithographers
F736 Typesetters and Compositors

TEXTILE, APPAREL, AND FURNISHINGS MACHINE OPERATORS

F738 Winding and Twisting Machine Operators
F739 Knitting, Looping, Taping, and Weaving Machine Operators
F743 Textile Cutting Machine Operators
F744 Textile Sewing Machine Operators
F745 Shoe Machine Operators
F747 Pressing Machine Operators
F748 Laundering and Dry Cleaning Machine Operators

MACHINE OPERATORS, ASSORTED MATERIALS

F753 Cementing and Gluing Machine Operators

F754 Packaging and Filling Machine Operators
F755 Extruding and Forming Machine Operators
F756 Mixing and Blending Machine Operators
F757 Separating, Filtering, and Clarifying Machine Operators
F758 Compressing and Compacting Machine Operators
F759 Painting and Paint Spraying Machine Operators
F763 Roasting and Baking Machine Operators, Food
F764 Washing, Cleaning, and Pickling Machine Operators
F765 Folding Machine Operators
F766 Furnace, Kiln, and Oven Operators, Except Food
F768 Crushing and Grinding Machine Operators
F769 Slicing and Cutting Machine Operators
F773 Motion Picture Projectionists
F774 Photographic Process Machine Operators
F777 Miscellaneous Machine Operators, n.e.c.

FABRICATORS, ASSEMBLERS, AND HAND WORKING OCCUPATIONS

F783 Welders and Cutters
F784 Solderers and Braziers
F785 Assemblers
F786 Hand Cutting and Trimming Occupations
F787 Hand Molding, Casting, and Forming Occupations
F789 Hand Painting, Coating, and Decorating Occupations
F793 Hand Engraving and Printing Occupations
F795 Miscellaneous Hand Working Occupations, n.e.c.

PRODUCTION INSPECTORS, TESTERS, SAMPLERS, AND WEIGHERS

F796 Production Inspectors, Checkers, and Examiners
F797 Production Testers
F798 Production Samplers and Weighers
F799 Graders and Sorters, Except Agricultural
F800 Hand Inspectors, n.e.c.

Major group G:

TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS

MOTOR VEHICLE OPERATORS

G803 Supervisors: Motor Vehicle Operators
G804 Truck Drivers

G806 Driver-Sales Workers
G808 Bus Drivers
G809 Taxicab Drivers and Chauffeurs
G813 Parking Lot Attendants
G814 Motor Transportation Occupations, n.e.c.

RAILROAD TRANSPORTATION OCCUPATIONS

G823 Railroad Conductors and Yardmasters
G824 Locomotive Operating Occupations
G825 Railroad Brake, Signal, and Switch Operators
G826 Rail Vehicle Operators, n.e.c.

WATER TRANSPORTATION OCCUPATIONS

G828 Ship Captains and Mates, Except Fishing Boats
G829 Sailors and Deckhands
G833 Marine Engineers
G834 Bridge, Lock, and Lighthouse Tenders

MATERIAL MOVING EQUIPMENT OPERATORS

G843 Supervisors: Material Moving Equipment Operators
G844 Operating Engineers
G845 Longshore Equipment Operators
G848 Hoist and Winch Operators
G849 Crane and Tower Operators
G853 Excavating and Loading Machine Operators
G855 Grader, Dozer, and Scraper Operators
G856 Industrial Truck and Tractor Equipment Operators
G859 Miscellaneous Material Moving Equipment Operators, n.e.c.

Major group H:

HANDLERS, EQUIPMENT CLEANERS, HELPERS, AND LABORERS

FARM, FISHING AND FORESTRY OCCUPATIONS - NONFARM SECTOR

H483 Marine Life Cultivation Workers
H484 Nursery Workers
H485 Supervisors, Agriculture-Related Workers
H486 Groundskeepers and Gardeners, Except Farm
H487 Animal Caretakers, Except Farm
H489 Inspectors, Agricultural Products
H494 Supervisors, Forestry and Logging Workers
H495 Forestry Workers, Except Logging
H496 Timber Cutting and Logging Occupations
H497 Captains and Other Officers, Fishing Vessels
H498 Fishers, Hunters, and Trappers

HELPERS, HANDLERS, AND LABORERS

- H864 Supervisors: Handlers, Equipment Cleaners, and Laborers, n.e.c.
- H865 Helpers, Mechanics and Repairers
- H866 Helpers, Construction Trades
- H867 Helpers, Surveyor
- H868 Helpers, Extractive Occupations
- H869 Construction Laborers
- H874 Production Helpers
- H875 Garbage Collectors
- H876 Stevedores
- H877 Stock Handlers and Baggers
- H878 Machine Feeders and Offbearers
- H883 Freight, Stock, and Material Handlers, n.e.c.
- H885 Garage and Service Station Related Occupations
- H887 Vehicle Washers and Equipment Cleaners
- H888 Hand Packers and Packagers
- H889 Laborers, Except Construction, n.e.c.

Major group K:

SERVICE OCCUPATIONS, EXCEPT PRIVATE HOUSEHOLD

PROTECTIVE SERVICE OCCUPATIONS

- K413 Supervisors: Firefighting and Fire Prevention Occupations
- K414 Supervisors: Police and Detectives
- K415 Supervisors: Guards
- K416 Fire Inspection and Fire Prevention Occupations
- K417 Firefighting Occupations
- K418 Police and Detectives, Public Service
- K423 Sheriffs, Bailiffs, and Other Law Enforcement Officers
- K424 Correctional Institution Officers
- K425 Crossing Guards
- K426 Guards and Police, Except Public Service
- K427 Protective Service Occupations, n.e.c.

FOOD SERVICE OCCUPATIONS

- K433 Supervisors: Food Preparation and Service Occupations
- K434 Bartenders
- K435 Waiters and Waitresses
- K436 Cooks
- K438 Food Counter, Fountain, and Related Occupation
- K439 Kitchen Workers, Food Preparation
- K443 Waiters'/Waitresses' Assistants
- K444 Food Preparation Occupations, n.e.c.

HEALTH SERVICE OCCUPATIONS

- K445 Dental Assistants
- K446 Health Aides, Except Nursing
- K447 Nursing Aides, Orderlies, and Attendants

CLEANING AND BUILDING SERVICE OCCUPATIONS

- K448 Supervisors: Cleaning and Building Service Workers
- K449 Maids and Housemen
- K453 Janitors and Cleaners
- K454 Elevator Operators
- K455 Pest Control Occupations

PERSONAL SERVICE OCCUPATIONS

- K456 Supervisors: Personal Service Occupations
- K457 Barbers
- K458 Hairdressers and Cosmetologists
- K459 Attendants, Amusement and Recreation Facilities
- K461 Guides
- K462 Ushers
- K463 Public Transportation Attendants
- K464 Baggage Porters and Bellhops
- K465 Welfare Service Aides
- K467 Early Childhood Teacher's Assistants
- K468 Child Care Workers, n.e.c.
- K469 Service Occupations, n.e.c.

Appendix C. Generic Leveling Criteria

Below are the 10 criteria for the generic leveling of occupations. The description of each level within a factor is included. An example of using these criteria for leveling a job follows in appendix D.

KNOWLEDGE measures the nature and extent of information or facts which the workers must understand to do acceptable work (e.g., steps, procedures, practices, rules, policies, theories, principles, and concepts) and the nature and extent of the skills needed to apply those knowledge's. To be used as a basis for selecting a level under this factor, a knowledge must be required and applied.

1. Knowledge of simple, routine, or repetitive tasks or operations which typically includes following step-by-step instructions and requires little or no previous training or experience;

OR

Skill to operate simple equipment or equipment which operates repetitively, requiring little or no previous training or experience;

OR

Equivalent knowledge and skill.

2. Knowledge of basic or commonly-used rules, procedures, or operations which typically requires some previous training or experience;

OR

Basic skill to operate equipment requiring some previous training or experience, such as keyboard equipment;

OR

Equivalent knowledge and skill.

3. Knowledge of a body of standardized rules, procedures, operations, goods, services, tools, or equipment requiring considerable training and experience to perform the full range of standard clerical assignments and resolve recurring problems;

OR

Skill, acquired through considerable training and experience, to operate and adjust varied equipment for purposes such as performing numerous standardized tests or operations;

OR

Equivalent knowledge and skill.

4. Knowledge of an extensive body of rules, procedures, operations, products or services requiring extended training and experience to perform a wide variety of interrelated or nonstandard procedural assignments and resolve a wide range of problems;

OR

Practical knowledge of standard procedures in a technical field, requiring extended training or experience, to perform such work as: adapting equipment when this requires considering the functioning characteristics of equipment; interpreting results of tests based on previous experience and observations (rather than directly reading instruments or other measures); or extracting information from various sources when this requires considering the applicability of information and the characteristics and quality of the sources;

OR

Comprehensive knowledge of a blue-collar skill, usually acquired through a formal apprenticeship;

OR

Equivalent knowledge and skill;

5. Knowledge (such as would be acquired through a pertinent baccalaureate educational program or its equivalent in experience, training, or independent study) of basic principles, concepts, and methodology of a professional or administrative occupation, and skill in applying this knowledge in carrying out elementary assignments, operations, or procedures;

OR

In addition to the practical knowledge of standard procedures in Level 4, practical knowledge of technical methods to perform assignments such as carrying out limited projects which involve use of specialized, complicated techniques;

OR

Advanced knowledge of a blue-collar skill to solve unusually complex problems;

OR

Equivalent knowledge and skill.

6. Knowledge of the principles, concepts, and methodology of a professional or administrative occupation as described at Level 5 which has been either: (a) supplemented by skill gained through job experience to permit independent performance of recurring assignments, or (b) supplemented by expanded professional or administrative knowl-

edge gained through relevant graduate study or experience, which has provided skill in carrying out assignments, operations, and procedures in the occupation which are significantly more difficult and complex than those covered by Level 5;

OR

Practical knowledge of a wide range of technical methods, principles, and practices similar to a narrow area of a professional field, and skill in applying this knowledge to such assignments as the design and planning of difficult, but well-precedented projects;

OR

Equivalent knowledge and skill.

7. Knowledge of a wide range of concepts, principles, and practices in a professional or administrative occupation, such as would be gained through extended graduate study or experience, and skill in applying this knowledge to difficult and complex work assignments;

OR

A comprehensive, intensive, practical knowledge of a technical field and skill in applying this knowledge to the development of new methods, approaches, or procedures;

OR

Equivalent knowledge and skill.

8. Mastery of a professional or administrative field to:

Apply experimental theories and new developments to problems not susceptible to treatment by accepted methods

OR

Make decisions or recommendations significantly changing, interpreting, or developing important policies or programs;

OR

Equivalent knowledge and skill

9. Mastery of a professional field to generate and develop new hypotheses and theories;

OR

Equivalent knowledge and skill.

SUPERVISION RECEIVED covers the nature and extent of direct or indirect controls exercised by the supervisor, the employee's responsibility and the review of completed work. Controls are exercised by the supervisor in the way assignments are made, instructions are given to the employee, priorities and deadlines are set, and objectives and boundaries are defined. Responsibility of the employee depends upon the extent to which the employee is expected to develop the sequence and timing of various aspects of the work, to modify or recommend modification of instructions, and to participate in establishing priorities and defining objectives. The degree of review of completed work depends upon the nature and extent of the review, e.g., close and detailed review of each phase of the assignment; detailed review of the finished assignment;

spot-check of finished work for accuracy; or review only for adherence to policy.

1. For both one-of-a-kind and repetitive tasks the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions.

The employee works as instructed and consults with the supervisor as needed on all matters not specifically covered in the original instructions or guidelines.

For all positions the work is closely controlled. For some positions, the control is through the structured nature of the work itself; for others, it may be controlled by the circumstances in which it is performed. In some situations, the supervisor maintains control through review of the work which may include checking progress or reviewing completed work for accuracy, adequacy, and adherence to instructions and established procedures.

2. The supervisor provides continuing or individual assignments by indicating generally what is to be done, limitations, quality and quantity expected, deadlines, and priority of assignments. The supervisor provides additional, specific instructions for new, difficult, or unusual assignments including suggested work methods or advice on source material available.

The employee uses initiative in carrying out recurring assignments independently without specific instruction, but refers deviations, problems, and unfamiliar situations not covered by instructions to the supervisor for decision or help.

The supervisor assures that finished work and methods used are technically accurate and in compliance with instructions or established procedures. Review of the work increases with more difficult assignments if the employee has not previously performed similar assignments.

3. The supervisor makes assignments by defining objectives, priorities, and deadlines; and assists employee with unusual situations which do not have clear precedents.

The employee plans and carries out the successive steps and handles problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices in the occupation.

Completed work is usually evaluated for technical soundness, appropriateness, and conformity to policy and requirements. The methods used in arriving at the end results are not usually reviewed in detail.

4. The supervisor sets the overall objectives and resources available. The employee and supervisor, in consultation, develop the deadlines, projects, and work to be done. At this level, the employee, having developed expertise in the line of work, is responsible for planning and carrying out the assignment; resolving most of the conflicts which arise; coordinating the work with others as necessary; and interpreting policy on own initiative in terms of established objectives. In some assignments, the

employee also determines the approach to be taken and the methodology to be used. The employee keeps the supervisor informed of progress, potentially controversial matters, or far-reaching implications.

Completed work is reviewed only from an overall standpoint in terms of feasibility, compatibility with other work, or effectiveness in meeting requirements or expected results.

5. The supervisor provides administrative direction with assignments in terms of broadly defined missions or functions.

The employee has responsibility for planning, designing, and carrying out programs, projects, studies, or other work independently.

Results of the work are considered as technically authoritative and are normally accepted without significant change. If the work should be reviewed, the review concerns such matters as fulfillment of program objectives, effect of advice and influence of the overall program, or the contribution to the advancement of technology. Recommendations for new projects and alteration of objectives are usually evaluated for such considerations as availability of funds and other resources, broad program goals or priorities.

GUIDELINES covers the nature of guidelines and the judgment needed to apply them. Guides used include, for example: desk manuals, established procedures and policies, traditional practices, and reference materials such as dictionaries, style manuals, engineering handbooks, and the pharmacopoeia.

Individual jobs in different occupations vary in the specificity, applicability and availability of the guidelines for performance of assignments. Consequently, the constraints and judgmental demands placed upon employees also vary. For example, the existence of specific instructions, procedures, and policies may limit the opportunity of the employee to make or recommend decisions or actions. However, in the absence of procedures or under broadly stated objectives, employees in some occupations may use considerable judgment in researching literature and developing new methods.

Guidelines should not be confused with the knowledge's described under Factor 1, Knowledge. Guidelines either provide reference data or impose certain constraints on the use of knowledge's. For example, in the field of medical technology, for a particular diagnosis there may be three or four standardized tests set forth in a technical manual. A medical technologist is expected to know these diagnostic tests. However, in a given laboratory the policy may be to use only one of the tests; or the policy may state specifically under what conditions one or the other of these tests may be used.

1. Specific, detailed guidelines covering all important aspects of the assignment are provided to the employee.

The employee works in strict adherence to the guidelines; deviations must be authorized by the supervisor.

2. Procedures for doing the work have been established and a number of specific guidelines are available.

The number and similarity of guidelines and work situations requires the employee to use judgment in locating and selecting the most appropriate guidelines, references, and procedures for application, and in making minor deviations to adapt the guidelines in specific cases. At this level, the employee may also determine which of several established alternatives to use. Situations to which the existing guidelines cannot be applied or significant proposed deviations from the guidelines are referred to the supervisor.

3. Guidelines are available, but are not completely applicable to the work or have gaps in specificity.

The employee uses judgment in interpreting and adapting guidelines such as policies, regulations, precedents, and work directions for application to specific cases or problems. The employee analyzes results and recommends changes.

4. Administrative policies and precedents are applicable but are stated in general terms. Guidelines for performing the work are scarce or of limited use.

The employee uses initiative and resourcefulness in deviating from traditional methods or researching trends and patterns to develop new methods, criteria, or proposed new policies.

5. Guidelines are broadly stated and nonspecific, e.g., broad policy statements and basic legislation which require extensive interpretation.

The employee must use judgment and ingenuity in interpreting the intent of the guides that do exist and in developing applications to specific areas of work. Frequently, the employee is recognized as a technical authority in the development and interpretation of guidelines.

COMPLEXITY covers the nature, number, variety, and intricacy of tasks, steps, processes, or methods in the work performed; the difficulty in identifying what needs to be done; and the difficulty and originality involved in performing the work.

1. The work consists of tasks that are clear-cut and directly related.

There is little or no choice to be made in deciding what needs to be done.

Actions to be taken or responses to be made are readily discernible. The work is quickly mastered.

2. The work consists of duties that involve related steps, processes, or methods.

The decision regarding what needs to be done involves various choices requiring the employee to recognize the existence of and differences among a few easily recognizable situations.

Actions to be taken or responses to be made differ in such things as the source of information, the kind of transactions or entries, or other differences of a factual nature.

3. The work includes various duties involving different and unrelated processes and methods.

The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives.

The work involves conditions and elements that must be identified and analyzed to discern interrelationships.

4. The work typically includes varied duties requiring many different and unrelated processes and methods such as those relating to well-established aspects of an administrative or professional field.

Decisions regarding what needs to be done include the assessment of unusual circumstances, variations in approach, and incomplete or conflicting data.

The work requires making many decisions concerning such things as the interpreting of considerable data, planning of the work, or refining the methods and techniques to be used.

5. The work includes varied duties requiring many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis, typically for an administrative or professional field.

Decisions regarding what needs to be done include major areas of uncertainty in approach, methodology, or interpretation and evaluation processes resulting from such elements as continuing changes in program, technological developments, unknown phenomena, or conflicting requirements.

The work requires originating new techniques, establishing criteria, or developing new information.

6. The work consists of broad functions and processes of an administrative or professional field. Assignments are characterized by breadth and intensity of effort and involve several phases being pursued concurrently or sequentially with the support of others within or outside of the organization.

Decisions regarding what needs to be done include largely undefined issues and elements, requiring extensive probing and analysis to determine the nature and scope of the problems.

The work requires continuing efforts to establish concepts, theories, or programs, or to resolve unyielding problems.

SCOPE AND EFFECT covers the relationship between the nature of the work, i.e., the purpose, breadth, and depth of the assignment, and the effect of work products or services both within and outside the organization.

Effect measures such things as whether the work output facilitates the work of others, provides timely services of a personal nature, or impacts on the adequacy of research conclusions. The concept of effect alone does not provide sufficient information to properly understand and evaluate the impact of the position. The scope of the work completes the picture, allowing consistent evaluations. Only the effect of properly performed work is to be considered.

1. The work involves the performance of specific, routine operations that include a few separate tasks or procedures.

The work product or service is required to facilitate the work of others; however, it has little impact beyond the immediate organizational unit or beyond the timely provision of limited services to others.

2. The work involves the execution of specific rules, regulations, or procedures and typically comprises a complete segment of an assignment or project of broader scope.

The work product or service affects the accuracy, reliability, or acceptability of further processes or services.

3. The work involves treating a variety of conventional problems, questions, or situations in conformance with established criteria.

The work product or service affects the design or operation of systems, programs, or equipment; the adequacy of such activities as field investigations, testing operations, or research conclusions; or the social, physical, and economic well-being of persons.

4. The work involves establishing criteria; formulating projects; assessing program effectiveness; or investigating or analyzing variety of unusual conditions, problems, or questions.

The work product or service affects a wide range of establishment activities, major activities of industrial concerns, or the operation of other organizations.

5. The work involves isolating and defining unknown conditions, resolving critical problems, or developing new theories.

The work product or service affects the work of other experts, the development of major aspects of administrative or scientific programs or missions, or the well-being of substantial numbers of people.

6. The work involves planning, developing, and carrying out vital administrative or scientific programs.

The programs are essential to the missions of the overall organization or affect large numbers of people on a long-term or continuing basis.

PERSONAL CONTACT includes face-to-face contacts and telephone and radio dialogue with persons not in the supervisory chain. (NOTE: Personal contacts with supervisors are covered under Factor 2, Supervision Received.) Levels described under this factor are based on what is required to make the initial contact, the difficulty of communicating with those contacted, and the setting in which the contact takes place (e.g., the degree to which the employee and those contacted recognize their relative roles and authorities).

Above the lowest level, points should be credited under this factor only for contacts which are essential for successful performance of the work and which have a demonstrable impact on the difficulty and responsibility of the work performed.

The relationship of Factors 6 (Personal Contacts) and 7 (Purpose of Contacts) presumes that the same contacts will be evaluated for both factors. Therefore, use the personal contacts which serve as the basis for the level selected for Factor 7 as the basis for selecting a level for Factor 6.

1. The personal contacts are with employees within the immediate organization, office, project, or work unit, and in related or support units;

AND/OR

The contacts are with members of the general public in very highly structured situations (e.g., the purpose of the contact and the question of with whom to deal are relatively clear). Typical of contacts at this level are purchases of admission tickets at a ticket window.

2. The personal contacts are with employees in the same overall organization, but outside the immediate organization. People contacted generally are engaged in different functions, missions, and kinds of work, e.g., representatives from various levels within the overall organizations such as headquarters, district offices, or local offices, plants, stores, or other operating units in the immediate installation.

AND/OR

The contacts are with members of the general public, as individuals or groups, in a moderately structured setting (e.g., the contacts are generally established on a routine basis, usually at the employee's work place; the exact purpose of the contact may be unclear at first to one or more of the parties; and one or more of the parties may be uninformed concerning the role and authority of other participants).

3. The personal contacts are with individuals or groups from outside the employing establishment in a moderately unstructured setting (e.g., the contacts are not established on a routine basis; the purpose and extent of each contact is different and the role and authority of each party is identified and developed during the course of the contact). Typical of contacts at this level are those with persons in

their capacities as attorneys; contractors; or representatives of professional organizations, the news media, or public action groups.

4. The personal contacts are with high-ranking officials from outside the employing establishment at national or international levels in highly unstructured settings (e.g., contacts are characterized by problems such as: the officials may be relatively inaccessible; arrangements may have to be made for accompanying staff members; appointments may have to be made well in advance; each party may be very unclear as to the role and authority of the other; and each contact may be conducted under different ground rules). Typical of contacts at this level are those with presidents of large national or international firms, nationally recognized representatives of the news media, presidents of national unions, members of Congress, leading representatives of foreign governments, State governors, or mayors of large cities.

PURPOSE OF CONTACTS ranges from factual exchanges of information to situations involving significant or controversial issues and differing viewpoints, goals, or objectives. The personal contacts which serve as the basis for the level selected for this factor must be the same as the contacts which are the basis for the level selected for Factor 6.

1. The purpose is to obtain, clarify, or give facts or information regardless of the nature of those facts, i.e., the facts or information may range from easily understood to highly technical.

2. The purpose is to plan, coordinate, or advise on work efforts or to resolve operating problems by influencing or motivating individuals or groups who are working toward mutual goals and who have basically cooperative attitudes.

3. The purpose is to influence, motivate, convince, or question persons or groups. Those contacted may be hesitant or skeptical, so the employee must be skillful in approaching the individual or group in order to obtain the desired response.

OR

The purpose is to interrogate or control persons or groups who may be fearful, uncooperative, or dangerous. Therefore, the employee must be skillful in approaching the individual or group in order to obtain the desired effect, such as, gaining compliance with established policies and regulations by persuasion or negotiation, or gaining information by establishing rapport with a suspicious informant.

4. The purpose is to justify, defend, negotiate, or settle matters involving significant or controversial issues. Work at this level usually involves active participation in conferences, meetings, hearings, or presentations involving problems or issues of considerable consequence or

importance. The persons contacted typically have diverse viewpoints, goals, or objectives requiring the employee to achieve a common understanding of the problem and a satisfactory solution by convincing them, arriving at a compromise, or developing suitable alternatives.

PHYSICAL DEMANDS covers the requirements and physical demands placed on the employee by the work assignment. This includes physical characteristics and abilities (e.g., specific agility and dexterity requirements) and the physical exertion involved in the work (e.g., climbing, lifting, pushing, balancing, stooping, kneeling, crouching, crawling, or reaching). To some extent the frequency or intensity of physical exertion must also be considered, e.g., a job requiring prolonged standing involves more physical exertion than a job requiring intermittent standing.

1. The work is sedentary. Typically, the employee may sit comfortably to do the work. However, there may be some walking; standing; bending; carrying of light items such as papers, books, small parts; driving an automobile, etc. No special physical demands are required to perform the work.

2. The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as personal computers and record boxes. The work may require specific, but common, physical characteristics and abilities such as above-average agility and dexterity.

3. The work requires considerable and strenuous physical exertion such as frequent climbing of tall ladders, lifting heavy objects over 50 pounds, crouching or crawling in restricted areas and defending oneself or others against physical attack.

WORK ENVIRONMENT considers the risks and discomforts in the employee's physical surroundings or the nature of the work assignment and the safety regulations required. Although the use of safety precautions can practically eliminate a certain danger or discomfort, such situations typically place additional demands upon the employee in carrying out safety regulations and techniques.

1. The work environment involves everyday risks or discomforts which require normal safety precautions typical

of such places as offices, meeting and training rooms, libraries, and residences or commercial vehicles, e.g., use of safe work practices with office equipment, avoidance of trips and falls, observance of fire regulations and traffic signals, etc. The work area is adequately lighted, heated, and ventilated.

2. The work involves moderate risks or discomforts which require special safety precautions, e.g., working around moving parts, carts, or machines; with contagious diseases or irritant chemicals; etc. Employees may be required to use protective clothing or gear such as masks, gowns, coats, boots, goggles, gloves, or shields.

3. The work environment involves high risks with exposure to potentially dangerous situations or unusual environmental stress which require a range of safety and other precautions, e.g., working at great heights under extreme outdoor weather conditions, subject to possible physical attack or mob conditions, or similar situations where conditions cannot be controlled.

SUPERVISORY DUTIES describes the level of supervisory responsibility for a position.

1. No supervisory responsibility.

2. A nonsupervisory position. Incumbent sets the pace of work for the group and shows other workers in the group how to perform assigned tasks. Commonly performs the same work as the group, in addition to lead duties. Can also be called group leader, team leader, or lead worker.

3. Directs staff through face to face meetings. Organizational structure is not complex and internal and administrative procedures are simple. Performing the same work as subordinates is not the principal duty. Typically, this is the first supervisory level.

4. Directs staff through intermediate supervisors. Internal procedures and administrative controls are formal. Organizational structure is complex and is divided into subordinate groups that may differ from each other as to subject matter and function

5. Directs staff through two or more subordinate supervisory levels with several subdivisions at each level. Programs are usually inter-locked on a direct and continuing basis with other organizational segments, requiring constant attention to extensive formal coordination, clearances, and procedural controls.

Appendix D. Evaluating Your Firm's Jobs

To compare data on their firm's jobs with statistics contained in this bulletin, data users need to be able to determine their jobs' work levels. Using the example of a dental hygienist, this appendix will go through the procedure for determining the work level of a particular job.

To determine the work level of a job, it must be evaluated using the generic leveling factors. With the information available, such as a written position description and other knowledge of the job, each factor must be reviewed. Comparing that information to the descriptions of each level within a factor as shown in Appendix C, the level best matching the job should be chosen and recorded. (Note that the number of levels varies by factor.)

Generic leveling: an example

Knowledge

Hygienist must have a dental hygienist license which requires 2 years of schooling and passage of a technical exam. This is a mid-level hygienist job, which means a worker must have at least 3 years of experience. The procedures are essentially the same every day, such as cleaning teeth, checking gums, and taking x-rays.

Level 4.

Supervision received

Most of the tasks are performed without supervision. For more complicated procedures, such as tooth filling, the dental hygienist assists the dentist.

Level 2.

Guidelines

A hygienist knows which procedure to use for different dental problems. Unusual situations are handled after checking with the supervisor.

Level 2.

Complexity

Each procedure performed leads to the next, for example, examining gums, scraping plaque, then cleaning teeth.

Level 2.

Scope and effect

In terms of process, the dentist's work follows the hygienist's. In terms of effect, the hygienist doing a thorough cleaning in preparation for the dentist's work allows the dentist to do a complete exam and properly treat the patient.

Level 2.

Personal contacts

Patients come to the clinic or occasionally the hygienist will travel to perform work or give a talk at a school.

Level 2.

Purpose of contacts

Most of hygienist's interaction is with patients; no planning or coordination work is involved.

Level 1.

Physical demands

The work is sedentary.

Level 1.

Work environment

Hygienist must take precautions not to be exposed to x-rays, punctures, etc.

Level 2.

Supervisory duties

A dental hygienist at this level does not supervise anyone.

Level 1.

Assigning points

Once the correct level has been identified within each factor, the points associated with each level are recorded. Summing the points for all factors gives the total points for the job. Using the factors above and the table at the end of this section showing the points associated with each level within a factor, a sample worksheet was filled out for the dental hygienist position.

Generic leveling worksheet

Company job title: Dental Hygienist

Factor	Level	Points
Knowledge	4	550
Supervision received	2	125
Guidelines	2	125
Complexity	2	75
Scope and effect	2	75
Personal contacts	2	25
Purpose of contacts	2	20
Physical demands	1	5
Work environment	2	20
Supervisory duties	1	0
Total	5	1020

Determining the work level

The following chart takes the point total determined using the worksheet and converts it to an overall work level for the job. There are 15 work levels, based on those used to rank Federal civil service white-collar jobs, each

identified by a point range. The 1,020 total points for the dental hygienist job puts it in level 5.

Point ranges by work level

Range of Generic Level Points		
Level	Low	High
1	190	254
2	255	454
3	455	654
4	655	854
5	855	1104
6	1105	1354
7	1355	1604
8	1605	1854
9	1855	2104
10	2105	2354
11	2355	2754
12	2755	3154
13	3155	3604
14	3605	4054
15	4055	and up

Comparing wages

Once the work level has been identified for a job, wages for that job can be compared to wages for similar jobs at the same work level. BLS publishes hourly wage rates by work level within nine major occupational groups, which are combinations of similar individual occupations. The groups and work levels available vary by area. Employers can also use the data on work levels to compare different jobs in their establishment.

Points associated with each factor level

Factor	1	2	3	4	5	6	7	8	9
Knowledge	50	200	350	550	750	950	1250	1550	1850
Supervision received	25	125	275	450	650	X	X	X	X
Guidelines	25	125	275	450	650	X	X	X	X
Complexity	25	75	150	225	325	450	X	X	X
Scope and effect	25	75	150	225	325	450	X	X	X
Personal contacts	10	25	60	110	X	X	X	X	X
Purpose of contacts	20	50	120	220	X	X	X	X	X
Physical demands	5	20	50	X	X	X	X	X	X
Work environment	5	20	50	X	X	X	X	X	X
Supervisory duties	0	0	0	0	0	X	X	X	X

Note: X indicates that a level is not associated with a given factor. For example, for physical demands, point levels 1, 2, and 3 are the only choices.