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# National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1974

U.S. DEPARTMENT OF LABOR  
Bureau of Labor Statistics  
Bulletin 1837  
1974

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# National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1974

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Bulletin 1837

U.S. DEPARTMENT OF LABOR  
Peter J. Brennan, Secretary

BUREAU OF LABOR STATISTICS  
Julius Shiskin, Commissioner

1974



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## Preface

This bulletin summarizes the results of the Bureau's annual salary survey of selected professional, administrative, technical, and clerical occupations in private industry. The nationwide salary information, relating to March 1974, is representative of establishments in a broad spectrum of industries throughout the United States, except Alaska and Hawaii.

The results of this survey are used as the basis for setting Federal white-collar salaries under the provisions of the Federal Pay Comparability Act of 1970. The Director of the Office of Management and Budget and the Chairman of the U.S. Civil Service Commission, who jointly serve as the President's agent for the purpose of setting pay for Federal white-collar employees, are responsible for translating the survey findings into recommendations to the President as to the appropriate adjustments needed in Federal pay rates to make them comparable with private enterprise pay rates for the same levels of work. The President's agent is also responsible for determining the industrial, geographic, size of establishment, and occupational coverages of the survey. The role of the BLS in the pay setting process is limited to conducting the survey and advising on the feasibility of proposed survey changes.

These survey results have also proven useful to other users as a guide for salary administration and in general economic analysis. It should be emphasized that this survey, like any other salary survey, does not provide mechanical answers to pay policy questions.

The occupations studied span a wide range of duties and responsibilities. The occupations selected were those judged to be (a) surveyable in industry within the framework of a broad survey design, (b) representative of occupational groups which are numerically important in industry as well as in the Federal service, and (c) consist of work that is essentially the same in both the Federal and private sectors.

Occupational definitions used in the collection of the salary data (appendix C) reflect duties and responsibilities in private industry; however, they are also designed to be translatable to specific General Schedule grades applying to Federal employees. Thus the definitions of some occupations and work levels were limited to specific elements that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Civil Service Commission collaborated in the preparation of the definitions.

The scope of the survey, in terms of industrial, geographic, and minimum establishment-size coverage, remained the same as in March 1973.

The survey could not have been conducted without the cooperation of the many firms whose salary data provide the basis for the statistical information presented in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that collaborated in planning the survey, wishes to express appreciation for the cooperation it has received.

This study was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Wage Structures. The analysis in this bulletin was prepared by William M. Smith. Field work for the survey was directed by the Bureau's Assistant Regional Directors, Division of Operations.

Although only nationwide salary data are presented in this bulletin, clerical and drafting occupation salary data are available for each of the 93 metropolitan areas in which the Bureau conducts area wage surveys. These area reports also include information on such supplementary benefits as paid vacations, holidays, and health, insurance, and pension plans relating to nonsupervisory office workers. (See the areas listed on the order form at the back of this bulletin.)





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# Professional, Administrative, Technical, and Clerical Pay

## Summary

Average salaries of workers in the occupations covered by this survey rose 6.4 percent from March 1973 to March 1974, the largest percent increase recorded in 3 years.<sup>1</sup> Increases for 9 of 11 professional, administrative, and technical support occupations ranged from 5.8 to 7.2 percent; the average increase was 6.3 percent. The average of the increases for clerical occupations was 6.4 percent; 6 of the 7 advanced between 5.4 and 6.9 percent.

Average monthly salaries for the 84 occupational levels varied from \$426 for clerks engaged in routine filing to \$3,182 for the highest level in the attorney series. For most of the occupations, salary levels in metropolitan areas and in large establishments were higher than the average for all establishments within the full scope of the survey. Salary levels in finance and retail trade industries generally were lower than in other major industry divisions represented in the survey. Reported average standard weekly hours also were generally lower in the finance industries.

## Characteristics of the survey

This survey, the 15th in an annual series, provides nationwide salary averages and distributions for 84 work level categories covering 20 occupations. It relates to establishments in all areas of the United States, except Alaska and Hawaii, in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; engineering and architectural services; and research, development, and testing laboratories operated on a commercial basis.<sup>2</sup> The minimum sizes of establishments surveyed are: 250 employees in manufacturing and retail trade; and 100 employees in all other industry divisions.

Definitions for the occupations included in this study provide for classification of employees according to appropriate work levels. Within each occupation, the work levels surveyed — designated by Roman numerals, with level I as the lowest — are defined in terms of duties and responsibilities. Specific job factors determining

classification, however, vary from occupation to occupation.

The number of work level definitions for each occupation ranges from one for messengers to eight each for chemists and engineers. More than one level of work is defined for survey in most of the occupations; some are purposely defined, however, to cover specific bands of work levels, which are not intended to represent all levels or all workers that may be found in those occupations.

The survey is designed to permit separate presentation of data for metropolitan areas. Coverage in metropolitan areas includes the 261 Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through April 1973 by the U.S. Office of Management and Budget. Establishments in metropolitan areas employed over four-fifths of the total workers and nine-tenths of the professional, administrative, clerical, and related employees within the scope of the survey. Ninety percent of the employees in the occupations chosen for study were employed in metropolitan areas.

The selected occupations included more than 1,615,000 employees, or one-fifth of the estimated employment in professional, administrative, clerical, and related occupations in establishments within the scope of the survey. Employment in the selected occupations varied widely, reflecting actual differences in employment in the various occupations, and also differences arising from variations in the range of duties and responsibilities covered by the occupational definitions. Among the professional and administrative occupations, the eight levels of engineers included a total of 388,797 employees, whereas there were fewer than 5,000 employees in each of four of the occupational categories as defined for the study (chief accountants, job analysts, directors of personnel, and keypunch supervisors). (See table 1.) Accounting clerks and secretaries made up over

<sup>1</sup> Results of the March 1973 survey were presented in *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1973*, Bulletin 1804 (Bureau of Labor Statistics, 1973).

<sup>2</sup> For a full description of the scope of the 1974 survey, see appendix A.

**Text table 1. Percent increases in average salaries, 1961-74, by occupation and group**

Occupation and group	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	Average annual rate of increase 1961 to 1974
	to 1962	to 1963	to 1964	to 1965	to 1966	to 1967 <sup>1</sup>	to 1968	to 1969	to 1970	to 1971	to 1972 <sup>1</sup>	to 1973	to 1974	
All survey occupations <sup>2</sup> .....	2.9	3.0	3.1	3.1	3.3	4.5	5.4	5.7	6.2	6.6	5.8	5.4	6.4	4.7
Professional, administrative, and technical support <sup>2</sup> .....	3.0	3.3	3.4	3.7	3.6	4.2	5.5	5.8	6.2	6.7	5.5	5.4	6.3	4.8
Accountants .....	2.8	3.3	2.8	3.5	3.8	4.6	5.7	7.0	6.7	6.7	5.6	4.9	6.1	4.9
Auditors .....	2.9	3.6	3.1	3.9	3.8	4.8	5.5	7.2	7.0	7.0	5.5	5.2	5.2	5.0
Chief accountants .....	2.6	2.8	4.8	3.9	3.3	5.1	5.5	5.8	7.1	9.1	3.9	5.8	7.2	5.1
Attorneys .....	3.2	4.6	3.3	4.2	4.0	3.2	5.3	( <sup>3</sup> )	7.1	5.0	6.1	6.3	5.8	( <sup>4</sup> )
Buyers .....	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	4.2	4.9	6.6	6.1	7.0	6.3	5.0	6.0	( <sup>5</sup> )
Job analysts .....	1.4	2.6	3.5	4.3	5.4	3.4	7.0	2.1	4.1	7.7	6.8	5.2	6.1	4.6
Directors of personnel .....	3.7	3.0	4.6	3.5	3.6	3.8	5.4	5.4	7.4	8.0	3.9	7.5	7.2	5.1
Chemists .....	3.9	3.8	3.3	3.9	4.8	4.4	5.1	6.5	5.9	5.5	5.1	3.7	7.1	4.9
Engineers .....	2.6	4.4	2.9	3.2	3.7	4.3	5.4	6.2	5.5	5.7	5.2	5.1	5.4	4.6
Engineering technicians .....	( <sup>5</sup> )	2.9	3.6	2.3	2.8	3.7	5.1	5.8	6.3	6.5	5.1	4.7	6.0	<sup>6</sup> 4.6
Drafting .....	3.2	3.6	2.6	( <sup>3</sup> )	1.5	3.5	5.3	5.8	4.9	5.6	7.2	6.2	6.7	( <sup>4</sup> )
Clerical and clerical supervisory <sup>2</sup> .....	2.8	2.6	2.7	2.4	3.0	4.8	5.3	5.5	6.2	6.5	6.1	5.4	6.4	4.6
Accounting clerks .....	3.0	2.5	2.8	2.2	3.0	3.3	4.7	4.7	6.2	6.0	6.0	4.6	6.9	4.3
File clerks .....	( <sup>5</sup> )	2.6	3.1	2.2	2.9	5.1	6.8	5.5	5.5	6.1	5.5	5.9	5.4	<sup>6</sup> 4.7
Keypunch operators .....	( <sup>5</sup> )	2.5	2.7	2.3	3.7	5.2	4.9	5.3	6.4	7.0	6.8	5.4	7.3	<sup>6</sup> 4.9
Keypunch supervisors .....	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	6.1	6.1	8.2	6.2	( <sup>5</sup> )
Messengers .....	2.6	2.8	2.3	3.0	2.8	5.4	6.2	6.7	6.3	6.7	6.3	5.1	5.6	4.7
Secretaries .....	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	4.6	5.3	6.4	6.6	6.1	5.1	( <sup>3</sup> )	( <sup>5</sup> )
Stenographers .....	( <sup>3</sup> )	2.5	2.4	2.3	2.9	4.6	4.9	5.9	5.8	7.5	6.4	5.2	6.5	<sup>6</sup> 4.7
Typists .....	2.5	2.6	2.6	2.5	2.6	5.4	5.8	5.7	6.0	6.1	5.7	4.0	6.7	4.5

<sup>1</sup> Survey data did not represent a 12-month period due to a change in survey timing. Data have been prorated to represent a 12-month interval.

<sup>2</sup> Data for 1 administrative occupation (managers of office services, last surveyed in 1968), and 3 clerical occupations (bookkeeping machine operators, last surveyed in 1964, and switchboard operators and tabulating-machine operators, last surveyed in 1970), not shown above, are included in the averages

for the periods during which they were surveyed.

<sup>3</sup> Comparable data not available for both years.

<sup>4</sup> Comparison over this period was not possible because of changes in the definition of the occupation.

<sup>5</sup> Not surveyed.

<sup>6</sup> Average annual rate of increase 1962 to 1974.

NOTE: For method of computation, see appendix A.

one-half of the 812,409 employees in the clerical occupations studied. The selected drafting occupations had aggregate employment of 83,423 and the five engineering technician levels together had 93,100 employees.

Although women were employed in approximately one-half of the total jobs in the occupations studied, they worked largely in clerical positions. The clerical occupations in which the proportion of women amounted to more than 90 percent at each level were file clerks, keypunch operators, secretaries, stenographers, and typists. A percent distribution of women employees by occupation and level is shown in appendix A.

### Changes in salary levels

Text table 1 presents increases in average salaries that occurred between annual surveys since 1961 for each

survey occupation.<sup>3</sup> Also shown are average percent changes for the two broad occupational groups covered by the survey (the professional, administrative, and technical support group; and the clerical and clerical supervisory group) and the average percent change for the two groups combined.

The increase in white-collar salaries in the year ending March 1974 was, at 6.4 percent, 1 percentage point greater than the increase in the year ending March 1973. This is the first year since 1970-71 that the rate of white-collar salary increase has shown a gain from the previous year, and is the second largest percent increase since the series began in 1961. Clerical and clerical supervisory salaries were up 6.4 percent; salaries for the professional, administrative, and technical support occu-

<sup>3</sup> Beginning in 1965, data are for establishments in metropolitan areas and nonmetropolitan counties; before 1965, data are for metropolitan areas only. Establishments employing fewer than 250 workers were excluded before 1966.

**Text table 2. Percent increases in average salaries, 1961–1974, by work level category**

Work level category	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1961
	to 1962	to 1963	to 1964	to 1965	to 1966	to 1967 <sup>1</sup>	to 1968	to 1969	to 1970	to 1971	to 1972 <sup>1</sup>	to 1973	to 1974	to 1974
Group A (GS grades 1-4 in appendix D) . . . . .	2.8	2.7	2.7	2.2	2.9	4.5	5.1	5.5	6.2	6.2	6.3	5.5	6.2	77.6
Group B (GS grades 5-10 in appendix D) . . . . .	2.6	4.0	2.6	3.3	3.7	4.8	5.8	6.5	6.3	6.3	5.2	4.4	5.7	81.6
Group C (GS grades 11-15 in appendix D) . . . . .	3.5	3.7	3.5	4.2	4.2	4.1	4.7	5.9	6.4	6.2	5.6	5.7	6.2	86.6

<sup>1</sup> Actual survey-to-survey increases have been prorated to a 12-month period.

NOTE: For method of computation, see appendix A.

pations were up 6.3 percent. Of the 18 occupations for which 1973-74 increases could be computed, the smallest increases were shown by auditors at 5.2 percent and engineers and file clerks at 5.4 percent. Showing the largest increases were keypunch operators at 7.3 percent and chief accountants and directors of personnel at 7.2 percent.

To examine the changes in salaries that have occurred since 1961 for different levels of work, all of the occupational classifications were grouped into the three broad categories described in text table 2.

Average salaries increased more for the higher occupational levels (group C) than for the two lower groups from 1961 through 1966, with the exception of the 1962-63 period. Between 1966 and 1969, however, the middle occupational levels (group B) showed larger annual increases than did the lower or higher levels. Between 1969 and 1971, the increases for all three groups were nearly identical. Increases for the middle levels were smaller than for the others between 1971 and 1974.

Another method of examining salary trends is to combine the data into the four occupational groups shown in chart 1. Increases in the 1973 to 1974 period amounted to 6.3 percent for the experienced professional and administrative group; 6.3 percent for the technical support group; 6.5 percent for clerical workers; and 5.0 percent for the entry and developmental professional and administrative group.<sup>4</sup> Although showing the lowest rate of salary increase for the fourth consecutive year, the rate for the entry and developmental professional and administrative occupational levels was above the year earlier level by a greater amount than for any of the other three groups. Changes in salaries for the entry and developmental professional and administrative group tend to reflect, in part, the status of the labor market for new and recent college graduates.

Increases in salaries of both clerical and technical support groups averaged 4.5 percent over the 13-year period – less than the increases (4.9 and 4.7 percent) for the experienced and entry professional and administrative groups.<sup>5</sup>

**Average salaries, March 1974**

Average monthly salaries for the occupations included in this report (table 1) ranged from \$426 for file clerks I to \$3,182 for the top level of attorneys surveyed. These extremes reflect the wide range of duties and responsibilities represented by the occupational work levels surveyed. Average salaries for the occupational levels, and a brief indication of the duties and responsibilities they represent, are summarized in the following paragraphs.<sup>6</sup>

Among the five levels of **accountants** surveyed, average monthly salaries ranged from \$812 for accountants I to \$1,630 for accountants V. **Auditors** in the four levels defined for survey had average salaries ranging from \$863 a month for auditors I to \$1,458 for auditors IV. Level I in both the accounting and auditing series included trainees who had bachelor's degrees in accounting or the equivalent in education and experience combined. At each corresponding level, average salaries

<sup>4</sup> Work levels used for computing 1973-74 increases were:

Clerical – All clerical levels, except secretaries.

Technical support – All levels of drafters and engineering technicians.

Entry and developmental professional and administrative – Accountants I and II; auditors I and II; attorneys I; job analysts I and II; chemists I and II; and engineers I and II.

Experienced professional and administrative – Accountants III, IV, V; auditors III and IV; chief accountants I, II, III, and IV; attorneys II, III, IV, V, and VI; job analysts III and IV; directors of personnel I, II, III, and IV; chemists III, IV, V, VI, VII, and VIII; and engineers III, IV, V, VI, VII, and VIII.

A few survey levels, not readily identifiable with any of the 4 occupational categories, were not used. In addition, secretaries and computer operators were not used because comparable data were not available for 1973.

See appendix A for method of computation.

<sup>5</sup> Survey data for 1966-67 and 1971-72 did not represent a 12-month period due to changes in survey timing. Increases for these years have been prorated to represent a 12-month period.

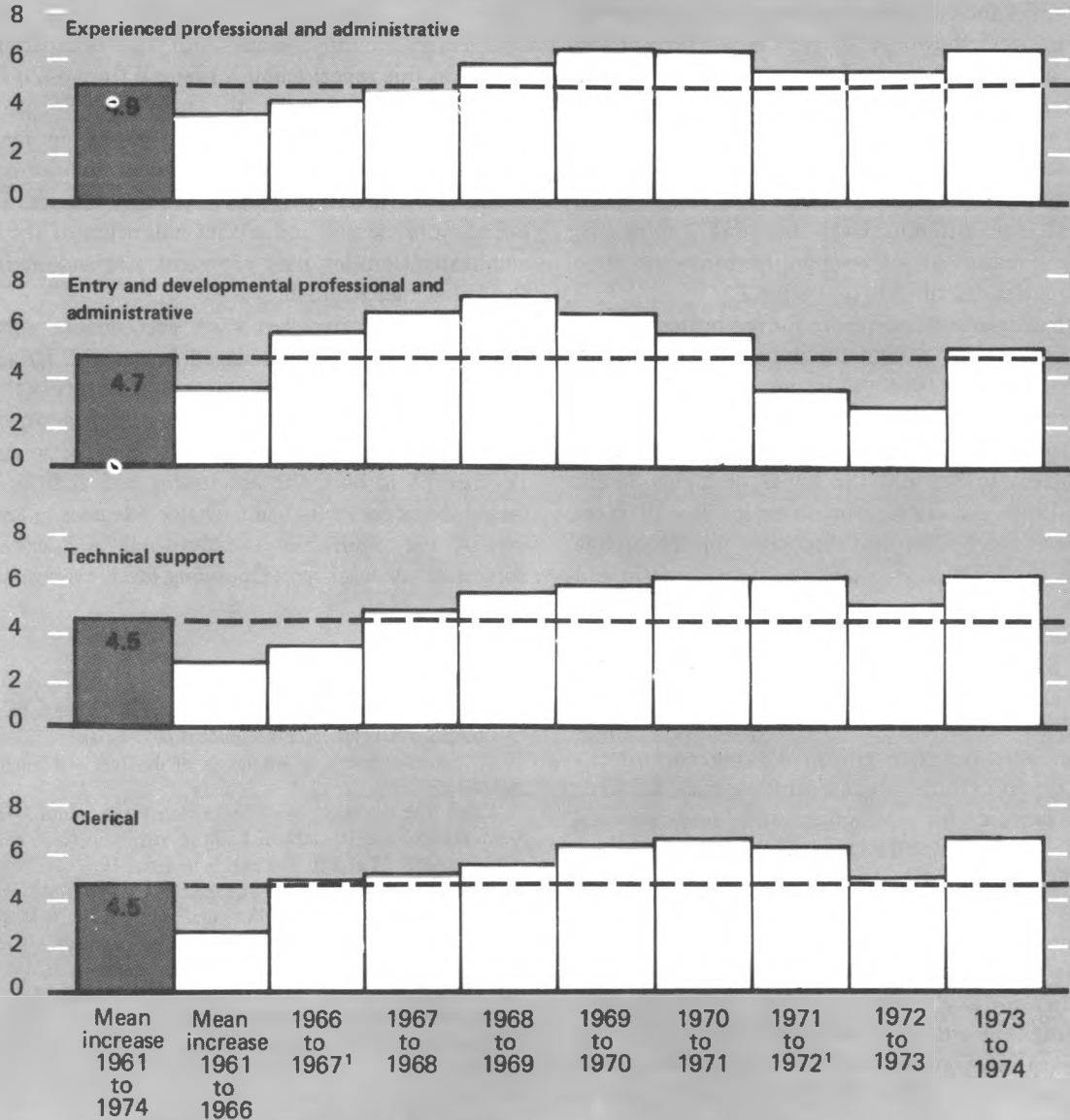
<sup>6</sup> Classification of employees in the occupations and work levels surveyed is based on factors detailed in the definitions in appendix C.



Chart 1

**Increases in Average Salaries for Selected Occupational Groups, 1961 to 1974**

Percent increase



<sup>1</sup> Data were adjusted to a 12-month period.

were higher for auditors than for accountants. For level III, the most heavily populated group in both series, monthly salaries averaged \$1,107 for accountants and \$1,198 for auditors. Whereas 68 percent of the accountants were employed in manufacturing, this industry division employed 42 percent of the auditors. Other industry divisions which had large numbers of auditors were finance, insurance, and real estate (29 percent); and public utilities (15 percent).<sup>7</sup>

**Chief accountants** were surveyed separately from accountants and include those who develop or adapt and direct the accounting program for a company or an establishment (plant) of a company. Classification by level is determined by the extent of delegated authority and responsibility, the technical complexity of the accounting system, and, to a lesser degree, the size of the professional staff directed. Chief accountants at level I, who have authority to adapt the accounting system established at higher levels to meet the needs of an establishment of a company with relatively few and stable functions and work processes (directing one or two accountants), averaged \$1,467 a month. Chief accountants IV,<sup>8</sup> who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a company with numerous and varied functions and work processes (directing as many as 40 accountants), average \$2,418 a month. Over three-fifths of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries.

**Attorneys** are classified into survey levels based upon the difficulty of their assignments and their responsibilities. Attorneys I, which includes new law graduates with bar membership and those performing work that is relatively uncomplicated due to clearly applicable precedents and well-established facts, averaged \$1,185 a month. Attorneys in the top level surveyed, level VI, earned an average of \$3,182 a month. These attorneys deal with legal matters of major importance to their organizations, and are usually subordinate only to the general counsel or his immediate deputy in very large firms. Finance, insurance, and real estate industries employed about four-tenths of the attorneys; manufacturing industries employed about three-tenths; and public utilities, about one-fifth.<sup>9</sup>

**Buyers** average \$839 a month at level I, which includes those who purchase "off-the-shelf" and readily available items and services from local sources. Buyers IV, who purchase large amounts of highly complex and technical items, materials, or services, were paid monthly salaries averaging \$1,452. Manufacturing industries employed 88 percent of the buyers in the four levels.

In the personnel management field four work levels

of **job analysts** and five levels of **directors of personnel** were studied.<sup>10</sup> Job analysts I, defined to include trainees under immediate supervision, averaged \$815, compared with \$1,439 for job analysts IV, who analyze and evaluate a variety of the more difficult jobs under general supervision, and who may participate in the development and installation of evaluation or compensation systems. Directors of personnel are limited by definition to those who have programs that include, at a minimum, responsibility for administering a job evaluation system, employment and placement functions, and employee relations and services functions. Those with significant responsibility for actual contract negotiation with labor unions as the principal company representative are excluded. Provisions are made in the definition for weighting various combinations of duties and responsibilities to determine the level. Among personnel directors with job functions as specified for the four levels of responsibility, average monthly salaries ranged from \$1,316 for level I to \$2,345 for level IV. Manufacturing industries employed 66 percent of the job analysts and 67 percent of the directors of personnel included in the study; the finance, insurance, and real estate industries ranked next, with 21 percent of the job analysts and 13 percent of the directors of personnel.

**Chemists and engineers** each are surveyed in eight levels. Both series start with a professional trainee level, typically requiring a B.S. degree. The highest level surveyed involves either full responsibility over a very broad and highly complex and diversified engineering or chemical program, with several subordinates each directing large and important segments of the program; or individual research and consultation in difficult problem areas where the engineer or chemist is a recognized authority and where solutions would represent a major scientific or technological advance.<sup>11</sup> Average monthly salaries ranged from \$992 for engineers I to \$2,622 for engineers VIII, and from \$888 for chemists I to \$2,873 for chemists VIII. Although at level I the average salaries of engineers exceeded those of chemists by 12 percent, the salary advantage of engineers over chemists decreased steadily with each level, until at level V the

<sup>7</sup> Establishments primarily engaged in providing accounting and auditing services are excluded from the survey.

<sup>8</sup> Although chief accountants V and directors of personnel V were surveyed, as defined in appendix C, too few employees in each occupational level met requirements for the level to warrant presentation of salary figures.

<sup>9</sup> Establishments primarily engaged in offering legal advice or legal services are excluded from the survey.

<sup>10</sup> See footnote 8.

<sup>11</sup> It is recognized in the definition that top positions of some companies with unusually extensive and complex engineering or chemical programs are above that level.

average salaries for both occupations were nearly equal, and at level VIII the average salaries for chemists exceeded those for engineers by 10 percent.

Level IV, the largest group in each series, includes professional employees who are fully competent in all technical aspects of their assignments, work with considerable independence, and, in some cases, supervise a few professional and technical workers. Manufacturing industries accounted for three-fourths of all engineers and over nine-tenths of all chemists; the surveyed engineering and scientific services, 12 and 3 percent; and public utilities 12 and 1 percent, respectively.

By definition, the five-level series for **engineering technicians** is limited to employees providing semiprofessional technical support to engineers engaged in such areas as research, design, development, testing, or manufacturing process improvement, and whose work pertains to electrical, electronic, or mechanical components or equipment. Technicians engaged primarily in production or maintenance work are excluded. Engineering technicians I, who perform simple, routine tasks under close supervision, or from detailed procedures, were paid monthly salaries averaging \$665. Engineering technicians V, the highest level surveyed, averaged \$1,138 a month. That level includes fully experienced technicians performing more complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope, or a portion of a larger and more diverse project in accordance with objectives, requirements, and design approaches as outlined by the supervisor or a professional engineer. Averages for intermediate levels III and IV, at which a majority of the technicians surveyed were classified, were \$874 and \$998, respectively. As might be expected, most of the technicians as defined were employed in manufacturing (79 percent) and in the scientific services industries studied (12 percent), with public utilities employing nearly all the rest (8 percent). Although the ratio of such technicians to engineers studied was about 1 to 4 in all manufacturing industries, ratios of approximately 1 to 3 were found in establishments manufacturing mechanical and electrical equipment, 1 to 6 in public utilities, and 1 to 2 in research, development, and testing laboratories.

In the **drafting field**, the definitions used in the survey, cover four levels of work – drafter-tracers, and drafters I, II, and III. Monthly salaries averaged \$587 for drafter-tracers and ranged from \$709 to \$1,089 among the three levels of drafters. Drafter-tracers copy plans and drawings prepared by others or prepare simple or repetitive drawings of easily visualized items. The three drafter levels as defined range from employees preparing detail drawings of single units or parts (level I) to those who, working in close support with the design origi-

nator, plan the graphic presentation of complex items having distinctive design features, and either prepare or direct the preparation of the drawings (level III). The drafting employees were distributed by industry in about the same proportion as engineers, with 73 percent in manufacturing, 11 percent in public utilities, and 14 percent in the selected engineering and scientific services industries studied.

A new job, **computer operator**, is included this year. Computer operators I (work assignments consist of on-the-job training) were paid an average of \$573 a month. Computer operators III, the largest group surveyed, averaged \$741. At the highest level, computer operator VI, the average monthly salary was \$1,034, however, less than 2 percent of the operators were at this level. Computer operators are classified on the basis of responsibility for solving problems and equipment malfunctions, the degree of variability of their assignments, and the relative level of sophistication of the equipment they operate. Computer operators, keypunch supervisors and keypunch operators were distributed by industry in approximately similar proportions. Nearly three-fourths were employed in manufacturing and the finance, insurance, and real estate industries, with the remainder distributed among the public utilities, wholesale, and retail trade industries.

**Keypunch supervisors** are classified on the basis of combinations of three elements – level of supervisory responsibility, difficulty of keypunch work supervised, and number of employees supervised. Keypunch supervisors I, who are responsible for the day-to-day supervision of fewer than 20 operators performing routine keypunching operations, average \$737 a month. At level V, the highest level defined for survey, keypunch supervisors average \$1,129. Individuals classified at this level supervise more complex keypunching operations, 50 operators or more, and perform at a higher level of supervisory authority.

Among the 17 **clerical jobs** included in this study, average monthly salaries for secretaries, the most heavily populated clerical occupation studied, ranged from \$633 at level I to \$866 at level V. Average salaries of \$579 and \$658 were reported for general and senior stenographers; \$551 and \$697 for accounting clerks I and II; and the two levels of typists averaged \$484 and \$563. Generally, average salaries for clerical workers were highest in public utilities and manufacturing industries and lowest in the finance, insurance, and real estate, and retail trade divisions. Employment in manufacturing exceeded that in any of the nonmanufacturing divisions within the scope of the survey in 13 of the 17 clerical work levels; highest employment totals in the other four levels were in the finance, insurance, and real estate division.

Women constituted 95 percent or more of the employees in 13 of the clerical work levels; men constituted one-half or more in only one (messenger).

Median monthly salaries (the amount below and above which 50 percent of the employees are found) for most of the work levels were slightly lower than the weighted averages (means) cited above (i.e., the salaries in the upper halves of the arrays had a greater effect on the averages than did the salaries in the lower halves). The relative difference between the median and the mean was less than 3 percent for 63 of the 84 work levels and between 3 and 5 percent in the 21 other levels.

### Salary levels in metropolitan areas

In most of the occupational levels, average salaries for employees in metropolitan areas (table 2) were slightly higher than average salaries for employees in all establishments within the full scope of the survey (table 1). Only in 5 of the 84 work levels studied were average salaries more than 1.5 percent higher in metropolitan areas than in all areas combined. Employment in the survey occupations in metropolitan areas was about nine-tenths of the total nationwide employment reported in these occupations. The proportions varied, however, among occupations and work levels. Nearly all of the attorneys, for example, but only four-fifths of all buyers and directors of personnel, were employed in metropolitan areas. In 75 of the 84 work levels studied, 85 percent or more of the employment was in metropolitan areas. It is apparent, therefore, that for most work levels, salaries in nonmetropolitan counties could have little effect upon the averages for all establishments combined.

### Salary levels in large establishments

It was possible to present separate data for 77 occupational work levels for establishments with 2,500 employees or more (table 3). Comparisons between employment and relative salary levels in these establishments and the full survey are also presented. Establishments employing 2,500 or more employed one-third of the professional, administrative, supervisory, and clerical workers within the scope of the survey, and almost three-eighths of the workers in the selected occupations studied. In the 77 occupational work levels shown in table 3 large establishments accounted for varying proportions of employment, ranging from 8 to 72 percent (keypunch supervisors I and job analysts IV, respectively). The range was from 8 to 41 percent for

clerical and clerical supervisory jobs, and from 16 to 72 percent for nonclerical jobs.

The salary levels in large establishments, expressed as a percent of levels in all establishments combined, ranged from 100 to 120. Salary averages in large establishments exceeded the all-establishment averages by 5 percent or more in all but two clerical and clerical supervisory occupational levels, but in only 31 of 56 nonclerical levels, as shown by the following tabulation (all-establishment average for each occupational level = 100 percent):

	<i>Professional, administrative, and technical</i>	<i>Clerical, clerical supervisory</i>
Total number of levels . . .	56	21
100-104 percent . . . . .	25	2
105-109 percent . . . . .	19	7
110 percent and over . . . . .	12	12

Relative salary levels in large establishments tended to be highest for work levels in which large establishments accounted for small proportions of the total employment.

### Salary distributions

Percent distributions of employees by monthly salary are presented for the professional and administrative occupations in table 4, and for technical support occupations and keypunch supervisors in table 5; distributions by weekly salary are shown for employees in clerical occupations in table 6. Within all of the 84 occupational work levels, salary rates for the highest paid employees were more than twice those of the lowest paid employees. The absolute spread between highest and lowest paid workers within a given work level tended to widen with each rise in work level for most occupations. All occupations showed a substantial degree of overlapping of individual salaries between work levels. Ranges in salary rates of employees in established pay grades or work levels within salary structures of individual firms also often overlapped substantially.

The middle 50 and 80 percent of the salary range, and the median salary for each occupation work level, have been charted (charts 2 and 3). The charts point up occupational pay relationships as well as the typically greater degree of salary dispersion associated with the higher work levels in each occupational series.

Expressing the salary range of the middle 50 percent of employees in each work level as a percent of the median salary permits comparison of salary ranges and eliminates extremely low and high salaries from each

Chart 2.

## Salaries in Professional and Technical Occupations, March 1974

Median Monthly Salaries and Ranges Within Which Fell 50 Percent and 80 Percent of Employees

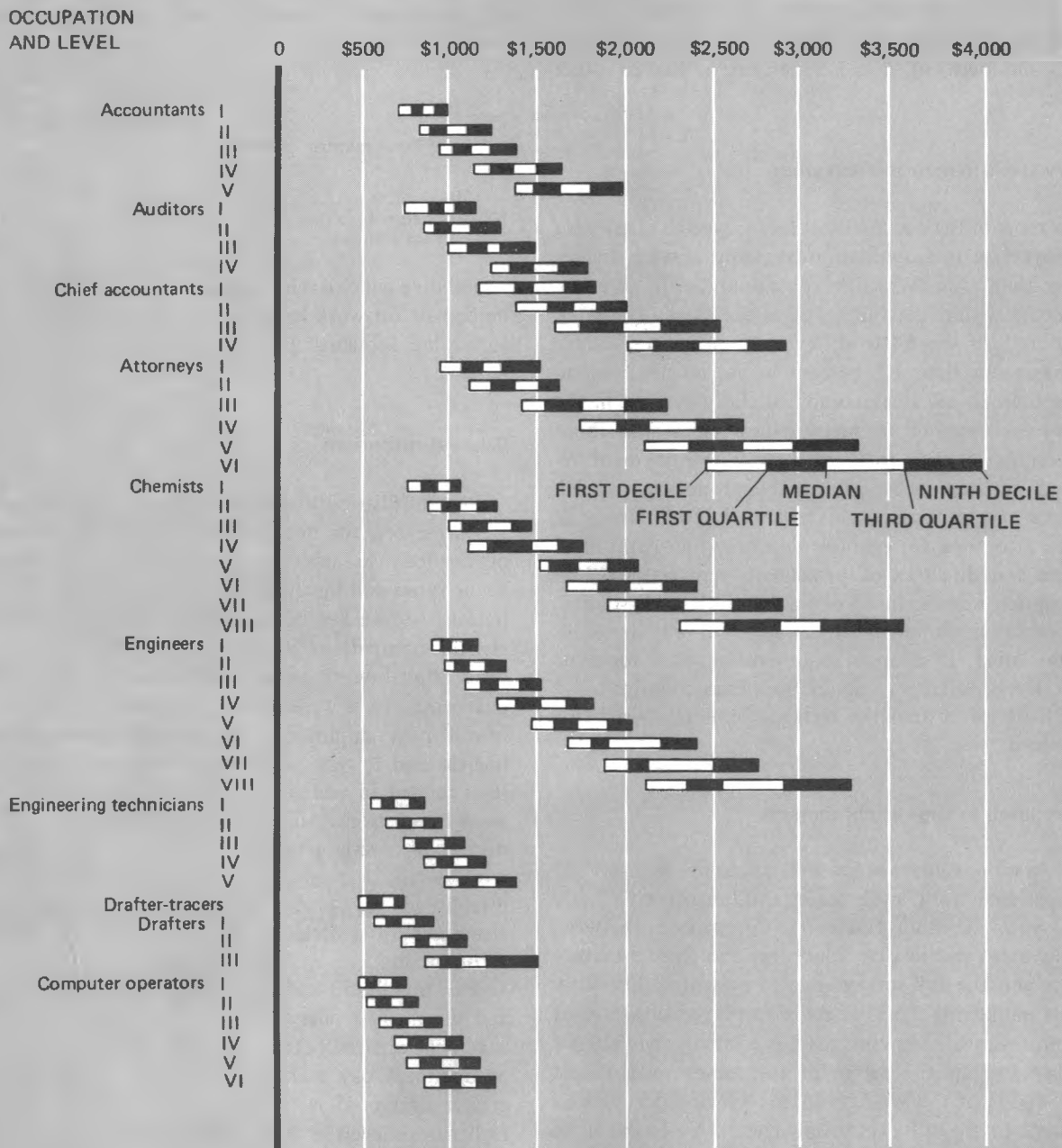
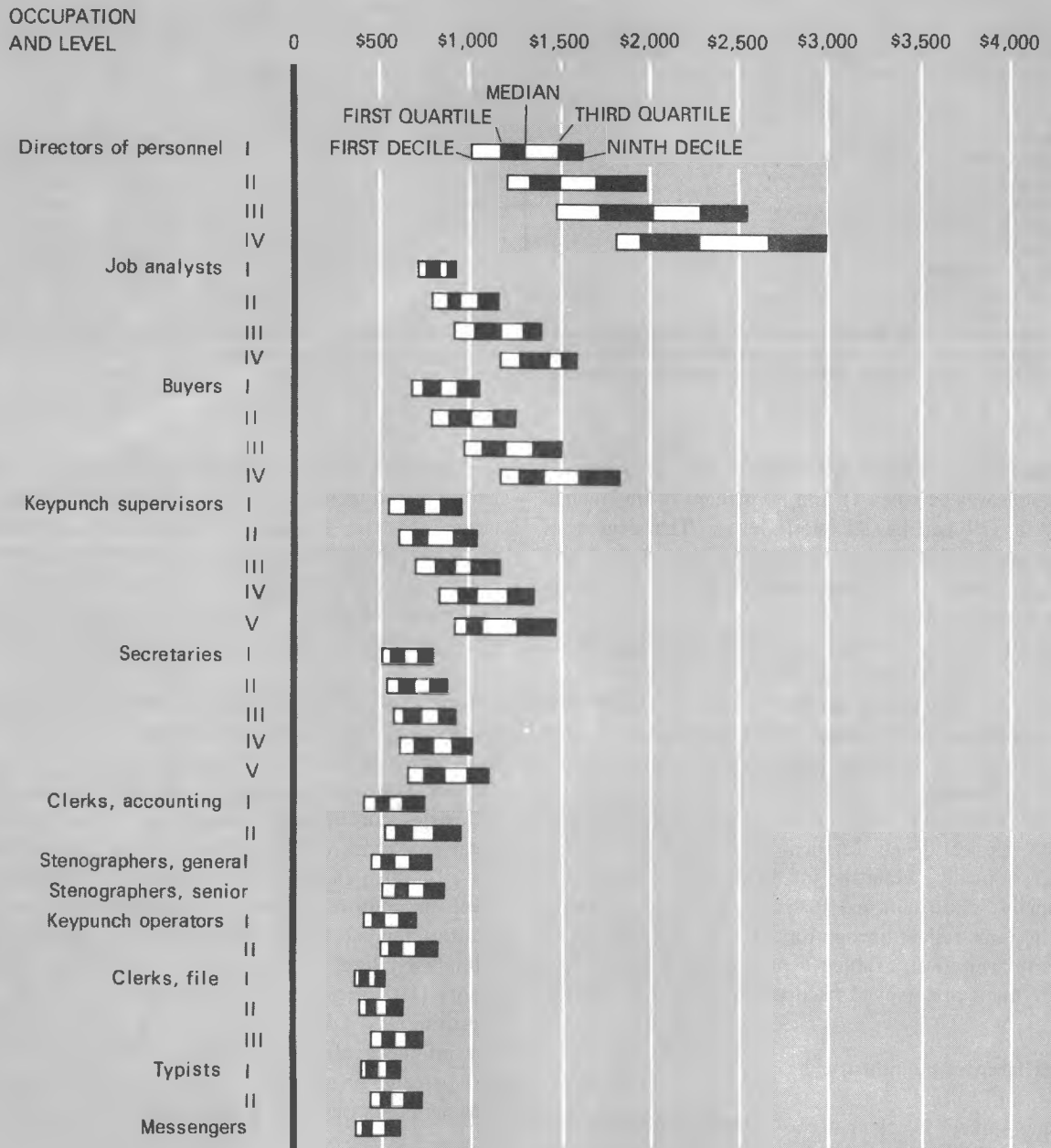


Chart 3

### Salaries in Administrative and Clerical Occupations, March 1974

Median Monthly Salaries and Ranges Within Which Fell 50 Percent and 80 Percent of Employees





**Text table 3. Distribution of work levels by degree of salary dispersion**

Occupation	Number of work levels	Number of levels having degree of dispersion <sup>1</sup> of –				
		Under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over
All occupations . . . . .	84	2	20	38	21	3
Accountants . . . . .	5	—	1	4	—	—
Auditors . . . . .	4	—	3	1	—	—
Chief accountants . . . . .	4	—	2	2	—	—
Attorneys . . . . .	6	—	2	2	2	—
Buyers . . . . .	4	—	—	4	—	—
Job analysts . . . . .	4	1	1	2	—	—
Directors of personnel . . . . .	4	—	—	2	1	1
Chemists . . . . .	8	—	4	4	—	—
Engineers . . . . .	8	1	4	3	—	—
Engineering technicians . . . . .	5	—	3	2	—	—
Drafting . . . . .	4	—	—	1	3	—
Computer operators . . . . .	6	—	—	5	1	—
Keypunch supervisors . . . . .	5	—	—	1	3	1
Clerical . . . . .	17	—	—	5	11	1

<sup>1</sup> Degree of dispersion equals the salary range of the middle 50 percent of employees in a work level expressed as a percent of the median salary for that level.

comparison. As shown in text table 3, the degree of dispersion was between 15 and 30 percent of the median salary in 79 of the 84 work levels. The degree of dispersion tended to be greater in the clerical and keypunch supervisory occupations than in the other occupations studied.

Differences in the range of salaries paid individuals within work levels surveyed reflect a variety of factors other than differences in the range of duties and responsibilities encompassed by the various work level definitions. Two of these factors are: Salary structures within establishments which provide for a range of rates for each grade level; and regional variations, particularly in the clerical levels (clerical employees are usually recruited locally, while the job field tends to be broader regionally, often national in scope, for the professional and administrative occupations).<sup>12</sup> A third factor is industry variation. Table 7 and chart 4 show how employment in surveyed occupations varies by industry.

**Pay differences by industry**

The survey is planned to permit publication of national salary estimates by level of work. By combining the data for all levels of work studied in each occupation, it is possible to present comparisons between relative salary levels in major industry divisions and all industries combined (table 8).

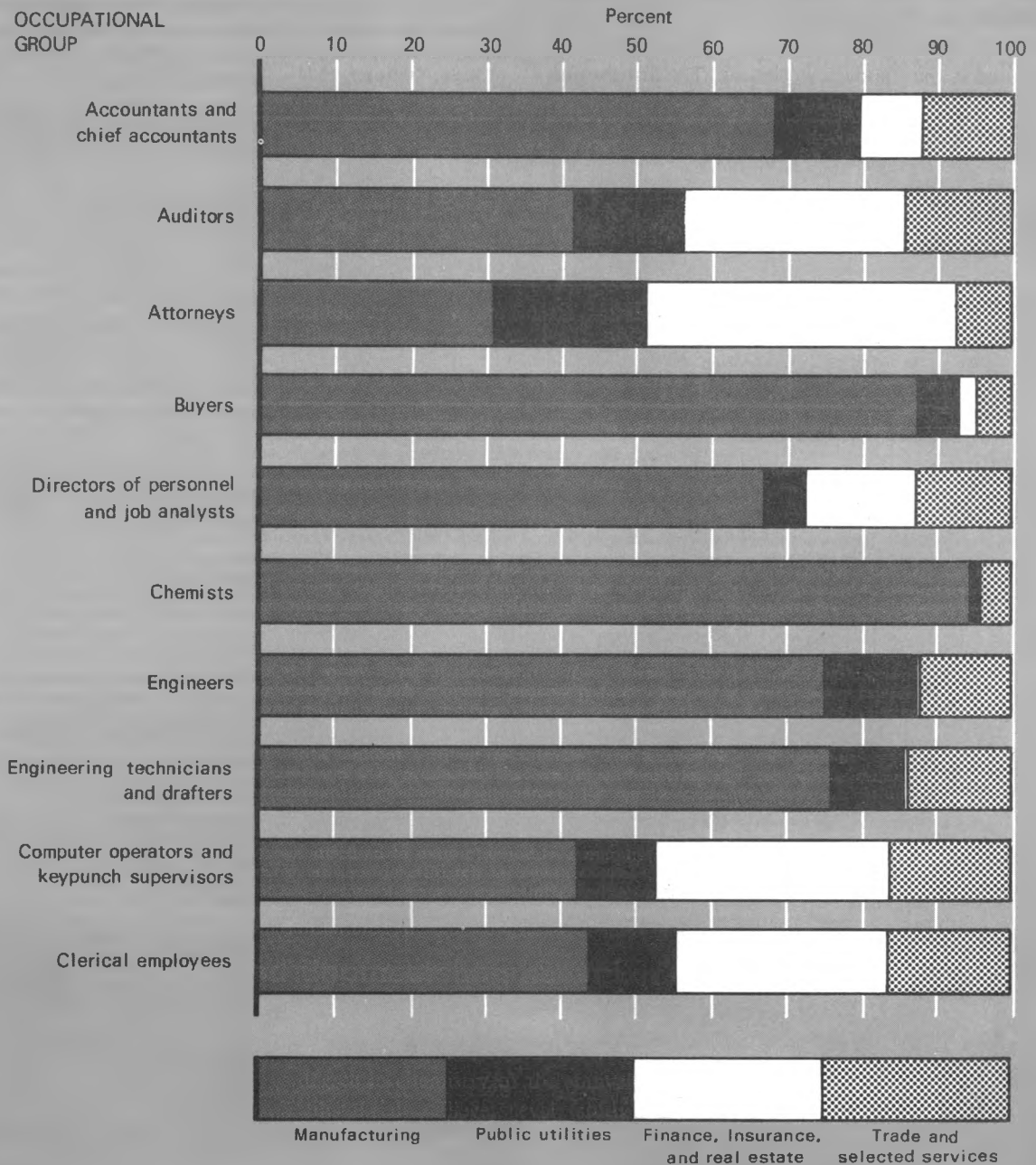
Relative salary levels for the 12 professional, administrative, and technical support occupations tended to be closest to the average for all industry divisions in manufacturing, which contributed more to total employment than any other industry division for all but one (attorneys) of the 12 occupations. Relative salary levels in the public utilities industry division were generally the highest.

For most of the occupations studied, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. In those occupations in which retail trade and the finance industries contributed a substantial proportion of the total employment, the average salary in the occupation for all industries combined was lowered, and the relative levels in industries such as manufacturing and public utilities tended to be well above 100 percent of the all-industry level. For example, relative pay levels for file clerks (107 percent of the all-industry level in manufacturing and 131 percent in public utilities) reflected the influence of lower salaries for the high proportion (63 percent) of all-industry employment included in the finance industries. The finance industries, however, also

<sup>12</sup>For an analysis of interarea pay differentials in clerical salaries, see *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1971-72*, Bulletin 1725-96 (Bureau of Labor Statistics, 1974).

Chart 4.

### Relative Employment in Selected Occupational Groups by Industry Division, March 1974



reported lower average standard weekly hours than the other industries surveyed, as shown in table 9.

#### **Average standard weekly hours**

The length of the standard workweek, on which the regular straight-time salary is based, is obtained for individual employees in the occupations studied. When individual weekly hours are not available, particularly for some higher level professional and administrative positions, the predominant workweek of the office work force is used as the standard workweek. The distribution

of average weekly hours (rounded to the nearest half-hour) is presented in table 9 for all work levels of each occupation combined in major industry divisions surveyed. Average weekly hours were lower in finance, insurance, and real estate (38 hours for a majority of the occupations) than in the other industry divisions (39 or 39.5 hours). Average weekly hours have been stable over the past decade.<sup>13</sup>

<sup>13</sup>For information on scheduled weekly hours of office workers employed in metropolitan areas, see *Area Wage Surveys: Selected Metropolitan Areas, 1972-73*, Bulletin 1775-97 (Bureau of Labor Statistics, 1974).

**Table 1. Average salaries: United States**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> United States except Alaska and Hawaii, March 1974)

Occupation and level <sup>2</sup>	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>			
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<u>Accountants and auditors</u>									
Accountants I -----	7,376	\$ 812	\$ 804	\$ 745	\$ 875	\$ 9,739	\$ 9,648	\$ 8,940	\$10,500
Accountants II -----	13,735	962	940	850	1,065	11,549	11,280	10,200	12,780
Accountants III -----	28,869	1,107	1,086	990	1,208	13,285	13,032	11,880	14,496
Accountants IV -----	19,206	1,338	1,325	1,200	1,465	16,051	15,900	14,400	17,580
Accountants V -----	7,259	1,630	1,600	1,456	1,777	19,560	19,200	17,472	21,324
Auditors I -----	1,208	863	850	752	920	10,352	10,200	9,024	11,040
Auditors II -----	2,682	1,002	967	879	1,086	12,024	11,604	10,548	13,032
Auditors III -----	5,025	1,198	1,173	1,065	1,295	14,341	14,076	12,780	15,540
Auditors IV -----	2,923	1,458	1,425	1,312	1,583	17,491	17,100	15,744	18,996
Chief accountants I -----	619	1,467	1,433	1,343	1,624	17,601	17,196	16,116	19,488
Chief accountants II -----	1,222	1,673	1,666	1,524	1,816	20,072	19,992	18,288	21,792
Chief accountants III -----	768	1,984	1,940	1,713	2,166	23,805	23,280	20,556	25,992
Chief accountants IV -----	325	2,418	2,365	2,124	2,666	29,021	28,380	25,488	31,992
<u>Attorneys</u>									
Attorneys I -----	580	1,185	1,150	1,043	1,265	14,223	13,800	12,516	15,180
Attorneys II -----	1,504	1,363	1,334	1,208	1,470	16,357	16,008	14,496	17,640
Attorneys III -----	2,443	1,757	1,714	1,508	1,958	21,082	20,568	18,096	23,496
Attorneys IV -----	1,968	2,163	2,103	1,919	2,374	25,956	25,236	23,028	28,488
Attorneys V -----	995	2,667	2,641	2,332	2,940	31,999	31,692	27,984	35,280
Attorneys VI -----	614	3,182	3,100	2,791	3,565	38,180	37,200	33,492	42,780
<u>Buyers</u>									
Buyers I -----	4,021	839	825	734	920	10,073	9,900	8,808	11,040
Buyers II -----	11,910	1,012	995	875	1,120	12,141	11,940	10,500	13,440
Buyers III -----	13,965	1,222	1,200	1,070	1,350	14,659	14,400	12,840	16,200
Buyers IV -----	5,200	1,452	1,405	1,265	1,608	17,421	16,860	15,180	19,296
<u>Personnel management</u>									
Job analysts I -----	55	815	816	756	865	9,783	9,792	9,072	10,380
Job analysts II -----	297	957	940	864	1,041	11,488	11,280	10,368	12,492
Job analysts III -----	676	1,160	1,162	1,023	1,294	13,921	13,944	12,276	15,528
Job analysts IV -----	494	1,439	1,445	1,276	1,605	17,263	17,340	15,312	19,260
Directors of personnel I -----	1,114	1,316	1,300	1,166	1,490	15,790	15,600	13,992	17,880
Directors of personnel II -----	1,924	1,568	1,499	1,333	1,700	18,815	17,988	15,996	20,400
Directors of personnel III -----	1,089	2,007	2,012	1,725	2,282	24,078	24,144	20,700	27,384
Directors of personnel IV -----	413	2,345	2,275	1,958	2,666	28,140	27,300	23,496	31,992
<u>Chemists and engineers</u>									
Chemists I -----	1,719	888	891	808	980	10,660	10,692	9,696	11,760
Chemists II -----	4,085	1,034	1,020	930	1,135	12,408	12,240	11,160	13,620
Chemists III -----	9,540	1,191	1,180	1,055	1,324	14,298	14,160	12,660	15,888
Chemists IV -----	12,161	1,440	1,433	1,289	1,590	17,283	17,196	15,468	19,080
Chemists V -----	8,725	1,725	1,708	1,544	1,880	20,702	20,496	18,528	22,560
Chemists VI -----	4,191	2,007	1,990	1,814	2,185	24,079	23,880	21,768	26,220
Chemists VII -----	1,564	2,350	2,292	2,041	2,575	28,203	27,504	24,492	30,900
Chemists VIII -----	412	2,873	2,853	2,542	3,085	34,475	34,236	30,504	37,020
Engineers I -----	15,358	992	980	925	1,050	11,901	11,760	11,100	12,600
Engineers II -----	30,532	1,098	1,080	1,000	1,178	13,171	12,960	12,000	14,136
Engineers III -----	83,255	1,263	1,250	1,151	1,371	15,160	15,000	13,812	16,452
Engineers IV -----	113,436	1,494	1,482	1,351	1,625	17,929	17,784	16,212	19,500
Engineers V -----	81,652	1,721	1,703	1,566	1,865	20,654	20,436	18,792	22,380
Engineers VI -----	44,283	1,986	1,966	1,777	2,173	23,827	23,592	21,324	26,076
Engineers VII -----	16,593	2,247	2,197	1,994	2,475	26,960	26,364	23,928	29,700
Engineers VIII -----	3,688	2,622	2,525	2,325	2,875	31,469	30,300	27,900	34,500
<u>Technical support</u>									
Engineering technicians I -----	4,039	665	652	582	741	7,975	7,824	6,984	8,892
Engineering technicians II -----	12,810	760	751	680	826	9,122	9,012	8,160	9,912
Engineering technicians III -----	26,151	874	866	780	956	10,491	10,392	9,360	11,472
Engineering technicians IV -----	31,853	998	988	908	1,085	11,974	11,856	10,896	13,020
Engineering technicians V -----	18,247	1,138	1,130	1,027	1,243	13,654	13,560	12,324	14,916

See footnotes at end of table.

**Table 1. Average salaries: United States—Continued**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> United States except Alaska and Hawaii, March 1974)

Occupation and level <sup>2</sup>	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>			
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<b>Technical support—Continued</b>									
Drafter-tracers .....	5,425	\$587	\$587	\$504	\$653	\$7,048	\$7,039	\$6,048	\$7,842
Drafters I .....	18,350	709	695	615	790	8,507	8,342	7,383	9,478
Drafters II .....	28,581	870	855	765	961	10,443	10,256	9,178	11,533
Drafters III .....	31,067	1,089	1,041	921	1,191	13,070	12,498	11,056	14,291
Computer operators I .....	4,488	573	554	500	641	6,879	6,648	6,000	7,692
Computer operators II .....	10,467	636	626	550	705	7,632	7,512	6,600	8,460
Computer operators III .....	19,717	741	730	650	826	8,887	8,760	7,800	9,912
Computer operators IV .....	11,498	857	847	743	951	10,279	10,164	8,916	11,412
Computer operators V .....	2,901	925	915	800	1,024	11,098	10,980	9,600	12,288
Computer operators VI .....	768	1,034	1,022	921	1,134	12,403	12,264	11,052	13,608
<b>Clerical supervisory</b>									
Keypunch supervisors I .....	1,277	737	739	634	832	8,842	8,868	7,608	9,984
Keypunch supervisors II .....	2,081	796	754	671	900	9,547	9,048	8,052	10,800
Keypunch supervisors III .....	1,143	917	900	800	1,000	11,005	10,800	9,600	12,000
Keypunch supervisors IV .....	385	1,067	1,029	930	1,208	12,809	12,348	11,160	14,496
Keypunch supervisors V .....	64	1,129	1,066	975	1,265	13,552	12,792	11,700	15,180
<b>Clerical</b>									
Clerks, accounting I .....	92,282	551	530	460	613	6,607	6,358	5,519	7,352
Clerks, accounting II .....	69,323	697	669	580	794	7,367	8,030	6,959	9,526
Clerks, file I .....	26,099	426	413	375	461	5,109	4,955	4,499	5,531
Clerks, file II .....	22,814	471	449	400	513	5,647	5,383	4,799	6,153
Clerks, file III .....	8,357	577	555	498	626	6,928	6,663	5,976	7,508
Keypunch operators I .....	63,909	537	515	452	591	6,440	6,179	5,423	7,091
Keypunch operators II .....	45,157	624	606	539	690	7,492	7,274	6,465	8,278
Messengers .....	25,435	470	450	396	521	5,643	5,402	4,751	6,257
Secretaries I .....	58,370	633	619	547	704	7,601	7,425	6,570	8,447
Secretaries II .....	76,386	685	673	594	769	8,221	8,082	7,126	9,229
Secretaries III .....	69,133	729	720	633	819	8,742	8,638	7,594	9,823
Secretaries IV .....	44,389	797	784	687	900	9,568	9,410	8,238	10,798
Secretaries V .....	14,180	866	854	740	975	10,396	10,246	8,878	11,698
Stenographers, general .....	43,612	579	559	485	652	6,954	6,703	5,819	7,821
Stenographers, senior .....	50,486	658	643	560	741	7,900	7,717	6,719	8,890
Typists I .....	63,176	484	569	417	527	5,810	5,627	5,005	6,324
Typists II .....	39,301	563	542	484	617	6,751	6,507	5,806	7,404

<sup>1</sup> For scope of study, see table in appendix A.

<sup>2</sup> Occupational definitions appear in appendix C.

<sup>3</sup> Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed. For further explanation, see appendix A, p. 34.

<sup>4</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

<sup>5</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

**Table 2. Average salaries: Metropolitan areas**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> metropolitan areas,<sup>1</sup> March 1974)

Occupation and Level <sup>2</sup>	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>			
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<u>Accountants and auditors</u>									
Accountants I -----	6,504	\$812	\$804	\$746	\$875	\$9,747	\$9,648	\$8,952	\$10,500
Accountants II -----	12,402	970	945	854	1,078	11,642	11,340	10,248	12,936
Accountants III -----	25,227	1,115	1,097	1,000	1,216	13,379	13,164	12,000	14,592
Accountants IV -----	16,801	1,342	1,330	1,200	1,474	16,102	15,960	14,400	17,688
Accountants V -----	6,443	1,638	1,612	1,460	1,792	19,655	19,344	17,520	21,504
Auditors I -----	1,120	867	864	752	920	10,406	10,368	9,024	11,040
Auditors II -----	2,500	1,006	967	880	1,088	12,076	11,604	10,560	13,056
Auditors III -----	4,785	1,199	1,175	1,064	1,295	14,384	14,100	12,768	15,540
Auditors IV -----	2,778	1,461	1,433	1,312	1,583	17,535	17,196	15,744	18,996
Chief accountants I -----	539	1,455	1,433	1,333	1,583	17,457	17,196	15,996	18,996
Chief accountants II -----	1,016	1,688	1,666	1,533	1,833	20,261	19,992	18,396	21,996
Chief accountants III -----	676	1,980	1,916	1,700	2,166	23,763	22,992	20,400	25,992
Chief accountants IV -----	306	2,424	2,376	2,166	2,666	29,086	28,512	25,992	31,992
<u>Attorneys</u>									
Attorneys I -----	568	1,184	1,149	1,042	1,265	14,202	13,778	12,504	15,180
Attorneys II -----	1,421	1,365	1,341	1,200	1,483	16,385	16,092	14,400	17,796
Attorneys III -----	2,338	1,759	1,724	1,500	1,964	21,107	20,688	18,000	23,568
Attorneys IV -----	1,860	2,172	2,107	1,934	2,400	26,069	25,284	23,208	28,800
Attorneys V -----	984	2,669	2,642	2,332	2,950	32,027	31,704	27,984	35,400
Attorneys VI -----	611	3,184	3,100	2,791	3,567	38,208	37,200	33,492	42,804
<u>Buyers</u>									
Buyers I -----	3,214	851	840	750	954	10,217	10,080	9,000	11,448
Buyers II -----	9,472	1,026	1,000	890	1,134	12,315	12,000	10,680	13,608
Buyers III -----	11,919	1,228	1,200	1,074	1,360	14,736	14,400	12,888	16,320
Buyers IV -----	4,778	1,460	1,412	1,270	1,617	17,524	16,944	15,240	19,404
<u>Personnel management</u>									
Job analysts I -----	51	822	816	756	867	9,858	9,792	9,072	10,404
Job analysts II -----	290	960	940	867	1,041	11,517	11,280	10,404	12,492
Job analysts III -----	626	1,168	1,175	1,036	1,300	14,015	14,100	12,432	15,600
Job analysts IV -----	469	1,442	1,450	1,282	1,610	17,299	17,400	15,384	19,320
Directors of personnel I -----	781	1,330	1,308	1,173	1,500	15,965	15,696	14,076	18,000
Directors of personnel II -----	1,617	1,571	1,499	1,333	1,702	18,847	17,988	15,996	20,424
Directors of personnel III -----	974	2,022	2,016	1,738	2,291	24,267	24,192	20,856	27,492
Directors of personnel IV -----	366	2,351	2,306	1,965	2,692	28,215	27,672	23,580	32,304
<u>Chemists and engineers</u>									
Chemists I -----	1,499	891	895	804	982	10,686	10,740	9,648	11,784
Chemists II -----	3,668	1,039	1,023	933	1,145	12,472	12,276	11,196	13,740
Chemists III -----	8,196	1,200	1,186	1,058	1,338	14,395	14,232	12,696	16,056
Chemists IV -----	10,612	1,445	1,443	1,291	1,592	17,336	17,316	15,492	19,104
Chemists V -----	7,680	1,729	1,709	1,545	1,884	20,752	20,508	18,540	22,608
Chemists VI -----	3,720	2,019	2,000	1,819	2,205	24,229	24,000	21,828	26,460
Chemists VII -----	1,411	2,369	2,315	2,060	2,582	28,426	27,780	24,720	30,984
Chemists VIII -----	357	2,915	2,874	2,567	3,085	34,978	34,488	30,804	37,020
Engineers I -----	14,053	995	982	926	1,052	11,943	11,784	11,112	12,624
Engineers II -----	28,370	1,102	1,083	1,000	1,183	13,225	12,996	12,000	14,196
Engineers III -----	74,100	1,274	1,262	1,164	1,382	15,293	15,144	13,968	16,584
Engineers IV -----	102,739	1,504	1,492	1,366	1,637	18,046	17,904	16,392	19,644
Engineers V -----	75,348	1,729	1,710	1,575	1,872	20,744	20,520	18,900	22,464
Engineers VI -----	41,280	1,991	1,972	1,781	2,177	23,897	23,664	21,372	26,124
Engineers VII -----	15,815	2,249	2,200	1,995	2,478	26,986	26,400	23,940	29,736
Engineers VIII -----	3,413	2,628	2,529	2,330	2,886	31,537	30,348	27,960	34,632
<u>Technical support</u>									
Engineering technicians I -----	3,706	664	652	579	744	7,973	7,824	6,948	8,928
Engineering technicians II -----	11,513	762	752	680	826	9,150	9,024	8,160	9,912
Engineering technicians III -----	23,007	880	870	786	962	10,559	10,440	9,432	11,544
Engineering technicians IV -----	28,438	1,006	995	916	1,095	12,075	11,940	10,992	13,140
Engineering technicians V -----	17,405	1,140	1,132	1,028	1,249	13,682	13,584	12,336	14,988
Drafter-tracers -----	4,959	589	589	504	659	7,064	7,072	6,048	7,907
Drafters I -----	15,227	721	704	630	806	8,647	8,447	7,560	9,677
Drafters II -----	23,996	886	870	780	980	10,633	10,435	9,358	11,763
Drafters III -----	27,747	1,107	1,057	932	1,212	13,278	12,683	11,181	14,547

See footnotes at end of table.



**Table 2. Average salaries: Metropolitan areas—Continued**

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,<sup>1</sup> metropolitan areas,<sup>1</sup> March 1974)

Occupation and Level <sup>2</sup>	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>			
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<b>Technical support—Continued</b>									
Computer operators I -----	4,080	\$577	\$556	\$504	\$643	\$6,928	\$6,672	\$6,048	\$7,716
Computer operators II -----	9,142	642	633	556	710	7,699	7,596	6,672	8,520
Computer operators III -----	17,832	744	730	652	830	8,927	8,760	7,824	9,960
Computer operators IV -----	10,477	860	850	747	955	10,315	10,200	8,964	11,460
Computer operators V -----	2,608	924	918	806	1,020	11,093	11,016	9,672	12,240
Computer operators VI -----	601	1,025	1,021	945	1,115	12,301	12,252	11,340	13,380
<b>Clerical supervisory</b>									
Keypunch supervisors I -----	1,147	747	739	634	834	8,968	8,868	7,608	10,008
Keypunch supervisors II -----	1,783	808	781	675	915	9,701	9,372	8,100	10,980
Keypunch supervisors III -----	1,076	925	900	805	1,008	11,096	10,800	9,660	12,096
Keypunch supervisors IV -----	373	1,069	1,033	930	1,220	12,823	12,396	11,160	14,640
Keypunch supervisors V -----	62	1,130	1,066	978	1,264	13,558	12,792	11,736	15,168
<b>Clerical</b>									
Clerks, accounting I -----	80,938	556	534	465	623	6,668	6,413	5,579	7,474
Clerks, accounting II -----	61,154	704	675	587	800	8,454	8,098	7,039	9,598
Clerks, file I -----	21,613	425	412	370	459	5,097	4,945	4,439	5,506
Clerks, file II -----	21,408	468	444	400	508	5,611	5,324	4,799	6,100
Clerks, file III -----	8,064	577	555	498	626	6,920	6,659	5,970	7,508
Keypunch operators I -----	56,004	546	523	461	600	6,550	6,279	5,527	7,198
Keypunch operators II -----	40,455	631	608	543	699	7,569	7,300	6,518	8,386
Messengers -----	24,011	470	450	399	521	5,645	5,406	4,789	6,251
Secretaries I -----	52,923	638	625	550	713	7,658	7,498	6,599	8,551
Secretaries II -----	69,784	689	675	600	773	8,272	8,098	7,195	9,281
Secretaries III -----	62,118	735	726	640	826	8,824	8,709	7,678	9,907
Secretaries IV -----	41,306	804	791	695	905	9,649	9,489	8,342	10,862
Secretaries V -----	13,025	875	869	750	980	10,506	10,428	8,998	11,758
Stenographers, general -----	38,045	586	565	492	660	7,037	6,778	5,902	7,925
Stenographers, senior -----	45,561	663	650	565	750	7,959	7,799	6,778	8,998
Typists I -----	55,914	488	474	425	534	5,859	5,683	5,099	6,407
Typists II -----	36,139	564	543	485	617	6,768	6,518	5,819	7,408

<sup>1</sup> For scope of study, see table in appendix A.

<sup>2</sup> Occupational definitions appear in appendix C.

<sup>3</sup> Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed. For further explanation, see appendix A, p. 34.

<sup>4</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

<sup>5</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

**Table 3. Average salaries: Establishments employing 2,500 workers or more**

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States except Alaska and Hawaii, March 1974)

Occupation and level <sup>3</sup>	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Levels in establishments employing 2,500 workers or more expressed as percent of those in all establishments combined	
		Mean	Median	Middle range <sup>6</sup>		Employment	Mean salaries
				First quartile	Third quartile		
<u>Accountants and auditors</u>							
Accountants I-----	1,985	\$ 890	\$ 875	\$ 805	\$ 955	27	110
Accountants II-----	5,747	1,064	1,065	950	1,182	42	111
Accountants III-----	7,937	1,194	1,178	1,060	1,334	27	108
Accountants IV-----	5,609	1,391	1,375	1,241	1,533	29	104
Accountants V-----	2,489	1,664	1,660	1,483	1,828	34	102
Auditors I-----	409	956	910	831	1,103	34	111
Auditors II-----	991	1,072	1,017	916	1,230	37	107
Auditors III-----	1,690	1,238	1,196	1,061	1,375	34	103
Auditors IV-----	1,251	1,477	1,445	1,316	1,607	43	101
Chief accountants III-----	216	2,216	2,133	1,927	2,643	28	112
Chief accountants IV-----	113	2,537	2,458	2,216	2,782	35	105
<u>Attorneys</u>							
Attorneys I-----	180	1,270	1,250	1,137	1,416	31	107
Attorneys II-----	397	1,529	1,500	1,350	1,685	26	112
Attorneys III-----	731	1,835	1,775	1,583	2,041	30	104
Attorneys IV-----	767	2,258	2,206	1,949	2,499	39	104
Attorneys V-----	412	2,674	2,642	2,383	2,918	41	100
Attorneys VI-----	356	3,209	3,127	2,773	3,624	58	101
<u>Buyers</u>							
Buyers I-----	809	943	925	834	1,050	20	112
Buyers II-----	3,221	1,105	1,083	950	1,225	27	109
Buyers III-----	5,085	1,259	1,234	1,091	1,403	36	103
Buyers IV-----	3,009	1,466	1,401	1,260	1,643	58	101
<u>Personnel management</u>							
Job analysts II-----	177	983	970	891	1,080	60	103
Job analysts III-----	432	1,183	1,185	1,030	1,310	64	102
Job analysts IV-----	354	1,441	1,451	1,292	1,594	72	100
Directors of personnel III-----	171	2,283	2,266	1,948	2,724	16	114
Directors of personnel IV-----	144	2,592	2,575	2,268	2,850	35	111
<u>Chemists and engineers</u>							
Chemists I-----	533	973	980	908	1,039	31	110
Chemists II-----	1,722	1,083	1,072	975	1,190	42	105
Chemists III-----	4,060	1,274	1,282	1,141	1,400	43	107
Chemists IV-----	5,477	1,531	1,539	1,391	1,680	45	106
Chemists V-----	3,654	1,820	1,810	1,640	1,970	42	106
Chemists VI-----	1,859	2,099	2,065	1,900	2,242	44	105
Chemists VII-----	644	2,500	2,444	2,249	2,707	41	106
Engineers I-----	7,938	1,020	1,000	947	1,080	52	103
Engineers II-----	16,426	1,125	1,104	1,018	1,210	54	102
Engineers III-----	46,406	1,299	1,290	1,189	1,408	56	103
Engineers IV-----	68,345	1,543	1,533	1,408	1,675	60	103
Engineers V-----	48,239	1,767	1,750	1,621	1,907	59	103
Engineers VI-----	24,813	2,043	2,025	1,836	2,225	56	103
Engineers VII-----	10,239	2,284	2,245	2,000	2,533	62	102
Engineers VIII-----	2,085	2,733	2,650	2,377	3,003	57	104
<u>Technical support</u>							
Engineering technicians I-----	2,153	703	687	613	786	53	106
Engineering technicians II-----	5,946	802	791	710	875	46	106
Engineering technicians III-----	11,437	900	891	800	992	44	103
Engineering technicians IV-----	16,773	1,020	1,010	926	1,105	53	102
Engineering technicians V-----	12,483	1,156	1,144	1,043	1,269	68	102
Drafter-tracers-----	2,010	642	631	574	680	37	109
Drafters I-----	5,790	763	735	661	847	32	108
Drafters II-----	9,326	919	904	800	1,014	33	106
Drafters III-----	14,784	1,194	1,122	982	1,400	48	110

See footnotes at end of table.

**Table 3. Average salaries: Establishments employing 2,500 workers or more—Continued**

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry<sup>1</sup> in establishments employing 2,500 workers or more,<sup>2</sup> United States except Alaska and Hawaii, March 1974)

Occupation and Level <sup>3</sup>	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Levels in establishments employing 2,500 workers or more expressed as percent of those in all establishments combined	
		Mean	Median	Middle range <sup>6</sup>		Employment	Mean salaries
				First quartile	Third quartile		
<u>Technical support—Continued</u>							
Computer operators I -----	1,336	\$631	\$617	\$541	\$704	30	110
Computer operators II -----	2,265	698	689	617	750	22	110
Computer operators III -----	5,455	793	764	695	890	28	107
Computer operators IV -----	4,210	917	908	805	1,026	37	107
Computer operators V -----	1,308	976	948	855	948	45	106
Computer operators VI -----	404	1,056	1,058	969	1,130	53	102
<u>Clerical supervisory</u>							
Keypunch supervisors I -----	99	887	850	738	1,045	8	120
Keypunch supervisors II -----	410	923	902	770	1,065	20	116
Keypunch supervisors III -----	337	991	962	843	1,108	29	108
Keypunch supervisors IV -----	159	1,075	1,064	910	1,198	41	101
<u>Clerical</u>							
Clerks, accounting I -----	16,705	629	617	526	704	18	114
Clerks, accounting II -----	16,603	795	760	648	949	24	114
Clerks, file I -----	3,508	484	460	417	524	13	114
Clerks, file II -----	4,194	538	504	442	600	18	114
Clerks, file III -----	2,520	618	596	503	702	30	107
Keypunch operators I -----	14,267	625	599	512	710	22	116
Keypunch operators II -----	14,053	684	665	585	775	31	110
Messengers -----	6,039	516	491	435	573	24	110
Secretaries I -----	15,165	673	660	595	739	26	106
Secretaries II -----	23,383	738	734	643	834	31	101
Secretaries III -----	22,074	785	779	695	881	32	108
Secretaries IV -----	12,958	878	869	776	978	29	110
Secretaries V -----	4,249	963	945	852	1,065	30	111
Stenographers, general -----	14,860	624	610	530	700	34	108
Stenographers, senior -----	17,344	711	707	600	814	34	108
Typists I -----	12,869	532	504	455	591	20	110
Typists II -----	13,348	605	575	508	671	34	107

<sup>1</sup> For scope of study, see table in appendix A.

<sup>2</sup> Includes data from 6 large companies, that provided companywide data unidentified by size of establishment. This applies only to data for occupations other than drafting and clerical.

<sup>3</sup> Occupational definitions appear in appendix C.

<sup>4</sup> Occupational employment estimates relate to the total in all establishments within scope of the survey and to the number actually surveyed. For further explanation, see appendix A, p. 34.

<sup>5</sup> Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

<sup>6</sup> The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

**Table 4. Employment distribution by salary: Professional and administrative occupations**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Accountants					Auditors				Chief accountants			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
Under \$600 -----	1.3	-	-	-	-	-	-	-	-	-	-	-	-
\$600 and under \$625 -----	2.9	-	-	-	-	1.4	-	-	-	-	-	-	-
\$625 and under \$650 -----	1.8	-	-	-	-	.2	-	-	-	-	-	-	-
\$650 and under \$675 -----	4.4	-	-	-	-	3.1	-	-	-	-	-	-	-
\$675 and under \$700 -----	3.0	(1.8)	-	-	-	3.6	-	-	-	-	-	-	-
\$700 and under \$725 -----	5.3	1.6	-	-	-	4.0	-	-	-	-	-	-	-
\$725 and under \$750 -----	6.8	2.6	-	-	-	5.2	(1.1)	-	-	-	-	-	-
\$750 and under \$775 -----	11.1	2.8	-	-	-	12.8	4.0	-	-	-	-	-	-
\$775 and under \$800 -----	7.2	4.0	-	-	-	10.5	2.0	-	-	-	-	-	-
\$800 and under \$825 -----	12.9	5.6	(2.5)	-	-	6.0	5.0	-	-	-	-	-	-
\$825 and under \$850 -----	8.0	6.1	1.0	-	-	2.3	5.1	-	-	-	-	-	-
\$850 and under \$875 -----	8.5	7.1	2.0	-	-	7.5	4.4	(2.0)	-	-	-	-	-
\$875 and under \$900 -----	7.8	6.7	2.7	-	-	7.2	6.3	1.3	-	-	-	-	-
\$900 and under \$925 -----	4.7	7.9	4.9	-	-	12.8	8.1	2.1	-	-	-	-	-
\$925 and under \$950 -----	3.8	5.7	3.1	-	-	3.5	5.8	2.6	-	-	-	-	-
\$950 and under \$975 -----	3.7	6.6	5.5	(1.3)	-	2.9	10.7	3.4	-	-	-	-	-
\$975 and under \$1,000 -----	1.7	4.9	4.5	1.0	-	2.0	4.9	2.3	-	-	-	-	-
\$1,000 and under \$1,050 -----	2.1	9.6	13.4	3.2	-	2.2	10.6	7.6	(1.1)	-	-	-	-
\$1,050 and under \$1,100 -----	1.3	6.1	12.1	4.4	-	1.5	8.7	11.9	1.9	6.8	-	-	-
\$1,100 and under \$1,150 -----	(1.9)	6.0	11.0	6.6	-	4.9	5.9	11.2	2.3	9.2	-	-	-
\$1,150 and under \$1,200 -----	-	4.9	9.8	8.1	(1.7)	2.6	4.5	9.9	4.2	-	1.2	-	-
\$1,200 and under \$1,250 -----	-	7.5	8.4	9.2	2.2	3.6	2.5	9.6	5.9	-	.8	-	-
\$1,250 and under \$1,300 -----	-	1.2	5.6	10.9	3.2	(.3)	2.5	11.5	6.6	2.1	3.1	-	-
\$1,300 and under \$1,350 -----	-	1.1	3.8	11.3	3.9	-	2.0	5.9	10.9	6.9	4.9	-	-
\$1,350 and under \$1,400 -----	-	(.4)	3.3	8.9	4.5	-	1.2	5.4	8.7	10.0	2.9	(0.5)	-
\$1,400 and under \$1,450 -----	-	-	2.4	6.9	8.3	-	1.6	3.2	12.4	16.2	5.4	6.9	-
\$1,450 and under \$1,500 -----	-	-	2.5	7.6	7.6	-	2.8	1.7	8.2	9.4	3.0	.4	-
\$1,500 and under \$1,550 -----	-	-	(1.5)	5.9	7.6	-	(.3)	2.3	8.7	7.9	14.0	2.0	-
\$1,550 and under \$1,600 -----	-	-	-	4.5	9.3	-	-	1.5	7.8	5.7	7.7	1.2	-
\$1,600 and under \$1,650 -----	-	-	-	3.2	8.0	-	-	1.5	4.7	7.6	5.1	3.3	-
\$1,650 and under \$1,700 -----	-	-	-	2.8	8.3	-	-	(3.2)	4.8	3.7	9.4	9.0	(1.5)
\$1,700 and under \$1,750 -----	-	-	-	1.2	6.1	-	-	-	2.1	.6	7.0	5.6	4.0
\$1,750 and under \$1,800 -----	-	-	-	1.1	6.3	-	-	-	2.0	3.9	8.2	3.3	1.8
\$1,800 and under \$1,850 -----	-	-	-	(1.7)	5.0	-	-	-	2.2	4.8	9.6	5.1	-
\$1,850 and under \$1,900 -----	-	-	-	-	4.3	-	-	-	1.2	1.0	3.4	5.9	1.5
\$1,900 and under \$1,950 -----	-	-	-	-	3.2	-	-	-	1.0	.6	3.6	7.3	.6
\$1,950 and under \$2,000 -----	-	-	-	-	2.9	-	-	-	(3.5)	.5	1.5	6.6	4.6
\$2,000 and under \$2,050 -----	-	-	-	-	2.7	-	-	-	-	.6	2.4	3.8	4.0
\$2,050 and under \$2,100 -----	-	-	-	-	1.8	-	-	-	-	1.8	1.7	8.9	3.7
\$2,100 and under \$2,150 -----	-	-	-	-	1.0	-	-	-	-	(.7)	-	2.1	3.7
\$2,150 and under \$2,200 -----	-	-	-	-	(2.1)	-	-	-	-	-	1.2	7.7	2.5
\$2,200 and under \$2,250 -----	-	-	-	-	-	-	-	-	-	-	1.1	4.6	4.9
\$2,250 and under \$2,300 -----	-	-	-	-	-	-	-	-	-	-	-	2.0	5.2
\$2,300 and under \$2,350 -----	-	-	-	-	-	-	-	-	-	-	(3.0)	.9	3.4
\$2,350 and under \$2,400 -----	-	-	-	-	-	-	-	-	-	-	-	.5	10.2
\$2,400 and under \$2,450 -----	-	-	-	-	-	-	-	-	-	-	-	1.7	1.5
\$2,450 and under \$2,500 -----	-	-	-	-	-	-	-	-	-	-	-	1.3	7.1
\$2,500 and under \$2,600 -----	-	-	-	-	-	-	-	-	-	-	-	1.2	9.2
\$2,600 and under \$2,700 -----	-	-	-	-	-	-	-	-	-	-	-	1.6	9.2
\$2,700 and under \$2,800 -----	-	-	-	-	-	-	-	-	-	-	-	1.2	9.2
\$2,800 and under \$2,900 -----	-	-	-	-	-	-	-	-	-	-	-	5.2	2.8
\$2,900 and under \$3,000 -----	-	-	-	-	-	-	-	-	-	-	-	(.7)	.6
\$3,000 and under \$3,100 -----	-	-	-	-	-	-	-	-	-	-	-	-	2.2
\$3,100 and under \$3,200 -----	-	-	-	-	-	-	-	-	-	-	-	-	3.1
\$3,200 and under \$3,300 -----	-	-	-	-	-	-	-	-	-	-	-	-	1.2
\$3,300 and under \$3,400 -----	-	-	-	-	-	-	-	-	-	-	-	-	-
\$3,400 and over -----	-	-	-	-	-	-	-	-	-	-	-	-	2.2
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	7,376	13,735	28,869	19,206	7,259	1,208	2,682	5,025	2,923	619	1,222	768	325
Average monthly salary -----	\$812	\$962	\$1,107	\$1,338	\$1,630	\$863	\$1,002	\$1,198	\$1,458	\$1,467	\$1,673	\$1,984	\$2,418

See footnote at end of table.

**Table 4. Employment distribution by salary: Professional and administrative occupations—Continued**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Attorneys					
	I	II	III	IV	V	VI
\$850 and under \$875 -----	0.3	-	-	-	-	-
\$875 and under \$900 -----	5.2	-	-	-	-	-
\$900 and under \$925 -----	9.1	-	-	-	-	-
\$925 and under \$950 -----	1.0	-	-	-	-	-
\$950 and under \$975 -----	2.1	-	-	-	-	-
\$975 and under \$1,000 -----	.9	(0.7)	-	-	-	-
\$1,000 and under \$1,050 -----	6.6	8.6	-	-	-	-
\$1,050 and under \$1,100 -----	9.3	2.6	-	-	-	-
\$1,100 and under \$1,150 -----	15.3	3.5	-	-	-	-
\$1,150 and under \$1,200 -----	2.4	6.4	-	-	-	-
\$1,200 and under \$1,250 -----	5.0	9.3	(1.6)	-	-	-
\$1,250 and under \$1,300 -----	20.0	12.2	4.9	-	-	-
\$1,300 and under \$1,350 -----	3.4	8.6	1.9	-	-	-
\$1,350 and under \$1,400 -----	2.2	8.2	3.6	-	-	-
\$1,400 and under \$1,450 -----	4.3	12.8	6.1	-	-	-
\$1,450 and under \$1,500 -----	3.6	4.9	5.0	-	-	-
\$1,500 and under \$1,550 -----	3.6	4.9	5.0	(1.8)	-	-
\$1,550 and under \$1,600 -----	1.6	2.4	7.2	2.4	-	-
\$1,600 and under \$1,650 -----	1.6	2.7	5.4	.6	-	-
\$1,650 and under \$1,700 -----	1.0	2.9	7.0	3.8	-	-
\$1,700 and under \$1,750 -----	(1.4)	2.0	7.8	5.3	-	-
\$1,750 and under \$1,800 -----	-	1.9	7.3	2.2	(0.7)	-
\$1,800 and under \$1,850 -----	-	1.1	4.9	3.9	1.2	-
\$1,850 and under \$1,900 -----	-	.7	2.9	3.3	1.6	-
\$1,900 and under \$1,950 -----	-	1.1	2.5	4.2	.4	-
\$1,950 and under \$2,000 -----	-	.3	6.6	7.1	2.0	-
\$2,000 and under \$2,050 -----	-	1.3	2.1	5.3	.7	-
\$2,050 and under \$2,100 -----	-	(1.0)	2.7	10.0	3.5	-
\$2,100 and under \$2,150 -----	-	-	4.1	3.9	1.6	-
\$2,150 and under \$2,200 -----	-	-	1.1	6.3	4.1	-
\$2,200 and under \$2,250 -----	-	-	1.9	4.0	2.6	(2.3)
\$2,250 and under \$2,300 -----	-	-	.5	5.1	3.0	2.6
\$2,300 and under \$2,350 -----	-	-	.9	4.5	5.0	1.0
\$2,350 and under \$2,400 -----	-	-	1.0	2.2	3.6	2.9
\$2,400 and under \$2,450 -----	-	-	.7	4.3	3.0	2.3
\$2,450 and under \$2,500 -----	-	-	1.1	3.6	4.4	3.3
\$2,500 and under \$2,600 -----	-	-	1.6	5.1	9.8	2.0
\$2,600 and under \$2,700 -----	-	-	1.6	2.3	6.9	3.3
\$2,700 and under \$2,800 -----	-	-	(.8)	2.4	9.8	8.1
\$2,800 and under \$2,900 -----	-	-	-	1.9	6.4	4.2
\$2,900 and under \$3,000 -----	-	-	-	2.1	8.4	9.8
\$3,000 and under \$3,100 -----	-	-	-	(2.5)	3.7	6.8
\$3,100 and under \$3,200 -----	-	-	-	-	5.1	7.0
\$3,200 and under \$3,300 -----	-	-	-	-	2.9	4.1
\$3,300 and under \$3,400 -----	-	-	-	-	1.9	8.6
\$3,400 and under \$3,500 -----	-	-	-	-	2.1	4.9
\$3,500 and under \$3,600 -----	-	-	-	-	1.3	3.9
\$3,600 and under \$3,700 -----	-	-	-	-	1.8	2.9
\$3,700 and under \$3,800 -----	-	-	-	-	1.1	4.2
\$3,800 and under \$3,900 -----	-	-	-	-	(.9)	2.3
\$3,900 and under \$4,000 -----	-	-	-	-	-	3.4
\$4,000 and under \$4,100 -----	-	-	-	-	-	2.9
\$4,100 and under \$4,200 -----	-	-	-	-	-	1.8
\$4,200 and under \$4,300 -----	-	-	-	-	-	.7
\$4,300 and under \$4,400 -----	-	-	-	-	-	1.5
\$4,400 and under \$4,500 -----	-	-	-	-	-	1.3
\$4,500 and over -----	-	-	-	-	-	2.0
<b>Total -----</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of employees -----	580	1,504	2,443	1,968	995	614
Average monthly salary -----	\$1,185	\$1,363	\$1,757	\$2,163	\$2,667	\$3,182

See footnote at end of table.

**Table 4. Employment distribution by salary: Professional and administrative occupations—Continued**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Buyers			
	I	II	III	IV
Under \$550 -----	1.3	-	-	-
\$550 and under \$575 -----	1.5	-	-	-
\$575 and under \$600 -----	1.3	-	-	-
\$600 and under \$625 -----	1.2	-	-	-
\$625 and under \$650 -----	1.6	-	-	-
\$650 and under \$675 -----	6.5	-	-	-
\$675 and under \$700 -----	3.4	(1.3)	-	-
\$700 and under \$725 -----	4.8	1.8	-	-
\$725 and under \$750 -----	5.6	1.8	-	-
\$750 and under \$775 -----	7.5	3.6	-	-
\$775 and under \$800 -----	6.6	2.6	-	-
\$800 and under \$825 -----	8.0	2.6	-	-
\$825 and under \$850 -----	6.4	4.4	-	-
\$850 and under \$875 -----	7.7	5.7	-	-
\$875 and under \$900 -----	5.7	4.9	(3.1)	-
\$900 and under \$925 -----	6.3	5.9	2.4	-
\$925 and under \$950 -----	2.1	4.6	2.2	-
\$950 and under \$975 -----	2.8	6.3	3.0	-
\$975 and under \$1,000 -----	4.0	5.6	2.6	(0.5)
\$1,000 and under \$1,050 -----	6.3	11.4	7.9	2.0
\$1,050 and under \$1,100 -----	4.2	8.8	8.8	2.3
\$1,100 and under \$1,150 -----	1.8	7.8	9.8	3.8
\$1,150 and under \$1,200 -----	1.0	5.8	9.7	5.9
\$1,200 and under \$1,250 -----	1.2	4.0	9.6	7.8
\$1,250 and under \$1,300 -----	(1.2)	3.1	9.1	7.5
\$1,300 and under \$1,350 -----	-	2.5	6.8	9.6
\$1,350 and under \$1,400 -----	-	1.2	5.6	8.4
\$1,400 and under \$1,450 -----	-	1.5	5.7	10.2
\$1,450 and under \$1,500 -----	-	1.2	3.3	7.2
\$1,500 and under \$1,550 -----	-	(1.5)	2.5	5.5
\$1,550 and under \$1,600 -----	-	-	2.1	3.8
\$1,600 and under \$1,650 -----	-	-	1.9	4.5
\$1,650 and under \$1,700 -----	-	-	1.5	4.6
\$1,700 and under \$1,750 -----	-	-	1.1	2.8
\$1,750 and under \$1,800 -----	-	-	(1.6)	2.6
\$1,800 and under \$1,850 -----	-	-	-	2.5
\$1,850 and under \$1,900 -----	-	-	-	2.0
\$1,900 and under \$1,950 -----	-	-	-	1.7
\$1,950 and under \$2,000 -----	-	-	-	.8
\$2,000 and under \$2,100 -----	-	-	-	2.0
\$2,100 and under \$2,200 -----	-	-	-	1.0
\$2,200 and over -----	-	-	-	.9
<b>Total -----</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of employees -----	4,021	11,910	13,965	5,200
Average monthly salary -----	\$839	\$1,012	\$1,222	\$1,452

See footnote at end of table.

**Table 4. Employment distribution by salary: Professional and administrative occupations—Continued**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Job analysts				Directors of personnel			
	I	II	III	IV	I	II	III	IV
\$550 and under \$575	1.8	-	-	-	-	-	-	-
\$575 and under \$600	-	-	-	-	-	-	-	-
\$600 and under \$625	-	-	-	-	-	-	-	-
\$625 and under \$650	-	-	-	-	-	-	-	-
\$650 and under \$675	3.6	1.3	-	-	-	-	-	-
\$675 and under \$700	1.8	-	-	-	-	-	-	-
\$700 and under \$725	5.5	2.4	-	-	-	-	-	-
\$725 and under \$750	3.6	1.3	-	-	-	-	-	-
\$750 and under \$775	14.5	3.7	-	-	-	-	-	-
\$775 and under \$800	14.5	3.7	-	-	-	-	-	-
\$800 and under \$825	12.7	4.4	(2.4)	-	-	-	-	-
\$825 and under \$850	12.7	5.7	2.2	-	-	-	-	-
\$850 and under \$875	10.9	4.7	.9	-	-	-	-	-
\$875 and under \$900	1.8	6.1	2.1	-	-	-	-	-
\$900 and under \$925	7.3	9.8	3.0	-	1.9	-	-	-
\$925 and under \$950	1.8	11.8	2.7	-	-	-	-	-
\$950 and under \$975	5.5	6.4	4.4	-	2.0	-	-	-
\$975 and under \$1,000	-	2.0	5.2	(1.2)	3.5	-	-	-
\$1,000 and under \$1,050	-	13.1	9.5	2.8	3.5	1.6	-	-
\$1,050 and under \$1,100	-	7.1	7.0	1.0	4.9	1.5	-	-
\$1,100 and under \$1,150	-	4.4	7.1	3.8	5.4	2.5	-	-
\$1,150 and under \$1,200	1.8	5.1	8.6	7.5	14.4	1.6	-	-
\$1,200 and under \$1,250	-	1.0	9.2	2.2	4.4	5.2	1.7	-
\$1,250 and under \$1,300	-	5.1	11.5	9.3	8.3	7.7	1.5	-
\$1,300 and under \$1,350	-	(1.0)	4.6	7.9	13.6	7.2	.5	-
\$1,350 and under \$1,400	-	-	10.1	7.5	6.3	5.1	1.3	-
\$1,400 and under \$1,450	-	-	4.7	7.9	6.2	9.4	3.7	-
\$1,450 and under \$1,500	-	-	2.2	8.7	4.6	8.5	3.9	-
\$1,500 and under \$1,550	-	-	1.5	5.1	4.8	5.4	2.7	(0.2)
\$1,550 and under \$1,600	-	-	(1.3)	7.9	3.8	3.8	2.5	5.1
\$1,600 and under \$1,650	-	-	-	11.7	6.6	3.1	3.6	1.5
\$1,650 and under \$1,700	-	-	-	5.5	.5	12.2	1.6	1.9
\$1,700 and under \$1,750	-	-	-	2.8	-	5.4	8.0	-
\$1,750 and under \$1,800	-	-	-	1.6	3.2	.9	4.4	.5
\$1,800 and under \$1,850	-	-	-	2.4	1.3	3.7	3.1	5.3
\$1,850 and under \$1,900	-	-	-	(3.0)	-	3.1	5.0	6.3
\$1,900 and under \$1,950	-	-	-	-	(.8)	1.7	2.0	3.6
\$1,950 and under \$2,000	-	-	-	-	-	1.7	3.5	4.4
\$2,000 and under \$2,050	-	-	-	-	-	1.1	5.1	5.1
\$2,050 and under \$2,100	-	-	-	-	-	.1	8.3	2.9
\$2,100 and under \$2,150	-	-	-	-	-	.4	3.9	1.0
\$2,150 and under \$2,200	-	-	-	-	-	.9	5.1	4.6
\$2,200 and under \$2,250	-	-	-	-	-	.1	2.2	6.1
\$2,250 and under \$2,300	-	-	-	-	-	1.1	3.8	2.2
\$2,300 and under \$2,350	-	-	-	-	-	1.3	1.3	3.9
\$2,350 and under \$2,400	-	-	-	-	-	1.0	2.1	1.5
\$2,400 and under \$2,450	-	-	-	-	-	1.1	1.3	.7
\$2,450 and under \$2,500	-	-	-	-	-	(1.6)	6.2	4.1
\$2,500 and under \$2,600	-	-	-	-	-	-	4.5	7.7
\$2,600 and under \$2,700	-	-	-	-	-	-	.6	7.0
\$2,700 and under \$2,800	-	-	-	-	-	-	5.2	5.8
\$2,800 and under \$2,900	-	-	-	-	-	-	(1.7)	4.8
\$2,900 and under \$3,000	-	-	-	-	-	-	-	4.6
\$3,000 and under \$3,100	-	-	-	-	-	-	-	3.4
\$3,100 and under \$3,200	-	-	-	-	-	-	-	1.5
\$3,200 and under \$3,300	-	-	-	-	-	-	-	1.0
\$3,300 and over	-	-	-	-	-	-	-	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	55	297	676	494	1,114	1,924	1,089	413
Average monthly salary	\$815	\$957	\$1,160	\$1,439	\$1,316	\$1,568	\$2,007	\$2,345

See footnote at end of table.

**Table 4. Employment distribution by salary: Professional and administrative occupations—Continued**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Chemists							
	I	II	III	IV	V	VI	VII	VIII
Under \$625	0.4	-	-	-	-	-	-	-
\$625 and under \$650	1.6	-	-	-	-	-	-	-
\$650 and under \$675	1.1	-	-	-	-	-	-	-
\$675 and under \$700	2.7	-	-	-	-	-	-	-
\$700 and under \$725	1.9	-	-	-	-	-	-	-
\$725 and under \$750	5.9	(0.5)	-	-	-	-	-	-
\$750 and under \$775	5.7	1.1	-	-	-	-	-	-
\$775 and under \$800	2.9	2.8	-	-	-	-	-	-
\$800 and under \$825	6.2	2.0	-	-	-	-	-	-
\$825 and under \$850	5.6	3.4	(1.3)	-	-	-	-	-
\$850 and under \$875	11.2	3.6	1.1	-	-	-	-	-
\$875 and under \$900	6.3	4.7	1.5	-	-	-	-	-
\$900 and under \$925	7.1	5.9	2.0	-	-	-	-	-
\$925 and under \$950	7.1	5.6	2.1	-	-	-	-	-
\$950 and under \$975	7.7	7.3	2.5	-	-	-	-	-
\$975 and under \$1,000	7.4	6.2	3.0	(1.0)	-	-	-	-
\$1,000 and under \$1,050	11.2	13.7	10.3	1.8	-	-	-	-
\$1,050 and under \$1,100	6.1	11.7	8.9	1.4	-	-	-	-
\$1,100 and under \$1,150	1.3	8.2	11.2	3.7	-	-	-	-
\$1,150 and under \$1,200	(.8)	7.1	9.8	4.7	-	-	-	-
\$1,200 and under \$1,250	-	7.3	9.3	6.6	(1.9)	-	-	-
\$1,250 and under \$1,300	-	5.0	9.4	8.0	1.1	-	-	-
\$1,300 and under \$1,350	-	2.3	6.6	8.4	2.0	(0.7)	-	-
\$1,350 and under \$1,400	-	(1.7)	7.4	9.8	2.8	1.0	-	-
\$1,400 and under \$1,450	-	-	5.4	6.7	6.0	.7	-	-
\$1,450 and under \$1,500	-	-	3.4	10.1	5.2	1.3	-	-
\$1,500 and under \$1,550	-	-	2.2	6.9	6.8	1.4	-	-
\$1,550 and under \$1,600	-	-	1.1	7.7	6.9	2.6	(1.0)	-
\$1,600 and under \$1,650	-	-	(1.5)	5.5	7.9	2.6	1.0	-
\$1,650 and under \$1,700	-	-	-	5.5	7.3	3.6	1.7	-
\$1,700 and under \$1,750	-	-	-	4.8	8.0	4.8	.5	-
\$1,750 and under \$1,800	-	-	-	2.5	8.3	4.2	1.1	-
\$1,800 and under \$1,850	-	-	-	1.9	6.9	7.1	3.8	-
\$1,850 and under \$1,900	-	-	-	1.0	5.7	6.4	2.8	-
\$1,900 and under \$1,950	-	-	-	(2.1)	4.7	8.5	4.3	-
\$1,950 and under \$2,000	-	-	-	-	5.7	6.8	5.9	(0.7)
\$2,000 and under \$2,050	-	-	-	-	3.1	6.4	3.3	1.9
\$2,050 and under \$2,100	-	-	-	-	2.2	7.7	5.1	.7
\$2,100 and under \$2,150	-	-	-	-	1.7	7.0	2.4	1.2
\$2,150 and under \$2,200	-	-	-	-	1.2	3.1	5.9	1.7
\$2,200 and under \$2,250	-	-	-	-	1.3	4.8	4.4	2.9
\$2,250 and under \$2,300	-	-	-	-	1.0	4.2	8.3	2.9
\$2,300 and under \$2,350	-	-	-	-	(2.4)	4.2	3.5	3.2
\$2,350 and under \$2,400	-	-	-	-	-	2.5	5.9	2.2
\$2,400 and under \$2,450	-	-	-	-	-	2.0	4.2	-
\$2,450 and under \$2,500	-	-	-	-	-	1.2	3.0	4.9
\$2,500 and under \$2,600	-	-	-	-	-	1.6	9.7	8.0
\$2,600 and under \$2,700	-	-	-	-	-	(3.6)	5.4	5.3
\$2,700 and under \$2,800	-	-	-	-	-	-	4.9	10.9
\$2,800 and under \$2,900	-	-	-	-	-	-	2.8	7.3
\$2,900 and under \$3,000	-	-	-	-	-	-	1.0	10.7
\$3,000 and under \$3,100	-	-	-	-	-	-	1.9	13.1
\$3,100 and under \$3,200	-	-	-	-	-	-	1.2	5.1
\$3,200 and under \$3,300	-	-	-	-	-	-	.5	4.1
\$3,300 and under \$3,400	-	-	-	-	-	-	1.3	1.7
\$3,400 and under \$3,500	-	-	-	-	-	-	.4	.2
\$3,500 and under \$3,600	-	-	-	-	-	-	2.2	2.4
\$3,600 and under \$3,700	-	-	-	-	-	-	(.7)	1.2
\$3,700 and under \$3,800	-	-	-	-	-	-	-	1.5
\$3,800 and under \$3,900	-	-	-	-	-	-	-	.5
\$3,900 and under \$4,000	-	-	-	-	-	-	-	1.0
\$4,000 and under \$4,100	-	-	-	-	-	-	-	1.5
\$4,100 and over	-	-	-	-	-	-	-	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	1,719	4,085	9,540	12,161	8,725	4,191	1,564	412
Average monthly salary	\$888	\$1,034	\$1,191	\$1,440	\$1,725	\$2,007	\$2,350	\$2,873

See footnote at end of table.



**Table 4. Employment distribution by salary: Professional and administrative occupations—Continued**

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Engineers							
	I	II	III	IV	V	VI	VII	VIII
Under \$625 -----	-	-	-	-	-	-	-	-
\$625 and under \$650 -----	-	-	-	-	-	-	-	-
\$650 and under \$675 -----	-	-	-	-	-	-	-	-
\$675 and under \$700 -----	-	-	-	-	-	-	-	-
\$700 and under \$725 -----	-	-	-	-	-	-	-	-
\$725 and under \$750 -----	-	-	-	-	-	-	-	-
\$750 and under \$775 -----	(1.6)	-	-	-	-	-	-	-
\$775 and under \$800 -----	1.1	-	-	-	-	-	-	-
\$800 and under \$825 -----	1.7	-	-	-	-	-	-	-
\$825 and under \$850 -----	1.8	-	-	-	-	-	-	-
\$850 and under \$875 -----	4.5	(2.5)	-	-	-	-	-	-
\$875 and under \$900 -----	4.2	1.1	-	-	-	-	-	-
\$900 and under \$925 -----	9.4	3.9	-	-	-	-	-	-
\$925 and under \$950 -----	9.7	3.6	(1.7)	-	-	-	-	-
\$950 and under \$975 -----	12.1	5.6	1.0	-	-	-	-	-
\$975 and under \$1,000 -----	12.1	6.3	1.2	-	-	-	-	-
\$1,000 and under \$1,050 -----	15.7	17.0	4.0	-	-	-	-	-
\$1,050 and under \$1,100 -----	9.9	15.2	6.7	(1.5)	-	-	-	-
\$1,100 and under \$1,150 -----	7.2	13.2	9.3	-	-	-	-	-
\$1,150 and under \$1,200 -----	3.8	10.1	11.8	2.5	-	-	-	-
\$1,200 and under \$1,250 -----	2.6	7.9	12.8	4.0	(1.1)	-	-	-
\$1,250 and under \$1,300 -----	1.5	4.9	12.0	6.0	1.1	-	-	-
\$1,300 and under \$1,350 -----	(1.1)	3.6	10.5	8.4	1.9	-	-	-
\$1,350 and under \$1,400 -----	-	2.1	8.3	9.4	2.7	-	-	-
\$1,400 and under \$1,450 -----	-	1.8	6.8	10.0	3.7	(1.4)	-	-
\$1,450 and under \$1,500 -----	-	(1.4)	5.3	10.0	4.6	1.1	-	-
\$1,500 and under \$1,550 -----	-	-	4.3	9.4	7.1	1.9	-	-
\$1,550 and under \$1,600 -----	-	-	2.1	8.2	8.1	2.5	-	-
\$1,600 and under \$1,650 -----	-	-	1.1	6.6	8.7	3.5	(1.7)	-
\$1,650 and under \$1,700 -----	-	-	(1.0)	6.2	10.0	4.1	1.3	-
\$1,700 and under \$1,750 -----	-	-	-	5.0	8.8	6.9	1.4	-
\$1,750 and under \$1,800 -----	-	-	-	4.1	8.3	6.7	1.9	-
\$1,800 and under \$1,850 -----	-	-	-	2.8	7.1	6.7	3.6	(1.1)
\$1,850 and under \$1,900 -----	-	-	-	1.7	5.8	6.5	4.9	1.1
\$1,900 and under \$1,950 -----	-	-	-	(2.6)	5.2	6.2	5.4	1.6
\$1,950 and under \$2,000 -----	-	-	-	-	4.2	7.0	5.7	2.0
\$2,000 and under \$2,050 -----	-	-	-	-	3.2	6.5	7.3	1.8
\$2,050 and under \$2,100 -----	-	-	-	-	2.5	6.3	5.7	1.6
\$2,100 and under \$2,150 -----	-	-	-	-	1.8	5.4	5.8	1.8
\$2,150 and under \$2,200 -----	-	-	-	-	1.4	4.7	5.5	2.3
\$2,200 and under \$2,250 -----	-	-	-	-	(2.7)	4.9	5.1	4.4
\$2,250 and under \$2,300 -----	-	-	-	-	-	4.0	5.2	4.9
\$2,300 and under \$2,350 -----	-	-	-	-	-	3.0	4.8	7.4
\$2,350 and under \$2,400 -----	-	-	-	-	-	2.7	4.2	3.9
\$2,400 and under \$2,450 -----	-	-	-	-	-	1.9	3.6	5.2
\$2,450 and under \$2,500 -----	-	-	-	-	-	1.9	3.6	8.1
\$2,500 and under \$2,600 -----	-	-	-	-	-	2.3	6.9	9.6
\$2,600 and under \$2,700 -----	-	-	-	-	-	1.1	5.4	7.4
\$2,700 and under \$2,800 -----	-	-	-	-	-	(1.0)	3.8	6.8
\$2,800 and under \$2,900 -----	-	-	-	-	-	-	2.6	4.8
\$2,900 and under \$3,000 -----	-	-	-	-	-	-	2.0	5.7
\$3,000 and under \$3,100 -----	-	-	-	-	-	-	(2.7)	3.9
\$3,100 and under \$3,200 -----	-	-	-	-	-	-	-	3.2
\$3,200 and under \$3,300 -----	-	-	-	-	-	-	-	2.7
\$3,300 and under \$3,400 -----	-	-	-	-	-	-	-	2.0
\$3,400 and under \$3,500 -----	-	-	-	-	-	-	-	1.7
\$3,500 and under \$3,600 -----	-	-	-	-	-	-	-	-
\$3,600 and under \$3,700 -----	-	-	-	-	-	-	-	1.8
\$3,700 and under \$3,800 -----	-	-	-	-	-	-	-	(3.4)
\$3,800 and under \$3,900 -----	-	-	-	-	-	-	-	-
\$3,900 and under \$4,000 -----	-	-	-	-	-	-	-	-
\$4,000 and under \$4,100 -----	-	-	-	-	-	-	-	-
\$4,100 and over -----	-	-	-	-	-	-	-	-
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	15,358	30,532	83,255	113,436	81,652	44,283	16,593	3,688
Average monthly salary -----	\$992	\$1,098	\$1,263	\$1,494	\$1,721	\$1,986	\$2,247	\$2,622

<sup>1</sup> For scope of study, see table in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

**Table 5. Employment distribution by salary: Technical support occupations and keypunch supervisors**

(Percent distribution of employees in selected technical support occupations and keypunch supervisors by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March, 1974)

Monthly salary	Engineering technicians					Drafter-tracers	Drafters		
	I	II	III	IV	V		I	II	III
Under \$400	-	-	-	-	-	2.5	-	-	-
\$400 and under \$425	(0.8)	-	-	-	-	3.6	(0.4)	-	-
\$425 and under \$450	1.4	-	-	-	-	2.7	1.0	-	-
\$450 and under \$475	.8	-	-	-	-	6.2	1.1	-	-
\$475 and under \$500	2.0	-	-	-	-	7.4	1.7	-	-
\$500 and under \$525	8.3	-	-	-	-	10.6	2.8	-	-
\$525 and under \$550	3.6	(2.1)	-	-	-	4.6	2.7	-	-
\$550 and under \$575	6.7	2.7	-	-	-	8.6	4.6	-	-
\$575 and under \$600	5.3	2.9	-	-	-	7.7	3.8	(2.3)	-
\$600 and under \$625	9.5	4.8	(0.5)	-	-	8.9	7.8	1.7	-
\$625 and under \$650	10.4	4.3	1.0	-	-	10.2	6.1	1.8	-
\$650 and under \$675	8.8	6.5	2.8	-	-	10.5	11.0	2.7	-
\$675 and under \$700	7.1	6.8	3.8	-	-	6.2	8.3	3.0	-
\$700 and under \$725	7.0	10.5	4.3	(0.9)	-	2.3	7.5	3.7	-
\$725 and under \$750	4.4	8.6	5.6	1.1	-	1.5	6.9	5.2	(2.5)
\$750 and under \$775	5.3	8.6	5.8	2.2	-	1.1	5.0	6.7	2.0
\$775 and under \$800	6.9	9.3	6.4	2.4	-	(5.4)	5.3	7.7	2.0
\$800 and under \$825	1.6	6.8	6.9	3.0	(0.9)	-	4.9	6.6	2.7
\$825 and under \$850	1.3	6.5	8.4	3.5	1.5	-	4.8	6.7	3.0
\$850 and under \$875	2.2	4.2	7.7	4.5	1.8	-	3.5	6.6	4.4
\$875 and under \$900	2.2	3.2	7.1	5.2	1.6	-	2.6	6.2	3.4
\$900 and under \$925	1.9	2.1	6.7	6.5	2.9	-	3.0	5.9	5.4
\$925 and under \$950	1.4	2.2	6.5	6.5	2.0	-	.8	5.4	5.1
\$950 and under \$975	(1.0)	1.5	5.2	8.4	4.1	-	1.0	5.1	5.3
\$975 and under \$1,000	-	.7	4.7	10.5	4.5	-	(3.3)	3.8	5.6
\$1,000 and under \$1,050	-	3.0	6.9	13.2	10.9	-	-	6.7	10.2
\$1,050 and under \$1,100	-	1.9	4.8	10.1	11.7	-	-	5.2	9.7
\$1,100 and under \$1,150	-	(.8)	2.3	8.4	14.2	-	-	2.3	3.1
\$1,150 and under \$1,200	-	-	1.4	5.2	10.7	-	-	1.4	6.8
\$1,200 and under \$1,250	-	-	(1.4)	3.9	9.2	-	-	1.0	3.9
\$1,250 and under \$1,300	-	-	-	2.9	6.7	-	-	1.1	2.9
\$1,300 and under \$1,350	-	-	-	(1.6)	7.4	-	-	(1.2)	2.0
\$1,350 and under \$1,400	-	-	-	-	4.4	-	-	-	2.6
\$1,400 and under \$1,450	-	-	-	-	4.1	-	-	-	1.3
\$1,450 and under \$1,500	-	-	-	-	(1.5)	-	-	-	1.8
\$1,500 and under \$1,550	-	-	-	-	-	-	-	-	2.0
\$1,550 and under \$1,600	-	-	-	-	-	-	-	-	1.8
\$1,600 and under \$1,650	-	-	-	-	-	-	-	-	1.3
\$1,650 and under \$1,700	-	-	-	-	-	-	-	-	1.8
\$1,700 and under \$1,750	-	-	-	-	-	-	-	-	1.2
\$1,750 and over	-	-	-	-	-	-	-	-	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	4,039	12,810	26,151	31,853	18,247	5,425	18,350	28,581	31,067
Average monthly salary	\$665	\$760	\$874	\$998	\$1,138	\$587	\$709	\$870	\$1,089

See footnote at end of table.

**Table 5. Employment distribution by salary: Technical support occupations and keypunch supervisors—Continued**

(Percent distribution of employees in selected technical support occupations and keypunch supervisors by monthly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Monthly salary	Computer Operators						Keypunch supervisors					
	I	II	III	IV	V	VI	I	II	III	IV	V	
Under \$375	1.2	-	-	-	-	-	-	-	-	-	-	-
\$375 and under \$400	2.7	-	-	-	-	-	-	-	-	-	-	-
\$400 and under \$425	1.0	(1.2)	-	-	-	-	-	-	-	-	-	-
\$425 and under \$450	4.0	2.6	(0.5)	-	-	-	-	-	-	-	-	-
\$450 and under \$475	4.5	2.1	1.1	-	-	-	1.3	-	-	-	-	-
\$475 and under \$500	8.4	4.0	1.0	-	-	-	3.4	-	-	-	-	-
\$500 and under \$525	11.9	6.6	1.7	-	-	-	.9	(1.5)	-	-	-	-
\$525 and under \$550	12.6	7.2	2.7	-	-	-	4.6	2.1	-	-	-	-
\$550 and under \$575	12.7	8.2	2.8	-	-	-	2.7	2.2	-	-	-	-
\$575 and under \$600	4.3	8.5	3.6	(2.3)	-	-	1.9	3.2	-	-	-	-
\$600 and under \$625	7.4	8.5	5.7	1.8	-	-	8.7	3.8	(0.5)	-	-	-
\$625 and under \$650	6.0	7.3	5.3	2.8	(2.4)	-	5.2	5.1	1.0	-	-	-
\$650 and under \$675	7.3	8.7	8.9	5.4	1.6	-	10.2	7.4	4.9	-	-	-
\$675 and under \$700	3.2	8.4	6.6	4.6	2.1	-	6.9	7.3	4.5	-	-	-
\$700 and under \$725	3.0	5.5	8.3	4.1	4.5	-	2.1	8.8	3.1	-	-	-
\$725 and under \$750	3.2	5.6	7.7	5.7	4.8	(0.8)	5.1	7.8	1.2	-	-	-
\$750 and under \$775	2.3	3.9	7.7	4.6	4.2	2.0	4.6	4.0	4.7	(1.8)	-	-
\$775 and under \$800	1.2	3.1	5.4	5.0	5.2	1.7	6.0	6.0	4.0	2.9	-	-
\$800 and under \$825	(2.8)	1.5	5.2	6.4	6.3	4.0	5.6	3.8	7.3	1.6	1.6	-
\$825 and under \$850	-	2.2	5.0	7.6	5.4	7.7	13.4	3.5	10.3	6.0	-	-
\$850 and under \$875	-	1.1	4.0	6.1	5.0	1.7	3.3	4.8	3.0	5.5	1.6	-
\$875 and under \$900	-	1.3	3.4	6.3	5.4	4.3	1.8	2.9	4.1	5.2	1.6	-
\$900 and under \$925	-	(2.5)	3.4	7.3	4.8	3.9	1.3	4.1	11.2	1.0	9.4	-
\$925 and under \$950	-	-	2.4	4.8	8.2	6.9	1.1	3.3	5.0	4.4	7.8	-
\$950 and under \$975	-	-	1.9	4.2	5.4	5.1	5.5	2.5	5.0	8.8	3.1	-
\$975 and under \$1,000	-	-	1.6	4.2	4.9	6.5	.2	2.7	5.1	4.9	6.3	-
\$1,000 and under \$1,050	-	-	2.0	5.7	9.7	10.3	.9	4.3	4.8	10.9	17.2	-
\$1,050 and under \$1,100	-	-	1.0	4.1	6.3	13.4	1.4	1.7	6.7	9.1	7.8	-
\$1,100 and under \$1,150	-	-	(1.2)	2.9	3.6	8.9	1.1	2.3	2.7	4.9	14.1	-
\$1,150 and under \$1,200	-	-	-	1.6	2.2	6.0	(.8)	1.4	3.0	7.5	1.6	-
\$1,200 and under \$1,250	-	-	-	1.1	1.6	8.7	-	2.2	2.3	3.4	-	-
\$1,250 and under \$1,300	-	-	-	(1.4)	2.9	2.9	-	(1.4)	1.0	4.2	4.7	-
\$1,300 and under \$1,350	-	-	-	-	1.0	.7	-	-	1.6	3.6	1.6	-
\$1,350 and under \$1,400	-	-	-	-	(2.2)	.8	-	-	(3.1)	10.1	3.1	-
\$1,400 and under \$1,450	-	-	-	-	-	3.9	-	-	-	2.9	4.7	-
\$1,450 and under \$1,500	-	-	-	-	-	-	-	-	-	(1.3)	4.7	-
\$1,500 and under \$1,550	-	-	-	-	-	-	-	-	-	-	3.1	-
\$1,550 and under \$1,600	-	-	-	-	-	-	-	-	-	-	1.6	-
\$1,600 and under \$1,650	-	-	-	-	-	-	-	-	-	-	4.7	-
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of employees	4,488	10,467	19,717	11,498	2,901	768	1,277	2,081	1,143	385	64	-
Average monthly salary	\$573	\$636	\$741	\$857	\$925	\$1,034	\$737	\$796	\$917	\$1,067	\$1,129	-

<sup>1</sup> For scope of study, see table in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

**Table 6. Employment distribution by salary: Clerical occupations**

(Percent distribution of employees in selected clerical occupations, by weekly salary, United States except Alaska and Hawaii,<sup>1</sup> March 1974)

Weekly salary	Clerks, accounting		Clerks, file			Key punch operators		Messengers
	I	II	I	II	III	I	II	
Under \$70 -----	-	-	1.1	-	-	-	-	-
\$70 and under \$75 -----	-	-	3.5	(1.8)	-	-	-	(2.2)
\$75 and under \$80 -----	(0.9)	-	5.5	1.3	-	(0.9)	-	2.5
\$80 and under \$85 -----	2.7	-	10.1	7.1	-	1.9	-	8.2
\$85 and under \$90 -----	2.2	-	13.0	8.3	(2.6)	3.5	-	8.8
\$90 and under \$95 -----	4.9	-	14.0	12.0	2.2	5.4	(1.0)	10.6
\$95 and under \$100 -----	5.4	(1.6)	12.2	12.7	4.4	5.7	1.5	9.2
\$100 and under \$105 -----	7.7	1.2	13.0	10.0	4.1	9.3	2.4	10.8
\$105 and under \$110 -----	6.2	2.2	9.1	8.8	4.3	7.4	3.2	8.4
\$110 and under \$115 -----	8.4	2.4	6.5	7.3	8.0	9.0	4.4	6.9
\$115 and under \$120 -----	7.4	3.7	3.6	7.9	9.9	8.6	6.7	7.2
\$120 and under \$125 -----	9.0	4.8	2.7	5.1	7.1	8.5	7.6	6.2
\$125 and under \$130 -----	6.9	4.7	1.6	3.8	10.5	6.9	7.4	3.6
\$130 and under \$135 -----	6.7	6.0	1.1	2.5	8.2	6.7	8.7	3.8
\$135 and under \$140 -----	5.3	6.2	(3.0)	2.4	8.5	4.6	7.7	2.3
\$140 and under \$145 -----	4.4	6.5	-	1.3	5.5	4.2	8.9	1.6
\$145 and under \$150 -----	3.9	5.5	-	1.2	3.6	2.4	6.8	1.6
\$150 and under \$160 -----	5.6	11.4	-	2.6	6.8	5.1	9.7	1.7
\$160 and under \$170 -----	2.9	10.3	-	1.4	4.4	2.6	7.4	1.5
\$170 and under \$180 -----	2.6	6.9	-	1.0	2.3	2.0	4.5	1.2
\$180 and under \$190 -----	2.2	6.0	(1.6)	1.9	1.9	1.1	4.5	(1.7)
\$190 and under \$200 -----	2.0	4.0	-	-	1.3	1.4	3.0	-
\$200 and under \$210 -----	(2.7)	4.3	-	-	2.1	1.5	1.9	-
\$210 and under \$220 -----	-	3.6	-	-	1.0	1.1	1.7	-
\$220 and under \$230 -----	-	3.5	-	-	(1.2)	(.3)	(1.3)	-
\$230 and under \$240 -----	-	1.7	-	-	-	-	-	-
\$240 and under \$250 -----	-	1.9	-	-	-	-	-	-
\$250 and over -----	-	1.6	-	-	-	-	-	-
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	92,282	69,323	26,099	22,814	8,357	63,909	45,157	25,435
Average weekly salary -----	\$127	\$161	\$98	\$108	\$133	\$124	\$144	\$108

See footnote at end of table.

**Table 6. Employment distribution by salary: Clerical occupations—Continued**

(Percent distribution of employees in selected clerical occupations, by weekly salary, United States except Alaska and Hawaii, <sup>1</sup> March 1974)

Weekly salary	Secretaries					Stenog- rappers, general	Stenog- rappers, senior	Typists	
	I	II	III	IV	V			I	II
Under \$80 -----	-	-	-	-	-	-	-	1.3	-
\$80 and under \$85 -----	-	-	-	-	-	(0.9)	-	3.6	(0.3)
\$85 and under \$90 -----	-	-	-	-	-	1.5	-	6.5	1.6
\$90 and under \$95 -----	-	-	-	-	-	2.5	-	10.3	2.5
\$95 and under \$100 -----	(1.9)	(1.1)	-	-	-	4.3	(1.7)	9.9	3.6
\$100 and under \$105 -----	2.2	1.0	-	-	-	6.3	1.3	12.0	7.0
\$105 and under \$110 -----	2.7	.9	(2.1)	-	-	6.9	2.2	10.5	7.5
\$110 and under \$115 -----	3.3	1.6	1.1	-	-	6.1	2.7	9.3	8.0
\$115 and under \$120 -----	5.8	2.9	2.0	(2.3)	-	8.5	5.0	8.6	10.2
\$120 and under \$125 -----	7.0	4.5	2.0	1.0	-	8.3	6.7	7.3	9.6
\$125 and under \$130 -----	7.2	4.6	2.9	1.8	(2.7)	6.3	6.1	4.7	8.5
\$130 and under \$135 -----	7.6	6.4	3.7	2.5	1.5	7.7	6.9	3.8	7.6
\$135 and under \$140 -----	7.6	6.0	4.5	2.8	1.4	5.9	6.9	2.6	6.5
\$140 and under \$145 -----	7.9	7.1	5.7	3.3	1.7	5.0	6.7	1.9	5.2
\$145 and under \$150 -----	6.8	7.2	5.4	3.7	2.3	4.6	6.4	1.7	4.0
\$150 and under \$160 -----	12.0	13.2	12.3	8.6	6.2	7.6	12.4	2.6	6.2
\$160 and under \$170 -----	10.1	11.8	13.0	11.8	8.5	5.4	9.5	1.5	3.6
\$170 and under \$180 -----	6.7	8.9	11.4	11.0	8.5	4.3	7.1	1.1	2.6
\$180 and under \$190 -----	4.3	7.9	9.9	11.1	10.1	2.8	6.6	(1.0)	1.3
\$190 and under \$200 -----	3.2	5.6	7.6	9.1	9.4	2.1	4.5	-	1.5
\$200 and under \$210 -----	1.8	4.3	6.8	7.9	9.5	2.0	3.5	-	1.4
\$210 and under \$220 -----	(1.9)	2.6	4.6	7.2	10.0	.9	2.3	-	(1.2)
\$220 and under \$230 -----	-	1.3	2.3	5.2	7.0	(.4)	1.3	-	-
\$230 and under \$240 -----	-	(1.1)	1.4	3.8	5.7	-	(.4)	-	-
\$240 and under \$250 -----	-	-	.6	3.0	3.8	-	-	-	-
\$250 and under \$260 -----	-	-	(.7)	1.5	3.9	-	-	-	-
\$260 and under \$270 -----	-	-	-	1.2	2.8	-	-	-	-
\$270 and under \$280 -----	-	-	-	(1.4)	1.5	-	-	-	-
\$280 and under \$290 -----	-	-	-	-	1.6	-	-	-	-
\$290 and over -----	-	-	-	-	2.0	-	-	-	-
Total -----	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees -----	58,370	76,386	69,133	44,389	14,180	43,612	50,486	63,176	39,301
Average weekly salary -----	\$146	\$158	\$168	\$184	\$200	\$134	\$152	\$112	\$130

<sup>1</sup> For scope of study, see table in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distribution for some occupations, the percentage of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

**Table 7. Occupational employment distribution: By industry division**

(Percent distribution of employees in selected professional, administrative, technical, and clerical occupations,<sup>1</sup> by industry division,<sup>2</sup> United States except Alaska and Hawaii, March 1974)

Occupation	Manu- facturing	Public utilities <sup>3</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>4</sup>
<u>Professional and administrative</u>						
Accountants -----	68	12	6	4	8	( <sup>5</sup> )
Auditors -----	42	15	6	7	29	( <sup>5</sup> )
Chief accountants -----	64	9	9	7	7	( <sup>5</sup> )
Attorneys -----	31	21	( <sup>5</sup> )	4	41	( <sup>5</sup> )
Buyers -----	88	5	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Job analysts -----	66	8	( <sup>5</sup> )	( <sup>5</sup> )	21	( <sup>5</sup> )
Directors of personnel -----	67	5	9	5	13	( <sup>5</sup> )
Chemists -----	95	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Engineers -----	75	12	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	12
<u>Technical support</u>						
Engineering technicians -----	79	8	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	12
Drafters -----	73	11	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	14
Computer operators -----	43	10	7	7	31	( <sup>5</sup> )
<u>Clerical supervisory</u>						
Keypunch supervisors -----						
<u>Clerical</u>						
Clerks, accounting -----	44	15	10	13	17	( <sup>5</sup> )
Clerks, file -----	20	6	5	4	63	( <sup>5</sup> )
Keypunch operators -----	43	11	11	10	24	( <sup>5</sup> )
Messengers -----	36	12	7	5	36	( <sup>5</sup> )
Secretaries -----	51	10	6	5	24	( <sup>5</sup> )
Stenographers -----	53	16	7	( <sup>5</sup> )	21	( <sup>5</sup> )
Typists -----	37	9	5	( <sup>5</sup> )	44	( <sup>5</sup> )

<sup>1</sup> Each occupation includes the work levels shown in table 1.

<sup>2</sup> For scope of study, see table in appendix A.

<sup>3</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.

<sup>4</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>5</sup> Less than 4 percent.

**Table 8. Relative salary levels: Occupation by industry division**

(Relative salary levels for selected professional, administrative, technical, and clerical occupations<sup>1</sup> by industry division,<sup>2</sup> United States except Alaska and Hawaii, March 1974)

(Average salary for each occupation in all industries = 100)

Occupation	Manu- facturing	Public utilities <sup>3</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>4</sup>
<u>Professional and administrative</u>						
Accountants -----	101	102	96	95	96	100
Auditors -----	104	106	100	96	92	115
Chief accountants -----	103	101	88	96	101	( <sup>5</sup> )
Attorneys -----	105	101	102	100	95	( <sup>5</sup> )
Buyers -----	100	106	99	103	104	96
Job analysts -----	103	106	( <sup>5</sup> )	( <sup>5</sup> )	87	( <sup>5</sup> )
Directors of personnel -----	99	103	107	94	104	101
Chemists -----	100	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	101
Engineers -----	100	103	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	98
<u>Technical support</u>						
Engineering technicians -----	99	108	104	( <sup>5</sup> )	( <sup>5</sup> )	103
Drafters -----	100	103	88	94	( <sup>5</sup> )	99
Computer operators -----	102	111	102	97	94	97
<u>Clerical supervisory</u>						
Keypunch supervisors -----	103	120	( <sup>5</sup> )	93	92	( <sup>5</sup> )
<u>Clerical</u>						
Clerks, accounting -----	102	118	96	90	89	101
Clerks, file -----	107	131	101	96	94	109
Keypunch operators -----	102	121	98	94	91	104
Messengers -----	104	122	97	94	90	96
Secretaries -----	101	114	99	94	93	105
Stenographers -----	102	111	96	96	87	98
Typists -----	105	114	103	101	92	108

<sup>1</sup> Each occupation includes the work levels shown in table 1. In computing relative salary levels for each occupation by industry division, the total employment in each work level in all industries surveyed was used as a constant employment weight to eliminate the effect of differences in the proportion of employment in various work levels within each occupation.

<sup>2</sup> For scope of study, see table in appendix A.

<sup>3</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas and sanitary services.

<sup>4</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>5</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.

**Table 9. Average weekly hours: Occupation by industry division**

(Average standard weekly hours<sup>1</sup> for employees in selected professional, administrative, technical, and clerical occupations<sup>2</sup> by industry division,<sup>3</sup> United States except Alaska and Hawaii, March 1974)

Occupation	Manu- facturing	Public utilities <sup>4</sup>	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected services <sup>5</sup>
<u>Professional and administrative</u>						
Accountants -----	39.5	39.5	39.5	39.5	38.0	39.5
Auditors -----	39.0	39.5	38.5	39.5	38.0	39.5
Chief accountants -----	39.5	39.0	40.5	40.0	38.5	( <sup>6</sup> )
Attorneys -----	38.5	39.5	38.5	39.0	37.5	( <sup>6</sup> )
Buyers -----	39.5	39.5	39.5	39.5	38.0	40.0
Job analysts -----	39.5	39.5	( <sup>6</sup> )	( <sup>6</sup> )	37.5	( <sup>6</sup> )
Directors of personnel -----	39.5	39.5	39.0	40.0	38.5	40.0
Chemists -----	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Engineers -----	40.0	39.0	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	39.5
<u>Technical support</u>						
Engineering technicians -----	40.0	39.5	39.5	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Drafters -----	40.0	39.5	40.0	38.5	( <sup>6</sup> )	40.0
Computer operators -----	39.5	39.0	39.0	39.5	38.5	39.5
<u>Clerical supervisory</u>						
Keypunch supervisors -----	39.5	39.0	( <sup>6</sup> )	39.5	38.5	( <sup>6</sup> )
<u>Clerical</u>						
Clerks, accounting -----	39.5	39.0	39.5	39.5	38.0	39.5
Clerks, file -----	39.0	39.0	39.0	39.0	38.0	39.0
Keypunch operators -----	39.5	39.5	39.0	39.0	38.0	39.5
Messengers -----	39.0	38.5	38.5	39.0	38.0	39.0
Secretaries -----	39.0	39.0	38.5	39.0	38.0	40.0
Stenographers -----	39.5	39.5	39.0	39.5	38.0	39.5
Typists -----	39.5	39.0	39.0	39.0	37.5	39.5

<sup>1</sup> Based on the standard workweek for which employees receive their regular straight-time salary. If standard hours were not available, the standard hours applicable for a majority of the office work force in the establishment were used. The average for each job category was rounded to the nearest half hour.

<sup>2</sup> Each occupation includes the work levels shown in table 1.

<sup>3</sup> For scope of study, see table in appendix A.

<sup>4</sup> Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.

<sup>5</sup> Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

<sup>6</sup> Insufficient employment in 1 work level or more to warrant separate presentation of data.



## Appendix A. Scope and Method of Survey

### Scope of survey

The survey relates to establishments in the United States, except Alaska and Hawaii, in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; engineering and architectural services; and commercially operated research, development, and testing laboratories. Excluded are establishments employing fewer than the minimum number of workers, as indicated in the accompanying table for each industry division, at the time of reference of the universe data (generally, first quarter of 1971). The variable minimum employment size, which was adopted in the 1966 survey, more nearly equalizes the white-collar employment of establishments among the various industry divisions.

The estimated number of establishments and the total employment within scope of this survey, and within the samples actually studied, are shown for each major industry division in table A-1. These estimates also are shown separately for establishments employing 2,500 workers or more and those located in Standard Metropolitan Statistical Areas.<sup>1</sup>

### Timing of survey and method of collection

Survey data collection was planned so that the data would reflect an average reference period of March 1974.<sup>2</sup>

Data were obtained by Bureau field economists who

<sup>1</sup>The metropolitan area data in the 1974 survey relate to all 261 SMSA's (within the 48 States surveyed) as revised through April 1973 by the U.S. Office of Management and Budget. Earlier surveys represented SMSA's ranging in numbers from 188 in 1962 and earlier surveys to 229 in the surveys from 1970 to 1972.

<sup>2</sup>The March payroll period has been used since the 1972 survey. The 1967 through 1971 surveys had a June reference period for all occupations. Prior to the 1967 study, the average reference period was February for clerical and drafting jobs, and March for all other occupations. Until 1963, reports listed "Winter" as the reference period. From 1963 through 1966, the more specific designation, "February-March," was used.

visited a nationwide sample of representative establishments within the scope of the survey between January and May. Employees were classified according to occupation and level, with the assistance of company officials, on the basis of the BLS job definitions which appear in appendix C. In comparing actual duties and responsibilities of employees with those in the survey definitions, extensive use was made of company occupational descriptions, organization charts, and other personnel records.

### Sampling and estimating procedures

The sampling procedures called for the detailed stratification of all establishments within the scope of the survey by location, industry, and size of employment. From this universe, a nationwide sample of about 3,200 establishments (not companies) was selected systematically.<sup>3</sup> Each industry was sampled separately, the sampling rates depending on the employment size of the industry. Within each industry, a greater proportion of large than of small establishments was included. In combining the data, each establishment was weighted according to its probability of selection, so that unbiased estimates were generated. To illustrate the process, where one establishment out of four was selected, it was given a weight of 4, thus representing itself plus three others. In instances where data were not available for the original sample member, an alternate of the same original probability of selection was chosen in the same industry-size classification. Where there was no suitable substitution for the original sample member, the missing unit was accounted for by assigning additional weight to the sample member that most closely resembled the missing unit.

<sup>3</sup>A few of the largest employers, together employing approximately 1,150,000 workers, gave data on a companywide basis. These companies were eliminated from the universe to which the preceding procedure applies. The sample count includes the establishments of these companies within the scope of the survey.

**Table A-1. Number of establishments and workers within scope of survey and number studied, by industry division, March 1974**

Industry division	Minimum employment in establishments in scope of survey	Within scope of survey <sup>1</sup>			Studied		
		Number of establishments	Workers in establishments		Number of establishments	Workers in establishments	
			Total	Professional, administrative, supervisory and clerical <sup>2</sup>		Total	Professional, administrative, supervisory and clerical <sup>2</sup>
United States—all industries <sup>1</sup> .....		29,205	20,227,540	7,762,596	3,199	6,876,946	2,904,829
Manufacturing .....	250	14,486	12,374,290	3,717,175	1,953	4,349,857	1,517,340
Nonmanufacturing:							
Transportation, <sup>3</sup> communication, electric, gas, and sanitary services .....	100	2,858	2,311,155	1,119,413	354	1,138,979	574,283
Wholesale trade .....	100	3,923	847,813	412,983	165	67,238	38,119
Retail trade .....	250	2,769	2,587,816	537,559	272	651,546	147,791
Finance, insurance and real estate .....	100	4,693	1,880,651	1,811,399	365	542,543	538,117
Services:							
Engineering and architectural services; and commercially operated research, development, and testing laboratories only .....	100	476	225,815	164,067	90	126,783	89,179
Metropolitan areas—all industries <sup>4</sup> .....	—	23,124	16,673,767	6,983,227	2,705	6,273,690	2,748,431
Manufacturing .....	250	9,828	9,258,095	3,132,509	1,533	3,792,344	1,384,297
Nonmanufacturing:							
Transportation, <sup>3</sup> communication, electric, gas, and sanitary services .....	100	2,197	2,135,531	1,052,740	319	1,118,033	563,564
Wholesale trade .....	100	3,673	801,561	393,870	157	65,788	37,544
Retail trade .....	250	2,579	2,472,860	522,181	261	642,467	146,408
Finance, insurance and real estate .....	100	4,379	1,790,458	1,724,669	350	537,151	532,977
Services:							
Engineering and architectural services; and commercially operated research, development, and testing laboratories only .....	100	468	215,262	157,258	85	117,907	83,641
Establishments employing 2,500 workers or more—all industries .....		1,191	6,673,800	2,694,296	776	5,122,211	2,158,357
Manufacturing .....	—	736	4,182,378	1,492,352	495	3,307,318	1,187,499

<sup>1</sup> The study relates to establishments in industries listed, with total employment at or above the minimum limitation indicated in the first column, in the United States except Alaska and Hawaii.

<sup>2</sup> Includes executive, administrative, professional, supervisory, and clerical employees, but excludes technicians, drafters, and sales personnel.

<sup>3</sup> Limited to railroad, local and suburban passenger, deep sea water (foreign and domestic), and air transportation industries as defined in the 1967 edition of the Standard Industrial Classification Manual.

<sup>4</sup> Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through April 1973 by the U.S. Office of Management and Budget.

## Nature of data collected and presented

The reported salaries relate to standard salaries paid for standard work schedules, i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included. The average salaries presented relate to full-time employees for whom salary data are available.

Data presented on year-to-year changes in average salaries are subject to limitations which reflect the nature of the data collected. Changes in average salaries reflect not only general salary increases and merit or other increases given to individuals while in the same work level category, but they also may reflect other factors such as employee turnover, expansions or reductions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum of the salary range established for a work level, which would tend to lower the average, whereas a reduction or a low turnover in the work force may have the opposite effect. Similarly, year-to-year promotions of employees to higher work levels of professional and administrative occupations may affect the average of each level. The established salary ranges for such occupations are relatively wide, and promoted employees, who may have been paid the maximum of the salary scale for the lower level, are likely to be replaced by less experienced employees who may be paid the minimum. Occupations most likely to reflect such changes in the salary averages are the higher levels of professional and administrative occupations and single incumbent positions such as chief accountant and director of personnel.<sup>4</sup>

About 3 percent of the establishments which were asked to supply data would not do so. These corresponded to an estimated total in the universe studied of approximately 875,000 workers, about 4 percent of 20,227,540. The noncooperating units were replaced by others in the same industry-size-location classes. If all similar units were already in the sample, the weights of the included establishments were increased to account for the missing units.

Some companies had an established policy of not disclosing salary data for some of their employees. Often this policy related to higher level positions, because these employees were considered part of the management group or were classified in categories which included only one employee. In nearly all instances, however, information was provided on the number of such employees and the appropriate occupational classi-

fication. It was thus possible to estimate the proportion of employees in each category for whom salary data were not available. In all but 4 of the 84 occupational levels surveyed, the number of employees for whom salary data were not available was less than 5 percent.<sup>5</sup>

Comparisons between establishments that provided salary data for each specific occupation level and those not doing so indicated that the two classes of establishments did not differ materially in industries represented, employment, or salary levels for other jobs in this series for which data were available.

Occupational employment estimates relate to the total in all establishments within the scope of the survey and not the number actually surveyed. Employees for whom salary data were not available were not taken into account in the estimates.<sup>6</sup> These estimates were derived by weighting full-time employees in the occupations studied in each sample establishment in proportion to the number of establishments it represented within the scope of the survey. For example, if the sample establishment was selected from a group of four establishments with similar employment in the same industry and region, each full-time employee found in an occupation studied was counted as four employees in compiling the employment estimates for the occupations. In addition, the survey occupations were limited to employees meeting the specific criteria in each survey definition and were not intended to include all employees in each field of work.<sup>7</sup> For these reasons, and because of differences in occupational structure among establishments, the estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the occupations and levels as defined for the survey. These qualifications of the employment estimates do not

<sup>4</sup> These types of occupations also may be subject to greater sampling error, as explained in the paragraph headed Estimates of sampling error.

<sup>5</sup> Those with 5 percent and over were: Directors of personnel IV – 16 percent; job analysts I and directors of personnel III – 11 percent; directors of personnel II – 5 percent.

<sup>6</sup> Also not taken into account were a few instances in which salary data were available for employees in an occupation, but where there was no satisfactory basis for classifying the employees by work level.

<sup>7</sup> Engineers, for example, are defined to permit classification of employees engaged in engineering work within a band of eight levels, starting with inexperienced engineering graduates and excluding only those within certain fields of specialization or in positions above those covered by level VIII. In contrast, such occupations as chief accountants and directors of personnel are defined to include only those with responsibility for a specified program and with duties and responsibilities as indicated for each of the more limited number of work levels selected for study.

materially affect the accuracy of the earnings data.

Wherever possible, data were collected for men and women separately. If identification by sex was not possible, all workers were reported as the predominant sex. In the professional, administrative, and technical support occupations, men were sufficiently predominant to preclude presentation of separate data by sex. For those clerical occupations in which both men and women are commonly employed, separate data by sex are available from the area wage survey reports compiled by metropolitan area. The occupations and work levels included in this study, and in which women accounted for 5 percent or more of the employment, were distributed according to the proportion of women employees, as follows:

<i>Women (percent)</i>	<i>Occupation and level</i>
95 or more . . . . .	File clerks I, all levels of keypunch operators, secretaries, stenographers, and typists
90-94 . . . . .	Accounting clerks I, file clerks II and III, and keypunch supervisors I and II
80-84 . . . . .	Keypunch supervisors III
75-79 . . . . .	Accounting clerks II
65-69 . . . . .	Keypunch supervisors IV
45-49 . . . . .	Messengers, keypunch supervisors V, and job analysts I
30-34 . . . . .	Drafter-tracers and job analysts II
25-29 . . . . .	Engineering technicians I, buyers I, and computer operators II
20-24 . . . . .	Accountants I and chemists I
15-19 . . . . .	Accountants II, job analysts III, chemists II, computer operators I and III
10-14 . . . . .	Auditors I and II, attorneys I, chemists III, and engineering technicians II
5-9 . . . . .	Accountants III, job analysts IV, directors of personnel II and III, attorneys III, engineers I, engineering technicians III, buyers II, computer operators IV and V, and drafters I and II

**Conversion of salary rates**

Salary data for the selected occupations were collected in the form in which they were most readily available from company records, i.e., on a weekly, biweekly, semimonthly, monthly, or annual basis. For the initial tabulations, the salary data were first converted to a weekly basis for the clerical and drafting occupations and to a monthly basis for all others. The factors used to convert these data were as follows:

<i>Payroll basis</i>	<i>Conversion factors</i>	
	<i>To weekly basis</i>	<i>To monthly basis</i>
Weekly . . . . .	1.0000	4.3450
Biweekly . . . . .	.5000	2.1725
Semimonthly . . . . .	.4602	2.0000
Monthly . . . . .	.2301	1.0000
Annual . . . . .	.0192	.0833

All salaries presented in the tables were rounded to the nearest dollar. Average monthly salaries presented in tables 1, 2, and 3 and annual salaries presented in tables 1 and 2 for the clerical and drafting occupations are derived from average weekly salaries (to the nearest penny) by use of the factors 4.345 and 52.14, respectively, and rounding the results. To obtain annual salaries for all other occupations in tables 1 and 2, average monthly salaries (to the nearest penny) are multiplied by 12 and rounded to the nearest dollar.

**Method of determining median and quartile values**

Median and quartile values presented in this report were derived from distributions of employees by salary using \$1 class intervals. Weekly salary class intervals were used for drafters and clerical occupations and monthly salary class intervals were used for all other occupations. The weekly values were multiplied by 4.345 to obtain monthly values and by 52.14 to obtain annual values. The annual values for other than drafters and clerical occupations were obtained by multiplying monthly values by 12.

**Estimates of sampling error**

The survey procedure yields estimates with widely varying sampling errors, depending on the frequency with which the job occurs and the dispersion of salaries. Thus, for the 84 surveyed occupational work levels, the relative sampling errors of the average salaries were distributed as follows: 51 were under 2 percent; 24 were 2 and under 4 percent; 3 were 4 and under 6 percent; and 6 were 6 percent and over.<sup>8</sup> These sampling errors measure the validity of the band within which the true average is likely to fall. Thus, for an occupation with a sample average monthly salary of \$1,000 and sampling error of 4 percent, the chances are 19 out of 20 that the true average lies within the band from \$960 to \$1,040.

**Methods of computation of annual percent increases**

The percent increases for each occupation in text table 1 were obtained by adding the aggregate salaries

<sup>8</sup>The 6 percent and over group included: Attorneys III – 7.8 percent; directors of personnel IV – 6.6 percent; drafter-tracers – 6.6 percent; computer operators VI – 7.5 percent; keypunch supervisors I – 6.7 percent; keypunch supervisors III – 7.1 percent.

for each level in each of two successive years (employment in the most recent year, to eliminate the effects of year-to-year employment shifts, multiplied by the average salaries in both years) and dividing the later sum by the earlier sum. The resultant relative, less 100, is the percent of increase. Changes in the scope of the survey and in occupational definitions were incorporated into the series on a continuing basis as soon as two comparable periods were available. The increases for each of the two broad occupational groups were obtained by averaging the increases of the occupations within the group. The increases for all survey occupations were determined by averaging the increases for the two broad occupational groups. The annual increases

were then linked together to obtain the changes that have occurred since this series was begun and to compute average annual rates of increase for each occupation and group and for all occupations combined.

The year-to-year percent increases for each group in text table 2 were determined by adding average salaries for all occupations in the group for 2 consecutive years, and dividing the later sum by the earlier sum. The resultant relative, less 100, shows the percent of increase. Changes in the scope of the survey or in the occupational definitions were incorporated into the series as soon as comparable data for 2 consecutive periods were available. The 13-year trends were obtained by linking changes for the individual periods.

## **Appendix B. Survey Changes in 1974**

### **Changes in occupational coverage**

A six level computer operator job as defined in appendix C was added to the survey.

### **Changes in occupational definitions**

The jobs formerly titled draftsman-tracer and draftsman were retitled drafter-tracer and drafter. The modification is in accordance with recommendations of the

Interagency Committee on Occupation Classification designed to identify and modify occupational titles which denote or connote sex stereotypes. Since the title changes did not affect the content of the jobs, comparisons with previously published data are not affected.

The secretary definition, revised to take account of the extent of the secretary's participation in the administrative work of the supervisor, is now defined in five rather than four levels. Because of changes in the definition at each level, data are not comparable to secretary data previously published.

## Appendix C. Occupational Definitions

The primary purpose of preparing job definitions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations, or levels within occupations, workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. To secure comparability of job content, some occupations and work levels are defined to include only those workers meeting specific criteria as to training, job functions, and responsibilities. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's occupational definitions may differ significantly from those in use in individual establishments or those prepared for other purposes. Also see note referring to the definitions for the drafting and clerical occupations at the end of this appendix.

### Accountants and Auditors

#### ACCOUNTANT

Performs professional accounting work requiring knowledge of the theory and practice of recording, classifying, examining, *and* analyzing the data and records of financial transactions. The work generally requires a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Positions covered by this definition are characterized by the inclusion of work that is analytical, creative, evaluative, and advisory in nature. The work *draws upon* and *requires* a thorough knowledge of the fundamental doctrines, theories, principles, and terminology of accountancy, and often entails some understanding of such related fields as business law, statistics, and general management. (See also chief accountant.)

Professional responsibilities in accountant positions above the entry and developmental levels include several such duties as:

- Analyzing the effects of transactions upon account relationships;
- Evaluating alternative means of treating transactions;
- Planning the manner in which account structures should be developed or modified;
- Assuring the adequacy of the accounting system as the basis for reporting to management;
- Considering the need for new or changed controls;

Projecting accounting data to show the effects of proposed plans on capital investments, income, cash position, and overall financial condition;

Interpreting the meaning of accounting records, reports, and statements;

Advising operating officials on accounting matters; and

Recommending improvements, adaptations, or revisions in the accounting system and procedures.

(Entry and developmental level positions provide opportunity to develop ability to perform professional duties such as those enumerated above.)

*In addition* to such professional work, most accountants are also responsible for assuring the proper recording and documentation of transactions in the accounts. They, therefore, frequently direct non-professional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost of other comparable data, the preparation of standard reports and statements, and similar work. (Positions involving such supervisory work but not including professional duties as described above are not included in this description.)

*Excluded* are accountants whose *principal or sole* duties consist of designing or improving accounting systems or other nonoperating staff work, e.g., financial analysis, financial forecasting, tax advising, etc. (The

criteria that follow for distinguishing among the several levels of work are inappropriate for such jobs.) Note, however, that professional accountant positions with responsibility for recording or reporting accounting data relative to taxes are included, as are operating or cost accountants whose work includes, but is not limited to, improvement of the accounting system.

Some accountants use electronic data processing equipment to process, record, and report accounting data. In some such cases the machine unit is a subordinate segment of the accounting system; in others it is a separate entity or is attached to some other organization. In either instance, providing the primary responsibility of the position is professional accounting work of the type otherwise included, the use of data processing equipment of any type does not of itself exclude a position from the accountant description nor does it change its level.

### **Accountant I**

*General characteristics.* At this beginning professional level, the accountant learns to apply the principles, theories, and concepts of accounting to a specific system. The position is distinguishable from non-professional positions by the variety of assignments; rate and scope of development expected of the incumbent; and the existence, implicit or explicit, of a planned training program designed to give the entering accountant practical experience. (Terminal positions are excluded.)

*Direction received.* Works under close supervision of an experienced accountant whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of his potential for advancement. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

*Typical duties and responsibilities.* Performs a variety of accounting tasks such as: Examining a variety of financial statements for completeness, internal accuracy, and conformance with uniform accounting classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements not involving problems of analysis or presentation; and preparing charts, tables, and other

exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

*Responsibility for direction of others.* Usually none.

### **Accountant II**

*General characteristics.* At this continuing developmental level the professional accountant makes practical applications of technical accounting practices and concepts beyond the mere application of detailed rules and instructions. Assignments are designed to expand his practical experience and to develop his professional judgment in the application of basic accounting techniques to simple professional problems. He is expected to be competent in the application of standard procedures and requirements to routine transactions, to raise questions about unusual or questionable items, and to suggest solutions. (Terminal positions are excluded.)

*Direction received.* Work is reviewed closely to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure his professional growth. His progress is evaluated in terms of his ability to apply his professional knowledge to basic accounting problems in the day-to-day operations of an established accounting system.

*Typical duties and responsibilities.* Performs a variety of accounting tasks, e.g., prepares routine working papers, schedules, exhibits, and summaries indicating the extent of his examination, and presenting and supporting his findings and recommendations. Examines a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent policies and procedures, and are classified and recorded according to acceptable accounting standards.

*Responsibility for the direction of others.* Usually none, although he may supervise a few clerks.

### **Accountant III**

*General characteristics.* Performs professional operating or cost accounting work requiring the standardized application of well-established accounting principles, theories, concepts, and practices. Receives detailed instructions concerning the overall accounting system and its objectives, the policies and procedures under

which it is operated, and the nature of changes in the system or its operation. Characteristically, the accounting system or assigned segment is stable and well established (i.e., the basic chart of accounts, classifications, the nature of the cost accounting system, the report requirements, and the procedures are changed infrequently).

Depending upon the workload involved, the accountant may have such assignments as supervision of the *day-to-day operation* of: (a) The entire system of a subordinate establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of a somewhat larger system, or (c) in a very large and complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

*Direction received.* A higher level professional accountant normally is available to furnish advice and assistance as needed. Work is reviewed for technical accuracy, adequacy of professional judgment, and compliance with instructions through spot checks, appraisal of results, subsequent processing, analysis of reports and statements, and other appropriate means.

*Typical duties and responsibilities.* The primary responsibility of most positions at this level is to assure that the assigned day-to-day operations are carried out in accordance with established accounting principles, policies, and objectives. The accountant performs such professional work as: Developing nonstandard reports and statements (e.g., those containing cash forecasts reflecting the interrelations of accounting, cost budgeting, or comparable information); interpreting and pointing out trends or deviations from standards; projecting data into the future; predicting the effects of changes in operating programs; or identifying management informational needs, and refining account structures or reports accordingly.

Within the limits of his delegated responsibility, makes day-to-day decisions concerning the accounting treatment of financial transactions. Is expected to recommend solutions to complex problems and propose changes in the accounting system for approval at higher levels. Such recommendations are derived from his own knowledge of the application of well-established principles and practices.

*Responsibility for the direction of others.* In most instances he directs the work of a subordinate nonprofessional staff.

## Accountant IV

*General characteristics.* Performs professional operating or cost accounting work which requires the application of well-established accounting principles, theories, concepts, and practices to a wide variety of difficult problems. Receives instructions concerning the objectives and operation of the overall accounting system. At this level, compared with level III, the accounting system or assigned segment is more complex, i.e., (a) is relatively unstable, (b) must adjust to new or changing company operations, (c) serves organizations of unusually large size, or (d) is complicated by the need to provide and coordinate separate or specialized accounting treatment and reporting (e.g., cost accounting using standard cost, process cost, and job order techniques) for different operations or divisions of the company.

Depending upon the workload and degree of coordination involved, the accountant IV may have such assignments as the supervision of the *day-to-day operation* of: (a) The entire accounting system of a subordinate establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of an accounting system serving a larger and more complex establishment, or (c) the entire accounting system of a large (e.g., employing several thousand persons) subordinate establishment which in other respects has an accounting system of the complexity that characterizes level III.

*Direction received.* A higher level accountant normally is available to furnish advice and assistance as needed. Work is reviewed by spot checks and appraisal of results for adequacy of professional judgment, compliance with instructions, and overall accuracy and quality.

*Typical duties and responsibilities.* As at level III, a primary characteristic of most positions at this level is the responsibility of operating an accounting system or major segment of a system in the intended manner.

The accountant IV exercises professional judgment in making frequent appropriate recommendations for: New accounts; revisions in the account structure; new types of ledgers; revisions in reporting system or subsidiary records; changes in instructions regarding the use of accounts; new or refined account classifications or definitions; etc. He also makes day-to-day decisions concerning the accounting treatment of financial transactions and is expected to recommend solutions to complex problems beyond the scope of his responsibility.



*Responsibility for direction of others.* Accounting staff he supervises, if any, may include professional accountants.

#### **Accountant V**

*General characteristics.* Performs professional operating or cost accounting work which is of greater than average professional difficulty and responsibility because of the presence of unusual and novel problems or the unusual magnitude or impact of the accounting program. Typically this level of difficulty arises from (a) the large size of the accounting and operating organization, (b) the atypical nature of the accounting problems encountered, or (c) the unusually great involvement in accounting systems design and development.

Examples of assignments characteristic of this level are the supervision of the *day-to-day operation* of: (a) The entire accounting system of a subordinate establishment having an unusually novel and complex accounting system, or (b) the entire accounting system of a large (e.g., employing several thousand persons) subordinate establishment which in other respects has an accounting system of the complexity that characterizes level IV, or (c) the entire accounting system of a company or corporation that has a relatively stable and conventional accounting system and employs several thousand persons and has a few subordinate establishments which include accounting units, or (d) a major segment of an accounting system that substantially exceeds the characteristics described in any one of the preceding examples.

*Direction received.* An accountant of higher level normally is available to furnish advice and assistance as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions, and overall quality.

*Typical duties and responsibilities.* The work is characterized by its unusual difficulty or responsibility. Accountants V typically are directly concerned on a relatively continuous basis with what the nature of the accounting system should be, with the devising or revising of the operating accounting policies and procedures that are necessary, and with the managerial as well as the accounting meaning of the reports and statements for which they are responsible. Accountants V are necessarily deeply involved in fundamental and complex accounting matters and in the managerial problems that are affected.

*Responsibility for the direction of others.* Accounting

staff supervised generally includes professional accountants.

#### **AUDITOR**

Performs professional auditing work requiring a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Audits the financial records and practices of a company, or of divisions or components of the company, to appraise systematically and verify the accounting accuracy of records and reports and to assure the consistent application of accepted accounting principles. Evaluates the adequacy of the accounting system and internal financial controls. Makes appropriate recommendations for improvement as necessary. To the extent determined necessary, examines the transactions entering into the balance sheet and the transactions entering into income, expense, and cost accounts. Determines:

The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities;

The accuracy of financial statements or reports and the fairness of presentation of facts therein;

The propriety or legality of transactions;

The degree of compliance with established policies and procedures concerning financial transactions.

*Excluded* are positions which do not require full professional accounting training because the work is confined on a relatively permanent basis to repetitive examinations of a limited area of company operations and accounting processes, e.g., only accounts payable and receivable; demurrage records and related functions, or station operations only of a railroad company; branch offices which do not engage in the full range of banking and accounting activities of the main bank; warehouse operations only of a mail order company; checking transactions to determine whether or not they conform to prescribed routines or procedures. (Examinations of such repetitive or limited nature normally do not require or permit professional audit work to be performed.)

#### **Auditor I**

*General characteristics.* As a trainee auditor at the entering professional level, performs a variety of routine assignments. Typically, he is rotated through a variety of tasks under a planned training program designed to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Terminal positions are excluded.)

*Direction received.* Works under close supervision of an experienced auditor whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of his potential for advancement. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

*Typical duties and responsibilities.* Assists in making audits by performing such tasks as: Verification of the accuracy of the balances in various records; examination of a variety of types of documents and vouchers for accuracy of computations; checking transactions to assure they are properly documented and have been recorded in accordance with correct accounting classifications; verifying the count of inventories; preparing detailed statements, schedules, and standard audit working papers; counting cash and other assets; preparing simple reconciliations; and similar functions.

### **Auditor II**

*General characteristics.* At this continuing developmental level the professional auditor serves as a junior member of an audit team, independently performing selected portions of the audit which are limited in scope and complexity. Auditors at this level typically have acquired knowledge of company operations, policies, and procedures. (Terminal positions are excluded.)

*Direction received.* Detailed instructions are furnished and the work is reviewed to the extent necessary to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure the auditor's professional growth. Any technical problems not covered by instructions are brought to the attention of a superior. His progress is evaluated in terms of his ability to apply his professional knowledge to basic auditing situations.

*Typical duties and responsibilities.* Applies knowledge of *accounting theory* and audit practices to a variety of relatively simple professional problems in his audit assignments, including such tasks as: The verification of reports against source accounts and records to determine their reliability; reconciliation of bank and other accounts and verifying the detail of recorded transactions; detailed examinations of cash receipts and disbursement vouchers, payroll records, requisitions, work orders, receiving reports, and other accounting documents to ascertain that transactions are properly

supported and are recorded correctly from an accounting or regulatory standpoint; or preparing working papers, schedules, and summaries.

### **Auditor III**

*General characteristics.* Work at this level consists of the audit of operations and accounting processes that are relatively stable, well-established, and typical of the industry. The audits primarily involve the collection and analysis of readily available findings; there is previous audit experience that is directly applicable; the audit reports are normally prepared in a prescribed format using a standard method of presentation; and few if any major problems are anticipated. The work performed requires the *application* of substantial knowledges of accounting principles and practices, e.g., bases for distinguishing among capital maintenance and operating expenses; accruing reserves for taxes; and other accounting considerations of an equivalent nature.

*Direction received.* Work is normally within an established audit program and supervision is provided by a higher level auditor who outlines and discusses assignments. Work is spot-checked in progress. Completed assignments are reviewed for adequacy of coverage, soundness of judgment, compliance with professional standards, and adherence to policies.

*Typical duties and responsibilities.* The auditor examines transactions and verifies accounts; observes and evaluates accounting procedures and internal controls; prepares audit working papers and submits an audit report in the required pattern containing recommendations for needed changes or improvements. He is usually responsible for selecting the detailed audit methods to follow, choosing the audit sample and its size, determining the extent to which discrepancies need to be investigated, and deciding the depth of the analyses required to support reported findings and conclusions.

Examples of assignments involving work of this level:

As a team leader or working alone, independently conducts audits of the complete accounts and related operations of smaller or less complex companies (e.g., involving a centralized accounting system with few or no subordinate, subsidiary, or branch accounting records) or of comparable segments of larger companies.

As a member of an audit team independently accomplishes varied audit assignments of the above described characteristics, typically major segments of complete audits, or assignments otherwise limited in scope of larger and more complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized *systems* integrated with the general accounting system).

Illustrative of such assignments are the audit and initial review of the accounting treatment and validity of reporting of overhead expenses in a large manufacturing or maintenance organization (e.g., major repair yard of a railroad); or, the checking, verification, and balancing of all accounts receivable and accounts payable; or, the analysis and verification of assets and reserves; or, the inspection and evaluation of accounting controls and procedures.

#### Auditor IV

*General characteristics.* Auditors at this level are experienced professionals who apply thorough knowledge of accounting principles and theory in connection with a *variety* of audits. Work at this level is characterized by the audit of organizations and accounting processes which are complex and difficult because of such factors as: Presence of new or changed programs and accounting systems; existence of major specialized accounting functions (e.g., cost accounting, inventory accounting, sales accounting), in addition to general accounting; need to consider extensive and complicated regulatory requirements; lack of or difficulty in obtaining information; and other similar factors. Typically, a variety of different assignments are encountered over a period of time, e.g., 1 year. The audit reports prepared are comprehensive, explain irregularities, cite rules or regulations violated, recommend remedial actions, and contain analyses of items of special importance or interest to company management.

*Direction received.* Within an established audit program, has responsibility for independently planning and executing audits. Unusually difficult problems are discussed with the supervisor who also reviews completed assignments for adherence to principles and standards and the soundness of conclusions.

*Typical duties and responsibilities.* Auditors at this level have full responsibility for planning the audit, including determination of the aspects to emphasize, methods to be used, development of nonstandard or specialized audit aids such as questionnaires, etc., *where previous audit experience and plans are of limited applicability.*

Included in the scope of work that characterizes this level are such functions as: Evaluation of methods used for determining depreciation rates of equipment; evaluation of assets where original costs are unknown; evaluation of the reliability of accounting and reporting

systems; analysis of cost accounting systems and cost reports to evaluate the basis for cost and price setting; evaluation of accounting procurement and supply management records, controls, and procedures; and many others.

Examples of assignments involving work at this level:

As a team leader or working alone, independently plans and conducts audits of the complete accounts and related operations of relatively large and complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized accounting systems integrated with the general accounting system) or of company branch, subsidiary, or affiliated organizations which are individually of comparable size and complexity.

As a member of an audit team independently plans and accomplishes audit assignments that constitute major segments of audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves.

*NOTE:* Excluded from level IV are auditors who, as team leaders or working alone, conduct *complete* audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves; or are team members assigned to major segments of audits of even larger or more complex organizations.

#### CHIEF ACCOUNTANT

As the top technical expert in accounting, is responsible for directing the accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); *and* (2) at least one other *major* accounting activity, typically tax accounting, cost accounting, property accounting, or sales accounting. It may also include such other activities as payroll and timekeeping, and mechanical or electronic data processing operations which are an adjunct of the accounting system. (Responsibility for an internal audit program is typically *not* included.)

The responsibilities of the chief accountant include *all* of the following:

1. On own responsibility, developing or adapting or revising an accounting system to meet the needs of the organization;
2. Supervising, either directly or through subordinate supervisors, the operation of the system with full management responsibility for the quality and quantity of work performed, training and development of subordinates, work

scheduling and review, coordination with other parts of the organization served, etc.;

3. Providing, directly or through an official such as a comptroller, advisory services to the top management officials of the organization served as to:

a. The status of financial resources and the financial trends or results of operations as revealed by accounting data, and selecting a manner of presentation that is meaningful to management;

b. Methods for improving operations as suggested by his expert knowledge of accounting, e.g., proposals for improving cost control, property management, credit and collection, tax reduction, or similar programs.

*Excluded* are positions with responsibility for the accounting program *if* they also include (as a major part of the job) responsibility for budgeting; work measurement; organization, methods, and procedures studies; or similar nonaccounting functions. (Positions of such breadth are sometimes titled comptroller, budget and accounting manager, financial manager, etc.)

Some positions responsible for supervising general accounting and one or more other major accounting activities but which do *not* fully meet *all* of the responsibilities of a chief accountant specified above may be covered by the descriptions for accountant.

Chief accountant jobs which meet the characteristics described are classified by level of work<sup>1</sup> according to (a) authority and responsibility and (b) technical complexity, using the table accompanying the definitions which follow.

### Authority and Responsibility

*AR-1.* The accounting system (i.e., accounts, procedures, and reports to be used) has been prescribed in considerable detail by higher levels in the company or organization. The chief accountant has final, unreviewed authority within the prescribed system, to expand it to fit the particular needs of the organization served, e.g., in the following or comparable ways:

Provides greater detail in accounts and reports or financial statements;

Establishes additional accounting controls, accounts, subaccounts, and subsidiary records; and

Provides special or interim reports and statements needed by the manager responsible for the day-to-day operations of the organization served.

This degree of authority is typically found at a plant or similar subordinate establishment.

<sup>1</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

*AR-2.* The basic accounting system is prescribed in broad outline rather than in specific detail. While certain major financial reports, overall accounts, and general policies are required by the basic system, the chief accountant has broad latitude and *authority* to decide the specific methods, procedures, accounts, reports, etc., to be used within the organizational segment served. He must secure prior approval from higher levels for only those changes which would basically affect the broad requirements prescribed by such higher levels. Typical responsibilities include:

Evaluating and taking final action on recommendations proposed by subordinate establishments for changes in aspects of the accounting system or activities not prescribed by higher authority;

Extending cost accounting operations to areas not previously covered;

Changing from one cost accounting method to another;

Expanding the utilization of computers within the accounting process; and

Preparing accounting reports and statements reflecting the events and progress of the entire organization for which he is responsible; often consolidating data submitted by subordinate segments.

This degree of authority is most typically found at intermediate organizational levels such as regional offices, or division or subsidiary headquarters. It is also found in some company level situations where the authority of the chief accountant is less extensive than is described in *AR-3*. More rarely it is found in plant level chief accountants who have been delegated more authority than usual for such positions as described in *AR-1*.

*AR-3.* Has complete responsibility for establishing and maintaining the framework for the basic accounting system used in the company, subject only to general policy guidance and control from a higher level company official responsible for general financial management. Typical responsibilities include:

Determining the basic characteristics of the company's accounting system and the specific accounts to be used;

Devising and preparing accounting reports and statements required to meet management's needs for data;

Establishing basic accounting policies, interpretations, and procedures;

Reviewing and taking action on proposed revisions to the company's accounting system suggested by subordinate units; and

Taking final action on all technical accounting matters.

Characteristically, participates extensively in broad company management processes by providing accounting advice, interpretations, or recommendations based on data accumulated in the accounting system and on his professional judgment and experience.

**Table C-1. Criteria for matching chief accountants by level**

Level	Authority and responsibility <sup>1</sup>	Technical complexity <sup>1</sup>	Subordinate staff of professional accountants in the system for which he is responsible.	
I	AR-1	TC-1	Only one or two professional accountants, who do not exceed the accountant III job definition.	
II	AR-1	TC-2	About 5 to 10 professional accountants, with at least one or two matching the accountant IV job definition.	
	<i>or</i>			
	AR-2	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match the accountant IV job definition.	
II	<i>or</i>			
	AR-3	TC-1	Only one or two professional accountants, who do not exceed the accountant IV job definition.	
	III	AR-1	TC-3	About 15 to 20 professional accountants. At least one or two match the accountant V job definition.
III	<i>or</i>			
	AR-2	TC-2	About 15 to 20 professional accountants. Many of these match the accountant IV job definition, but some may match the accountant V job definition.	
	<i>or</i>			
III	AR-3	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match as high as accountant V.	
	IV	AR-2	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.
	IV	<i>or</i>		
AR-3		TC-2	About 15 to 20 professional accountants. Most of these match the accountant IV job definition, but several may match the accountant V and one or two may exceed that level.	
V	AR-3	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.	

<sup>1</sup> AR-1, -2, and -3 and TC-1, -2, and -3 are explained in the accompanying text.

## Technical Complexity

*TC-1.* The organization which the accounting program serves has relatively few functions, products, work processes, etc., and these tend to be stable and unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

*TC-2.* The organization which the accounting program serves has a relatively large number of functions, products, work processes, etc., which require substantial and frequent adaptations of the basic system to meet management needs (e.g., adoption of new accounts, subaccounts, and subsidiary records; revision of instructions for the use of accounts; improvement or expansion of methods for accumulating and reporting cost data in connection with new or changed work processes).

*TC-3.* The organization which the accounting program serves puts a *heavy demand on the accounting organization for specialized and extensive adaptations* of the

basic system to meet management needs. Such demands arise because the functions, products, work processes, etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

Provide for the solution of problems for which no clear precedents exist; or

Provide for the development or extension of accounting theories and practices to deal with problems to which these theories and practices have not previously been applied.

## Subordinate Staff

In table C-1 the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various levels. It is to be considered less important in the matching process than the other criteria. In addition to the staff of professional accountants in the system for which the chief accountant is responsible, there are clerical, machine operation, bookkeeping, and related personnel.

## Attorneys

### ATTORNEY

Performs consultation and advisory work and carries out the legal processes necessary to effect the rights, privileges, and obligations of the company. The work performed requires completion of law school with an LL.B. degree (or the equivalent) and admission to the bar. *Responsibilities or functions include one or more of the following or comparable duties:*

Preparing and reviewing various legal instruments and documents, such as contracts, leases, licenses, purchases, sales, real estate, etc.;

Acting as agent of the company in its transactions;

Examining material (e.g., advertisements, publications, etc.) for legal implications; advising officials of proposed legislation which might affect the company;

Applying for patents, copyrights, or registration of company's products, processes, devices, and trademarks;

Advising whether to initiate or defend lawsuits;

Conducting pre-trial preparations; defending the company in lawsuits; and

Advising officials on tax matters, government regulations, and/or corporate rights.

*Excluded* from this definition are:

Patent work which requires professional training in addition to legal training (typically a degree in engineering or in a science);

Claims examining, claims investigating, or similar work for which professional legal training and bar membership is not essential;

Attorneys, frequently titled "general counsel" (and their immediate full associates or deputies), who serve as company officers or the equivalent and are responsible for participating in the overall management and formulation of policy for the company in addition to directing its legal work. (The duties and responsibilities of such positions exceed level VI as described below.)

Attorney jobs which meet the above definition are to be classified and coded in accordance with table C-2 and the definitions which follow.

*D-1.* Legal questions are characterized by: Facts that are well established; clearly applicable legal precedents; and matters not of substantial importance to the organization. (Usually relatively limited sums of money, e.g., a few thousand dollars, are involved.)

*Examples of D-1 work:*

Legal investigation, negotiation, and research preparatory to defending the organization in potential or actual lawsuits involving alleged negligence where the facts can be firmly established and there are precedent cases directly applicable to the situation.

**Table C-2. Criteria for matching attorneys by level**

Level	Difficulty of legal work <sup>1</sup>	Responsibility of job <sup>1</sup>	Experience required	
I	This is the entry level. The duties and responsibilities after initial orientation and training are those described in D-1 and R-1.		Completion of law school with an LL.B. or J.D. degree plus admission to the bar.	
II	<i>or</i>	D-1 D-2	R-2 R-1	Sufficient professional experience (at least 1 year, usually more) at the "D-1" level to assure competence as an attorney.
III	<i>or</i>	D-2 D-3	R-2 R-1	At least 1 year, usually more, of professional experience at the "D-2" level.
IV	<i>or</i>	D-2 D-3	R-3 R-2	Extensive professional experience at the "D-2" or a higher level.
V		D-3	R-3	Extensive professional experience at the "D-3" level.
VI		D-3	R-4	Extensive professional experience at the "D-3" and "R-3" levels.

<sup>1</sup>D-1, D-2, D-3 and R-1, R-2, R-3, and R-4 are explained in the accompanying text.

Searching case reports, legal documents, periodicals, textbooks, and other legal references, and preparing draft opinions on employee compensation or benefit questions when there is a substantial amount of clearly applicable statutory, regulatory, and case material.

Drawing up contracts and other legal documents in connection with real property transactions requiring the development of detailed information but *not* involving serious questions regarding titles to property or other major factual or legal issues.

*D-2.* Legal work is regularly difficult by reason of one or more of the following: The absence of clear and directly applicable legal precedents; the different possible interpretations that can be placed on the facts, the laws, or the precedents involved; the substantial importance of the legal matters to the organization (e.g., sums as large as \$100,000 are generally directly or indirectly involved); the matter is being strongly pressed or contested in formal proceedings or in negotiations by the individuals, corporations, or government agencies involved.

*Examples of D-2 work:*

Advising on the legal implications of advertising representations when the facts supporting the representations and the applicable precedent cases are subject to different interpretations.

Reviewing and advising on the implications of new or revised laws affecting the organization.

Presenting the organization's defense in court in a negligence lawsuit which is strongly pressed by counsel for an organized group.

Providing legal counsel on tax questions complicated by the absence of precedent decisions that are directly applicable to the organization's situation.

*D-3.* Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluation of expert testimony regarding controversial issues in a scientific, financial, corporate organization, engineering, or other highly technical area;

the legal matter is of critical importance to the organization and is being vigorously pressed or contested (e.g., sums such as \$1 million or more are generally directly or indirectly involved).

*Examples of D-3 work:*

Advising on the legal aspects and implications of Federal antitrust laws to projected greatly expanded marketing operations involving joint ventures with several other organizations.

Planning legal strategy and representing a utility company in rate or government franchise cases involving a geographic area including parts or all of several States.

Preparing and presenting a case before an appellate court where the case is highly important to the future operation of the organization and is vigorously contested by very distinguished (e.g., having a broad regional or national reputation) legal talent.

Serving as the principal counsel to the officers and staff of an insurance company on the legal problems in the sale, underwriting, and administration of group contracts involving nationwide or multistate coverages and laws.

Performing the principal legal work in a nonroutine major revision of the company's charter or in effectuating new major financing steps.

*R-1.* Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard practice is involved. Any decisions or actions having a significant bearing on the organization's business are reviewed. (Is given guidance in the initial stages of his assignment. Assignments are then carried out with moderate independence although guidance is generally available and is sought from time to time on problem points.)

*R-2.* Usually works independently in investigating the facts, searching legal precedents, defining the legal and factual issues, drafting the necessary legal documents, and developing conclusions and recommendations. Decisions having an important bearing on the organization's business are reviewed. (Receives information from supervisor regarding unusual circumstances or important policy considerations pertaining to a legal problem. If trials are involved, may receive guidance from a supervisor regarding presentation, line of approach, possible line of opposition to be encountered, etc. In the case of nonroutine written presentations the final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with organization policy. Some (but not all) attorneys make

assignments to one or more lower level attorneys, aids, or clerks.)

*R-3.* Carries out assignments independently and makes final legal determinations in matters of substantial importance to his organization. Such determinations are subject to review only for consistency with company policy, possible precedent effect, and overall effectiveness. To carry out his assignments, he deals regularly with company officers and top level management officials and confers or negotiates regularly with senior attorneys and officials in other companies or in government agencies on various aspects of his assigned work. (Receives little or no preliminary instruction on legal problems and a minimum of technical legal supervision. May assign and review work of a few attorneys, but this is not a primary responsibility.)

*R-4.* Carries out assignments which entail independently planning investigations and negotiations on legal problems of the highest importance to his organization and developing completed briefs, opinions, contracts, or other legal products. To carry out his assignments he represents his organization at conferences, hearings, or trials, and personally confers and negotiates with top attorneys and top-ranking officials in private companies or in government agencies. On various aspects of his assigned work may give advice directly and personally to corporation officers and top level managers, or may work through the general counsel of the company in advising officers. (Generally receives no preliminary instruction on legal problems. On matters requiring the concentrated efforts of several attorneys or other specialists, is responsible for directing, coordinating, and reviewing the work of the attorneys involved.)

*OR*

As a primary responsibility, directs the work of a staff of attorneys, one, but usually more, of whom regularly perform D-3 legal work. With respect to the work directed, gives advice directly to corporation officers and top managerial officers, or may give such advice through the general counsel. (Receives guidance as to organization policy but no technical supervision or assistance except when he might request advice from, or be briefed by, the general counsel on the overall approach to the most difficult, novel, or important legal questions. Usually reports to the general counsel or his deputy.)



# Buyers

## BUYER

Purchases materials, supplies, equipment, and services (e.g., utilities, maintenance, and repair). In some instances items are of types that must be specially designed, produced, or modified by the vendor in accordance with drawings or engineering specifications.

Solicits bids, analyzes quotations received, and selects or recommends supplier. May interview prospective vendors. Purchases items and services at the most favorable price consistent with quality, quantity, specification requirements, and other factors. Prepares or supervises preparation of purchase orders from requisitions. May expedite delivery and visit vendors' offices and plants.

Normally, purchases are unreviewed when they are consistent with past experience, and are in conformance with established rules and policies. Proposed purchase transactions that deviate from the usual or from past experience in terms of prices, quality of items, quantities, etc., or that may set precedents for future purchases, are reviewed by higher authority prior to final action.

In addition to the work described above, some (but not all) buyers direct the work of one or a few clerks who perform routine aspects of the work. As a secondary and subsidiary duty, some buyers may also sell or dispose of surplus, salvage, or used materials, equipment, or supplies.

*NOTE:* Some buyers are responsible for the purchasing of a variety of items and materials. When the variety includes items and work described at more than one of the following levels, the position should be considered to equal the highest level that characterizes at least a substantial portion of the buyer's time.

*Excluded* are:

- a. Buyers of items for direct sale, either wholesale or retail;
- b. Brokers and dealers buying for clients or for investment purposes;
- c. Positions that specifically require professional education and qualifications in a physical science or in engineering (e.g., chemist, mechanical engineer);
- d. Buyers who specialize in purchasing a single or a few related items of highly variable quality such as raw cotton or wool, tobacco, cattle, or leather for shoe uppers, etc. Expert personal knowledge of the item is required to judge the relative value of the goods offered and to decide the quantity, quality, and price of each purchase in terms of its probable effect on the organization's profit and competitive status;
- e. Buyers whose principal responsibility is the super-

vision of other buyers or the management, direction, or supervision of a purchasing program;

f. Persons predominantly concerned with contract or subcontract administration;

g. Persons whose major duties consist of ordering, reordering, or requisitioning items under existing contracts; and

h. Positions restricted to clerical functions or to purchase expediting work.

## Buyer I

Purchases "off-the-shelf" types of readily available, commonly used materials, supplies, tools, furniture, services, etc.

Transactions usually involve local retailers, wholesalers, jobbers, and manufacturers' sales representatives.

Quantities purchased are generally small amounts, e.g., those available from local sources.

*Examples* of items purchased include: Common stationery and office supplies; standard types of office furniture and fixtures; standard nuts, bolts, screws; janitorial and common building maintenance supplies; and common building maintenance or common utility services.

## Buyer II

Purchases "off-the-shelf" types of standard, generally available technical items, materials, and services.

Transactions usually involve dealing directly with manufacturers, distributors, jobbers, etc.

Quantities of items and materials purchased may be relatively large, particularly in the case of contracts for continuing supply over a period of time.

May be responsible for locating or promoting possible new sources of supply. Usually is expected to keep abreast of market trends, changes in business practices in the assigned markets, new or altered types of materials entering the market, etc.

*Examples* of items purchased include: Industrial types of handtools; electronic tube and component test instruments; standard electronic parts and components; electric motors; gasoline service station equipment; PBX or other specialized telephone services; and routine purchases of common raw materials such as standard grades and sizes of steel bars, rods, and angles.

Also included at this level are buyers of materials of the types described for buyer I when the quantities purchased are large so that local sources of supply are generally inadequate and the buyer must deal directly with manufacturers on a broader than local scale.

### Buyer III

Purchases items, materials, or services of a technical and specialized nature. The items, while of a common general type, are usually made, altered, or customized to meet the user's specific needs and specifications.

Transactions usually require dealing with manufacturers. The number of potential vendors is likely to be small and price differentials often reflect important factors (quality, delivery dates and places, etc.) that are difficult to evaluate.

The quantities purchased of any item or service may be large.

Many of the purchases involve one or more of such complications as: Specifications that detail, in technical terms, the required physical, chemical, electrical, or other comparable properties; special testing prior to acceptance; grouping of items for lot bidding and awards; specialized processing, packing, or packaging requirements; export packs; overseas port differentials; etc.

Is expected to keep abreast of market and product developments. May be required to locate new sources of supply.

Some positions may involve *assisting* in the training or supervising of lower level buyers or clerks.

*Examples* of items purchased include: Castings; special extruded shapes of normal size and material; special formula paints; electric motors of special shape or speed; special packaging of items; and raw materials in substantial quantities.

### Buyer IV

Purchases highly complex and technical items, materials, or services, usually those specially designed and manufactured exclusively for the purchaser.

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom-designed items

according to complex and rigid specifications.

Quantities of items and materials purchased are often large in order to satisfy the requirements for an entire large organization for an extended period of time. Complex schedules of delivery are often involved. Buyer determines appropriate quantities to be contracted for at any given period of time.

Transactions are often complicated by the presence of one or more such matters as inclusion of: Requirements for spare parts, preproduction samples and testing, or technical literature; or patent and royalty provisions.

Keeps abreast of market and product developments. Develops new sources of supply.

In addition to the work described above, a few positions may also require supervision over a few lower level buyers or clerks. (No position is included in this level *solely* because supervisory duties are performed.)

*Examples* of items purchased include: Special purpose high cost machine tools and production facilities; raw materials of critically important characteristics or quality; parts, subassemblies, components, etc., specially designed and made to order (e.g., communications equipment for installation in aircraft being manufactured; component assemblies for missiles and rockets; and motor vehicle frames).

*NOTE:* Excluded are buying positions above level IV. Some buyers above level IV make purchases in such unusually large quantities that they can affect the market price of a commodity or produce other significant effects on the industry or trade concerned. Others may purchase items of either (1) extraordinary technical complexity, e.g., involving the outermost limits of science or engineering, or (2) unusually high individual or unit value. Such buyers often persuade suppliers to expand their plants or convert facilities to the production of new items or services. These types of buying functions are often performed by program managers or company officials who have primary responsibilities other than buying.

## Personnel Management

### JOB ANALYST

Performs work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating employees in a fair, equitable, and uniform manner. Performs such duties as studying and analyzing jobs and preparing descriptions of duties and

responsibilities and of the physical and mental requirements needed by workers; evaluating jobs and determining appropriate wage or salary levels in accordance with their difficulty and responsibility; independently conducting or participating with representatives of other companies in conducting compensation surveys within a locality or labor market area; assisting in administering merit rating programs; reviewing changes in wages and

salaries indicated by surveys and recommending changes in pay scales; and auditing individual jobs to check the propriety of evaluations and to apply current job classifications.

#### **Job Analyst I**

As a trainee, performs work in designated areas and of limited occupational scope. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.

#### **Job Analyst II**

Studies, describes, and evaluates jobs in accordance with established procedures. Is usually assigned to the simpler kinds of both wage and salaried jobs in the establishment. Works independently on such assignments but is limited by instructions of his superior and by defined area of assignment.

#### **Job Analyst III**

Analyzes and evaluates a variety of wage and salaried jobs in accordance with established evaluation systems and procedures. May conduct wage surveys within the locality or participate in conducting surveys of broad compensation areas. May assist in developing survey methods and plans. Receives general supervision but responsibility for final action is limited.

#### **Job Analyst IV**

Analyzes and evaluates a variety of jobs in accordance with established evaluation systems and procedures, and is given assignments which regularly include responsibility for the more difficult kinds of jobs. ("More difficult" means jobs which consist of hard-to-understand work processes; e.g., professional, scientific, administrative, or technical; *or* jobs in new or emerging occupational fields; *or* jobs which are being established as part of the creation of new organizations; *or* where other special considerations of these types apply.) Receives general supervision, but responsibility for final action is limited. May participate in the development and installation of evaluation or compensation systems, which may include those for merit rating programs. May

plan survey methods and conduct or direct wage surveys within a broad compensation area.

### **DIRECTOR OF PERSONNEL**

Directs a personnel management program for a company or a segment of a company. Serves top management officials of the organization as the source of advice and assistance on personnel management matters and problems generally; is typically consulted on the personnel implications of planned changes in management policy or program, the effects on the organization of economic or market trends, product or production method changes, etc.; represents management in contacts with other companies, trade associations, government agencies, etc., dealing primarily with personnel management matters.

Typically the director of personnel for a company reports to a company officer in charge of industrial relations and personnel management activities or an officer of similar level. Below the company level the director of personnel typically reports to a company officer or a high management official who has responsibility for the operation of a plant, establishment, or other segment of the company.

For a job to be covered by this definition, the personnel management program *must include* responsibility for *all* three of the following functions:

1. *Administering a job evaluation system*: i.e., a system in which there are established procedures by which jobs are analyzed and evaluated on the basis of their duties, responsibilities, and qualification requirements in order to provide a foundation for equitable compensation. Typically, such a system includes the use of one or more sets of job evaluation factors and the preparation of formal job descriptions. It *may* also include such related functions as wage and salary surveys or merit rating system administration. The job evaluation system(s) does not necessarily cover all jobs in the organization, but does cover a substantial portion of the organization.

2. *Employment and placement function*: i.e., recruiting actively for at least some kinds of workers through a variety of sources (e.g., schools or colleges, employment agencies, professional societies, etc.); evaluating applicants against demands of particular jobs by use of such techniques as job analysis to determine requirements, interviews, written tests of aptitude, knowledge, or skill, reference checks, experience evaluations, etc.; recommending selections and job placements to management, etc.

3. *Employee relations and services function*: i.e., functions designed to maintain employees' morale and productivity at a high level (for example, administering a formal or informal grievance procedure; identifying and recommending solutions for personnel problems such as absenteeism, high turnover, low productivity, etc.; administration of beneficial suggestions system, retirement, pension, or insurance plans, merit rating system, etc.;

overseeing cafeteria operations, recreational programs, industrial health and safety programs, etc.).

In addition, positions covered by this definition may, but do not necessarily, include responsibilities in the following areas:

*Employee training and development;*

*Labor relations activities* which are confined mainly to the administration, interpretation, and application of those aspects of labor union contracts that are essentially of the type described under (3) above. May also participate in bargaining of a subordinate nature, e.g.; to negotiate detailed settlement of such matters as specific rates, job classifica-

tions, work rules, hiring or layoff procedures, etc., within the broad terms of a general agreement reached at higher levels, or to supply advice and information on technical points to the company's principal representative.

*Excluded* are positions in which responsibility for actual contract negotiation with labor unions as the principal company representative is a significant aspect of the job, i.e., a responsibility which serves as a primary basis for qualification requirements and compensation.

Director of personnel jobs which meet the above definition are classified by level of work<sup>2</sup> in accordance with the criteria shown in table C-3.

**Table C-3. Criteria for matching directors of personnel by level**

Number of employees in work force serviced	"Operations level" personnel program <sup>1</sup>		Number of employees in work force serviced	"Development level" personnel program <sup>2</sup>	
	"Type A" organization serviced <sup>3</sup>	"Type B" organization serviced <sup>4</sup>		"Type A" organization serviced <sup>3</sup>	"Type B" organization serviced <sup>4</sup>
250-750 .....	I	II	250-750 .....	II	III
1,000-5,000 .....	II	III	1,000-5,000 .....	III	IV
6,000-12,000 .....	III	IV	6,000-12,000 .....	IV	V
15,000-25,000 .....	IV	V	15,000-25,000 .....	V	-

<sup>1</sup> "Operations level" personnel program—director of personnel servicing an organizational segment (e.g., a plant) of a company, where the basic personnel program policies, plans, objectives, etc., are established at company headquarters or at some other higher level between the plant and the company headquarters level. The personnel director's responsibility is to put these into operation at the local level, in such a manner as to most effectively serve the local management needs.

<sup>2</sup> "Development level" personnel program—either:

(a) Director of personnel servicing an entire company (with or without subordinate establishments) where the personnel director plays an important role in establishment of basic personnel policies, plans, objectives, etc., for the company subject to policy direction and control from company officers, or (b) director of personnel servicing an intermediate organization below the company level, e.g., a division or a subsidiary, to which a relatively complete delegation of personnel program planning and development responsibility is made. In this situation only basic policy direction is given by the parent company and local officers. The director of personnel has essentially the same degree of latitude and responsibility for establishment of basic personnel policies, plans, objectives, etc., as described above in (a).

<sup>3</sup> "Type A" organization serviced—most jobs serviced do not present particularly difficult or unusual recruitment, job evaluation, or training problems because the jobs consist of relatively easy-to-understand work processes, and an adequate labor supply is available. These conditions are most likely to be found in organizations in which the work force and organizational structure are relatively stable.

<sup>4</sup> "Type B" organization serviced—a substantial number of jobs present difficult recruitment, job evaluation, or training problems because of the jobs: consist of hard-to-understand work processes (e.g., professional, scientific, administrative, or technical); have hard-to-match skill requirements; are in new or emerging occupations; or are extremely hard to fill. These conditions are most likely to be found in organizations in which the work force, organizational structure, work processes or functions, etc., are complicated or unstable.

NOTE: There are gaps between different degrees of all three elements used to determine job level matches. These gaps have been provided purposely to allow room for judgment in getting the best overall job level match for each job. Thus, a job which services a work force of 850 employees should be matched with level II if it is a personnel program operations level job where the nature of the organization serviced seems to fall slightly below the definition for type B. However, the same job should be matched with level I if the nature of the organization serviced clearly falls well within the definition for type A.

## Chemists and Engineers

### CHEMIST

Performs professional work in research, development, interpretation, and analysis to determine the composition, molecular structure, and properties of substances; to develop or investigate new materials and

processes; and to investigate the transformations which substances undergo. Work typically requires a B.S. degree in chemistry or the equivalent in appropriate and substantial college level study of chemistry plus experience.

#### Chemist I

*General characteristics.* This is the entry level of professional work requiring a bachelor's degree in chemistry

<sup>2</sup> Insufficient data were obtained for level V to warrant presentation of average salaries.

and no experience, or the equivalent (to a degree) in appropriate education and experience. Performs assignments designed to develop professional capabilities and to provide experience in the application of training in chemistry as it relates to the company's programs. May also receive formal classroom or seminar type training. (Terminal positions are excluded.)

*Direction received.* Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress, and is reviewed for accuracy upon completion.

*Typical duties and responsibilities.* Performs a variety of routine tasks that are planned to provide experience and familiarization with the chemistry staff, methods, practices, and programs of the company. The work includes a variety of routine qualitative and quantitative analyses; physical tests to determine properties such as viscosity, tensile strength, and melting point; and assisting more experienced chemists to gain additional knowledge through personal observation and discussion.

*Responsibility for the direction of others.* Usually none.

## **Chemist II**

*General characteristics.* At this continuing developmental level, performs routine chemical work requiring selection and application of general and specialized methods, techniques, and instruments commonly used in the laboratory and the ability to carry out instructions when less common or proposed methods or procedures are necessary. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

*Direction received.* Supervisor establishes the nature and extent of analysis required, specifies methods and criteria on new types of assignments, and reviews work for thoroughness of application of methods and accuracy of results.

*Typical duties and responsibilities.* Carries out a wide variety of standardized methods, tests, and procedures. In accordance with specific instructions may carry out proposed and less common ones. Is expected to detect problems in using standardized procedures because of the condition of the sample, difficulties with the equipment, etc. Recommends modifications of pro-

cedures, e.g., extending or curtailing the analysis or using alternate procedures, based on his knowledge of the problem and pertinent available literature. Conducts specified phases of research projects as an assistant to an experienced chemist.

*Responsibility for the direction of others.* May be assisted by a few aids or technicians.

## **Chemist III**

*General characteristics.* Performs a broad range of chemical tests and procedures utilized in the laboratory, using judgment in the independent evaluation, selection, and adaptation of standard methods and techniques. May carry through a complete series of tests on a product in its different process stages. Some assignments require a specialized knowledge of one or two common categories of related substances. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

*Direction received.* On routine work, supervision is very general. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

*Typical duties and responsibilities.* In accordance with instructions as to the nature of the problem, selects standard methods, tests or procedures; when necessary, develops or works out alternate or modified methods with supervisor's concurrence. Assists in research by analyzing samples or testing new procedures that require specialized training because (a) standard methods are inapplicable, (b) analytical findings must be interpreted in terms of compliance or noncompliance with standards, or (c) specialized and advanced equipment and techniques must be adapted.

*Responsibility for the direction of others.* May supervise or coordinate the work of a few technicians or aids, and be assisted by lower level chemists.

## **Chemist IV**

*General characteristics.* As a fully competent chemist in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring (a) mastery of specialized techniques or ingenuity in selecting and evaluating approaches to unforeseen or novel problems, and (b) ability to apply a research approach to the solution of a wide variety of

problems and to assimilate the details and significance of chemical and physical analyses, procedures, and tests. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

*Direction received.* Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

*Typical duties and responsibilities.* Conducts laboratory assignments requiring the determination and evaluation of alternative procedures and the sequence of performing them. Performs complex, exacting, unusual analytical assignments requiring specialized knowledge of techniques or products. Interprets results, prepares reports, and may provide technical advice in his specialized area.

*Responsibility for the direction of others.* May supervise a small staff of chemists and technicians.

#### **Chemist V**

*General characteristics.* Participates in planning laboratory programs on the basis of specialized knowledge of problems and methods and probable value of results. May serve as an expert in a narrow specialty (e.g., class of chemical compounds, or a class of products), making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects. Development of the knowledge and expertise required for this level of work usually reflects progressive experience through chemist IV.

*Direction received.* Supervision and guidance relates largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity, plans, organizes, and directs assigned laboratory programs. Independently defines scope and critical elements of the projects and selects approaches to be taken. A substantial portion of the work supervised is comparable to that described for chemist IV. (2) As individual researcher or worker, carries out projects requiring development of new or

highly modified scientific techniques and procedures, extensive knowledge of his specialty, and knowledge of related scientific fields.

*Responsibility for the direction of others.* Supervises, coordinates, and reviews the work of a small staff of chemists and technicians engaged in varied research and development projects, or a larger group performing routine analytical work. Estimates manpower needs and schedules and assigns work to meet completion date. Or, as individual researcher or worker, may be assisted on projects by other chemists or technicians.

#### **Chemist VI**

*General characteristics.* Performs work requiring leadership and expert knowledge in a specialized field, product, or process. Formulates and conducts a systematic attack on a problem area of considerable scope and complexity which must be approached through a series of complete and conceptually related studies, or a number of projects of lesser scope. The problems are complex because they are difficult to define and require unconventional or novel approaches or have other difficult features. Maintains liaison with individuals and units within and outside his organization, with responsibility for acting independently on technical matters pertaining to his field. Work at this level usually requires extensive progressive experience including work comparable to chemist V.

*Direction received.* Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire chemical program of a company, when the program is of limited complexity and scope. Activities under his leadership are of such a scope that they require a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker determines, conceives, plans, and conducts projects of major importance to the company. Applies a high degree of originality and ingenuity in adapting, extending, and synthesizing existing theory, principles, and techniques into original combinations and configurations. May serve as a consultant to other chemists in his specialty.

*Responsibility for the direction of others.* Plans, organizes, and supervises the work of a staff of chemists and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual worker or researcher, may be assisted on individual projects by other chemists or technicians.

#### **Chemist VII**

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive chemical activities. Initiates and maintains extensive contacts with key chemists and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature judgment in anticipating and solving unprecedented chemical problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse chemical activities.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a chemical program of a company with extensive and diversified scientific requirements, or (b) the entire chemical program of a company where the program is more limited in scope. The overall chemical program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Makes authoritative technical recommendations concerning the scientific objectives and levels of work which will be most profitable in light of company requirements and scientific and industrial trends and developments. Recommends facilities, personnel, and funds required. (2) As individual researcher and consultant, selects problems for research to further the company's objectives. Conceives and plans investigations in which the phenomena and principles are not adequately understood, and where few or contradictory scientific precedents or results are available for reference. Outstanding creativity and mature judgment are required to devise hypotheses and techniques of experimentation and to interpret results. As a leader and authority in his company, in a broad area of specialization, or in a narrow but intensely specialized one, advises the head of a large laboratory or company officials on

complex aspects of extremely broad and important programs. Has responsibility for exploring, evaluating, and justifying proposed and current programs and projects and furnishing advice on unusually complex and novel problems in the specialty field. Typically will have contributed innovations (e.g., techniques, products, procedures) which are regarded as significant advances in the field.

*Responsibility for the direction of others.* Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to chemist VI; or, as individual researcher and consultant, may be assisted on individual projects by other chemists and technicians.

#### **Chemist VIII**

*General characteristics.* Makes decisions and recommendations that are authoritative and have a far-reaching impact on extensive chemical and related activities of the company. Negotiates critical and controversial issues with top level chemists and officers of other organizations and companies. Individuals at this level have demonstrated a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive chemical programs and activities of outstanding novelty and importance.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) the entire chemical program of a company which is of moderate scope, or (b) an important segment of a chemical program of a company with very extensive and highly diversified scientific requirements, where programs are of such complexity and scope that they are of critical importance to overall operations and include problems of extraordinary difficulty that have resisted solution. Decides the kind and extent of chemical programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company and/or industry. Problems are characterized by the lack of scientific precedents and source materials, or the lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and

consulting work for the company as a recognized authority for broad program areas of considerable novelty and importance. Has made contributions such as new products or techniques, development of processes, etc., which are regarded as major advances in the field.

*Responsibility for the direction of others.* Supervises several subordinate supervisors or team leaders some of whose positions are comparable to chemist VII, or individual researchers some of whose positions are comparable to chemist VII and sometimes chemist VIII. As an individual researcher and consultant may be assisted on individual projects by other chemists or technicians.

*NOTE:* Individuals in charge of a company's chemical program may match any of several of the survey job levels, depending on the size and complexity of chemical programs. Excluded from level VIII are chemists in charge of programs so extensive and complex (e.g., consisting of highly diversified or unusually novel products and procedures) that one or more subordinate supervisory chemists are performing at level VIII. Also excluded from level VIII are individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

## ENGINEER

Performs professional work in research, development, design, testing, analysis, production, construction, maintenance, operation, planning, survey, estimating, application, or standardization of engineering facilities, systems, structures, processes, equipment devices, or materials requiring knowledge of the science and art by which materials, natural resources, and power are made useful. Work typically requires a B.S. degree in engineering or the equivalent in combined education and experience. (*Excluded* are: Safety engineers, industrial engineers, quality control engineers, sales engineers, and engineers whose primary responsibility is to be in charge of nonprofessional maintenance work.)

### Engineer I

*General characteristics.* This is the entry level of professional work requiring a bachelor's degree in engineering and no experience, or the equivalent (to a degree) in appropriate education and experience. Performs assignments designed to develop professional work knowledges

and abilities. May also receive formal classroom or seminar type training. (Terminal positions are excluded.)

*Direction received.* Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress and is reviewed for accuracy upon completion.

*Typical duties and responsibilities.* Performs a variety of routine tasks that are planned to provide experience and familiarization with the engineering staff, methods, practices, and programs of the company.

*Responsibility for the direction of others.* Usually none.

### Engineer II

*General characteristics.* At this continuing developmental level, performs routine engineering work requiring application of standard techniques, procedures, and criteria in carrying out a sequence of related engineering tasks. Limited exercise of judgment is required on details of work and in making preliminary selections and adaptations of engineering alternatives. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

*Direction received.* Supervisor screens assignments for unusual or difficult problems and selects techniques and procedures to be applied on nonroutine work. Receives close supervision on new aspects of assignments.

*Typical duties and responsibilities.* Using prescribed methods, performs specific and limited portions of a broader assignment of an experienced engineer. Applies standard practices and techniques in specific situations, adjusts and correlates data, recognizes discrepancies in results, and follows operations through a series of related detailed steps or processes.

*Responsibility for the direction of others.* May be assisted by a few aids or technicians.

### Engineer III

*General characteristics.* Independently evaluates, selects, and applies standard engineering techniques, procedures, and criteria, using judgment in making minor adaptations and modifications. Assignments have clear and



specified objectives and require the investigation of a limited number of variables. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

*Direction received.* Receives instructions on specific assignment objectives, complex features, and possible solutions. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

*Typical duties and responsibilities.* Performs work which involves conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features for which there are precedents. Assignments usually include one or more of the following: Equipment design and development, test of materials, preparation of specifications, process study, research investigations, report preparation, and other activities of limited scope requiring knowledge of principles and techniques commonly employed in the specific narrow area of assignments.

*Responsibility for the direction of others.* May supervise or coordinate the work of drafters, technicians, and others who assist in specific assignments.

#### **Engineer IV**

*General characteristics.* As a fully competent engineer in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring judgment in the independent evaluation, selection, and substantial adaptation and modification of standard techniques, procedures, and criteria. Devises new approaches to problems encountered. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

*Direction received.* Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

*Typical duties and responsibilities.* Plans, schedules, conducts, or coordinates detailed phases of the engineering work in a part of a major project or in a total project of moderate scope. Performs work which involves conventional engineering practice but may include a variety of complex features such as conflicting design

requirements, unsuitability of standard materials, and difficult coordination requirements. Work requires a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties.

*Responsibility for the direction of others.* May supervise a few engineers or technicians on assigned work.

#### **Engineer V**

*General characteristics.* Applies intensive and diversified knowledge of engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on engineering problems and methods, and represents the organization in conferences to resolve important questions and to plan and coordinate work. Requires the use of advanced techniques and the modification and extension of theories, precepts, and practices of his field and related sciences and disciplines. The knowledge and expertise required for this level of work usually result from progressive experience, including work comparable to engineer IV.

*Direction received.* Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

*Typical duties and responsibilities.* One or more of the following: (1) In a supervisory capacity plans, develops, coordinates, and directs a large and important engineering project or a number of small projects with many complex features. A substantial portion of the work supervised is comparable to that described for engineer IV. (2) As individual researcher or worker carries out complex or novel assignments requiring the development of new or improved techniques and procedures. Work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods. (3) As staff specialist develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others. Assesses the feasibility and soundness of proposed engineering evaluation tests, products, or equipment when necessary data are insufficient or confirmation by testing is advisable. Usually performs as a staff advisor and consultant as to a technical specialty, a type of facility or equipment, or a program function.

*Responsibility for the direction of others.* Supervises, coordinates, and reviews the work of a small staff of engineers and technicians; estimates manpower needs

and schedules and assigns work to meet completion date. Or, as individual research or staff specialist may be assisted on projects by other engineers or technicians.

#### **Engineer VI**

*General characteristics.* Has full technical responsibility for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects concerned with unique or controversial problems which have an important effect on major company programs. This involves exploration of subject area, definition of scope and selection of problems for investigation, and development of novel concepts and approaches. Maintains liaison with individuals and units within or outside his organization, with responsibility for acting independently on technical matters pertaining to his field. Work at this level usually requires extensive progressive experience including work comparable to engineer V.

*Direction received.* Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

*Typical duties and responsibilities.* One or more of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire engineering program of a company when the program is of limited complexity and scope. The extent of his responsibilities generally requires a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker conceives, plans, and conducts research in problem areas of considerable scope and complexity. The problems must be approached through a series of complete and conceptually related studies, are difficult to define, require unconventional or novel approaches, and require sophisticated research techniques. Available guides and precedents contain critical gaps, are only partially related to the problem, or may be largely lacking due to the novel character of the project. At this level, the individual researcher generally will have contributed inventions, new designs, or techniques which are of material significance in the solution of important problems. (3) As a staff specialist serves as the technical specialist for the organization (division or company) in the application of advanced theories, concepts, principles, and processes for an assigned area of responsibility (i.e., subject matter, function, type of facility or equipment, or product). Keeps abreast of new

scientific methods and developments affecting his organization for the purpose of recommending changes in emphasis of programs or new programs warranted by such developments.

*Responsibility for the direction of others.* Plans, organizes, and supervises the work of a staff of engineers and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual researcher or staff specialist may be assisted on individual projects by other engineers or technicians.

#### **Engineer VII**

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive engineering activities. Initiates and maintains extensive contacts with key engineers and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature engineering judgment in anticipating and solving unprecedented engineering problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse engineering activities.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of the engineering program of a company with extensive and diversified engineering requirements, or (b) the entire engineering program of a company when it is more limited in scope. The overall engineering program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. The extent of his responsibilities generally requires several subordinate organizational segments or teams. Recommends facilities, personnel, and funds required to carry out programs which are directly related with and directed toward fulfillment of overall company objectives. (2) As individual researcher and consultant is a recognized leader and authority in his company in a broad area of specialization or in a narrow but intensely specialized field. Selects research problems to further the company's objectives. Conceives and plans investigations of broad areas of considerable novelty and importance

for which engineering precedents are lacking in areas critical to the overall engineering program. Is consulted extensively by associates and others, with a high degree of reliance placed on his scientific interpretations and advice. Typically, will have contributed inventions, new designs, or techniques which are regarded as major advances in the field.

*Responsibility for the direction of others.* Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to engineer VI; or, as individual researcher and consultant, may be assisted on individual projects by other engineers and technicians.

### Engineer VIII

*General characteristics.* Makes decisions and recommendations that are recognized as authoritative and have a far-reaching impact on extensive engineering and related activities of the company. Negotiates critical and controversial issues with top level engineers and officers of other organizations and companies. Individuals at this level demonstrate a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive engineering programs and activities of outstanding novelty and importance.

*Direction received.* Receives general administrative direction.

*Typical duties and responsibilities.* One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a very extensive and highly diversified engineering program of a company, or (b) the entire engineering program of a company when the program is of moderate scope. The programs are of such complexity and scope that they are of critical importance to overall objectives, include problems of extraordinary difficulty that often have resisted

solution, and consist of several segments requiring subordinate supervisors. Is responsible for deciding the kind and extent of engineering and related programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company or industry. Problems are characterized by their lack of scientific precedents and source material, or lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas or in an intensely specialized area of considerable novelty and importance.

*Responsibility for the direction of others.* Supervises several subordinate supervisors or team leaders some of whose positions are comparable to engineer VII, or individual researchers some of whose positions are comparable to engineer VII and sometimes engineer VIII. As an individual researcher and consultant may be assisted on individual projects by other engineers or technicians.

*NOTE:* Individuals in charge of a company's engineering program may match any of several of the survey job levels depending on the size and complexity of engineering programs. Excluded from level VIII are engineers in charge of programs so extensive and complex (e.g., consisting of research and development on a variety of complex products or systems with numerous novel components) that one or more subordinate supervisory engineers are performing at level VIII. Also excluded from level VIII are individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

## Technical Support

### ENGINEERING TECHNICIAN

To be covered by these definitions, employees must meet *all* of the following criteria: (a) Provides semiprofessional technical support for engineers working in such areas as research, design, development, testing, or manufacturing process improvement. (2) Work pertains to electrical, electronic, or mechanical components or equipment. (3) Required to have some knowledge of

science or engineering. (Excludes production or maintenance workers, quality control testers, craft workers, drafters, designers, and engineers.)

#### Engineering Technician I

Performs simple routine tasks under close supervision or from detailed procedures. Work is checked in process

or on completion. Performs, at this level, one or a combination of such typical duties as:

Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting.

Performs simple or routine tasks or tests such as tensile or hardness tests; operates and adjusts simple test equipment; records test data.

Gathers and maintains specified records of engineering data such as tests, drawings, etc.; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

### **Engineering Technician II**

Performs standardized or prescribed assignments, involving a sequence of related operations. Follows standard work methods or explicit instructions; technical adequacy of routine work is reviewed on completion; nonroutine work may also be reviewed in process. Performs, at this level, one or a combination of such typical duties as:

Assembles or constructs simple or standard equipment or parts. May service or repair simple instruments or equipment.

Conducts a variety of standardized tests; may prepare test specimens; sets up and operates standard test equipment; records test data.

Extracts engineering data from various prescribed sources; processes the data following well-defined methods; presents the data in prescribed form.

### **Engineering Technician III**

Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment. Receives initial instructions, equipment requirements, and advice from supervisor or engineer; technical adequacy of completed work is checked. Performs, at this level, one or a combination of such typical duties as:

Constructs components, subunits, or simple models or adapts standard equipment. May troubleshoot and correct malfunctions.

Conducts various tests or experiments which may require minor modifications in test setups or procedures; selects, sets up, and operates standard test equipment and records test data.

Extracts and compiles a variety of engineering data; processes or computes data using specified formulas and procedures. Performs routine analysis to check applicability, accuracy, and reasonableness of data.

### **Engineering Technician IV**

Performs nonroutine assignments of substantial variety and complexity. Receives objectives and tech-

nical advice from supervisor or engineer; work is reviewed for technical adequacy. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

Works on limited segment of development project; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments; records and evaluates data and reports findings.

Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; records data; analyzes data and prepares test reports.

Compiles and computes a variety of engineering data; may analyze test and design data; develops or prepares schematics, designs, specifications, parts lists, or makes recommendations regarding these items. May review designs or specifications for adequacy.

### **Engineering Technician V**

Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs, or layouts. May coordinate portions of overall assignment; reviews, analyzes, and integrates the technical work of others. Supervisor or professional engineer outlines objectives, requirements, and design approaches; completed work is reviewed for technical adequacy and satisfaction of requirements. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

Designs, develops, and constructs major units, devices, or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; reports results.

Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification and test procedures; conducts tests, analyzes and evaluates data, and prepares reports on findings and recommendations.

Reviews and analyzes a variety of engineering data to determine requirements to meet engineering objectives; may calculate design data; prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and design.

## **DRAFTERS**

### **Drafter-tracer**

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to

plans primarily consisting of straight lines and a large scale not requiring close delineation.)

and/or

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

#### **Drafter I**

Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning or components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required. Suggested methods of approach, applicable precedents, and advice on source materials are given with initial assignments. Instructions are less complete when assignments recur. Work may be spot checked during progress.

#### **Drafter II**

Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

#### **Drafter III**

Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare

drawings, or direct their preparation by lower level drafters.

### **COMPUTER OPERATOR**

Monitors and operates the control console of a digital computer, in accordance with operating instructions, to process data. Work is characterized by the following:

- Studies operating instructions to determine equipment setup needed;
- Loads equipment with required items (tapes, cards, paper, etc.);
- Switches necessary auxiliary equipment into system;
- Starts and operates computer;
- Responds to operating instructions and computer output instructions;
- Reviews error messages and makes corrections during operation *or* refers problems;
- Maintains operating record.

May test run new or modified programs and *assist* in modifying systems or programs. Included within the scope of this definition are fully qualified computer operators, trainees working to become fully qualified operators, and lead operators providing *technical* assistance to lower level operators.

#### **Computer Operator I**

Work assignments consist of on-the-job training (sometimes augmented by classroom training). Operator is provided detailed written or oral guidance before and during assignments and is under close personal supervision.

#### **Computer Operator II**

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing (i.e., one program is processed at a time). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

#### **Computer Operator III**

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. In response to computer output instructions or error conditions, applies standard

operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

OR

Work assignments are established production runs (i.e., programs which present few operating problems) executed by multiprocessing (i.e., simultaneous processing of two or more programs). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedures.

#### **Computer Operator IV**

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

OR

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to

adapt to a variety of problems) executed by multiprocessing. In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments are established production run (i.e., programs which present few operating problems) executed by multiprocessing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

#### **Computer Operator V**

Work assignments are characterized by the frequent testing and introduction of new programs, applications and procedures (i.e., situations which require the operator to adapt to a variety of problems). In responding to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, operator deviates from standard procedures or aborts program. Such actions may materially alter the computer unit's production plans. Advises programmers and subject-matter experts on setup techniques.

#### **Computer Operator VI**

In addition to level V characteristics, assignments at this level require a knowledge of program language, computer features, and software systems to *assist* in: (1) Maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; (3) switching to emergency backup procedures.

## **Clerical Supervisory**

### **KEYPUNCH SUPERVISOR**

Supervises three or more keypunch operators who keypunch or verify cards or tape for computer or tabulating machine processing. May also, as an incidental responsibility, supervise the operation of other types of punching machines such as reproducers or gang punches.

*Excluded* are: (a) Positions also responsible for supervising the operation of equipment such as com-

puters, tabulating machines, or other kinds of office machines; (b) positions responsible for supervising clerical work not directly related to the keypunch function; and (c) working supervisors, group leaders, or other overseers with more limited supervisory responsibility than is described below.

Keypunch supervisory positions are classified in five levels (I through V) on the basis of combinations of three elements—level and kind of supervisory responsi-

**Table C-4. Criteria for matching keypunch supervisors by level**

Level and kind of supervisory responsibility				
Lower			Upper	
Is responsible for the day-to-day operations and flow of work when the organization of the work, assignment of employees to positions, the job types and levels, instructions and procedures, etc., are prescribed by higher authority. Within this prescribed framework, assigns work to individual employees; instructs employees in specific tasks and procedures; insures work meets established standards of quality; checks attendance; keeps production records; provides information to higher levels for use in budgeting, planning of personnel changes, adjusting to variations in the workload, etc.; reports problems to a higher level supervisor. ( <i>Exclude</i> positions in which keypunching rather than supervisory responsibility is the most significant function.)			In addition to being responsible for the functions of the lower level of supervisory responsibility, plans and establishes the organization and flow of work; plans changes to meet both short- and long-term workload trends and changes; selects employees and assigns them to positions; assigns and reviews work of subordinates; initiates recommendations or formal actions such as requests for staff, job evaluation actions, promotions, etc.; approves absences and vacation schedules; recommends disciplinary actions; in some positions, assists programmers, project planners, or other technical specialists in designing card layouts and detailed punching instructions.	
Number of employees supervised	Difficulty of keypunch work supervised		Difficulty of keypunch work supervised	
	Less difficult <sup>1</sup>	More difficult <sup>2</sup>	Less difficult <sup>1</sup>	More difficult <sup>2</sup>
	Level of keypunch supervisor		Level of keypunch supervisor	
3-15 .....	I	II	II	III
20-40 .....	II	III	III	IV
50 or more .....	III	IV	IV	V

<sup>1</sup> *Less difficult keypunch work* - Work is routine and repetitive. Under close supervision or following specific procedures or instructions, works from various standardized source documents which have been coded, follows specified procedures which have been prescribed in detail and require little or no selecting, coding, or interpreting of data to be recorded. Refers to supervisor problems arising from erroneous items, codes, or missing information. (This level is the same as the BLS Class B Keypunch Operator.)

<sup>2</sup> *More difficult keypunch work* - Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be keypunched from a variety of documents. On occasion may also perform some routine keypunch work. May train inexperienced keypunch operators. (This level is the same as the BLS Class A Keypunch Operator.)

NOTE: If the keypunch activities include both "more difficult" and "less difficult" work, classification should be on the basis of the more difficult work, provided that a significant proportion of the keypunch operators work at this level. The number of keypunch operators performing more difficult work is considered significant when at least 25 percent of the operators work at this level, provided there are at least two such operators in units with a total of 3 or 4 employees, 3 such operators in units with a total of 5 to 12 employees, and 4 such operators in units with a total of 13 or more operators.

bility, difficulty of keypunch work supervised, and number of employees supervised. In table C-4 two levels of supervision are described and each is followed by a

brief chart that shows the level of keypunch supervisor for each combination of the other two elements.

## Clerical

### CLERK, ACCOUNTING

Performs one or more accounting clerical tasks such as posting to registers and ledgers; reconciling bank accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying for clerical accuracy

various types of reports, lists, calculations, postings, etc.; or preparing simple (or assisting in preparing more complicated) journal vouchers. May work in either a manual or automated accounting system.

The work requires a knowledge of clerical methods and office practices and procedures which relates to the clerical processing and recording of transactions and accounting information. With experience, the worker

typically becomes familiar with the bookkeeping and accounting terms and procedures used in the assigned work, but is not required to have a knowledge of the formal principles of bookkeeping and accounting.

Positions are classified into levels on the basis of the following definitions.

#### **Clerk, Accounting I**

Under close supervision, following detailed instructions and standardized procedures, performs one or more routine accounting clerical operations, such as posting to ledgers, cards, or worksheets where identification of items and locations of postings are clearly indicated; checking accuracy and completeness of standardized and repetitive records or accounting documents; and coding documents using a few prescribed accounting codes.

#### **Clerk, Accounting II**

Under general supervision, performs accounting clerical operations which require the application of experience and judgment, for example, clerically processing complicated or nonrepetitive accounting transactions, selecting among a substantial variety of prescribed accounting codes and classifications, or tracing transactions through previous accounting actions to determine source of discrepancies. May be assisted by one or more accounting clerks I.

### **CLERK, FILE**

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions.

#### **Clerk, File I**

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

#### **Clerk, File II**

Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

#### **Clerk, File III**

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

### **KEYPUNCH OPERATOR**

Operates a keypunch machine to record or verify alphabetic and/or numeric data on tabulating cards or on tape.

Positions are classified into levels on the basis of the following definitions.

#### **Keypunch Operator I**

Work is routine and repetitive. Under close supervision or following specific procedures or instructions, works from various standardized source documents which have been coded, and follows specified procedures which have been prescribed in detail and require little or no selecting, coding, or interpreting of data to be recorded. Refers to supervisor problems arising from erroneous items, codes, or missing information.

#### **Keypunch Operator II**

Work requires the application of experience and judgment in selecting procedures to be followed and in searching for, interpreting, selecting, or coding items to be keypunched from a variety of source documents. On occasion may also perform some routine keypunch work. May train inexperienced keypunch operators.

### **MESSENGER**

Performs various routine duties such as running errands, operating minor office machines such as sealers



or mailers, opening and distributing mail, and other minor clerical work. *Exclude* positions that require operation of a motor vehicle as a significant duty.

## SECRETARY

Assigned as a personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

*Exclusions.* Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows:

- a. Positions which do not meet the "personal" secretary concept described above;
- b. Stenographers not fully trained in secretarial-type duties;
- c. Stenographers serving as office assistants to a group of professional, technical, or managerial persons;
- d. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., administrative assistant, or executive assistant;
- e. Positions which do not fit any of the situations listed in the section below titled "Level of Secretary's Supervisor," e.g., secretary to the president of a company that employs, in all, over 5,000 persons;
- f. Trainees.

Secretary jobs which meet the required characteristics are matched at one of the five levels according to (a) the level of the secretary's supervisor within the company's organizational structure and (b) the level of the secretary's responsibility. Table C-5 indicates the level of the secretary for each combination of the factors.

### Level of Secretary's Supervisor (LS)

- LS-1* a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or
- b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer or assistant, skilled technician or expert. (*NOTE:* Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)
- LS-2* a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several

dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or

- b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

- LS-3* a. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or

- b. Secretary to the head (immediately below the officer level) of either a major corporatewide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or

- c. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, over 5,000 persons; or

- d. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

- LS-4* a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or

- b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or

- c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

*NOTE:* The term "corporate officer" used in the above *LS* definitions refers to those officials who have a significant corporatewide policymaking role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the definition.

### Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor, and the

extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at *LR-1* or *LR-2* described below according to their level of responsibility.

**Level of Responsibility 1 (LR-1)**

Performs varied secretarial duties including or comparable to most of the following:

- a. Answers telephone, greets personal callers, and opens incoming mail.
- b. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
- c. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy.
- d. Maintains supervisor's calendar and makes appointments as instructed.
- e. Types, takes and transcribes dictation, and files.

**Level of Responsibility 2 (LR-2)**

Performs duties described under *LR-1* and, *in addition*, performs tasks requiring greater judgment, initiative, and knowledge of office functions including or comparable to most of the following:

- a. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
- b. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
- c. Compiles or assists in compiling periodic reports on the basis of general instructions.
- d. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
- e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation, and files.)

**Table C-5. Criteria for matching secretaries by level**

Level of secretary's supervisor	Level of secretary's responsibility	
	LR-1	LR-2
LS-1 .....	I	II
LS-2 .....	II	III
LS-3 .....	III	IV
LS-4 .....	IV	V

**STENOGRAPHER**

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

*NOTE:* This job is distinguished from that of a secretary in that a secretary normally works in a confidential relationship with only one manager or executive and performs more responsible and discretionary tasks as described in the secretary job definition.

**Stenographer, General**

Dictation involves a normal routine vocabulary. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

**Stenographer, Senior**

Dictation involves a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also set up and maintain files, keep records, etc.

*OR*

Performs stenographic duties requiring significantly greater independence and responsibility than stenographer, general, as evidenced by the following: Work requires a high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedure and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memorandums, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc.

**TYPIST**

Uses a typewriter to make copies of various materials or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

**Typist I**

Performs *one or more of the following*: Copy typing from rough or clear drafts; or routine typing of forms,

insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

**Typist II**

Performs *one or more of the following*: Typing material in final form when it involves combining

material from several sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

**NOTE:** The occupational titles and definitions for drafter-tracers, messengers, and stenographers are the same as those used in the Bureau's program of occupational wage surveys in metropolitan areas. (See the list of areas on the order form at the back of this bulletin.) The occupations listed below have the same definitions in both the national and area surveys; however, the level designations differ as shown:

Occupation	National Survey of Professional, Admini- strative, Technical, and Clerical Pay	Occupational Wage Surveys in Metropolitan Areas
Drafter . . . . .	I	C
	II	B
	III	A
Clerk, accounting . . . . .	I	B
	II	A
Clerk, file . . . . .	I	C
	II	B
	III	A
Keypunch operator . . . . .	I	B
	II	A
Typist . . . . .	I	B
	II	A

## **Appendix D. Comparison of Average Annual Salaries in Private Industry with Corresponding Salary Rates for Federal Employees Under the General Schedule, March 1974**

The survey was designed to provide a basis for comparing salaries under the General Schedule classification and pay system with salaries in private enterprise. To assure collection of pay data for work levels equivalent to the General Schedule grade levels, the Civil Service Commission, in cooperating with the Bureau of Labor Statistics, prepared the occupational work level definitions used in the survey. Definitions were graded

by the Commission according to standards established for each grade level. Table D shows the surveyed jobs grouped by work levels equivalent to General Schedule grade levels. (Note that the private enterprise rates for secretaries and computer operators were not used by the President's agent in the 1974 Federal-private enterprise pay comparisons.)

**Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule, March 1974**

Occupation and level surveyed by BLS <sup>1</sup>	Average annual salaries in private industry <sup>2</sup>	Salary rates for Federal employees under the General Schedule <sup>3</sup>													
		Grade <sup>4</sup>	Average <sup>5</sup>	Annual rates and steps <sup>6</sup>											
				1	2	3	4	5	6	7	8	9	10		
Clerks, file I -----	\$5,109	GS-1	\$5,113	\$5,017	\$5,184	\$5,351	\$5,518	\$5,685	\$5,852	\$6,019	\$6,186	\$6,353	\$6,520		
Messengers -----	5,643														
Clerks, file II -----	5,647	GS-2	5,859	5,682	5,871	6,060	6,249	6,438	6,627	6,816	7,005	7,194	7,383		
Keypunch operators I -----	6,440														
Typists I -----	5,810														
Clerks, accounting I -----	6,607	GS-3	6,916	6,408	6,622	6,836	7,050	7,264	7,478	7,692	7,906	8,120	8,334		
Clerks, file III -----	6,928														
Drafter-tracers -----	7,048														
Engineering technicians I -----	7,975														
Keypunch operators II -----	7,492														
Keypunch supervisors I -----	8,842														
Stenographers, general -----	6,954														
Typists II -----	6,751														
Clerks, accounting II -----	8,367	GS-4	8,108	7,198	7,438	7,678	7,918	8,158	8,398	8,638	8,878	9,118	9,358		
Computer operators I <sup>7</sup> -----	6,879														
Drafters I -----	8,507														
Engineering technicians II -----	9,122														
Keypunch supervisors II -----	9,547														
Secretaries I <sup>7</sup> -----	7,601														
Stenographers, senior -----	7,900														
Accountants I -----	9,739	GS-5	9,186	8,055	8,323	8,591	8,859	9,127	9,395	9,663	9,931	10,199	10,467		
Auditors I -----	10,352														
Buyers I -----	10,073														
Chemists I -----	10,660														
Computer operators II <sup>7</sup> -----	7,632														
Drafters II -----	10,443														
Engineers I -----	11,901														
Engineering technicians III -----	10,491														
Job analysts I -----	9,783														
Keypunch supervisors III -----	11,005														
Secretaries II <sup>7</sup> -----	8,221														
Computer operators III <sup>7</sup> -----	8,887														
Keypunch supervisors IV -----	12,809														
Secretaries III <sup>7</sup> -----	8,742														
Accountants II -----	11,549	GS-7	11,251	9,969	10,301	10,633	10,965	11,297	11,629	11,961	12,293	12,625	12,957		
Auditors II -----	12,024														
Buyers II -----	12,141														
Chemists II -----	12,408														
Computer operators IV <sup>7</sup> -----	10,279														
Drafters III -----	13,070														
Engineers II -----	13,171														
Engineering technicians IV -----	11,974														
Job analysts II -----	11,488														
Keypunch supervisors V -----	13,552														
Secretaries IV <sup>7</sup> -----	9,568														
Computer operators V <sup>7</sup> -----	11,098														
Secretaries V <sup>7</sup> -----	10,396														
Accountants III -----	13,285	GS-9	13,736	12,167	12,573	12,979	13,385	13,791	14,197	14,603	15,009	15,415	15,821		
Attorneys I -----	14,223														
Auditors III -----	14,371														
Buyers III -----	14,659														
Chemists III -----	14,298														
Computer operators VI <sup>7</sup> -----	12,403														
Engineers III -----	15,160														
Engineering technicians V -----	13,654														
Job analysts III -----	13,921														
Accountants IV -----	16,051			GS-11	16,586	14,671	15,160	15,649	16,138	16,627	17,116	17,605	18,094	18,583	19,072
Attorneys II -----	16,357														
Auditors IV -----	17,491														
Buyers IV -----	17,421														
Chemists IV -----	17,283														
Chief accountants I -----	17,601														
Directors of personnel I -----	15,790														
Engineers IV -----	17,929														
Job analysts IV -----	17,263														

See footnotes at end of table.

**Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule, March 1974—Continued**

Occupation and level surveyed by BLS <sup>1</sup>	Average annual salaries in private industry <sup>2</sup>	Salary rates for Federal employees under the General Schedule <sup>3</sup>											
		Grade <sup>4</sup>	Average <sup>5</sup>	Annual rates and steps <sup>6</sup>									
				1	2	3	4	5	6	7	8	9	10
Accountants V -----	\$19,560	GS-12	\$19,709	\$17,497	\$18,080	\$18,663	\$19,246	\$19,829	\$20,412	\$20,995	\$21,578	\$22,161	\$22,744
Attorneys III -----	21,082												
Chemists V -----	20,702												
Chief accountants II -----	20,072												
Directors of personnel II -----	18,815												
Engineers V -----	20,654												
Attorneys IV -----	25,956	GS-13	23,355	20,677	21,366	22,055	22,744	23,433	24,122	24,811	25,500	26,189	26,878
Chemists VI -----	24,079												
Chief accountants III -----	23,805												
Directors of personnel III -----	24,078												
Engineers VI -----	23,827												
Attorneys V -----	31,999	GS-14	27,431	24,247	25,055	25,863	26,671	27,479	28,287	29,095	29,903	30,711	31,519
Chemists VII -----	28,203												
Chief accountants IV -----	29,021												
Directors of personnel IV -----	28,140												
Engineers VII -----	26,960												
Attorneys VI -----	38,180	GS-15	32,328	28,263	29,205	30,147	31,089	32,031	32,973	33,915	34,857	35,799	36,741 <sup>8</sup>
Chemists VIII -----	34,475												
Engineers VIII -----	31,469												

<sup>1</sup> For definitions, see appendix C.

<sup>2</sup> Survey findings as summarized in table 1 of this bulletin. For scope of survey, see appendix A.

<sup>3</sup> Salary rates in effect March 1974, reference date of the BLS survey, as established by Executive Order 11739 issued under authority of Section 5305 of title 5, U.S. Code.

<sup>4</sup> Corresponding grades in the General Schedule were supplied by the U.S. Civil Service Commission.

<sup>5</sup> Mean salary of all General Schedule employees in each grade as of March 31, 1974. Not limited to Federal employees in occupations surveyed by BLS.

<sup>6</sup> Section 5335 of title 5 of the U.S. Code provides for within-grade increases on condition that the employee's work is of an acceptable level of competence as defined by the head of the agency. For employees who meet this condition, the service requirements are 52 calendar weeks each for advancement to salary rates 2, 3, and 4; 104 weeks each for advancement to salary rates 5, 6, and 7; and 156 weeks each for advancement to salary rates 8, 9, and 10. Section 5336 provides that an additional within-grade increase may be granted within any period of 52 weeks in recognition of high quality performance above that ordinarily found in the type of position concerned.

<sup>7</sup> Not used in the 1974 Federal-private pay comparisons.

<sup>8</sup> Employees at GS-15, step 10, are actually paid \$36,000 rather than the theoretical rate of \$36,741, since a special statutory limitation on Federal pay prevents payment of a salary of more than \$36,000 to any General Schedule employee.

Under Section 5303 of title 5 of the United States Code, higher minimum rates (but not exceeding the maximum salary rate prescribed in the General Schedule for the grade or level) and a corresponding new salary range may be established for positions or occupations under certain conditions. The conditions include a finding that the Government's recruitment or retention of well-qualified persons is significantly handicapped because the salary rates in private industry are substantially above the salary rates of the statutory pay schedules. As of March 1974, special, higher salary ranges were authorized for professional engineers, accountants, and auditors at the entry grades (GS-5 and GS-7). Information on special salary rates, including the occupations and the areas to which they apply, may be obtained from the U.S. Civil Service Commission, Washington, D.C. 20415, or its regional offices.

## Area Wage Surveys

A list of the latest available bulletins or bulletin supplements is presented below. A directory of area wage studies including more limited studies conducted at the request of the Employment Standards Administration of the Department of Labor is available on request. Bulletins may be purchased from any of the BLS regional offices shown on the back cover, or from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. Bulletin supplements listed below may be obtained, without cost, only from BLS regional offices. (Prices of publications are subject to change without notice.)

<u>Area</u>	<u>Bulletin number and price</u>		<u>Area</u>	<u>Bulletin number and price</u>	
Akron, Ohio, Dec. 1973 <sup>1</sup> . . . . .	1795-10,	65 cents	Lexington, Ky., Nov. 1973 . . . . .	Suppl.	Free
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Albuquerque, N.Mex., Mar. 1974 . . . . .	Suppl.	Free	Los Angeles-Long Beach and Anaheim-Santa Ana-Garden Grove, Calif., Oct. 1973 . . . . .	Suppl.	Free
Allentown-Bethlehem-Easton, Pa.-N.J., May 1973 . . . . .	1775-90,	50 cents	Louisville, Ky.-Ind., Nov. 1973 . . . . .	Suppl.	Free
Atlanta, Ga., May 1974 . . . . .	Suppl.	Free	Lubbock, Tex., Mar. 1974 . . . . .	Suppl.	Free
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Baltimore, Md., Aug. 1973 . . . . .	Suppl.	Free	Melbourne-Titusville-Cocoa, Fla., Aug. 1973 <sup>1</sup> . . . . .	1795-2,	55 cents
Beaumont-Port Arthur-Orange, Tex., May 1974 . . . . .	Suppl.	Free	Memphis, Tenn.-Ark., Nov. 1973 <sup>1</sup> . . . . .	1795-11,	65 cents
Binghamton, N.Y.-Pa., July 1973 <sup>1</sup> . . . . .	1795-1,	55 cents	Miami, Fla., Nov. 1973 . . . . .	Suppl.	Free
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Burlington, Vt., Dec. 1973 . . . . .	Suppl.	Free	Newark and Jersey City, N.J., Jan. 1974 . . . . .	Suppl.	Free
Canton, Ohio, May 1974 <sup>1</sup> . . . . .	1795-23,	80 cents	New Haven, Conn., Jan. 1974 . . . . .	Suppl.	Free
Charleston, W. Va., Mar. 1974 . . . . .	Suppl.	Free	New Orleans, La., Jan. 1974 <sup>1</sup> . . . . .	1795-15,	70 cents
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Chicago, Ill., May 1973 . . . . .	1775-88,	50 cents	Oklahoma City, Okla., July 1973 . . . . .	Suppl.	Free
Cincinnati, Ohio-Ky.-Ind., Feb. 1974 <sup>1</sup> . . . . .	1795-16,	75 cents	Omaha, Nebr.-Iowa, Sept. 1973 . . . . .	Suppl.	Free
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<sup>1</sup> Data on establishment practices and supplementary wage provisions are also presented.

## Area Wage Surveys—Continued

<u>Area</u>	<u>Bulletin number and price</u>		<u>Area</u>	<u>Bulletin number and price</u>	
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<sup>1</sup> Data on establishment practices and supplementary wage provisions are also presented.





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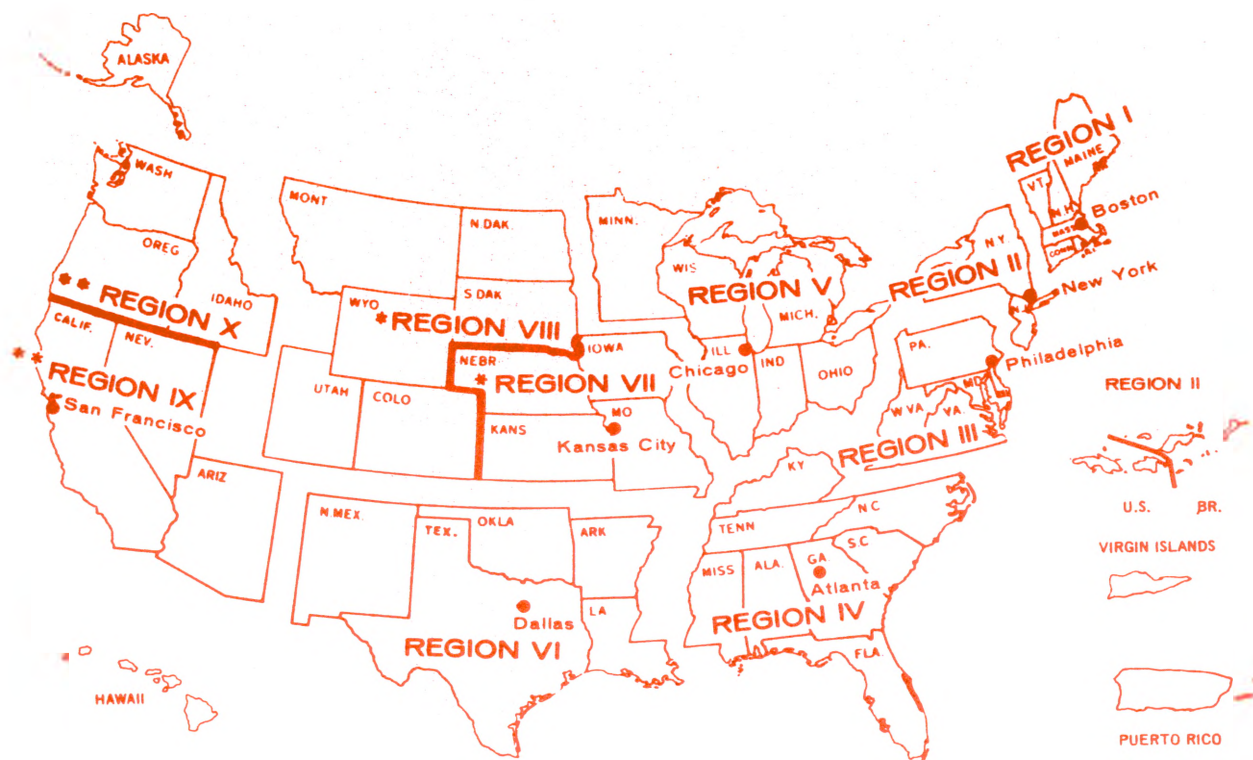
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