

Detroit-Ann Arbor-Flint, MI National Compensation Survey July 1998



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Preface

Data shown in this bulletin were collected as part of the Bureau of Labor Statistics' (BLS) 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.

Field economists of the Bureau of Labor Statistics collected and reviewed the survey data. 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 prepared the survey for publication.

For additional information regarding this survey, please contact any BLS regional office at the address and telephone number listed on the back cover of this bulletin. 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) 606-6199, or send e-mail to ocltinfo@bls.gov.

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

Results of earlier surveys of this area are also available from BLS regional offices, the Division of Compensation Data Analysis and Planning, or at the BLS Internet site.

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Contents

	<i>Page</i>
Introduction.....	1
Tables:	
1-1. Summary: Mean hourly earnings and weekly hours by selected worker and establishment characteristics, private industry, and State and local government	2
2-1. Mean hourly earnings: Selected occupations, all workers, private industry, and State and local government.....	3
2-2. Mean hourly earnings: Selected occupations, full-time workers, private industry, and State and local government.....	7
2-3. Mean hourly earnings: Selected occupations, part-time workers, private industry, and State and local government.....	10
3-1. Mean weekly earnings and hours: Selected occupations, full-time workers, private industry, and State and local government.....	12
3-2. Mean annual earnings and hours: Selected occupations, full-time workers, private industry, and State and local government.....	17
4-1. Selected occupations and levels, all workers: Mean hourly earnings, private industry, and State and local government.....	22
4-2. Selected occupations and levels, full-time workers: Mean hourly earnings, private industry, and State and local government.....	31
4-3. Selected occupations and levels, part-time workers: Mean hourly earnings, private industry, and State and local government.....	39
5-1. Selected worker characteristics: Mean hourly earnings by occupational group	42
5-2. Major industry division: Mean hourly earnings by occupational group, private industry	43
5-3. Establishment employment size: Mean hourly earnings by occupational group, private industry.	44
Appendixes:	
A. Technical Note.....	A - 1
Appendix table 1. Number of workers represented by the survey, by occupational group.....	A - 5
Appendix table 2. Number of establishments studied and represented.....	A - 6
B. Occupational Classifications.....	B - 1
C. Generic Leveling Criteria.....	C - 1
D. Evaluating Your Firm’s Jobs	D - 1
E. A Guide for Users of Prior BLS Wage Surveys.....	E - 1

Introduction

The tables in this bulletin summarize the NCS results for the Detroit-Ann Arbor-Flint, MI, metropolitan area. Tabulations provide information on earnings of workers in a variety of occupations and at different work levels. Also contained in this bulletin are 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 products

The Bureau's National Compensation Survey provides data on the occupational wages and employee benefits for localities, broad geographic regions, and the Nation as a whole. The Employment Cost Index, a quarterly measure of the change in employer costs for wages and benefits, will be derived from the NCS. Another product, Employer Costs for Employee Compensation, measures employers' average hourly costs for total compensation, that is, wages and benefits. Still another NCS product measures the incidence of benefit plans and their provisions. This bulletin is limited to data on occupational wages and salaries.

Ongoing changes

The NCS is implementing changes to its sample design and timing of data collection and publication. Because of these ongoing changes, it is not possible to produce median wages and other wage percentiles for this area publication. Estimates describing the distribution of wages by occupation will be published for the next survey of this area in the late spring of 2000.

About the tables

The tables that follow present data on straight-time occupational earnings, which include wages and salaries, incentive pay, cost-of-living adjustments, and hazard pay. These earnings exclude premium pay for overtime, vacations, holidays, nonproduction bonuses, and tips. About 480 detailed occupations are used to describe all occupations in the civilian nonfarm economy (excluding the Federal Government and private households), as explained in Appendix A. The table footnotes include information on survey concepts and definitions.

Table 1-1 presents an overview of all tables in this bulletin. Mean hourly earnings, weekly hours, and relative standard errors are given for all industries, private industry, and State and local government for selected worker and

establishment characteristics. The worker characteristics include major occupational group, full-time or part-time status, union or nonunion status, and time or incentive pay. Establishment characteristics include goods and service producing (within private industry) and size of establishment.

Table 2-1 presents estimates of mean hourly earnings, and the relative standard errors associated with them, for detailed occupations within all industries, private industry, and State and local government. Data are not shown for any occupations if they would raise concerns about the confidentiality of the survey respondents or if the data are insufficient to support reliable estimates. Table 2-2 presents the same type of information only for full-time workers. Table 2-3 provides similar data for workers designated as part-time.

Table 3-1 presents mean weekly earnings data, with relative standard errors, and weekly hours for full-time employees in specific occupations across all industries, private industry, and State and local government. The mean hours reflect hours employees are scheduled to work, excluding overtime hours. Table 3-2 provides annual earnings, relative standard error, and annual hours for full-time employees in specific occupations.

Table 4-1 presents mean hourly earnings data by work level for occupational groups and for detailed occupations. Separate data are also shown for private industry and government workers. Table 4-2 provides work level data for full-time workers. Table 4-3 provides similar data for workers designated as part-time.

Table 5-1 presents mean hourly earnings data for selected worker characteristics by major occupational groups. The worker characteristics include full-time or part-time designation, union or nonunion status, and time or incentive pay. Table 5-2 presents mean hourly earnings data for major industry divisions by occupational groups; these estimates are limited to the private sector. Table 5-3 presents mean hourly earnings data for establishment employment sizes by major occupational groups; these estimates are also limited to the private sector.

Appendix table 1 provides the employment scope of this survey. The occupation employment estimates relate to all employers in the area, rather than just those surveyed. Appendix table 2 presents the number of establishments studied by industry group and employment size.

Table 1-1. Summary: Mean hourly earnings¹ and weekly hours by selected characteristics, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Worker and establishment characteristics	Total			Private industry			State and local government		
	Hourly earnings		Mean weekly hours ³	Hourly earnings		Mean weekly hours ³	Hourly earnings		Mean weekly hours ³
	Mean	Relative error ² (percent)		Mean	Relative error ² (percent)		Mean	Relative error ² (percent)	
Total	\$18.59	1.9	36.5	\$18.05	2.1	36.8	\$21.41	3.4	35.1
Worker characteristics:⁴									
White-collar occupations ⁵	22.27	2.3	36.8	21.58	2.7	37.3	25.05	4.2	35.0
Professional specialty and technical	26.97	2.3	35.9	25.68	2.5	36.8	30.27	5.0	33.7
Executive, administrative, and managerial	30.15	4.2	40.3	30.59	4.7	40.6	27.04	5.4	38.4
Sales	15.34	7.2	33.3	15.35	7.2	33.4	-	-	-
Administrative support	13.15	2.4	37.9	13.14	2.9	38.1	13.18	2.5	37.1
Blue-collar occupations ⁵	16.59	2.0	38.1	16.64	2.2	38.2	15.73	4.6	37.0
Precision production, craft, and repair	20.53	1.8	40.1	20.65	1.9	40.1	19.01	4.4	39.9
Machine operators, assemblers, and inspectors	15.55	3.2	39.8	15.55	3.2	39.8	-	-	-
Transportation and material moving	15.74	4.6	34.6	16.28	5.2	34.9	13.23	3.3	33.1
Handlers, equipment cleaners, helpers, and laborers	10.62	3.8	32.5	10.42	4.1	32.0	12.95	6.8	39.2
Service occupations ⁵	9.99	3.4	32.3	8.31	2.9	31.6	14.51	3.3	34.3
Full time	19.50	1.9	39.8	18.98	2.2	40.1	22.15	3.5	38.1
Part time	10.13	5.0	20.8	9.81	5.6	21.3	12.35	8.3	17.8
Union	19.21	2.2	37.5	18.01	2.5	38.3	21.97	3.8	35.8
Nonunion	18.22	2.7	36.0	18.07	2.9	36.2	20.04	8.5	33.4
Time	18.67	1.9	36.5	18.12	2.2	36.8	21.41	3.4	35.1
Incentive	16.69	7.0	37.0	16.69	7.0	37.0	-	-	-
Establishment characteristics:									
Goods producing	(⁶)	(⁶)	(⁶)	21.74	2.9	39.9	(⁶)	(⁶)	(⁶)
Service producing	(⁶)	(⁶)	(⁶)	-	-	-	(⁶)	(⁶)	(⁶)
50-99 workers	14.70	6.6	35.1	14.70	6.6	35.1	-	-	-
100-499 workers	16.35	4.1	36.8	16.01	4.4	37.0	20.67	6.8	35.1
500 workers or more	20.88	2.2	36.7	20.66	2.5	37.3	21.55	3.9	35.1

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

² The relative standard error (RSE) is the standard error expressed as a percent of the estimate. It can be used to calculate a "confidence interval" around a sample estimate. For more information about RSEs, see appendix A.

³ Mean weekly hours are the hours an employee is scheduled to work in a week, exclusive of overtime.

⁴ Employees are classified as working either a full-time or a part-time schedule based on the definition used by each establishment. Union workers are those whose wages are

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

⁵ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

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

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

Table 2-1. Mean hourly earnings¹, all workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
All	\$18.59	1.9	\$18.05	2.1	\$21.41	3.4
All excluding sales	18.79	1.9	18.26	2.2	21.41	3.4
White collar	22.27	2.3	21.58	2.7	25.05	4.2
White collar excluding sales	23.16	2.3	22.61	2.7	25.06	4.2
Professional specialty and technical	26.97	2.3	25.68	2.5	30.27	5.0
Professional specialty	29.31	2.4	27.91	2.7	32.21	4.8
Engineers, architects, and surveyors	30.65	3.6	30.65	3.6	—	—
Industrial engineers	28.05	1.9	28.05	1.9	—	—
Mechanical engineers	31.20	11.9	31.20	11.9	—	—
Engineers, n.e.c.	31.42	2.7	31.42	2.7	—	—
Mathematical and computer scientists	28.02	5.0	28.03	5.0	—	—
Computer systems analysts and scientists	28.05	6.4	28.06	6.4	—	—
Operations and systems researchers and analysts	28.16	7.2	28.16	7.2	—	—
Natural scientists	20.77	18.8	29.25	11.2	—	—
Health related	22.99	2.8	22.85	2.9	24.32	8.9
Physicians	31.02	18.2	31.28	20.9	—	—
Registered nurses	22.02	1.9	22.00	2.0	22.24	4.1
Dietitians	15.79	8.9	—	—	—	—
Physical therapists	24.01	7.9	—	—	—	—
Teachers, college and university	38.01	13.9	37.26	6.8	38.11	15.8
Engineering teachers	61.84	7.3	—	—	—	—
Health specialties teachers	32.86	10.0	—	—	—	—
Teachers, post secondary, n.e.c.	46.59	14.5	46.59	14.5	—	—
Teachers, post secondary, subject not specified ..	29.40	18.3	—	—	28.92	20.3
Teachers, except college and university	35.53	4.5	19.37	7.5	36.06	4.6
Prekindergarten and kindergarten	33.77	10.2	—	—	34.35	10.2
Elementary school teachers	36.16	4.7	—	—	36.43	4.7
Secondary school teachers	38.58	5.1	20.95	9.8	39.94	4.9
Teachers, special education	40.98	2.9	—	—	40.98	2.9
Teachers, n.e.c.	33.84	22.6	—	—	34.12	22.4
Vocational and educational counselors	23.96	28.5	14.48	10.4	—	—
Librarians, archivists, and curators	29.04	22.2	—	—	29.59	21.9
Librarians	29.04	22.2	—	—	29.59	21.9
Social scientists and urban planners	18.45	21.9	—	—	—	—
Social, recreation, and religious workers	22.56	13.9	15.01	10.9	24.08	14.7
Social workers	22.75	13.9	—	—	24.33	14.7
Lawyers and judges	48.27	17.3	—	—	—	—
Lawyers	48.27	17.3	—	—	—	—
Writers, authors, entertainers, athletes, and professionals, n.e.c.	31.64	6.6	31.33	7.6	—	—
Technical	19.34	3.3	20.03	3.1	14.96	10.3
Clinical laboratory technologists and technicians	15.39	15.8	19.04	3.2	—	—
Health record technologists and technicians	14.66	12.5	—	—	—	—
Radiologic technicians	17.37	6.7	17.33	6.9	—	—
Licensed practical nurses	14.98	1.6	15.00	1.7	14.81	5.0
Health technologists and technicians, n.e.c.	13.18	4.1	13.02	4.1	—	—
Electrical and electronic technicians	21.22	4.5	21.22	4.5	—	—
Mechanical engineering technicians	21.86	6.9	21.86	6.9	—	—
Engineering technicians, n.e.c.	24.04	5.2	24.07	5.3	—	—
Drafters	22.87	12.5	22.87	12.5	—	—
Chemical technicians	19.51	3.9	19.51	3.9	—	—
Computer programmers	28.25	1.7	28.25	1.7	—	—
Technical and related, n.e.c.	19.48	7.3	21.88	7.2	17.34	10.5
Executive, administrative, and managerial	30.15	4.2	30.59	4.7	27.04	5.4
Executives, administrators, and managers	34.08	6.0	34.24	6.6	32.59	6.4
Administrators and officials, public administration	29.98	6.0	—	—	29.98	6.0
Financial managers	36.06	13.8	36.57	14.0	—	—
Managers, marketing, advertising, and public relations	41.86	7.4	41.86	7.4	—	—
Administrators, education and related fields	40.83	12.4	20.12	10.2	—	—
Managers, medicine and health	28.66	13.0	29.04	14.5	—	—

See footnotes at end of table.

Table 2-1. Mean hourly earnings¹, all workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
White collar –Continued						
Executive, administrative, and managerial –Continued						
Executives, administrators, and managers –Continued						
Managers, food servicing and lodging establishments	\$14.05	13.7	\$14.05	13.7	–	–
Managers and administrators, n.e.c.	37.45	7.6	37.58	7.6	–	–
Management related	24.66	3.0	25.13	3.5	\$22.19	3.2
Accountants and auditors	22.10	4.9	22.09	5.0	–	–
Other financial officers	30.19	15.2	32.47	15.6	–	–
Management analysts	21.93	13.0	21.43	13.6	–	–
Personnel, training, and labor relations specialists	23.89	9.5	24.22	11.3	–	–
Purchasing agents and buyers, n.e.c.	27.22	9.2	27.34	9.3	–	–
Construction inspectors	21.39	2.6	–	–	21.39	2.6
Management related, n.e.c.	24.63	6.1	24.85	7.0	–	–
Sales	15.34	7.2	15.35	7.2	–	–
Supervisors, sales	19.15	13.9	19.15	13.9	–	–
Advertising and related sales	20.18	13.4	20.18	13.4	–	–
Sales, other business services	19.14	14.3	19.14	14.3	–	–
Sales representatives, mining, manufacturing, and wholesale	23.70	12.9	23.70	12.9	–	–
Sales workers, furniture and home furnishings	12.56	20.9	12.56	20.9	–	–
Sales workers, other commodities	10.63	10.6	10.63	10.6	–	–
Cashiers	7.75	4.0	7.76	4.0	–	–
Administrative support, including clerical	13.15	2.4	13.14	2.9	13.18	2.5
Supervisors, general office	18.26	6.5	18.39	8.4	–	–
Supervisors, financial records processing	19.55	10.8	19.55	10.8	–	–
Computer operators	17.97	10.9	18.76	12.8	–	–
Secretaries	14.84	5.1	15.58	6.4	13.60	5.1
Typists	9.73	6.9	10.42	8.7	–	–
Interviewers	10.16	6.0	–	–	–	–
Receptionists	9.84	6.9	9.85	6.9	–	–
Order clerks	12.03	7.0	12.03	7.0	–	–
Personnel clerks, except payroll and timekeeping	14.64	6.2	12.75	7.0	–	–
Library clerks	11.04	11.9	–	–	9.90	12.7
Records clerks, n.e.c.	10.78	11.7	9.61	12.7	–	–
Bookkeepers, accounting and auditing clerks	11.33	5.5	10.92	5.5	–	–
Payroll and timekeeping clerks	12.78	8.7	12.78	8.7	–	–
Billing clerks	10.94	4.5	10.68	4.6	–	–
Telephone operators	11.18	12.5	11.18	12.5	–	–
Production coordinators	19.69	12.2	19.69	12.2	–	–
Traffic, shipping and receiving clerks	12.10	10.0	12.10	10.0	–	–
Stock and inventory clerks	10.21	9.0	10.21	9.0	–	–
Material recording, scheduling, and distribution clerks, n.e.c.	15.53	12.1	15.53	12.1	–	–
Insurance adjusters, examiners, and investigators	13.69	2.9	13.69	2.9	–	–
Investigators and adjusters, except insurance	12.08	11.0	12.08	11.0	–	–
Bill and account collectors	12.30	8.1	12.30	8.1	–	–
General office clerks	12.41	3.7	12.77	6.4	12.04	3.1
Bank tellers	10.13	3.7	10.13	3.7	–	–
Data entry keyers	8.54	12.9	–	–	–	–
Teachers' aides	10.93	4.9	–	–	10.97	4.9
Administrative support, n.e.c.	13.26	5.4	12.96	6.7	14.36	5.7
Blue collar	16.59	2.0	16.64	2.2	15.73	4.6
Precision production, craft, and repair	20.53	1.8	20.65	1.9	19.01	4.4
Supervisors, mechanics and repairers	22.09	9.1	22.19	9.6	–	–
Automobile mechanics	18.27	7.4	–	–	–	–
Bus, truck, and stationary engine mechanics	15.93	7.6	–	–	–	–

See footnotes at end of table.

Table 2-1. Mean hourly earnings¹, all workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
Blue collar —Continued						
Precision production, craft, and repair —Continued						
Heavy equipment mechanics	\$20.89	5.0	\$21.64	4.9	—	—
Industrial machinery repairers	20.34	4.9	20.34	4.9	—	—
Millwrights	22.70	1.7	22.70	1.7	—	—
Mechanics and repairers, n.e.c.	19.82	3.5	19.89	3.6	—	—
Supervisors, construction trades, n.e.c.	24.61	6.9	26.12	9.3	—	—
Electricians	23.55	1.5	23.33	1.4	—	—
Plumbers, pipefitters and steamfitters	24.13	3.8	24.12	3.9	—	—
Construction trades, n.e.c.	16.46	8.2	—	—	—	—
Supervisors, production	20.45	7.4	20.45	7.4	—	—
Tool and die makers	22.48	3.2	22.48	3.2	—	—
Tool and die maker apprentices	16.76	10.1	16.76	10.1	—	—
Machinists	20.32	3.8	20.32	3.8	—	—
Precision grinders, filers, and tool sharpeners	22.25	7.1	22.25	7.1	—	—
Patternmakers, layout workers, and cutters	24.50	6.9	24.50	6.9	—	—
Butchers and meat cutters	14.58	7.7	14.58	7.7	—	—
Inspectors, testers, and graders	20.61	8.6	20.61	8.6	—	—
Stationary engineers	19.40	2.5	—	—	—	—
Machine operators, assemblers, and inspectors	15.55	3.2	15.55	3.2	—	—
Punching and stamping press operators	15.98	12.7	15.98	12.7	—	—
Fabricating machine operators, n.e.c.	20.58	1.4	20.58	1.4	—	—
Textile sewing machine operators	12.14	29.7	12.14	29.7	—	—
Laundering and dry cleaning machine operators	7.83	4.7	7.42	.7	—	—
Packaging and filling machine operators	10.51	10.4	10.51	10.4	—	—
Miscellaneous machine operators, n.e.c.	12.45	6.8	12.45	6.8	—	—
Welders and cutters	17.41	7.9	17.41	7.9	—	—
Assemblers	16.73	4.5	16.73	4.5	—	—
Production inspectors, checkers and examiners ..	15.10	10.7	15.10	10.7	—	—
Transportation and material moving	15.74	4.6	16.28	5.2	\$13.23	3.3
Truck drivers	15.38	5.9	16.00	6.3	—	—
Bus drivers	12.91	11.9	—	—	12.94	3.6
Crane and tower operators	18.70	5.2	18.70	5.2	—	—
Industrial truck and tractor equipment operators ..	15.77	6.8	15.77	6.8	—	—
Handlers, equipment cleaners, helpers, and laborers	10.62	3.8	10.42	4.1	12.95	6.8
Groundskeepers and gardeners, except farm	12.85	8.6	—	—	12.85	8.6
Stock handlers and baggers	9.24	6.7	9.24	6.7	—	—
Freight, stock, and material handlers, n.e.c.	11.03	5.7	11.03	5.7	—	—
Vehicle washers and equipment cleaners	11.36	9.6	11.36	9.6	—	—
Hand packers and packagers	9.46	6.8	9.46	6.8	—	—
Laborers, except construction, n.e.c.	13.17	11.1	12.91	12.6	—	—
Service	9.99	3.4	8.31	2.9	14.51	3.3
Protective service	13.35	9.2	7.28	6.9	17.69	2.1
Firefighting	15.71	2.3	—	—	15.71	2.3
Police and detectives, public service	19.26	2.5	—	—	19.26	2.5
Correctional institution officers	16.35	3.8	—	—	16.35	3.8
Crossing guards	7.05	5.8	—	—	7.05	5.8
Guards and police, except public service	7.29	7.3	7.27	7.3	—	—
Protective service, n.e.c.	13.30	9.7	—	—	13.30	9.7
Food service	7.17	4.6	7.05	4.8	9.16	10.0
Bartenders	7.28	7.7	7.28	7.7	—	—
Waiters and waitresses	3.96	14.9	3.96	14.9	—	—
Cooks	8.66	5.3	8.45	5.4	—	—
Food counter, fountain, and related	5.93	12.4	5.93	12.4	—	—
Kitchen workers, food preparation	8.82	4.4	8.76	4.4	—	—
Food preparation, n.e.c.	6.91	5.3	6.76	5.2	8.25	10.9
Health service	8.87	3.0	8.77	3.0	11.62	5.3
Health aides, except nursing	10.34	2.2	10.21	2.5	—	—
Nursing aides, orderlies and attendants	8.54	2.8	8.47	2.8	12.02	9.8

See footnotes at end of table.

Table 2-1. Mean hourly earnings¹, all workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
Service —Continued						
Cleaning and building service	\$11.36	4.2	\$10.83	5.3	\$12.79	4.5
Maids and housemen	7.17	2.7	7.10	2.7	—	—
Janitors and cleaners	11.82	4.4	11.35	5.9	12.83	4.6
Personal service	8.63	5.7	7.45	4.0	9.96	8.0
Early childhood teachers' assistants	7.45	13.8	—	—	—	—
Child care workers, n.e.c.	9.85	9.9	—	—	10.09	10.1
Service, n.e.c.	8.69	6.7	8.43	11.5	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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.

³ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

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

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

Table 2-2. Mean hourly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
All	\$19.50	1.9	\$18.98	2.2	\$22.15	3.5
All excluding sales	19.58	1.9	19.05	2.2	22.15	3.5
White collar	23.06	2.3	22.41	2.7	25.59	4.3
White collar excluding sales	23.60	2.3	23.02	2.7	25.59	4.3
Professional specialty and technical	27.51	2.4	26.03	2.5	31.25	5.1
Professional specialty	29.93	2.5	28.26	2.7	33.34	4.9
Engineers, architects, and surveyors	30.65	3.6	30.65	3.6	—	—
Industrial engineers	28.05	1.9	28.05	1.9	—	—
Mechanical engineers	31.20	11.9	31.20	11.9	—	—
Engineers, n.e.c.	31.42	2.7	31.42	2.7	—	—
Mathematical and computer scientists	28.09	4.9	28.10	4.9	—	—
Computer systems analysts and scientists	28.05	6.4	28.06	6.4	—	—
Operations and systems researchers and analysts	28.34	7.0	28.34	7.0	—	—
Natural scientists	20.90	19.1	29.37	11.3	—	—
Health related	22.68	3.2	22.37	3.3	25.07	9.6
Physicians	27.04	18.3	26.46	21.0	—	—
Registered nurses	22.12	2.4	22.02	2.6	23.01	4.9
Teachers, college and university	40.89	14.1	38.81	7.4	41.18	16.0
Engineering teachers	61.96	7.1	—	—	—	—
Teachers, post secondary, subject not specified	47.39	5.2	—	—	—	—
Teachers, except college and university	37.06	4.2	20.36	7.8	37.58	4.3
Prekindergarten and kindergarten	34.49	10.8	—	—	34.49	10.8
Elementary school teachers	37.49	3.6	—	—	37.77	3.7
Secondary school teachers	38.60	5.1	20.99	10.0	39.94	4.9
Teachers, special education	40.98	2.9	—	—	40.98	2.9
Vocational and educational counselors	24.10	28.9	—	—	—	—
Librarians, archivists, and curators	32.43	18.6	—	—	33.33	17.4
Librarians	32.43	18.6	—	—	33.33	17.4
Social scientists and urban planners	18.15	22.2	—	—	—	—
Social, recreation, and religious workers	23.25	13.9	—	—	24.47	14.9
Social workers	23.25	13.9	—	—	24.47	14.9
Lawyers and judges	48.27	17.3	—	—	—	—
Lawyers	48.27	17.3	—	—	—	—
Writers, authors, entertainers, athletes, and professionals, n.e.c.	31.89	6.4	31.60	7.5	—	—
Technical	19.72	3.2	20.46	2.9	15.03	10.9
Clinical laboratory technologists and technicians	15.20	16.6	19.01	3.5	—	—
Health record technologists and technicians	14.26	12.9	—	—	—	—
Radiologic technicians	17.60	7.4	17.56	7.6	—	—
Licensed practical nurses	14.78	1.9	14.71	2.0	—	—
Health technologists and technicians, n.e.c.	13.11	4.7	12.91	4.8	—	—
Electrical and electronic technicians	21.22	4.5	21.22	4.5	—	—
Mechanical engineering technicians	21.86	6.9	21.86	6.9	—	—
Engineering technicians, n.e.c.	24.04	5.2	24.07	5.3	—	—
Drafters	25.23	8.3	25.23	8.3	—	—
Chemical technicians	19.51	3.9	19.51	3.9	—	—
Computer programmers	28.25	1.7	28.25	1.7	—	—
Technical and related, n.e.c.	19.67	7.3	21.90	7.2	17.62	10.5
Executive, administrative, and managerial	30.15	4.2	30.60	4.7	27.01	5.5
Executives, administrators, and managers	34.10	6.0	34.24	6.6	32.78	6.4
Administrators and officials, public administration	29.98	6.0	—	—	29.98	6.0
Financial managers	36.06	13.8	36.57	14.0	—	—
Managers, marketing, advertising, and public relations	41.86	7.4	41.86	7.4	—	—
Administrators, education and related fields	40.83	12.4	20.12	10.2	—	—
Managers, medicine and health	28.66	13.0	29.04	14.5	—	—
Managers, food servicing and lodging establishments	14.05	13.7	14.05	13.7	—	—
Managers and administrators, n.e.c.	37.45	7.6	37.58	7.6	—	—
Management related	24.62	3.0	25.13	3.5	21.92	3.2
Accountants and auditors	22.06	5.0	22.06	5.1	—	—
Other financial officers	30.19	15.2	32.47	15.6	—	—

See footnotes at end of table.

Table 2-2. Mean hourly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
White collar –Continued						
Executive, administrative, and managerial –Continued						
Management related –Continued						
Management analysts	\$21.43	13.6	\$21.43	13.6	–	–
Personnel, training, and labor relations specialists	23.89	9.5	24.22	11.3	–	–
Purchasing agents and buyers, n.e.c.	27.22	9.2	27.34	9.3	–	–
Construction inspectors	21.39	2.6	–	–	\$21.39	2.6
Management related, n.e.c.	24.63	6.1	24.85	7.0	–	–
Sales	17.88	7.2	17.88	7.2	–	–
Supervisors, sales	19.15	13.9	19.15	13.9	–	–
Sales, other business services	19.14	14.3	19.14	14.3	–	–
Sales representatives, mining, manufacturing, and wholesale	23.70	12.9	23.70	12.9	–	–
Sales workers, other commodities	12.85	11.5	12.85	11.5	–	–
Cashiers	8.65	6.0	8.65	6.0	–	–
Administrative support, including clerical	13.36	2.5	13.36	3.0	13.37	2.6
Supervisors, general office	18.26	6.5	18.39	8.4	–	–
Supervisors, financial records processing	19.55	10.8	19.55	10.8	–	–
Computer operators	17.97	10.9	18.76	12.8	–	–
Secretaries	14.88	5.1	15.65	6.4	13.62	5.1
Typists	9.73	6.9	10.42	8.7	–	–
Receptionists	9.87	7.4	9.87	7.4	–	–
Order clerks	12.22	6.7	12.22	6.7	–	–
Personnel clerks, except payroll and timekeeping	14.64	6.2	12.75	7.0	–	–
Records clerks, n.e.c.	10.78	12.1	9.62	12.7	–	–
Bookkeepers, accounting and auditing clerks	11.66	5.7	11.24	5.8	–	–
Payroll and timekeeping clerks	14.19	3.8	14.19	3.8	–	–
Billing clerks	10.97	4.7	10.70	4.8	–	–
Telephone operators	11.24	12.5	11.24	12.5	–	–
Production coordinators	19.69	12.2	19.69	12.2	–	–
Traffic, shipping and receiving clerks	12.10	10.2	12.10	10.2	–	–
Stock and inventory clerks	10.21	9.0	10.21	9.0	–	–
Material recording, scheduling, and distribution clerks, n.e.c.	15.77	11.6	15.77	11.6	–	–
Insurance adjusters, examiners, and investigators	13.69	2.9	13.69	2.9	–	–
Investigators and adjusters, except insurance	12.08	11.0	12.08	11.0	–	–
Bill and account collectors	12.30	8.1	12.30	8.1	–	–
General office clerks	12.61	3.8	13.06	6.5	12.15	3.1
Bank tellers	10.62	1.9	10.62	1.9	–	–
Teachers' aides	10.81	5.6	–	–	10.85	5.6
Administrative support, n.e.c.	13.55	5.5	13.08	6.8	–	–
Blue collar	17.07	2.0	17.14	2.1	16.00	4.8
Precision production, craft, and repair	20.54	1.8	20.66	1.9	19.01	4.4
Supervisors, mechanics and repairers	22.09	9.1	22.19	9.6	–	–
Automobile mechanics	18.27	7.4	–	–	–	–
Bus, truck, and stationary engine mechanics	15.93	7.6	–	–	–	–
Heavy equipment mechanics	20.89	5.0	21.64	4.9	–	–
Industrial machinery repairers	20.34	4.9	20.34	4.9	–	–
Millwrights	22.70	1.7	22.70	1.7	–	–
Mechanics and repairers, n.e.c.	19.82	3.5	19.89	3.6	–	–
Supervisors, construction trades, n.e.c.	24.61	6.9	26.12	9.3	–	–
Electricians	23.55	1.5	23.33	1.4	–	–
Plumbers, pipefitters and steamfitters	24.13	3.8	24.12	3.9	–	–
Construction trades, n.e.c.	16.46	8.2	–	–	–	–
Supervisors, production	20.45	7.4	20.45	7.4	–	–
Tool and die makers	22.48	3.2	22.48	3.2	–	–
Tool and die maker apprentices	16.76	10.1	16.76	10.1	–	–
Machinists	20.32	3.8	20.32	3.8	–	–

See footnotes at end of table.

Table 2-2. Mean hourly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
Blue collar —Continued						
Precision production, craft, and repair —Continued						
Precision grinders, filers, and tool sharpeners	\$22.25	7.1	\$22.25	7.1	—	—
Patternmakers, layout workers, and cutters	24.50	6.9	24.50	6.9	—	—
Butchers and meat cutters	14.58	7.7	14.58	7.7	—	—
Inspectors, testers, and graders	20.61	8.6	20.61	8.6	—	—
Machine operators, assemblers, and inspectors						
Punching and stamping press operators	15.71	3.1	15.71	3.1	—	—
Fabricating machine operators, n.e.c.	15.98	12.7	15.98	12.7	—	—
Textile sewing machine operators	20.58	1.4	20.58	1.4	—	—
Laundering and dry cleaning machine operators	12.14	29.7	12.14	29.7	—	—
Packaging and filling machine operators	7.87	4.9	7.45	1.1	—	—
Miscellaneous machine operators, n.e.c.	10.51	10.4	10.51	10.4	—	—
Welders and cutters	12.45	6.8	12.45	6.8	—	—
Assemblers	17.41	7.9	17.41	7.9	—	—
Production inspectors, checkers and examiners ..	17.17	4.0	17.17	4.0	—	—
	15.10	10.7	15.10	10.7	—	—
Transportation and material moving						
Truck drivers	16.81	4.0	17.55	4.2	\$13.41	3.8
Bus drivers	15.63	6.0	16.14	6.4	—	—
Crane and tower operators	12.45	4.9	—	—	12.91	4.2
Industrial truck and tractor equipment operators ..	18.70	5.2	18.70	5.2	—	—
	15.77	6.8	15.77	6.8	—	—
Handlers, equipment cleaners, helpers, and laborers						
Groundskeepers and gardeners, except farm	11.62	3.9	11.46	4.2	13.13	7.7
Stock handlers and baggers	13.27	10.8	—	—	13.27	10.8
Freight, stock, and material handlers, n.e.c.	12.06	7.1	12.06	7.1	—	—
Vehicle washers and equipment cleaners	10.88	6.3	10.88	6.3	—	—
Hand packers and packagers	11.57	9.0	11.57	9.0	—	—
Laborers, except construction, n.e.c.	9.62	7.0	9.62	7.0	—	—
	13.17	11.1	12.91	12.6	—	—
Service						
Protective service	11.06	3.7	9.02	3.4	15.49	3.4
Firefighting	13.91	9.2	7.22	7.3	18.09	2.2
Police and detectives, public service	15.71	2.3	—	—	15.71	2.3
Correctional institution officers	19.41	2.5	—	—	19.41	2.5
Guards and police, except public service	16.35	3.8	—	—	16.35	3.8
Food service	7.22	7.8	7.21	7.8	—	—
Cooks	8.42	7.3	8.31	7.6	10.88	5.4
Food preparation, n.e.c.	9.19	3.6	9.00	3.3	—	—
Health service	7.64	10.9	7.52	11.2	—	—
Health aides, except nursing	8.82	3.1	8.70	3.1	11.80	5.6
Nursing aides, orderlies and attendants	10.39	2.2	10.28	2.4	—	—
Cleaning and building service	8.40	2.7	8.31	2.6	—	—
Maid and housemen	11.81	3.8	11.37	4.9	12.91	4.8
Janitors and cleaners	7.36	2.9	—	—	—	—
Personal service	12.25	3.7	11.90	5.0	12.95	4.9
Child care workers, n.e.c.	9.68	8.2	—	—	11.14	8.9
	11.35	10.3	—	—	11.91	10.5

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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 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. See appendix B for more information.

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

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

Table 2-3. Mean hourly earnings¹, part-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
All	\$10.13	5.0	\$9.81	5.6	\$12.35	8.3
All excluding sales	10.59	5.6	10.28	6.4	12.37	8.3
White collar	13.63	5.4	13.23	6.1	16.17	7.5
White collar excluding sales	16.67	5.3	16.78	6.4	16.23	7.4
Professional specialty and technical	20.63	4.9	21.66	5.9	17.75	6.9
Professional specialty	22.29	5.0	24.09	5.6	18.13	7.0
Mathematical and computer scientists	—	—	—	—	—	—
Natural scientists	—	—	—	—	—	—
Health related	24.04	5.7	24.33	5.8	—	—
Registered nurses	21.77	3.5	21.96	3.5	—	—
Teachers, college and university	23.13	5.4	28.76	17.4	22.39	3.4
Teachers, post secondary, subject not specified ..	21.61	.9	—	—	—	—
Teachers, except college and university	16.93	8.6	10.97	10.6	17.20	8.9
Elementary school teachers	18.49	14.1	—	—	—	—
Teachers, n.e.c.	16.58	13.3	—	—	16.92	12.9
Librarians, archivists, and curators	—	—	—	—	—	—
Social scientists and urban planners	—	—	—	—	—	—
Social, recreation, and religious workers	13.39	18.4	—	—	—	—
Writers, authors, entertainers, athletes, and professionals, n.e.c.	26.51	23.3	26.51	23.3	—	—
Technical	13.94	7.9	13.98	8.8	13.67	13.5
Licensed practical nurses	15.49	2.2	15.74	1.8	—	—
Health technologists and technicians, n.e.c.	13.55	4.6	13.55	4.6	—	—
Executive, administrative, and managerial	—	—	—	—	—	—
Executives, administrators, and managers	—	—	—	—	—	—
Management related	—	—	—	—	—	—
Sales	7.42	4.9	7.42	4.9	—	—
Sales workers, other commodities	7.26	6.5	7.26	6.5	—	—
Cashiers	6.91	4.3	6.91	4.3	—	—
Administrative support, including clerical	10.68	10.9	10.91	11.1	8.61	8.2
Secretaries	10.19	5.2	—	—	—	—
Library clerks	7.87	16.6	—	—	7.87	16.6
General office clerks	8.61	8.3	9.02	8.6	7.19	5.7
Administrative support, n.e.c.	8.77	10.6	10.32	9.9	—	—
Blue collar	8.32	11.1	8.05	12.2	11.98	7.4
Precision production, craft, and repair	—	—	—	—	—	—
Machine operators, assemblers, and inspectors	—	—	—	—	—	—
Transportation and material moving	10.97	18.9	10.69	23.2	12.39	7.3
Bus drivers	13.34	21.8	—	—	13.07	6.0
Handlers, equipment cleaners, helpers, and laborers	6.75	3.8	6.74	3.9	—	—
Stock handlers and baggers	6.43	2.4	6.43	2.4	—	—
Service	6.79	3.2	6.60	3.5	7.94	5.4
Protective service	7.68	8.0	7.58	10.1	7.97	9.5
Crossing guards	7.05	5.8	—	—	7.05	5.8
Guards and police, except public service	7.62	10.0	7.58	10.1	—	—
Food service	6.06	3.4	5.91	3.7	8.15	12.3
Waiters and waitresses	3.29	6.9	3.29	6.9	—	—
Kitchen workers, food preparation	8.47	5.9	8.47	5.9	—	—
Food preparation, n.e.c.	6.54	3.4	—	—	7.92	12.7
Health service	9.17	5.3	9.13	5.6	—	—
Nursing aides, orderlies and attendants	9.16	5.6	9.17	5.6	—	—
Cleaning and building service	7.14	6.9	6.75	5.1	—	—
Janitors and cleaners	7.36	9.5	6.86	7.4	—	—
Personal service	6.90	3.5	6.54	2.3	7.44	7.7
Child care workers, n.e.c.	7.41	9.2	—	—	7.41	9.3

See footnotes at end of table.

Table 2-3. Mean hourly earnings¹, part-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total		Private industry		State and local government	
	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)	Mean	Relative error ⁴ (percent)
Service —Continued						
Personal service—Continued						
Service, n.e.c.	\$7.34	5.7	—	—	—	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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 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. See appendix B for more information.

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

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

Table 3-1. Mean weekly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation ³	Total			Private industry			State and local government		
	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
All	\$776	1.8	39.8	\$762	2.1	40.1	\$845	3.2	38.1
All excluding sales	778	1.9	39.7	763	2.2	40.1	845	3.2	38.1
White collar	911	2.2	39.5	901	2.6	40.2	949	4.0	37.1
White collar excluding sales	928	2.2	39.3	922	2.6	40.0	949	4.0	37.1
Professional specialty and technical	1,062	2.2	38.6	1,036	2.4	39.8	1,122	4.7	35.9
Professional specialty	1,147	2.3	38.3	1,122	2.6	39.7	1,192	4.4	35.7
Engineers, architects, and surveyors	1,232	3.6	40.2	1,232	3.6	40.2	-	-	-
Industrial engineers	1,132	2.1	40.4	1,132	2.1	40.4	-	-	-
Mechanical engineers	1,261	11.7	40.4	1,261	11.7	40.4	-	-	-
Engineers, n.e.c.	1,258	2.7	40.0	1,258	2.7	40.0	-	-	-
Mathematical and computer scientists	1,126	4.8	40.1	1,127	4.8	40.1	-	-	-
Computer systems analysts and scientists	1,127	6.2	40.2	1,128	6.2	40.2	-	-	-
Operations and systems researchers and analysts	1,133	7.0	40.0	1,133	7.0	40.0	-	-	-
Natural scientists	823	19.5	39.4	1,175	11.3	40.0	-	-	-
Health related	901	3.1	39.7	892	3.3	39.9	970	9.1	38.7
Physicians	1,093	18.3	40.4	1,057	20.9	39.9	-	-	-
Registered nurses	876	2.4	39.6	877	2.6	39.8	865	5.1	37.6
Teachers, college and university	1,560	14.2	38.2	1,338	7.0	34.5	1,595	16.1	38.7
Engineering teachers	2,432	8.8	39.3	-	-	-	-	-	-
Teachers, post secondary, subject not specified	1,577	2.9	33.3	-	-	-	-	-	-
Teachers, except college and university	1,262	3.4	34.1	777	7.7	38.2	1,275	3.5	33.9
Prekindergarten and kindergarten	1,180	7.9	34.2	-	-	-	1,180	7.9	34.2
Elementary school teachers	1,261	3.0	33.6	-	-	-	1,269	3.0	33.6
Secondary school teachers	1,329	4.3	34.4	806	10.0	38.4	1,365	4.1	34.2
Teachers, special education	1,350	1.6	32.9	-	-	-	1,350	1.6	32.9
Vocational and educational counselors	920	25.7	38.2	-	-	-	-	-	-
Librarians, archivists, and curators	1,191	15.5	36.7	-	-	-	1,219	14.5	36.6
Librarians	1,191	15.5	36.7	-	-	-	1,219	14.5	36.6
Social scientists and urban planners	718	21.6	39.5	-	-	-	-	-	-
Social, recreation, and religious workers	877	11.1	37.7	-	-	-	914	11.8	37.3
Social workers	877	11.1	37.7	-	-	-	914	11.8	37.3
Lawyers and judges	1,928	17.3	39.9	-	-	-	-	-	-
Lawyers	1,928	17.3	39.9	-	-	-	-	-	-
Writers, authors, entertainers, athletes, and professionals, n.e.c.	1,216	4.3	38.1	1,197	5.0	37.9	-	-	-
Technical	781	3.4	39.6	819	2.9	40.0	560	11.0	37.2
Clinical laboratory technologists and technicians	608	16.6	40.0	760	3.5	40.0	-	-	-
Health record technologists and technicians	565	12.4	39.7	-	-	-	-	-	-
Radiologic technicians	704	7.4	40.0	702	7.6	40.0	-	-	-
Licensed practical nurses	590	1.9	39.9	587	2.1	39.9	-	-	-
Health technologists and technicians, n.e.c.	524	4.7	40.0	516	4.8	40.0	-	-	-
Electrical and electronic technicians	849	4.5	40.0	849	4.5	40.0	-	-	-
Mechanical engineering technicians	874	6.9	40.0	874	6.9	40.0	-	-	-

See footnotes at end of table.

Table 3-1. Mean weekly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
White collar —Continued									
Professional specialty and technical —Continued									
Technical —Continued									
Engineering technicians, n.e.c.	\$961	5.2	40.0	\$963	5.3	40.0	—	—	—
Drafters	1,009	8.3	40.0	1,009	8.3	40.0	—	—	—
Chemical technicians	780	3.9	40.0	780	3.9	40.0	—	—	—
Computer programmers	1,130	1.7	40.0	1,130	1.7	40.0	—	—	—
Technical and related, n.e.c. ..	729	10.6	37.1	876	7.2	40.0	\$612	15.3	34.7
Executive, administrative, and managerial	1,219	4.1	40.4	1,243	4.5	40.6	1,059	5.1	39.2
Executives, administrators, and managers	1,390	5.5	40.8	1,404	6.1	41.0	1,272	5.5	38.8
Administrators and officials, public administration	1,181	5.9	39.4	—	—	—	1,181	5.9	39.4
Financial managers	1,442	13.6	40.0	1,463	13.9	40.0	—	—	—
Managers, marketing, advertising, and public relations	1,728	8.9	41.3	1,728	8.9	41.3	—	—	—
Administrators, education and related fields	1,519	9.7	37.2	833	10.6	41.4	—	—	—
Managers, medicine and health	1,146	13.0	40.0	1,161	14.5	40.0	—	—	—
Managers, food servicing and lodging establishments	654	12.9	46.6	654	12.9	46.6	—	—	—
Managers and administrators, n.e.c.	1,515	7.4	40.5	1,521	7.5	40.5	—	—	—
Management related	984	3.1	40.0	1,007	3.6	40.1	867	3.2	39.5
Accountants and auditors	881	5.0	39.9	881	5.1	39.9	—	—	—
Other financial officers	1,225	15.8	40.6	1,321	16.2	40.7	—	—	—
Management analysts	857	13.6	40.0	857	13.6	40.0	—	—	—
Personnel, training, and labor relations specialists	962	9.6	40.3	977	11.5	40.3	—	—	—
Purchasing agents and buyers, n.e.c.	1,087	9.2	39.9	1,094	9.3	40.0	—	—	—
Construction inspectors	831	3.4	38.8	—	—	—	831	3.4	38.8
Management related, n.e.c.	982	6.0	39.9	991	7.0	39.9	—	—	—
Sales	737	7.6	41.2	737	7.6	41.2	—	—	—
Supervisors, sales	809	18.2	42.3	809	18.2	42.3	—	—	—
Sales, other business services	766	14.3	40.0	766	14.3	40.0	—	—	—
Sales representatives, mining, manufacturing, and wholesale	1,011	10.6	42.6	1,011	10.6	42.6	—	—	—
Sales workers, other commodities	514	11.5	40.0	514	11.5	40.0	—	—	—
Cashiers	345	5.9	39.9	345	5.9	39.9	—	—	—
Administrative support, including clerical	531	2.4	39.7	534	3.0	40.0	520	2.4	38.9
Supervisors, general office	744	5.9	40.7	753	7.6	41.0	—	—	—
Supervisors, financial records processing	777	10.9	39.7	777	10.9	39.7	—	—	—
Computer operators	703	11.3	39.2	748	12.9	39.9	—	—	—
Secretaries	584	5.3	39.2	619	6.6	39.5	528	5.1	38.8
Typists	383	6.9	39.4	405	9.5	38.9	—	—	—
Receptionists	392	7.5	39.7	392	7.5	39.7	—	—	—
Order clerks	506	6.9	41.4	506	6.9	41.4	—	—	—
Personnel clerks, except payroll and timekeeping	578	6.0	39.5	508	6.9	39.8	—	—	—
Records clerks, n.e.c.	460	7.4	42.7	424	8.0	44.0	—	—	—

See footnotes at end of table.

Table 3-1. Mean weekly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
White collar —Continued									
Administrative support, including clerical —Continued									
Bookkeepers, accounting and auditing clerks	\$467	5.2	40.0	\$451	5.3	40.1	—	—	—
Payroll and timekeeping clerks	564	3.4	39.8	564	3.4	39.8	—	—	—
Billing clerks	437	4.6	39.8	426	4.6	39.8	—	—	—
Telephone operators	434	11.8	38.6	434	11.8	38.6	—	—	—
Production coordinators	788	12.2	40.0	788	12.2	40.0	—	—	—
Traffic, shipping and receiving clerks	484	10.2	40.0	484	10.2	40.0	—	—	—
Stock and inventory clerks	409	9.0	40.0	409	9.0	40.0	—	—	—
Material recording, scheduling, and distribution clerks, n.e.c.	631	11.6	40.0	631	11.6	40.0	—	—	—
Insurance adjusters, examiners, and investigators	536	3.1	39.2	536	3.1	39.2	—	—	—
Investigators and adjusters, except insurance	477	10.7	39.5	477	10.7	39.5	—	—	—
Bill and account collectors	492	8.1	40.0	492	8.1	40.0	—	—	—
General office clerks	502	3.8	39.8	522	6.5	40.0	\$483	3.1	39.7
Bank tellers	425	1.9	40.0	425	1.9	40.0	—	—	—
Teachers' aides	352	7.7	32.6	—	—	—	353	7.8	32.6
Administrative support, n.e.c.	539	5.5	39.8	520	6.8	39.8	—	—	—
Blue collar	684	2.1	40.1	688	2.2	40.1	630	4.9	39.4
Precision production, craft, and repair	825	1.9	40.2	831	2.0	40.2	759	4.4	39.9
Supervisors, mechanics and repairers	1,010	10.5	45.7	1,027	10.9	46.3	—	—	—
Automobile mechanics	744	8.7	40.7	—	—	—	—	—	—
Bus, truck, and stationary engine mechanics	634	7.5	39.8	—	—	—	—	—	—
Heavy equipment mechanics	836	5.0	40.0	866	4.9	40.0	—	—	—
Industrial machinery repairers	814	4.9	40.0	814	4.9	40.0	—	—	—
Millwrights	908	1.7	40.0	908	1.7	40.0	—	—	—
Mechanics and repairers, n.e.c.	793	3.5	40.0	796	3.6	40.0	—	—	—
Supervisors, construction trades, n.e.c.	984	6.9	40.0	1,045	9.3	40.0	—	—	—
Electricians	940	1.6	39.9	933	1.4	40.0	—	—	—
Plumbers, pipefitters and steamfitters	965	3.8	40.0	965	3.9	40.0	—	—	—
Construction trades, n.e.c.	658	8.1	39.9	—	—	—	—	—	—
Supervisors, production	831	8.0	40.6	831	8.0	40.6	—	—	—
Tool and die makers	899	3.2	40.0	899	3.2	40.0	—	—	—
Tool and die maker apprentices	670	10.1	40.0	670	10.1	40.0	—	—	—
Machinists	813	3.8	40.0	813	3.8	40.0	—	—	—
Precision grinders, filers, and tool sharpeners	890	7.1	40.0	890	7.1	40.0	—	—	—
Patternmakers, layout workers, and cutters	980	6.9	40.0	980	6.9	40.0	—	—	—
Butchers and meat cutters	583	7.7	40.0	583	7.7	40.0	—	—	—
Inspectors, testers, and graders	825	8.6	40.0	825	8.6	40.0	—	—	—
Machine operators, assemblers, and inspectors	629	3.1	40.0	629	3.1	40.0	—	—	—

See footnotes at end of table.

Table 3-1. Mean weekly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
Blue collar —Continued									
Machine operators, assemblers, and inspectors —Continued									
Punching and stamping press operators	\$639	12.7	40.0	\$639	12.7	40.0	—	—	—
Fabricating machine operators, n.e.c.	823	1.4	40.0	823	1.4	40.0	—	—	—
Textile sewing machine operators	486	29.7	40.0	486	29.7	40.0	—	—	—
Laundering and dry cleaning machine operators	311	5.1	39.5	294	1.8	39.5	—	—	—
Packaging and filling machine operators	419	10.3	39.9	419	10.3	39.9	—	—	—
Miscellaneous machine operators, n.e.c.	498	6.8	40.0	498	6.8	40.0	—	—	—
Welders and cutters	696	7.9	40.0	696	7.9	40.0	—	—	—
Assemblers	687	4.0	40.0	687	4.0	40.0	—	—	—
Production inspectors, checkers and examiners ...	604	10.7	40.0	604	10.7	40.0	—	—	—
Transportation and material moving	673	4.2	40.0	709	4.5	40.4	\$515	3.9	38.4
Truck drivers	648	8.3	41.5	674	9.1	41.7	—	—	—
Bus drivers	472	5.2	37.9	—	—	—	488	4.4	37.8
Crane and tower operators	748	5.2	40.0	748	5.2	40.0	—	—	—
Industrial truck and tractor equipment operators	631	6.8	40.0	631	6.8	40.0	—	—	—
Handlers, equipment cleaners, helpers, and laborers	464	3.9	40.0	458	4.2	40.0	521	7.5	39.7
Groundskeepers and gardeners, except farm	522	9.9	39.3	—	—	—	522	9.9	39.3
Stock handlers and baggers ...	482	7.1	40.0	482	7.1	40.0	—	—	—
Freight, stock, and material handlers, n.e.c.	435	6.3	39.9	435	6.3	39.9	—	—	—
Vehicle washers and equipment cleaners	463	9.0	40.0	463	9.0	40.0	—	—	—
Hand packers and packagers	385	7.0	40.0	385	7.0	40.0	—	—	—
Laborers, except construction, n.e.c.	527	11.1	40.0	516	12.6	40.0	—	—	—
Service	443	3.9	40.1	359	3.3	39.8	631	4.1	40.8
Protective service	576	9.9	41.4	289	7.3	40.0	765	2.4	42.3
Firefighting	804	3.9	51.2	—	—	—	804	3.9	51.2
Police and detectives, public service	780	2.5	40.2	—	—	—	780	2.5	40.2
Correctional institution officers	656	3.7	40.1	—	—	—	656	3.7	40.1
Guards and police, except public service	289	7.8	40.0	288	7.8	40.0	—	—	—
Food service	332	6.9	39.5	330	7.3	39.8	364	10.1	33.5
Cooks	361	3.3	39.3	358	3.2	39.8	—	—	—
Food preparation, n.e.c.	290	9.5	37.9	288	10.1	38.3	—	—	—
Health service	350	3.1	39.7	345	3.1	39.7	466	6.0	39.5
Health aides, except nursing ..	413	2.5	39.8	408	2.8	39.7	—	—	—
Nursing aides, orderlies and attendants	333	2.6	39.7	330	2.5	39.7	—	—	—
Cleaning and building service	470	3.9	39.8	452	5.1	39.8	516	4.8	39.9
Maids and housemen	294	2.9	40.0	—	—	—	—	—	—
Janitors and cleaners	487	4.2	39.8	472	5.8	39.7	517	4.9	39.9

See footnotes at end of table.

Table 3-1. Mean weekly earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵	Weekly earnings		Mean weekly hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
Service —Continued									
Personal service	\$378	8.0	39.0	—	—	—	\$426	9.8	38.2
Child care workers, n.e.c.	448	10.5	39.5	—	—	—	470	10.6	39.4

¹ Earnings are the straight-time weekly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard 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 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. See appendix B for more information.

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

⁵ 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, and n.e.c. means "not elsewhere classified." Overall occupational groups may include data for categories not shown separately.

Table 3-2. Mean annual earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation ³	Total			Private industry			State and local government		
	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
All	\$39,533	1.8	2,028	\$39,534	2.1	2,083	\$39,530	3.2	1,784
All excluding sales	39,592	1.9	2,022	39,607	2.2	2,079	39,530	3.2	1,784
White collar	45,835	2.2	1,987	46,674	2.6	2,083	43,192	4.0	1,688
White collar excluding sales	46,551	2.2	1,973	47,756	2.6	2,075	43,192	4.0	1,688
Professional specialty and technical	51,617	2.2	1,877	53,452	2.4	2,054	48,135	4.7	1,540
Professional specialty	54,880	2.3	1,834	57,731	2.6	2,043	50,565	4.4	1,517
Engineers, architects, and surveyors	64,066	3.6	2,090	64,054	3.6	2,090	-	-	-
Industrial engineers	58,881	2.1	2,099	58,881	2.1	2,099	-	-	-
Mechanical engineers	65,582	11.7	2,102	65,582	11.7	2,102	-	-	-
Engineers, n.e.c.	65,413	2.7	2,082	65,413	2.7	2,082	-	-	-
Mathematical and computer scientists	58,574	4.8	2,085	58,596	4.8	2,085	-	-	-
Computer systems analysts and scientists	58,614	6.2	2,090	58,650	6.2	2,090	-	-	-
Operations and systems researchers and analysts	58,913	7.0	2,079	58,913	7.0	2,079	-	-	-
Natural scientists	42,781	19.5	2,047	61,091	11.3	2,080	-	-	-
Health related	46,742	3.1	2,061	46,396	3.3	2,074	49,272	9.1	1,965
Physicians	56,823	18.3	2,102	54,962	20.9	2,077	-	-	-
Registered nurses	45,552	2.4	2,060	45,617	2.6	2,072	44,980	5.1	1,954
Teachers, college and university	66,908	14.2	1,636	53,750	7.0	1,385	69,129	16.1	1,679
Engineering teachers	96,651	8.8	1,560	-	-	-	-	-	-
Teachers, post secondary, subject not specified	57,765	2.9	1,219	-	-	-	-	-	-
Teachers, except college and university	49,831	3.4	1,345	32,433	7.7	1,593	50,290	3.5	1,338
Prekindergarten and kindergarten	45,878	7.9	1,330	-	-	-	45,878	7.9	1,330
Elementary school teachers	49,426	3.0	1,319	-	-	-	49,716	3.0	1,316
Secondary school teachers	51,486	4.3	1,334	32,579	10.0	1,552	52,716	4.1	1,320
Teachers, special education	53,716	1.6	1,311	-	-	-	53,716	1.6	1,311
Vocational and educational counselors	43,226	25.7	1,794	-	-	-	-	-	-
Librarians, archivists, and curators	52,511	15.5	1,619	-	-	-	53,261	14.5	1,598
Librarians	52,511	15.5	1,619	-	-	-	53,261	14.5	1,598
Social scientists and urban planners	36,555	21.6	2,014	-	-	-	-	-	-
Social, recreation, and religious workers	42,039	11.1	1,808	-	-	-	43,293	11.8	1,769
Social workers	42,039	11.1	1,808	-	-	-	43,293	11.8	1,769
Lawyers and judges	100,253	17.3	2,077	-	-	-	-	-	-
Lawyers	100,253	17.3	2,077	-	-	-	-	-	-
Writers, authors, entertainers, athletes, and professionals, n.e.c.	60,637	4.3	1,902	59,329	5.0	1,878	-	-	-
Technical	40,024	3.4	2,029	42,583	2.9	2,081	26,346	11.0	1,753
Clinical laboratory technologists and technicians	31,624	16.6	2,080	39,538	3.5	2,080	-	-	-
Health record technologists and technicians	29,400	12.4	2,062	-	-	-	-	-	-
Radiologic technicians	36,609	7.4	2,080	36,520	7.6	2,080	-	-	-
Licensed practical nurses	30,658	1.9	2,075	30,513	2.1	2,074	-	-	-
Health technologists and technicians, n.e.c.	27,273	4.7	2,080	26,856	4.8	2,080	-	-	-
Electrical and electronic technicians	44,170	4.5	2,081	44,170	4.5	2,081	-	-	-
Mechanical engineering technicians	45,465	6.9	2,080	45,465	6.9	2,080	-	-	-

See footnotes at end of table.

Table 3-2. Mean annual earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
White collar —Continued									
Professional specialty and technical —Continued									
Technical —Continued									
Engineering technicians, n.e.c.	\$49,995	5.2	2,080	\$50,064	5.3	2,080	—	—	—
Drafters	52,476	8.3	2,080	52,476	8.3	2,080	—	—	—
Chemical technicians	40,585	3.9	2,080	40,585	3.9	2,080	—	—	—
Computer programmers	58,756	1.7	2,080	58,756	1.7	2,080	—	—	—
Technical and related, n.e.c. ...	34,084	10.6	1,733	45,544	7.2	2,080	\$26,491	15.3	1,503
Executive, administrative, and managerial	63,318	4.1	2,100	64,605	4.5	2,111	54,609	5.1	2,022
Executives, administrators, and managers	72,223	5.5	2,118	72,962	6.1	2,131	65,911	5.5	2,011
Administrators and officials, public administration	61,416	5.9	2,049	—	—	—	61,416	5.9	2,049
Financial managers	74,995	13.6	2,080	76,089	13.9	2,081	—	—	—
Managers, marketing, advertising, and public relations	89,852	8.9	2,146	89,852	8.9	2,146	—	—	—
Administrators, education and related fields	75,169	9.7	1,841	38,947	10.6	1,936	—	—	—
Managers, medicine and health	59,610	13.0	2,080	60,394	14.5	2,080	—	—	—
Managers, food servicing and lodging establishments	34,030	12.9	2,422	34,030	12.9	2,422	—	—	—
Managers and administrators, n.e.c.	78,785	7.4	2,104	79,073	7.5	2,104	—	—	—
Management related	51,083	3.1	2,075	52,344	3.6	2,083	44,540	3.2	2,032
Accountants and auditors	45,816	5.0	2,077	45,805	5.1	2,077	—	—	—
Other financial officers	63,692	15.8	2,110	68,701	16.2	2,116	—	—	—
Management analysts	44,580	13.6	2,080	44,580	13.6	2,080	—	—	—
Personnel, training, and labor relations specialists	50,038	9.6	2,094	50,790	11.5	2,097	—	—	—
Purchasing agents and buyers, n.e.c.	56,523	9.2	2,077	56,865	9.3	2,080	—	—	—
Construction inspectors	43,209	3.4	2,020	—	—	—	43,209	3.4	2,020
Management related, n.e.c.	50,761	6.0	2,061	51,506	7.0	2,073	—	—	—
Sales	38,315	7.6	2,143	38,315	7.6	2,143	—	—	—
Supervisors, sales	42,066	18.2	2,197	42,066	18.2	2,197	—	—	—
Sales, other business services	39,810	14.3	2,080	39,810	14.3	2,080	—	—	—
Sales representatives, mining, manufacturing, and wholesale	52,563	10.6	2,217	52,563	10.6	2,217	—	—	—
Sales workers, other commodities	26,721	11.5	2,080	26,721	11.5	2,080	—	—	—
Cashiers	17,918	5.9	2,072	17,918	5.9	2,072	—	—	—
Administrative support, including clerical	27,362	2.4	2,048	27,744	3.0	2,077	25,996	2.4	1,944
Supervisors, general office	38,680	5.9	2,118	39,164	7.6	2,130	—	—	—
Supervisors, financial records processing	40,383	10.9	2,065	40,383	10.9	2,065	—	—	—
Computer operators	36,578	11.3	2,036	38,901	12.9	2,073	—	—	—
Secretaries	29,533	5.3	1,984	32,111	6.6	2,052	25,631	5.1	1,882
Typists	19,941	6.9	2,049	21,057	9.5	2,020	—	—	—
Receptionists	20,370	7.5	2,064	20,370	7.5	2,064	—	—	—
Order clerks	26,291	6.9	2,151	26,291	6.9	2,151	—	—	—
Personnel clerks, except payroll and timekeeping	30,073	6.0	2,054	26,402	6.9	2,071	—	—	—
Records clerks, n.e.c.	23,932	7.4	2,220	22,040	8.0	2,290	—	—	—

See footnotes at end of table.

Table 3-2. Mean annual earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
White collar —Continued									
Administrative support, including clerical —Continued									
Bookkeepers, accounting and auditing clerks	\$24,256	5.2	2,080	\$23,437	5.3	2,085	—	—	—
Payroll and timekeeping clerks	29,342	3.4	2,068	29,342	3.4	2,068	—	—	—
Billing clerks	22,710	4.6	2,071	22,149	4.6	2,070	—	—	—
Telephone operators	22,555	11.8	2,006	22,555	11.8	2,006	—	—	—
Production coordinators	40,956	12.2	2,080	40,956	12.2	2,080	—	—	—
Traffic, shipping and receiving clerks	25,160	10.2	2,080	25,160	10.2	2,080	—	—	—
Stock and inventory clerks	21,244	9.0	2,080	21,244	9.0	2,080	—	—	—
Material recording, scheduling, and distribution clerks, n.e.c.	32,794	11.6	2,080	32,794	11.6	2,080	—	—	—
Insurance adjusters, examiners, and investigators	27,883	3.1	2,036	27,883	3.1	2,036	—	—	—
Investigators and adjusters, except insurance	24,783	10.7	2,052	24,783	10.7	2,052	—	—	—
Bill and account collectors	25,584	8.1	2,080	25,584	8.1	2,080	—	—	—
General office clerks	26,116	3.8	2,072	27,144	6.5	2,078	\$25,103	3.1	2,066
Bank tellers	22,090	1.9	2,080	22,090	1.9	2,080	—	—	—
Teachers' aides	14,234	7.7	1,317	—	—	—	14,275	7.8	1,316
Administrative support, n.e.c.	28,008	5.5	2,068	27,030	6.8	2,067	—	—	—
Blue collar	35,500	2.1	2,079	35,752	2.2	2,086	31,463	4.9	1,966
Precision production, craft, and repair	42,926	1.9	2,090	43,200	2.0	2,091	39,447	4.4	2,075
Supervisors, mechanics and repairers	52,515	10.5	2,378	53,383	10.9	2,405	—	—	—
Automobile mechanics	38,683	8.7	2,117	—	—	—	—	—	—
Bus, truck, and stationary engine mechanics	32,953	7.5	2,069	—	—	—	—	—	—
Heavy equipment mechanics	43,454	5.0	2,080	45,017	4.9	2,080	—	—	—
Industrial machinery repairers	42,310	4.9	2,080	42,310	4.9	2,080	—	—	—
Millwrights	47,222	1.7	2,080	47,222	1.7	2,080	—	—	—
Mechanics and repairers, n.e.c.	41,226	3.5	2,080	41,381	3.6	2,080	—	—	—
Supervisors, construction trades, n.e.c.	51,179	6.9	2,080	54,336	9.3	2,080	—	—	—
Electricians	48,905	1.6	2,076	48,517	1.4	2,080	—	—	—
Plumbers, pipefitters and steamfitters	50,186	3.8	2,080	50,168	3.9	2,080	—	—	—
Construction trades, n.e.c.	34,191	8.1	2,077	—	—	—	—	—	—
Supervisors, production	43,205	8.0	2,113	43,205	8.0	2,113	—	—	—
Tool and die makers	46,768	3.2	2,080	46,768	3.2	2,080	—	—	—
Tool and die maker apprentices	34,865	10.1	2,080	34,865	10.1	2,080	—	—	—
Machinists	42,272	3.8	2,080	42,272	3.8	2,080	—	—	—
Precision grinders, filers, and tool sharpeners	46,284	7.1	2,080	46,284	7.1	2,080	—	—	—
Patternmakers, layout workers, and cutters	50,954	6.9	2,080	50,954	6.9	2,080	—	—	—
Butchers and meat cutters	30,335	7.7	2,080	30,335	7.7	2,080	—	—	—
Inspectors, testers, and graders	42,875	8.6	2,080	42,875	8.6	2,080	—	—	—
Machine operators, assemblers, and inspectors	32,698	3.1	2,082	32,701	3.1	2,082	—	—	—

See footnotes at end of table.

Table 3-2. Mean annual earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
Blue collar —Continued									
Machine operators, assemblers, and inspectors —Continued									
Punching and stamping press operators	\$33,243	12.7	2,080	\$33,243	12.7	2,080	—	—	—
Fabricating machine operators, n.e.c.	42,807	1.4	2,080	42,807	1.4	2,080	—	—	—
Textile sewing machine operators	25,246	29.7	2,080	25,246	29.7	2,080	—	—	—
Laundering and dry cleaning machine operators	16,173	5.1	2,055	15,298	1.8	2,054	—	—	—
Packaging and filling machine operators	21,799	10.3	2,073	21,799	10.3	2,073	—	—	—
Miscellaneous machine operators, n.e.c.	25,892	6.8	2,080	25,892	6.8	2,080	—	—	—
Welders and cutters	36,215	7.9	2,080	36,215	7.9	2,080	—	—	—
Assemblers	35,722	4.0	2,080	35,722	4.0	2,080	—	—	—
Production inspectors, checkers and examiners ...	31,408	10.7	2,080	31,408	10.7	2,080	—	—	—
Transportation and material moving	34,204	4.2	2,035	36,880	4.5	2,101	\$23,785	3.9	1,774
Truck drivers	33,687	8.3	2,156	35,027	9.1	2,171	—	—	—
Bus drivers	20,972	5.2	1,684	—	—	—	21,451	4.4	1,662
Crane and tower operators	38,905	5.2	2,080	38,905	5.2	2,080	—	—	—
Industrial truck and tractor equipment operators	32,799	6.8	2,080	32,799	6.8	2,080	—	—	—
Handlers, equipment cleaners, helpers, and laborers	24,143	3.9	2,078	23,834	4.2	2,080	27,102	7.5	2,064
Groundskeepers and gardeners, except farm	27,119	9.9	2,043	—	—	—	27,119	9.9	2,043
Stock handlers and baggers ...	25,081	7.1	2,080	25,081	7.1	2,080	—	—	—
Freight, stock, and material handlers, n.e.c.	22,597	6.3	2,077	22,597	6.3	2,077	—	—	—
Vehicle washers and equipment cleaners	24,072	9.0	2,080	24,072	9.0	2,080	—	—	—
Hand packers and packagers	20,017	7.0	2,080	20,017	7.0	2,080	—	—	—
Laborers, except construction, n.e.c.	27,388	11.1	2,080	26,854	12.6	2,080	—	—	—
Service	22,703	3.9	2,053	18,661	3.3	2,069	31,286	4.1	2,019
Protective service	29,852	9.9	2,146	15,016	7.3	2,080	39,617	2.4	2,190
Firefighting	41,807	3.9	2,661	—	—	—	41,807	3.9	2,661
Police and detectives, public service	40,552	2.5	2,090	—	—	—	40,552	2.5	2,090
Correctional institution officers	34,091	3.7	2,085	—	—	—	34,091	3.7	2,085
Guards and police, except public service	15,014	7.8	2,080	14,990	7.8	2,080	—	—	—
Food service	17,040	6.9	2,024	17,184	7.3	2,069	14,956	10.1	1,375
Cooks	18,290	3.3	1,989	18,622	3.2	2,070	—	—	—
Food preparation, n.e.c.	14,842	9.5	1,943	14,967	10.1	1,990	—	—	—
Health service	18,197	3.1	2,063	17,963	3.1	2,064	24,235	6.0	2,054
Health aides, except nursing ..	21,479	2.5	2,068	21,236	2.8	2,066	—	—	—
Nursing aides, orderlies and attendants	17,321	2.6	2,062	17,152	2.5	2,063	—	—	—
Cleaning and building service	24,407	3.9	2,067	23,513	5.1	2,068	26,637	4.8	2,063
Maids and housemen	15,301	2.9	2,079	—	—	—	—	—	—
Janitors and cleaners	25,279	4.2	2,064	24,560	5.8	2,065	26,716	4.9	2,063

See footnotes at end of table.

Table 3-2. Mean annual earnings¹, full-time workers:² Selected occupations, private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation ³	Total			Private industry			State and local government		
	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵	Annual earnings		Mean annual hours ⁵
	Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)		Mean	Relative error ⁴ (percent)	
Service —Continued									
Personal service	\$17,555	8.0	1,814	—	—	—	\$18,101	9.8	1,625
Child care workers, n.e.c.	19,674	10.5	1,733	—	—	—	20,262	10.6	1,701

¹ Earnings are the straight-time annual wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard 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 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. See appendix B for more information.

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

⁵ Mean annual hours are the hours an employee is scheduled to work in a year, exclusive of overtime.

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

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
All	\$18.59	1.9	\$18.05	2.1	\$21.41	3.4
All excluding sales	18.79	1.9	18.26	2.2	21.41	3.4
White collar	22.27	2.3	21.58	2.7	25.05	4.2
1	7.25	3.5	7.22	3.5	7.89	17.2
2	9.54	4.9	9.49	5.5	9.85	7.7
3	10.74	2.8	10.68	2.9	11.64	4.9
4	13.08	3.1	12.99	4.0	13.32	3.5
5	14.13	4.4	14.84	5.4	12.07	4.8
6	18.46	8.4	16.02	2.8	30.40	17.4
7	19.75	2.4	20.03	2.5	17.88	8.3
8	24.79	4.2	21.04	3.2	34.09	5.1
9	26.43	3.0	24.31	2.1	31.50	6.2
10	25.43	4.1	25.84	4.7	23.70	7.4
11	32.54	3.3	31.91	4.0	35.47	5.0
12	35.58	2.7	35.70	2.7	33.94	9.4
13	39.84	10.1	44.21	2.8	-	-
14	47.54	8.0	47.47	8.2	-	-
Not able to be leveled	34.07	12.5	36.27	15.2	27.32	9.3
White collar excluding sales	23.16	2.3	22.61	2.7	25.06	4.2
1	7.95	4.5	7.96	4.5	7.89	17.5
2	10.22	4.9	10.30	5.6	9.89	7.8
3	11.23	2.6	11.20	2.7	11.64	4.9
4	12.82	2.9	12.60	3.9	13.32	3.5
5	13.74	3.8	14.48	4.6	12.07	4.8
6	18.66	8.8	16.08	3.0	30.40	17.4
7	19.49	2.4	19.76	2.4	17.88	8.3
8	25.55	4.3	21.54	3.5	34.09	5.1
9	26.59	3.1	24.35	2.0	31.50	6.2
10	25.40	4.2	25.81	4.8	23.70	7.4
11	32.38	3.5	31.65	4.3	35.47	5.0
12	35.59	2.7	35.71	2.8	33.94	9.4
13	39.84	10.1	44.21	2.8	-	-
14	47.54	8.0	47.47	8.2	-	-
Not able to be leveled	34.33	12.9	36.75	15.9	27.32	9.3
Professional specialty and technical	26.97	2.3	25.68	2.5	30.27	5.0
Professional specialty	29.31	2.4	27.91	2.7	32.21	4.8
5	11.73	8.1	14.36	4.9	11.28	8.5
6	29.40	17.0	17.49	5.2	39.97	10.8
7	20.00	4.1	20.54	2.6	17.68	16.4
8	29.14	4.9	22.24	3.2	36.21	4.5
9	27.83	4.0	23.94	1.8	34.15	6.1
10	25.90	6.4	26.87	7.5	23.34	11.3
11	32.87	4.4	32.13	5.5	35.95	4.9
12	34.49	3.8	34.36	3.9	-	-
13	31.98	29.1	47.13	6.9	-	-
Not able to be leveled	29.95	11.2	31.25	17.1	27.94	9.3
Engineers, architects, and surveyors	30.65	3.6	30.65	3.6	-	-
9	25.18	2.4	25.18	2.4	-	-
10	28.36	3.0	28.36	3.0	-	-
11	32.64	8.0	32.64	8.0	-	-
12	31.94	2.7	31.94	2.7	-	-
Industrial engineers	28.05	1.9	28.05	1.9	-	-
Mechanical engineers	31.20	11.9	31.20	11.9	-	-
9	25.60	6.0	25.60	6.0	-	-
11	39.55	13.1	39.55	13.1	-	-
Engineers, n.e.c.	31.42	2.7	31.42	2.7	-	-
9	24.76	2.1	24.76	2.1	-	-
11	30.04	2.3	30.04	2.3	-	-
12	33.06	2.5	33.06	2.5	-	-
Mathematical and computer scientists	28.02	5.0	28.03	5.0	-	-
9	23.46	4.5	23.46	4.5	-	-
10	27.21	6.3	27.33	6.9	-	-
11	29.97	4.6	29.97	4.6	-	-
Computer systems analysts and scientists	28.05	6.4	28.06	6.4	-	-

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar –Continued						
Professional specialty and technical –Continued						
Professional specialty –Continued						
Mathematical and computer scientists –Continued						
Computer systems analysts and scientists –Continued						
9	\$24.72	5.7	\$24.72	5.7	–	–
10	27.21	6.3	27.33	6.9	–	–
11	31.56	2.2	31.56	2.2	–	–
12	33.53	5.4	33.53	5.4	–	–
Operations and systems researchers and analysts						
9	28.16	7.2	28.16	7.2	–	–
9	21.14	4.8	21.14	4.8	–	–
Natural scientists						
20.77	18.8	29.25	11.2	–	–	
Health related						
22.99	2.8	22.85	2.9	\$24.32	8.9	
6	18.02	3.7	18.01	3.8	–	–
7	20.46	3.0	20.50	3.0	–	–
8	21.39	2.6	21.43	2.8	20.82	3.0
9	21.73	2.2	21.71	2.3	–	–
10	28.59	10.8	30.67	12.6	–	–
11	27.99	6.8	29.13	7.6	–	–
Not able to be leveled	26.42	19.9	27.80	22.9	–	–
Physicians						
31.02	18.2	31.28	20.9	–	–	
Not able to be leveled	26.42	19.9	27.80	22.9	–	–
Registered nurses						
22.02	1.9	22.00	2.0	22.24	4.1	
6	18.80	2.7	18.80	2.8	–	–
7	20.90	3.1	20.90	3.1	–	–
8	21.33	1.1	21.38	1.2	20.82	3.0
9	21.19	2.1	21.25	2.2	–	–
10	24.80	12.3	–	–	–	–
11	30.06	7.4	30.62	8.4	–	–
Dietitians						
15.79	8.9	–	–	–	–	
Physical therapists						
24.01	7.9	–	–	–	–	
Teachers, college and university						
38.01	13.9	37.26	6.8	38.11	15.8	
8	50.96	10.9	–	–	–	
9	38.48	10.8	31.85	9.8	–	–
10	36.01	8.4	37.27	8.9	–	–
11	36.28	4.2	37.88	11.7	36.10	4.4
Engineering teachers						
61.84	7.3	–	–	–	–	
Health specialties teachers						
32.86	10.0	–	–	–	–	
Teachers, post secondary, n.e.c.						
46.59	14.5	46.59	14.5	–	–	
Teachers, post secondary, subject not specified ..						
29.40	18.3	–	–	28.92	20.3	
Teachers, except college and university						
35.53	4.5	19.37	7.5	36.06	4.6	
5	10.83	8.9	–	–	–	
6	39.51	10.9	–	–	41.25	10.1
8	37.38	4.7	25.03	8.6	37.71	4.8
9	35.76	6.0	–	–	36.05	6.0
Prekindergarten and kindergarten						
33.77	10.2	–	–	34.35	10.2	
Elementary school teachers						
36.16	4.7	–	–	36.43	4.7	
6	39.07	10.7	–	–	–	
8	36.95	5.4	–	–	37.07	5.5
9	35.47	7.9	–	–	35.54	7.9
Secondary school teachers						
38.58	5.1	20.95	9.8	39.94	4.9	
8	37.88	8.1	–	–	38.70	8.2
9	37.77	5.3	–	–	–	–
Teachers, special education						
40.98	2.9	–	–	40.98	2.9	
Teachers, n.e.c.						
33.84	22.6	–	–	34.12	22.4	
Vocational and educational counselors						
23.96	28.5	14.48	10.4	–	–	
Librarians, archivists, and curators						
29.04	22.2	–	–	29.59	21.9	
Librarians						
29.04	22.2	–	–	29.59	21.9	
Social scientists and urban planners						
18.45	21.9	–	–	–	–	
Social, recreation, and religious workers						
22.56	13.9	15.01	10.9	24.08	14.7	
8	20.25	18.2	–	–	–	
10	17.00	13.6	–	–	–	

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Professional specialty and technical —Continued						
Professional specialty —Continued						
Social, recreation, and religious workers						
—Continued						
11	\$37.30	12.9	—	—	—	—
Social workers	22.75	13.9	—	—	\$24.33	14.7
8	20.25	18.2	—	—	—	—
10	17.00	13.6	—	—	—	—
11	37.30	12.9	—	—	—	—
Lawyers and judges	48.27	17.3	—	—	—	—
Lawyers	48.27	17.3	—	—	—	—
Writers, authors, entertainers, athletes, and professionals, n.e.c.	31.64	6.6	\$31.33	7.6	—	—
9	24.99	3.5	24.99	3.5	—	—
Not able to be leveled	32.29	20.0	31.42	30.8	—	—
Technical	19.34	3.3	20.03	3.1	14.96	10.3
3	9.73	4.2	—	—	—	—
4	13.68	7.3	13.92	7.6	—	—
5	13.53	6.4	14.68	3.7	—	—
6	17.24	4.5	17.16	5.0	—	—
7	20.26	3.0	20.77	3.0	16.64	2.8
8	24.01	3.3	24.18	3.4	—	—
9	23.57	4.8	24.04	5.2	—	—
10	27.76	8.6	27.76	8.6	—	—
Clinical laboratory technologists and technicians	15.39	15.8	19.04	3.2	—	—
Health record technologists and technicians	14.66	12.5	—	—	—	—
Radiologic technicians	17.37	6.7	17.33	6.9	—	—
6	15.86	2.8	15.86	2.8	—	—
Licensed practical nurses	14.98	1.6	15.00	1.7	14.81	5.0
5	14.78	3.2	14.78	3.2	—	—
6	14.31	3.2	14.86	1.3	—	—
7	15.37	1.9	15.18	2.3	—	—
Health technologists and technicians, n.e.c.	13.18	4.1	13.02	4.1	—	—
4	11.98	3.8	—	—	—	—
5	13.41	3.3	13.41	3.3	—	—
Electrical and electronic technicians	21.22	4.5	21.22	4.5	—	—
Mechanical engineering technicians	21.86	6.9	21.86	6.9	—	—
Engineering technicians, n.e.c.	24.04	5.2	24.07	5.3	—	—
Drafters	22.87	12.5	22.87	12.5	—	—
Chemical technicians	19.51	3.9	19.51	3.9	—	—
Computer programmers	28.25	1.7	28.25	1.7	—	—
Technical and related, n.e.c.	19.48	7.3	21.88	7.2	17.34	10.5
Executive, administrative, and managerial	30.15	4.2	30.59	4.7	27.04	5.4
6	16.84	6.7	16.61	6.9	—	—
7	18.78	7.1	18.22	7.5	—	—
8	18.60	8.6	18.37	9.3	—	—
9	24.52	4.4	24.99	5.2	22.90	7.5
10	24.19	6.3	24.16	7.5	—	—
11	31.58	4.3	30.93	4.2	33.97	12.3
12	37.00	3.0	37.58	2.9	32.31	11.6
13	43.39	2.7	43.60	2.8	—	—
14	52.96	11.3	53.06	11.8	—	—
Not able to be leveled	48.82	21.7	50.00	22.2	—	—
Executives, administrators, and managers	34.08	6.0	34.24	6.6	32.59	6.4
7	15.99	9.8	15.99	9.8	—	—
8	17.16	21.1	17.16	21.1	—	—
9	26.04	7.0	25.86	8.2	—	—
10	23.88	11.2	23.85	11.4	—	—
11	32.20	5.5	31.44	5.5	34.64	14.1
12	37.53	3.4	38.44	2.9	32.31	11.6
13	43.39	2.7	43.60	2.8	—	—
14	58.66	12.3	59.15	12.8	—	—

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Executive, administrative, and managerial —Continued						
Executives, administrators, and managers —Continued						
Not able to be leveled	\$65.85	28.1	\$70.05	29.1	—	—
Administrators and officials, public administration	29.98	6.0	—	—	\$29.98	6.0
Financial managers	36.06	13.8	36.57	14.0	—	—
Managers, marketing, advertising, and public relations	41.86	7.4	41.86	7.4	—	—
Administrators, education and related fields	40.83	12.4	20.12	10.2	—	—
Managers, medicine and health	28.66	13.0	29.04	14.5	—	—
Managers, food servicing and lodging establishments	14.05	13.7	14.05	13.7	—	—
Managers and administrators, n.e.c.	37.45	7.6	37.58	7.6	—	—
9	25.93	11.4	26.01	11.8	—	—
10	26.23	18.5	26.23	18.5	—	—
11	31.53	6.0	31.53	6.0	—	—
12	37.14	3.8	37.46	3.7	—	—
14	60.25	13.6	60.25	13.6	—	—
Management related	24.66	3.0	25.13	3.5	22.19	3.2
6	16.66	6.0	16.13	6.0	—	—
7	20.92	3.7	20.52	4.8	—	—
8	19.51	3.4	19.25	3.8	—	—
9	23.21	4.2	24.10	5.3	—	—
10	24.58	3.4	24.75	3.1	—	—
11	29.69	3.6	29.56	4.2	—	—
12	35.47	7.0	35.47	7.0	—	—
Accountants and auditors	22.10	4.9	22.09	5.0	—	—
8	20.31	5.1	20.31	5.1	—	—
9	26.00	8.8	26.39	9.2	—	—
Other financial officers	30.19	15.2	32.47	15.6	—	—
Management analysts	21.93	13.0	21.43	13.6	—	—
Personnel, training, and labor relations specialists	23.89	9.5	24.22	11.3	—	—
Purchasing agents and buyers, n.e.c.	27.22	9.2	27.34	9.3	—	—
Construction inspectors	21.39	2.6	—	—	21.39	2.6
Management related, n.e.c.	24.63	6.1	24.85	7.0	—	—
7	19.63	3.3	19.35	3.6	—	—
8	21.81	2.9	—	—	—	—
9	24.07	5.6	25.81	6.6	—	—
10	24.33	6.0	24.33	6.0	—	—
12	32.17	1.8	32.17	1.8	—	—
Sales	15.34	7.2	15.35	7.2	—	—
1	6.81	4.3	6.80	4.3	—	—
2	8.09	4.4	8.10	4.5	—	—
3	8.49	9.0	8.49	9.0	—	—
4	14.52	13.7	14.52	13.7	—	—
5	16.04	14.2	16.04	14.2	—	—
7	22.49	10.2	22.49	10.2	—	—
8	18.04	4.1	18.04	4.1	—	—
9	23.88	13.5	23.88	13.5	—	—
11	34.98	9.1	34.98	9.1	—	—
Supervisors, sales	19.15	13.9	19.15	13.9	—	—
Advertising and related sales	20.18	13.4	20.18	13.4	—	—
Sales, other business services	19.14	14.3	19.14	14.3	—	—
Sales representatives, mining, manufacturing, and wholesale	23.70	12.9	23.70	12.9	—	—
Sales workers, furniture and home furnishings	12.56	20.9	12.56	20.9	—	—
Sales workers, other commodities	10.63	10.6	10.63	10.6	—	—
1	6.98	5.5	6.98	5.5	—	—
3	9.18	16.7	9.18	16.7	—	—
Cashiers	7.75	4.0	7.76	4.0	—	—
1	7.03	10.3	7.03	10.4	—	—

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Sales —Continued						
Cashiers —Continued						
2	\$8.03	4.8	\$8.04	4.9	—	—
3	7.72	8.1	7.72	8.1	—	—
Administrative support, including clerical	13.15	2.4	13.14	2.9	\$13.18	2.5
1	7.95	4.5	7.96	4.5	7.89	17.5
2	10.19	5.0	10.24	5.8	9.97	7.9
3	11.28	2.7	11.24	2.8	11.83	5.1
4	12.75	3.1	12.44	4.4	13.42	3.6
5	14.11	5.5	14.33	6.9	13.42	5.4
6	15.21	4.3	15.24	4.5	14.72	3.9
7	17.76	5.2	17.96	5.8	—	—
8	19.65	6.8	19.97	9.0	—	—
Supervisors, general office	18.26	6.5	18.39	8.4	—	—
Supervisors, financial records processing	19.55	10.8	19.55	10.8	—	—
Computer operators	17.97	10.9	18.76	12.8	—	—
5	15.11	2.4	—	—	—	—
Secretaries	14.84	5.1	15.58	6.4	13.60	5.1
3	11.46	3.7	10.88	3.3	—	—
4	14.80	5.2	15.12	6.7	14.30	7.1
5	15.45	14.0	19.31	12.7	—	—
6	15.58	6.3	16.16	7.1	—	—
7	18.77	6.2	—	—	—	—
Typists	9.73	6.9	10.42	8.7	—	—
Interviewers	10.16	6.0	—	—	—	—
Receptionists	9.84	6.9	9.85	6.9	—	—
3	10.28	6.8	10.28	6.8	—	—
Order clerks	12.03	7.0	12.03	7.0	—	—
Personnel clerks, except payroll and timekeeping	14.64	6.2	12.75	7.0	—	—
Library clerks	11.04	11.9	—	—	9.90	12.7
1	6.84	11.2	—	—	—	—
Records clerks, n.e.c.	10.78	11.7	9.61	12.7	—	—
Bookkeepers, accounting and auditing clerks	11.33	5.5	10.92	5.5	—	—
3	9.63	3.8	9.63	3.8	—	—
4	12.00	7.4	11.00	5.6	—	—
5	11.77	12.4	11.31	12.5	—	—
Payroll and timekeeping clerks	12.78	8.7	12.78	8.7	—	—
Billing clerks	10.94	4.5	10.68	4.6	—	—
4	10.47	5.3	10.47	5.3	—	—
Telephone operators	11.18	12.5	11.18	12.5	—	—
2	12.44	10.3	12.44	10.3	—	—
Production coordinators	19.69	12.2	19.69	12.2	—	—
Traffic, shipping and receiving clerks	12.10	10.0	12.10	10.0	—	—
4	13.40	11.1	13.40	11.1	—	—
Stock and inventory clerks	10.21	9.0	10.21	9.0	—	—
Material recording, scheduling, and distribution clerks, n.e.c.	15.53	12.1	15.53	12.1	—	—
Insurance adjusters, examiners, and investigators	13.69	2.9	13.69	2.9	—	—
Investigators and adjusters, except insurance	12.08	11.0	12.08	11.0	—	—
Bill and account collectors	12.30	8.1	12.30	8.1	—	—
General office clerks	12.41	3.7	12.77	6.4	12.04	3.1
1	7.78	6.5	—	—	—	—
2	9.26	5.3	9.53	4.8	—	—
3	11.06	4.7	11.04	5.1	—	—
4	12.21	2.7	12.43	2.9	12.15	3.3
5	19.64	8.4	20.81	6.6	—	—
Bank tellers	10.13	3.7	10.13	3.7	—	—
3	9.97	5.3	9.97	5.3	—	—
Data entry keyers	8.54	12.9	—	—	—	—
Teachers' aides	10.93	4.9	—	—	10.97	4.9
2	10.68	3.2	—	—	—	—

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Administrative support, including clerical —Continued						
Administrative support, n.e.c.	\$13.26	5.4	\$12.96	6.7	\$14.36	5.7
3	10.72	4.6	10.77	4.7	—	—
4	13.08	6.6	11.79	7.2	—	—
6	14.10	11.7	—	—	—	—
Blue collar						
1	16.59	2.0	16.64	2.2	15.73	4.6
2	8.41	3.1	8.41	3.1	—	—
3	10.96	5.0	10.81	5.7	12.00	3.9
4	16.91	3.0	17.11	3.1	12.92	4.6
5	16.43	3.7	16.46	3.7	—	—
6	15.58	3.1	15.54	3.2	16.46	4.1
7	18.62	3.9	18.97	4.2	—	—
8	21.51	2.2	21.63	2.4	20.26	3.4
9	23.99	2.5	24.23	2.5	—	—
9	28.22	3.4	28.22	3.4	—	—
Precision production, craft, and repair						
3	20.53	1.8	20.65	1.9	19.01	4.4
4	13.30	9.0	13.40	11.9	—	—
5	14.56	8.3	14.49	8.5	—	—
6	16.35	4.0	16.31	4.1	—	—
7	18.97	4.8	19.21	5.1	—	—
8	21.56	2.3	21.68	2.5	20.24	3.6
9	23.68	2.6	23.91	2.6	—	—
9	28.22	3.4	28.22	3.4	—	—
Supervisors, mechanics and repairers	22.09	9.1	22.19	9.6	—	—
Automobile mechanics	18.27	7.4	—	—	—	—
Bus, truck, and stationary engine mechanics	15.93	7.6	—	—	—	—
Heavy equipment mechanics	20.89	5.0	21.64	4.9	—	—
7	21.17	5.5	—	—	—	—
Industrial machinery repairers	20.34	4.9	20.34	4.9	—	—
7	22.30	4.0	22.30	4.0	—	—
Millwrights	22.70	1.7	22.70	1.7	—	—
7	22.70	1.7	22.70	1.7	—	—
Mechanics and repairers, n.e.c.	19.82	3.5	19.89	3.6	—	—
7	22.89	2.8	23.42	2.7	—	—
Supervisors, construction trades, n.e.c.	24.61	6.9	26.12	9.3	—	—
Electricians	23.55	1.5	23.33	1.4	—	—
7	23.64	1.5	23.42	1.4	—	—
Plumbers, pipefitters and steamfitters	24.13	3.8	24.12	3.9	—	—
7	25.03	2.6	25.06	2.7	—	—
Construction trades, n.e.c.	16.46	8.2	—	—	—	—
Supervisors, production	20.45	7.4	20.45	7.4	—	—
8	23.80	3.4	23.80	3.4	—	—
Tool and die makers	22.48	3.2	22.48	3.2	—	—
7	22.87	2.8	22.87	2.8	—	—
Tool and die maker apprentices	16.76	10.1	16.76	10.1	—	—
Machinists	20.32	3.8	20.32	3.8	—	—
7	20.62	3.9	20.62	3.9	—	—
Precision grinders, filers, and tool sharpeners	22.25	7.1	22.25	7.1	—	—
Patternmakers, layout workers, and cutters	24.50	6.9	24.50	6.9	—	—
Butchers and meat cutters	14.58	7.7	14.58	7.7	—	—
Inspectors, testers, and graders	20.61	8.6	20.61	8.6	—	—
Stationary engineers	19.40	2.5	—	—	—	—
Machine operators, assemblers, and inspectors						
1	15.55	3.2	15.55	3.2	—	—
2	7.96	4.8	7.93	4.9	—	—
3	10.15	4.9	10.15	4.9	—	—
4	17.39	3.6	17.39	3.6	—	—
5	17.06	4.1	17.06	4.1	—	—
6	15.41	5.5	15.41	5.5	—	—
7	18.44	4.6	—	—	—	—
7	18.45	2.6	—	—	—	—

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Blue collar —Continued						
Machine operators, assemblers, and inspectors						
—Continued						
Punching and stamping press operators	\$15.98	12.7	\$15.98	12.7	—	—
3	17.80	8.2	17.80	8.2	—	—
Fabricating machine operators, n.e.c.	20.58	1.4	20.58	1.4	—	—
3	20.36	3.5	20.36	3.5	—	—
4	20.70	.8	20.70	.8	—	—
Textile sewing machine operators	12.14	29.7	12.14	29.7	—	—
Laundering and dry cleaning machine operators	7.83	4.7	7.42	.7	—	—
1	7.83	4.7	7.42	.7	—	—
Packaging and filling machine operators	10.51	10.4	10.51	10.4	—	—
Miscellaneous machine operators, n.e.c.	12.45	6.8	12.45	6.8	—	—
3	10.34	8.0	10.34	8.0	—	—
4	16.58	4.5	16.58	4.5	—	—
Welders and cutters	17.41	7.9	17.41	7.9	—	—
Assemblers	16.73	4.5	16.73	4.5	—	—
1	7.47	7.8	7.47	7.8	—	—
3	18.89	2.6	18.89	2.6	—	—
4	15.91	10.2	15.91	10.2	—	—
Production inspectors, checkers and examiners ..	15.10	10.7	15.10	10.7	—	—
Transportation and material moving	15.74	4.6	16.28	5.2	\$13.23	3.3
2	12.07	14.7	11.88	20.2	12.61	3.8
3	16.33	5.2	17.53	5.2	12.32	5.1
4	16.95	7.2	17.09	7.4	—	—
5	15.80	7.2	15.81	11.0	—	—
Truck drivers	15.38	5.9	16.00	6.3	—	—
3	16.96	11.1	16.96	11.1	—	—
Bus drivers	12.91	11.9	—	—	12.94	3.6
2	13.34	21.8	—	—	—	—
3	11.69	6.6	—	—	12.32	5.1
Crane and tower operators	18.70	5.2	18.70	5.2	—	—
Industrial truck and tractor equipment operators ..	15.77	6.8	15.77	6.8	—	—
3	18.19	4.6	18.19	4.6	—	—
4	15.31	10.1	15.31	10.1	—	—
Handlers, equipment cleaners, helpers, and laborers	10.62	3.8	10.42	4.1	12.95	6.8
1	8.48	3.8	8.48	3.8	—	—
2	10.97	5.1	10.87	6.2	11.39	4.9
3	13.95	9.0	13.79	10.5	—	—
4	12.38	11.8	12.38	11.8	—	—
Groundskeepers and gardeners, except farm	12.85	8.6	—	—	12.85	8.6
Stock handlers and baggers	9.24	6.7	9.24	6.7	—	—
1	6.82	3.7	6.82	3.7	—	—
Freight, stock, and material handlers, n.e.c.	11.03	5.7	11.03	5.7	—	—
1	9.57	12.1	9.57	12.1	—	—
2	10.75	9.3	10.75	9.3	—	—
Vehicle washers and equipment cleaners	11.36	9.6	11.36	9.6	—	—
1	11.36	9.6	11.36	9.6	—	—
Hand packers and packagers	9.46	6.8	9.46	6.8	—	—
Laborers, except construction, n.e.c.	13.17	11.1	12.91	12.6	—	—
2	13.06	17.8	12.87	19.5	—	—
Service	9.99	3.4	8.31	2.9	14.51	3.3
1	7.73	4.0	7.69	4.3	8.05	8.5
2	8.89	5.6	8.19	7.0	10.92	4.7
3	8.36	4.0	7.98	3.7	12.66	5.4
4	9.54	6.9	8.94	8.3	11.40	7.8
5	12.68	6.1	10.54	9.3	14.59	2.6
6	14.61	4.6	—	—	16.03	2.3
7	17.54	3.6	—	—	17.40	4.1
8	18.66	2.1	—	—	18.66	2.1
9	21.74	1.6	—	—	21.74	1.6

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Service—Continued						
Protective service	\$13.35	9.2	\$7.28	6.9	\$17.69	2.1
3	6.81	6.6	6.54	4.6	—	—
5	12.92	7.0	10.25	13.2	14.73	2.5
6	16.15	2.5	—	—	16.15	2.5
7	17.78	4.2	—	—	17.78	4.2
8	18.62	2.2	—	—	18.62	2.2
9	21.74	1.6	—	—	21.74	1.6
Firefighting	15.71	2.3	—	—	15.71	2.3
Police and detectives, public service	19.26	2.5	—	—	19.26	2.5
8	18.71	2.8	—	—	18.71	2.8
Correctional institution officers	16.35	3.8	—	—	16.35	3.8
Crossing guards	7.05	5.8	—	—	7.05	5.8
Guards and police, except public service	7.29	7.3	7.27	7.3	—	—
3	6.54	4.6	6.54	4.6	—	—
Protective service, n.e.c.	13.30	9.7	—	—	13.30	9.7
Food service	7.17	4.6	7.05	4.8	9.16	10.0
1	6.54	2.7	6.47	2.5	7.43	11.5
2	5.82	11.5	5.64	12.0	—	—
3	7.61	7.2	7.42	7.7	—	—
4	9.51	6.2	9.19	5.4	—	—
Bartenders	7.28	7.7	7.28	7.7	—	—
Waiters and waitresses	3.96	14.9	3.96	14.9	—	—
2	2.88	1.6	2.88	1.6	—	—
Cooks	8.66	5.3	8.45	5.4	—	—
3	9.10	2.9	—	—	—	—
4	9.05	6.4	—	—	—	—
Food counter, fountain, and related	5.93	12.4	5.93	12.4	—	—
Kitchen workers, food preparation	8.82	4.4	8.76	4.4	—	—
Food preparation, n.e.c.	6.91	5.3	6.76	5.2	8.25	10.9
1	6.61	3.6	—	—	7.43	11.5
2	6.68	19.6	—	—	—	—
3	8.27	5.1	—	—	—	—
Health service	8.87	3.0	8.77	3.0	11.62	5.3
2	8.35	3.8	8.23	3.8	—	—
3	8.72	3.9	8.72	4.0	—	—
4	10.07	3.5	9.93	3.8	—	—
Health aides, except nursing	10.34	2.2	10.21	2.5	—	—
2	9.12	5.9	—	—	—	—
3	10.37	2.6	10.37	2.6	—	—
4	10.73	2.7	—	—	—	—
Nursing aides, orderlies and attendants	8.54	2.8	8.47	2.8	12.02	9.8
2	8.27	4.0	8.23	4.1	—	—
3	8.51	3.9	8.51	3.9	—	—
4	9.03	3.8	9.03	3.8	—	—
Cleaning and building service	11.36	4.2	10.83	5.3	12.79	4.5
1	9.64	4.4	9.45	4.2	—	—
2	12.24	6.9	12.45	11.0	11.96	6.3
3	12.75	10.4	11.05	15.7	14.94	3.6
4	12.25	5.8	11.43	7.5	13.28	6.8
Maids and housemen	7.17	2.7	7.10	2.7	—	—
1	7.16	3.7	7.07	3.7	—	—
Janitors and cleaners	11.82	4.4	11.35	5.9	12.83	4.6
1	10.25	5.4	10.07	5.3	—	—
2	12.73	6.5	13.39	9.8	11.97	6.4
3	12.85	11.1	11.01	17.9	14.94	3.6
4	12.92	6.8	—	—	13.28	6.8
Personal service	8.63	5.7	7.45	4.0	9.96	8.0
1	6.73	6.0	—	—	6.87	9.8
2	8.14	9.0	—	—	8.97	7.4
3	8.09	5.3	7.66	4.5	10.80	8.7
4	8.89	3.9	—	—	—	—
Early childhood teachers' assistants	7.45	13.8	—	—	—	—
Child care workers, n.e.c.	9.85	9.9	—	—	10.09	10.1
1	6.84	11.8	—	—	6.84	11.8

See footnotes at end of table.

Table 4-1. Selected occupations¹ and levels,² all workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Service —Continued						
Personal service—Continued						
Child care workers, n.e.c.—Continued						
2	\$9.05	5.9	—	—	\$9.51	3.1
Service, n.e.c.	8.69	6.7	\$8.43	11.5	—	—

¹ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

² Each occupation for which 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 rank within each factor. The points are summed to determine the overall level of the occupation. See appendices C and D for more information.

³ All workers include full-time and part-time workers.

⁴ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and

hazard pay. Excluded are premium pay for overtime, vacations, 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.

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

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

Table 4-2. Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
All	\$19.50	1.9	\$18.98	2.2	\$22.15	3.5
All excluding sales	19.58	1.9	19.05	2.2	22.15	3.5
White collar	23.06	2.3	22.41	2.7	25.59	4.3
1	8.20	6.1	8.05	5.8	—	—
2	9.85	5.3	9.84	5.9	9.91	9.3
3	11.29	2.7	11.25	2.9	11.73	5.4
4	13.26	3.0	13.22	4.0	13.37	3.5
5	14.33	4.3	15.17	5.1	12.10	4.8
6	18.95	8.9	16.28	2.6	30.65	17.8
7	19.63	2.5	19.90	2.5	18.02	8.6
8	25.05	4.4	20.95	3.3	34.77	5.2
9	26.82	3.0	24.42	2.1	32.93	5.7
10	25.49	3.9	25.90	4.3	23.59	8.1
11	32.53	3.4	31.89	4.0	35.48	5.0
12	35.34	2.6	35.44	2.7	33.94	9.4
13	39.84	10.1	44.21	2.8	—	—
14	47.27	8.0	47.19	8.2	—	—
Not able to be leveled	34.98	12.8	36.66	15.3	28.72	8.2
White collar excluding sales	23.60	2.3	23.02	2.7	25.59	4.3
1	8.74	6.4	8.49	6.0	—	—
2	10.35	5.4	10.45	6.1	9.91	9.3
3	11.39	2.8	11.37	2.9	11.73	5.4
4	12.94	2.9	12.75	3.9	13.37	3.5
5	13.71	4.0	14.47	4.9	12.10	4.8
6	19.23	9.3	16.37	2.8	30.65	17.8
7	19.33	2.4	19.57	2.3	18.02	8.6
8	25.90	4.6	21.48	3.7	34.77	5.2
9	27.01	3.1	24.47	2.1	32.93	5.7
10	25.46	4.0	25.87	4.4	23.59	8.1
11	32.35	3.6	31.62	4.3	35.48	5.0
12	35.35	2.7	35.45	2.8	33.94	9.4
13	39.84	10.1	44.21	2.8	—	—
14	47.27	8.0	47.19	8.2	—	—
Not able to be leveled	35.30	13.3	37.17	16.0	28.72	8.2
Professional specialty and technical	27.51	2.4	26.03	2.5	31.25	5.1
Professional specialty	29.93	2.5	28.26	2.7	33.34	4.9
5	11.81	8.6	—	—	—	—
6	30.41	17.9	17.12	6.0	40.62	10.4
7	19.45	4.4	19.93	1.8	17.86	16.9
8	30.17	5.2	22.20	3.5	37.08	4.6
9	28.60	3.9	24.13	1.8	36.32	4.7
10	26.30	5.4	27.15	5.3	23.97	13.0
11	32.85	4.5	32.09	5.6	35.97	4.9
12	34.03	3.6	33.89	3.7	—	—
13	31.98	29.1	47.13	6.9	—	—
Not able to be leveled	30.87	11.5	31.51	17.0	—	—
Engineers, architects, and surveyors	30.65	3.6	30.65	3.6	—	—
9	25.18	2.4	25.18	2.4	—	—
10	28.36	3.0	28.36	3.0	—	—
11	32.64	8.0	32.64	8.0	—	—
12	31.94	2.7	31.94	2.7	—	—
Industrial engineers	28.05	1.9	28.05	1.9	—	—
Mechanical engineers	31.20	11.9	31.20	11.9	—	—
9	25.60	6.0	25.60	6.0	—	—
11	39.55	13.1	39.55	13.1	—	—
Engineers, n.e.c.	31.42	2.7	31.42	2.7	—	—
9	24.76	2.1	24.76	2.1	—	—
11	30.04	2.3	30.04	2.3	—	—
12	33.06	2.5	33.06	2.5	—	—
Mathematical and computer scientists	28.09	4.9	28.10	4.9	—	—
9	23.56	4.5	23.56	4.5	—	—
10	27.21	6.3	27.33	6.9	—	—
11	29.97	4.6	29.97	4.6	—	—
Computer systems analysts and scientists	28.05	6.4	28.06	6.4	—	—

See footnotes at end of table.

Table 4-2. **Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar –Continued						
Professional specialty and technical –Continued						
Professional specialty –Continued						
Mathematical and computer scientists –Continued						
Computer systems analysts and scientists –Continued						
9	\$24.72	5.7	\$24.72	5.7	–	–
10	27.21	6.3	27.33	6.9	–	–
11	31.56	2.2	31.56	2.2	–	–
12	33.53	5.4	33.53	5.4	–	–
Operations and systems researchers and analysts	28.34	7.0	28.34	7.0	–	–
9	21.31	5.0	21.31	5.0	–	–
Natural scientists	20.90	19.1	29.37	11.3	–	–
Health related	22.68	3.2	22.37	3.3	\$25.07	9.6
6	17.51	5.0	17.50	5.1	–	–
7	19.59	1.6	19.61	1.6	–	–
8	21.25	3.2	21.23	3.4	–	–
9	22.06	2.6	21.99	2.7	–	–
10	28.15	11.6	–	–	–	–
11	27.85	7.4	29.05	8.5	–	–
Not able to be leveled	26.42	19.9	27.80	22.9	–	–
Physicians	27.04	18.3	26.46	21.0	–	–
Not able to be leveled	26.42	19.9	27.80	22.9	–	–
Registered nurses	22.12	2.4	22.02	2.6	23.01	4.9
6	18.61	3.5	–	–	–	–
7	20.00	1.7	20.00	1.7	–	–
8	21.54	1.1	21.55	1.3	–	–
9	21.52	2.6	21.52	2.8	–	–
11	30.48	7.5	31.19	8.4	–	–
Teachers, college and university	40.89	14.1	38.81	7.4	41.18	16.0
9	40.25	9.6	33.59	11.2	–	–
10	35.79	11.1	35.79	11.1	–	–
11	36.24	4.3	37.97	11.9	–	–
Engineering teachers	61.96	7.1	–	–	–	–
Teachers, post secondary, subject not specified ..	47.39	5.2	–	–	–	–
Teachers, except college and university	37.06	4.2	20.36	7.8	37.58	4.3
6	40.08	10.5	–	–	41.81	9.5
8	38.14	4.8	25.18	8.6	38.49	4.9
9	38.26	3.9	–	–	38.64	3.9
Prekindergarten and kindergarten	34.49	10.8	–	–	34.49	10.8
Elementary school teachers	37.49	3.6	–	–	37.77	3.7
8	36.97	5.4	–	–	37.07	5.5
9	37.84	4.6	–	–	37.93	4.6
Secondary school teachers	38.60	5.1	20.99	10.0	39.94	4.9
8	37.88	8.1	–	–	38.70	8.2
9	37.77	5.3	–	–	–	–
Teachers, special education	40.98	2.9	–	–	40.98	2.9
Vocational and educational counselors	24.10	28.9	–	–	–	–
Librarians, archivists, and curators	32.43	18.6	–	–	33.33	17.4
Librarians	32.43	18.6	–	–	33.33	17.4
Social scientists and urban planners	18.15	22.2	–	–	–	–
Social, recreation, and religious workers	23.25	13.9	–	–	24.47	14.9
8	20.36	18.3	–	–	–	–
11	37.30	12.9	–	–	–	–
Social workers	23.25	13.9	–	–	24.47	14.9
8	20.36	18.3	–	–	–	–
11	37.30	12.9	–	–	–	–
Lawyers and judges	48.27	17.3	–	–	–	–
Lawyers	48.27	17.3	–	–	–	–
Writers, authors, entertainers, athletes, and professionals, n.e.c.	31.89	6.4	31.60	7.5	–	–
9	24.99	3.5	24.99	3.5	–	–
Not able to be leveled	32.86	19.4	32.25	30.2	–	–

See footnotes at end of table.

Table 4-2. Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Professional specialty and technical —Continued						
Technical	\$19.72	3.2	\$20.46	2.9	\$15.03	10.9
3	9.76	4.3	—	—	—	—
4	14.57	5.2	14.94	5.1	—	—
5	13.25	7.4	14.56	4.6	—	—
6	17.50	4.6	17.37	5.4	—	—
7	20.41	3.0	20.90	2.9	16.76	2.8
8	24.17	3.3	24.36	3.4	—	—
9	23.63	4.9	24.04	5.2	—	—
10	27.76	8.6	27.76	8.6	—	—
Clinical laboratory technologists and technicians	15.20	16.6	19.01	3.5	—	—
Health record technologists and technicians	14.26	12.9	—	—	—	—
Radiologic technicians	17.60	7.4	17.56	7.6	—	—
Licensed practical nurses	14.78	1.9	14.71	2.0	—	—
5	14.02	2.7	14.02	2.7	—	—
7	15.46	2.2	15.25	2.7	—	—
Health technologists and technicians, n.e.c.	13.11	4.7	12.91	4.8	—	—
5	13.07	4.0	13.07	4.0	—	—
Electrical and electronic technicians	21.22	4.5	21.22	4.5	—	—
Mechanical engineering technicians	21.86	6.9	21.86	6.9	—	—
Engineering technicians, n.e.c.	24.04	5.2	24.07	5.3	—	—
Drafters	25.23	8.3	25.23	8.3	—	—
Chemical technicians	19.51	3.9	19.51	3.9	—	—
Computer programmers	28.25	1.7	28.25	1.7	—	—
Technical and related, n.e.c.	19.67	7.3	21.90	7.2	17.62	10.5
Executive, administrative, and managerial	30.15	4.2	30.60	4.7	27.01	5.5
6	16.84	6.7	16.61	6.9	—	—
7	18.70	7.1	18.13	7.6	—	—
8	18.60	8.6	18.37	9.3	—	—
9	24.52	4.4	24.99	5.2	22.90	7.5
10	23.98	6.4	24.16	7.5	—	—
11	31.58	4.3	30.93	4.2	33.97	12.3
12	37.00	3.0	37.58	2.9	32.31	11.6
13	43.39	2.7	43.60	2.8	—	—
14	52.96	11.3	53.06	11.8	—	—
Not able to be leveled	48.92	21.7	50.00	22.2	—	—
Executives, administrators, and managers	34.10	6.0	34.24	6.6	32.78	6.4
7	15.99	9.8	15.99	9.8	—	—
8	17.16	21.1	17.16	21.1	—	—
9	26.04	7.0	25.86	8.2	—	—
10	23.88	11.2	23.85	11.4	—	—
11	32.20	5.5	31.44	5.5	34.64	14.1
12	37.53	3.4	38.44	2.9	32.31	11.6
13	43.39	2.7	43.60	2.8	—	—
14	58.66	12.3	59.15	12.8	—	—
Not able to be leveled	66.15	28.2	70.05	29.1	—	—
Administrators and officials, public administration	29.98	6.0	—	—	29.98	6.0
Financial managers	36.06	13.8	36.57	14.0	—	—
Managers, marketing, advertising, and public relations	41.86	7.4	41.86	7.4	—	—
Administrators, education and related fields	40.83	12.4	20.12	10.2	—	—
Managers, medicine and health	28.66	13.0	29.04	14.5	—	—
Managers, food servicing and lodging establishments	14.05	13.7	14.05	13.7	—	—
Managers and administrators, n.e.c.	37.45	7.6	37.58	7.6	—	—
9	25.93	11.4	26.01	11.8	—	—
10	26.23	18.5	26.23	18.5	—	—
11	31.53	6.0	31.53	6.0	—	—
12	37.14	3.8	37.46	3.7	—	—
14	60.25	13.6	60.25	13.6	—	—
Management related	24.62	3.0	25.13	3.5	21.92	3.2
6	16.66	6.0	16.13	6.0	—	—

See footnotes at end of table.

Table 4-2. Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar –Continued						
Executive, administrative, and managerial –Continued						
Management related –Continued						
7	\$20.85	3.8	\$20.41	5.0	–	–
8	19.51	3.4	19.25	3.8	–	–
9	23.21	4.2	24.10	5.3	–	–
10	24.12	2.5	24.75	3.1	–	–
11	29.69	3.6	29.56	4.2	–	–
12	35.47	7.0	35.47	7.0	–	–
Accountants and auditors	22.06	5.0	22.06	5.1	–	–
8	20.31	5.1	20.31	5.1	–	–
9	26.00	8.8	26.39	9.2	–	–
Other financial officers	30.19	15.2	32.47	15.6	–	–
Management analysts	21.43	13.6	21.43	13.6	–	–
Personnel, training, and labor relations specialists	23.89	9.5	24.22	11.3	–	–
Purchasing agents and buyers, n.e.c.	27.22	9.2	27.34	9.3	–	–
Construction inspectors	21.39	2.6	–	–	\$21.39	2.6
Management related, n.e.c.	24.63	6.1	24.85	7.0	–	–
7	19.63	3.3	19.35	3.6	–	–
8	21.81	2.9	–	–	–	–
9	24.07	5.6	25.81	6.6	–	–
10	24.33	6.0	24.33	6.0	–	–
12	32.17	1.8	32.17	1.8	–	–
Sales	17.88	7.2	17.88	7.2	–	–
2	8.38	4.5	8.38	4.5	–	–
3	10.16	10.7	10.16	10.7	–	–
4	15.23	14.2	15.23	14.2	–	–
5	18.06	10.5	18.06	10.5	–	–
7	22.49	10.2	22.49	10.2	–	–
8	18.04	4.1	18.04	4.1	–	–
9	23.88	13.5	23.88	13.5	–	–
11	34.98	9.1	34.98	9.1	–	–
Supervisors, sales	19.15	13.9	19.15	13.9	–	–
Sales, other business services	19.14	14.3	19.14	14.3	–	–
Sales representatives, mining, manufacturing, and wholesale	23.70	12.9	23.70	12.9	–	–
Sales workers, other commodities	12.85	11.5	12.85	11.5	–	–
Cashiers	8.65	6.0	8.65	6.0	–	–
2	8.31	4.9	8.31	4.9	–	–
Administrative support, including clerical	13.36	2.5	13.36	3.0	13.37	2.6
1	8.74	6.4	8.49	6.0	–	–
2	10.30	5.6	10.38	6.3	9.91	9.3
3	11.45	2.9	11.42	3.0	11.90	5.8
4	12.81	3.1	12.52	4.4	13.42	3.6
5	14.12	5.6	14.34	7.1	13.42	5.4
6	15.60	4.4	15.68	4.6	14.72	3.9
7	17.89	4.9	18.11	5.3	–	–
8	19.65	6.8	19.97	9.0	–	–
Supervisors, general office	18.26	6.5	18.39	8.4	–	–
Supervisors, financial records processing	19.55	10.8	19.55	10.8	–	–
Computer operators	17.97	10.9	18.76	12.8	–	–
5	15.11	2.4	–	–	–	–
Secretaries	14.88	5.1	15.65	6.4	13.62	5.1
3	11.47	3.8	10.88	3.3	–	–
4	14.82	5.2	15.16	6.7	14.30	7.1
5	15.45	14.0	19.31	12.7	–	–
6	15.58	6.3	16.16	7.1	–	–
7	18.77	6.2	–	–	–	–
Typists	9.73	6.9	10.42	8.7	–	–
Receptionists	9.87	7.4	9.87	7.4	–	–
3	10.24	7.0	10.24	7.0	–	–

See footnotes at end of table.

Table 4-2. **Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Administrative support, including clerical —Continued						
Order clerks	\$12.22	6.7	\$12.22	6.7	—	—
Personnel clerks, except payroll and timekeeping	14.64	6.2	12.75	7.0	—	—
Records clerks, n.e.c.	10.78	12.1	9.62	12.7	—	—
Bookkeepers, accounting and auditing clerks	11.66	5.7	11.24	5.8	—	—
4	12.00	7.4	11.00	5.6	—	—
5	11.77	12.4	11.31	12.5	—	—
Payroll and timekeeping clerks	14.19	3.8	14.19	3.8	—	—
Billing clerks	10.97	4.7	10.70	4.8	—	—
4	10.49	5.5	10.49	5.5	—	—
Telephone operators	11.24	12.5	11.24	12.5	—	—
Production coordinators	19.69	12.2	19.69	12.2	—	—
Traffic, shipping and receiving clerks	12.10	10.2	12.10	10.2	—	—
4	13.40	11.1	13.40	11.1	—	—
Stock and inventory clerks	10.21	9.0	10.21	9.0	—	—
Material recording, scheduling, and distribution clerks, n.e.c.	15.77	11.6	15.77	11.6	—	—
Insurance adjusters, examiners, and investigators	13.69	2.9	13.69	2.9	—	—
Investigators and adjusters, except insurance	12.08	11.0	12.08	11.0	—	—
Bill and account collectors	12.30	8.1	12.30	8.1	—	—
General office clerks	12.61	3.8	13.06	6.5	\$12.15	3.1
3	11.10	5.1	11.09	5.4	—	—
4	12.21	2.7	12.43	2.9	12.15	3.3
5	19.64	8.4	20.81	6.6	—	—
Bank tellers	10.62	1.9	10.62	1.9	—	—
Teachers' aides	10.81	5.6	—	—	10.85	5.6
Administrative support, n.e.c.	13.55	5.5	13.08	6.8	—	—
3	10.76	5.0	10.76	5.0	—	—
4	13.13	6.7	11.83	7.4	—	—
6	14.10	11.7	—	—	—	—
Blue collar	17.07	2.0	17.14	2.1	16.00	4.8
1	9.34	3.2	9.34	3.3	—	—
2	10.96	3.8	10.77	4.4	12.05	4.0
3	17.01	3.0	17.16	3.1	13.26	5.5
4	16.45	3.7	16.48	3.8	—	—
5	15.58	3.1	15.54	3.2	16.55	4.8
6	18.62	3.9	18.97	4.2	—	—
7	21.51	2.2	21.63	2.4	20.26	3.4
8	23.99	2.5	24.23	2.5	—	—
9	28.22	3.4	28.22	3.4	—	—
Precision production, craft, and repair	20.54	1.8	20.66	1.9	19.01	4.4
3	13.50	9.0	13.69	11.9	—	—
4	14.56	8.3	14.49	8.5	—	—
5	16.35	4.0	16.30	4.1	—	—
6	18.97	4.8	19.21	5.1	—	—
7	21.56	2.3	21.68	2.5	20.24	3.6
8	23.68	2.6	23.91	2.6	—	—
9	28.22	3.4	28.22	3.4	—	—
Supervisors, mechanics and repairers	22.09	9.1	22.19	9.6	—	—
Automobile mechanics	18.27	7.4	—	—	—	—
Bus, truck, and stationary engine mechanics	15.93	7.6	—	—	—	—
Heavy equipment mechanics	20.89	5.0	21.64	4.9	—	—
7	21.17	5.5	—	—	—	—
Industrial machinery repairers	20.34	4.9	20.34	4.9	—	—
7	22.30	4.0	22.30	4.0	—	—
Millwrights	22.70	1.7	22.70	1.7	—	—
7	22.70	1.7	22.70	1.7	—	—
Mechanics and repairers, n.e.c.	19.82	3.5	19.89	3.6	—	—
7	22.89	2.8	23.42	2.7	—	—
Supervisors, construction trades, n.e.c.	24.61	6.9	26.12	9.3	—	—

See footnotes at end of table.

Table 4-2. **Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Blue collar —Continued						
Precision production, craft, and repair —Continued						
Electricians	\$23.55	1.5	\$23.33	1.4	—	—
7	23.64	1.5	23.42	1.4	—	—
Plumbers, pipefitters and steamfitters	24.13	3.8	24.12	3.9	—	—
7	25.03	2.6	25.06	2.7	—	—
Construction trades, n.e.c.	16.46	8.2	—	—	—	—
Supervisors, production	20.45	7.4	20.45	7.4	—	—
8	23.80	3.4	23.80	3.4	—	—
Tool and die makers	22.48	3.2	22.48	3.2	—	—
7	22.87	2.8	22.87	2.8	—	—
Tool and die maker apprentices	16.76	10.1	16.76	10.1	—	—
Machinists	20.32	3.8	20.32	3.8	—	—
7	20.62	3.9	20.62	3.9	—	—
Precision grinders, filers, and tool sharpeners	22.25	7.1	22.25	7.1	—	—
Patternmakers, layout workers, and cutters	24.50	6.9	24.50	6.9	—	—
Butchers and meat cutters	14.58	7.7	14.58	7.7	—	—
Inspectors, testers, and graders	20.61	8.6	20.61	8.6	—	—
Machine operators, assemblers, and inspectors	15.71	3.1	15.71	3.1	—	—
1	8.31	3.6	8.28	3.7	—	—
2	10.15	4.9	10.15	4.9	—	—
3	17.39	3.6	17.39	3.6	—	—
4	17.06	4.1	17.06	4.1	—	—
5	15.41	5.5	15.41	5.5	—	—
6	18.44	4.6	—	—	—	—
7	18.45	2.6	—	—	—	—
Punching and stamping press operators	15.98	12.7	15.98	12.7	—	—
3	17.80	8.2	17.80	8.2	—	—
Fabricating machine operators, n.e.c.	20.58	1.4	20.58	1.4	—	—
3	20.36	3.5	20.36	3.5	—	—
4	20.70	.8	20.70	.8	—	—
Textile sewing machine operators	12.14	29.7	12.14	29.7	—	—
Laundering and dry cleaning machine operators	7.87	4.9	7.45	1.1	—	—
1	7.87	4.9	7.45	1.1	—	—
Packaging and filling machine operators	10.51	10.4	10.51	10.4	—	—
Miscellaneous machine operators, n.e.c.	12.45	6.8	12.45	6.8	—	—
3	10.34	8.0	10.34	8.0	—	—
4	16.58	4.5	16.58	4.5	—	—
Welders and cutters	17.41	7.9	17.41	7.9	—	—
Assemblers	17.17	4.0	17.17	4.0	—	—
1	8.13	4.3	8.13	4.3	—	—
3	18.89	2.6	18.89	2.6	—	—
4	15.91	10.2	15.91	10.2	—	—
Production inspectors, checkers and examiners ..	15.10	10.7	15.10	10.7	—	—
Transportation and material moving	16.81	4.0	17.55	4.2	\$13.41	3.8
2	13.79	8.8	—	—	—	—
3	16.92	5.5	17.94	5.0	—	—
4	17.05	7.3	17.20	7.5	—	—
5	15.80	7.7	15.81	11.0	—	—
Truck drivers	15.63	6.0	16.14	6.4	—	—
3	16.96	11.1	16.96	11.1	—	—
4	17.23	6.5	17.23	6.5	—	—
Bus drivers	12.45	4.9	—	—	12.91	4.2
3	11.65	8.1	—	—	—	—
Crane and tower operators	18.70	5.2	18.70	5.2	—	—
Industrial truck and tractor equipment operators ..	15.77	6.8	15.77	6.8	—	—
3	18.19	4.6	18.19	4.6	—	—
4	15.31	10.1	15.31	10.1	—	—
Handlers, equipment cleaners, helpers, and laborers	11.62	3.9	11.46	4.2	13.13	7.7
1	10.04	4.5	10.04	4.5	—	—
2	10.99	5.5	10.86	6.9	11.45	5.0

See footnotes at end of table.

Table 4-2. **Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Blue collar —Continued						
Handlers, equipment cleaners, helpers, and laborers						
—Continued						
3	\$14.07	9.1	\$13.82	10.6	—	—
4	12.38	11.8	12.38	11.8	—	—
Groundskeepers and gardeners, except farm	13.27	10.8	—	—	\$13.27	10.8
Stock handlers and baggers	12.06	7.1	12.06	7.1	—	—
Freight, stock, and material handlers, n.e.c.	10.88	6.3	10.88	6.3	—	—
Vehicle washers and equipment cleaners	11.57	9.0	11.57	9.0	—	—
1	11.57	9.0	11.57	9.0	—	—
Hand packers and packagers	9.62	7.0	9.62	7.0	—	—
Laborers, except construction, n.e.c.	13.17	11.1	12.91	12.6	—	—
2	13.06	17.8	12.87	19.5	—	—
Service	11.06	3.7	9.02	3.4	15.49	3.4
1	9.19	5.6	9.03	5.8	10.87	8.2
2	9.80	5.4	9.26	7.1	11.11	5.1
3	8.55	4.2	8.12	3.8	13.56	5.0
4	9.71	8.2	9.03	10.0	11.67	8.8
5	12.90	5.9	10.61	9.9	14.84	1.9
6	14.75	4.6	—	—	16.38	1.1
7	17.54	3.6	—	—	17.40	4.1
8	18.66	2.1	—	—	18.66	2.1
9	21.74	1.6	—	—	21.74	1.6
Protective service	13.91	9.2	7.22	7.3	18.09	2.2
5	13.19	6.6	—	—	14.96	1.7
6	16.56	.8	—	—	16.56	.8
7	17.78	4.2	—	—	17.78	4.2
8	18.62	2.2	—	—	18.62	2.2
9	21.74	1.6	—	—	21.74	1.6
Firefighting	15.71	2.3	—	—	15.71	2.3
Police and detectives, public service	19.41	2.5	—	—	19.41	2.5
8	18.71	2.8	—	—	18.71	2.8
Correctional institution officers	16.35	3.8	—	—	16.35	3.8
Guards and police, except public service	7.22	7.8	7.21	7.8	—	—
Food service	8.42	7.3	8.31	7.6	10.88	5.4
1	7.34	8.4	7.02	9.1	—	—
2	7.04	13.0	6.86	13.6	—	—
3	7.79	7.6	7.75	7.7	—	—
4	9.84	5.9	—	—	—	—
Cooks	9.19	3.6	9.00	3.3	—	—
Food preparation, n.e.c.	7.64	10.9	7.52	11.2	—	—
1	7.94	5.4	—	—	—	—
Health service	8.82	3.1	8.70	3.1	11.80	5.6
2	8.32	3.9	8.23	4.0	—	—
3	8.61	3.8	8.61	3.8	—	—
4	10.40	3.4	10.23	3.8	—	—
Health aides, except nursing	10.39	2.2	10.28	2.4	—	—
3	10.37	2.6	10.37	2.6	—	—
4	10.73	2.7	—	—	—	—
Nursing aides, orderlies and attendants	8.40	2.7	8.31	2.6	—	—
2	8.26	4.1	8.23	4.1	—	—
3	8.33	3.4	8.32	3.4	—	—
Cleaning and building service	11.81	3.8	11.37	4.9	12.91	4.8
1	10.39	3.8	10.22	3.9	—	—
2	12.30	7.1	12.50	11.2	12.04	6.6
3	12.76	10.5	11.05	15.7	15.04	3.7
4	12.39	6.1	11.43	7.5	—	—
Maids and housemen	7.36	2.9	—	—	—	—
Janitors and cleaners	12.25	3.7	11.90	5.0	12.95	4.9
1	11.02	4.1	10.88	4.2	—	—
2	12.81	6.6	13.47	9.8	12.06	6.6
3	12.87	11.2	11.01	17.9	15.04	3.7

See footnotes at end of table.

Table 4-2. **Selected occupations¹ and levels,² full-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Service —Continued						
Cleaning and building service—Continued						
Janitors and cleaners—Continued						
4	\$13.17	7.2	—	—	—	—
Personal service	9.68	8.2	—	—	\$11.14	8.9
Child care workers, n.e.c.	11.35	10.3	—	—	11.91	10.5

¹ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

² Each occupation for which 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 rank within each factor. The points are summed to determine the overall level of the occupation. See appendices C and D for more information.

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 Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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.

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

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

Table 4-3. Selected occupations¹ and levels,² part-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
All	\$10.13	5.0	\$9.81	5.6	\$12.35	8.3
All excluding sales	10.59	5.6	10.28	6.4	12.37	8.3
White collar	13.63	5.4	13.23	6.1	16.17	7.5
1	6.57	2.5	6.58	2.8	6.44	4.5
2	8.37	5.5	8.21	5.8	9.61	10.5
3	8.16	6.3	8.04	6.4	—	—
4	8.68	6.4	8.51	6.2	10.24	15.7
5	12.14	8.6	12.22	9.0	—	—
6	15.52	8.5	—	—	—	—
7	20.99	6.7	21.40	6.3	—	—
8	20.82	5.3	22.08	4.1	13.78	9.3
9	18.39	4.7	20.55	2.9	16.77	5.0
10	24.46	20.8	24.45	33.4	24.49	17.3
11	34.09	8.9	34.17	9.6	—	—
Not able to be leveled	20.66	11.2	17.27	47.9	—	—
White collar excluding sales	16.67	5.3	16.78	6.4	16.23	7.4
1	6.94	2.3	7.10	2.3	6.41	4.5
2	9.38	4.5	9.24	5.0	9.80	10.0
3	9.40	3.5	9.23	3.4	—	—
4	9.09	7.8	8.88	7.8	10.24	15.7
5	14.22	3.2	14.52	2.9	—	—
6	15.52	8.5	—	—	—	—
7	20.99	6.7	21.40	6.3	—	—
8	20.82	5.3	22.08	4.1	13.78	9.3
9	18.39	4.7	20.55	2.9	16.77	5.0
10	24.46	20.8	24.45	33.4	24.49	17.3
11	34.09	8.9	34.17	9.6	—	—
Not able to be leveled	20.66	11.2	17.27	47.9	—	—
Professional specialty and technical	20.63	4.9	21.66	5.9	17.75	6.9
Professional specialty	22.29	5.0	24.09	5.6	18.13	7.0
5	10.25	6.6	10.72	12.1	—	—
6	22.72	13.3	18.99	2.7	—	—
7	22.04	5.6	22.32	5.2	—	—
8	21.03	5.5	22.45	4.2	13.78	9.3
9	18.35	4.8	20.55	2.9	16.62	5.1
10	22.76	23.0	24.45	33.4	19.46	5.5
11	34.09	8.9	34.17	9.6	—	—
Not able to be leveled	21.83	10.1	—	—	—	—
Mathematical and computer scientists	—	—	—	—	—	—
Natural scientists	—	—	—	—	—	—
Health related	24.04	5.7	24.33	5.8	—	—
6	19.19	2.6	19.19	2.6	—	—
7	22.55	4.9	22.55	4.9	—	—
8	21.76	4.3	21.96	4.3	—	—
9	20.37	2.9	20.57	3.0	—	—
Registered nurses	21.77	3.5	21.96	3.5	—	—
7	22.69	4.7	22.69	4.7	—	—
8	20.72	2.6	20.91	2.6	—	—
9	20.37	2.9	20.57	3.0	—	—
Teachers, college and university	23.13	5.4	28.76	17.4	22.39	3.4
9	25.94	3.3	25.94	3.3	—	—
10	36.41	11.7	—	—	—	—
Teachers, post secondary, subject not specified ..	21.61	.9	—	—	—	—
Teachers, except college and university	16.93	8.6	10.97	10.6	17.20	8.9
5	9.96	7.6	—	—	—	—
Elementary school teachers	18.49	14.1	—	—	—	—
Teachers, n.e.c.	16.58	13.3	—	—	16.92	12.9
Librarians, archivists, and curators	—	—	—	—	—	—
Social scientists and urban planners	—	—	—	—	—	—
Social, recreation, and religious workers	13.39	18.4	—	—	—	—
Writers, authors, entertainers, athletes, and professionals, n.e.c.	26.51	23.3	26.51	23.3	—	—
Technical	13.94	7.9	13.98	8.8	13.67	13.5
5	15.13	3.1	15.13	3.1	—	—

See footnotes at end of table.

Table 4-3. **Selected occupations¹ and levels,² part-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
White collar —Continued						
Professional specialty and technical —Continued						
Technical —Continued						
6	\$14.42	2.5	—	—	—	—
7	15.92	4.3	—	—	—	—
Licensed practical nurses	15.49	2.2	\$15.74	1.8	—	—
Health technologists and technicians, n.e.c.	13.55	4.6	13.55	4.6	—	—
Executive, administrative, and managerial	—	—	—	—	—	—
Executives, administrators, and managers	—	—	—	—	—	—
Management related	—	—	—	—	—	—
Sales	7.42	4.9	7.42	4.9	—	—
1	6.42	3.3	6.42	3.3	—	—
2	7.62	6.8	7.63	6.9	—	—
3	7.38	8.3	7.38	8.3	—	—
Sales workers, other commodities	7.26	6.5	7.26	6.5	—	—
1	6.57	1.5	6.57	1.5	—	—
3	8.12	14.2	8.12	14.2	—	—
Cashiers	6.91	4.3	6.91	4.3	—	—
1	6.41	6.2	6.40	6.2	—	—
2	7.55	7.9	7.57	8.0	—	—
Administrative support, including clerical	10.68	10.9	10.91	11.1	\$8.61	8.2
1	6.94	2.3	7.10	2.3	6.41	4.5
2	9.47	4.4	9.24	5.0	10.26	8.1
3	9.41	3.5	9.23	3.4	—	—
4	8.64	7.5	8.65	7.8	—	—
Secretaries	10.19	5.2	—	—	—	—
Library clerks	7.87	16.6	—	—	7.87	16.6
General office clerks	8.61	8.3	9.02	8.6	7.19	5.7
1	7.22	3.0	—	—	—	—
Administrative support, n.e.c.	8.77	10.6	10.32	9.9	—	—
Blue collar	8.32	11.1	8.05	12.2	11.98	7.4
1	6.26	1.6	6.26	1.6	—	—
2	10.97	21.2	10.95	22.5	—	—
3	9.87	10.4	—	—	11.45	5.8
Precision production, craft, and repair	—	—	—	—	—	—
Machine operators, assemblers, and inspectors	—	—	—	—	—	—
Transportation and material moving	10.97	18.9	10.69	23.2	12.39	7.3
2	11.02	24.8	10.97	26.5	—	—
3	10.31	12.0	—	—	—	—
Bus drivers	13.34	21.8	—	—	13.07	6.0
3	11.82	4.9	—	—	—	—
Handlers, equipment cleaners, helpers, and laborers	6.75	3.8	6.74	3.9	—	—
1	6.25	2.1	6.25	2.1	—	—
Stock handlers and baggers	6.43	2.4	6.43	2.4	—	—
1	6.17	1.6	6.17	1.6	—	—
Service	6.79	3.2	6.60	3.5	7.94	5.4
1	6.48	2.0	6.41	1.7	6.80	6.9
2	5.57	9.8	5.04	10.5	9.37	5.0
3	7.70	6.0	7.50	6.4	9.77	6.5
4	8.60	4.9	8.55	5.2	—	—
Protective service	7.68	8.0	7.58	10.1	7.97	9.5
3	7.28	11.4	—	—	—	—
Crossing guards	7.05	5.8	—	—	7.05	5.8
Guards and police, except public service	7.62	10.0	7.58	10.1	—	—
Food service	6.06	3.4	5.91	3.7	8.15	12.3

See footnotes at end of table.

Table 4-3. **Selected occupations¹ and levels,² part-time workers:³ Mean hourly earnings,⁴ private industry and State and local government, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998 — Continued**

Occupation and level	Total		Private industry		State and local government	
	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)	Mean	Relative error ⁵ (percent)
Service—Continued						
Food service—Continued						
1	\$6.39	1.9	\$6.37	1.8	—	—
2	4.67	13.0	4.52	13.3	—	—
3	7.05	9.3	6.23	9.2	—	—
Waiters and waitresses	3.29	6.9	3.29	6.9	—	—
Kitchen workers, food preparation	8.47	5.9	8.47	5.9	—	—
Food preparation, n.e.c.	6.54	3.4	—	—	\$7.92	12.7
1	6.35	1.9	—	—	—	—
Health service	9.17	5.3	9.13	5.6	—	—
2	8.94	6.1	—	—	—	—
3	9.22	8.2	9.23	8.2	—	—
4	9.25	4.3	9.25	4.3	—	—
Nursing aides, orderlies and attendants	9.16	5.6	9.17	5.6	—	—
3	9.22	8.2	9.23	8.2	—	—
4	9.25	4.3	9.25	4.3	—	—
Cleaning and building service	7.14	6.9	6.75	5.1	—	—
1	6.52	3.6	6.52	3.6	—	—
Janitors and cleaners	7.36	9.5	6.86	7.4	—	—
1	6.55	4.9	6.55	4.9	—	—
Personal service	6.90	3.5	6.54	2.3	7.44	7.7
1	6.75	7.3	—	—	6.86	11.0
2	7.24	8.1	—	—	9.05	4.8
3	6.86	4.3	6.64	4.3	—	—
Child care workers, n.e.c.	7.41	9.2	—	—	7.41	9.3
1	6.84	11.8	—	—	6.84	11.8
Service, n.e.c.	7.34	5.7	—	—	—	—

¹ A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

² Each occupation for which 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 rank within each factor. The points are summed to determine the overall level of the occupation. See appendices C and D for more information.

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 Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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.

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

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

Table 5-1. **Selected worker characteristics: Mean hourly earnings¹ by occupational group,² National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998**

Occupational group	Private industry and State and local government					
	Full-time workers ³	Part-time workers ³	Union ⁴	Nonunion ⁴	Time ⁵	Incentive ⁵
	Mean					
All occupations	\$19.50	\$10.13	\$19.21	\$18.22	\$18.67	\$16.69
All excluding sales	19.58	10.59	19.32	18.45	18.86	15.74
White collar	23.06	13.63	24.19	21.81	22.49	17.53
White-collar excluding sales	23.60	16.67	24.82	22.72	23.24	16.32
Professional specialty and technical	27.51	20.63	31.94	25.42	26.97	—
Professional specialty	29.93	22.29	34.43	27.50	29.31	—
Technical	19.72	13.94	18.69	19.47	19.34	—
Executive, administrative, and managerial	30.15	—	25.33	30.49	30.50	—
Sales	17.88	7.42	—	15.81	14.24	17.89
Administrative support, including clerical	13.36	10.68	14.63	12.64	13.16	12.39
Blue collar	17.07	8.32	18.28	13.57	16.58	16.74
Precision production, craft, and repair	20.54	—	21.41	19.01	20.54	20.30
Machine operators, assemblers, and inspectors	15.71	—	17.82	11.02	15.55	—
Transportation and material moving	16.81	10.97	17.57	12.52	15.70	16.00
Handlers, equipment cleaners, helpers, and laborers	11.62	6.75	11.96	8.76	10.57	—
Service	11.06	6.79	13.59	7.93	10.03	—
	Relative error ⁶ (percent)					
All occupations	1.9	5.0	2.2	2.7	1.9	7.0
All excluding sales	1.9	5.6	2.2	2.8	1.9	8.2
White collar	2.3	5.4	4.3	2.7	2.2	8.1
White-collar excluding sales	2.3	5.3	4.3	2.7	2.3	14.5
Professional specialty and technical	2.4	4.9	4.2	2.8	2.3	—
Professional specialty	2.5	5.0	4.2	3.0	2.4	—
Technical	3.2	7.9	6.4	3.7	3.3	—
Executive, administrative, and managerial	4.2	—	6.3	4.5	4.3	—
Sales	7.2	4.9	—	7.7	8.9	9.8
Administrative support, including clerical	2.5	10.9	3.5	2.8	2.4	6.9
Blue collar	2.0	11.1	2.2	4.1	2.1	8.0
Precision production, craft, and repair	1.8	—	2.2	2.9	1.9	3.4
Machine operators, assemblers, and inspectors	3.1	—	3.1	5.5	3.3	—
Transportation and material moving	4.0	18.9	4.1	9.5	4.4	17.4
Handlers, equipment cleaners, helpers, and laborers	3.9	3.8	5.2	7.2	3.9	—
Service	3.7	3.2	4.2	3.1	3.5	—

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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. See appendix B for more information.

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.

⁶ The relative standard error (RSE) is the standard error expressed as a percent of the estimate. It can be used to calculate a "confidence interval" around a sample estimate. For more information about RSEs, see appendix A.

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

Table 5-2. Major industry division: Mean hourly earnings¹ by occupational group,² private industry, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupational group	Full-time and part-time workers									
	All private industries	Goods-producing industries ³				Service-producing industries ⁴				
		Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services
	Mean									
All occupations	\$18.05	\$21.74	-	-	\$21.68	-	-	-	\$17.83	\$15.45
All excluding sales	18.26	21.69	-	-	21.64	-	-	-	18.13	15.35
White collar	21.58	29.43	-	-	29.49	-	-	-	18.04	19.60
White-collar excluding sales	22.61	29.69	-	-	29.75	-	-	-	18.37	19.65
Professional specialty and technical	25.68	29.40	-	-	29.40	-	-	-	24.91	22.60
Professional specialty	27.91	31.09	-	-	31.09	-	-	-	26.52	24.93
Technical	20.03	23.84	-	-	23.85	-	-	-	-	17.24
Executive, administrative, and managerial	30.59	37.77	-	-	38.15	-	-	-	24.70	25.42
Sales	15.35	24.47	-	-	24.48	-	-	-	13.74	18.66
Administrative support, including clerical	13.14	16.04	-	-	16.08	-	-	-	12.35	12.13
Blue collar	16.64	17.84	-	-	17.59	-	-	-	-	11.81
Precision production, craft, and repair	20.65	21.70	-	-	21.46	-	-	-	-	16.01
Machine operators, assemblers, and inspectors	15.55	15.90	-	-	15.88	-	-	-	-	7.35
Transportation and material moving	16.28	19.80	-	-	19.52	-	-	-	-	8.02
Handlers, equipment cleaners, helpers, and laborers	10.42	13.09	-	-	12.83	-	-	-	-	10.87
Service	8.31	16.40	-	-	16.40	-	-	-	-	8.02
	Relative error ⁵ (percent)									
All occupations	2.1	2.9	-	-	3.0	-	-	-	7.1	4.6
All excluding sales	2.2	3.0	-	-	3.1	-	-	-	7.4	4.5
White collar	2.7	3.2	-	-	3.3	-	-	-	7.4	3.7
White-collar excluding sales	2.7	3.2	-	-	3.3	-	-	-	7.6	3.7
Professional specialty and technical	2.5	3.2	-	-	3.2	-	-	-	14.4	3.7
Professional specialty	2.7	3.3	-	-	3.3	-	-	-	12.7	4.1
Technical	3.1	3.4	-	-	3.4	-	-	-	-	4.8
Executive, administrative, and managerial	4.7	5.6	-	-	5.6	-	-	-	8.8	5.0
Sales	7.2	8.7	-	-	8.9	-	-	-	6.0	12.9
Administrative support, including clerical	2.9	5.0	-	-	5.1	-	-	-	4.7	4.2
Blue collar	2.2	2.4	-	-	2.5	-	-	-	-	8.3
Precision production, craft, and repair	1.9	1.8	-	-	1.9	-	-	-	-	5.1
Machine operators, assemblers, and inspectors	3.2	3.2	-	-	3.2	-	-	-	-	8.7
Transportation and material moving	5.2	3.7	-	-	3.8	-	-	-	-	8.8
Handlers, equipment cleaners, helpers, and laborers	4.1	5.9	-	-	5.9	-	-	-	-	10.0
Service	2.9	5.9	-	-	5.9	-	-	-	-	2.9

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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. See appendix B for more information.

³ Goods-producing industries include mining, construction, and manufacturing.

⁴ Service-producing industries include transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services.

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

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

Table 5-3. Establishment employment size: Mean hourly earnings¹ by occupational group,² private industry, National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998

Occupational group	Full-time and part-time workers				
	All private industry workers	50 - 99 workers	100 workers or more		
			Total	100 - 499 workers	500 workers or more
	Mean				
All occupations	\$18.05	\$14.70	\$18.61	\$16.01	\$20.66
All excluding sales	18.26	14.56	18.81	16.05	20.84
White collar	21.58	17.99	22.20	20.23	23.74
White-collar excluding sales	22.61	18.93	23.12	21.35	24.31
Professional specialty and technical	25.68	25.26	25.71	25.76	25.69
Professional specialty	27.91	29.28	27.83	28.76	27.41
Technical	20.03	20.72	19.94	19.57	20.19
Executive, administrative, and managerial	30.59	26.53	31.28	30.32	31.80
Sales	15.35	15.61	15.24	15.58	14.33
Administrative support, including clerical	13.14	11.26	13.54	12.98	14.17
Blue collar	16.64	13.87	16.99	13.36	19.66
Precision production, craft, and repair	20.65	18.06	21.10	18.25	22.92
Machine operators, assemblers, and inspectors	15.55	10.92	15.81	11.60	18.99
Transportation and material moving	16.28	14.99	16.50	12.51	18.64
Handlers, equipment cleaners, helpers, and laborers	10.42	8.09	11.03	10.03	12.25
Service	8.31	7.24	8.61	7.87	9.37
	Relative error ³ (percent)				
All occupations	2.1	6.6	2.3	4.4	2.5
All excluding sales	2.2	6.7	2.4	4.7	2.5
White collar	2.7	8.1	2.9	5.5	3.0
White-collar excluding sales	2.7	8.8	2.8	5.6	3.0
Professional specialty and technical	2.5	7.8	2.6	6.2	2.4
Professional specialty	2.7	7.1	2.8	6.9	2.4
Technical	3.1	7.1	3.4	7.1	3.2
Executive, administrative, and managerial	4.7	11.5	5.2	9.5	6.2
Sales	7.2	16.9	7.5	9.7	12.2
Administrative support, including clerical	2.9	4.2	3.2	5.0	3.7
Blue collar	2.2	7.4	2.3	4.7	2.1
Precision production, craft, and repair	1.9	7.3	2.0	3.7	1.8
Machine operators, assemblers, and inspectors	3.2	10.0	3.3	5.9	2.6
Transportation and material moving	5.2	14.2	5.4	15.7	4.2
Handlers, equipment cleaners, helpers, and laborers	4.1	6.2	4.5	6.4	7.3
Service	2.9	6.8	3.4	3.7	5.3

¹ Earnings are the straight-time hourly wages or salaries paid to employees. They include incentive pay, cost-of-living adjustments, and hazard pay. Excluded are premium pay for overtime, vacations, 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. See

appendix B for more information.

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

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

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. Although 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 includes questions of scope, frame, and sample selection.

Survey scope

This survey 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 is an economic unit that produces goods or services, a central administrative office, or an auxiliary unit providing support services to a company. For private industries in this survey, the establishment is usually at a single physical location. For State and local governments, an establishment is defined as all locations of a government entity.

The Detroit-Ann Arbor-Flint, MI, Metropolitan Statistical Area includes Genesee, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties, MI.

Sampling frame

The list of establishments from which the survey sample was selected (sampling frame) was developed from State unemployment insurance reports. 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 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. Field economists collected the data, working out of the Regional Office and visiting each establishment surveyed. Other contact methods, such as mail and telephone, were used to follow-up and update data.

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 MOGs:

- 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

Appendix B contains a complete list of all individual occupations, classified by the MOG to which they belong. 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 nine 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 job with its associated leveling factors, and a guide to help data users evaluate jobs in their firms

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 nota-

bly 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 and will be published by BLS in the future.

Collection period

Survey data were collected over a 13-month period for 60 metropolitan areas in the NCS program. For 20 small metropolitan areas, data were collected over a 4-month period. For each establishment in the survey, the data reflect the establishment's most recent information at the time of collection. The payroll reference month shown in the tables reflects the average date of this information for all sample units.

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

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 and 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)
- On-call pay

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 and 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 establishments or occupations into the various data series. Some of the establishments surveyed could not supply or 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 that were additionally defined by major occupation group and job level.

Establishments that were determined to be out of business or outside the scope of the survey 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.

Survey response

	Establishments
Total in sample	574
Responding	385
Out of business or not in survey scope	35
Unable or refused to provide data	154

Some surveys may have a high nonresponse rate for the all industries or private industry iterations. Such instances are noted in the bulletin table footnotes.

Estimation

The wage series in the tables are computed by combining the wages for each sampled occupation. 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 calculated series 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.

Estimates of the number of workers 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. RSE data are provided alongside the earnings in the bulletin tables.

The standard error can be used to calculate a “confidence interval” around a sample estimate. As an example, suppose a table shows that mean hourly earnings for all workers was \$12.79 with 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 (1.645 times 3.6 percent = 5.922 percent times \$12.27, plus or minus \$0.76). 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 workers¹ represented by the survey, by occupational group,² National Compensation Survey, Detroit-Ann Arbor-Flint, MI, July 1998**

Occupational group	Full-time and part-time workers		
	Total	Private industry	State and local government
All occupations	1,365,600	1,115,400	250,200
All excluding sales	1,280,200	1,030,300	249,900
White collar	701,300	538,300	163,000
White-collar excluding sales	615,800	453,100	162,700
Professional specialty and technical	319,000	210,400	108,700
Professional specialty	251,300	152,900	98,400
Technical	67,700	57,500	10,200
Executive, administrative, and managerial	108,000	93,600	14,400
Sales	85,500	85,200	—
Administrative support, including clerical	188,800	149,200	39,700
Blue collar	446,100	418,500	27,600
Precision production, craft, and repair	140,300	130,000	10,200
Machine operators, assemblers, and inspectors	178,100	177,300	—
Transportation and material moving	59,700	47,600	12,100
Handlers, equipment cleaners, helpers, and laborers	68,100	63,500	4,600
Service	218,200	158,700	59,600

¹ The number of workers represented by the survey are rounded to the nearest 100. Estimates of the number of workers provide a description of size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison to other statistical series to measure employment trends or levels. Both full-time and part-time workers were included in the survey.

² A classification system including about 480 individual occupations is used to cover all workers in the civilian economy. See appendix B for more information.

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

Appendix table 2. **Number of establishments represented by survey and the number studied by industry division and establishment employment size, Detroit-Ann Arbor-Flint, MI, July 1998**

Industry	Number of establishments represented ¹	Number of establishments studied				
		Total studied	50 - 99 workers	100 workers or more		
				Total	100 - 499 workers	500 workers or more
All industries	6,300	373	73	300	132	168
Private industry	6,000	321	72	249	115	134
Goods-producing industries	1,800	124	17	107	40	67
Mining	(²)	2	2	-	-	-
Construction	200	6	3	3	2	1
Manufacturing	1,600	116	12	104	38	66
Service-producing industries	4,200	197	55	142	75	67
Transportation and public utilities	300	15	4	11	8	3
Wholesale and retail trade	2,000	48	21	27	14	13
Finance, insurance and real estate	300	17	2	15	6	9
Services	1,600	117	28	89	47	42
State and local government	300	52	1	51	17	34

¹ Number of establishments represented by the survey rounded to the nearest 100.
² Number of establishments represented by the survey is fewer than 50.

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