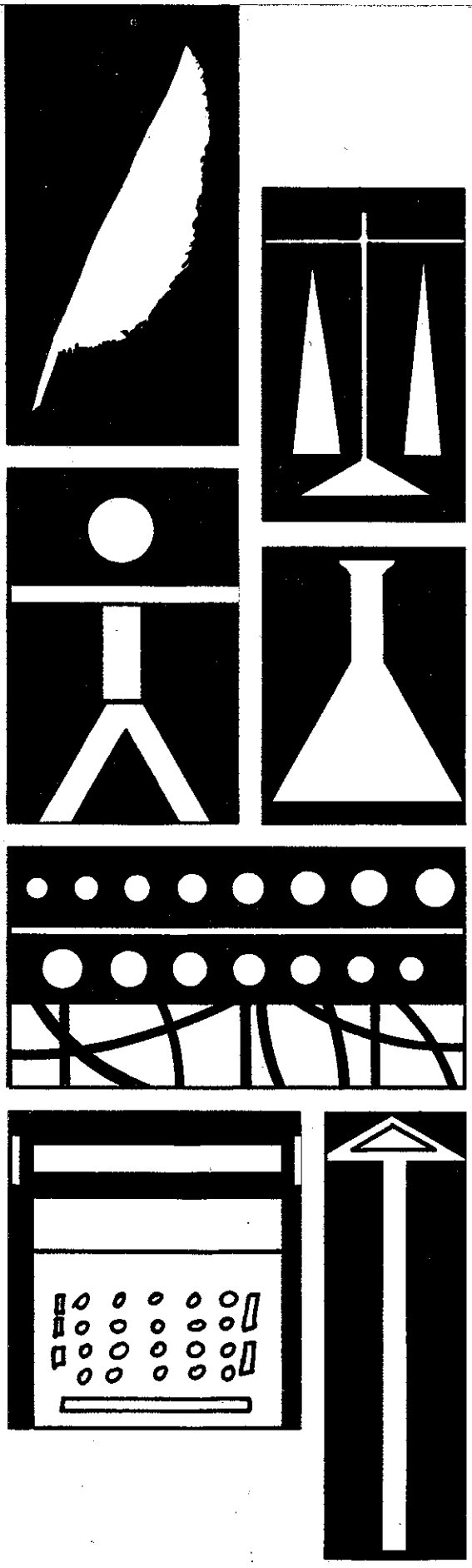

# *National Survey of Professional, Administrative, Technical, and Clerical Pay,*

*June 1969*

U.S. Department of Labor
Bureau of Labor Statistics
Bulletin 1654
February 1970

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

*June 1969*

Accountants and Auditors
Attorneys
Personnel Management
Buyers
Engineers and Chemists
Engineering Technicians
Draftsmen
Office Clerical

U.S. Department of Labor
George P. Shultz, Secretary

Bureau of Labor Statistics
Geoffrey H. Moore, Commissioner

Bulletin 1654
February 1970

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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, which relates to June 1969, 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 Bureau of the Budget and the Civil Service Commission. It provides a fund of broadly based information on salary levels and distributions in private employment. As such, the results are useful as a guide for salary administration purposes and for general economic analysis. In addition, 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). It should be emphasized that this survey, like any other salary survey, is in no sense calculated to supply mechanical answers to pay policy questions.

The occupations studied span a wide range of duties and responsibilities. Individually, 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. This necessitated limiting some occupations and work levels to specific elements that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Civil Service Commission collaborated in the preparation of the definitions.

The scope of the survey, in terms of industrial, geographic, and minimum establishment-size coverage remained the same as in the 1968 survey. The definitions for attorneys and directors of personnel were revised and managers of office services were not surveyed (see appendix B). The other definitions were the same as used in the 1968 survey.

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.

## Preface—Continued

This study was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Wage Structures. The analysis was prepared by Stephen H. Perloff. 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 office workers. (See the areas listed in the order form at the back of this bulletin.)

# Contents

# National Survey of Professional, Administrative, Technical, and Clerical Pay, June 1969


## Summary

Average salaries of workers in the occupations covered by this survey increased at a higher rate between 1968 and 1969 than for any year since the study was initiated. The 5.7 average percent increase for all white-collar occupations combined was slightly higher than the year earlier. Increases for 9 of 10 professional, administrative, and technical support occupations ranged from 5.4 to 7.2 percent, and averaged 5.8 percent. The average of the increases for clerical occupations was 5.5 percent, with 8 of the 9 advancing between 4.7 and 5.9 percent.[1]

Average monthly salaries for the 78 occupational work levels varied from $324 for clerks engaged in routine filing to $2,452 for the highest level in the attorney series. For engineers, the largest professional occupation surveyed, salaries ranged from $805 a month for recent college graduates in trainee positions to $2,002 for engineers VIII, whose typical responsibilities could include the direction of a highly complex and diversified engineering program consisting of many large and important projects. Monthly salaries averaged $412 for accounting clerks I, $489 for secretaries I, $549 for secretaries II, $433 for general stenographers, and $371 for typists I, the largest clerical groups represented in the survey. Average monthly salaries of engineering technicians ranged from $495 to $860 among five work levels. For most of the occupations, salary levels in metropolitan areas and in large establishments were higher than in 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 scheduled weekly hours were also generally lower in the finance industries.


## Characteristics of the Survey

This survey, the tenth in an annual series, provides nationwide salary averages and distributions for 78 work level categories covering 12 broad occupational groups.[2] 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.[3] The minimum size of establishment requirements varied by industry division roughly equalizing minimum size scope in terms of white-collar employment. These requirements ranged from 50 employees in the finance, insurance, and real estate division, which is almost entirely composed of white-collar workers, to 250 employees in the manufacturing and retail trade divisions.[4]

Definitions for the occupations included in this study provide for classification of employees according to appropriate work levels (or classes). Within each occupation, the work levels surveyed, usually designated by Roman numerals with class I assigned to the lowest level, are defined in terms of duties and responsibilities. Specific job factors determining classification, however, varied from occupation to occupation.

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1 To obtain the increase for all white-collar occupations, the average of increases for the 9 clerical occupations and for the 10 professional, administrative, and technical support occupations were averaged. This method differed from that used to compute increases in the tabulation on p. 4 for the clerical occupations. A forthcoming article in the Monthly Labor Review will further explain the method of computation and present similar information for the 1961-69 period.

2 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); and June 1968 (BLS Bulletin 1617, 1969).

3 February-March 1964 and earlier surveys were limited to establishments in metropolitan areas. For a full description of the scope of the 1969 survey, see appendix A.

4 February-March 1965 and earlier surveys were limited to establishments having 250 employees or more.

The number of work level definitions for each occupation varies from one for office boys or girls to eight each for chemists and engineers. More than one level of work was defined for survey in most of the occupations; however, some occupations were purposely defined 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 227 Standard Metropolitan Statistical Areas in the United States except Alaska and Hawaii, as revised through April 1967 by the Bureau of the Budget, the same number represented in the previous survey. About four-fifths of the total employment and almost nine-tenths of the employment in professional, administrative, clerical, and related occupations within scope of this survey were accounted for by establishments located in metropolitan areas. Almost nine-tenths of the employees in the selected occupations studied also were employed in metropolitan areas. The proportions varied more for the professional and administrative occupations than for the clerical and drafting occupations.

The selected occupations accounted for more than 1,638,000 employees or almost one-fourth of the estimated total employment in professional, administrative, clerical, and related occupations in all establishments within scope of the survey. Employment in the selected occupations varied widely, reflecting actual differences in employment in the various occupations, as well as differences in the range of duties and responsibilities covered by each occupational definition. Among the professional and administrative occupations, the eight levels of engineers accounted for a total of 397,131 employees, whereas, fewer than 5,000 were employed in each of three of the occupational categories as defined for the study (chief accountants, job analysts, and directors of personnel). (See table 1.) Four occupations at all work levels studied (accounting clerks, secretaries, stenographers, and typists) accounted for about 70 percent of the 889,003 employees in the clerical occupations studied. The selected drafting room occupations had aggregate employment of 90,300 and the five engineering technician levels together accounted for about 99,000.

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 of employment at each level were file clerks, keypunch operators, secretaries, stenographers, switchboard operators, and typists. Among tabulating-machine operators, women accounted for 57 percent at level I, 39 percent at level II, and 25 percent at level III. Office girls (47 percent) were outnumbered by office boys (53 percent). Women accounted for almost 25 percent of the draftsmen-tracers, but less than 5 percent of the three draftsmen levels combined. Engineering technicians at level I included almost 25 percent women, whereas levels II through V combined included only 3 percent. Women employees in the professional and administrative occupations usually were reported in the first few levels; those in which women accounted for as many as 10 but less than 40 percent of the employment were: Accountants I; job analysts I and II; chemists I and II; and buyers I.

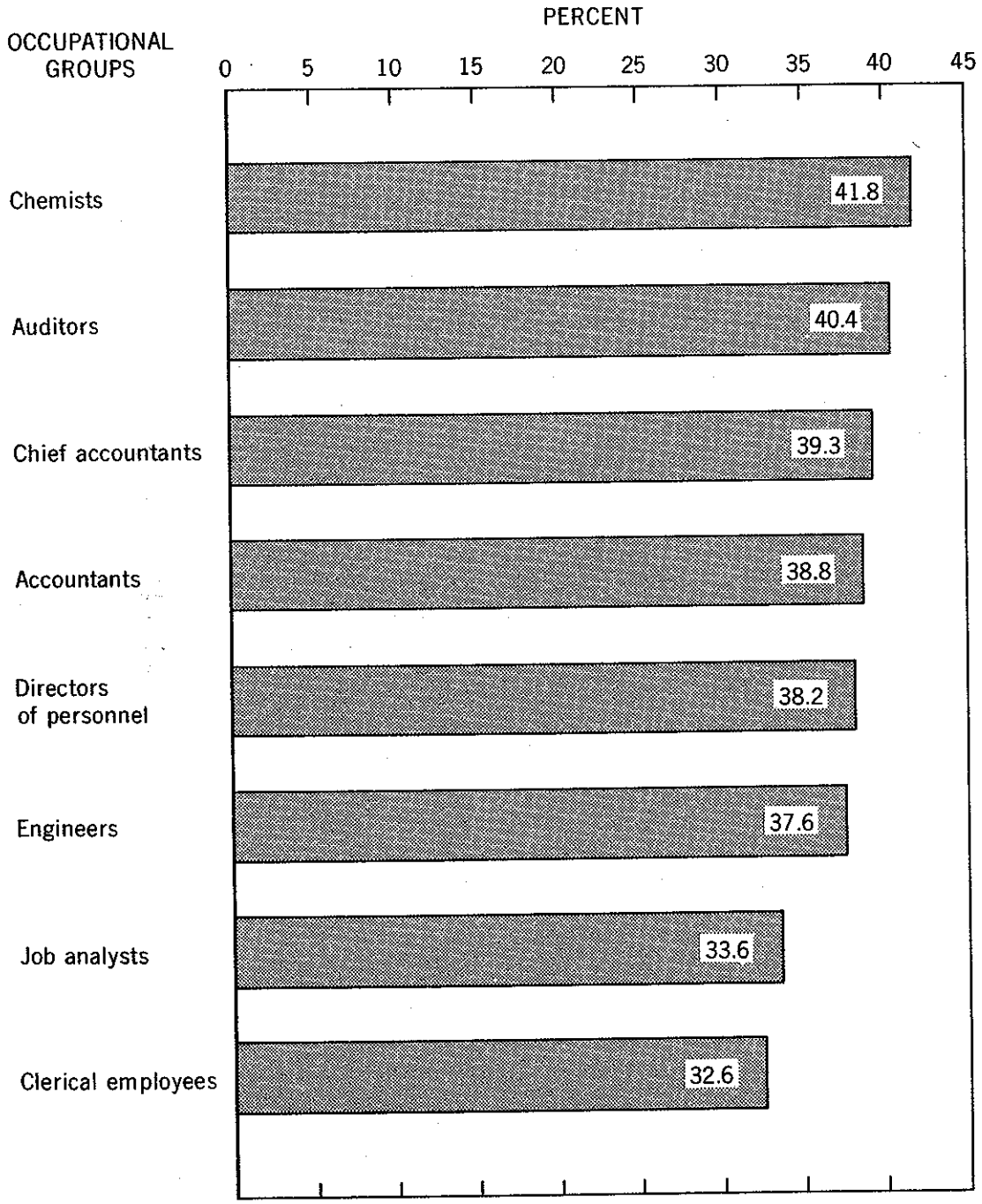
The general level of salaries for each occupation or work level is presented in this study as the arithmetic mean of all the individual salary rates. Median salaries, the amount below and above which the salaries for 50 percent of the employees are found, are also presented in tables 1, 2, and 3.

## Changes in Salary Levels

The following tabulation presents the salary increases that occurred between annual surveys since 1961 for the levels representing each of 12 occupational groups.[5] To determine the increases for each group, all levels of the occupation were combined using employment in the most recent year as a constant employment weight in both years to eliminate the effects of changes in the proportion of employees in the various work levels. Changes in the scope of the survey or in the occupational definitions were incorporated into the series as soon as two comparable periods were available. The increases were then linked together to obtain the changes that had occurred since this series began and to compute average annual rates of increase. The 1961–69 percent increases for selected occupations are shown in chart 1.

[5] 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.

## Chart 1. Rise in Average (Mean) Salaries for Selected Occupational Groups, 1961 to 1969



| Occupational group | Percent increases in average salaries | | | | | | | | Average annual rate of increase |
|---|---|---|---|---|---|---|---|---|---|
| | 1968 to 1969 | 1967 to 1968 | 1966 to 1967[1] | 1965 to 1966 | 1964 to 1965 | 1963 to 1964 | 1962 to 1963 | 1961 to 1962 | 1961 to 1969 |
| Accountants | 7.0 | 5.7 | 4.6 | 3.8 | 3.5 | 2.8 | 3.3 | 2.8 | 4.2 |
| Auditors | 7.2 | 5.5 | 4.8 | 3.8 | 3.9 | 3.1 | 3.6 | 2.9 | 4.3 |
| Chief accountants | 5.8 | 5.5 | 5.1 | 3.3 | 3.9 | 4.8 | 2.8 | 2.6 | 4.2 |
| Attorneys | (2) | 5.3 | 3.2 | 4.0 | 4.2 | 3.3 | 4.6 | 3.2 | (2) |
| Buyers | 6.6 | 4.9 | 4.2 | (3) | (3) | (3) | (3) | (3) | (3) |
| Job analysts | 2.1 | 7.0 | 3.4 | 5.4 | 4.3 | 3.5 | 2.6 | 1.4 | 3.7 |
| Directors of personnel | 5.4 | 5.4 | 3.8 | 3.6 | 3.5 | 4.6 | 3.0 | 3.7 | 4.1 |
| Chemists | 6.5 | 5.1 | 4.4 | 4.8 | 3.9 | 3.3 | 3.8 | 3.9 | 4.5 |
| Engineers | 6.2 | 5.4 | 4.3 | 3.7 | 3.2 | 2.9 | 4.4 | 2.6 | 4.1 |
| Engineering technicians | 5.8 | 5.1 | 3.7 | 2.8 | 2.3 | 3.6 | 2.9 | (4) | 43.8 |
| Drafting | 5.8 | 5.3 | 3.5 | 1.5 | (5) | 2.6 | 3.6 | 3.8 | (5) |
| Clerical | 5.3 | 5.0 | 4.6 | 3.0 | 2.4 | 2.9 | 2.6 | 2.9 | 3.6 |

[1] The 1966-67 percent increases shown in the 1968 survey report have been prorated to a 12-month period. A change in survey timing in 1967 resulted in changes over a 16-month period for clerical and drafting occupations, and a 15-month period for all others. The actual survey-to-survey increases were: Accountants--5.8; auditors--6.0; chief accountants--6.4; attorneys--4.0; buyers--5.2; job analysts--4.2; directors of personnel--4.7; chemists--5.5; engineers--5.4; engineering technicians--4.6; drafting--4.6; and clerical--6.1.

[2] Comparison over this period was not possible for attorneys because of changes in the number and definitions of work levels in 1969.

[3] Buyers were not surveyed before 1966.

[4] Engineering technicians were not surveyed before 1962; therefore, the average annual rate of increase relates to the 1962 to 1969 period.

[5] Comparison over this period was not possible for draftsmen because of changes in definitions of work levels in 1965.

In the 1968–69 period, increases in average salaries for 10 of the 11 occupational groups in which comparisons could be made ranged from 5.3 to 7.2 percent. Increases were generally higher than had been recorded for any other year period since 1961–62, when the Bureau began measuring occupational wage trends on a national basis.

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 the tabulation which follows. The year-to-year percent increases for each

| Work level categories[1] | Percent increases in average salaries | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1968 to 1969 | 1967 to 1968 | 1966 to 1967[2] | 1965 to 1966 | 1964 to 1965 | 1963 to 1964 | 1962 to 1963 | 1961 to 1962 | 1961 to 1969[2] |
| Group A (GS grades 1-4 in appendix D) | 5.5 | 5.1 | 4.5 | 2.9 | 2.2 | 2.7 | 2.7 | 2.8 | 32.2 |
| Group B (GS grades 5-10 in appendix D) | 6.5 | 5.8 | 4.8 | 3.7 | 3.3 | 2.6 | 4.0 | 2.6 | 38.5 |
| Group C (GS grades 11-15 in appendix D) | 5.9 | 4.7 | 4.1 | 4.2 | 4.2 | 3.5 | 3.7 | 3.5 | 39.3 |

[1] Work levels used for computing 1968 to 1969 increases are:

Group A--All levels of accounting clerks, file clerks, keypunch operators, stenographers, switchboard operators, tabulating-machine operators, and typists; and office boys or girls, secretaries I, draftsmen-tracers, draftsmen I, and engineering technicians I and II.

Group B--Accountants I, II, and III; auditors I, II, and III; buyers I, II, and III; chemists I, II, and III; draftsmen II and III; engineers I, II, and III; engineering technicians III, IV, and V; job analysts II and III; and secretaries II, III, and IV.

Group C--Accountants IV and V; auditors IV; buyers IV; chemists IV, V, VI, VII, and VIII; chief accountants I, II, III, and IV; directors of personnel I, II, III, and IV; engineers IV, V, VI, VII, and VIII; and job analysts IV.

[2] The 1966-67 percent changes shown in the 1968 survey report have been prorated to reflect a 12-month period. Because of the change in survey timing in 1967, survey-to-survey percent changes related to a period of more than 1 year (see footnote 1 of the preceding tabulation). The percent increases for each of the 3 groups based on the full period between surveys were:

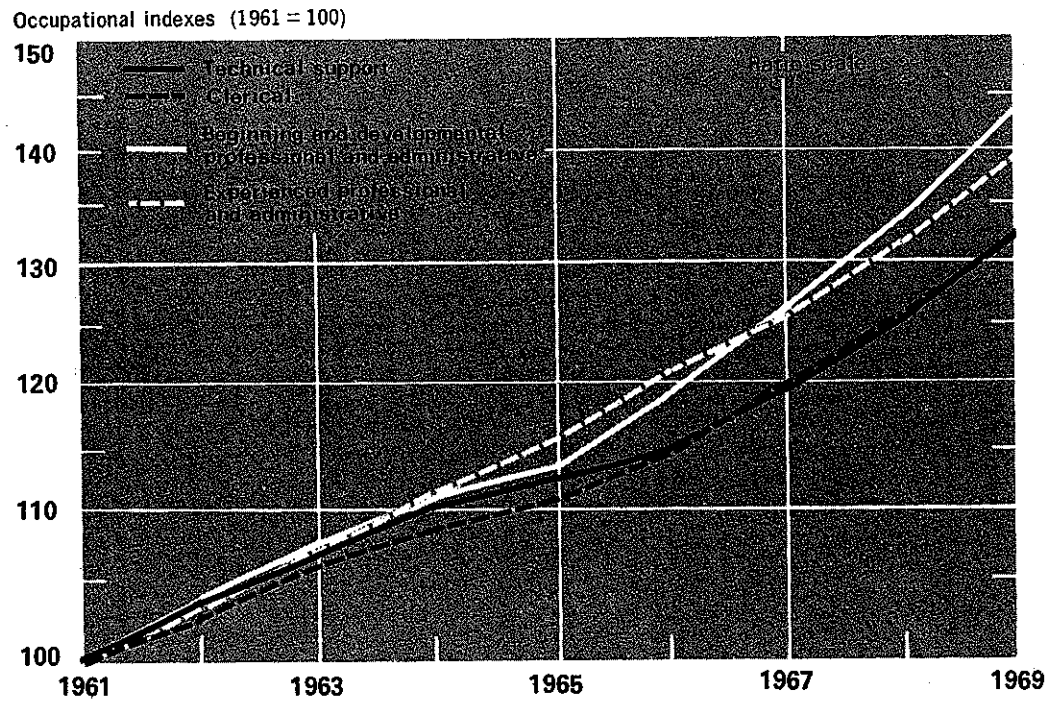
Group A--6.0; group B--6.0; and group C--5.1. The 1961-69 increases were obtained by linking together the eight 12-month increases.

group were determined by adding average salaries for all occupations in the group for 2 consecutive years, and dividing the later sum by the earlier sum. The resultant relative, less 100, shows the percent of increase. Changes in the scope of the survey or in the occupational definitions were incorporated into the series as soon as two comparable periods were available. The 8-year trends were obtained by linking changes for the individual periods.

From 1961 through 1966, average salaries increased more for group C than for groups A and B. Beginning with 1966–67, however, while all three groups showed successively higher year-to-year increases, group B reported larger increases than either group A or C.

Beginning with the 1965–66 period, pay for entry and developmental level professional and administrative positions increased at a faster pace than for clerical, technical support, or experienced professional and administrative positions, and is at a higher level relative to the 1961 base than salaries for the other groups. By grouping survey occupational levels into the four categories mentioned above, differences in the rate of change in average salaries since 1961 can be illustrated.[6] Relative salary levels were computed in the same manner as the percent increases in the foregoing table and were plotted using a ratio scale. (See chart 2.)

## Chart 2. Rates of Salary Changes for Selected Occupational Groups, 1961-69




Average salaries of clerical and technical support workers increased over the 8-year period by practically identical percentage amounts, but have not maintained pace with salaries for the two professional and administrative occupational groups. For the clerical and technical

[6] Work levels used for computing 1968-69 increases were:
Clerical - All clerical levels for which data are shown in table 1.
Technical support - All levels of draftsmen and engineering technicians for which data are shown in table 1.
Beginning and developmental professional and administrative - Accountants I and II; auditors I and II; job analysts 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; 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. A change in survey timing in 1967 resulted in a longer period between surveys.

support groups, salaries increased at an average annual rate of 3.6 percent over the period. For the two professional and administrative categories, the average rates of increase were 4.2 percent for the experienced group and 4.6 percent for the beginning and developmental employee group.

Changes in average salaries reflect not only general salary increases and merit or other increases given to individuals while in the same work level category, but they also may reflect other factors such as employee turnover, expansions or reductions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum of the salary range established for a work level, which would tend to lower the average, whereas, a reduction or a low turnover in the work force may have the opposite effect. Similarly, year-to-year promotions of employees to higher work levels of professional and administrative occupations may affect average salaries, lowering or raising the average. For example, 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; or vacancies may exist at the time of the resurvey. 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.[7]

## Average Salaries, June 1969

Average monthly salaries for the occupations included in this report ranged from $324 for file clerks I to $2,452 for the top level of attorney surveyed (table 1). 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.[8]

Among the five levels of **accountants** surveyed, average monthly salaries ranged from $667 for accountants I to $1,198 for accountants V. **Auditors** in the four levels defined for survey had average salaries ranging from $697 a month for auditors I to $1,094 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 $836 for accountants and $894 for auditors. Whereas almost 70 percent of the accountants were employed in manufacturing, this industry division employed slightly less than 40 percent of the auditors.[9] Other industry divisions which accounted for large numbers of auditors were finance, insurance, and real estate (29 percent), and public utilities (17 percent). The proportion of employees in each major industry division within scope of the survey is shown by occupation in table 7 and presented graphically in chart 5, page 13.

**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. Level classification was determined by the extent of delegated authority and responsibility; the technical complexity of the 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 $1,101 a month. Chief accountants IV,[10] who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a

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7 These types of occupations also may be subject to greater sampling error, as explained in the last paragraph of appendix A.

8 Classification of employees in the occupations and work levels surveyed was based on factors detailed in the definitions in appendix C.

9 Establishments primarily engaged in providing accounting and auditing services were excluded from the survey.

10 Although level V was surveyed, as defined in appendix C, too few employees met requirements for this level to warrant presentation of salary figures.

company with numerous and varied functions and work processes (directing as many as 40 accountants), averaged $1,716 a month. Almost three-fifths of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries and one-sixth were in the finance, insurance, and real estate division.

**Attorneys** were classified into six levels based upon the difficulty of their assignments and their responsibilities.[11] 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 $918 a month. Attorneys in the top level surveyed, level VI, earned an average of $2,452 a month.[12] 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 almost one-half of the attorneys; manufacturing industries employed one-fourth; and a high proportion of the remainder were employed in public utilities (almost one-fifth).

**Buyers** averaged $656 a month at level I, which included those who purchased "off-the-shelf" and readily available items and services from local sources. Buyers III, who purchased specialized and technical items, materials, or services were paid monthly salaries averaging $912. Buyers V, who averaged $1,306, purchased unusually large quantities, or items of extraordinary technical complexity or unusually high value. Manufacturing industries accounted for 86 percent of the buyers in the five levels.

In the personnel management field, four work levels of **job analysts** and five levels of **directors of personnel** were studied.[13] Job analysts I, defined to include trainees under immediate supervision, averaged $678, compared with $1,069 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 $987 for level I to $1,715 for level IV. Manufacturing industries accounted for 71 percent of both the job analysts and directors of personnel included in the study; the finance, insurance, and real estate industries ranked next, with 18 percent of the job analysts and 12 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 problem areas where the engineer or chemist was a recognized authority and where solutions would represent a major scientific or technological advance.[14] Average monthly salaries ranged from $805 for engineers I to $2,002 for engineers VIII, and from $728 for chemists I to $2,258 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 4 percent, and at level VIII, the average salaries of chemists exceeded those for engineers by 13 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 80 percent of all engineers and 91 percent of all chemists; public utilities, 9 and less than 2 percent, respectively; and the surveyed engineering and scientific services employed virtually all of the others.

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11 Establishments primarily engaged in offering legal advice or legal services were excluded from the survey.

12 See appendix B for changes in attorney definitions adopted in the current survey.

13 Although directors of personnel V were surveyed, as defined in appendix D, too few employees met requirements for this level to warrant presentation of salary figures.

14 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.

By definition, the five-level series for **engineering technicians** was limited to employees providing semiprofessional technical support to engineers engaged in such areas as research, design, development, testing, or manufacturing process improvement, and whose work 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 $495. Engineering technicians V, the highest level surveyed, averaged $860 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 $670 and $775, respectively. As might be expected, nearly all of the technicians as defined were employed in manufacturing (76 percent) and in the scientific services industries studied (17 percent). Although the ratio of such technicians to engineers studied was about 1 to 4 in all manufacturing industries, higher 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 $442 for draftsmen-tracers and ranged from $538 to $813 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 draftsmen 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 78 percent in manufacturing, 7 percent in public utilities, and 13 percent in the selected engineering and scientific services industries studied.

Among the 21 **clerical jobs** included in this study, average monthly salaries for secretaries, the most heavily populated clerical occupation studied, ranged from $489 at level I to $641 at level IV. For other large groups, average salaries of $433 and $490 were reported for general and senior stenographers; $412 and $537 for accounting clerks I and II; and the two levels of typists averaged $371 and $430. 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 16 of the 21 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 14 of the clerical work levels, and men accounted for one-half or more in three (tabulating-machine operators II and III, and office boys or girls).

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 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 60 of the 78 work levels and as much as 3 but less than 5 percent in 17 additional levels. The weighted average salary for chemist VIII exceeded the median by 6.6 percent.

## 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). Employment in the survey occupations in metropolitan areas accounted for almost nine-tenths of the total nationwide employment reported in these occupations. The proportions varied, however, among occupations and work levels. Nearly all of the attorneys at each level, for example, were employed in metropolitan areas, whereas the proportion of chief accountants and directors

of personnel for all levels combined was approximately four-fifths and seven-tenths, respectively, with a smaller proportion at the lowest levels. In 63 of the 78 work levels studied, 85 percent or more of the employment was in metropolitan areas. It is apparent, therefore, that although average salaries usually were lower in the nonmetropolitan counties, in those work levels in which nearly all of the employment was in metropolitan areas, nonmetropolitan counties could have little effect upon the averages for all establishments combined. Only in five of the 78 work levels studied were average salaries more than 1.5 (but not more than 3.0) percent higher in metropolitan areas than in all areas combined; in all of these cases the proportion of the total employment within nonmetropolitan counties ranged approximately between one-tenth and one-third.

Increases in average salaries in metropolitan area establishments from June 1968 to June 1969 were within one-half percentage point of increases reported for all areas studied in 58 of the 70 levels for which year-to-year increases were reported. The year-to-year increases in metropolitan areas compared with all areas were larger for 40, smaller for 25 levels, and the same for five.

## Salary Levels in Large Establishments

It was possible to present separate data for 72 of the 78 occupation work levels for all establishments with 2,500 employees or more (table 3). Comparisons between employments and relative salary levels in these establishments and all establishments combined also are presented. Establishments employing 2,500 or more accounted for almost three-eighths of the total employment in professional, administrative, supervisory, and clerical occupations within scope of the survey, and nearly two-fifths of total employment in the selected occupations studied. Large establishments accounted for varying proportions of total employment in the 72 occupational work levels shown in table 3, ranging from 16 to 75 percent (directors of personnel III and job analysts IV, respectively).

The salary levels in large establishments, expressed as a percent of levels in all establishments combined ranged from 99 for buyers IV, job analysts III, and chemists VII and VIII to 116 for directors of personnel III. As shown in the following tabulation, salary averages for large establishments exceeded the all establishment averages by 5 percent or more in 19 of 21 clerical jobs, but in only 19 of 51 nonclerical jobs.

| Pay levels in large establishments as percent of all establishment average | Number of job categories | |
|---|---|---|
| | Professional, administrative, and technical | Clerical |
| Total | 51 | 21 |
| 95-100 | 4 | - |
| 101-104 | 28 | 2 |
| 105-109 | 13 | 11 |
| 110 and over | 6 | 8 |

The relative salary levels in large establishments tended to be highest for work levels in which such establishments accounted for the smallest proportion of the total employment. Thus, while the degree of employment concentration in large establishments ranged from 17 to 43 percent for clerical jobs, these firms contributed 40 percent or more of the employment in almost three-fifths of the nonclerical jobs.

## Salary Distributions

Percent distributions of employees by monthly salaries are presented for the professional and administrative occupations in table 4, and for engineering technicians in table 5; distributions by weekly salaries are shown for employees in drafting and clerical occupations

in table 6.[15] Within almost all of the 78 occupation work levels, salary rates for some of the highest paid employees were twice those of the lowest paid employees. The absolute spread between highest and lowest paid workers within given work levels tended to widen with each successive work level for most occupations in which two levels or more were surveyed. All occupations in which two levels or more of work were surveyed showed a substantial degree of overlapping of individual salaries between work levels in the same occupation. Ranges in salary rates of employees in established pay grades or work levels within salary structures of individual firms also exhibited substantial overlapping.

The middle 50 and 80 percent of the 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.

| Occupational group | Total | Distribution of work levels by degree of dispersion (salary range of middle 50 percent of employees expressed as a percent of median salary) | | | | |
|---|---|---|---|---|---|---|
| | | Under 15 | 15 and under 20 | 20 and under 25 | 25 and under 30 | 30 and over |
| All levels | 78 | 3 | 23 | 33 | 18 | 1 |
| Accountants | 5 | | 4 | 1 | | |
| Auditors | 4 | | | 4 | | |
| Chief accountants | 4 | | | 3 | 1 | |
| Attorneys | 6 | | | 3 | 3 | |
| Buyers | 5 | | 1 | 4 | | |
| Job analysts | 4 | | 3 | 1 | | |
| Directors of personnel | 4 | | | 2 | 2 | |
| Chemists | 8 | | 5 | 1 | 1 | 1 |
| Engineers | 8 | 3 | 4 | 1 | | |
| Engineering technicians | 5 | | 4 | 1 | | |
| Drafting | 4 | | 1 | 2 | 1 | |
| Clerical | 21 | | 1 | 10 | 10 | |

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 on the same basis and eliminated extreme low and high salaries from each comparison. As shown in the tabulation, the degree of dispersion was between 15 and 30 percent of the median salary in all but four work levels (8.9, 10.9, and 14.9 for engineers I, II, and III, respectively, and 33.1 for chemists VIII). This relative spread tended to be smaller for the professional, administrative, and engineering technician work levels than for the clerical and drafting levels 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).[16] As pointed out earlier (and indicated in table 7 and chart 5), employment in the various industries within the scope of the survey varies considerably from occupation to occupation. These variations in employment are reflected also in salary levels and distributions to the extent that salaries differ by industry, as explained in the following section.

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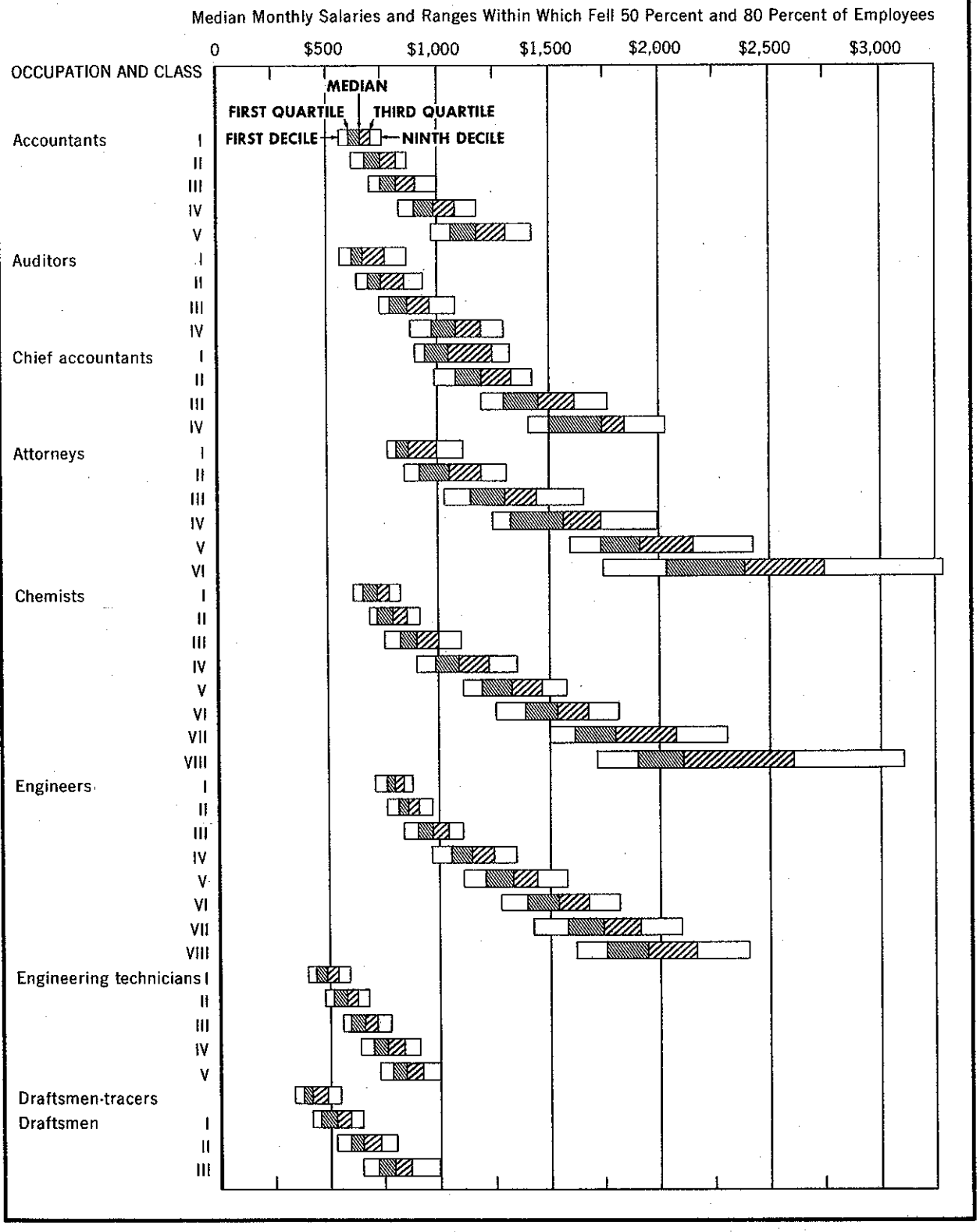
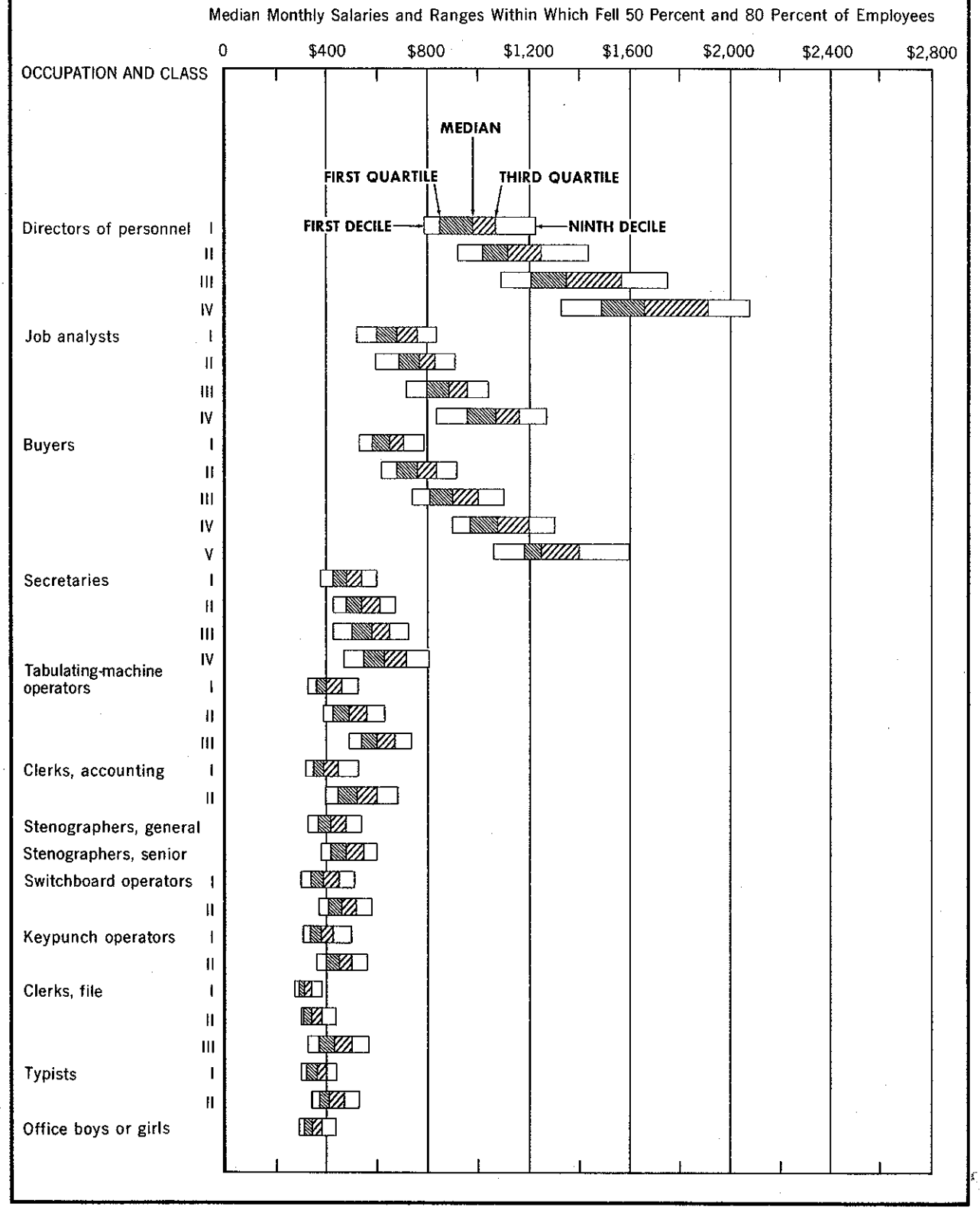
[15] Technical considerations dictated the summarization of employee distributions by weekly salaries in the case of the drafting and clerical jobs.

[16] For an analysis of interarea pay differentials in clerical salaries, see Wages and Related Benefits, Part II: Metropolitan Areas, United States and Regional Summaries, 1967-68 (BLS Bulletin 1578-87, 1969).

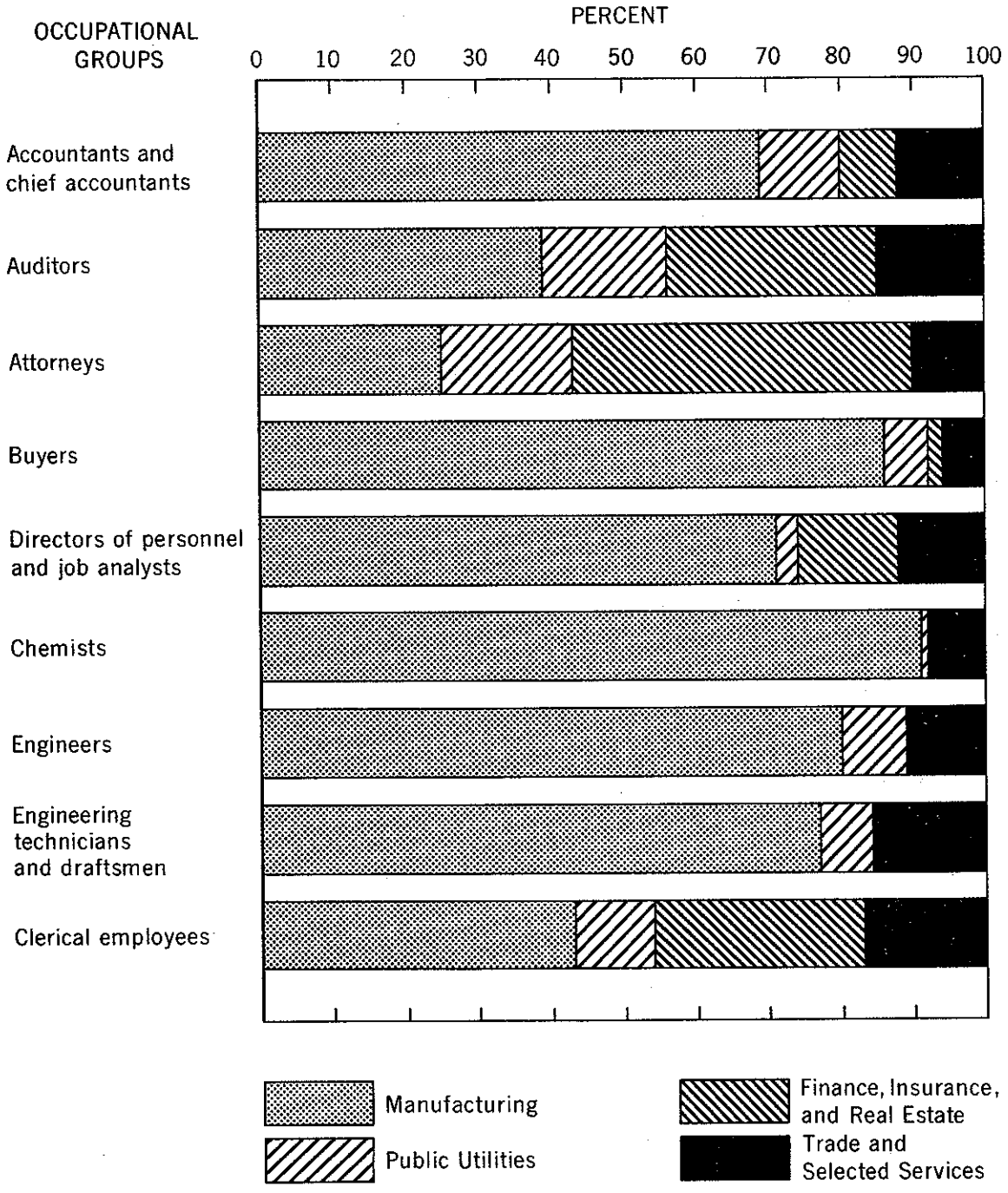
## Chart 3. Salaries in Professional and Technical Occupations, June 1969



## Chart 4. Salaries in Administrative and Clerical Occupations, June 1969



## Chart 5. Relative Employment in Selected Occupational Groups by Industry Division, June 1969



## Pay Differences by Industry

The survey was planned to permit publication of national salary estimates by level of work. By combining the data for all levels of work studied in each occupation, it was possible to present comparisons between relative salary levels in major industry divisions and all industries combined (table 8). To obtain relative salary levels, the all-industry employment in each work level was used as a constant employment weight to compute aggregates in each industry division to eliminate the influence of differences among industry divisions in the proportion of employment in various work levels. The industry division aggregates for work levels within an occupation were combined and expressed as percentages of the corresponding aggregates in all industries combined.

The relative salary levels for most of the professional, administrative, engineering technician, and drafting occupations tended to be nearest 100 percent of the all-industry levels in manufacturing industries which had 58 to 91 percent of the employees in 9 of the 11 occupations. Relative salary levels in public utilities and manufacturing industries generally kept pace. For engineers, however, the figures were 96 percent for public utilities, 101 percent for manufacturing, and 97 percent for selected services. Conversely, for engineering technicians, public utilities showed a relative salary of 106, while manufacturing reported 99, and selected services were 101. Relative salary levels for 8 of the 9 clerical occupations were highest in the public utilities industries.

For all of the clerical occupations studied, and for a majority of the professional and administrative occupations in which comparisons could be made, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. It is apparent, therefore, that in those occupations in which retail trade and the finance industries include a substantial proportion of the total employment, the average salaries for all industries combined are lowered, and the relative levels in industries such as manufacturing and public utilities tend to be well above 100 percent of the all-industry level. For example, relative pay levels for file clerks of 108 percent in manufacturing and 120 percent in public utilities reflect the influence of lower salaries for the high proportion (55 percent) of all-industry employment included in the finance industries. The finance industries, however, also reported lower average scheduled weekly hours than in the other industries surveyed, as shown in table 9.

## Average Scheduled Weekly Hours

The length of the scheduled 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 force was used as the scheduled 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 than in the other industry divisions. Thus, in finance industries, workweeks averaged 38 hours for a majority of the occupations, compared to 39 or 39.5 hours in the remaining industries surveyed. [17]

[17] For additional information on scheduled weekly hours of office workers employed in metropolitan areas, see Wages and Related Benefits, Part I: 85 Metropolitan Areas, 1967-68 (BLS Bulletin 1575-87, 1969).

## Table 1. Average Salaries: United States

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] United States except Alaska and Hawaii, June 1969, and percent increase in mean salaries during the year[2])

| Occupation and class (See definitions in appendix C) | Number of employees[3] | Monthly salaries[4] | | | | Annual salaries[4] | | | | Percent increase in mean salaries[2] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range[5] | | Mean | Median | Middle range[5] | | |
| | | | | First quartile | Third quartile | | | First quartile | Third quartile | |
| **Accountants and auditors** | | | | | | | | | | |
| Accountants I | 5,579 | $667 | $668 | $617 | $717 | $8,002 | $8,016 | $7,404 | $8,604 | 7.4 |
| Accountants II | 11,138 | 751 | 750 | 683 | 820 | 9,013 | 9,000 | 8,196 | 9,840 | 8.9 |
| Accountants III | 24,550 | 836 | 825 | 750 | 910 | 10,029 | 9,900 | 9,000 | 10,920 | 7.1 |
| Accountants IV | 16,629 | 997 | 990 | 900 | 1,083 | 11,967 | 11,880 | 10,800 | 12,996 | 6.2 |
| Accountants V | 6,451 | 1,198 | 1,187 | 1,065 | 1,311 | 14,373 | 14,244 | 12,780 | 15,732 | 6.2 |
| Auditors I | 719 | 697 | 673 | 625 | 778 | 8,367 | 8,076 | 7,500 | 9,336 | 9.4 |
| Auditors II | 1,848 | 774 | 750 | 691 | 850 | 9,287 | 9,000 | 8,292 | 10,200 | 6.7 |
| Auditors III | 4,193 | 894 | 875 | 793 | 976 | 10,726 | 10,500 | 9,516 | 11,712 | 7.5 |
| Auditors IV | 2,295 | 1,094 | 1,083 | 982 | 1,200 | 13,125 | 12,996 | 11,784 | 14,400 | 6.7 |
| Chief accountants I | 731 | 1,101 | 1,052 | 958 | 1,250 | 13,212 | 12,624 | 11,496 | 15,000 | 7.5 |
| Chief accountants II | 1,288 | 1,220 | 1,208 | 1,085 | 1,333 | 14,637 | 14,496 | 13,020 | 15,996 | 3.6 |
| Chief accountants III | 756 | 1,476 | 1,465 | 1,300 | 1,625 | 17,714 | 17,580 | 15,600 | 19,500 | 6.9 |
| Chief accountants IV | 325 | 1,716 | 1,740 | 1,500 | 1,848 | 20,586 | 20,880 | 18,000 | 22,176 | 8.1 |
| **Attorneys** | | | | | | | | | | |
| Attorneys I | 568 | 918 | 875 | 824 | 999 | 11,020 | 10,500 | 9,888 | 11,988 | (6) |
| Attorneys II | 1,316 | 1,065 | 1,050 | 916 | 1,195 | 12,780 | 12,600 | 10,992 | 14,340 | (6) |
| Attorneys III | 1,640 | 1,323 | 1,309 | 1,150 | 1,458 | 15,879 | 15,708 | 13,800 | 17,496 | (6) |
| Attorneys IV | 1,626 | 1,597 | 1,570 | 1,337 | 1,749 | 19,163 | 18,840 | 16,044 | 20,988 | (6) |
| Attorneys V | 655 | 1,974 | 1,920 | 1,749 | 2,166 | 23,685 | 23,040 | 20,988 | 25,992 | (6) |
| Attorneys VI | 469 | 2,452 | 2,395 | 2,042 | 2,750 | 29,421 | 28,740 | 24,504 | 33,000 | (6) |
| **Buyers** | | | | | | | | | | |
| Buyers I | 2,708 | 656 | 650 | 583 | 715 | 7,877 | 7,800 | 6,996 | 8,580 | 7.3 |
| Buyers II | 9,884 | 772 | 760 | 685 | 842 | 9,269 | 9,120 | 8,220 | 10,104 | 7.0 |
| Buyers III | 13,809 | 912 | 902 | 817 | 1,000 | 10,942 | 10,824 | 9,804 | 12,000 | 6.6 |
| Buyers IV | 4,909 | 1,096 | 1,080 | 978 | 1,208 | 13,151 | 12,960 | 11,736 | 14,496 | 5.8 |
| Buyers V | 234 | 1,306 | 1,250 | 1,181 | 1,404 | 15,675 | 15,000 | 14,172 | 16,848 | (7) |
| **Personnel management** | | | | | | | | | | |
| Job analysts I | 129 | 678 | 683 | 600 | 760 | 8,137 | 8,196 | 7,200 | 9,120 | (7) |
| Job analysts II | 319 | 757 | 750 | 695 | 835 | 9,081 | 9,000 | 8,340 | 10,020 | 3.0 |
| Job analysts III | 648 | 883 | 890 | 800 | 963 | 10,595 | 10,680 | 9,600 | 11,556 | 1.9 |
| Job analysts IV | 573 | 1,069 | 1,077 | 963 | 1,165 | 12,830 | 12,924 | 11,556 | 13,980 | 2.0 |
| Directors of personnel I | 1,101 | 987 | 980 | 850 | 1,077 | 11,847 | 11,760 | 10,200 | 12,924 | 7.4 |
| Directors of personnel II | 2,105 | 1,160 | 1,125 | 1,020 | 1,250 | 13,925 | 13,500 | 12,240 | 15,000 | 5.4 |
| Directors of personnel III | 1,142 | 1,395 | 1,355 | 1,211 | 1,575 | 16,738 | 16,260 | 14,532 | 18,900 | 4.6 |
| Directors of personnel IV | 409 | 1,715 | 1,666 | 1,491 | 1,925 | 20,585 | 19,992 | 17,892 | 23,100 | 4.4 |
| **Chemists and engineers** | | | | | | | | | | |
| Chemists I | 1,949 | 728 | 735 | 660 | 785 | 8,736 | 8,820 | 7,920 | 9,420 | 8.4 |
| Chemists II | 4,577 | 802 | 800 | 733 | 860 | 9,626 | 9,600 | 8,796 | 10,320 | 7.8 |
| Chemists III | 9,084 | 922 | 900 | 833 | 1,000 | 11,063 | 10,800 | 9,996 | 12,000 | 8.6 |
| Chemists IV | 11,059 | 1,113 | 1,095 | 990 | 1,235 | 13,359 | 13,140 | 11,880 | 14,820 | 4.8 |
| Chemists V | 8,797 | 1,340 | 1,333 | 1,208 | 1,470 | 16,080 | 15,996 | 14,496 | 17,640 | 5.4 |
| Chemists VI | 4,486 | 1,544 | 1,540 | 1,399 | 1,683 | 18,529 | 18,480 | 16,788 | 20,196 | 7.0 |
| Chemists VII | 1,848 | 1,873 | 1,805 | 1,627 | 2,083 | 22,473 | 21,660 | 19,524 | 24,996 | 9.3 |
| Chemists VIII | 534 | 2,258 | 2,118 | 1,916 | 2,616 | 27,092 | 25,416 | 22,992 | 31,392 | 6.6 |
| Engineers I | 13,848 | 805 | 808 | 773 | 845 | 9,662 | 9,696 | 9,276 | 10,140 | 7.1 |
| Engineers II | 34,224 | 871 | 869 | 824 | 919 | 10,455 | 10,428 | 9,888 | 11,028 | 7.0 |
| Engineers III | 88,587 | 975 | 975 | 900 | 1,045 | 11,701 | 11,700 | 10,800 | 12,540 | 6.7 |
| Engineers IV | 121,882 | 1,158 | 1,150 | 1,054 | 1,251 | 13,893 | 13,800 | 12,648 | 15,012 | 6.1 |
| Engineers V | 79,139 | 1,342 | 1,330 | 1,216 | 1,451 | 16,107 | 15,960 | 14,592 | 17,412 | 5.8 |
| Engineers VI | 41,032 | 1,548 | 1,540 | 1,400 | 1,680 | 18,577 | 18,480 | 16,800 | 20,160 | 7.0 |
| Engineers VII | 14,953 | 1,767 | 1,755 | 1,586 | 1,926 | 21,199 | 21,060 | 19,032 | 23,112 | 4.9 |
| Engineers VIII | 3,466 | 2,002 | 1,950 | 1,761 | 2,173 | 24,020 | 23,400 | 21,132 | 26,076 | 3.2 |
| **Engineering technicians** | | | | | | | | | | |
| Engineering technicians I | 6,100 | 495 | 498 | 443 | 547 | 5,942 | 5,976 | 5,316 | 6,564 | 6.4 |
| Engineering technicians II | 15,752 | 584 | 582 | 526 | 633 | 7,011 | 6,984 | 6,312 | 7,596 | 5.3 |
| Engineering technicians III | 28,185 | 670 | 665 | 608 | 726 | 8,040 | 7,980 | 7,296 | 8,712 | 5.8 |
| Engineering technicians IV | 32,337 | 775 | 765 | 704 | 840 | 9,300 | 9,180 | 8,448 | 10,080 | 6.1 |
| Engineering technicians V | 16,903 | 860 | 850 | 791 | 925 | 10,321 | 10,200 | 9,492 | 11,100 | 5.4 |

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,[1] United States except Alaska and Hawaii, June 1969, and percent increase in mean salaries during the year[2])

| Occupation and class (See definitions in appendix C) | Number of employees[3] | Monthly salaries[4] | | | | Annual salaries[4] | | | | Percent increase in mean salaries[2] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range[5] | | Mean | Median | Middle range[5] | | |
| | | | | First quartile | Third quartile | | | First quartile | Third quartile | |
| **Draftsmen** | | | | | | | | | | |
| Draftsmen-tracers | 5,818 | $442 | $428 | $382 | $491 | $5,301 | $5,131 | $4,579 | $5,897 | 7.1 |
| Draftsmen I | 21,501 | 538 | 530 | 466 | 598 | 6,454 | 6,361 | 5,589 | 7,175 | 5.6 |
| Draftsmen II | 34,292 | 666 | 659 | 591 | 735 | 7,988 | 7,913 | 7,091 | 8,818 | 5.8 |
| Draftsmen III | 28,689 | 813 | 795 | 723 | 878 | 9,755 | 9,542 | 8,674 | 10,532 | 5.7 |
| **Clerical** | | | | | | | | | | |
| Clerks, accounting I | 89,004 | 412 | 395 | 350 | 453 | 4,941 | 4,739 | 4,199 | 5,436 | 4.9 |
| Clerks, accounting II | 57,324 | 537 | 525 | 458 | 607 | 6,448 | 6,299 | 5,495 | 7,285 | 4.4 |
| Clerks, file I | 31,134 | 324 | 313 | 293 | 345 | 3,883 | 3,754 | 3,519 | 4,139 | 5.7 |
| Clerks, file II | 29,488 | 361 | 348 | 317 | 388 | 4,328 | 4,171 | 3,806 | 4,661 | 5.3 |
| Clerks, file III | 8,978 | 443 | 430 | 374 | 500 | 5,320 | 5,159 | 4,484 | 5,996 | 5.2 |
| Keypunch operators I | 62,838 | 400 | 387 | 348 | 435 | 4,797 | 4,640 | 4,171 | 5,219 | 5.1 |
| Keypunch operators II | 45,568 | 457 | 450 | 403 | 504 | 5,482 | 5,396 | 4,839 | 6,048 | 5.6 |
| Office boys or girls | 28,066 | 357 | 343 | 313 | 384 | 4,279 | 4,119 | 3,754 | 4,609 | 6.7 |
| Secretaries I | 87,275 | 489 | 483 | 433 | 543 | 5,869 | 5,798 | 5,191 | 6,518 | 5.5 |
| Secretaries II | 82,602 | 549 | 543 | 482 | 614 | 6,586 | 6,518 | 5,788 | 7,366 | 5.0 |
| Secretaries III | 48,037 | 586 | 584 | 505 | 655 | 7,032 | 7,008 | 6,059 | 7,863 | 5.1 |
| Secretaries IV | 15,051 | 641 | 630 | 551 | 725 | 7,697 | 7,560 | 6,611 | 8,698 | 5.9 |
| Stenographers, general | 71,379 | 433 | 424 | 374 | 481 | 5,192 | 5,084 | 4,484 | 5,771 | 6.8 |
| Stenographers, senior | 56,212 | 490 | 480 | 425 | 553 | 5,884 | 5,759 | 5,106 | 6,631 | 4.8 |
| Switchboard operators I | 14,035 | 402 | 391 | 346 | 452 | 4,822 | 4,693 | 4,151 | 5,423 | 5.1 |
| Switchboard operators II | 10,826 | 474 | 469 | 416 | 528 | 5,689 | 5,631 | 4,991 | 6,340 | 4.5 |
| Tabulating-machine operators I | 5,297 | 418 | 402 | 360 | 465 | 5,021 | 4,823 | 4,317 | 5,579 | 6.8 |
| Tabulating-machine operators II | 10,130 | 505 | 494 | 435 | 565 | 6,060 | 5,927 | 5,219 | 6,782 | 4.9 |
| Tabulating-machine operators III | 5,058 | 614 | 604 | 546 | 673 | 7,371 | 7,243 | 6,550 | 8,082 | 5.2 |
| Typists I | 85,292 | 371 | 361 | 326 | 400 | 4,451 | 4,328 | 3,911 | 4,799 | 5.8 |
| Typists II | 45,409 | 430 | 417 | 378 | 470 | 5,155 | 5,005 | 4,536 | 5,639 | 5.4 |

[1] For scope of study, see table in appendix A.

[2] For limitations of percent increase in average salaries as a measure of change in salary scales, see p. 6 of text.

[3] 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 p. 33.

[4] 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.

[5] The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

[6] Because of changes in the number and definitions of levels between surveys, year-to-year comparisons for attorneys could not be presented.

[7] Not reported in 1968.

## Table 2. Average Salaries: Metropolitan Areas

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas, [1] June 1969)

| Occupation and class (See definitions in appendix C) | Number of employees [2] | Monthly salaries [3] | | | | Annual salaries [3] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range [4] | | Mean | Median | Middle range [4] | |
| | | | | First quartile | Third quartile | | | First quartile | Third quartile |
| **Accountants and auditors** | | | | | | | | | |
| Accountants I | 4,759 | $670 | $675 | $625 | $718 | $8,044 | $8,100 | $7,500 | $8,616 |
| Accountants II | 9,925 | 754 | 750 | 685 | 825 | 9,042 | 9,000 | 8,220 | 9,900 |
| Accountants III | 20,949 | 840 | 826 | 750 | 916 | 10,075 | 9,912 | 9,000 | 10,992 |
| Accountants IV | 14,296 | 999 | 990 | 900 | 1,086 | 11,994 | 11,880 | 10,800 | 13,032 |
| Accountants V | 5,621 | 1,199 | 1,191 | 1,071 | 1,313 | 14,394 | 14,292 | 12,852 | 15,756 |
| Auditors I | 654 | 708 | 680 | 635 | 789 | 8,495 | 8,160 | 7,620 | 9,468 |
| Auditors II | 1,741 | 776 | 750 | 691 | 850 | 9,316 | 9,000 | 8,292 | 10,200 |
| Auditors III | 3,904 | 895 | 875 | 793 | 976 | 10,744 | 10,500 | 9,516 | 11,712 |
| Auditors IV | 2,110 | 1,097 | 1,083 | 983 | 1,200 | 13,161 | 12,996 | 11,796 | 14,400 |
| Chief accountants I | 615 | 1,107 | 1,052 | 958 | 1,250 | 13,285 | 12,624 | 11,496 | 15,000 |
| Chief accountants II | 951 | 1,232 | 1,235 | 1,100 | 1,333 | 14,786 | 14,820 | 13,200 | 15,996 |
| Chief accountants III | 695 | 1,485 | 1,475 | 1,300 | 1,644 | 17,826 | 17,700 | 15,600 | 19,728 |
| Chief accountants IV | 288 | 1,714 | 1,749 | 1,484 | 1,791 | 20,568 | 20,988 | 17,808 | 21,492 |
| **Attorneys** | | | | | | | | | |
| Attorneys I | 565 | 919 | 875 | 824 | 999 | 11,028 | 10,500 | 9,888 | 11,988 |
| Attorneys II | 1,226 | 1,064 | 1,036 | 916 | 1,195 | 12,762 | 12,432 | 10,992 | 14,340 |
| Attorneys III | 1,573 | 1,325 | 1,304 | 1,141 | 1,467 | 15,906 | 15,648 | 13,692 | 17,604 |
| Attorneys IV | 1,539 | 1,590 | 1,542 | 1,333 | 1,750 | 19,076 | 18,504 | 15,996 | 21,000 |
| Attorneys V | 631 | 1,977 | 1,920 | 1,749 | 2,171 | 23,721 | 23,040 | 20,988 | 26,052 |
| Attorneys VI | 463 | 2,454 | 2,408 | 2,042 | 2,772 | 29,452 | 28,896 | 24,504 | 33,264 |
| **Buyers** | | | | | | | | | |
| Buyers I | 2,311 | 663 | 652 | 595 | 723 | 7,955 | 7,824 | 7,140 | 8,676 |
| Buyers II | 7,772 | 784 | 775 | 700 | 852 | 9,408 | 9,300 | 8,400 | 10,224 |
| Buyers III | 11,430 | 914 | 904 | 821 | 1,000 | 10,966 | 10,848 | 9,852 | 12,000 |
| Buyers IV | 4,506 | 1,098 | 1,081 | 978 | 1,207 | 13,174 | 12,972 | 11,736 | 14,484 |
| Buyers V | 230 | 1,305 | 1,250 | 1,181 | 1,404 | 15,664 | 15,000 | 14,172 | 16,848 |
| **Personnel management** | | | | | | | | | |
| Job analysts I | 122 | 668 | 682 | 582 | 744 | 8,018 | 8,184 | 6,984 | 8,928 |
| Job analysts II | 318 | 757 | 750 | 695 | 835 | 9,082 | 9,000 | 8,340 | 10,020 |
| Job analysts III | 576 | 882 | 890 | 795 | 965 | 10,585 | 10,680 | 9,540 | 11,580 |
| Job analysts IV | 497 | 1,071 | 1,074 | 965 | 1,171 | 12,852 | 12,888 | 11,580 | 14,052 |
| Directors of personnel I | 723 | 1,013 | 985 | 875 | 1,100 | 12,158 | 11,820 | 10,500 | 13,200 |
| Directors of personnel II | 1,517 | 1,180 | 1,135 | 1,033 | 1,299 | 14,158 | 13,620 | 12,396 | 15,588 |
| Directors of personnel III | 891 | 1,405 | 1,350 | 1,215 | 1,600 | 16,855 | 16,200 | 14,580 | 19,200 |
| Directors of personnel IV | 316 | 1,730 | 1,666 | 1,500 | 1,934 | 20,761 | 19,992 | 18,000 | 23,208 |
| **Chemists and engineers** | | | | | | | | | |
| Chemists I | 1,566 | 736 | 748 | 680 | 790 | 8,827 | 8,976 | 8,160 | 9,480 |
| Chemists II | 3,820 | 807 | 800 | 743 | 869 | 9,682 | 9,600 | 8,916 | 10,428 |
| Chemists III | 7,677 | 930 | 912 | 833 | 1,008 | 11,154 | 10,944 | 9,996 | 12,096 |
| Chemists IV | 8,972 | 1,117 | 1,100 | 999 | 1,248 | 13,400 | 13,200 | 11,988 | 14,976 |
| Chemists V | 7,538 | 1,340 | 1,333 | 1,208 | 1,469 | 16,078 | 15,996 | 14,496 | 17,628 |
| Chemists VI | 3,970 | 1,547 | 1,541 | 1,402 | 1,683 | 18,560 | 18,492 | 16,824 | 20,196 |
| Chemists VII | 1,606 | 1,896 | 1,833 | 1,645 | 2,122 | 22,747 | 21,996 | 19,740 | 25,464 |
| Chemists VIII | 490 | 2,275 | 2,124 | 1,916 | 2,633 | 27,301 | 25,488 | 22,992 | 31,596 |
| Engineers I | 12,723 | 806 | 808 | 774 | 845 | 9,675 | 9,696 | 9,288 | 10,140 |
| Engineers II | 31,694 | 873 | 870 | 825 | 920 | 10,471 | 10,440 | 9,900 | 11,040 |
| Engineers III | 79,479 | 980 | 978 | 908 | 1,049 | 11,757 | 11,736 | 10,896 | 12,588 |
| Engineers IV | 107,575 | 1,166 | 1,155 | 1,066 | 1,260 | 13,994 | 13,860 | 12,792 | 15,120 |
| Engineers V | 71,150 | 1,350 | 1,336 | 1,225 | 1,460 | 16,202 | 16,032 | 14,700 | 17,520 |
| Engineers VI | 36,564 | 1,554 | 1,543 | 1,405 | 1,683 | 18,643 | 18,516 | 16,860 | 20,196 |
| Engineers VII | 13,583 | 1,769 | 1,760 | 1,600 | 1,925 | 21,232 | 21,120 | 19,200 | 23,100 |
| Engineers VIII | 3,038 | 2,015 | 1,964 | 1,770 | 2,181 | 24,180 | 23,568 | 21,240 | 26,172 |
| **Engineering technicians** | | | | | | | | | |
| Engineering technicians I | 5,182 | 501 | 501 | 456 | 550 | 6,018 | 6,012 | 5,472 | 6,600 |
| Engineering technicians II | 12,772 | 589 | 586 | 530 | 639 | 7,068 | 7,032 | 6,360 | 7,668 |
| Engineering technicians III | 23,539 | 672 | 669 | 610 | 730 | 8,068 | 8,028 | 7,320 | 8,760 |
| Engineering technicians IV | 29,111 | 779 | 768 | 706 | 846 | 9,348 | 9,216 | 8,472 | 10,152 |
| Engineering technicians V | 15,077 | 862 | 850 | 791 | 928 | 10,340 | 10,200 | 9,492 | 11,136 |

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, [1] June 1969)

| Occupation and class (See definitions in appendix C) | Number of employees [2] | Monthly salaries [3] | | | | Annual salaries [3] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range [4] | | Mean | Median | Middle range [4] | |
| | | | | First quartile | Third quartile | | | First quartile | Third quartile |
| **Draftsmen** | | | | | | | | | |
| Draftsmen-tracers | 4,922 | $445 | $428 | $382 | $494 | $5,338 | $5,135 | $4,588 | $5,923 |
| Draftsmen I | 17,901 | 543 | 540 | 475 | 600 | 6,519 | 6,478 | 5,699 | 7,198 |
| Draftsmen II | 29,144 | 672 | 666 | 600 | 739 | 8,060 | 7,988 | 7,198 | 8,864 |
| Draftsmen III | 25,722 | 822 | 804 | 730 | 890 | 9,860 | 9,646 | 8,760 | 10,678 |
| **Clerical** | | | | | | | | | |
| Clerks, accounting I | 76,246 | 416 | 400 | 355 | 461 | 4,997 | 4,799 | 4,259 | 5,527 |
| Clerks, accounting II | 49,063 | 541 | 526 | 462 | 608 | 6,494 | 6,309 | 5,548 | 7,300 |
| Clerks, file I | 26,102 | 327 | 317 | 295 | 348 | 3,924 | 3,800 | 3,546 | 4,171 |
| Clerks, file II | 25,665 | 363 | 348 | 318 | 391 | 4,358 | 4,171 | 3,813 | 4,693 |
| Clerks, file III | 8,185 | 445 | 435 | 374 | 506 | 5,344 | 5,214 | 4,484 | 6,066 |
| Keypunch operators I | 53,891 | 406 | 391 | 349 | 443 | 4,871 | 4,693 | 4,183 | 5,315 |
| Keypunch operators II | 39,887 | 462 | 453 | 410 | 508 | 5,540 | 5,435 | 4,919 | 6,095 |
| Office boys or girls | 25,824 | 357 | 345 | 313 | 385 | 4,290 | 4,139 | 3,754 | 4,619 |
| Secretaries I | 77,781 | 494 | 489 | 435 | 546 | 5,930 | 5,867 | 5,214 | 6,550 |
| Secretaries II | 74,221 | 553 | 549 | 487 | 617 | 6,635 | 6,593 | 5,840 | 7,407 |
| Secretaries III | 43,382 | 593 | 587 | 520 | 660 | 7,119 | 7,048 | 6,239 | 7,921 |
| Secretaries IV | 13,583 | 652 | 645 | 565 | 734 | 7,827 | 7,738 | 6,778 | 8,806 |
| Stenographers, general | 62,503 | 437 | 425 | 375 | 488 | 5,239 | 5,106 | 4,505 | 5,855 |
| Stenographers, senior | 49,142 | 495 | 486 | 433 | 557 | 5,936 | 5,831 | 5,195 | 6,683 |
| Switchboard operators I | 12,566 | 406 | 392 | 348 | 456 | 4,866 | 4,706 | 4,171 | 5,467 |
| Switchboard operators II | 9,866 | 477 | 472 | 420 | 530 | 5,718 | 5,669 | 5,039 | 6,364 |
| Tabulating-machine operators I | 4,760 | 419 | 404 | 360 | 463 | 5,031 | 4,849 | 4,319 | 5,561 |
| Tabulating-machine operators II | 9,258 | 504 | 492 | 435 | 565 | 6,054 | 5,909 | 5,215 | 6,782 |
| Tabulating-machine operators III | 4,557 | 617 | 605 | 546 | 682 | 7,408 | 7,263 | 6,549 | 8,186 |
| Typists I | 74,453 | 373 | 365 | 330 | 404 | 4,481 | 4,379 | 3,959 | 4,849 |
| Typists II | 41,317 | 431 | 419 | 380 | 473 | 5,173 | 5,025 | 4,559 | 5,674 |

[1] For scope of study, see table in appendix A.

[2] 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 p. 33.

[3] 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.

[4] 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 [1] in establishments employing 2,500 workers or more, [2] United States except Alaska and Hawaii, June 1969, percent increase in mean salaries during the year, [3] and comparison with levels in all establishments combined)

| Occupation and class (See definitions in appendix C) | Number of employees [4] | Monthly salaries [5] | | | | Percent increase in mean salaries [3] | Levels in large establishments expressed as percent of those in all establishments combined | |
|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range [6] | | | Employment | Mean salaries |
| | | | | First quartile | Third quartile | | | |
| **Accountants and auditors** | | | | | | | | |
| Accountants I | 2,509 | $698 | $700 | $652 | $740 | 7.4 | 45 | 105 |
| Accountants II | 5,961 | 783 | 784 | 717 | 855 | 8.8 | 54 | 104 |
| Accountants III | 8,164 | 880 | 875 | 791 | 968 | 8.5 | 33 | 105 |
| Accountants IV | 5,187 | 1,036 | 1,030 | 934 | 1,125 | 7.0 | 31 | 104 |
| Accountants V | 2,574 | 1,217 | 1,208 | 1,098 | 1,346 | 5.9 | 40 | 102 |
| Auditors I | 368 | 765 | 775 | 687 | 846 | ([7]) | 51 | 110 |
| Auditors II | 820 | 831 | 810 | 726 | 933 | 8.5 | 44 | 107 |
| Auditors III | 1,564 | 920 | 900 | 800 | 1,030 | 7.6 | 37 | 103 |
| Auditors IV | 1,119 | 1,100 | 1,091 | 987 | 1,208 | 6.7 | 49 | 101 |
| Chief accountants III | 195 | 1,604 | 1,571 | 1,416 | 1,882 | 6.4 | 26 | 109 |
| Chief accountants IV | 116 | 1,793 | 1,746 | 1,547 | 1,981 | 5.8 | 36 | 104 |
| **Attorneys** | | | | | | | | |
| Attorneys I | 162 | 1,012 | 999 | 881 | 1,100 | ([8]) | 29 | 110 |
| Attorneys II | 404 | 1,181 | 1,167 | 1,020 | 1,304 | ([8]) | 31 | 111 |
| Attorneys III | 576 | 1,428 | 1,416 | 1,250 | 1,580 | ([8]) | 35 | 108 |
| Attorneys IV | 512 | 1,658 | 1,624 | 1,458 | 1,833 | ([8]) | 31 | 104 |
| Attorneys V | 284 | 2,048 | 2,013 | 1,791 | 2,332 | ([8]) | 43 | 104 |
| Attorneys VI | 236 | 2,525 | 2,499 | 2,180 | 2,773 | ([8]) | 50 | 103 |
| **Buyers** | | | | | | | | |
| Buyers I | 805 | 722 | 710 | 649 | 783 | 4.0 | 30 | 110 |
| Buyers II | 3,236 | 812 | 804 | 720 | 875 | 7.0 | 33 | 105 |
| Buyers III | 5,698 | 934 | 925 | 826 | 1,035 | 7.0 | 41 | 102 |
| Buyers IV | 2,917 | 1,088 | 1,069 | 965 | 1,190 | 4.8 | 59 | 99 |
| **Personnel management** | | | | | | | | |
| Job analysts II | 155 | 769 | 760 | 699 | 840 | −.3 | 49 | 102 |
| Job analysts III | 407 | 881 | 875 | 800 | 953 | −.4 | 63 | 99 |
| Job analysts IV | 429 | 1,076 | 1,075 | 980 | 1,165 | 2.9 | 75 | 101 |
| Directors of personnel III | 181 | 1,624 | 1,700 | 1,434 | 1,804 | 3.0 | 16 | 116 |
| Directors of personnel IV | 144 | 1,884 | 1,900 | 1,647 | 2,058 | 2.3 | 35 | 110 |
| **Chemists and engineers** | | | | | | | | |
| Chemists I | 548 | 777 | 775 | 730 | 825 | 6.8 | 28 | 107 |
| Chemists II | 1,758 | 845 | 843 | 779 | 907 | 6.9 | 38 | 105 |
| Chemists III | 3,289 | 976 | 975 | 883 | 1,051 | 8.4 | 36 | 106 |
| Chemists IV | 4,163 | 1,168 | 1,155 | 1,045 | 1,290 | 6.3 | 38 | 105 |
| Chemists V | 2,941 | 1,392 | 1,380 | 1,254 | 1,508 | 7.1 | 33 | 104 |
| Chemists VI | 1,720 | 1,579 | 1,555 | 1,420 | 1,712 | 8.8 | 38 | 102 |
| Chemists VII | 688 | 1,856 | 1,804 | 1,640 | 2,009 | 7.1 | 37 | 99 |
| Chemists VIII | 271 | 2,249 | 2,122 | 1,950 | 2,533 | 4.1 | 51 | 99 |
| Engineers I | 7,848 | 812 | 815 | 775 | 850 | 6.7 | 57 | 101 |
| Engineers II | 21,306 | 876 | 873 | 829 | 922 | 6.7 | 62 | 101 |
| Engineers III | 53,176 | 993 | 991 | 924 | 1,055 | 6.5 | 60 | 102 |
| Engineers IV | 74,743 | 1,184 | 1,174 | 1,090 | 1,274 | 6.4 | 61 | 102 |
| Engineers V | 46,596 | 1,372 | 1,365 | 1,255 | 1,476 | 6.7 | 59 | 102 |
| Engineers VI | 22,939 | 1,592 | 1,583 | 1,450 | 1,716 | 8.3 | 56 | 103 |
| Engineers VII | 7,514 | 1,823 | 1,813 | 1,650 | 1,977 | 4.6 | 50 | 103 |
| Engineers VIII | 1,770 | 2,076 | 2,010 | 1,830 | 2,255 | 5.0 | 51 | 104 |
| **Engineering technicians** | | | | | | | | |
| Engineering technicians I | 2,426 | 521 | 521 | 478 | 568 | 7.9 | 40 | 105 |
| Engineering technicians II | 7,478 | 600 | 597 | 548 | 648 | 6.1 | 47 | 103 |
| Engineering technicians III | 14,241 | 688 | 685 | 630 | 745 | 6.8 | 51 | 103 |
| Engineering technicians IV | 18,563 | 787 | 782 | 721 | 850 | 7.0 | 57 | 102 |
| Engineering technicians V | 10,730 | 870 | 856 | 804 | 939 | 6.8 | 63 | 101 |

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 [1] in establishments employing 2,500 workers or more, [2] United States except Alaska and Hawaii, June 1969, percent increase in mean salaries during the year, [3] and comparison with levels in all establishments combined)

| Occupation and class (See definitions in appendix C) | Number of employees [4] | Monthly salaries [5] | | | | Percent increase in mean salaries [3] | Levels in large establishments expressed as percent of those in all establishments combined | |
|---|---|---|---|---|---|---|---|---|
| | | Mean | Median | Middle range [6] | | | Employment | Mean salaries |
| | | | | First quartile | Third quartile | | | |
| **Draftsmen** | | | | | | | | |
| Draftsmen-tracers | 2,327 | $475 | $469 | $410 | $534 | 8.0 | 40 | 107 |
| Draftsmen I | 7,961 | 567 | 564 | 506 | 620 | 5.2 | 37 | 105 |
| Draftsmen II | 12,112 | 691 | 681 | 624 | 752 | 5.3 | 35 | 104 |
| Draftsmen III | 12,259 | 845 | 821 | 745 | 920 | 4.8 | 43 | 104 |
| **Clerical** | | | | | | | | |
| Clerks, accounting I | 16,825 | 458 | 448 | 387 | 524 | 5.1 | 19 | 111 |
| Clerks, accounting II | 13,357 | 588 | 582 | 504 | 666 | 2.5 | 23 | 109 |
| Clerks, file I | 5,263 | 360 | 348 | 325 | 383 | 6.2 | 17 | 111 |
| Clerks, file II | 6,990 | 401 | 390 | 350 | 443 | 5.9 | 24 | 111 |
| Clerks, file III | 2,972 | 492 | 489 | 418 | 564 | 5.4 | 33 | 111 |
| Keypunch operators I | 16,125 | 440 | 426 | 371 | 504 | 4.6 | 26 | 110 |
| Keypunch operators II | 14,415 | 491 | 485 | 430 | 554 | 5.5 | 32 | 107 |
| Office boys or girls | 7,641 | 380 | 361 | 330 | 413 | 5.3 | 27 | 106 |
| Secretaries I | 25,049 | 519 | 515 | 467 | 570 | 6.2 | 29 | 106 |
| Secretaries II | 32,784 | 587 | 587 | 522 | 642 | 5.1 | 40 | 107 |
| Secretaries III | 12,739 | 659 | 655 | 587 | 725 | 5.2 | 27 | 112 |
| Secretaries IV | 3,559 | 714 | 700 | 635 | 785 | 5.3 | 24 | 111 |
| Stenographers, general | 23,957 | 464 | 456 | 405 | 521 | 7.3 | 34 | 107 |
| Stenographers, senior | 21,919 | 522 | 522 | 460 | 592 | 5.2 | 39 | 107 |
| Switchboard operators I | 2,942 | 426 | 417 | 363 | 478 | 6.5 | 21 | 106 |
| Switchboard operators II | 3,506 | 505 | 508 | 443 | 561 | 4.2 | 32 | 107 |
| Tabulating-machine operators I | 1,895 | 461 | 450 | 394 | 521 | 9.5 | 36 | 110 |
| Tabulating-machine operators II | 4,062 | 520 | 517 | 449 | 586 | 6.2 | 40 | 103 |
| Tabulating-machine operators III | 2,150 | 642 | 633 | 573 | 717 | 5.6 | 43 | 105 |
| Typists I | 19,572 | 404 | 391 | 356 | 439 | 5.9 | 23 | 109 |
| Typists II | 16,510 | 449 | 434 | 391 | 501 | 4.6 | 36 | 104 |

[1] For scope of study, see table in appendix A.

[2] 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.

[3] For limitations of percent increase in average salaries as a measure of change in salary scales, see p. 6.

[4] 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 p. 33.

[5] 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.

[6] The middle range (interquartile) used here is the central part of the array excluding the upper and lower fourths of the employee distribution.

[7] Not reported in 1968.

[8] Because of changes in the number and definitions of levels between surveys, year-to-year comparisons for attorneys could not be presented.

## Table 4. Employment Distribution by Salary: Professional and Administrative Occupations

(Percent distribution of employees in selected professional and administrative occupations, by average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Accountants | | | | | Auditors | | | | Chief accountants | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | I | II | III | IV | I | II | III | IV |
| Under $475 | (0.1) | - | - | - | - | - | - | - | - | - | - | - | - |
| $475 and under $500 | 1.0 | - | - | - | - | (1.9) | - | - | - | - | - | - | - |
| $500 and under $525 | 2.5 | - | - | - | - | 1.3 | - | - | - | - | - | - | - |
| $525 and under $550 | 2.6 | (1.2) | - | - | - | 3.2 | (0.4) | - | - | - | - | - | - |
| $550 and under $575 | 6.4 | 1.2 | - | - | - | 4.7 | 1.3 | - | - | - | - | - | - |
| $575 and under $600 | 5.8 | 1.6 | - | - | - | 6.8 | 1.1 | - | - | - | - | - | - |
| $600 and under $625 | 8.1 | 5.5 | (1.5) | - | - | 4.5 | 3.6 | - | - | - | - | - | - |
| $625 and under $650 | 11.2 | 3.8 | 1.2 | - | - | 8.6 | 3.7 | - | - | - | - | - | - |
| $650 and under $675 | 14.3 | 8.5 | 3.4 | - | - | 19.1 | 10.5 | - | - | - | - | - | - |
| $675 and under $700 | 11.6 | 7.7 | 2.9 | - | - | 6.8 | 5.8 | (3.1) | - | - | - | - | - |
| $700 and under $725 | 14.1 | 10.7 | 8.3 | - | - | 10.0 | 12.8 | 4.5 | - | - | - | - | - |
| $725 and under $750 | 7.2 | 8.9 | 6.0 | (1.4) | - | 3.9 | 7.0 | 3.4 | - | - | - | - | - |
| $750 and under $775 | 7.0 | 11.7 | 9.9 | 1.7 | - | 3.5 | 9.4 | 8.5 | (0.7) | - | - | - | - |
| $775 and under $800 | 3.2 | 8.2 | 7.3 | 1.7 | - | 5.1 | 6.2 | 6.6 | 1.0 | - | - | - | - |
| $800 and under $825 | 2.3 | 7.0 | 8.6 | 2.8 | - | 4.2 | 7.7 | 6.1 | 2.2 | - | - | - | - |
| $825 and under $850 | 1.1 | 6.0 | 9.1 | 4.9 | - | 4.0 | 4.7 | 8.9 | 2.1 | (0.7) | - | - | - |
| $850 and under $875 | (1.5) | 5.1 | 7.4 | 6.7 | (1.3) | 2.8 | 8.0 | 7.8 | 1.6 | 7.8 | - | - | - |
| $875 and under $900 | - | 7.9 | 6.2 | 5.0 | 1.7 | 6.8 | 3.8 | 8.3 | 3.8 | - | - | - | - |
| $900 and under $925 | - | 1.9 | 5.9 | 8.0 | 2.8 | (2.8) | 2.1 | 7.2 | 4.2 | 1.6 | 1.3 | - | - |
| $925 and under $950 | - | 1.2 | 4.3 | 7.2 | 1.0 | - | 2.2 | 5.0 | 3.1 | 7.0 | .5 | - | - |
| $950 and under $975 | - | (1.9) | 4.2 | 6.3 | 2.3 | - | 1.9 | 4.9 | 4.5 | 11.2 | 2.7 | - | - |
| $975 and under $1,000 | - | - | 2.9 | 6.4 | 2.7 | - | 1.1 | 4.9 | 4.3 | 1.5 | 6.4 | - | - |
| $1,000 and under $1,050 | - | - | 6.8 | 15.3 | 10.1 | - | 5.5 | 7.0 | 13.9 | 14.8 | 8.2 | - | - |
| $1,050 and under $1,100 | - | - | 1.9 | 10.0 | 9.6 | - | (1.4) | 4.6 | 13.0 | 14.1 | 5.9 | (1.3) | - |
| $1,100 and under $1,150 | - | - | 1.1 | 8.8 | 9.8 | - | - | 3.9 | 8.7 | 3.1 | 11.4 | 3.7 | - |
| $1,150 and under $1,200 | - | - | (1.2) | 4.7 | 11.0 | - | - | 2.5 | 9.5 | 7.7 | 11.7 | 2.9 | (1.2) |
| $1,200 and under $1,250 | - | - | - | 3.8 | 8.6 | - | - | 1.6 | 10.0 | 2.5 | 6.9 | 3.8 | 1.8 |
| $1,250 and under $1,300 | - | - | - | 2.2 | 12.2 | - | - | (1.3) | 5.4 | 12.7 | 14.5 | 12.3 | - |
| $1,300 and under $1,350 | - | - | - | 1.8 | 5.9 | - | - | - | 5.1 | 10.9 | 11.9 | 12.2 | 5.8 |
| $1,350 and under $1,400 | - | - | - | (1.1) | 6.4 | - | - | - | 2.6 | 1.0 | 5.5 | 5.2 | .6 |
| $1,400 and under $1,450 | - | - | - | - | 5.1 | - | - | - | 1.8 | 1.0 | 3.4 | 4.0 | 5.8 |
| $1,450 and under $1,500 | - | - | - | - | 2.6 | - | - | - | 1.1 | .5 | 2.5 | 13.5 | 7.7 |
| $1,500 and under $1,550 | - | - | - | - | 3.2 | - | - | - | 1.0 | 1.0 | 2.2 | 7.9 | 6.5 |
| $1,550 and under $1,600 | - | - | - | - | 1.2 | - | - | - | (.4) | (1.0) | 1.0 | 6.3 | 7.7 |
| $1,600 and under $1,650 | - | - | - | - | .5 | - | - | - | - | - | 1.1 | 4.6 | 3.4 |
| $1,650 and under $1,700 | - | - | - | - | 1.4 | - | - | - | - | - | (2.8) | 6.6 | 5.5 |
| $1,700 and under $1,750 | - | - | - | - | (.4) | - | - | - | - | - | - | 3.7 | 5.8 |
| $1,750 and under $1,800 | - | - | - | - | - | - | - | - | - | - | - | 3.3 | 22.2 |
| $1,800 and under $1,850 | - | - | - | - | - | - | - | - | - | - | - | .5 | .9 |
| $1,850 and under $1,900 | - | - | - | - | - | - | - | - | - | - | - | .8 | 6.8 |
| $1,900 and under $1,950 | - | - | - | - | - | - | - | - | - | - | - | 3.6 | .6 |
| $1,950 and under $2,000 | - | - | - | - | - | - | - | - | - | - | - | .5 | 5.8 |
| $2,000 and under $2,050 | - | - | - | - | - | - | - | - | - | - | - | 2.1 | 1.8 |
| $2,050 and under $2,100 | - | - | - | - | - | - | - | - | - | - | - | (1.1) | 1.5 |
| $2,100 and under $2,150 | - | - | - | - | - | - | - | - | - | - | - | - | 2.2 |
| $2,150 and under $2,200 | - | - | - | - | - | - | - | - | - | - | - | - | .9 |
| $2,200 and under $2,250 | - | - | - | - | - | - | - | - | - | - | - | - | .3 |
| $2,250 and under $2,300 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $2,300 and under $2,350 | - | - | - | - | - | - | - | - | - | - | - | - | 1.2 |
| $2,350 and under $2,400 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $2,400 and under $2,450 | - | - | - | - | - | - | - | - | - | - | - | - | .9 |
| $2,450 and under $2,500 | - | - | - | - | - | - | - | - | - | - | - | - | .6 |
| $2,500 and under $2,550 | - | - | - | - | - | - | - | - | - | - | - | - | .9 |
| $2,550 and under $2,600 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| $2,600 and over | - | - | - | - | - | - | - | - | - | - | - | - | 1.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 5,579 | 11,138 | 24,550 | 16,629 | 6,451 | 719 | 1,848 | 4,193 | 2,295 | 731 | 1,288 | 756 | 325 |
| Average monthly salaries | $667 | $751 | $836 | $997 | $1,198 | $697 | $774 | $894 | $1,094 | $1,101 | $1,220 | $1,476 | $1,716 |

See footnotes 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 average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Attorneys | | | | | | Buyers | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | I | II | III | IV | V |
| Under $475 | - | - | - | - | - | - | (1.0) | - | - | - | - |
| $475 and under $500 | - | - | - | - | - | - | 3.8 | - | - | - | - |
| $500 and under $525 | - | - | - | - | - | - | 3.6 | (0.7) | - | - | - |
| $525 and under $550 | - | - | - | - | - | - | 7.3 | 1.0 | - | - | - |
| $550 and under $575 | - | - | - | - | - | - | 5.5 | 1.5 | - | - | - |
| $575 and under $600 | - | - | - | - | - | - | 8.7 | 1.5 | - | - | - |
| $600 and under $625 | - | - | - | - | - | - | 9.1 | 3.1 | - | - | - |
| $625 and under $650 | - | - | - | - | - | - | 8.7 | 5.7 | (1.7) | - | - |
| $650 and under $675 | - | - | - | - | - | - | 14.3 | 7.5 | 1.8 | - | - |
| $675 and under $700 | - | - | - | - | - | - | 7.7 | 7.0 | 1.4 | - | - |
| $700 and under $725 | (2.3) | - | - | - | - | - | 7.5 | 8.2 | 2.8 | - | - |
| $725 and under $750 | 1.4 | (0.5) | - | - | - | - | 4.2 | 7.2 | 2.9 | - | - |
| $750 and under $775 | 4.2 | 1.1 | - | - | - | - | 5.8 | 10.7 | 4.2 | - | - |
| $775 and under $800 | 7.9 | .9 | - | - | - | - | 3.0 | 6.8 | 5.0 | - | - |
| $800 and under $825 | 10.0 | 2.7 | - | - | - | - | 2.7 | 7.7 | 6.3 | (2.7) | - |
| $825 and under $850 | 12.1 | 3.7 | 0.9 | - | - | - | 1.2 | 7.8 | 7.3 | 1.7 | - |
| $850 and under $875 | 4.0 | 5.5 | 1.9 | - | - | - | 1.9 | 6.3 | 7.1 | 2.4 | - |
| $875 and under $900 | 14.4 | 3.3 | .4 | - | - | - | 1.1 | 4.2 | 7.4 | 3.0 | - |
| $900 and under $925 | 14.1 | 9.6 | .5 | - | - | - | (3.0) | 3.6 | 8.1 | 4.5 | - |
| $925 and under $950 | 1.2 | 7.3 | .1 | - | - | - | - | 1.8 | 6.6 | 4.5 | - |
| $950 and under $975 | 2.5 | 2.7 | .4 | - | - | - | - | 1.5 | 6.4 | 5.3 | - |
| $975 and under $1,000 | 1.2 | 4.9 | 2.6 | - | - | - | - | 1.2 | 5.9 | 5.0 | 3.4 |
| $1,000 and under $1,050 | 9.2 | 7.4 | 4.1 | - | - | - | - | 2.3 | 9.4 | 12.9 | 3.8 |
| $1,050 and under $1,100 | 4.2 | 10.5 | 8.8 | (0.6) | - | - | - | .9 | 5.4 | 12.3 | 6.4 |
| $1,100 and under $1,150 | 3.3 | 8.0 | 5.2 | 1.0 | - | - | - | 1.0 | 4.7 | 10.6 | 3.4 |
| $1,150 and under $1,200 | 2.1 | 9.8 | 5.5 | 2.0 | - | - | - | (.9) | 2.9 | 8.8 | 11.5 |
| $1,200 and under $1,250 | .7 | 3.2 | 5.7 | 2.2 | - | - | - | - | 1.5 | 9.0 | 10.7 |
| $1,250 and under $1,300 | 1.4 | 7.9 | 11.0 | 9.6 | - | - | - | - | (1.1) | 5.5 | 19.7 |
| $1,300 and under $1,350 | (3.5) | 3.9 | 13.1 | 11.6 | - | - | - | - | - | 5.6 | 8.5 |
| $1,350 and under $1,400 | - | 1.9 | 6.3 | 3.8 | (1.4) | - | - | - | - | 1.7 | 6.0 |
| $1,400 and under $1,450 | - | 1.7 | 6.8 | 4.2 | 1.2 | - | - | - | - | 1.9 | 5.1 |
| $1,450 and under $1,500 | - | .9 | 5.1 | 8.3 | 3.2 | - | - | - | - | 1.0 | 3.8 |
| $1,500 and under $1,550 | - | 1.0 | 6.0 | 5.4 | 1.5 | - | - | - | - | (1.6) | 4.7 |
| $1,550 and under $1,600 | - | (1.6) | 3.0 | 4.8 | 2.4 | - | - | - | - | - | 2.1 |
| $1,600 and under $1,650 | - | - | 2.1 | 4.4 | 2.9 | (1.5) | - | - | - | - | 4.3 |
| $1,650 and under $1,700 | - | - | 3.2 | 10.6 | 9.5 | 5.8 | - | - | - | - | .4 |
| $1,700 and under $1,750 | - | - | 2.6 | 6.4 | 3.2 | 2.1 | - | - | - | - | 2.6 |
| $1,750 and under $1,800 | - | - | 1.1 | 3.2 | 4.7 | 1.3 | - | - | - | - | - |
| $1,800 and under $1,850 | - | - | 1.5 | 3.1 | 13.9 | 1.3 | - | - | - | - | .9 |
| $1,850 and under $1,900 | - | - | (2.3) | 2.2 | 2.1 | 3.4 | - | - | - | - | 1.7 |
| $1,900 and under $1,950 | - | - | - | 4.3 | 7.6 | 1.1 | - | - | - | - | .9 |
| $1,950 and under $2,000 | - | - | - | 2.4 | 3.5 | 7.0 | - | - | - | - | - |
| $2,000 and under $2,050 | - | - | - | 1.3 | 6.6 | 1.9 | - | - | - | - | - |
| $2,050 and under $2,100 | - | - | - | 1.6 | 7.5 | 2.8 | - | - | - | - | - |
| $2,100 and under $2,150 | - | - | - | 1.1 | 2.7 | 2.1 | - | - | - | - | - |
| $2,150 and under $2,200 | - | - | - | 2.2 | 2.4 | 5.5 | - | - | - | - | - |
| $2,200 and under $2,250 | - | - | - | .9 | 4.6 | 2.3 | - | - | - | - | - |
| $2,250 and under $2,300 | - | - | - | .5 | 1.5 | 5.8 | - | - | - | - | - |
| $2,300 and under $2,350 | - | - | - | .2 | 2.1 | 3.4 | - | - | - | - | - |
| $2,350 and under $2,400 | - | - | - | .2 | 2.7 | 2.8 | - | - | - | - | - |
| $2,400 and under $2,450 | - | - | - | .3 | 2.7 | 4.3 | - | - | - | - | - |
| $2,450 and under $2,500 | - | - | - | .1 | 1.8 | 2.8 | - | - | - | - | - |
| $2,500 and under $2,550 | - | - | - | - | 2.4 | 2.8 | - | - | - | - | - |
| $2,550 and under $2,600 | - | - | - | - | .3 | 3.2 | - | - | - | - | - |
| $2,600 and under $2,650 | - | - | - | 1.3 | 1.2 | 2.8 | - | - | - | - | - |
| $2,650 and under $2,700 | - | - | - | (.1) | 1.1 | 5.3 | - | - | - | - | - |
| $2,700 and under $2,750 | - | - | - | - | .2 | 3.4 | - | - | - | - | - |
| $2,750 and under $2,800 | - | - | - | - | .6 | 2.3 | - | - | - | - | - |
| $2,800 and under $2,850 | - | - | - | - | 1.1 | 2.3 | - | - | - | - | - |
| $2,850 and under $2,900 | - | - | - | - | (1.1) | 1.3 | - | - | - | - | - |
| $2,900 and under $2,950 | - | - | - | - | - | 1.1 | - | - | - | - | - |
| $2,950 and under $3,000 | - | - | - | - | - | .4 | - | - | - | - | - |
| $3,000 and under $3,050 | - | - | - | - | - | .6 | - | - | - | - | - |
| $3,050 and under $3,100 | - | - | - | - | - | 1.3 | - | - | - | - | - |
| $3,100 and under $3,150 | - | - | - | - | - | 1.1 | - | - | - | - | - |
| $3,150 and under $3,200 | - | - | - | - | - | .9 | - | - | - | - | - |
| $3,200 and under $3,250 | - | - | - | - | - | 3.2 | - | - | - | - | - |
| $3,250 and under $3,300 | - | - | - | - | - | 3.0 | - | - | - | - | - |
| $3,300 and under $3,350 | - | - | - | - | - | 4.3 | - | - | - | - | - |
| $3,350 and under $3,400 | - | - | - | - | - | .4 | - | - | - | - | - |
| $3,400 and under $3,450 | - | - | - | - | - | .4 | - | - | - | - | - |
| $3,450 and under $3,500 | - | - | - | - | - | .2 | - | - | - | - | - |
| $3,500 and over | - | - | - | - | - | 2.6 | - | - | - | - | - |
| 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 | 568 | 1,316 | 1,640 | 1,626 | 655 | 469 | 2,708 | 9,884 | 13,809 | 4,909 | 234 |
| Average monthly salaries | $918 | $1,065 | $1,323 | $1,597 | $1,974 | $2,452 | $656 | $772 | $912 | $1,096 | $1,306 |

See footnotes 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 average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Job analysts | | | | Directors of personnel | | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | I | II | III | IV |
| $400 and under $425 | 2.3 | - | - | - | - | - | - | - |
| $425 and under $450 | - | - | - | - | - | - | - | - |
| $450 and under $475 | - | - | - | - | - | - | - | - |
| $475 and under $500 | 3.1 | - | - | - | - | - | - | - |
| $500 and under $525 | 3.9 | (1.9) | - | - | - | - | - | - |
| $525 and under $550 | 7.0 | 2.8 | - | - | - | - | - | - |
| $550 and under $575 | 6.2 | 1.3 | - | - | - | - | - | - |
| $575 and under $600 | 1.6 | 4.4 | - | - | - | - | - | - |
| $600 and under $625 | 10.1 | 1.6 | - | - | - | - | - | - |
| $625 and under $650 | 2.3 | 5.6 | (1.7) | - | - | - | - | - |
| $650 and under $675 | 9.3 | 4.1 | 2.3 | - | - | - | - | - |
| $675 and under $700 | 15.5 | 4.1 | .9 | 1.2 | - | - | - | - |
| $700 and under $725 | 5.4 | 7.8 | 4.8 | .2 | - | - | - | - |
| $725 and under $750 | 5.4 | 13.5 | 1.7 | 1.2 | 4.1 | - | - | - |
| $750 and under $775 | 3.9 | 9.7 | 7.4 | 1.4 | - | - | - | - |
| $775 and under $800 | 6.2 | 5.3 | 6.0 | 4.2 | 6.8 | - | - | - |
| $800 and under $825 | 2.3 | 8.8 | 6.9 | .7 | .2 | (0.5) | - | - |
| $825 and under $850 | 5.4 | 8.5 | 7.7 | 1.2 | 11.6 | 2.4 | - | - |
| $850 and under $875 | 7.0 | 6.6 | 7.9 | 3.8 | 4.6 | .7 | - | - |
| $875 and under $900 | (3.1) | 3.4 | 5.6 | 2.3 | 7.4 | 1.8 | - | - |
| $900 and under $925 | - | 6.9 | 7.7 | 3.7 | 4.5 | 7.0 | - | - |
| $925 and under $950 | - | 1.3 | 5.6 | 3.8 | 1.9 | .8 | - | - |
| $950 and under $975 | - | (2.5) | 11.9 | 2.6 | 6.8 | 1.4 | - | - |
| $975 and under $1,000 | - | - | 5.4 | 4.2 | 5.9 | .7 | - | - |
| $1,000 and under $1,050 | - | - | 11.0 | 9.9 | 18.3 | 18.4 | (3.0) | - |
| $1,050 and under $1,100 | - | - | 3.2 | 17.6 | 8.0 | 7.9 | 7.5 | - |
| $1,100 and under $1,150 | - | - | 1.2 | 12.6 | 3.2 | 14.7 | 4.3 | - |
| $1,150 and under $1,200 | - | - | (1.1) | 9.4 | 2.3 | 7.0 | 5.7 | - |
| $1,200 and under $1,250 | - | - | - | 6.3 | 4.9 | 5.8 | 9.6 | (1.5) |
| $1,250 and under $1,300 | - | - | - | 4.4 | 2.2 | 8.8 | 10.0 | 5.1 |
| $1,300 and under $1,350 | - | - | - | 3.8 | 4.2 | 5.0 | 8.9 | 4.2 |
| $1,350 and under $1,400 | - | - | - | 2.4 | 2.3 | 3.8 | 7.9 | 3.9 |
| $1,400 and under $1,450 | - | - | - | 1.4 | (.8) | 3.8 | 5.3 | 5.4 |
| $1,450 and under $1,500 | - | - | - | (1.6) | - | 2.1 | 3.8 | 5.1 |
| $1,500 and under $1,550 | - | - | - | - | - | 3.3 | 7.1 | 9.0 |
| $1,550 and under $1,600 | - | - | - | - | - | 1.6 | 4.5 | 6.1 |
| $1,600 and under $1,650 | - | - | - | - | - | .4 | 6.8 | 5.9 |
| $1,650 and under $1,700 | - | - | - | - | - | .2 | 3.2 | 8.1 |
| $1,700 and under $1,750 | - | - | - | - | - | .6 | 2.2 | 3.9 |
| $1,750 and under $1,800 | - | - | - | - | - | 1.0 | 3.1 | 2.4 |
| $1,800 and under $1,850 | - | - | - | - | - | (.3) | 2.3 | 7.1 |
| $1,850 and under $1,900 | - | - | - | - | - | - | 1.3 | 2.9 |
| $1,900 and under $1,950 | - | - | - | - | - | - | .6 | 7.8 |
| $1,950 and under $2,000 | - | - | - | - | - | - | 1.1 | 4.2 |
| $2,000 and under $2,050 | - | - | - | - | - | - | (1.8) | 4.9 |
| $2,050 and under $2,100 | - | - | - | - | - | - | - | 4.2 |
| $2,100 and under $2,150 | - | - | - | - | - | - | - | 2.0 |
| $2,150 and under $2,200 | - | - | - | - | - | - | - | .7 |
| $2,200 and under $2,250 | - | - | - | - | - | - | - | .5 |
| $2,250 and under $2,300 | - | - | - | - | - | - | - | .5 |
| $2,300 and under $2,350 | - | - | - | - | - | - | - | 1.0 |
| $2,350 and under $2,400 | - | - | - | - | - | - | - | .7 |
| $2,400 and under $2,450 | - | - | - | - | - | - | - | .5 |
| $2,450 and under $2,500 | - | - | - | - | - | - | - | .2 |
| $2,500 and under $2,550 | - | - | - | - | - | - | - | 1.2 |
| $2,550 and over | - | - | - | - | - | - | - | (.9) |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 129 | 319 | 648 | 573 | 1,101 | 2,105 | 1,142 | 409 |
| Average monthly salaries | $678 | $757 | $883 | $1,069 | $987 | $1,160 | $1,395 | $1,715 |

See footnotes 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 average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Chemists | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | VII | VIII |
| Under $550 | (0.7) | - | - | - | - | - | - | - |
| $550 and under $575 | 2.4 | - | - | - | - | - | - | - |
| $575 and under $600 | 1.7 | - | - | - | - | - | - | - |
| $600 and under $625 | 6.3 | - | - | - | - | - | - | - |
| $625 and under $650 | 8.5 | (1.4) | - | - | - | - | - | - |
| $650 and under $675 | 7.4 | 4.7 | (1.0) | - | - | - | - | - |
| $675 and under $700 | 5.7 | 5.2 | 1.1 | - | - | - | - | - |
| $700 and under $725 | 10.8 | 9.1 | 1.8 | - | - | - | - | - |
| $725 and under $750 | 13.2 | 6.9 | 1.9 | - | - | - | - | - |
| $750 and under $775 | 12.7 | 12.2 | 4.9 | - | - | - | - | - |
| $775 and under $800 | 10.0 | 9.8 | 5.4 | (1.7) | - | - | - | - |
| $800 and under $825 | 6.8 | 11.2 | 6.9 | 1.1 | - | - | - | - |
| $825 and under $850 | 6.6 | 8.6 | 6.6 | 2.0 | - | - | - | - |
| $850 and under $875 | 4.5 | 9.7 | 9.8 | 2.0 | - | - | - | - |
| $875 and under $900 | 1.4 | 6.4 | 9.0 | 2.0 | - | - | - | - |
| $900 and under $925 | (1.3) | 5.3 | 8.7 | 3.7 | - | - | - | - |
| $925 and under $950 | - | 3.3 | 5.9 | 3.7 | - | - | - | - |
| $950 and under $975 | - | 2.0 | 6.1 | 5.5 | - | - | - | - |
| $975 and under $1,000 | - | 1.6 | 5.4 | 4.3 | (2.4) | - | - | - |
| $1,000 and under $1,050 | - | 1.8 | 9.6 | 12.9 | 2.1 | - | - | - |
| $1,050 and under $1,100 | - | (.6) | 5.7 | 11.6 | 4.2 | (1.8) | - | - |
| $1,100 and under $1,150 | - | - | 3.7 | 11.0 | 6.3 | 1.3 | - | - |
| $1,150 and under $1,200 | - | - | 1.9 | 8.0 | 7.7 | 1.5 | - | - |
| $1,200 and under $1,250 | - | - | 1.9 | 6.6 | 9.0 | 3.4 | - | - |
| $1,250 and under $1,300 | - | - | 1.4 | 7.5 | 11.0 | 4.2 | - | - |
| $1,300 and under $1,350 | - | - | (1.2) | 6.0 | 10.5 | 5.5 | - | - |
| $1,350 and under $1,400 | - | - | - | 4.5 | 10.6 | 7.4 | (2.4) | - |
| $1,400 and under $1,450 | - | - | - | 2.7 | 7.5 | 7.8 | 1.4 | - |
| $1,450 and under $1,500 | - | - | - | 1.9 | 8.3 | 10.3 | 6.5 | (1.3) |
| $1,500 and under $1,550 | - | - | - | (1.5) | 6.8 | 9.4 | 5.6 | 1.1 |
| $1,550 and under $1,600 | - | - | - | - | 5.0 | 7.5 | 4.4 | .6 |
| $1,600 and under $1,650 | - | - | - | - | 3.9 | 9.3 | 7.9 | .9 |
| $1,650 and under $1,700 | - | - | - | - | 1.5 | 7.3 | 6.1 | 4.5 |
| $1,700 and under $1,750 | - | - | - | - | 1.2 | 7.5 | 8.4 | 4.5 |
| $1,750 and under $1,800 | - | - | - | - | (1.9) | 4.1 | 5.6 | 4.1 |
| $1,800 and under $1,850 | - | - | - | - | - | 3.7 | 6.5 | 3.4 |
| $1,850 and under $1,900 | - | - | - | - | - | 2.3 | 4.9 | 4.1 |
| $1,900 and under $1,950 | - | - | - | - | - | 1.9 | 5.8 | 7.3 |
| $1,950 and under $2,000 | - | - | - | - | - | 1.5 | 3.5 | 5.2 |
| $2,000 and under $2,050 | - | - | - | - | - | (2.4) | 2.3 | 8.4 |
| $2,050 and under $2,100 | - | - | - | - | - | - | 5.6 | 3.7 |
| $2,100 and under $2,150 | - | - | - | - | - | - | 1.9 | 4.7 |
| $2,150 and under $2,200 | - | - | - | - | - | - | 2.1 | 3.9 |
| $2,200 and under $2,250 | - | - | - | - | - | - | 4.0 | 1.3 |
| $2,250 and under $2,300 | - | - | - | - | - | - | 4.0 | 2.6 |
| $2,300 and under $2,350 | - | - | - | - | - | - | 2.7 | 2.8 |
| $2,350 and under $2,400 | - | - | - | - | - | - | .8 | 2.4 |
| $2,400 and under $2,450 | - | - | - | - | - | - | 2.4 | .6 |
| $2,450 and under $2,500 | - | - | - | - | - | - | .7 | 1.7 |
| $2,500 and under $2,550 | - | - | - | - | - | - | .5 | 2.2 |
| $2,550 and under $2,600 | - | - | - | - | - | - | .2 | 2.1 |
| $2,600 and under $2,650 | - | - | - | - | - | - | .2 | 3.2 |
| $2,650 and under $2,700 | - | - | - | - | - | - | .9 | 1.7 |
| $2,700 and under $2,750 | - | - | - | - | - | - | 1.2 | 1.9 |
| $2,750 and under $2,800 | - | - | - | - | - | - | 1.1 | 1.3 |
| $2,800 and under $2,850 | - | - | - | - | - | - | (.4) | 4.3 |
| $2,850 and under $2,900 | - | - | - | - | - | - | - | .9 |
| $2,900 and under $2,950 | - | - | - | - | - | - | - | .9 |
| $2,950 and under $3,000 | - | - | - | - | - | - | - | 1.1 |
| $3,000 and under $3,050 | - | - | - | - | - | - | - | .4 |
| $3,050 and under $3,100 | - | - | - | - | - | - | - | - |
| $3,100 and under $3,150 | - | - | - | - | - | - | - | 4.3 |
| $3,150 and under $3,200 | - | - | - | - | - | - | - | .6 |
| $3,200 and under $3,250 | - | - | - | - | - | - | - | .7 |
| $3,250 and under $3,300 | - | - | - | - | - | - | - | - |
| $3,300 and under $3,350 | - | - | - | - | - | - | - | 3.9 |
| $3,350 and under $3,400 | - | - | - | - | - | - | - | - |
| $3,400 and over | - | - | - | - | - | - | - | 1.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 1,949 | 4,577 | 9,084 | 11,059 | 8,797 | 4,486 | 1,848 | 534 |
| Average monthly salaries | $728 | $802 | $922 | $1,113 | $1,340 | $1,544 | $1,873 | $2,258 |

See footnotes 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 average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Engineers | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | V | VI | VII | VIII |
| Under $625 | (1.2) | - | - | - | - | - | - | - |
| $625 and under $650 | 1.0 | - | - | - | - | - | - | - |
| $650 and under $675 | 1.8 | - | - | - | - | - | - | - |
| $675 and under $700 | 1.7 | (1.8) | - | - | - | - | - | - |
| $700 and under $725 | 3.9 | 1.2 | - | - | - | - | - | - |
| $725 and under $750 | 6.3 | 1.9 | (1.0) | - | - | - | - | - |
| $750 and under $775 | 10.5 | 4.2 | 1.1 | - | - | - | - | - |
| $775 and under $800 | 14.5 | 5.8 | 1.8 | - | - | - | - | - |
| $800 and under $825 | 18.4 | 10.1 | 2.8 | - | - | - | - | - |
| $825 and under $850 | 17.4 | 13.1 | 4.4 | - | - | - | - | - |
| $850 and under $875 | 10.1 | 14.1 | 6.1 | (1.9) | - | - | - | - |
| $875 and under $900 | 6.8 | 13.6 | 6.2 | 1.2 | - | - | - | - |
| $900 and under $925 | 3.3 | 11.9 | 8.9 | 2.0 | - | - | - | - |
| $925 and under $950 | 1.8 | 7.2 | 8.0 | 2.2 | - | - | - | - |
| $950 and under $975 | (1.4) | 4.9 | 9.5 | 3.2 | - | - | - | - |
| $975 and under $1,000 | - | 4.3 | 9.1 | 3.4 | (1.8) | - | - | - |
| $1,000 and under $1,050 | - | 3.4 | 17.4 | 9.4 | 2.5 | - | - | - |
| $1,050 and under $1,100 | - | 1.6 | 11.4 | 12.2 | 3.9 | (1.1) | - | - |
| $1,100 and under $1,150 | - | (.8) | 6.5 | 14.4 | 6.0 | 1.4 | - | - |
| $1,150 and under $1,200 | - | - | 3.3 | 12.8 | 7.3 | 1.9 | (0.7) | - |
| $1,200 and under $1,250 | - | - | 1.9 | 11.1 | 9.2 | 2.7 | 1.0 | - |
| $1,250 and under $1,300 | - | - | (.6) | 9.7 | 11.5 | 4.7 | 1.3 | - |
| $1,300 and under $1,350 | - | - | - | 6.2 | 11.9 | 6.4 | 1.9 | - |
| $1,350 and under $1,400 | - | - | - | 4.1 | 10.4 | 6.5 | 2.7 | - |
| $1,400 and under $1,450 | - | - | - | 2.5 | 9.6 | 7.9 | 3.6 | (1.0) |
| $1,450 and under $1,500 | - | - | - | 1.9 | 7.5 | 9.1 | 4.4 | 1.2 |
| $1,500 and under $1,550 | - | - | - | (1.8) | 5.8 | 10.2 | 5.0 | 2.7 |
| $1,550 and under $1,600 | - | - | - | - | 3.8 | 8.9 | 5.6 | 2.5 |
| $1,600 and under $1,650 | - | - | - | - | 3.0 | 8.7 | 6.4 | 5.6 |
| $1,650 and under $1,700 | - | - | - | - | 2.0 | 7.8 | 8.4 | 4.6 |
| $1,700 and under $1,750 | - | - | - | - | 1.3 | 6.2 | 7.5 | 5.9 |
| $1,750 and under $1,800 | - | - | - | - | 1.0 | 4.8 | 8.0 | 5.6 |
| $1,800 and under $1,850 | - | - | - | - | (1.7) | 3.3 | 8.4 | 7.3 |
| $1,850 and under $1,900 | - | - | - | - | - | 2.3 | 6.3 | 5.7 |
| $1,900 and under $1,950 | - | - | - | - | - | 1.8 | 6.3 | 7.3 |
| $1,950 and under $2,000 | - | - | - | - | - | 1.4 | 6.1 | 7.0 |
| $2,000 and under $2,050 | - | - | - | - | - | (2.9) | 3.6 | 5.2 |
| $2,050 and under $2,100 | - | - | - | - | - | - | 2.9 | 6.4 |
| $2,100 and under $2,150 | - | - | - | - | - | - | 2.1 | 5.1 |
| $2,150 and under $2,200 | - | - | - | - | - | - | 1.8 | 4.1 |
| $2,200 and under $2,250 | - | - | - | - | - | - | 1.4 | 2.6 |
| $2,250 and under $2,300 | - | - | - | - | - | - | 1.2 | 3.5 |
| $2,300 and under $2,350 | - | - | - | - | - | - | 1.0 | 4.4 |
| $2,350 and under $2,400 | - | - | - | - | - | - | (2.6) | 1.8 |
| $2,400 and under $2,450 | - | - | - | - | - | - | - | 1.4 |
| $2,450 and under $2,500 | - | - | - | - | - | - | - | 1.5 |
| $2,500 and under $2,550 | - | - | - | - | - | - | - | 1.6 |
| $2,550 and under $2,600 | - | - | - | - | - | - | - | .5 |
| $2,600 and under $2,650 | - | - | - | - | - | - | - | .5 |
| $2,650 and under $2,700 | - | - | - | - | - | - | - | .4 |
| $2,700 and under $2,750 | - | - | - | - | - | - | - | .7 |
| $2,750 and over | - | - | - | - | - | - | - | (4.1) |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 13,848 | 34,224 | 88,587 | 121,882 | 79,139 | 41,032 | 14,953 | 3,466 |
| Average monthly salaries | $805 | $871 | $975 | $1,158 | $1,342 | $1,548 | $1,767 | $2,002 |

[1] 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

(Percent distribution of engineering technicians, by average monthly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average monthly salaries | Engineering technicians | | | | |
|---|---|---|---|---|---|
| | I | II | III | IV | V |
| Under $325 | (0.8) | - | - | - | - |
| $325 and under $350 | 2.0 | - | - | - | - |
| $350 and under $375 | 2.5 | - | - | - | - |
| $375 and under $400 | 4.0 | (1.0) | - | - | - |
| $400 and under $425 | 8.2 | 1.0 | - | - | - |
| $425 and under $450 | 9.3 | 1.5 | - | - | - |
| $450 and under $475 | 11.1 | 3.6 | - | - | - |
| $475 and under $500 | 12.4 | 6.4 | (1.4) | - | - |
| $500 and under $525 | 16.4 | 10.5 | 2.4 | - | - |
| $525 and under $550 | 8.7 | 10.4 | 3.6 | (1.4) | - |
| $550 and under $575 | 9.3 | 12.4 | 6.1 | 1.1 | - |
| $575 and under $600 | 6.1 | 11.7 | 6.3 | 1.5 | - |
| $600 and under $625 | 5.3 | 12.2 | 11.1 | 2.7 | - |
| $625 and under $650 | 2.5 | 9.0 | 11.1 | 4.0 | (1.5) |
| $650 and under $675 | 1.0 | 7.3 | 11.9 | 5.9 | 1.4 |
| $675 and under $700 | (.4) | 4.5 | 10.0 | 6.2 | 2.1 |
| $700 and under $725 | - | 3.7 | 10.2 | 9.5 | 3.5 |
| $725 and under $750 | - | 1.7 | 7.9 | 10.2 | 3.9 |
| $750 and under $775 | - | 1.1 | 6.1 | 10.5 | 6.4 |
| $775 and under $800 | - | (1.9) | 4.7 | 9.1 | 8.9 |
| $800 and under $825 | - | - | 2.8 | 7.8 | 11.0 |
| $825 and under $850 | - | - | 1.9 | 7.3 | 10.8 |
| $850 and under $875 | - | - | (2.3) | 6.6 | 10.4 |
| $875 and under $900 | - | - | - | 4.7 | 8.2 |
| $900 and under $925 | - | - | - | 3.6 | 6.3 |
| $925 and under $950 | - | - | - | 2.1 | 5.1 |
| $950 and under $975 | - | - | - | 2.0 | 4.1 |
| $975 and under $1,000 | - | - | - | 1.0 | 5.2 |
| $1,000 and under $1,050 | - | - | - | .4 | 7.1 |
| $1,050 and under $1,100 | - | - | - | .6 | 2.4 |
| $1,100 and under $1,150 | - | - | - | 1.3 | 1.0 |
| $1,150 and over | - | - | - | (.4) | (.7) |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 6,100 | 15,752 | 28,185 | 32,337 | 16,903 |
| Average monthly salaries | $495 | $584 | $670 | $775 | $860 |

[1] 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 average weekly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average weekly salaries | Draftsmen-tracers | Draftsmen | | | Clerks, accounting | | Clerks, file | | | Keypunch operators | | Office boys or girls |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | I | II | III | I | II | I | II | III | I | II | |
| Under $60 | - | - | - | - | - | - | (1.3) | (0.5) | - | - | - | 0.3 |
| $60 and under $65 | 0.7 | - | - | - | (1.0) | - | 14.0 | 2.4 | (0.5) | (0.9) | - | 5.7 |
| $65 and under $70 | 1.2 | - | - | - | 3.9 | - | 22.1 | 10.5 | 1.2 | 3.4 | (0.3) | 11.5 |
| $70 and under $75 | 2.0 | - | - | - | 7.1 | - | 23.7 | 19.3 | 3.9 | 9.3 | 1.3 | 18.5 |
| $75 and under $80 | 3.6 | (0.5) | - | - | 10.3 | (1.2) | 14.6 | 15.7 | 6.5 | 11.2 | 2.7 | 15.8 |
| $80 and under $85 | 12.4 | 1.1 | - | - | 11.9 | 1.8 | 10.4 | 15.9 | 9.7 | 14.1 | 5.7 | 15.4 |
| $85 and under $90 | 7.7 | 2.2 | - | - | 12.3 | 3.6 | 6.1 | 12.0 | 10.7 | 13.1 | 8.1 | 10.7 |
| $90 and under $95 | 12.9 | 4.3 | - | - | 11.8 | 4.8 | 3.2 | 6.9 | 9.5 | 10.8 | 10.5 | 6.2 |
| $95 and under $100 | 10.7 | 4.3 | - | - | 9.5 | 5.6 | 1.9 | 4.6 | 9.4 | 9.7 | 12.0 | 4.4 |
| $100 and under $105 | 8.9 | 8.3 | (1.4) | - | 7.7 | 6.9 | (2.7) | 3.6 | 9.9 | 8.4 | 13.1 | 3.0 |
| $105 and under $110 | 9.1 | 7.5 | 1.0 | - | 5.0 | 8.5 | - | 2.6 | 6.3 | 4.7 | 10.4 | 1.9 |
| $110 and under $115 | 7.7 | 7.5 | 2.2 | - | 4.3 | 6.6 | - | 1.8 | 6.8 | 3.9 | 8.8 | 2.7 |
| $115 and under $120 | 6.1 | 9.1 | 2.8 | - | 3.4 | 9.3 | - | 1.5 | 5.3 | 2.3 | 6.8 | 1.4 |
| $120 and under $125 | 5.4 | 9.0 | 3.9 | - | 2.6 | 8.0 | - | 1.0 | 4.4 | 2.1 | 5.9 | 1.1 |
| $125 and under $130 | 3.8 | 8.4 | 4.7 | (1.1) | 2.7 | 6.8 | - | (1.7) | 3.7 | 2.6 | 4.8 | (1.3) |
| $130 and under $135 | 1.7 | 8.6 | 7.0 | 1.1 | 2.1 | 6.1 | - | - | 4.2 | 1.7 | 3.9 | - |
| $135 and under $140 | 1.4 | 7.8 | 7.6 | 1.2 | 1.7 | 6.2 | - | - | 3.7 | (2.0) | 2.9 | - |
| $140 and under $145 | 1.7 | 5.6 | 7.9 | 2.8 | 1.0 | 5.0 | - | - | 1.4 | - | 1.4 | - |
| $145 and under $150 | .9 | 5.0 | 8.2 | 2.6 | (1.7) | 4.0 | - | - | (2.8) | - | (1.3) | - |
| $150 and under $160 | 1.3 | 4.8 | 15.2 | 7.8 | - | 6.8 | - | - | - | - | - | - |
| $160 and under $170 | (.6) | 3.1 | 13.8 | 12.8 | - | 4.7 | - | - | - | - | - | - |
| $170 and under $180 | - | 1.7 | 10.3 | 13.6 | - | 2.2 | - | - | - | - | - | - |
| $180 and under $190 | - | (1.4) | 6.4 | 16.5 | - | (2.1) | - | - | - | - | - | - |
| $190 and under $200 | - | - | 4.0 | 11.7 | - | - | - | - | - | - | - | - |
| $200 and under $210 | - | - | 2.1 | 9.0 | - | - | - | - | - | - | - | - |
| $210 and under $220 | - | - | 1.0 | 5.3 | - | - | - | - | - | - | - | - |
| $220 and under $230 | - | - | (.6) | 4.5 | - | - | - | - | - | - | - | - |
| $230 and under $240 | - | - | - | 2.7 | - | - | - | - | - | - | - | - |
| $240 and under $250 | - | - | - | 2.6 | - | - | - | - | - | - | - | - |
| $250 and under $260 | - | - | - | 2.1 | - | - | - | - | - | - | - | - |
| $260 and under $270 | - | - | - | .9 | - | - | - | - | - | - | - | - |
| $270 and under $280 | - | - | - | 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 | 100.0 |
| Number of employees | 5,818 | 21,501 | 34,292 | 28,689 | 89,004 | 57,324 | 31,134 | 29,488 | 8,978 | 62,838 | 45,568 | 28,066 |
| Average weekly salaries | $101.50 | $124.00 | $153.00 | $187.00 | $95.00 | $123.50 | $74.50 | $83.00 | $102.00 | $92.00 | $105.00 | $82.00 |

See footnotes 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 average weekly salaries, United States except Alaska and Hawaii, [1] June 1969)

| Average weekly salaries | Secretaries | | | | Stenographers, general | Stenographers, senior | Switchboard operators | | Tabulating-machine operators | | | Typists | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | I | II | III | IV | | | I | II | I | II | III | I | II |
| Under $60 | - | - | - | - | - | - | (0.5) | - | - | - | - | 0.2 | - |
| $60 and under $65 | - | - | - | - | (0.4) | - | 3.3 | - | 0.1 | - | - | 1.4 | - |
| $65 and under $70 | - | - | - | - | 1.6 | - | 4.3 | (0.8) | 3.5 | - | - | 6.9 | (0.9) |
| $70 and under $75 | (1.3) | - | - | - | 4.6 | (0.9) | 9.3 | 1.4 | 4.2 | (0.7) | - | 13.8 | 2.8 |
| $75 and under $80 | 1.5 | (1.2) | (0.5) | - | 6.2 | 1.3 | 7.7 | 1.1 | 10.9 | 1.7 | - | 15.6 | 5.6 |
| $80 and under $85 | 3.3 | 1.0 | 1.5 | - | 9.0 | 3.6 | 11.4 | 4.7 | 13.5 | 2.6 | - | 17.0 | 9.7 |
| $85 and under $90 | 4.7 | 1.5 | 1.3 | - | 11.3 | 5.3 | 11.6 | 6.6 | 10.6 | 3.3 | - | 14.2 | 13.3 |
| $90 and under $95 | 6.8 | 2.9 | 2.5 | (2.6) | 11.1 | 7.9 | 12.2 | 7.9 | 9.2 | 5.7 | (1.2) | 10.0 | 13.6 |
| $95 and under $100 | 8.1 | 3.8 | 3.1 | 1.7 | 11.2 | 9.0 | 8.1 | 10.4 | 9.4 | 8.5 | 1.1 | 7.3 | 12.6 |
| $100 and under $105 | 11.1 | 5.9 | 4.6 | 2.2 | 9.6 | 10.2 | 7.9 | 10.3 | 9.6 | 9.9 | 2.0 | 4.9 | 11.3 |
| $105 and under $110 | 9.9 | 6.1 | 3.7 | 2.3 | 8.3 | 9.9 | 4.6 | 10.7 | 7.9 | 8.6 | 3.3 | 2.6 | 7.8 |
| $110 and under $115 | 9.0 | 7.8 | 3.9 | 3.2 | 5.9 | 8.2 | 5.2 | 8.8 | 5.0 | 10.8 | 2.7 | 1.7 | 5.5 |
| $115 and under $120 | 10.2 | 9.4 | 7.3 | 3.8 | 5.5 | 7.7 | 5.1 | 8.8 | 3.8 | 8.3 | 7.5 | 1.5 | 5.3 |
| $120 and under $125 | 8.7 | 9.2 | 6.5 | 4.3 | 4.3 | 7.5 | 3.4 | 9.1 | 3.1 | 6.7 | 5.7 | .8 | 3.3 |
| $125 and under $130 | 6.7 | 8.6 | 8.4 | 7.3 | 3.9 | 6.5 | 2.4 | 6.0 | 2.5 | 6.5 | 9.2 | 1.2 | 2.5 |
| $130 and under $135 | 6.1 | 8.2 | 7.7 | 7.4 | 3.5 | 6.3 | 1.6 | 4.6 | 3.2 | 8.1 | 9.9 | (.7) | 2.8 |
| $135 and under $140 | 4.2 | 7.2 | 7.5 | 7.2 | 1.8 | 7.4 | (1.4) | 4.3 | 1.5 | 4.8 | 9.1 | - | 1.5 |
| $140 and under $145 | 3.6 | 7.9 | 7.7 | 7.4 | (1.9) | 2.9 | - | 1.9 | (2.0) | 3.1 | 9.5 | - | (1.7) |
| $145 and under $150 | 1.9 | 5.4 | 6.4 | 5.6 | - | 2.2 | - | 1.2 | - | 3.0 | 6.9 | - | - |
| $150 and under $160 | 1.9 | 7.3 | 11.1 | 11.1 | - | 2.4 | - | 1.1 | - | 4.9 | 11.2 | - | - |
| $160 and under $170 | (1.1) | 4.0 | 7.0 | 11.7 | - | (.8) | - | (.4) | - | 1.8 | 9.0 | - | - |
| $170 and under $180 | - | 1.5 | 4.5 | 8.5 | - | - | - | - | - | (.8) | 5.3 | - | - |
| $180 and under $190 | - | (1.1) | 2.5 | 5.4 | - | - | - | - | - | - | 2.7 | - | - |
| $190 and under $200 | - | - | 1.5 | 3.4 | - | - | - | - | - | - | 1.6 | - | - |
| $200 and under $210 | - | - | 1.0 | 2.5 | - | - | - | - | - | - | 1.1 | - | - |
| $210 and under $220 | - | - | - | 1.2 | - | - | - | - | - | - | 1.0 | - | - |
| $220 and over | - | - | - | (1.1) | - | - | - | - | - | - | - | - | - |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of employees | 87,275 | 82,602 | 48,037 | 15,051 | 71,379 | 56,212 | 14,035 | 10,826 | 5,297 | 10,130 | 5,058 | 85,292 | 45,409 |
| Average weekly salaries | $112.50 | $126.50 | $135.00 | $147.50 | $99.50 | $113.00 | $92.50 | $109.00 | $96.50 | $116.00 | $141.50 | $85.50 | $99.00 |

[1] 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, [1] by industry division, [2] United States except Alaska and Hawaii, June 1969)

| Occupation | Manufacturing | Public utilities [3] | Wholesale trade | Retail trade | Finance, insurance, and real estate | Selected services [4] |
|---|---|---|---|---|---|---|
| **Professional and administrative** | | | | | | |
| Accountants | 69 | 11 | 7 | ([5]) | 8 | ([5]) |
| Auditors | 39 | 17 | 8 | 6 | 29 | ([5]) |
| Chief accountants | 58 | 7 | 8 | 7 | 16 | ([5]) |
| Attorneys | 25 | 18 | 6 | ([5]) | 47 | ([5]) |
| Buyers | 86 | 6 | ([5]) | ([5]) | ([5]) | ([5]) |
| Job analysts | 71 | 4 | ([5]) | ([5]) | 18 | 5 |
| Directors of personnel | 71 | ([5]) | 6 | 6 | 12 | ([5]) |
| Chemists | 91 | ([5]) | ([5]) | ([5]) | ([5]) | 7 |
| Engineers | 80 | 9 | ([5]) | ([5]) | ([5]) | 11 |
| **Technical** | | | | | | |
| Engineering technicians | 76 | 7 | ([5]) | ([5]) | - | 17 |
| Draftsmen | 78 | 7 | ([5]) | ([5]) | ([5]) | 13 |
| **Clerical** | | | | | | |
| Clerks, accounting | 40 | 16 | 12 | 12 | 20 | ([5]) |
| Clerks, file | 23 | 5 | 7 | 9 | 55 | ([5]) |
| Keypunch operators | 42 | 11 | 12 | 8 | 26 | ([5]) |
| Office boys or girls | 36 | 12 | 9 | 4 | 36 | ([5]) |
| Secretaries | 51 | 9 | 7 | 5 | 24 | 4 |
| Stenographers | 52 | 13 | 8 | ([5]) | 22 | ([5]) |
| Switchboard operators | 32 | 13 | 7 | 15 | 31 | ([5]) |
| Tabulating-machine operators | 39 | 20 | 10 | 5 | 25 | ([5]) |
| Typists | 41 | 7 | 5 | 4 | 41 | ([5]) |

[1] 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.
[2] For scope of study, see table in appendix A.
[3] Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.
[4] Engineering and architectural services; and commercially operated research, development, and testing laboratories only.
[5] Less than 4 percent.

## Table 8. Relative Salary Levels: Occupation by Industry Division

(Relative salary levels for selected professional, administrative, technical, and clerical occupations [1] by industry division, [2] United States except Alaska and Hawaii, June 1969)

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

| Occupation | Manufacturing | Public utilities [3] | Wholesale trade | Retail trade | Finance, insurance, and real estate | Selected services [4] |
|---|---|---|---|---|---|---|
| **Professional and administrative** | | | | | | |
| Accountants | 100 | 102 | 98 | 98 | 97 | 100 |
| Auditors | 103 | 101 | 108 | 101 | 93 | 112 |
| Chief accountants | 103 | 100 | ([5]) | ([5]) | 97 | 93 |
| Attorneys | 105 | 103 | ([5]) | 98 | 95 | ([5]) |
| Buyers | 100 | 102 | 108 | ([5]) | ([5]) | 99 |
| Job analysts | 102 | 103 | ([5]) | ([5]) | 91 | ([5]) |
| Directors of personnel | 100 | 110 | 102 | 98 | 106 | 103 |
| Chemists | 100 | ([5]) | ([5]) | ([5]) | ([5]) | 105 |
| Engineers | 101 | 96 | ([5]) | ([5]) | ([5]) | 97 |
| **Technical** | | | | | | |
| Engineering technicians | 99 | 106 | ([5]) | ([5]) | ([5]) | 101 |
| Draftsmen | 100 | 99 | 98 | 98 | 96 | 100 |
| **Clerical** | | | | | | |
| Clerks, accounting | 104 | 105 | 104 | 91 | 91 | 104 |
| Clerks, file | 108 | 120 | 101 | 94 | 95 | 108 |
| Keypunch operators | 102 | 109 | 101 | 97 | 94 | 104 |
| Office boys or girls | 104 | 111 | 97 | 96 | 94 | 100 |
| Secretaries | 102 | 106 | 100 | 92 | 94 | 105 |
| Stenographers | 103 | 107 | 101 | 93 | 91 | 98 |
| Switchboard operators | 105 | 114 | 103 | 86 | 96 | 105 |
| Tabulating-machine operators | 106 | 99 | 103 | 95 | 94 | 101 |
| Typists | 104 | 105 | 100 | 97 | 95 | 102 |

[1] 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.
[2] For scope of study, see table in appendix A.
[3] Transportation (limited to railroad, local and suburban passenger, deep sea water, and air transportation industries), communication, electric, gas, and sanitary services.
[4] Engineering and architectural services; and commercially operated research, development, and testing laboratories only.
[5] Insufficient employment in 1 work level or more to warrant separate presentation of data.

## Table 9. Average Scheduled Weekly Hours: Occupation by Industry Division

(Average weekly hours[1] for employees in selected professional, administrative, technical, and clerical occupations[2] by industry division,[3] United States except Alaska and Hawaii, June 1969)

| Occupation | Manufacturing | Public utilities[4] | Wholesale trade | Retail trade | Finance, insurance, and real estate | Selected services[5] |
|---|---|---|---|---|---|---|
| Professional and administrative | | | | | | |
| Accountants | 40.0 | 39.5 | 39.5 | 39.5 | 38.0 | 39.5 |
| Auditors | 39.0 | 39.5 | 39.5 | 40.0 | 38.0 | 39.5 |
| Chief accountants | 39.5 | 39.5 | (6) | (6) | 38.0 | 40.0 |
| Attorneys | 39.0 | 39.5 | (6) | 40.0 | 37.5 | (6) |
| Buyers | 40.0 | 39.5 | 39.0 | (6) | (6) | 39.5 |
| Job analysts | 39.5 | 39.5 | (6) | (6) | 38.0 | (6) |
| Directors of personnel | 40.0 | 39.5 | 39.0 | 40.5 | 38.5 | 40.0 |
| Chemists | 39.5 | (6) | (6) | (6) | (6) | 39.5 |
| Engineers | 40.0 | 39.5 | (6) | (6) | (6) | 39.5 |
| Technical | | | | | | |
| Engineering technicians | 40.0 | 39.5 | (6) | (6) | (6) | 39.5 |
| Draftsmen | 40.0 | 39.5 | 39.0 | 38.0 | 38.0 | 39.5 |
| Clerical | | | | | | |
| Clerks, accounting | 39.5 | 39.5 | 39.5 | 39.5 | 38.5 | 39.5 |
| Clerks, file | 39.0 | 39.0 | 39.0 | 39.0 | 38.0 | 39.0 |
| Keypunch operators | 39.5 | 39.5 | 39.5 | 39.5 | 38.0 | 39.5 |
| Office boys or girls | 39.0 | 38.5 | 39.0 | 38.5 | 38.0 | 39.0 |
| Secretaries | 39.0 | 39.0 | 38.5 | 39.0 | 38.0 | 39.5 |
| Stenographers | 39.5 | 39.5 | 39.0 | 39.0 | 38.5 | 39.5 |
| Switchboard operators | 39.5 | 39.5 | 39.0 | 39.0 | 38.5 | 39.5 |
| Tabulating-machine operators | 39.5 | 39.0 | 39.5 | 39.0 | 37.5 | 39.5 |
| Typists | 39.5 | 39.0 | 39.0 | 39.0 | 38.0 | 39.5 |

[1] Based on the scheduled workweek for which employees receive their regular straight-time salary. If scheduled hours were not available, the scheduled 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.

[2] Each occupation includes the work levels, as defined for the survey, for which data are presented in table 1.

[3] For scope of study, see table in appendix A.

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

[5] Engineering and architectural services; and commercially operated research, development, and testing laboratories only.

[6] 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 1968). The variable minimum employment size, which was adopted in the 1966 survey, more nearly equalizes the minimum 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. [1]

As indicated in the table, the scope of the study was the same for all occupations; however, the clerical and drafting occupations were studied in a larger number of establishments than were the professional, administrative, and engineering technician occupations. The sampling methods used for studying each of these occupational groups are described in detail under Sampling and Estimating Procedures.

## Timing of Survey

Survey data collection was planned so that the data would reflect an average reference period of June 1969. [2] The data for the professional, administrative, and engineering technician occupations were obtained from a nationwide sample of establishments contacted largely between March and September.

The average reference month for clerical and drafting occupations was also June 1969. Data for these occupations were obtained from two sources: The Bureau's occupational wage studies in 47 metropolitan areas which had reference dates of March through September 1969; and in all other areas, from the same sample of establishments that were visited for the professional and administrative occupations.

## Method of Collection

Data were obtained by Bureau field economists, largely by personal visits, from representative establishments within the scope of the survey. [3] 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.

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[1] The metropolitan area data in the 1969 survey relate to all 227 SMSA's (within the 48 States surveyed) as revised through April 1967 by the Bureau of the Budget. Earlier surveys represented SMSA's ranging in numbers from 188 in 1962 and earlier surveys to 221 in the 1966 survey.

[2] Prior to the 1967 study, the average reference period for clerical and drafting jobs was February, and it was 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. Beginning with 1967, the reference period was changed to June.

[3] The surveys in metropolitan areas, used to develop the nationwide estimates for the drafting and clerical occupations, provide for collection by a combination of mail and personal visits in alternate years.

Number of Establishments and Workers Within Scope of Survey [1] and Number Studied by Industry Division, June 1969

| Industry division | Minimum employment in establishments in scope of survey | Within scope of survey [1] | | | Studied for professional and administrative occupations | | Studied for drafting and clerical occupations [2] | |
|---|---|---|---|---|---|---|---|---|
| | | Number of establishments | Workers in establishments | | Number of establishments | Total workers in establishments | Number of establishments | Total workers in establishments |
| | | | Total | Professional, administrative, supervisory, and clerical [3] | | | | |
| United States—all industries [1] | | 31,648 | 19,723,125 | 7,221,622 | 3,045 | 6,959,092 | 5,652 | 8,329,740 |
| Manufacturing | 250 | 13,625 | 12,630,514 | 3,515,726 | 1,832 | 4,770,727 | 2,812 | 5,267,492 |
| Nonmanufacturing: | | | | | | | | |
| Transportation, [4] communication, electric, gas, and sanitary services | 100 | 2,794 | 2,110,043 | 984,920 | 306 | 979,932 | 655 | 1,190,760 |
| Wholesale trade | 100 | 4,000 | 899,291 | 439,357 | 178 | 78,118 | 524 | 180,284 |
| Retail trade | 250 | 2,333 | 2,082,388 | 441,019 | 225 | 538,215 | 650 | 948,443 |
| Finance, insurance, and real estate | 50 | 8,396 | 1,750,733 | 1,674,757 | 406 | 445,136 | 862 | 588,803 |
| Services: | | | | | | | | |
| Engineering and architectural services; and commercially operated research, development, and testing laboratories only | 100 | 500 | 250,156 | 165,843 | 98 | 146,964 | 149 | 153,958 |
| Metropolitan areas—all industries [5] | | 24,569 | 15,825,986 | 6,347,582 | 2,452 | 6,221,533 | 5,059 | 7,592,181 |
| Manufacturing | 250 | 9,096 | 9,303,776 | 2,912,343 | 1,345 | 4,089,766 | 2,325 | 4,586,531 |
| Nonmanufacturing: | | | | | | | | |
| Transportation, [4] communication, electric, gas, and sanitary services | 100 | 2,048 | 1,913,782 | 913,765 | 272 | 963,999 | 621 | 1,174,827 |
| Wholesale trade | 100 | 3,550 | 818,480 | 408,087 | 162 | 73,886 | 508 | 176,052 |
| Retail trade | 250 | 2,076 | 1,950,041 | 418,601 | 213 | 529,422 | 638 | 939,650 |
| Finance, insurance, and real estate | 50 | 7,313 | 1,615,172 | 1,543,983 | 371 | 438,771 | 827 | 582,438 |
| Services: | | | | | | | | |
| Engineering and architectural services; and commerically operated research, development, and testing laboratories only | 100 | 486 | 224,735 | 150,803 | 89 | 125,689 | 140 | 132,683 |
| Establishments employing 2,500 workers or more—all industries | | 1,133 | 6,884,342 | 2,617,336 | 716 | 5,319,497 | 793 | 5,166,494 |
| Manufacturing | - | 763 | 4,772,450 | 1,572,980 | 470 | 3,735,165 | 500 | 3,530,060 |

[1] 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.

[2] The drafting and clerical occupations were studied in the same sample of establishments as were the professional and administrative occupations, except in SMSA's. For these areas, the drafting and clerical data were obtained from the Bureau's more intensively sampled surveys of separate metropolitan areas. (For a more detailed explanation, see Sampling and Estimating Procedures, p. 34.)

[3] Includes executive, administrative, professional, supervisory, and clerical employees, but excludes technicians and draftsmen, and sales personnel.

[4] 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.

[5] Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through May 1967 by the Bureau of the Budget.

## Nature of Data Collected and Presented

The reported salaries relate to standard salaries paid for standard work schedules, i. e., to 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 were available.

About 4 percent of the establishments asked to supply data on professional, administrative, and technical occupations would not do so. These corresponded to an estimated total in the universe studied of approximately 935,000 workers, about 4.7 percent of 19,723,000. A lower refusal rate was found in the surveys of clerical and drafting occupations. The noncooperating units were replaced by others in the same industry-size-location classes. Where no such substitutes were available, since all similar units were already in the sample, the weights of the included establishments were increased to account for the missing units.

Under established policies of some companies, officials were not authorized to provide information relating to salaries for all occupations studied. 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 for whom salary data were not available. These policies more often related to the higher level positions, mainly because of policies not to disclose pay data for employees considered a part of the management group or classified in occupational levels involving a single employee.

| Number of job categories | Percent of employees classified in professional, administrative, and engineering technician occupations surveyed for whom salary data were not available |
|---|---|
| 1 | 10 percent or more<br>Directors of personnel IV (16 percent) |
| 2 | 5 to 9.9 percent<br>Attorneys VI<br>Directors of personnel III |
| 16 | 1 to 4.9 percent |
| 34 | 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 pay structure 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. [4] 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

[4] 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 the appropriate work levels.

estimates for the occupations. In addition, the professional and administrative 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. [5] 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.

In the occupations surveyed, both men and women were classified and included in the occupational employment and earnings estimates. In the professional, administrative, and technical occupations, men were sufficiently predominant to preclude presentation of separate data by sex. For those clerical occupations in which both men and women are commonly employed, separate data by sex are available from the area wage survey reports compiled by metropolitan area. The occupations and work levels included in this study, and in which women accounted for 5 percent or more of the employment, were distributed according to the proportion of women employees, as follows:

| Women (percent) | Occupation and level |
|---|---|
| 95 or more | File clerks I and II, all levels of keypunch operators, secretaries, stenographers, switchboard operators, and typists |
| 90-94 | Accounting clerks I and file clerks III |
| 65-69 | Accounting clerks II |
| 55-59 | Tabulating-machine operators I |
| 45-49 | Office boys or girls |
| 35-39 | Tabulating-machine operators II and job analysts I |
| 25-29 | Tabulating-machine operators III and job analysts II |
| 20-24 | Engineering technicians I and draftsmen-tracers |
| 15-19 | Chemists I and II |
| 10-14 | Accountants I and buyers I |
| 5- 9 | Accountants II, auditors I, attorneys I, job analysts III, directors of personnel I, chemists III, engineering technicians II, and draftsmen I |

## Sampling and Estimating Procedures

As indicated earlier, this survey relates to all establishments in the United States, except Alaska and Hawaii, within the industry and minimum size scope. Although one sample of establishments was selected for studying the professional, administrative, and engineering technician occupations, and another for the drafting and clerical occupations, both relate to the same population of geographic, industry, and size-of-establishment characteristics. The procedures used for selecting samples for these two groups of occupations are explained in the following paragraphs.

Professional, Administrative, and Engineering Technician Occupations. 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. [6] Each industry was sampled separately, the sampling rates dependent on the importance of the industry as an employer having the survey jobs. Within each industry, a

[5] 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. By way of 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.

[6] A few of the largest employers, together employing approximately one and a quarter million workers, gave data on a company-wide 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.

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.

Clerical and Drafting Occupations. The nationwide estimates for the clerical and drafting occupations are, in large part, a byproduct of the Bureau's surveys of these occupations in 89 metropolitan areas. Data from 47 of these area wage surveys were adjusted to the scope of the national survey and were included to represent themselves.[7] The sampling of establishments within each of these areas was designed to yield estimates of the area as a whole, and for major industry divisions within the area. As described in the preceding section, the establishments were stratified by industry and employment size, and sample members selected at random for each stratum.

For all remaining areas, clerical and drafting data were obtained from the same nationwide sample of establishments used for the professional, administrative, and engineering technician occupations. Within this sample there were approximately 750 establishments in areas where locality studies had been done between October 1968 and February 1969. Where possible, clerical and drafting data reported in these studies were updated to reflect general increases occurring to the time professional and administrative data were collected. In all other establishments, clerical and drafting data were collected in conjunction with professional and administrative data.

Conversion of Salary Rates

Salary data for the selected occupations were collected in the form in which it was 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 the professional, administrative, and engineering technician occupations. The factors used to convert these data for the two groups of occupations were as follows:

| Time interval represented by salary | Salaries for clerical and drafting occupations to weekly basis | Salaries for professional and administrative occupations and for engineering technicians to monthly basis |
|---|---|---|
| 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 the professional and administrative occupations and for engineering technicians 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.

[7] These were the 47 area wage surveys (excluding Cleveland and San Jose) which had payroll reference dates of March through September 1969, and were, therefore, representative of the same collection time period that applied for the national survey.

## 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 professional and administrative and engineering technician occupation work levels, the relative sampling errors of the average salaries were distributed as follows: 35 were under 2 percent; 14 were 2 and under 4 percent; 2 were 4 and under 6 percent; and 2 were 6 percent and over.[8] The nationwide estimates for the clerical and drafting room occupations, based on the much larger sample, are subject to smaller sampling error—2 percent or less in all cases except for secretaries IV (2.1 percent), accounting clerks I (2.3 percent), tabulating-machine operators II (2.5 percent), and tabulating-machine operators I (6.2 percent). 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 a sampling error of 4 percent, the changes are 19 out of 20 that the true average lies within the band from $960 to $1,040.

[8] The 6 percent and over group included: Chief accountants I—7 percent and chemists VIII—6.5 percent.

# Appendix B. Survey Changes in 1969

## Changes in Occupational Coverage and Definitions

The four-level managers, office services occupation was dropped from the survey and changes were made in the definitions for directors of personnel and attorneys as described below.

Directors of Personnel. The survey definition for this occupation was revised slightly, mostly by rearranging certain portions of the definition and making some minor changes in wording. The changes were designed to clarify the intent of the definition and facilitate uniform interpretation by data collectors, respondents, and users. There were no substantive changes and each level represents the same types of positions as in 1968. Comparisons of data for trend purposes, therefore, were not affected.

Attorneys. The survey definition for this occupation was revised, reducing the number of levels from seven to six so that survey data could be related by the Civil Service Commission to new standards for Federal attorney positions. Although the current six-level definition includes essentially the same range of difficulty and responsibility coverage as the former definition, comparability of data between surveys for individual levels was not maintained.

The reduction in the number of levels was accomplished by consolidating much of the content of former levels I and II into new level I and modifying the experience required statement in former level III (current level II). The wording of levels III through VI in the revised definition is the same as for former levels IV through VII, respectively. Evaluation of the survey data and collection experience indicated that in addition to the rematching required for current levels I and II, some reevaluation of prior matches apparently occurred in other levels. The extent of rematching and the effect on average salaries could not be measured; therefore, comparisons of data for trend purposes were not reported.

# 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 page 75.

## 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.)

ACCOUNTANT—Continued

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 classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements, not involving problems of analysis or presentation; and preparing charts, tables, and other exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

Responsibility for direction of others. Usually none.

Accountant II

General characteristics. At this continuing developmental level the professional accountant makes practical applications of technical accounting practices and concepts beyond the mere application of detailed rules and instructions. Assignments are designed to expand his practical experience and to develop his professional judgment in the application of basic

ACCOUNTANT—Continued

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.

ACCOUNTANT—Continued

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

ACCOUNTANT—Continued

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 responsibility. 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—Continued

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.

AUDITOR—Continued

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.

AUDITOR—Continued

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 leader 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 similiar programs.

CHIEF ACCOUNTANT—Continued

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[1] 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

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.

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[1] Insufficient data were obtained for level V to warrant presentation of average salaries.

CHIEF ACCOUNTANT—Continued

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 unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

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

TC-3. The organization which the accounting program serves puts a heavy demand on the accounting organization for specialized and extensive adaptations of the basic system to meet management needs. Such demands arise because the functions, products, work processes, etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

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

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

Subordinate Staff

In 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.

CHIEF ACCOUNTANT—Continued

| Class | Authority and responsibility * | Technical complexity * | 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. |
| | or | | |
| | 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. |
| | or | | |
| | 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. |
| | or | | |
| | 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. |
| | or | | |
| | 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. |
| | or | | |
| | 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. |

* AR-1, -2, and -3; and TC-1, -2, and -3 are explained on the preceding pages.

# ATTORNEYS

## ATTORNEY [2]

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 definitions are to be classified and coded in accordance with the chart below.

| Class | Difficulty level of legal work* | Responsibility level of job* | 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 | R-2 | Sufficient professional experience (at least 1 year, usually more) at the "D-1" level to assure competence as an attorney |
| | or | | |
| | D-2 | R-1 | |
| III | D-2 | R-2 | At least 1 year, usually more, of professional experience at the "D-2" level. |
| | or | | |
| | D-3 | R-1 | |

[2] See appendix B for description of revisions in the number and definition of work levels.

ATTORNEY—Continued

| Class | Difficulty level of legal work* | Responsibility level of job* | Experience required |
|---|---|---|---|
| IV | D-2 or D-3 | R-3 or 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. |

* D-1, D-2, D-3, and R-1, R-2, R-3, and R-4 are explained below.

NOTE: In the table above, Roman numeral designations do not identify the same attorney levels as in the 1968 and earlier surveys. (See appendix B.)

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

Examples of D-1 work:

(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.

ATTORNEY—Continued

D-3. Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluating 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 (e.g., in planning and organizing legal research and studies). 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

ATTORNEY—Continued

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);

BUYER—Continued

(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.

BUYER—Continued

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

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

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

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

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

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

Buyer IV

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

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom designed items according to complex and rigid specifications.

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

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

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

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

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

Buyer V [3]

Purchases items or materials, either technical or nontechnical, in such unusually large quantities that individual purchases can affect the overall market price of the commodity. (NOTE: Only the very largest organizations, e.g., those employing more than 10,000 persons, are able to buy in the quantities contemplated in this paragraph. Even in the very large organizations this level of buying is often absent and even when present, is restricted to a very few buyers or is assigned, not to a buyer but to some higher ranking official.)

[3] Insufficient data were obtained for level V to warrant presentation of average salaries.

BUYER—Continued

Alternatively, may purchase items of extraordinary technical complexity (e.g., missile guidance systems; items that involve the outermost limits of the physical sciences or engineering) or of unusually high individual value (e.g., multiengine jet aircraft; large capacity computers; and high capacity turbine-generators).

Usually is required to identify and consider all possible sources of supply.

The transactions are so large that they often affect a considerable portion of the industry or trade concerned, resulting in complex scheduling and difficulty in negotiating mutually acceptable arrangements.

Frequently is required to develop new sources of supply through persuasion of manufacturers or other concerns to expand or convert plants and facilities.

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

## 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 techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.

Job Analyst II

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

Job Analyst III

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

JOB ANALYST—Continued

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 OR PERSONNEL [4]

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 functions; 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.).

[4] Definition revised for 1969 survey. See appendix B for an explanation of changes made.

DIRECTOR OR PERSONNEL—Continued

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 of work in accordance with the following tabulation:

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

[1] "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.

[2] "Development level" personnel program—either:

(a) Director or 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 paragraph (a).

[3] "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.

[4] "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.

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.

CHEMIST—Continued

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

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

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

Chemist IV

General characteristics. As a fully competent chemist in all conventional aspects of the subject-matter or the functional area of the assignments, plans and conducts work requiring (a) mastery of specialized techniques or ingenuity in selecting and evaluating approaches to unforeseen or novel problems, and (b) ability to apply a research approach to the solution of a wide variety of problems and to assimilate the details and significance of chemical and physical analyses, procedures, and tests. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

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

Typical duties and responsibilities. Conducts laboratory assignments requiring the determination and evaluation of alternative procedures and the sequence of performing them. Performs complex, exacting, or 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.

CHEMIST—Continued

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

Chemist VI

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

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

Typical duties and responsibilities. (One or both of the following.)

(1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire chemical program of a company, when the program is of limited complexity and scope. Activities under his leadership are of 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

CHEMIST—Continued

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 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.

CHEMIST—Continued

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—Continued

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.

ENGINEER—Continued

Typical duties and responsibilities. (One or more of the following.)

(1) In a supervisory capacity plans, develops, coordinates, and directs a large and important engineering project or a number of small projects with many complex features. A substantial portion of the work supervised is comparable to that described for engineer IV.

(2) As individual researcher or worker carries out complex or novel assignments requiring the development of new or improved techniques and procedures. Work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods.

(3) As staff specialist develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others. Assesses the feasibility and soundness of proposed engineering evaluation tests, products, or equipment when necessary data are insufficient or confirmation by testing is advisable. Usually performs as a staff advisor and consultant as to a technical specialty, a type of facility or equipment, or a program function.

Responsibility for the direction of others. Supervises, coordinates, and reviews the work of a small staff of engineers and technicians; estimates manpower needs and schedules and assigns work to meet completion date. Or, as individual 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.

ENGINEER—Continued

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

ENGINEER—Continued

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.

## ENGINEERING TECHNICIANS

### 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, and drawings; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

ENGINEERING TECHNICIAN—Continued

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; sets up and operates equipment; 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

ENGINEERING TECHNICIAN—Continued

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.

## DRAFTSMEN

### 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 of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required.

### 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

## CLERK, ACCOUNTING

### Clerk, Accounting I

Under supervision, performs one or more routine accounting operations such as posting simple journal vouchers or accounts payable vouchers, entering vouchers in voucher registers; reconciling bank accounts; and posting subsidiary ledgers controlled by general ledgers, or posting simple cost accounting data. This job does not require a knowledge of accounting and bookkeeping principles, but is found in offices in which the more routine accounting work is subdivided on a functional basis among several workers.

### Clerk, Accounting II

Under general direction of a bookkeeper or accountant, has responsibility for keeping one or more sections of a complete set of books or records relating to one phase of an establishment's business transactions. Work involves posting and balancing subsidiary ledger or ledgers such as accounts receivable or accounts payable; examining and coding invoices or vouchers with proper accounting distribution; requires judgment and experience in making proper assignations and allocations. May assist in preparing, adjusting, and closing journal entries; may direct accounting clerks I.

## CLERK, FILE

### 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. Performs 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

In an established filing system containing a number of varied subject matter files, classifies and indexes file material such as correspondence, reports, technical documents, etc. 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

### Keypunch Operator I

Under close supervision or following specific procedures or instructions, transcribes data from source documents to punched cards. Operates a numerical and/or alphabetical or combination keypunch machine to keypunch tabulating cards. May verify cards. Working from various standardized source documents, follows specified sequences which have been coded or prescribed in detail and require little or no selecting, coding, or interpreting of data to be punched. Problems arising from erroneous items or codes, missing information, etc., are referred to supervisor.

KEYPUNCH OPERATOR—Continued

Keypunch Operator II

Operates a numerical and/or alphabetical or combination keypunch machine to transcribe data from various source documents to keypunch tabulating cards. Performs same tasks as lower level keypunch operator but in addition, work requires application of coding skills and the making of some determinations, for example, locates on the source document the items to be punched; extracts information from several documents; searches for and interprets information on the document to determine information to be punched. May train inexperienced operators.

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.

SECRETARY

Assigned as personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work activities 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 the 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—Continued

Secretary I

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

(b) Secretary to a nonsupervisory staff specialist, professional employee, administrative officer, or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

Secretary II

(a) 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 subordinate staff normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or

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

Secretary III

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

(b) 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

(c) 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

(d) 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

(e) 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

(a) Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or

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

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

STENOGRAPHER, GENERAL

Primary duty is to take and transcribe dictation from one or more persons either in shorthand or by Stenotype or similar machine, involving a normal routine vocabulary. May also type from written copy. May maintain files, keep simple records or perform other relatively routine clerical tasks. May operate from a stenographic pool. Does not include transcribing-machine work.

STENOGRAPHER, SENIOR

Primary duty is to take and transcribe dictation from one or more persons either in shorthand or by Stenotype or similar machine, involving a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also type from written copy. 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 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 followup files; assembling material for reports, memorandums, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc. Does not include transcribing-machine work.

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

SWITCHBOARD OPERATOR

Switchboard Operator I

Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. May handle routine long distance calls and record tolls. May perform limited telephone information service. ("Limited" telephone information service occurs if the functions of the establishment serviced are readily understandable for telephone information purposes, or if the requests are routine, e.g., giving extension numbers when specific names are furnished, or if complex calls are referred to another operator.)

Switchboard Operator II

Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. Performs full telephone information service or handles complex calls, such as conference, collect, overseas, or similar calls, either in addition to doing routine work as described for switchboard operator I, or as a full-time assignment. ("Full" telephone information service occurs when the establishment has varied functions that are not readily understandable for telephone information purposes, e.g., because of overlapping or interrelated functions, and consequently present frequent problems as to which extensions are appropriate for calls.)

## TABULATING-MACHINE OPERATOR

### Tabulating-Machine Operator I

Operates simple tabulating or electrical accounting machines, such as the sorter, reproducing punch, collator, etc., with specific instructions. May include the performance of some simple wiring from diagrams and some filing work. The work typically involves portions of a work unit, for example, individual sorting or collating runs, or repetitive operations.

### Tabulating-Machine Operator II

Operates more difficult tabulating or electrical accounting machines, such as the tabulator and calculator, in addition to the sorter, reproducer, and collator. This work is performed under specific instructions and may include the performance of some wiring from diagrams. The work typically involves, for example, tabulations involving a repetitive accounting exercise, a complete but small tabulating study, or parts of a longer and more complex report. Such reports and studies are usually of a recurring nature where the procedures are well established. May also include the training of new employees in the basic operation of the machine.

### Tabulating-Machine Operator III

Operates a variety of tabulating or electrical accounting machines, typically including such machines as the tabulator, calculator, interpreter, collator, and others. Performs complete reporting assignments without close supervision, and performs difficult wiring as required. The complete reporting and tabulating assignments typically involve a variety of long and complex reports which often are of irregular or nonrecurring type requiring some planning and sequencing of steps to be taken. As a more experienced operator, is typically involved in training new operators in machine operations, or partially trained operators in wiring from diagrams and operating sequences of long and complex reports. Does not include working supervisors performing tabulating-machine operations and day-to-day supervision of the work and production of a group of tabulating-machine operators.

## 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; routine typing of forms, insurance policies, etc.; 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; 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 in 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 | C |
| | II | B |
| | III | A |
| Clerk, accounting | I | B |
| | II | A |
| Clerk, file | I | C |
| | II | B |
| | III | A |
| Keypunch operator | I | B |
| | II | A |
| Secretary | I | D |
| | II | C |
| | III | B |
| | IV | A |
| Switchboard operator | I | B |
| | II | A |
| Tabulating-machine operator | I | C |
| | II | B |
| | III | A |
| Typist | I | B |
| | II | A |

# Appendix D. Comparison of Average Annual Salaries in Private Industry, June 1969, with Corresponding Salary Rates for Federal Employees Under the General Schedule

The survey was designed, among other uses, to provide a basis for comparing Federal salaries under the General Schedule with general pay levels in private industry. To assure compilation of pay data for work levels that would be equivalent to the Federal grades, the Civil Service Commission collaborated with the Bureau of Labor Statistics to prepare the occupation work level definitions used in the survey. Definitions were graded by the Commission according to standards established for each grade. Each occupation work level surveyed by the Bureau of Labor Statistics and currently considered by the Commission to be equivalent to a General Schedule grade is identified in the following table.

Comparison of Average Annual Salaries in Private Industry,[1] June 1969, With Salary Rates for Federal Employees Under the General Schedule[2]

| Occupation and class surveyed by BLS[3] | Average annual salaries in private industry[4] | Salary rates for Federal employees under the General Schedule[2] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Grade[5] | Per annum rates and steps[6] | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Clerks, file I | $3,883 | GS 1 | $3,889 | $4,019 | $4,149 | $4,279 | $4,408 | $4,538 | $4,668 | $4,798 | $4,928 | $5,057 |
| Office boys or girls | 4,279 | | 3,889 | 4,019 | 4,149 | 4,279 | 4,408 | 4,538 | 4,668 | 4,798 | 4,928 | 5,057 |
| Clerks, file II | 4,328 | GS 2 | 4,231 | 4,372 | 4,513 | 4,655 | 4,796 | 4,937 | 5,078 | 5,219 | 5,360 | 5,501 |
| Keypunch operators I | 4,797 | | 4,360 | 4,505 | 4,650 | 4,795 | 4,940 | 5,085 | 5,230 | 5,375 | 5,520 | 5,665 |
| Switchboard operators I | 4,822 | | | | | | | | | | | |
| Tabulating-machine operators I | 5,021 | | | | | | | | | | | |
| Typists I | 4,451 | | | | | | | | | | | |
| Clerks, accounting I | 4,941 | GS 3 | 4,600 | 4,753 | 4,907 | 5,060 | 5,214 | 5,367 | 5,521 | 5,674 | 5,828 | 5,981 |
| Clerks, file III | 5,320 | | 4,917 | 5,081 | 5,245 | 5,409 | 5,573 | 5,737 | 5,901 | 6,065 | 6,229 | 6,393 |
| Draftsmen-tracers | 5,301 | | | | | | | | | | | |
| Engineering technicians I | 5,942 | | | | | | | | | | | |
| Keypunch operators II | 5,482 | | | | | | | | | | | |
| Stenographers, general | 5,192 | | | | | | | | | | | |
| Switchboard operators II | 5,689 | | | | | | | | | | | |
| Tabulating-machine operators II | 6,060 | | | | | | | | | | | |
| Typists II | 5,155 | | | | | | | | | | | |
| Clerks, accounting II | 6,448 | GS 4 | 5,145 | 5,316 | 5,487 | 5,658 | 5,829 | 6,000 | 6,171 | 6,342 | 6,513 | 6,684 |
| Draftsmen I | 6,454 | | 5,522 | 5,706 | 5,890 | 6,074 | 6,258 | 6,442 | 6,626 | 6,810 | 6,994 | 7,178 |
| Engineering technicians II | 7,011 | | | | | | | | | | | |
| Secretaries I | 5,869 | | | | | | | | | | | |
| Stenographers, senior | 5,884 | | | | | | | | | | | |
| Tabulating-machine operators III | 7,371 | | | | | | | | | | | |
| Accountants I | 8,002 | GS 5 | 5,732 | 5,924 | 6,115 | 6,307 | 6,498 | 6,690 | 6,881 | 7,073 | 7,265 | 7,456 |
| Auditors I | 8,367 | | 6,176 | 6,382 | 6,588 | 6,794 | 7,000 | 7,206 | 7,412 | 7,618 | 7,824 | 8,030 |
| Buyers I | 7,877 | | | | | | | | | | | |
| Chemists I | 8,736 | | | | | | | | | | | |
| Draftsmen II | 7,988 | | | | | | | | | | | |
| Engineers I | 9,662 | | | | | | | | | | | |
| Engineering technicians III | 8,040 | | | | | | | | | | | |
| Job analysts I | 8,137 | | | | | | | | | | | |
| Secretaries II | 6,586 | | | | | | | | | | | |
| Secretaries III | 7,032 | GS 6 | 6,321 | 6,532 | 6,743 | 6,955 | 7,166 | 7,377 | 7,588 | 7,799 | 8,010 | 8,221 |
| | | | 6,882 | 7,111 | 7,340 | 7,569 | 7,798 | 8,027 | 8,256 | 8,485 | 8,714 | 8,943 |
| Accountants II | 9,013 | GS 7 | 6,981 | 7,214 | 7,447 | 7,680 | 7,913 | 8,146 | 8,379 | 8,612 | 8,845 | 9,078 |
| Auditors II | 9,287 | | 7,639 | 7,894 | 8,149 | 8,404 | 8,659 | 8,914 | 9,169 | 9,424 | 9,679 | 9,934 |
| Buyers II | 9,269 | | | | | | | | | | | |
| Chemists II | 9,626 | | | | | | | | | | | |
| Draftsmen III | 9,755 | | | | | | | | | | | |
| Engineers II | 10,455 | | | | | | | | | | | |
| Engineering technicians IV | 9,300 | | | | | | | | | | | |
| Job analysts II | 9,081 | | | | | | | | | | | |
| Secretaries IV | 7,697 | | | | | | | | | | | |
| Accountants III | 10,029 | GS 9 | 8,462 | 8,744 | 9,026 | 9,308 | 9,590 | 9,872 | 10,154 | 10,436 | 10,718 | 11,000 |
| Attorneys I | 11,020 | | 9,320 | 9,631 | 9,942 | 10,253 | 10,564 | 10,875 | 11,186 | 11,497 | 11,808 | 12,119 |
| Auditors III | 10,726 | | | | | | | | | | | |
| Buyers III | 10,942 | | | | | | | | | | | |
| Chemists III | 11,063 | | | | | | | | | | | |
| Engineers III | 11,701 | | | | | | | | | | | |
| Engineering technicians V | 10,321 | | | | | | | | | | | |
| Job analysts III | 10,595 | | | | | | | | | | | |
| Accountants IV | 11,967 | GS 11 | 10,203 | 10,543 | 10,883 | 11,223 | 11,563 | 11,903 | 12,243 | 12,583 | 12,923 | 13,263 |
| Attorneys II | 12,780 | | 11,233 | 11,607 | 11,981 | 12,355 | 12,729 | 13,103 | 13,477 | 13,851 | 14,225 | 14,599 |
| Auditors IV | 13,125 | | | | | | | | | | | |
| Buyers IV | 13,151 | | | | | | | | | | | |
| Chemists IV | 13,359 | | | | | | | | | | | |
| Chief accountants I | 13,212 | | | | | | | | | | | |
| Directors of personnel I | 11,847 | | | | | | | | | | | |
| Engineers IV | 13,893 | | | | | | | | | | | |
| Job analysts IV | 12,830 | | | | | | | | | | | |

See footnotes at end of table.

Comparison of Average Annual Salaries in Private Industry, [1] June 1969, With Salary Rates for Federal Employees Under the General Schedule [2]—Continued

| Occupation and class surveyed by BLS [3] | Average annual salaries in private industry [4] | Salary rates for Federal employees under the General Schedule [2] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Grade [5] | Per annum rates and steps [6] | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Accountants V | $14,373 | GS 12 | $12,174 | $12,580 | $12,986 | $13,392 | $13,798 | $14,204 | $14,610 | $15,016 | $15,422 | $15,828 |
| Attorneys III | 15,879 | | 13,389 | 13,835 | 14,281 | 14,727 | 15,173 | 15,619 | 16,065 | 16,511 | 16,957 | 17,403 |
| Chemists V | 16,080 | | | | | | | | | | | |
| Chief accountants II | 14,637 | | | | | | | | | | | |
| Directors of personnel II | 13,925 | | | | | | | | | | | |
| Engineers V | 16,107 | | | | | | | | | | | |
| Attorneys IV | 19,163 | GS 13 | 14,409 | 14,889 | 15,369 | 15,849 | 16,329 | 16,809 | 17,289 | 17,769 | 18,249 | 18,729 |
| Chemists VI | 18,529 | | 15,812 | 16,339 | 16,866 | 17,393 | 17,920 | 18,447 | 18,974 | 19,501 | 20,028 | 20,555 |
| Chief accountants III | 17,714 | | | | | | | | | | | |
| Directors of personnel III | 16,738 | | | | | | | | | | | |
| Engineers VI | 18,577 | | | | | | | | | | | |
| Attorneys V | 23,685 | GS 14 | 16,946 | 17,511 | 18,076 | 18,641 | 19,206 | 19,771 | 20,336 | 20,901 | 21,466 | 22,031 |
| Chemists VII | 22,473 | | 18,531 | 19,149 | 19,767 | 20,385 | 21,003 | 21,621 | 22,239 | 22,857 | 23,475 | 24,093 |
| Chief accountants IV | 20,586 | | | | | | | | | | | |
| Directors of personnel IV | 20,585 | | | | | | | | | | | |
| Engineers VII | 21,199 | | | | | | | | | | | |
| Attorneys VI | 29,421 | GS 15 | 19,780 | 20,439 | 21,098 | 21,757 | 22,416 | 23,075 | 23,734 | 24,393 | 25,052 | 25,711 |
| Chemists VIII | 27,092 | | 21,589 | 22,309 | 23,029 | 23,749 | 24,469 | 25,189 | 25,909 | 26,629 | 27,349 | 28,069 |
| Engineers VIII | 24,020 | | | | | | | | | | | |

[1] For scope of survey, see appendix A.

[2] First line—salary rates promulgated by Executive Order 11413 issued under the authority of Section 212 of the Federal Salary Act of 1967 which were in effect in June 1969, the reference date for the BLS survey; and second line—salary rates promulgated by Executive Order 11474 issued under the authority of Section 212 of the Federal Salary Act of 1967 which became effective on the first day of the first pay period beginning on or after July 1, 1969.

[3] For definitions, see appendix C. Due to a revision of the Civil Service Commission standards for attorney positions in the Federal Service, the number of occupational levels studied has been reduced from 7 to 6. The attorney series now spans GS 9-15 rather than GS 7-15 as in 1968. See appendix B for explanation of changes in the attorney definition.

[4] Survey findings as summarized in table 1 of this report.

[5] Corresponding grades in the General Schedule were supplied by the U.S. Civil Service Commission.

[6] 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 salary rates 1, 2, and 3; 104 weeks each for salary rates 4, 5, and 6; and 156 weeks each for salary rates 7, 8, and 9. 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 U.S. Code, higher minimum rates (but not exceeding the maxium 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 salary rates in private industry are so substantially above the salary rates of the statutory pay schedules as to handicap significantly the Government's recruitment or retention of well-qualified persons. Such special pay scales have been established for specific grades or levels of certain occupations (including accountants, auditors, chemists, and engineers). Information on special higher pay scales currently in effect, and the occupations and areas to which they apply, may be obtained from the U.S. Civil Service Commission, Washington, D.C. 20415, or its regional offices.

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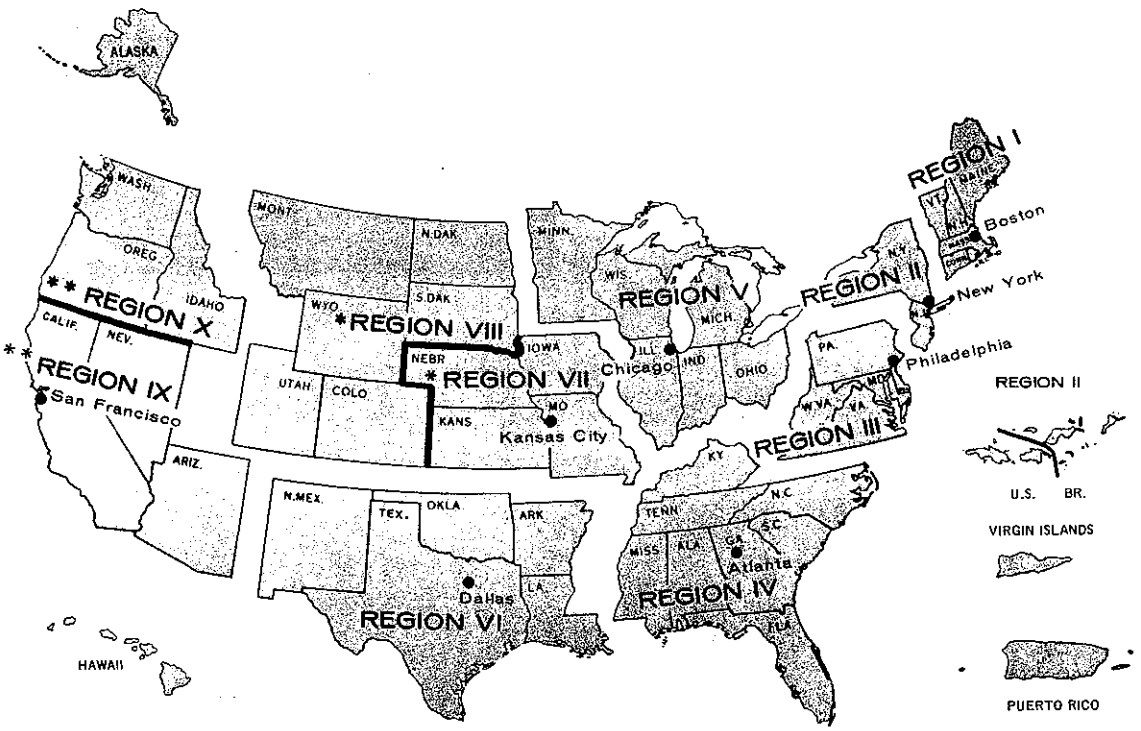


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