

*National Survey of  
Professional,  
Administrative,  
Technical,  
and Clerical Pay,*

*March 1972*

U.S. Department of Labor.  
Bureau of Labor Statistics  
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1973

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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 1972, is representative of establishments in a broad spectrum of industries throughout the United States, except Alaska and Hawaii.

The survey was designed by the Bureau of Labor Statistics in cooperation with the U.S. Office of Management and Budget and the U.S. Civil Service Commission. It provides a fund of broadly based information on salary levels and distributions in private employment. The survey provides information on pay in private industry in a form suitable for use in appraising the compensation of salaried employees in the Federal civil service (appendix D). In addition, survey results are useful 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 judged to be (a) surveyable in industry within the framework of a broad survey design and (b) representative of occupational groups which are numerically important in industry as well as in the Federal service.

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 pay grades in the General Schedule applying to Federal Classification Act 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.

A number of changes affecting the scope, reference period, sampling procedures, and some of the occupational definitions were introduced in the 1972 survey. The reference period was changed from June to March in 1972 at the request of the President's agent to adjust the timing of the survey to fit the time schedule for Federal pay adjustments set by the Federal Pay Comparability Act of 1970. The changes are described in detail in appendix B.

The survey could not have been accomplished 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 sincere 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. William M. Smith prepared the analysis in this bulletin. 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 89 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 officeworkers. (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 4.4 percent from June 1971 to March 1972. Comparisons with earlier surveys in this series indicate that the annual rate of increase (5.9 percent) in white-collar salaries declined for the first time since the study was initiated in 1961. Over the 9-month period, average salaries increased by 4.6 percent for clerical jobs and 4.1 percent for professional, administrative, and technical occupations.

Average monthly salaries for the 77 occupational levels varied from \$383 for clerks engaged in routine filing to \$2,902 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 were also generally lower in the finance industries.

## Characteristics of the survey

This survey, the 13th in an annual series, provides nationwide salary averages and distributions for 77 work level categories covering 19 occupations.<sup>1</sup> 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 were: 250 employees in manufacturing and retail trade and 100 employees in all other industry divisions.<sup>3</sup>

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 — usually designated by roman numerals, with class I as the lowest level — are defined in terms of duties and responsibilities. Specific job factors determining classification, however, varied from occupation to occupation.

The number of work level definitions for each occupation varies from one for messengers to eight each

for chemists and engineers. More than one level of work was defined for survey in most of the occupations; some were purposely defined, however, to cover specific bands of work levels, which were not intended to represent all levels or all workers that may be found in those occupations.

The survey was designed to permit separate presentation of data for metropolitan areas. Coverage in metropolitan areas includes the 229 Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through January 1968 by the U.S. Office of Management and Budget. Establishments in metropolitan areas accounted for four-fifths of the total employment and almost nine-tenths of the professional, administrative, clerical, and related employees within scope of the survey. Almost nine-tenths of the employees in the occupations chosen for study were employed in metropolitan areas.

The selected occupations accounted for more than 1,445,000 employees, or about one-fifth of the estimated employment in professional, administrative, clerical, and related occupations in establishments within 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 accounted for a total of 360,052 employees, whereas there were fewer than 5,000 employees in each of four of the occupa-

<sup>1</sup> Results of the earlier survey reports were presented under the title: *National Survey of Professional, Administrative, Technical, and Clerical Pay, Winter 1959-60* (BLS Bulletin 1286, 1960); *Winter 1960-61* (BLS Bulletin 1310, 1961); *Winter 1961-62* (BLS Bulletin 1346, 1962); *February-March 1963* (BLS Bulletin 1387, 1963); *February-March 1964* (BLS Bulletin 1422, 1964); *February-March 1965* (BLS Bulletin 1469, 1965); *February-March 1966* (BLS Bulletin 1535, 1966); *June 1967* (BLS Bulletin 1585, 1968); *June 1968* (BLS Bulletin 1617, 1969); *June 1969* (BLS Bulletin 1654, 1970); *June 1970* (BLS Bulletin 1693, 1971); and *June 1971* (BLS Bulletin 1742, 1972).

<sup>2</sup> February-March 1964 and earlier surveys were limited to establishments in metropolitan areas. For a full description of the scope of the 1972 survey, see appendix A.

<sup>3</sup> February-March 1965 and earlier surveys were limited to establishments having 250 employees or more in all industry divisions. In 1972, the minimum size for establishments in the finance, insurance, and real estate industry was raised from 50 to 100 employees. See appendix B for further details.

tional categories as defined for the study (chief accountants, job analysts, directors of personnel, and keypunch supervisors). (See table 1.) Accounting clerks and secretaries accounted for about one-half of the 761,078 employees in the clerical occupations studied. The selected drafting occupations had aggregate employment of 80,857 and the five engineering technician levels together accounted for about 83,404.

Although women accounted for approximately one-half of the total employment in the occupations studied, they were employed 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 percentage distribution of women employees by occupation and level is shown in appendix A.

### Changes in salary levels

Table A presents percent increases in average salaries that occurred between annual surveys since 1961 for each survey occupation. <sup>4</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 cumulative 1961-72 percent increases for selected occupations are shown in chart 1.

In the 1971-72 9-month period, increases in average salaries for the 11 professional, administrative, and technical support occupations ranged from 2.9 to 5.4 percent, while increases for the eight clerical and clerical supervisory occupations were between 4.1 and 5.1 percent. <sup>5</sup> For all white-collar occupations combined, the increase in average salaries amounted to 4.4 percent. Conversion of this figure to an annual rate indicates that white-collar salaries rose at the rate of 5.9 percent per year during the 9-month period. This represents a decline from the 6.6-percent rate of increase recorded in the previous year and is the first decline in the rate of increase in average salaries since the trend series was begun a decade ago.

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 table B.

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. From June 1971 to March 1972 increases for the middle levels were smaller than for the others.

Another method of examining salary trends is to combine the data into the four occupational groups shown in chart 2. <sup>6</sup> Increases in the June 1971-March 1972 period amounted to 4.6 percent for technical support and for clerical workers; 4.2 percent for the experienced professional and administrative group; and 2.6 percent for entry and developmental professional and administrative workers. Adjusting these increases to reflect a 12-month period for comparison purposes results in increases of 6.2 percent, 5.6, and 3.5 percent, respectively. (This adjustment assumes a constant rate of increase over the 9-month period, projected to 12 months.) These increases were above their respective 11-year averages for all but the entry and developmental professional and administrative group. The annual rate of increase for that group was, at 3.5 percent, less than half its peak rate of increase of 7.2 percent recorded in 1968-69.

Increases in salaries of both clerical and technical support groups averaged 4.3 percent over the 11-year period — less than the increases (4.7 and 4.8 percent) for the experienced and entry professional and administrative groups.

### Average salaries, March 1972

Average monthly salaries for the occupations included in this report (table 1) ranged from \$383 for

<sup>4</sup> The increases since 1965 relate to establishments in metropolitan areas and nonmetropolitan counties; all others relate to metropolitan areas only. Establishments employing fewer than 250 workers were excluded before 1966.

<sup>5</sup> All measures of salary change for the 1971-72 period which appear in this bulletin have been computed using data based on the 1971 survey scope in both years, i.e., including establishments with fewer than 100 employees in the finance, insurance, and real estate industries.

<sup>6</sup> Work levels used for computing 1971-72 increases were: Clerical — All clerical levels.

Technical support — All levels of draftsmen and engineering technicians.

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

Experienced professional and administrative — Accountants III, IV, and 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 four occupational categories, were not used.

The 1966-67 increases were prorated to a 12-month period because a change in survey timing in 1967 resulted in a longer period between surveys.

Table A. Percent increases in average salaries, 1961-1972, by occupation and group

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

<sup>1</sup> Actual survey-to-survey increases have been prorated to a 12-month period because changes in timing lengthened the period between the 1966 and 1967 surveys.

<sup>2</sup> The 1971 to 1972 increases are for the 9-month period, June 1971-March 1972.

<sup>3</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>4</sup> Comparable data not available for both years.

<sup>5</sup> Comparison over this period was not possible because of changes in the definition of the occupation.

<sup>6</sup> Not surveyed.

<sup>7</sup> The average annual rate of increase relates to the 1962 to 1972 period.

NOTE: For method of computation, see appendix A.

file clerks I to \$2,902 for the top level of attorney 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>7</sup>

Among the five levels of accountants surveyed, average monthly salaries ranged from \$756 for accountants I to \$1,447 for accountants V. Auditors in the four levels defined for survey had average salaries ranging from \$802 a month for auditors I to \$1,319 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 were higher for auditors than for accountants. For level III, the most heavily populated group in both

series, monthly salaries averaged \$990 for accountants and \$1,073 for auditors. Whereas two-thirds of the accountants were employed in manufacturing, this industry division employed 40 percent of the auditors.<sup>8</sup> Other industry divisions which accounted for large numbers of auditors were finance, insurance, and real estate (27 percent), and public utilities (19 percent).

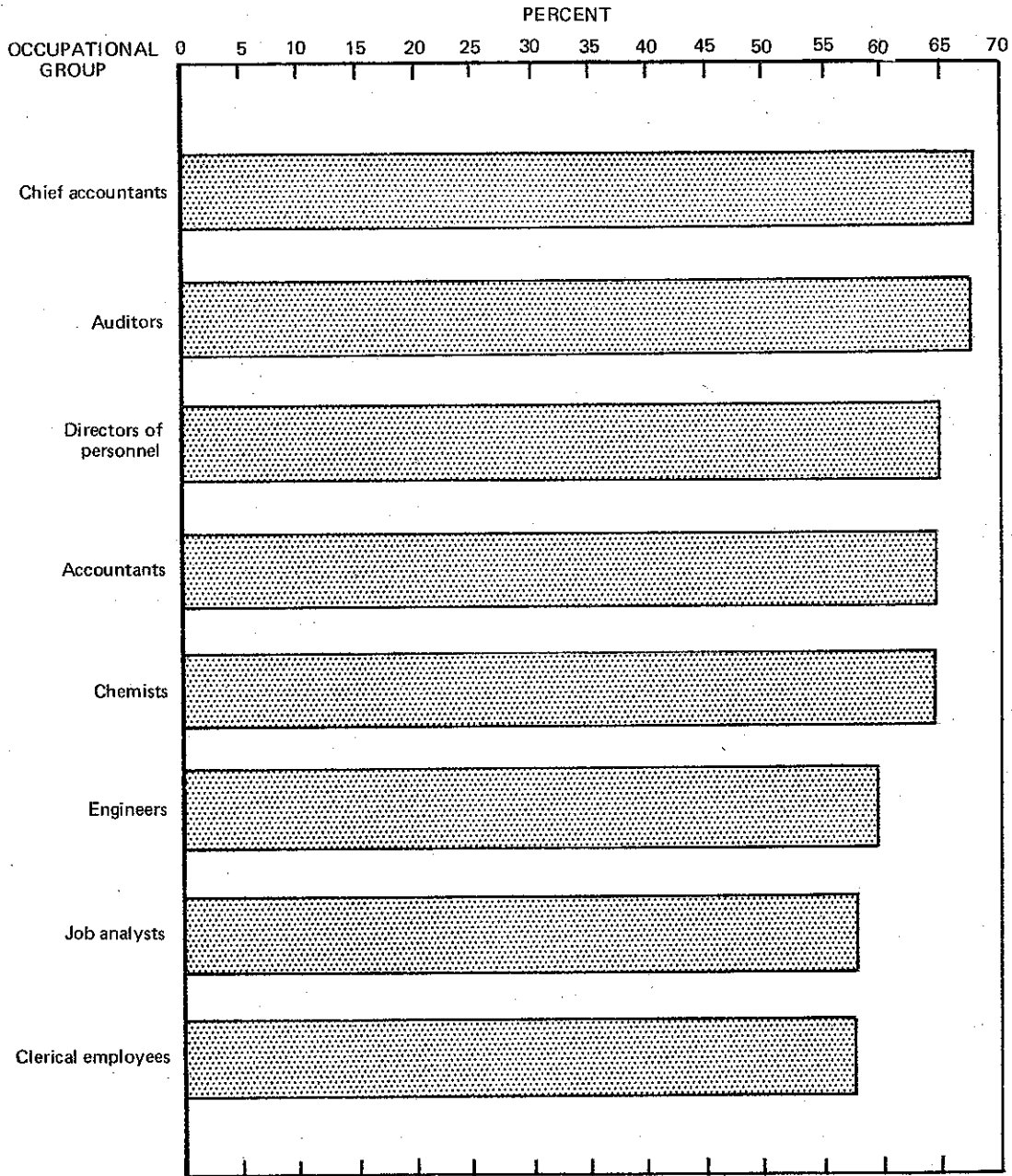
Chief accountants were surveyed separately from accountants and included those who develop or adapt and direct the accounting program for a company or an establishment (plant) of a company. Classification by level was determined by the extent of delegated authority and responsibility; the technical complexity of

<sup>7</sup> Classification of employees in the occupations and work levels surveyed was based on factors detailed in the definitions in appendix C.

<sup>8</sup> Establishments primarily engaged in providing accounting and auditing services were excluded from the survey.

**CHART 1**

**Cumulative Rise in Average (Mean) Salaries for Selected Occupational Groups, 1961 to 1972**





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 \$1,279 a month. Chief accountants IV,<sup>9</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), averaged \$2,210 a month. About three-fifths of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries.

**Attorneys** were classified into survey levels based upon the difficulty of their assignments and their responsibilities.<sup>10</sup> Attorneys I, which included new law graduates with bar membership and those performing work that was relatively uncomplicated due to clearly applicable precedents and well-established facts, averaged \$1,125 a month. Attorneys in the top level surveyed, level VI, earned an average of \$2,902 a month. These attorneys dealt with legal matters of critical importance to their organizations, and were 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, one-fifth.

**Buyers** averaged \$782 a month at level I, which included those who purchased "off-the-shelf" and readily available items and services from local sources. Buyers IV, who purchased large amounts of highly complex and technical items, materials, or services were paid monthly salaries averaging \$1,296. Manufacturing industries accounted for 86 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>11</sup> Job analysts I, defined to include trainees under immediate supervision, averaged \$787, compared with \$1,255 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 were limited by definition to those who had programs that included, 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 were excluded. Provisions were made in the definition for weighing various combinations of duties and responsibilities to determine the level classification. Among personnel directors with job functions as specified for the four levels of responsibility, average monthly salaries ranged from \$1,193 for level I to \$2,062 for level IV. Manufacturing industries accounted for 64 percent of the job analysts and 73 percent of the directors of personnel included in the study; the finance, insurance, and real estate industries ranked next, with 25 percent of the job analysts and 11 percent of the directors of personnel.

**Chemists and engineers** each were surveyed in eight levels. Both series started with a professional trainee level, typically requiring a B.S. degree. The highest level surveyed involved 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

<sup>9</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>10</sup> Establishments primarily engaged in offering legal advice or legal services were excluded from the survey.

<sup>11</sup> See footnote 9.

**Table B. Percent increases in average salaries, 1961-1972, by work level category**

Work level category	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	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>2</sup>	to 1972
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	4.7	56.1
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	3.9	62.6
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	4.2	64.0

<sup>1</sup> Actual survey-to-survey increases have been prorated to a 12-month period because changes in timing lengthened the period between the 1966 and 1967 surveys.

<sup>2</sup> The 1971-72 increases are for the 9-month period June

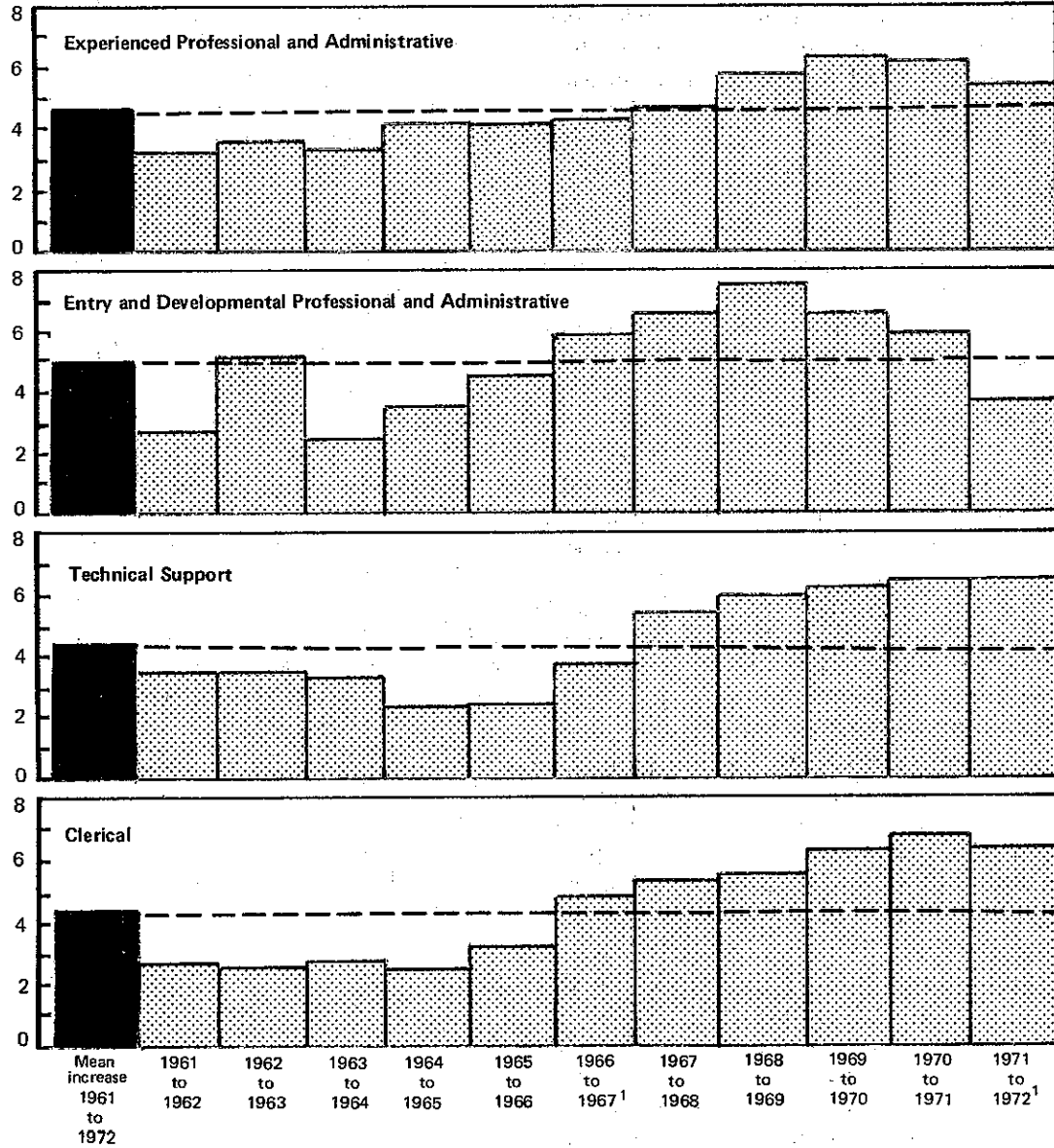
1971-March 1972. The percent increases were computed using data based upon the scope of the 1971 survey in both years.

NOTE: For method of computation, see appendix A.

CHART 2

Increases in Average Salaries for Selected Occupational Groups, 1961 to 1972

Percent increase



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

problem areas where the engineer or chemist was a recognized authority and where solutions would represent a major scientific or technological advance.<sup>12</sup> Average monthly salaries ranged from \$910 for engineers I to \$2,324 for engineers VIII, and from \$820 for chemists I to \$2,569 for chemists VIII. Although, at level I, the average salaries of engineers exceeded those for chemists by 11 percent, at level IV the difference narrowed to 3 percent, and at level VIII, the average salaries of chemists exceeded those for engineers by 11 percent. Level IV, the largest group in each series, included professional employees who were fully competent in all technical aspects of their assignments, worked with considerable independence, and, in some cases, supervised a few professional and technical workers. Manufacturing industries accounted for three-fourths of all engineers and nine-tenths of all chemists; public utilities, 11 and 1 percent, respectively; and the surveyed engineering and scientific services employed virtually all of the others.

By definition, the five-level series for **engineering technicians** was limited to employees providing semi-professional technical support to engineers engaged in such areas as research, design, development, testing, or manufacturing process improvement, and whose work pertained to electrical, electronic, or mechanical components or equipment. Technicians engaged primarily in production or maintenance work were excluded. Engineering technicians I, who performed simple, routine tasks under close supervision, or from detailed procedures, were paid monthly salaries averaging \$601. Engineering technicians V, the highest level surveyed, averaged \$1,022 a month. That level included 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 \$792 and \$899, respectively. As might be expected, nearly all of the technicians as defined were employed in manufacturing (74 percent) and in the scientific services industries studied (16 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 and 1 to 2 in research, development, and testing laboratories.

In the **drafting field**, the definitions used in the survey covered four levels of work — draftsmen-tracers,

and draftsmen I, II, and III. Monthly salaries averaged \$524 for draftsmen-tracers and ranged from \$629 to \$958 among the three levels of draftsmen. Draftsmen-tracers copy plans and drawings prepared by others or prepare simple or repetitive drawings of easily visualized items. The three draftsman levels as defined ranged from employees preparing detail drawings of single units or parts (level I) to those who, working in close support with the design originator, 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 72 percent in manufacturing, 11 percent in public utilities, and 15 percent in the selected engineering and scientific services industries studied.

**Keypunch supervisors** were 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 were responsible for the day-to-day supervision of fewer than 20 operators performing routine keypunching operations, averaged \$634 a month. At level V, the highest level defined for survey, keypunch supervisors averaged \$1,027. Individuals classified at this level supervised more complex keypunching operations, 50 or more operators, and performed at a higher level of supervisory authority.

Among the 16 **clerical jobs** included in this study, average monthly salaries for secretaries, the most heavily populated clerical occupation studied, ranged from \$581 at level I to \$758 at level IV. Average salaries of \$515 and \$589 were reported for general and senior stenographers; \$489 and \$628 for accounting clerks I and II; and the two levels of typists averaged \$436 and \$508. 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 scope of the survey in 11 of the 16 clerical work levels; highest employment totals in the other five levels were in the finance, insurance, and real estate division. Women accounted for 95 percent or more of the employees in 12 of the clerical work levels, while men accounted for one-half or more in only one (messenger).

Median monthly salaries (the amount below and above which 50 percent of the employees were found) for most of the work levels were slightly lower than the weighted averages (means) cited above (i.e., the salaries

<sup>12</sup> It was recognized in the definition that top positions of some companies with unusually extensive and complex engineering or chemical programs were above that level.

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 58 of the 77 work levels and between 3 and 7 percent in the 19 other levels.

**Salary levels in metropolitan areas**

In most of the occupational work levels, average salaries for employees in metropolitan areas (table 2) were either identical to or slightly higher than average salaries for employees in all establishments within full scope of the survey (table 1). Only in 11 of the 75 work levels studied <sup>13</sup> 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 accounted for about seven-eighths 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 three-fourths of all directors of personnel, were employed in metropolitan areas. In 57 of the 75 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 69 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 accounted for over one-third of the professional, administrative, supervisory, and clerical employment within scope of the survey, and almost three-eighths of the employment in the selected occupations studied. Large establishments accounted for varying proportions of employment in the 69 occupational work levels shown in table 3, ranging from 9 to 84 percent (keypunch supervisors I and job analysts IV, respectively). The range was from 9 to 40 percent for clerical and clerical supervisory jobs, and from 23 to 84 percent for nonclerical jobs.

The salary levels in large establishments, expressed as a percent of levels in all establishments combined, ranged from 101 to 123. Salary averages in large establishments exceeded the all-establishment averages by 5 percent or more in all clerical and clerical supervisory job categories, but in only 26 of 49 nonclerical categories, as shown by the following tabula-

tion (all-establishment average for each category = 100 percent):

	<i>Professional, administrative, and technical categories</i>	<i>Clerical and clerical supervisory categories</i>
Total number of categories	49	20
101-104 percent .....	23	—
105-109 percent .....	18	9
110 percent and over .....	8	11

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 engineering technicians and keypunch supervisors in table 5; distributions by weekly salary are shown for employees in drafting and clerical occupations in table 6. <sup>14</sup> Within almost all of the 77 occupation work levels, salary rates for the highest paid employees were 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 3 and 4) to 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 permitted comparison of salary ranges and eliminated extreme low and high salaries from each comparison. As shown in table C, the degree of dispersion was between 15 and 30 percent of the median salary in 73 of the 77 work levels. The degree of dispersion tended to be greater in the clerical and

<sup>13</sup> Two work levels (chief accountant I and chemist VIII) did not meet criteria for publication in this segment of the survey.

<sup>14</sup> Technical considerations dictated the summarization of employee distributions by weekly, rather than monthly, salary for drafting and clerical jobs.

**CHART 3**

**Salaries in Professional and Technical Occupations, March 1972**

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

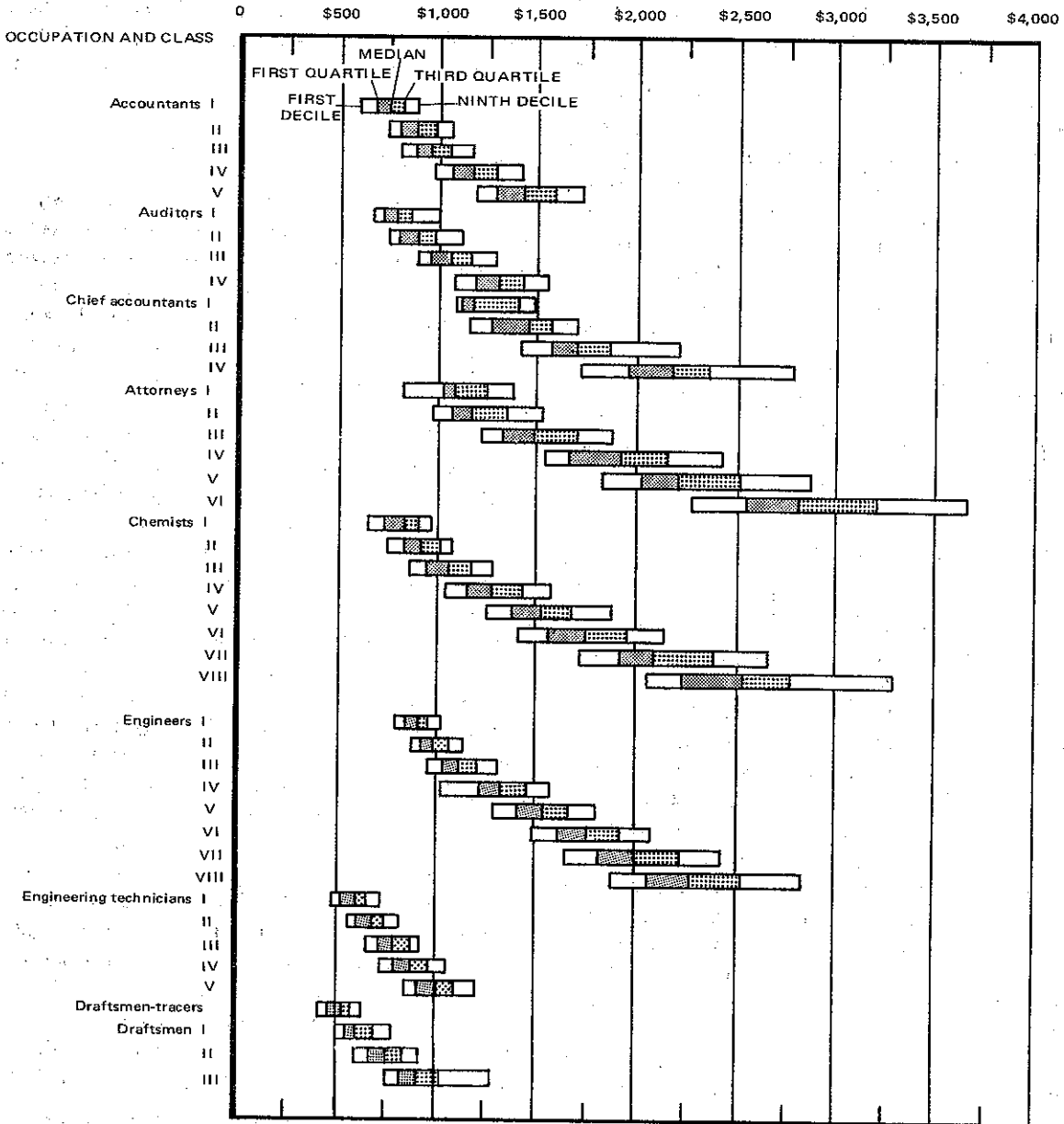
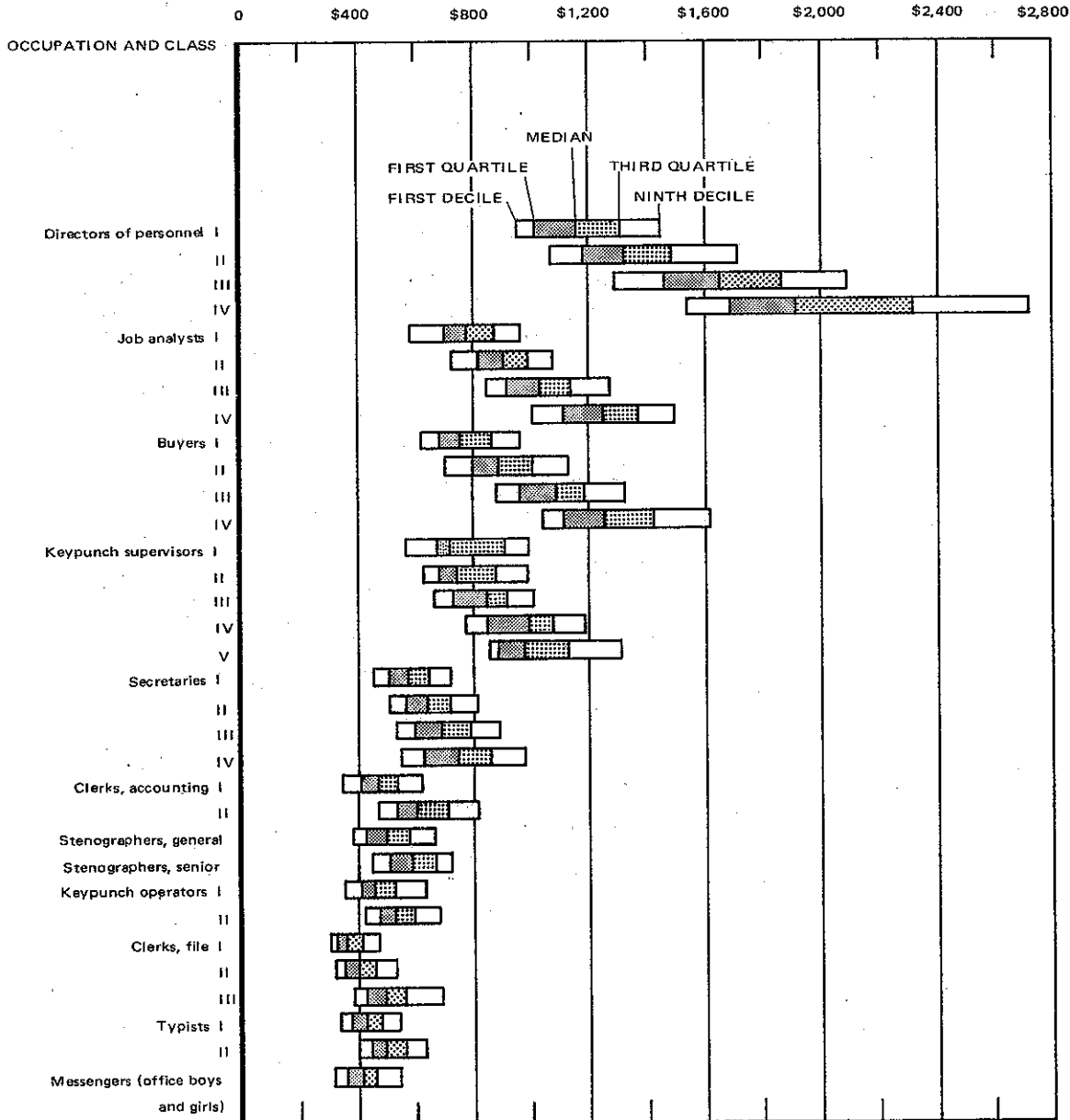


CHART 4

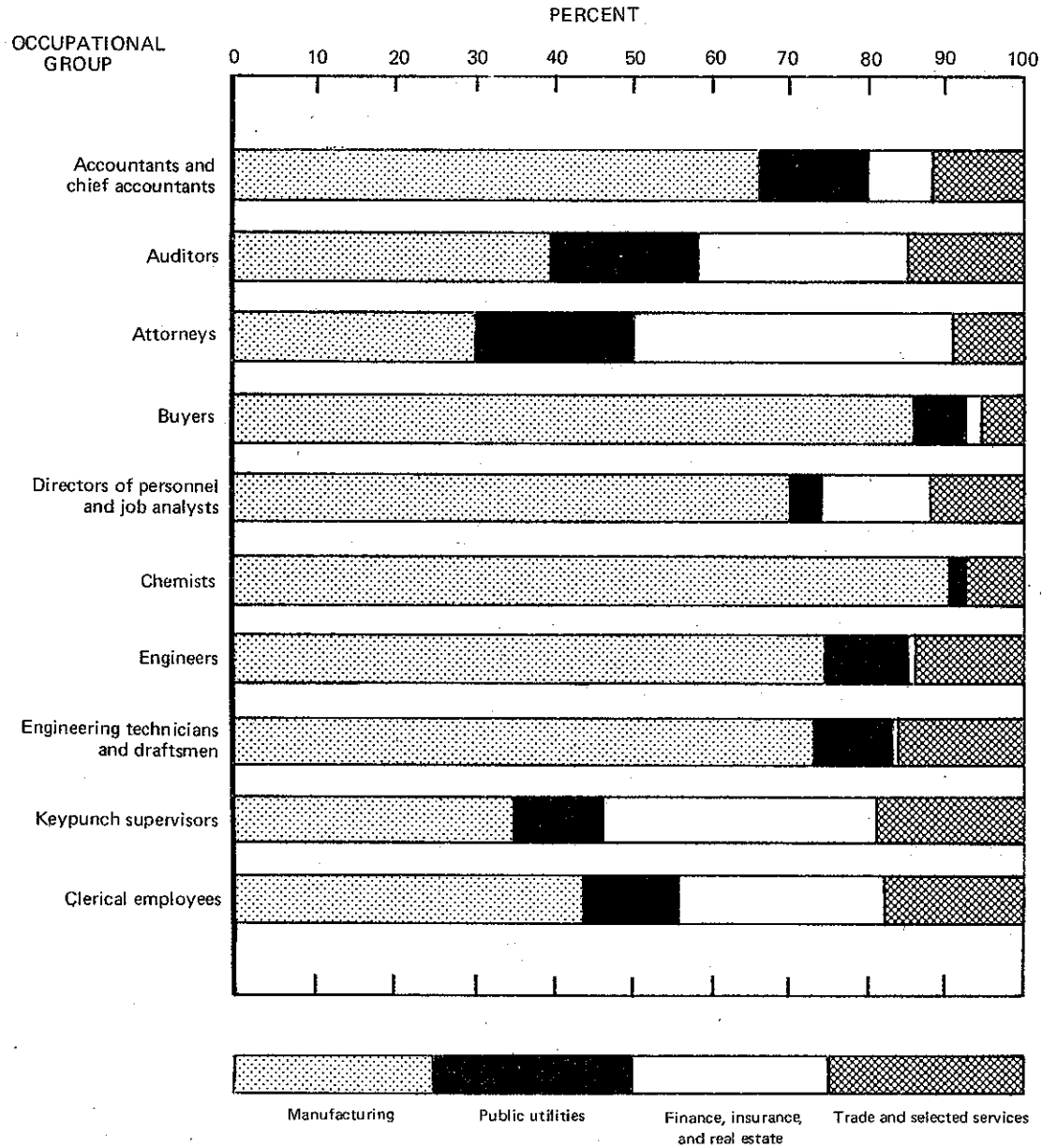
Salaries in Administrative and Clerical Occupations, March 1972

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



**CHART 5**

**Relative Employment in Selected Occupational Groups by Industry Division, March 1972**



**Table C. 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 .....	77	2	20	38	15	2
Accountants .....	5		2	3		
Auditors .....	4		3	1		
Chief accountants .....	4		3	1		
Attorneys .....	6			4	2	
Buyers .....	4			4		
Job analysts .....	4		2	2		
Directors of personnel .....	4			3		1
Chemists .....	8		1	7		
Engineers .....	8	2	5	1		
Engineering technicians .....	5		4	1		
Drafting .....	4			4		
Keypunch supervisors .....	5			1	3	1
Clerical .....	16			6	10	

<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.

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>15</sup> A third factor is industry variation. (Table 7 and chart 5 show how employment in surveyed occupations varies by industry.)

**Pay differences by industry**

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

The relative salary levels for most of the professional, administrative, clerical supervisory, and technical support occupations tended to be closest to the averages for all industry divisions in manufacturing, which had 63 to 91 percent of the employees in 9 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 132 percent in public utilities) reflected the influence of lower salaries for the high proportion (56 percent) of all-industry employment included in the finance industries. The finance industries, however, also 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 was based, was obtained for individual employees in the occupations studied. When individual weekly hours were not available, particularly for some higher level professional and administrative positions, the predominant workweek of the office work

<sup>15</sup> For an analysis of interarea pay differentials in clerical salaries, see *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1969 - 70*. (BLS Bulletin 1660 - 92, 1972).



force was 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).<sup>16</sup>

<sup>16</sup> For information on scheduled weekly hours of office-workers employed in metropolitan areas, see *Area Wage Surveys: Selected Metropolitan Areas, 1970 - 1971* (BLS Bulletin 1685 - 91, 1972).

**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 1972, and percent increase in mean salaries since June 1971 <sup>2</sup>)

Occupation and class (See definitions in appendix C)	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>				Percent increase in mean salaries <sup>6</sup>
		Mean	Median	Middle range <sup>5</sup>		Mean	Median	Middle range <sup>5</sup>		
				First quartile	Third quartile			First quartile	Third quartile	
<b>Accountants and auditors</b>										
Accountants I	4,230	\$756	\$750	\$683	\$825	\$9,067	\$9,000	\$8,196	\$9,900	0.7
Accountants II	10,657	888	875	800	979	10,655	10,500	9,600	11,748	4.3
Accountants III	25,872	990	975	885	1,080	11,879	11,700	10,620	12,960	4.2
Accountants IV	18,439	1,188	1,174	1,075	1,291	14,259	14,088	12,900	15,492	4.5
Accountants V	6,416	1,447	1,430	1,299	1,586	17,368	17,160	15,588	19,032	4.5
Auditors I	854	802	790	713	850	9,628	9,480	8,556	10,200	1.9
Auditors II	2,603	910	895	800	980	10,924	10,740	9,600	11,760	2.6
Auditors III	4,292	1,073	1,060	959	1,156	12,881	12,720	11,508	13,872	4.8
Auditors IV	2,618	1,319	1,304	1,195	1,430	15,823	15,648	14,340	17,160	4.5
Chief accountants I	386	1,279	1,190	1,126	1,416	15,348	14,280	13,512	16,992	6.2
Chief accountants II	1,185	1,452	1,463	1,299	1,583	17,419	17,556	15,588	18,996	1.7
Chief accountants III	628	1,766	1,700	1,585	1,874	21,198	20,400	19,020	22,488	1.4
Chief accountants IV	218	2,210	2,182	1,964	2,366	26,521	26,184	23,568	26,392	7.8
<b>Attorneys</b>										
Attorneys I	346	1,125	1,100	1,030	1,250	13,498	13,200	12,360	15,000	(7)
Attorneys II	1,288	1,220	1,175	1,078	1,350	14,640	14,100	12,936	16,200	2.1
Attorneys III	2,301	1,533	1,499	1,337	1,700	18,392	17,988	16,044	20,400	5.0
Attorneys IV	1,664	1,954	1,917	1,666	2,166	23,448	23,004	19,992	25,992	5.4
Attorneys V	898	2,294	2,208	2,015	2,513	27,528	26,496	24,180	30,156	4.8
Attorneys VI	534	2,902	2,812	2,543	3,280	34,828	33,744	30,516	39,360	4.4
<b>Buyers</b>										
Buyers I	2,640	782	755	695	861	9,380	9,060	8,340	10,332	4.2
Buyers II	9,929	910	891	800	1,003	10,922	10,692	9,600	12,036	5.3
Buyers III	12,213	1,093	1,075	966	1,197	13,117	12,900	11,592	14,364	4.2
Buyers IV	4,409	1,296	1,254	1,139	1,425	15,555	15,048	13,668	17,100	5.2
<b>Personnel management</b>										
Job analysts I	98	787	778	710	875	9,441	9,336	8,520	10,500	2.3
Job analysts II	358	902	903	816	990	10,828	10,836	9,792	11,880	4.1
Job analysts III	492	1,044	1,032	916	1,150	12,526	12,384	10,992	13,800	4.2
Job analysts IV	508	1,255	1,257	1,130	1,372	15,057	15,084	13,560	16,464	6.8
Directors of personnel I	904	1,193	1,175	1,034	1,310	14,313	14,100	12,408	15,720	4.2
Directors of personnel II	1,701	1,367	1,333	1,195	1,498	16,401	15,996	14,340	17,976	3.0
Directors of personnel III	1,035	1,679	1,651	1,465	1,874	20,153	19,812	17,580	22,488	1.7
Directors of personnel IV	346	2,062	1,929	1,682	2,325	24,738	23,148	20,184	27,900	3.6
<b>Chemists and engineers</b>										
Chemists I	970	820	830	725	900	9,838	9,960	8,700	10,800	1.5
Chemists II	3,755	924	925	840	1,014	11,092	11,100	10,080	12,168	2.9
Chemists III	8,094	1,075	1,066	950	1,180	12,901	12,792	11,400	14,160	3.5
Chemists IV	9,600	1,306	1,291	1,153	1,449	15,670	15,492	13,836	17,388	4.2
Chemists V	7,383	1,548	1,525	1,380	1,695	18,581	18,300	16,560	20,340	3.6
Chemists VI	4,471	1,773	1,755	1,575	1,952	21,277	21,060	18,900	23,424	3.7
Chemists VII	1,575	2,157	2,100	1,917	2,381	25,888	25,200	23,004	28,572	5.6
Chemists VIII	421	2,569	2,520	2,249	2,792	30,827	30,240	26,988	33,504	3.7
Engineers I	9,390	910	902	850	965	10,921	10,824	10,200	11,580	2.3
Engineers II	28,140	1,006	999	928	1,075	12,071	11,988	11,136	12,900	3.2
Engineers III	79,779	1,140	1,130	1,043	1,234	13,682	13,560	12,516	14,808	4.3
Engineers IV	112,074	1,347	1,339	1,221	1,464	16,159	16,068	14,652	17,568	4.0
Engineers V	74,629	1,552	1,542	1,414	1,674	18,628	18,504	16,968	20,088	3.6
Engineers VI	38,532	1,784	1,764	1,625	1,926	21,402	21,168	19,500	23,112	4.2
Engineers VII	14,438	2,031	2,000	1,825	2,216	24,367	24,000	21,900	26,592	3.7
Engineers VIII	3,070	2,324	2,275	2,068	2,529	27,885	27,300	24,816	30,348	4.3
<b>Technical support</b>										
Engineering technicians I	3,374	601	608	535	654	7,208	7,296	6,420	7,848	5.2
Engineering technicians II	10,583	684	682	608	743	8,207	8,184	7,296	8,916	3.1
Engineering technicians III	23,697	792	791	712	870	9,507	9,492	8,544	10,440	3.9
Engineering technicians IV	28,543	899	898	813	975	10,788	10,776	9,756	11,700	3.8
Engineering technicians V	17,207	1,022	1,013	926	1,108	12,259	12,156	11,112	13,296	3.8

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 1972, and percent increase in mean salaries since June 1971<sup>2</sup>)

Occupation and class (See definitions in appendix C)	Number of employees <sup>3</sup>	Monthly salaries <sup>4</sup>				Annual salaries <sup>4</sup>				Percent increase in mean salaries <sup>6</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>										
Draftsmen-tracers .....	4,365	\$524	\$513	\$452	\$567	\$6,288	\$6,153	\$5,423	\$6,804	6.8
Draftsmen I .....	16,710	629	610	547	695	7,550	7,318	6,570	8,342	4.6
Draftsmen II .....	29,607	767	754	675	850	9,201	9,052	8,098	10,198	4.4
Draftsmen III .....	30,175	958	917	826	1,021	11,492	11,002	9,907	12,257	6.4
<b>Clerical supervisory</b>										
Keypunch supervisors I .....	919	634	591	539	735	7,612	7,092	6,468	8,820	6.5
Keypunch supervisors II .....	1,693	710	708	608	800	8,516	8,496	7,296	9,600	3.8
Keypunch supervisors III .....	1,106	777	756	661	866	9,325	9,072	7,932	10,392	5.2
Keypunch supervisors IV .....	391	908	905	783	1,016	10,891	10,860	9,396	12,192	1.9
Keypunch supervisors V .....	59	1,027	975	909	1,118	12,322	11,700	10,908	13,416	8.9
<b>Clerical</b>										
Clerks, accounting I .....	82,549	489	471	413	543	5,870	5,657	4,953	6,518	4.6
Clerks, accounting II .....	59,930	628	607	531	713	7,537	7,288	6,376	8,551	4.4
Clerks, file I .....	24,037	383	369	339	413	4,602	4,432	4,067	4,960	4.2
Clerks, file II .....	22,754	419	400	360	456	5,027	4,797	4,319	5,475	3.4
Clerks, file III .....	6,936	518	495	435	569	6,214	5,944	5,214	6,832	5.3
Keypunch operators I .....	61,700	480	456	404	525	5,756	5,475	4,849	6,299	5.1
Keypunch operators II .....	45,043	545	534	478	600	6,539	6,413	5,735	7,198	5.2
Messengers (office boys and girls) .....	25,245	424	410	365	469	5,087	4,919	4,375	5,631	4.7
Secretaries I .....	80,584	581	575	505	650	6,972	6,899	6,059	7,799	4.3
Secretaries II .....	90,652	653	645	569	728	7,840	7,738	6,829	8,731	4.9
Secretaries III .....	50,937	703	695	600	795	8,436	8,342	7,198	9,538	4.5
Secretaries IV .....	16,030	758	750	637	855	9,092	8,998	7,639	10,258	4.6
Stenographers, general .....	49,096	515	500	435	578	6,181	5,996	5,214	6,939	3.8
Stenographers, senior .....	48,960	589	580	501	669	7,074	6,959	6,007	8,030	5.7
Typists I .....	59,426	436	425	376	480	5,229	5,099	4,512	5,756	3.9
Typists II .....	37,199	508	495	440	560	6,093	5,940	5,277	6,716	5.0

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

<sup>2</sup> For limitations of percent increase in average salaries as a measure of change in salary scales, see appendix A, p. 31.

<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. 33.

<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.

<sup>6</sup> For year-to-year comparisons, average salaries in 1972 were adjusted by including data for establishments in the finance, insurance, and real estate industry division employing 50 to 99 workers to correspond to scope of 1971 survey.

<sup>7</sup> 1971 data did not meet publication criteria.

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

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas, 1 March 1972)

Occupation and class (See definitions in appendix C)	Number of employees <sup>2</sup>	Monthly salaries <sup>3</sup>				Annual salaries <sup>3</sup>			
		Mean	Median	Middle range <sup>4</sup>		Mean	Median	Middle range <sup>4</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<b>Accountants and auditors</b>									
Accountants I	3,806	\$761	\$750	\$687	\$829	\$9,130	\$9,000	\$8,244	\$9,948
Accountants II	9,807	894	880	800	988	10,732	10,560	9,600	11,856
Accountants III	22,025	1,001	987	894	1,091	12,007	11,844	10,728	13,092
Accountants IV	15,807	1,196	1,181	1,083	1,300	14,349	14,172	12,996	15,600
Accountants V	5,627	1,455	1,434	1,300	1,595	17,459	17,208	15,600	19,140
Auditors I	758	808	791	718	859	9,696	9,492	8,616	10,308
Auditors II	2,449	911	893	800	982	10,929	10,716	9,600	11,784
Auditors III	4,124	1,074	1,060	959	1,158	12,886	12,720	11,508	13,896
Auditors IV	2,439	1,324	1,316	1,196	1,435	15,870	15,792	14,352	17,220
Chief accountants II	935	1,453	1,463	1,290	1,583	17,431	17,556	15,480	18,996
Chief accountants III	547	1,777	1,735	1,576	1,922	21,319	20,820	18,912	23,064
Chief accountants IV	197	2,206	2,173	1,955	2,366	26,475	26,076	23,460	28,392
<b>Attorneys</b>									
Attorneys I	315	1,127	1,104	1,000	1,250	13,526	13,248	12,000	15,000
Attorneys II	1,255	1,219	1,173	1,065	1,350	14,632	14,076	12,780	16,200
Attorneys III	2,229	1,539	1,500	1,347	1,716	18,466	18,000	16,164	20,592
Attorneys IV	1,567	1,970	1,931	1,683	2,168	23,636	23,172	20,196	26,016
Attorneys V	869	2,295	2,207	2,015	2,552	27,541	26,484	24,180	30,624
Attorneys VI	533	2,904	2,812	2,544	3,290	34,844	33,744	30,528	39,480
<b>Buyers</b>									
Buyers I	2,190	792	770	705	868	9,509	9,240	8,460	10,416
Buyers II	7,650	933	908	821	1,021	11,192	10,896	9,852	12,252
Buyers III	9,872	1,101	1,082	975	1,208	13,209	12,984	11,700	14,496
Buyers IV	3,994	1,300	1,255	1,141	1,425	15,596	15,060	13,692	17,100
<b>Personnel management</b>									
Job analysts I	94	789	778	703	875	9,469	9,336	8,436	10,500
Job analysts II	350	906	908	827	990	10,869	10,896	9,924	11,880
Job analysts III	437	1,046	1,030	916	1,150	12,549	12,360	10,992	13,800
Job analysts IV	485	1,257	1,255	1,130	1,375	15,078	15,060	13,560	16,500
Directors of personnel I	560	1,197	1,182	1,034	1,300	14,363	14,184	12,408	15,600
Directors of personnel II	1,274	1,381	1,348	1,204	1,512	16,569	16,176	14,448	18,144
Directors of personnel III	836	1,714	1,666	1,499	1,874	20,567	19,992	17,988	22,488
Directors of personnel IV	260	2,067	1,999	1,672	2,332	24,806	23,988	20,064	27,984
<b>Chemists and engineers</b>									
Chemists I	791	916	830	715	900	9,798	9,960	8,580	10,800
Chemists II	3,187	926	927	835	1,021	11,111	11,124	10,020	12,252
Chemists III	6,451	1,092	1,083	970	1,200	13,100	12,996	11,640	14,400
Chemists IV	7,861	1,326	1,315	1,170	1,470	15,911	15,780	14,040	17,640
Chemists V	6,103	1,576	1,558	1,406	1,725	18,696	18,907	16,872	20,700
Chemists VI	3,464	1,814	1,800	1,628	1,985	21,762	21,600	19,536	23,820
Chemists VII	1,209	2,220	2,169	1,967	2,437	26,634	26,028	23,604	29,244
Engineers I	8,439	913	904	855	965	10,960	10,848	10,260	11,580
Engineers II	25,947	1,011	1,000	934	1,078	12,138	12,000	11,208	12,936
Engineers III	71,257	1,148	1,141	1,050	1,241	13,780	13,692	12,600	14,892
Engineers IV	100,146	1,357	1,350	1,234	1,475	16,254	16,200	14,808	17,700
Engineers V	67,200	1,564	1,553	1,425	1,686	18,766	18,636	17,100	20,232
Engineers VI	34,765	1,794	1,775	1,641	1,935	21,528	21,300	19,692	23,220
Engineers VII	13,107	2,040	2,008	1,838	2,227	24,477	24,096	22,056	26,724
Engineers VIII	2,744	2,340	2,285	2,083	2,550	28,084	27,420	24,996	30,600
<b>Technical support</b>									
Engineering technicians I	2,943	604	608	543	654	7,250	7,296	6,516	7,848
Engineering technicians II	8,743	688	687	613	747	8,259	8,244	7,356	8,964
Engineering technicians III	19,711	796	795	715	874	9,557	9,540	8,580	10,488
Engineering technicians IV	25,071	904	900	817	985	10,850	10,800	9,804	11,820
Engineering technicians V	15,419	1,025	1,015	926	1,113	12,303	12,180	11,112	13,356
Draftsmen-tracers	3,761	531	519	461	569	6,374	6,231	5,527	6,830
Draftsmen I	13,777	639	620	556	785	7,667	7,446	6,674	8,458
Draftsmen II	24,538	778	765	685	867	9,331	9,177	8,218	10,402
Draftsmen III	26,870	971	927	834	1,040	11,656	11,121	10,011	12,477
<b>Clerical supervisory</b>									
Keypunch supervisors I	805	654	610	560	739	7,844	7,320	6,720	8,868
Keypunch supervisors II	1,523	717	708	616	800	8,605	8,496	7,392	9,600
Keypunch supervisors III	1,018	785	760	685	867	9,422	9,120	8,220	10,404
Keypunch supervisors IV	381	907	905	782	1,018	10,888	10,860	9,384	12,216
Keypunch supervisors V	57	1,025	975	912	1,110	12,300	11,700	10,944	13,320

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, metropolitan areas,<sup>1</sup> March 1972)

Occupation and class (See definitions in appendix C)	Number of employees <sup>2</sup>	Monthly salaries <sup>3</sup>				Annual salaries <sup>3</sup>			
		Mean	Median	Middle range <sup>4</sup>		Mean	Median	Middle range <sup>4</sup>	
				First quartile	Third quartile			First quartile	Third quartile
<u>Clerical</u>									
Clerks, accounting I -----	71,544	\$496	\$478	\$420	\$547	\$5,952	\$5,735	\$5,039	\$6,570
Clerks, accounting II -----	51,482	635	611	540	717	7,615	7,327	6,478	8,603
Clerks, file I -----	21,530	386	369	339	417	4,628	4,432	4,067	5,005
Clerks, file II -----	20,590	421	402	361	458	5,053	4,823	4,328	5,492
Clerks, file III -----	6,264	520	500	439	574	6,241	5,996	5,266	6,882
Keypunch operators I -----	53,346	490	466	413	539	5,883	5,592	4,953	6,465
Keypunch operators II -----	39,989	550	538	482	608	6,606	6,457	5,788	7,294
Messengers (office boys and girls) -----	22,814	424	409	365	467	5,087	4,914	4,379	5,605
Secretaries I -----	70,021	589	582	518	655	7,069	6,987	6,215	7,859
Secretaries II -----	82,642	658	650	574	732	7,895	7,799	6,882	8,780
Secretaries III -----	46,607	710	700	608	800	8,525	8,398	7,300	9,597
Secretaries IV -----	14,428	771	765	651	866	9,250	9,177	7,808	10,390
Stenographers, general -----	42,164	524	505	445	587	6,289	6,059	5,336	7,039
Stenographers, senior -----	43,333	597	587	511	673	7,160	7,039	6,131	8,082
Typists I -----	52,466	440	430	382	484	5,282	5,162	4,588	5,807
Typists II -----	33,592	511	500	442	561	6,128	5,996	5,308	6,726

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

<sup>2</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. 33.

<sup>3</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>4</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 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 1972, percent increase in mean salaries since June 1971,<sup>3</sup> and comparison with levels in all establishments combined)

Occupation and class (See definitions in appendix C)	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Percent increase in mean salaries <sup>3</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			
<b>Accountants and auditors</b>								
Accountants I	1,209	\$838	\$827	\$768	\$900	5.0	29	111
Accountants II	4,961	958	964	873	1,052	6.4	47	108
Accountants III	7,336	1,061	1,050	950	1,177	5.6	28	107
Accountants IV	5,182	1,247	1,234	1,124	1,365	5.5	28	105
Accountants V	2,311	1,500	1,499	1,340	1,641	5.9	36	104
Auditors I	379	863	850	750	987	3.9	44	108
Auditors II	987	957	912	831	1,086	3.7	38	105
Auditors III	1,636	1,118	1,083	962	1,241	4.0	38	104
Auditors IV	1,086	1,351	1,345	1,206	1,473	5.7	41	102
Chief accountants IV	94	2,362	2,330	2,089	2,577	10.3	43	107
<b>Attorneys</b>								
Attorneys I	154	1,189	1,166	1,075	1,298	(7)	45	106
Attorneys II	385	1,383	1,347	1,225	1,540	5.6	28	113
Attorneys III	611	1,646	1,592	1,450	1,833	2.4	27	107
Attorneys IV	640	2,048	2,000	1,750	2,276	4.1	38	105
Attorneys V	345	2,407	2,375	2,125	2,666	5.9	38	105
Attorneys VI	229	3,006	2,993	2,542	3,465	4.8	43	104
<b>Buyers</b>								
Buyers I	619	870	865	760	960	5.2	23	111
Buyers II	2,450	1,008	975	869	1,130	8.0	25	111
Buyers III	4,440	1,144	1,119	995	1,270	4.9	36	105
Buyers IV	2,529	1,311	1,242	1,130	1,466	5.0	57	102
<b>Personnel management</b>								
Job analysts II	205	928	925	830	1,025	6.2	57	103
Job analysts III	304	1,069	1,050	950	1,170	4.9	62	102
Job analysts IV	425	1,264	1,270	1,129	1,385	5.9	84	101
Directors of personnel IV	110	2,304	2,221	1,924	2,640	2.2	32	112
<b>Chemists and engineers</b>								
Chemists I	274	906	910	835	960	3.3	28	110
Chemists II	1,414	991	993	910	1,077	4.3	38	107
Chemists III	3,004	1,159	1,157	1,035	1,283	3.6	37	108
Chemists IV	3,568	1,379	1,385	1,230	1,516	4.2	37	106
Chemists V	2,699	1,596	1,575	1,414	1,750	2.5	37	103
Chemists VI	2,143	1,786	1,769	1,570	1,959	2.6	48	101
Chemists VII	775	2,175	2,131	1,925	2,399	4.3	49	101
Chemists VIII	225	2,692	2,599	2,369	3,007	6.1	53	105
Engineers I	3,963	943	933	878	991	3.3	42	104
Engineers II	14,622	1,031	1,021	952	1,101	4.0	52	102
Engineers III	42,530	1,172	1,170	1,078	1,266	4.6	53	103
Engineers IV	64,207	1,392	1,391	1,282	1,503	4.3	57	103
Engineers V	39,989	1,602	1,599	1,475	1,722	3.8	54	103
Engineers VI	19,722	1,839	1,825	1,686	1,977	4.0	51	103
Engineers VII	7,120	2,101	2,075	1,910	2,292	2.5	49	103
Engineers VIII	1,558	2,382	2,310	2,107	2,624	1.9	51	102
<b>Technical support</b>								
Engineering technicians I	1,843	616	617	560	673	6.0	55	102
Engineering technicians II	4,657	722	725	650	788	4.5	44	106
Engineering technicians III	9,943	807	808	734	878	4.1	42	102
Engineering technicians IV	16,170	917	915	835	993	4.1	57	102
Engineering technicians V	11,984	1,033	1,022	939	1,125	3.3	70	101
Draftsmen-tracers	1,687	571	550	484	614	10.0	39	109
Draftsmen I	4,754	690	670	608	751	6.3	28	110
Draftsmen II	8,570	823	802	730	897	4.8	29	107
Draftsmen III	12,802	1,060	993	875	1,258	9.2	42	111
<b>Clerical supervisory</b>								
Keypunch supervisors I	84	781	735	675	911	1.2	9	123
Keypunch supervisors II	407	791	767	682	887	9.0	24	111
Keypunch supervisors III	298	842	843	747	916	5.8	27	108
Keypunch supervisors IV	139	980	999	858	1,083	7.6	36	108

See footnotes at end of table.

**Table 3. Average salaries: Establishments employing 2,500 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 1972, percent increase in mean salaries since June 1971,<sup>3</sup> and comparison with levels in all establishments combined)

Occupation and class (See definitions in appendix C)	Number of employees <sup>4</sup>	Monthly salaries <sup>5</sup>				Percent increase in mean salaries <sup>3</sup>	Levels in establishments <sup>6</sup> 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			
<b>Clerical</b>								
Clerks, accounting I	16,639	\$560	\$541	\$465	\$634	9.8	20	115
Clerks, accounting II	13,989	700	678	587	807	6.9	23	111
Clerks, file I	4,726	431	413	369	469	6.4	20	113
Clerks, file II	5,089	481	460	410	521	6.2	22	115
Clerks, file III	2,485	560	540	482	622	5.5	36	108
Keypunch operators I	15,418	558	524	458	652	9.8	25	116
Keypunch operators II	12,772	597	585	523	673	5.9	28	110
Messengers (office boys and girls)	6,289	461	439	391	513	5.5	25	109
Secretaries I	22,020	615	608	550	673	5.3	27	106
Secretaries II	35,936	707	700	623	778	6.3	40	108
Secretaries III	14,627	797	782	704	880	5.8	29	113
Secretaries IV	4,020	871	850	765	970	6.6	25	115
Stenographers, general	15,892	558	544	478	626	5.3	32	108
Stenographers, senior	18,066	639	641	555	719	7.4	37	108
Typists I	13,485	479	461	421	521	5.0	23	110
Typists II	13,766	540	517	464	597	6.5	37	106

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

<sup>2</sup> Includes data for a few establishments with less than 2,500 employees of 6 large companies studied that provided companywide data unidentified by size of establishment. This applies only to data for occupations other than drafting and clerical.

<sup>3</sup> For limitations of percent increase in average salaries as a measure of change in salary scales, see appendix A, p. 31.

<sup>4</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. 33.

<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.

<sup>7</sup> 1971 data did not meet publication criteria.

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

(Percent distribution of employees in selected professional and administrative occupations, by monthly salaries, United States except Alaska and Hawaii, <sup>1</sup> March 1972)

Monthly salaries	Accountants					Auditors				Chief accountants			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
Under \$500	(0.4)	-	-	-	-	-	-	-	-	-	-	-	-
\$500 and under \$525	1.6	-	-	-	-	-	-	-	-	-	-	-	-
\$525 and under \$550	.8	-	-	-	-	-	-	-	-	-	-	-	-
\$550 and under \$575	1.0	-	-	-	-	(0.5)	-	-	-	-	-	-	-
\$575 and under \$600	3.8	-	-	-	-	1.8	-	-	-	-	-	-	-
\$600 and under \$625	3.4	-	-	-	-	1.5	(0.9)	-	-	-	-	-	-
\$625 and under \$650	2.6	(1.1)	-	-	-	2.6	1.0	-	-	-	-	-	-
\$650 and under \$675	8.4	2.0	-	-	-	6.8	.9	-	-	-	-	-	-
\$675 and under \$700	5.8	1.7	(1.1)	-	-	3.6	2.2	-	-	-	-	-	-
\$700 and under \$725	8.4	3.0	1.0	-	-	10.4	2.0	-	-	-	-	-	-
\$725 and under \$750	11.2	3.2	1.0	-	-	4.1	2.1	-	-	-	-	-	-
\$750 and under \$775	10.0	7.5	1.8	-	-	14.3	5.8	-	-	-	-	-	-
\$775 and under \$800	7.4	6.4	2.8	-	-	12.9	6.8	-	-	-	-	-	-
\$800 and under \$825	8.4	9.0	3.4	-	-	4.3	6.5	(3.3)	-	-	-	-	-
\$825 and under \$850	7.9	7.3	4.9	(0.7)	-	8.8	7.6	3.1	-	-	-	-	-
\$850 and under \$875	6.3	7.9	5.3	1.2	-	6.7	7.2	2.0	-	-	-	-	-
\$875 and under \$900	3.8	7.0	6.7	.9	-	2.5	8.1	3.4	-	-	-	-	-
\$900 and under \$925	2.7	6.8	7.8	2.0	-	3.3	7.6	5.8	-	-	-	-	-
\$925 and under \$950	1.3	5.7	6.2	1.9	-	1.9	8.8	4.2	(1.1)	-	-	-	-
\$950 and under \$975	1.1	5.3	7.6	2.3	-	2.1	6.3	7.1	1.3	-	-	-	-
\$975 and under \$1,000	1.1	5.3	5.6	2.8	(1.0)	1.6	3.3	5.1	.7	-	-	-	-
\$1,000 and under \$1,050	1.1	7.3	13.1	8.8	1.0	3.9	6.0	13.1	2.8	-	-	-	-
\$1,050 and under \$1,100	1.1	10.3	9.9	9.7	1.9	5.9	5.1	13.2	5.0	7.3	4.6	-	-
\$1,100 and under \$1,150	(0.5)	1.7	7.0	12.4	3.3	.7	4.2	13.4	7.1	25.1	3.2	-	-
\$1,150 and under \$1,200	-	1.0	5.2	12.7	3.3	-	2.7	8.4	7.7	18.1	7.0	-	-
\$1,200 and under \$1,250	-	(0.5)	3.4	10.2	7.1	-	1.0	3.8	10.7	5.4	5.0	-	-
\$1,250 and under \$1,300	-	-	3.7	10.9	8.0	-	3.3	4.5	12.0	7.0	6.3	(1.0)	-
\$1,300 and under \$1,350	-	-	1.1	7.2	10.2	-	(0.6)	2.3	10.4	5.1	5.7	3.3	-
\$1,350 and under \$1,400	-	-	(1.4)	4.2	8.1	-	-	1.8	9.1	5.2	2.8	3.0	-
\$1,400 and under \$1,450	-	-	-	-	-	-	-	1.8	9.1	11.1	10.6	4.8	-
\$1,450 and under \$1,500	-	-	-	3.1	9.3	-	-	(3.5)	7.3	8.8	15.8	6.4	(1.8)
\$1,500 and under \$1,550	-	-	-	1.9	6.3	-	-	-	5.6	1.0	11.2	4.0	3.2
\$1,550 and under \$1,600	-	-	-	1.3	7.6	-	-	-	3.1	.3	5.6	4.3	2.3
\$1,600 and under \$1,650	-	-	-	(1.8)	6.0	-	-	-	1.8	2.8	7.3	16.4	.5
\$1,650 and under \$1,700	-	-	-	-	4.5	-	-	-	2.3	.5	3.1	6.4	.5
\$1,700 and under \$1,750	-	-	-	-	3.9	-	-	-	1.0	.3	3.3	4.1	4.1
\$1,750 and under \$1,800	-	-	-	-	2.8	-	-	-	1.0	1.8	2.0	7.5	3.2
\$1,800 and under \$1,850	-	-	-	-	2.0	-	-	-	(1.0)	1.6	.7	9.6	.9
\$1,850 and under \$1,900	-	-	-	-	(4.1)	-	-	-	-	(0.5)	2.8	4.6	3.7
\$1,900 and under \$1,950	-	-	-	-	-	-	-	-	-	-	(3.0)	2.4	4.1
\$1,950 and under \$2,000	-	-	-	-	-	-	-	-	-	-	-	4.1	2.8
\$2,000 and under \$2,050	-	-	-	-	-	-	-	-	-	-	-	2.1	6.0
\$2,050 and under \$2,100	-	-	-	-	-	-	-	-	-	-	-	1.6	10.1
\$2,100 and under \$2,150	-	-	-	-	-	-	-	-	-	-	-	1.8	1.4
\$2,150 and under \$2,200	-	-	-	-	-	-	-	-	-	-	-	2.2	7.3
\$2,200 and under \$2,250	-	-	-	-	-	-	-	-	-	-	-	4.6	7.3
\$2,250 and under \$2,300	-	-	-	-	-	-	-	-	-	-	-	.6	4.1
\$2,300 and under \$2,350	-	-	-	-	-	-	-	-	-	-	-	.8	3.2
\$2,350 and under \$2,400	-	-	-	-	-	-	-	-	-	-	-	1.0	2.8
\$2,400 and under \$2,450	-	-	-	-	-	-	-	-	-	-	-	(3.5)	1.4
\$2,450 and under \$2,500	-	-	-	-	-	-	-	-	-	-	-	-	3.2
\$2,500 and under \$2,600	-	-	-	-	-	-	-	-	-	-	-	-	4.1
\$2,600 and under \$2,700	-	-	-	-	-	-	-	-	-	-	-	-	5.0
\$2,700 and under \$2,800	-	-	-	-	-	-	-	-	-	-	-	-	1.8
\$2,800 and under \$2,900	-	-	-	-	-	-	-	-	-	-	-	-	1.8
\$2,900 and under \$3,000	-	-	-	-	-	-	-	-	-	-	-	-	5.4
\$3,000 and under \$3,100	-	-	-	-	-	-	-	-	-	-	-	-	2.3
\$3,100 and under \$3,200	-	-	-	-	-	-	-	-	-	-	-	-	(1.4)
\$3,200 and over	-	-	-	-	-	-	-	-	-	-	-	-	-
<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>	<b>100.0</b>
Number of employees	4,230	10,657	25,872	18,439	6,416	854	2,603	4,292	2,618	386	1,185	628	218
Average monthly salaries	\$756	\$888	\$990	\$1,188	\$1,447	\$802	\$910	\$1,073	\$1,319	\$1,279	\$1,452	\$1,766	\$2,210

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 salaries, United States except Alaska and Hawaii, <sup>1</sup> March 1972)

Monthly salaries	Attorneys						Buyers				
	I	II	III	IV	V	VI	I	II	III	IV	
Under \$550	-	-	-	-	-	-	(1.8)	-	-	-	-
\$550 and under \$575	-	-	-	-	-	-	2.7	(0.4)	-	-	-
\$575 and under \$600	-	-	-	-	-	-	.9	1.2	-	-	-
\$600 and under \$625	-	-	-	-	-	-	3.0	.6	-	-	-
\$625 and under \$650	-	-	-	-	-	-	4.3	1.3	-	-	-
\$650 and under \$675	-	-	-	-	-	-	4.1	1.9	-	-	-
\$675 and under \$700	-	-	-	-	-	-	9.5	1.1	-	-	-
\$700 and under \$725	-	-	-	-	-	-	9.0	4.8	-	-	-
\$725 and under \$750	-	-	-	-	-	-	8.3	3.7	-	-	-
\$750 and under \$775	-	-	-	-	-	-	11.7	5.5	(1.0)	-	-
\$775 and under \$800	5.5	-	-	-	-	-	5.9	4.5	.8	-	-
\$800 and under \$825	1.2	-	-	-	-	-	3.9	5.5	1.1	-	-
\$825 and under \$850	4.6	-	-	-	-	-	6.8	7.8	2.6	-	-
\$850 and under \$875	1.7	(2.6)	-	-	-	-	5.8	6.0	2.1	-	-
\$875 and under \$900	-	1.4	-	-	-	-	5.5	8.3	3.7	-	-
\$900 and under \$925	2.3	4.0	-	-	-	-	4.2	8.0	3.8	-	-
\$925 and under \$950	.3	.3	-	-	-	-	2.0	4.0	4.5	(2.2)	-
\$950 and under \$975	2.3	1.8	-	-	-	-	1.9	5.5	5.5	1.6	-
\$975 and under \$1,000	2.3	2.2	(0.8)	-	-	-	1.8	3.9	5.4	.9	-
\$1,000 and under \$1,050	8.7	11.6	1.1	-	-	-	2.8	7.2	12.7	4.8	-
\$1,050 and under \$1,100	10.7	4.7	1.4	-	-	-	2.4	7.0	11.6	7.6	-
\$1,100 and under \$1,150	24.9	13.3	2.8	-	-	-	(1.7)	3.3	9.8	9.8	-
\$1,150 and under \$1,200	5.8	11.2	2.1	-	-	-	-	2.5	9.8	10.5	-
\$1,200 and under \$1,250	4.3	8.0	5.2	-	-	-	-	2.1	5.4	11.4	-
\$1,250 and under \$1,300	9.2	6.9	6.6	-	-	-	-	1.1	6.2	10.1	-
\$1,300 and under \$1,350	4.9	7.1	7.0	-	-	-	-	(2.8)	3.9	7.3	-
\$1,350 and under \$1,400	3.8	6.1	7.4	(1.5)	-	-	-	-	2.8	6.5	-
\$1,400 and under \$1,450	1.7	2.4	8.3	1.3	-	-	-	-	2.2	4.8	-
\$1,450 and under \$1,500	1.4	4.3	7.7	4.7	-	-	-	-	1.6	4.2	-
\$1,500 and under \$1,550	2.0	4.2	5.3	6.9	1.2	-	-	-	1.4	3.9	-
\$1,550 and under \$1,600	(2.3)	.9	7.5	3.6	.8	-	-	-	(1.2)	3.7	-
\$1,600 and under \$1,650	-	2.2	4.9	4.7	1.1	-	-	-	-	2.2	-
\$1,650 and under \$1,700	-	2.3	6.6	5.1	.8	-	-	-	-	3.0	-
\$1,700 and under \$1,750	-	(2.8)	3.9	3.7	5.0	-	-	-	-	1.2	-
\$1,750 and under \$1,800	-	-	2.4	3.2	.7	-	-	-	-	1.1	-
\$1,800 and under \$1,850	-	-	5.3	7.7	2.4	-	-	-	-	1.2	-
\$1,850 and under \$1,900	-	-	3.8	2.9	3.0	-	-	-	-	(2.0)	-
\$1,900 and under \$1,950	-	-	1.5	7.8	3.0	-	-	-	-	-	-
\$1,950 and under \$2,000	-	-	1.6	6.8	1.2	(2.1)	-	-	-	-	-
\$2,000 and under \$2,050	-	-	1.2	4.2	10.5	3.4	-	-	-	-	-
\$2,050 and under \$2,100	-	-	2.0	4.7	4.3	1.3	-	-	-	-	-
\$2,100 and under \$2,150	-	-	.7	3.2	4.1	.7	-	-	-	-	-
\$2,150 and under \$2,200	-	-	1.0	5.8	9.0	.7	-	-	-	-	-
\$2,200 and under \$2,250	-	-	(1.7)	5.0	6.0	1.5	-	-	-	-	-
\$2,250 and under \$2,300	-	-	-	3.2	4.1	.9	-	-	-	-	-
\$2,300 and under \$2,350	-	-	-	1.6	3.9	.4	-	-	-	-	-
\$2,350 and under \$2,400	-	-	-	1.4	2.6	2.4	-	-	-	-	-
\$2,400 and under \$2,450	-	-	-	1.3	2.6	.7	-	-	-	-	-
\$2,450 and under \$2,500	-	-	-	2.4	6.9	3.2	-	-	-	-	-
\$2,500 and under \$2,600	-	-	-	2.3	4.2	15.5	-	-	-	-	-
\$2,600 and under \$2,700	-	-	-	1.0	5.5	8.6	-	-	-	-	-
\$2,700 and under \$2,800	-	-	-	1.9	4.5	8.1	-	-	-	-	-
\$2,800 and under \$2,900	-	-	-	(2.0)	3.6	5.1	-	-	-	-	-
\$2,900 and under \$3,000	-	-	-	-	3.0	6.4	-	-	-	-	-
\$3,000 and under \$3,100	-	-	-	-	1.9	5.4	-	-	-	-	-
\$3,100 and under \$3,200	-	-	-	-	1.3	1.9	-	-	-	-	-
\$3,200 and under \$3,300	-	-	-	-	1.6	7.1	-	-	-	-	-
\$3,300 and under \$3,400	-	-	-	-	(1.2)	5.1	-	-	-	-	-
\$3,400 and under \$3,500	-	-	-	-	-	5.2	-	-	-	-	-
\$3,500 and under \$3,600	-	-	-	-	-	3.4	-	-	-	-	-
\$3,600 and under \$3,700	-	-	-	-	-	2.6	-	-	-	-	-
\$3,700 and under \$3,800	-	-	-	-	-	2.2	-	-	-	-	-
\$3,800 and under \$3,900	-	-	-	-	-	.7	-	-	-	-	-
\$3,900 and under \$4,000	-	-	-	-	-	3.6	-	-	-	-	-
\$4,000 and over	-	-	-	-	-	(1.7)	-	-	-	-	-
Total	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	346	1,288	2,301	1,664	898	534	2,640	9,929	12,213	4,409	
Average monthly salaries	\$1,125	\$1,220	\$1,533	\$1,954	\$2,294	\$2,902	\$782	\$910	\$1,093	\$1,296	

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 salaries, United States except Alaska and Hawaii, <sup>1</sup> March 1972)

Monthly salaries	Job analysts				Directors of personnel			
	I	II	III	IV	I	II	III	IV
\$575 and under \$600	11.2	-	-	-	-	-	-	-
\$600 and under \$625	1.0	(1.1)	-	-	-	-	-	-
\$625 and under \$650	1.0	1.7	-	-	-	-	-	-
\$650 and under \$675	2.0	1.1	1.2	-	-	-	-	-
\$675 and under \$700	7.1	2.0	-	-	-	-	-	-
\$700 and under \$725	9.2	2.5	1.0	-	-	-	-	-
\$725 and under \$750	5.1	3.9	1.0	-	-	-	-	-
\$750 and under \$775	7.1	4.5	-	-	-	-	-	-
\$775 and under \$800	18.4	4.7	1.0	-	-	-	-	-
\$800 and under \$825	1.0	4.2	1.2	-	-	-	-	-
\$825 and under \$850	6.1	7.8	5.1	(0.6)	-	-	-	-
\$850 and under \$875	4.1	9.5	4.5	1.0	1.8	-	-	-
\$875 and under \$900	8.2	7.0	5.9	1.2	2.2	-	-	-
\$900 and under \$925	2.0	8.1	6.7	.4	1.1	1.3	-	-
\$925 and under \$950	-	5.9	2.4	1.4	3.1	-	-	-
\$950 and under \$975	6.1	4.7	6.1	2.4	2.7	1.2	-	-
\$975 and under \$1,000	2.0	8.9	4.3	2.0	.8	.4	-	-
\$1,000 and under \$1,050	6.1	8.1	13.2	4.7	18.3	3.5	-	-
\$1,050 and under \$1,100	1.0	7.5	10.2	7.7	4.3	7.4	1.2	-
\$1,100 and under \$1,150	1.0	2.8	11.0	5.7	9.1	6.7	1.2	-
\$1,150 and under \$1,200	-	1.1	8.1	9.1	14.3	5.2	1.4	-
\$1,200 and under \$1,250	-	.6	4.7	12.4	6.2	6.6	3.1	-
\$1,250 and under \$1,300	-	1.1	4.3	9.8	7.0	10.5	4.5	-
\$1,300 and under \$1,350	-	1.1	4.1	12.4	6.3	12.4	4.0	(0.3)
\$1,350 and under \$1,400	-	-	2.0	8.7	7.9	8.0	3.2	1.2
\$1,400 and under \$1,450	-	-	(2.0)	6.5	5.6	8.2	4.1	2.0
\$1,450 and under \$1,500	-	-	-	3.7	2.8	5.4	8.5	1.4
\$1,500 and under \$1,550	-	-	-	4.9	3.3	6.9	8.7	6.6
\$1,550 and under \$1,600	-	-	-	2.6	.1	2.4	6.6	5.8
\$1,600 and under \$1,650	-	-	-	1.4	.1	1.2	2.9	4.0
\$1,650 and under \$1,700	-	-	-	1.0	1.1	2.3	9.3	4.3
\$1,700 and under \$1,750	-	-	-	(0.6)	1.1	2.2	2.9	3.2
\$1,750 and under \$1,800	-	-	-	-	(1.0)	1.5	4.2	3.2
\$1,800 and under \$1,850	-	-	-	-	-	.6	5.4	3.8
\$1,850 and under \$1,900	-	-	-	-	-	1.6	8.2	2.3
\$1,900 and under \$1,950	-	-	-	-	-	.3	3.4	12.1
\$1,950 and under \$2,000	-	-	-	-	-	.1	4.4	4.0
\$2,000 and under \$2,050	-	-	-	-	-	.2	1.8	5.8
\$2,050 and under \$2,100	-	-	-	-	-	1.5	1.2	3.8
\$2,100 and under \$2,150	-	-	-	-	-	(2.2)	2.2	1.2
\$2,150 and under \$2,200	-	-	-	-	-	-	.7	2.3
\$2,200 and under \$2,250	-	-	-	-	-	-	3.8	2.3
\$2,250 and under \$2,300	-	-	-	-	-	-	(3.4)	3.8
\$2,300 and under \$2,350	-	-	-	-	-	-	-	4.6
\$2,350 and under \$2,400	-	-	-	-	-	-	-	1.2
\$2,400 and under \$2,450	-	-	-	-	-	-	-	.3
\$2,450 and under \$2,500	-	-	-	-	-	-	-	.6
\$2,500 and under \$2,600	-	-	-	-	-	-	-	4.9
\$2,600 and under \$2,700	-	-	-	-	-	-	-	2.0
\$2,700 and under \$2,800	-	-	-	-	-	-	-	5.2
\$2,800 and under \$2,900	-	-	-	-	-	-	-	1.7
\$2,900 and under \$3,000	-	-	-	-	-	-	-	2.0
\$3,000 and under \$3,100	-	-	-	-	-	-	-	.9
\$3,100 and under \$3,200	-	-	-	-	-	-	-	1.2
\$3,200 and over	-	-	-	-	-	-	-	(2.0)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	98	358	492	508	904	1,701	1,035	346
Average monthly salaries	\$787	\$902	\$1,044	\$1,255	\$1,193	\$1,367	\$1,679	\$2,062

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 salaries, United States except Alaska and Hawaii, <sup>1</sup> March 1972)

Monthly salaries	Chemists							
	I	II	III	IV	V	VI	VII	VIII
Under \$575	(1.3)	-	-	-	-	-	-	-
\$575 and under \$600	2.7	-	-	-	-	-	-	-
\$600 and under \$625	-	(0.5)	-	-	-	-	-	-
\$625 and under \$650	2.7	1.1	-	-	-	-	-	-
\$650 and under \$675	9.0	2.5	-	-	-	-	-	-
\$675 and under \$700	3.9	1.2	-	-	-	-	-	-
\$700 and under \$725	4.3	2.6	(1.0)	-	-	-	-	-
\$725 and under \$750	3.8	.8	1.0	-	-	-	-	-
\$750 and under \$775	5.4	2.7	.5	-	-	-	-	-
\$775 and under \$800	7.9	4.6	1.2	-	-	-	-	-
\$800 and under \$825	6.1	6.2	1.4	-	-	-	-	-
\$825 and under \$850	9.4	5.1	1.7	-	-	-	-	-
\$850 and under \$875	7.0	6.2	2.6	-	-	-	-	-
\$875 and under \$900	10.2	6.7	4.0	-	-	-	-	-
\$900 and under \$925	6.7	8.1	6.4	-	-	-	-	-
\$925 and under \$950	6.2	9.1	3.7	(3.1)	-	-	-	-
\$950 and under \$975	3.8	8.0	5.2	1.1	-	-	-	-
\$975 and under \$1,000	2.2	5.7	5.3	1.3	-	-	-	-
\$1,000 and under \$1,050	4.3	11.1	11.3	4.4	(0.6)	-	-	-
\$1,050 and under \$1,100	1.9	8.2	13.7	5.9	1.6	-	-	-
\$1,100 and under \$1,150	(1.2)	6.0	9.7	7.9	1.8	-	-	-
\$1,150 and under \$1,200	-	2.2	9.2	8.7	1.9	(1.1)	-	-
\$1,200 and under \$1,250	-	1.2	6.8	9.3	2.8	1.2	-	-
\$1,250 and under \$1,300	-	(0.3)	5.4	9.9	5.6	.4	-	-
\$1,300 and under \$1,350	-	-	3.2	9.7	7.4	2.2	-	-
\$1,350 and under \$1,400	-	-	3.3	7.8	5.8	3.0	-	-
\$1,400 and under \$1,450	-	-	1.4	6.2	8.7	3.5	-	-
\$1,450 and under \$1,500	-	-	(2.1)	5.8	9.1	4.4	-	-
\$1,500 and under \$1,550	-	-	-	6.2	8.2	5.2	-	-
\$1,550 and under \$1,600	-	-	-	4.1	6.8	6.5	(2.2)	-
\$1,600 and under \$1,650	-	-	-	3.1	8.7	6.1	1.8	-
\$1,650 and under \$1,700	-	-	-	2.0	6.5	8.8	3.7	-
\$1,700 and under \$1,750	-	-	-	1.1	5.3	6.7	3.1	-
\$1,750 and under \$1,800	-	-	-	(2.6)	4.5	7.5	4.6	(0.2)
\$1,800 and under \$1,850	-	-	-	-	3.5	7.3	4.3	1.2
\$1,850 and under \$1,900	-	-	-	-	3.2	6.2	4.0	1.9
\$1,900 and under \$1,950	-	-	-	-	1.8	4.6	7.3	3.6
\$1,950 and under \$2,000	-	-	-	-	1.9	6.4	5.5	1.4
\$2,000 and under \$2,050	-	-	-	-	1.4	3.3	7.3	1.7
\$2,050 and under \$2,100	-	-	-	-	(3.2)	3.8	6.0	3.6
\$2,100 and under \$2,150	-	-	-	-	-	2.1	6.3	3.6
\$2,150 and under \$2,200	-	-	-	-	-	2.6	4.6	4.0
\$2,200 and under \$2,250	-	-	-	-	-	1.8	5.6	6.9
\$2,250 and under \$2,300	-	-	-	-	-	1.4	3.2	6.7
\$2,300 and under \$2,350	-	-	-	-	-	1.0	4.1	3.3
\$2,350 and under \$2,400	-	-	-	-	-	(3.0)	2.8	2.4
\$2,400 and under \$2,450	-	-	-	-	-	-	5.7	3.6
\$2,450 and under \$2,500	-	-	-	-	-	-	2.2	2.6
\$2,500 and under \$2,600	-	-	-	-	-	-	3.9	15.7
\$2,600 and under \$2,700	-	-	-	-	-	-	3.2	7.6
\$2,700 and under \$2,800	-	-	-	-	-	-	2.0	5.7
\$2,800 and under \$2,900	-	-	-	-	-	-	2.3	2.4
\$2,900 and under \$3,000	-	-	-	-	-	-	2.4	4.3
\$3,000 and under \$3,100	-	-	-	-	-	-	1.3	4.0
\$3,100 and under \$3,200	-	-	-	-	-	-	(1.0)	1.0
\$3,200 and under \$3,300	-	-	-	-	-	-	-	2.4
\$3,300 and under \$3,400	-	-	-	-	-	-	-	3.8
\$3,400 and under \$3,500	-	-	-	-	-	-	-	2.1
\$3,500 and under \$3,600	-	-	-	-	-	-	-	.2
\$3,600 and under \$3,700	-	-	-	-	-	-	-	2.6
\$3,700 and over	-	-	-	-	-	-	-	(1.7)
<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>
Number of employees	970	3,755	8,094	9,600	7,383	4,471	1,575	421
Average monthly salaries	\$820	\$924	\$1,075	\$1,306	\$1,548	\$1,773	\$2,157	\$2,569

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 salaries, United States except Alaska and Hawaii,<sup>1</sup> March 1972)

Monthly salaries	Engineers							
	I	II	III	IV	V	VI	VII	VIII
Under \$725	(1.6)	-	-	-	-	-	-	-
\$725 and under \$750	1.3	-	-	-	-	-	-	-
\$750 and under \$775	2.4	-	-	-	-	-	-	-
\$775 and under \$800	3.1	(1.5)	-	-	-	-	-	-
\$800 and under \$825	5.4	1.1	-	-	-	-	-	-
\$825 and under \$850	7.9	2.6	-	-	-	-	-	-
\$850 and under \$875	13.2	4.3	(1.9)	-	-	-	-	-
\$875 and under \$900	12.0	5.3	1.1	-	-	-	-	-
\$900 and under \$925	12.4	8.1	2.1	-	-	-	-	-
\$925 and under \$950	9.3	8.8	2.3	-	-	-	-	-
\$950 and under \$975	8.6	9.6	3.2	-	-	-	-	-
\$975 and under \$1,000	8.1	9.4	4.3	(1.5)	-	-	-	-
\$1,000 and under \$1,050	8.4	16.9	11.1	2.4	-	-	-	-
\$1,050 and under \$1,100	3.6	13.6	14.4	3.6	-	-	-	-
\$1,100 and under \$1,150	1.8	8.3	13.8	5.5	(1.2)	-	-	-
\$1,150 and under \$1,200	(1.0)	5.0	13.2	7.6	1.8	-	-	-
\$1,200 and under \$1,250	-	2.5	10.2	8.9	2.6	-	-	-
\$1,250 and under \$1,300	-	1.7	9.1	10.7	4.1	(0.9)	-	-
\$1,300 and under \$1,350	-	(1.2)	6.0	12.0	5.6	1.7	-	-
\$1,350 and under \$1,400	-	-	3.8	10.1	6.8	2.4	-	-
\$1,400 and under \$1,450	-	-	-	10.1	9.0	2.7	(1.2)	-
\$1,450 and under \$1,500	-	-	(1.6)	8.0	9.4	3.0	1.1	-
\$1,500 and under \$1,550	-	-	-	6.9	10.5	4.6	1.7	-
\$1,550 and under \$1,600	-	-	-	5.0	10.2	5.6	2.5	(0.6)
\$1,600 and under \$1,650	-	-	-	3.1	9.1	6.9	2.8	1.1
\$1,650 and under \$1,700	-	-	-	1.9	8.2	8.8	4.1	1.1
\$1,700 and under \$1,750	-	-	-	1.0	6.2	9.7	3.9	1.2
\$1,750 and under \$1,800	-	-	-	(1.8)	4.7	9.2	4.8	2.0
\$1,800 and under \$1,850	-	-	-	-	3.1	8.0	6.2	2.4
\$1,850 and under \$1,900	-	-	-	-	2.5	7.5	5.8	2.4
\$1,900 and under \$1,950	-	-	-	-	1.7	5.9	7.9	3.4
\$1,950 and under \$2,000	-	-	-	-	1.1	5.4	6.9	4.2
\$2,000 and under \$2,050	-	-	-	-	(2.2)	4.4	6.8	4.4
\$2,050 and under \$2,100	-	-	-	-	-	3.6	7.4	6.4
\$2,100 and under \$2,150	-	-	-	-	-	2.6	4.4	4.0
\$2,150 and under \$2,200	-	-	-	-	-	2.1	5.7	5.0
\$2,200 and under \$2,250	-	-	-	-	-	1.5	4.0	8.3
\$2,250 and under \$2,300	-	-	-	-	-	1.3	4.7	7.0
\$2,300 and under \$2,350	-	-	-	-	-	(2.1)	3.6	7.1
\$2,350 and under \$2,400	-	-	-	-	-	-	2.5	2.7
\$2,400 and under \$2,450	-	-	-	-	-	-	2.8	4.5
\$2,450 and under \$2,500	-	-	-	-	-	-	1.8	3.8
\$2,500 and under \$2,600	-	-	-	-	-	-	2.9	7.4
\$2,600 and under \$2,700	-	-	-	-	-	-	2.0	4.8
\$2,700 and under \$2,800	-	-	-	-	-	-	1.3	5.1
\$2,800 and under \$2,900	-	-	-	-	-	-	(1.1)	3.3
\$2,900 and under \$3,000	-	-	-	-	-	-	-	2.3
\$3,000 and under \$3,100	-	-	-	-	-	-	-	2.0
\$3,100 and over	-	-	-	-	-	-	-	(3.4)
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	9,390	28,140	79,779	112,074	74,629	38,532	14,438	3,070
Average monthly salaries	\$910	\$1,006	\$1,140	\$1,347	\$1,552	\$1,784	\$2,031	\$2,324

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

NOTE: Because of rounding, sums of individual items may not equal 100.

**Table 5. Employment distribution by salary: Engineering technicians and keypunch supervisors**

(Percent distribution of engineering technicians and keypunch supervisors, by monthly salaries, United States except Alaska and Hawaii,<sup>1</sup> March 1972)

Monthly salaries	Engineering technicians					Keypunch supervisors				
	I	II	III	IV	V	I	II	III	IV	V
Under \$375	(1.2)	-	-	-	-	-	-	-	-	-
\$375 and under \$400	.7	-	-	-	-	-	-	-	-	-
\$400 and under \$425	1.5	-	-	-	-	3.3	0.7	-	-	-
\$425 and under \$450	.7	-	-	-	-	3.7	2.5	-	-	-
\$450 and under \$475	4.3	-	-	-	-	3.6	.7	-	-	-
\$475 and under \$500	2.7	(2.1)	-	-	-	3.7	2.0	0.9	-	-
\$500 and under \$525	7.5	2.8	-	-	-	5.5	.1	1.3	-	-
\$525 and under \$550	9.5	3.7	(0.9)	-	-	8.3	6.5	-	-	-
\$550 and under \$575	10.0	5.7	1.0	-	-	12.8	3.0	.9	-	-
\$575 and under \$600	8.9	6.6	1.3	-	-	9.4	6.6	5.4	-	-
\$600 and under \$625	17.2	8.5	2.8	-	-	5.5	6.7	5.6	-	-
\$625 and under \$650	8.7	6.9	3.2	(1.0)	-	4.7	5.3	5.9	(2.3)	-
\$650 and under \$675	7.8	10.1	5.7	1.3	-	6.9	7.4	7.2	1.8	-
\$675 and under \$700	4.8	10.7	6.5	2.5	-	4.2	6.0	4.8	1.3	-
\$700 and under \$725	4.9	9.7	6.4	3.0	-	2.7	8.9	6.1	1.0	-
\$725 and under \$750	2.7	9.7	8.4	3.8	(0.9)	4.8	8.4	9.8	10.0	1.7
\$750 and under \$775	2.1	6.2	8.6	5.2	1.0	4.7	6.2	6.1	4.6	-
\$775 and under \$800	3.0	5.0	8.0	5.0	1.8	2.7	4.0	4.6	7.9	1.7
\$800 and under \$825	1.1	3.7	8.9	5.5	2.0	2.7	5.7	5.3	10.5	1.7
\$825 and under \$850	(0.7)	2.7	7.9	7.3	3.8	1.0	3.4	8.1	3.1	-
\$850 and under \$875	-	1.8	6.3	8.4	4.4	1.6	3.0	7.6	2.3	11.9
\$875 and under \$900	-	1.0	7.1	7.4	4.6	.4	3.4	3.5	4.6	5.1
\$900 and under \$925	-	1.1	5.6	8.6	5.5	1.3	2.4	2.5	3.6	6.8
\$925 and under \$950	-	1.0	4.3	8.1	6.3	4.6	1.4	2.1	7.9	11.9
\$950 and under \$975	-	(1.3)	1.9	7.7	8.6	(1.8)	1.9	3.3	3.3	8.5
\$975 and under \$1,000	-	-	1.2	5.1	6.8	-	1.2	.9	5.1	10.2
\$1,000 and under \$1,050	-	-	2.2	8.3	13.1	-	1.4	2.6	13.8	3.4
\$1,050 and under \$1,100	-	-	1.2	5.6	14.1	-	(1.4)	2.6	6.4	6.8
\$1,100 and under \$1,150	-	-	(0.6)	3.9	9.2	-	-	1.5	2.8	10.2
\$1,150 and under \$1,200	-	-	-	1.4	6.8	-	-	(1.1)	3.3	1.7
\$1,200 and under \$1,250	-	-	-	(1.0)	4.5	-	-	-	3.1	6.8
\$1,250 and under \$1,300	-	-	-	-	5.5	-	-	-	(1.3)	3.4
\$1,300 and over	-	-	-	-	(1.1)	-	-	-	-	(8.5)
<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>Number of employees</b>	<b>3,374</b>	<b>10,583</b>	<b>23,697</b>	<b>28,543</b>	<b>17,207</b>	<b>919</b>	<b>1,693</b>	<b>1,106</b>	<b>391</b>	<b>59</b>
<b>Average monthly salaries</b>	<b>\$601</b>	<b>\$684</b>	<b>\$792</b>	<b>\$899</b>	<b>\$1,022</b>	<b>\$634</b>	<b>\$710</b>	<b>\$777</b>	<b>\$908</b>	<b>\$1,027</b>

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

NOTE: Because of rounding, sums of individual items may not equal 100.

**Table 6. Employment distribution by salary: Drafting and clerical occupations**

(Percent distribution of employees in selected drafting and clerical occupations, by weekly salaries, United States except Alaska and Hawaii, March 1972)

Weekly salaries	Drafts- men- tracers	Draftsmen			Clerks, accounting		Clerks, file			Keypunch operators		Messen- gers (office boys and girls)
		I	II	III	I	II	I	II	III	I	II	
Under \$65	-	-	-	-	-	-	(0.6)	(0.5)	-	-	-	(0.7)
\$65 and under \$70	-	-	-	-	(0.6)	-	3.9	2.9	-	(0.5)	-	3.6
\$70 and under \$75	-	-	-	-	1.4	-	13.8	4.5	-	1.4	-	5.6
\$75 and under \$80	1.5	-	-	-	2.5	-	12.6	7.5	(1.1)	2.1	-	6.2
\$80 and under \$85	1.8	-	-	-	5.0	-	17.8	15.5	2.3	6.3	(1.0)	11.0
\$85 and under \$90	2.0	(0.4)	-	-	5.7	(1.1)	14.5	14.0	6.5	7.5	2.2	12.2
\$90 and under \$95	4.7	1.1	-	-	8.5	1.4	10.0	10.8	5.4	9.9	2.8	11.9
\$95 and under \$100	5.9	1.0	-	-	9.0	1.9	7.8	9.6	8.2	10.4	4.1	10.1
\$100 and under \$105	9.8	1.8	-	-	10.5	2.8	5.4	9.6	9.6	11.7	6.8	9.5
\$105 and under \$110	7.1	2.3	-	-	9.1	3.5	5.0	6.1	9.2	8.6	7.4	6.4
\$110 and under \$115	9.9	3.1	-	-	8.1	5.0	2.7	4.6	8.2	8.1	10.2	5.5
\$115 and under \$120	9.5	7.1	-	-	7.6	6.1	2.1	3.0	8.6	6.6	9.4	4.3
\$120 and under \$125	11.6	6.8	(2.7)	-	6.8	6.1	1.2	2.3	8.5	5.2	9.9	2.8
\$125 and under \$130	7.2	6.6	1.4	-	5.3	7.0	(2.5)	1.7	5.9	3.7	8.0	2.7
\$130 and under \$135	9.1	8.9	2.5	-	4.4	7.9	-	1.6	4.6	3.3	9.2	1.6
\$135 and under \$140	5.0	8.7	2.8	-	2.5	7.2	-	1.5	2.8	2.1	5.1	1.6
\$140 and under \$145	3.4	7.5	4.4	-	2.7	6.8	-	1.0	2.7	2.2	6.1	1.2
\$145 and under \$150	1.9	5.7	4.5	(1.5)	1.8	5.5	-	.6	2.6	1.4	3.7	.9
\$150 and under \$160	2.6	13.5	12.4	1.5	3.3	9.2	-	1.2	4.2	2.6	5.8	1.0
\$160 and under \$170	2.1	8.9	14.3	4.6	1.6	8.2	-	(1.5)	3.1	2.0	4.4	(1.1)
\$170 and under \$180	1.1	5.5	13.6	6.9	1.4	6.2	-	-	3.4	2.6	1.8	-
\$180 and under \$190	1.9	5.3	11.4	10.3	1.2	5.3	-	-	1.8	1.4	1.0	-
\$190 and under \$200	(1.8)	2.3	8.7	12.0	(1.1)	3.4	-	-	(1.2)	(0.3)	(1.1)	-
\$200 and under \$210	-	1.0	6.5	11.5	-	1.9	-	-	-	-	-	-
\$210 and under \$220	-	(2.6)	6.8	11.7	-	1.6	-	-	-	-	-	-
\$220 and under \$230	-	-	2.8	8.2	-	(1.9)	-	-	-	-	-	-
\$230 and under \$240	-	-	1.6	9.2	-	-	-	-	-	-	-	-
\$240 and under \$250	-	-	1.3	4.4	-	-	-	-	-	-	-	-
\$250 and under \$260	-	-	.9	2.8	-	-	-	-	-	-	-	-
\$260 and under \$270	-	-	1.0	1.3	-	-	-	-	-	-	-	-
\$270 and under \$280	-	-	(0.5)	1.4	-	-	-	-	-	-	-	-
\$280 and under \$290	-	-	-	1.3	-	-	-	-	-	-	-	-
\$290 and under \$300	-	-	-	1.9	-	-	-	-	-	-	-	-
\$300 and under \$310	-	-	-	2.0	-	-	-	-	-	-	-	-
\$310 and under \$320	-	-	-	1.5	-	-	-	-	-	-	-	-
\$320 and under \$330	-	-	-	1.7	-	-	-	-	-	-	-	-
\$330 and under \$340	-	-	-	1.3	-	-	-	-	-	-	-	-
\$340 and under \$350	-	-	-	1.9	-	-	-	-	-	-	-	-
\$350 and over	-	-	-	(0.8)	-	-	-	-	-	-	-	-
<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	4,365	16,710	29,607	30,175	82,549	59,930	24,037	22,754	6,936	61,700	45,043	25,245
Average weekly salaries	\$121	\$145	\$176	\$220	\$113	\$145	\$88	\$96	\$119	\$110	\$125	\$98

See footnote at end of table.

**Table 6. Employment distribution by salary: Drafting and clerical occupations—Continued**

(Percent distribution of employees in selected drafting and clerical occupations, by weekly salaries, United States except Alaska and Hawaii,<sup>1</sup> March 1972)

Weekly salaries	Secretaries				Steno- graphers, general	Steno- graphers, senior	Typists	
	I	II	III	IV			I	II
\$65 and under \$70	-	-	-	-	.4	-	(1.0)	-
\$70 and under \$75	-	-	-	-	1.3	-	4.8	-
\$75 and under \$80	-	-	-	-	.7	-	4.3	(1.3)
\$80 and under \$85	-	-	-	-	2.7	-	9.0	2.1
\$85 and under \$90	(1.8)	-	-	-	4.4	(1.7)	11.1	4.3
\$90 and under \$95	1.8	-	-	-	6.4	1.9	12.2	6.5
\$95 and under \$100	2.6	(1.9)	(1.9)	-	7.7	2.6	11.3	7.8
\$100 and under \$105	4.7	1.6	1.5	-	9.5	5.2	11.0	10.3
\$105 and under \$110	5.0	2.5	1.7	-	8.3	5.3	8.3	9.8
\$110 and under \$115	5.5	2.6	1.7	(3.3)	8.2	5.6	7.7	9.2
\$115 and under \$120	7.6	4.4	3.0	2.2	8.4	7.6	5.8	9.7
\$120 and under \$125	7.8	5.0	3.3	2.6	7.2	7.5	3.7	9.0
\$125 and under \$130	8.3	5.4	3.6	2.6	6.1	7.3	2.5	6.6
\$130 and under \$135	9.1	7.1	4.8	3.3	5.3	7.1	2.4	5.7
\$135 and under \$140	7.7	7.4	4.8	4.6	4.2	6.6	1.4	3.3
\$140 and under \$145	7.5	7.3	5.8	4.5	4.3	6.4	1.0	3.4
\$145 and under \$150	6.1	7.2	5.6	5.1	2.3	5.8	(2.4)	2.3
\$150 and under \$160	10.1	13.4	11.8	8.7	5.2	10.2	-	2.7
\$160 and under \$170	6.8	11.6	11.7	9.4	3.0	9.3	-	3.0
\$170 and under \$180	4.1	8.5	11.0	10.3	2.9	4.2	-	1.6
\$180 and under \$190	1.7	5.5	8.7	11.6	1.1	3.1	-	1.0
\$190 and under \$200	(1.7)	3.5	6.7	8.9	(0.4)	2.0	-	(0.2)
\$200 and under \$210	-	2.1	4.2	7.1	-	(0.6)	-	-
\$210 and under \$220	-	1.7	3.1	4.6	-	-	-	-
\$220 and under \$230	-	1.0	2.0	2.7	-	-	-	-
\$230 and under \$240	-	(0.5)	1.5	2.7	-	-	-	-
\$240 and under \$250	-	-	(1.8)	1.9	-	-	-	-
\$250 and under \$260	-	-	-	2.0	-	-	-	-
\$260 and over	-	-	-	(2.0)	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	80,584	90,652	50,937	16,030	49,096	48,960	59,426	37,199
Average weekly salaries	\$134	\$150	\$162	\$174	\$119	\$135	\$100	\$117

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

NOTE: 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 1972)

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 .....	67	14	6	( <sup>5</sup> )	8	( <sup>5</sup> )
Auditors .....	40	19	7	6	27	( <sup>5</sup> )
Chief accountants .....	63	9	10	7	6	( <sup>5</sup> )
Attorneys .....	30	20	5	4	41	( <sup>5</sup> )
Buyers .....	86	6	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Job analysts .....	64	5	( <sup>5</sup> )	( <sup>5</sup> )	25	( <sup>5</sup> )
Directors of personnel .....	73	( <sup>5</sup> )	7	5	11	( <sup>5</sup> )
Chemists .....	91	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Engineers .....	75	11	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	7
<u>Technical support</u>						
Engineering technicians .....	74	10	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	16
Draftsmen .....	72	11	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	15
<u>Clerical supervisory</u>						
Keypunch supervisors .....	35	11	10	8	36	( <sup>5</sup> )
<u>Clerical</u>						
Clerks, accounting .....	43	17	10	14	16	( <sup>5</sup> )
Clerks, file .....	21	6	8	8	56	( <sup>5</sup> )
Keypunch operators .....	42	11	12	9	25	( <sup>5</sup> )
Messengers (office boys and girls) .....	32	15	7	4	39	( <sup>5</sup> )
Secretaries .....	52	10	7	5	23	( <sup>5</sup> )
Stenographers .....	49	18	7	( <sup>5</sup> )	21	( <sup>5</sup> )
Typists .....	37	10	6	4	41	( <sup>5</sup> )

<sup>1</sup> Each occupation includes the work levels, as defined for the survey, for which employment estimates in all industries within scope of the study are 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 1972)

(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 -----	100	103	98	97	97	102
Auditors -----	103	103	105	96	93	114
Chief accountants -----	101	101	97	101	( <sup>5</sup> )	98
Attorneys -----	105	101	110	102	96	( <sup>5</sup> )
Buyers -----	100	105	105	107	( <sup>5</sup> )	97
Job analysts -----	103	( <sup>5</sup> )	112	98	88	109
Directors of personnel -----	99	107	102	98	103	98
Chemists -----	100	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	100
Engineers -----	100	100	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )	98
<u>Technical support</u>						
Engineering technicians -----	99	107	96	( <sup>5</sup> )	( <sup>5</sup> )	99
Draftsmen -----	101	104	93	100	( <sup>5</sup> )	95
<u>Clerical supervisory</u>						
Keypunch supervisors -----	102	122	( <sup>5</sup> )	97	92	( <sup>5</sup> )
<u>Clerical</u>						
Clerks, accounting -----	102	112	97	91	91	105
Clerks, file -----	107	132	102	97	94	114
Keypunch operators -----	102	117	96	96	93	102
Messengers (office boys and girls) -----	104	117	95	95	92	103
Secretaries -----	102	111	98	93	93	102
Stenographers -----	102	108	97	90	89	98
Typists -----	103	110	100	101	94	100

<sup>1</sup> Each occupation includes the work levels, as defined for the survey, for which data are presented 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 standard weekly hours: Occupation by industry division**

(Average 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 1972)

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	39.0	39.5	38.0	39.5
Auditors .....	39.0	39.0	39.5	39.5	37.5	39.5
Chief accountants .....	39.5	39.0	40.0	40.0	( <sup>6</sup> )	40.0
Attorneys .....	38.5	39.5	38.0	39.0	38.0	( <sup>6</sup> )
Buyers .....	39.5	39.5	39.0	39.5	( <sup>6</sup> )	39.5
Job analysts .....	39.0	( <sup>6</sup> )	39.0	37.5	37.5	39.5
Directors of personnel .....	40.0	39.5	38.5	40.5	38.5	40.0
Chemists .....	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Engineers .....	40.0	39.5	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )	39.5
<u>Technical support</u>						
Engineering technicians .....	40.0	39.5	38.5	( <sup>6</sup> )	( <sup>6</sup> )	39.5
Draftsmen .....	40.0	39.5	39.5	38.5	( <sup>6</sup> )	40.0
<u>Clerical supervisory</u>						
Keypunch supervisors .....	39.5	39.0	( <sup>6</sup> )	39.5	38.0	( <sup>6</sup> )
<u>Clerical</u>						
Clerks, accounting .....	39.5	39.0	39.5	39.5	38.0	39.5
Clerks, file .....	39.5	39.0	39.0	39.0	38.0	39.0
Keypunch operators .....	39.5	39.5	39.5	39.0	38.0	39.5
Messengers (office boys and girls) .....	39.0	39.0	38.5	39.0	38.0	38.5
Secretaries .....	39.5	39.0	38.5	39.0	38.0	39.5
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, as defined for the survey, for which data are presented 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 1970). 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 the accompanying table. 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 1972.<sup>2</sup>

Data were obtained by Bureau field economists who 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 scope of the survey by location, industry, and size of employment. From this universe, a nationwide sample of about 3,000 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 an existing sample member that was as nearly similar as possible to the missing unit.

## 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

<sup>1</sup> The metropolitan area data in the 1972 survey relate to all 229 SMSA's (within the 48 States surveyed) as revised through January 1968 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 1970 and 1971 surveys.

<sup>2</sup> 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.

<sup>3</sup> A few of the largest employers, together employing approximately one and a quarter million 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.

Number of establishments and workers within scope of survey<sup>1</sup> and number studied by industry division, March 1972

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>		28,803	18,686,310	7,083,731	3,116	6,935,490	2,861,792
Manufacturing	250	14,260	11,233,259	3,317,239	1,880	4,374,091	1,489,397
Nonmanufacturing:							
Transportation, <sup>3</sup> communication, electric, gas, and sanitary services	100	2,900	2,301,939	1,107,900	337	1,125,534	569,352
Wholesale trade	100	4,067	863,253	413,093	174	79,176	47,270
Retail trade	250	2,692	2,419,390	481,790	283	719,515	156,288
Finance, insurance, and real estate	100	4,357	1,650,912	1,608,326	339	516,435	516,038
Services:							
Engineering and architectural services; and commercially operated, research, development, and testing laboratories only	100	527	217,557	155,383	103	120,739	83,447
Metropolitan areas—all industries <sup>4</sup>		22,028	15,151,011	6,304,453	2,555	6,295,828	2,699,241
Manufacturing	250	9,228	8,142,692	2,738,830	1,399	3,780,082	1,348,544
Nonmanufacturing:							
Transportation, <sup>3</sup> communication, electric, gas, and sanitary services	100	2,292	2,149,795	1,049,410	311	1,112,849	563,618
Wholesale trade	100	3,605	786,159	382,485	159	76,224	45,914
Retail trade	250	2,474	2,317,005	468,184	271	710,612	155,214
Finance, insurance, and real estate	100	3,915	1,556,861	1,521,015	322	512,100	511,929
Services:							
Engineering and architectural services; and commercially operated research, development, and testing laboratories only	100	514	198,499	144,529	93	103,961	74,022
Establishments employing 2,500 workers or more—all industries		1,063	6,266,934	2,490,925	763	5,162,121	2,130,164
Manufacturing	-	617	3,787,146	1,315,618	472	3,290,922	1,159,092

<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 and draftsmen, 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 January 1968 by the U.S. Office of Management and Budget.

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 5 percent of the establishments asked to supply data would not do so. These corresponded to an estimated total in the universe studied of approximately 1,050,000 workers, about 5.6 percent of 18,686,310. 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 classification. It was thus possible to estimate the proportion of employees in each category for whom salary data were not available. The number of work level categories affected and the proportion of employees in these categories for whom salary data were not available are as follows:

1 category (directors of personnel IV) .....	18 percent
4 categories (directors of personnel III, chief accountants III and IV, engineers VIII) .....	5 to 9.9 percent
14 categories .....	1 to 4.9 percent
58 categories .....	Less than 1 percent

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>5</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>6</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 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

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

<sup>5</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>6</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.

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 and II, all levels of keypunch operators, secretaries, stenographers, and typists
90-94 . . . . .	Accounting clerks I, file clerks III, keypunch supervisors II
85-89 . . . . .	Keypunch supervisors I and III
70-74 . . . . .	Accounting clerks II
65-69 . . . . .	Keypunch supervisors IV
55-59 . . . . .	Keypunch supervisors V
45-49 . . . . .	Messengers (office boys and girls)
40-44 . . . . .	Job analysts I
35-39 . . . . .	Draftsmen-tracers
25-29 . . . . .	Engineering technicians I
20-24 . . . . .	Job analysts II
15-19 . . . . .	Job analysts III, chemists I, and buyers I
10-14 . . . . .	Accountants I and II, chemists II and III, and engineering technicians II
5-9 . . . . .	Accountants III, auditors I and II, job analysts IV, directors of personnel II, attorneys II, buyers II, and draftsmen I

**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

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 the average weekly salaries (to the nearest penny) by use of factors 4.345 and 52.14, respectively, and rounding results to the nearest dollar. Average weekly salaries for these occupations, presented in table 6, are rounded to the nearest half-dollar. Average monthly salaries presented in tables 1, 2, and 3 for all other occupations are rounded to the nearest dollar. To obtain the annual salaries, 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 draftsmen 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 draftsmen 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 77 surveyed occupational work levels, the relative sampling errors of the average salaries were distributed as follows: 53 were under 2 percent; 13 were 2 and under 4 percent; 6 were 4 and under 6 percent; and 5 were 6 percent and over.<sup>7</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 and \$1,040.

**Methods of computation of annual percent increases**

The percent increases for each occupation in table A were obtained by adding the aggregate salaries 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 had occurred since this series was begun and to compute average annual rates of increase for each occupation and group, and all occupations combined.

The year-to-year percent increases for each group in table B 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

<sup>7</sup> The 6 percent and over group included: Chemists VI - 6.1 percent; chemists VIII - 9.5 percent; chief accountants I - 7.1 percent; chief accountants II - 6.6 percent; and chief accountants III - 6.0 percent.

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 11-year trends were obtained by linking changes for the individual periods.

## Appendix B. Survey Changes in 1972

Changes in the 1972 survey included: Modification of the scope of the survey; a change in the survey reference period; a change in sampling procedures; and changes in the definitions of five occupations. Each of these changes is described in detail below.

### Change in scope of survey

The minimum employment in finance, insurance, and real estate establishments within scope of the survey was raised from 50 employees to 100 employees. This was the first change in minimum survey employment size since the February-March 1966 survey. The change was requested by the President's agent to insure that data would be available for development of Federal pay comparability as required by the Federal Pay Comparability Act of 1970.

The change in scope had practically no effect on the estimates of salaries and employment of the professional, administrative, technical support, and clerical supervisory occupations. The number of employees in the clerical occupations studied was reduced by about 3 percent and average salaries were increased by a small amount (generally less than one-half of 1 percent) by the change in scope. Information on changes in salaries from 1971 to 1972 presented in tables or text is unaffected by the change in scope because salary changes have been computed using data based on the 1971 survey scope in both years, i.e., including establishments with fewer than 100 employees in the finance, insurance, and real estate industries.

### Change in sampling procedures

In prior years, the nationwide estimates for the clerical and drafting occupations were, in large part, a

byproduct of the Bureau's area wage surveys in selected metropolitan areas (89 in 1971). In 1972 data for all occupations were obtained from the same nationwide sample of establishments. The change in sampling procedures caused small declines in the number of employees reported in some (principally clerical) occupations.

### Change in survey timing

Since the 1967 survey, data collection had been timed so that the salary estimates related, on the average, to June. The reference period was changed to March in 1972 at the request of the President's agent to adjust the timing of the survey to fit the time schedule for Federal pay adjustments set by the Federal Pay Comparability Act of 1970.

### Changes in occupational coverage and definitions

*Buyer.* Level V was dropped from the survey. A paragraph was added to the level IV definition to more clearly define the upper limit of occupational coverage.

*File Clerk, Stenographer, Secretary, and Typist.* The survey definitions for these occupations were revised slightly to clarify the intent of the definitions and facilitate uniform interpretation by data collectors, respondents, and users. The work levels of each occupation are intended to represent the same types of jobs as did the same levels of the previous definitions. An examination of the survey data and the collection experience revealed that the revised definitions did not significantly change classifications that had been made in the past. Comparisons of data for trend purposes, therefore, were not affected by the changes in occupational definitions.



## 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 on p. 64.

### 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 nonprofessional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost or 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 nonprofessional 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 classifica-

tions 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 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 operations 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 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 he is responsible. Accountants V are necessarily deeply involved in fundamental and complex accounting matters and in the managerial problems that are affected.

*Responsibility for direction of others.* Accounting staff he supervises 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 control. 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:

- (1) The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities.
- (2) The accuracy of financial statements or reports and the fairness of presentation of facts therein.
- (3) The propriety or legality of transactions.
- (4) 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:

- (1) 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.

(2) 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 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, have 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:

(1) 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, or

(2) 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 above characteristics are classified by level <sup>1</sup> of work according to

(a) authority and responsibility and (b) technical complexity, using the chart which follows the definitions below.

### 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.

*AR-2.* The basic accounting system is prescribed in broad outlines 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

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

Class	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.
<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.
<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>	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.
<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 on the preceding pages.



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.

#### **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 unchang-

ing. 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 the chart that follows, the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various classes. 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 instigate 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 the chart below.

*D-1.* Legal questions are characterized by: Facts that are well-established; clearly applicable legal precedents; and

Class	Difficulty level of legal work <sup>1</sup>	Responsibility level 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	D-1 D-2	or 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	D-2 D-3	or R-2 R-1	At least 1 year, usually more, of professional experience at the "D-2" level.
IV	D-2 D-3	or 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 below.

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:*

(a) 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.

(b) 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.

(c) 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 either 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:*

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

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

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

(d) 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 obtain-

ing 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:*

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

(b) 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.

(c) 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.

(d) 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.

(e) 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 on, the overall approach to the most difficult, novel or important legal questions, by the general counsel. 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 supervision 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 the 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 involved persuading potential vendors to under-

take 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 program; 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 tech-

niques 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 assignment which regularly includes

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 functions;* 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, 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:

a. *Employee training and development;*

b. *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 classifications, 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.

Directors of personnel jobs which meet the above definition are classified by level<sup>2</sup> of work in accordance with the following tabulation:

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

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

Number of employees in work force serviced	"Development level" personnel program <sup>4</sup>	
	"Type A" organization serviced <sup>2</sup>	"Type B" organization serviced <sup>3</sup>
250-750 . . . . .	II	III
1,000-5,000 . . . . .	III	IV
6,000-12,000 . . . . .	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> "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>3</sup> "Type B" organization serviced—a substantial number of jobs present difficult recruitment, job evaluation, or training problems because 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.

<sup>4</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).

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 the type B degree. However, the same job should be matched with level I if the nature of the organization serviced clearly falls well within the definition for the type A degree.

## 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 transformation which substances undergo. Work typically requires a B.S. degree in chemistry or 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 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 procedures, 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 neces-

sary, 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 larger 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 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 the 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 planning and organizing facilities and programs, and for 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 draftsmen, 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 results from progressive experience, including work comparable to engineer 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 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 speciality, 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 researcher 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 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 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 require 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: (1) 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, craftsmen, draftsmen, 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 technical 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.

### **DRAFTSMAN**

#### **Draftsman-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.

#### **Draftsman 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.

#### **Draftsman 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.

#### **Draftsman 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 draftsmen.



## 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 computers, 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 responsibility, difficulty of keypunch work supervised, and number of employees supervised. In the following table 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.

#### 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. (Exclude 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 or 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.

# 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, posting, 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 or 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 (Office Boy or Girl)**

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 personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties, usually including most of the following:

- (a) Receives telephone calls, personal callers, and incoming mail, answers routine inquiries, and routes technical inquiries to the proper persons;
- (b) Establishes, maintains, and revises the supervisor's files;
- (c) Maintains the supervisor's calendar and makes appointments as instructed;
- (d) Relays messages from supervisor to subordinates;
- (e) Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy;
- (f) Performs stenographic and typing work.

May also perform other clerical and secretarial tasks of comparable nature and difficulty. The work typically requires 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) Secretary positions in which the duties are either substantially more routine or substantially more complex and responsible than those characterized in the definition;

(e) Assistant type positions which involve more difficult or more responsible technical, administrative, supervisory, or specialized clerical duties which are not typical of secretarial work.

*NOTE:* The term "corporate officer," used in the level definitions following, refers to those officials who have a significant corporate-wide 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 following level definitions:

#### **Secretary I**

1. Secretary to the supervisor or head of a *small* organizational unit (e.g., fewer than about 25 or 30 persons); or
2. 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.)

#### **Secretary II**

1. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for level III, 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
2. 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*.

#### **Secretary III**

1. Secretary to the chairman of the board or president of a company that employs, in all, *fewer than 100 persons*; or

2. 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*

3. Secretary to the head (immediately below the officer level) over either a major *corporate-wide* 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*

4. 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*

5. 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.*

#### Secretary IV

1. 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*

2. 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*

3. 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.*

#### 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 definitions for the drafting and clerical occupations shown in this bulletin 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 level designations used in this bulletin, however, differ from

those used in the area bulletins. The equivalent level designations for the occupations concerned are as follows:

Occupation	National Survey of Professional, Administrative, Technical, and Clerical Pay	Occupational Wage Surveys in Metropolitan Areas
Draftsman .....	I II III	C B A
Clerk, accounting .....	I II	B A
Clerk, file .....	I II III	C B A
Keypunch operator .....	I II	B A
Secretary .....	I II III IV	D C B A
Typist .....	I II	B A

## **Appendix D. Comparison of Average Annual Salaries in Private Industry, March 1972, with Corresponding Salary Rates for Federal Employees Under the General Schedule**

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 cooperation 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. The following table shows the surveyed jobs grouped by work levels equivalent to General Schedule grade levels.

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Comparison of average annual salaries in private industry,<sup>1</sup> March 1972, with salary rates for Federal employees under the General Schedule<sup>2</sup>

Occupation and class surveyed by BLS <sup>3</sup>	Average annual salaries in private industry <sup>4</sup>	Salary rates for Federal employees under the General Schedule <sup>2</sup>																					
		Grade <sup>5</sup>	Per annum rates and step <sup>6</sup>																				
			1	2	3	4	5	6	7	8	9	10											
Clerks, file I	\$4,602	GS 1	\$4,564	\$4,716	\$4,868	\$5,020	\$5,172	\$5,324	\$5,476	\$5,628	\$5,780	\$5,932											
Messengers (office boys and girls)	5,087																						
Clerks, file II	5,027	GS 2	5,166	5,338	5,510	5,682	5,854	6,026	6,198	6,370	6,542	6,714											
Keypunch operators I	5,756																						
Typists I	5,229																						
Clerks, accounting I	5,870	GS 3	5,828	6,022	6,216	6,410	6,604	6,798	6,992	7,186	7,380	7,574											
Clerks, file III	6,214																						
Draftsmen-tracers	6,288																						
Engineering technicians I	7,208																						
Keypunch operators II	6,539																						
Keypunch supervisors I	7,612																						
Stenographers, general	6,181																						
Typists II	6,093																						
Clerks, accounting II	7,537	GS 4	6,544	6,762	6,980	7,198	7,416	7,634	7,852	8,070	8,288	8,506											
Draftsmen I	7,550																						
Engineering technicians II	8,207																						
Keypunch supervisors II	8,516																						
Secretaries I	6,972																						
Stenographers, senior	7,074																						
Accountants I	9,067												GS 5	7,319	7,563	7,807	8,051	8,295	8,539	8,783	9,027	9,271	9,515
Auditors I	9,628																						
Buyers I	9,380																						
Chemists I	9,838																						
Draftsmen II	9,201																						
Engineers I	10,921																						
Engineering technicians III	9,507																						
Job analysts I	9,441																						
Keypunch supervisors III	9,325																						
Secretaries II	7,840																						
Keypunch supervisors IV	10,891	GS 6	8,153	8,425	8,697	8,969	9,241	9,513	9,785	10,057	10,329	10,601											
Secretaries I	8,436																						
Accountants II	10,655	GS 7	9,053	9,355	9,657	9,959	10,261	10,563	10,865	11,167	11,469	11,771											
Auditors II	10,924																						
Buyers II	10,922																						
Chemists II	11,092																						
Draftsmen III	11,492																						
Engineers II	12,071																						
Engineering technicians IV	10,788																						
Job analysts II	10,828																						
Keypunch supervisors V	12,322																						
Secretaries IV	9,092																						
Accountants III	11,879												GS 9	11,046	11,414	11,782	12,150	12,518	12,886	13,254	13,622	13,990	14,358
Attorneys I	13,498																						
Auditors III	12,881																						
Buyers III	13,117																						
Chemists III	12,901																						
Engineers III	13,682																						
Engineering technicians V	12,259																						
Job analysts III	12,526																						
Accountants IV	14,259	GS 11	13,309	13,753	14,197	14,641	15,085	15,529	15,973	16,417	16,861	17,305											
Attorneys II	14,640																						
Auditors IV	15,823																						
Buyers IV	15,555																						
Chemists IV	15,670																						
Chief accountants I	15,348																						
Directors of personnel I	14,313																						
Engineers IV	16,159																						
Job analysts IV	15,057																						

See footnotes at end of table.

Comparison of average annual salaries in private industry,<sup>1</sup> March 1972, with salary rates for Federal employees under the General Schedule<sup>2</sup> - Continued

Occupation and class surveyed by BLS <sup>3</sup>	Average annual salaries in private industry <sup>4</sup>	Salary rates for Federal employees under the General Schedule <sup>2</sup>										
		Grade <sup>5</sup>	Per annum rates and step <sup>6</sup>									
			1	2	3	4	5	6	7	8	9	10
Accountants V -----	\$17,368	GS 12	\$15,866	\$16,395	\$16,924	\$17,453	\$17,982	\$18,511	\$19,040	\$19,569	\$20,098	\$20,627
Attorneys III -----	18,392											
Chemists V -----	18,581											
Chief accountants II -----	17,419											
Directors of personnel II -----	16,401											
Engineers V -----	18,628											
Attorneys IV -----	23,443	GS 13	18,737	19,362	19,987	20,612	21,237	21,862	22,487	23,112	23,737	24,362
Chemists VI -----	21,277											
Chief accountants III -----	21,198											
Directors of personnel III -----	20,153											
Engineers VI -----	21,402											
Attorneys V -----	27,528	GS 14	21,960	22,692	23,424	24,156	24,888	25,620	26,352	27,084	27,816	28,548
Chemists VII -----	25,888											
Chief accountants IV -----	26,521											
Directors of personnel IV -----	24,738											
Engineers VII -----	24,367											
Attorneys VI -----	34,828	GS 15	25,583	26,436	27,289	28,142	28,995	29,848	30,701	31,554	32,407	33,260
Chemists VIII -----	30,827											
Engineers VIII -----	27,885											

<sup>1</sup> For scope of survey, see appendix A.

<sup>2</sup> Salary rates in effect in March 1972, reference date of the BLS survey, as established by Executive Order 11637 issued under authority of Public Law 92-210.

<sup>3</sup> For definitions, see appendix C.

<sup>4</sup> Survey findings as summarized in table 1 of this report.

<sup>5</sup> Corresponding grades in the General Schedule were supplied by the U.S. Civil Service Commission.

<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.

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 1972, there were no special rates for the occupations covered by this survey. Information on special rates may be obtained from the U.S. Civil Service Commission, Washington, D.C. 20415, or its regional offices.



# Order Form

TO:

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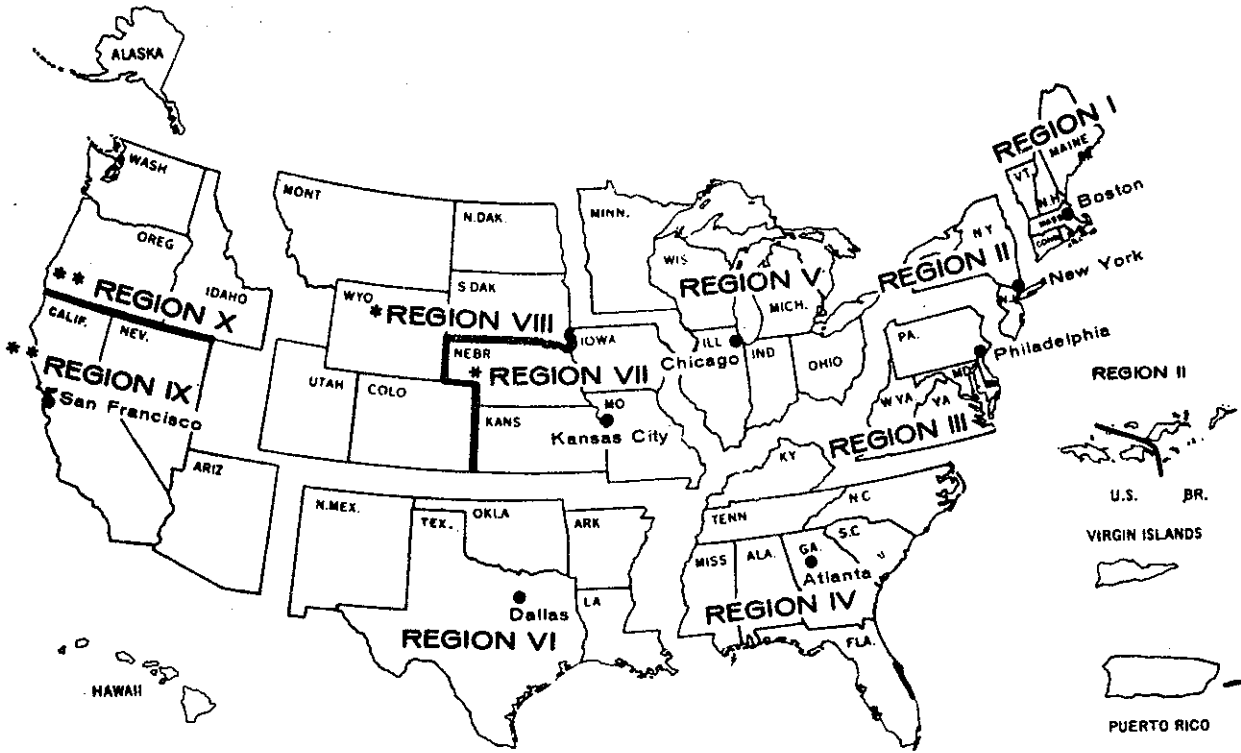
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