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

Winter 1959-60

Bulletin No. 1286

UNITED STATES DEPARTMENT OF LABOR
James P. Mitchell, Secretary

BUREAU OF LABOR STATISTICS
Ewan Clague, Commissioner

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Accountants and Auditors
Attorneys
Engineers and Scientists
Personnel Management
Clerical Supervisory
Draftsmen
Office Clerical

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Preface

The Bureau of Labor Statistics provides in this report the results of the first in a series of annual nationwide surveys of compensation for selected professional, administrative, technical, and clerical occupations in private industry. The data, which relate to representative establishments in a broad spectrum of American industry in urban areas, were obtained by personal visits of Bureau field economists. For the most part, the data reflect salaries in effect during the period January–June 1960.

The design for the survey was developed in a study sponsored by the Bureau of the Budget in collaboration with the Civil Service Commission, the Special Assistant to the President for Personnel Management, and the Bureau of Labor Statistics. This multiagency origin of the survey plan points to the major purpose it is intended to serve. This purpose is to provide more information than has hitherto been available on pay in private industry for use in appraising the compensation of salaried employees in the Federal civil service. The survey is thus designed to assist in the implementation of the policy that Federal pay should be reasonably comparable with non-Federal pay for the same kind of work.

It should be emphasized that the study is in no sense calculated to supply mechanical answers to questions of Government pay policy. Indeed, no conceivable survey could do so. The study does provide a fund of broadly based information on salary levels and distributions in private employment; that is, on rates of compensation in the dominant sector of the labor market.

In addition to its uses in Federal salary policy and administration, substantial general interest in the survey results was anticipated. This factor was given recognition in the survey planning.

The list of occupations studied represents a wide range of pay levels. 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 prepared for use in the collection of the salary data reflect duties and responsibilities in industry; however, they are designed to be translatable to specific pay grades in the General Schedule applying to Federal Classification Act employees. For office clerical and drafting occupations, selected from among those included in the Bureau's program of locality occupational wage surveys, Bureau of Labor Statistics job definitions were used. Definitions for all other occupations studied were prepared by Civil Service Commission staff. (See appendix B.)

As outlined in greater detail elsewhere in the report, the survey included the collection of salary data for all occupations studied; cash bonus payments for all of these, except clerical and drafting occupations; and supplementary data mainly relating to the characteristics of salary rate systems. Information on supplementary benefits such as paid vacations and paid holidays, and health, insurance, and pension plans is not included in this report. This type of information relating to office employees has been incorporated in the BLS bulletins issued separately for each of the 60 metropolitan areas in which occupational wage surveys were conducted during the year ending June 30, 1960.

The survey could not have been completed without the wholehearted cooperation of the many firms whose salary scales provide the basis for the statistical data presented in this report. The Bureau, on its own behalf and on behalf of the other Federal agencies that collaborated in planning the survey, wishes to express sincere thanks for the splendid cooperation it has received in this difficult undertaking.

This report was prepared in the Bureau's Division of Wages and Industrial Relations under the general supervision of Toivo P. Kanninen. Samuel E. Cohen devised the sampling procedures and supervised the selection of the sample, assisted by Theodore J. Golonka, who was responsible for the preparation of the estimates. The analysis was prepared by Louis E. Badenhoop assisted by Harry F. Zeman. Field work for the survey was directed by the Bureau's Regional Wage and Industrial Relations Analysts and conducted by their staffs of labor economists.

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Introduction

The accompanying tables and charts present nationwide estimates of pay levels for 77 occupation work level job categories surveyed in the following industries: Manufacturing; transportation, communication, electric, gas, and sanitary services; wholesale and retail trade; finance, insurance, and real estate; engineering and architectural services; and research, development, and testing laboratories.[1] The data relate to establishments employing 100 or more workers, located in metropolitan areas.

In order to meet the primary need for which the survey was designed, it was necessary to establish definitions for appropriate work levels (or classes) in the professional, administrative, technical, and clerical occupations selected for study. Within each occupation, differentiation between work levels, designated by Roman numerals with class I assigned to the lowest level, is in terms of duties and responsibilities. Specific job factors affecting classification, however, varied from occupation to occupation.

The number of work levels for each occupation ranges from one for office boys and girls to seven for mathematicians. Thus, four levels were judged to be necessary in personnel administration occupations and six were adopted for chemists and engineers.

Employment in the occupations studied amounted to about 1.1 million, or 8 percent of the 14.3 million employees within the geographic and industrial scope of the survey. Four occupations accounted for slightly more than half of this total—engineers (247,000), typists (134,000), accounting clerks (124,000), and stenographers (120,000). Employment estimates of less than 2,500 were recorded for job analysts, managers of office services, and research and development directors.

Although women accounted for 50 percent of the total employment in the jobs studied, they were largely employed in clerical positions. Women constituted 90 percent or more of the work force in bookkeeping-machine operation, filing, keypunching (including supervision), stenography and typing, and switchboard operation. Office boys, however, outnumbered office girls by a 3 to 2 ratio. Among tabulating-machine operators, women accounted for 47, 33, and 16 percent of employment at levels I, II, and III, respectively. A fourth of the payroll supervisors and of the employment managers I and somewhat smaller proportions of job analysts and mathematicians (the latter below level III) were women.

Average Salaries

Average (mean) weekly salaries among the 77 job categories ranged from $55.50 for file clerks I to $442 for attorneys VI—a level defined to include top legal advisors, such as chief counsel heading a staff of attorneys (table 1).[2] Averages exceeded $200 a week for 16 job categories, with engineers in levels V and VI accounting for more than three-fourths of the aggregate

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[1] For a detailed description of the scope and method of survey, see appendix A.

[2] Classification of employees in the survey was based on the factors detailed in the job descriptions in appendix B.

employment in jobs at these pay levels. The occupational positioning in the intermediate salary structure (above entry level but below $200 a week) is illustrated below by the weekly averages for the numerically most important work levels for the jobs shown.

Typists I	$ 60.50
Stenographers, general	75.00
Draftsmen, senior	120.00
Accountants II	132.00
Supervisors, tabulating-machine unit II	140.00
Engineers III	161.00
Directors of personnel II	182.00
Attorneys III	192.00

Among five levels of accountants surveyed, weekly salaries ranged from $112 for accountants I to $231 for accountants V. Auditors I averaged $96 a week and auditors IV, the highest level surveyed, averaged $179. Auditor I was defined to include inexperienced trainees in positions typically requiring a bachelor's degree in accounting or the equivalent in education and experience combined, whereas, accountant I represented a level of accounting responsibility above that of an inexperienced trainee, and the top level surveyed (accountant V) represented a level of responsibility well above that defined for auditor IV. Fully three-fourths of the accountants were employed in manufacturing and public utilities. By way of contrast, the largest group of auditors were in the finance industries.

Attorneys I, newly hired attorneys (with LLB degrees and membership in bar) in trainee positions, averaged $115 a week. This category, however, accounted for only 427 of the 7,214 attorneys employed in the 6 defined work levels. Salary increments between successive levels of attorneys studied, $25, $52, $63, $132, and $55 (between 5th and 6th levels), were substantially larger than for all other series except personnel directors. Attorneys at the first three levels were employed mainly in finance; manufacturing and public utilities together accounted for about a fourth of these employees. Attorneys IV, V, and VI, however, were more equally divided among these industry divisions. Relatively few attorneys were employed in the trade and service industries.

Six levels of chemists and engineers, and seven levels of mathematicians were surveyed, each starting with a trainee level of professional work typically requiring a bachelor of science degree or the equivalent in education and experience combined. For engineers, the largest group studied, weekly salaries ranged from $122 for engineers I to $272 for engineers VI. Although engineers were not identified by field of specialization or function in the organization, information on pay policies obtained in the survey indicated that differentials based on either of these factors were quite unusual among establishments with engineers employed in two or more specializations or functions.

Directors of research and development in companies (or major organizational units within companies) averaged $349 a week. Pay levels for mathematicians were below those for engineers at the lowest levels and about the same at the higher levels; weekly salaries for mathematicians VII averaged $289. For each of the six levels of chemists, the average was below that of engineers in the corresponding level; it ranged from $106 for chemists I to $263 for chemists VI. Nearly all of the chemists and a great majority of the engineers and mathematicians were employed in manufacturing.

In the personnel management field, three occupations with four levels for each were studied. Job analysts I, defined to include trainees under immediate supervision, averaged $114 a week, compared with $180 for job analysts IV who participated in the development, installation, and administration of evaluation and compensation systems and were fully responsible for other broad assignments. The levels for employment manager and director of personnel started with positions requiring full responsibility for their respective programs, with each of the levels determined on the basis of the employment, range of occupations, and variety of functions for which they were responsible. Weekly salaries for employment managers averaged from $128 for level I to $224 for level IV, and for personnel directors, from $152 for level I to $302 for level IV. Manufacturing establishments accounted for three-fifths to four-fifths of the employment in these 12 job categories. Among other industries, finance accounted for a fourth of the employees in the first two levels of the job analyst position; a third of the employment managers IV were in public utilities.

In the drafting field, four levels of work were selected for study. Weekly salaries for these levels averaged $72.50 for a relatively small group of tracers, $90 for junior draftsmen, $120 for senior (fully experienced) draftsmen, and $146 for lead draftsmen, who may perform drafting work but also plan and direct the work of others (table 2). Of the nearly 91,000 draftsmen and tracers, 79 percent were employed in manufacturing and 12 percent were in establishments providing architectural and engineering services.

General stenographers accounted for a tenth of all employees in the jobs studied and constituted the largest group among 17 occupations and work levels studied in the clerical field. Their weekly salaries averaged $75, which was near the midpoint in the range of average weekly salaries for the clerical levels surveyed. For 9 of the 17 levels studied, average salaries fell within a $9 range from $69.50 to $78.50 a week. Among all clerical levels studied, average weekly salaries ranged from $55.50 for file clerks I, who performed routine filing, to $101.50 for tabulating-machine operators III, who are required to perform complete reporting assignments by machine, including difficult wiring, without close supervision. Office boys and girls, two-fifths of whom were employed in manufacturing industries, averaged $1.50 more a week than file clerks I, who were more heavily represented in finance industries. Although employment in manufacturing exceeded that in the several nonmanufacturing divisions in 14 of the 17 clerical jobs, in only 6 instances did manufacturing account for as many as half of the employees.

Among the clerical supervisory positions studied were managers of office services with four levels based upon the size of the organization serviced and the variety of services for which they were responsible. Their average weekly salaries ranged from $139 for level I to $218 for level IV. Keypunch supervisors averaged $93 a week in level I and $114 in level II; the first level related to working supervisors who were also required to operate keypunch machines, and the second level to full-time supervisors immediately in charge of keypunch operations units. Similarly defined levels of tabulating-machine unit supervisors averaged $114 in level I and $140 in level II. Manufacturing industries accounted for more than half of the employment in all except the first level of managers of office services and the second level of keypunch supervisors.

The time units in which salaries were expressed varied among establishments for each job studied. In fact, Bureau field economists often had a choice of weekly or biweekly salaries or of monthly or annual salary rates for

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the same employees.[3] Salaries reported on a monthly or annual basis were converted to weekly salaries by dividing by 4.33 or 52.1, respectively. The same factors were used to convert average weekly salaries to average monthly and annual salaries presented in tables 3 and 4.

The following tabulation suggests the broad outlines of a salary structure covering the selected job categories in terms of annual rates.

Distribution of 77 Job Categories Studied by Annual Salaries

	Number of job categories	Job category
Under $3,500	4	File clerks I, office boys and girls, typists I
$3,500 and under $5,000	16	Accounting clerks, stenographers, typists II
$5,000 and under $7,500	22	Levels I and II of accountants, attorneys, chemists, engineers, and mathematicians
$7,500 and under $10,000	19	Director of personnel I and II; levels III and IV of auditors, accountants, chemists, engineers, and mathematicians
$10,000 and under $12,500	6	Level V of accountants, chemists, engineers, and mathematicians; level IV of employment managers and managers of office services
$12,500 and under $15,000	5	Level VI of chemists, engineers, and mathematicians; attorney IV; directors of personnel III
$15,000 and under $17,500	2	Directors of personnel IV
$17,500 and over	3	Attorneys V and VI, directors of research and development

Average Weekly Hours

Average weekly hours, reflecting the workweek for which employees receive their regular straight-time salary, are presented in tables 1 and 2. The following tabulation shows the distribution of the 77 job categories according to average weekly hours (rounded to the nearest half hour).

Average weekly hours	Number of job categories
38.0	1
38.5	9
39.0	24
39.5	25
40.0	18

[3] Because of this variation within individual establishments, no attempt was made to summarize the prevalence of particular time units reported.

Interjob differences in average weekly hours largely reflect variation in the distribution of employment in these jobs among industries. Whereas the majority of manufacturing establishments, for example, have 40-hour work schedules for their office employees, banking and insurance firms commonly report shorter workweeks.[4] Averages of 39 hours or less were reported for all work levels in the auditor and attorney series; for all except one level (attorneys IV), employment was greatest in finance. The fact that average weekly hours for most of the clerical jobs were either 39 or 38.5 is also explained by the lack of concentration of employment in manufacturing. Forty-hour averages are shown for five of six engineering levels and, as pointed out earlier, a great majority of the engineers were employed in manufacturing.

Salary Distributions

Percentage distributions of employees by weekly salaries for each of the 77 job categories are presented in table 5. Within nearly all of the 77 occupation work levels, salary rates for some of the higher paid employees were at least twice those of the lowest paid employees. In the 20 occupations where 2 or more levels were studied, absolute as well as relative spreads between the highest and lowest salaries tended to widen with each increase in work level.[5]

It can readily be seen that a very substantial degree of overlapping of individual rates occurs between work levels in the same occupation. Rate overlapping can also be noted between distinct occupations for which average salaries differ quite substantially. To illustrate, level I engineers averaged $122 with 4.9 percent receiving salaries of less than $100 a week; although general stenographers averaged $75 ($47 less), 4.7 percent were paid $100 or more.

Median weekly salaries (the amount below and above which 50 percent of the employees were found) were in most cases lower than the weighted averages (means) cited earlier. The percent by which the median differed from the mean was less than 2 percent in 43 jobs and as much as 2 but less than 3 percent in 15 additional cases. Largest differences between the medians and the weighted averages (from 5.2 to 8.8 percent) were found in the following categories: Attorneys I, III, V, and VI; chemists VI; directors of personnel IV; employment managers IV; job analysts I; managers of office services II; and mathematicians VI and VII. It will be noted that these are for the most part the higher work levels, usually covering a wide range of duties and responsibilities.

Median salaries and middle (interquartile) ranges are shown in tables 1 and 2. These have also been charted (charts 1 and 2) to point up occupational pay relationships as well as the typically greater degree of salary dispersion associated with the higher work levels in each occupational series.

Expressing the salary range of the middle 50 percent of employees as a percent of the median salary permitted comparisons of salary ranges for the various work levels on the same basis, and also eliminated the extreme low and

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[4] Wage surveys conducted in major labor markets also indicate that work schedules tend to be shorter in large northeastern labor markets (particularly in New York City) than in areas studied in other regions. See BLS Bull. 1240-22, Wages and Related Benefits, 20 Labor Markets, 1958–59.

[5] The Bureau issues reports separately for each labor market that provide averages and distributions for an occupational list that includes the clerical and drafting jobs shown in this bulletin. The general characteristics of the nationwide distributions for these particular jobs are also apparent within individual labor markets.

high salaries from each comparison. This, however, does not take into account differences in the range of duties and responsibilities among the job descriptions for various levels.

Occupational group	Number of job categories	Distribution of job categories by salary range of middle 50 percent of employees expressed as a percent of median salary: Under 20 percent	20 and under 25	25 - 30	30 - 35	35 - 40	40 and over
All categories	77	8	22	33	4	2	8
Accountants and auditors	9	2	1	6	-	-	-
Attorneys	6	-	-	1	-	1	4
Engineers and scientists	20	5	11	2	1	-	1
Personnel management	12	-	4	5	1	-	2
Clerical supervisory	9	-	3	3	1	1	1
Drafting	4	-	-	4	-	-	-
Clerical	17	1	3	12	1	-	-

Thus, in this comparison, the middle range in salaries for attorney levels exceeded 35 percent of the corresponding median in 5 of 6 levels, whereas, for the engineers and scientists group the range was less than 25 percent of the corresponding median for 16 of the 20 levels. For all other job groups, the range was between 20 and 30 percent of the median for a majority of the work levels.

Differences in the range of salaries paid individuals within the work levels surveyed undoubtedly reflected a variety of factors other than differences in the work level definitions. Salaries of individual employees in the same occupation and grade level may vary considerably within establishments. This pattern applies particularly to the professional and administrative occupations. Salaries are generally determined either on an individual basis or under formalized pay plans which characteristically provide for a wide range in salary rates for each occupation and grade level within the pay structure. Distinct overlapping of salaries between pay grades within salary structures of individual firms was noted frequently.

Pay Differences by Region and Industry

The survey design was not planned to permit publication of separate estimates for professional and administrative jobs by region or major industry division, and such estimates are not shown in this report. Estimates were computed, however, solely for the purpose of providing a basis for some general observations relating to the broad occupational groups surveyed. To eliminate from these estimates the influence of differences in the regional or industrial composition of employment, the total employment within the scope of the survey in each job category was used as a constant employment weight in computing averages for the various occupational groups for comparison by region and industry.[6]

[6] Data for each of the occupational groups were insufficient in wholesale trade to permit comparisons with other industry divisions surveyed.

With the exception of the attorney series, differences between the highest and lowest regional averages appeared to be substantially smaller for professional and administrative job groupings than for the clerical and drafting groups. Among four broad regions (Northeast, South, North Central, and West)[7] the maximum spread amounted to less than 5 percent in the engineering and scientific series; to 5 percent in the personnel management series; and to about 7 percent in the accounting and auditing series. For the clerical and drafting job groups, the highest regional averages exceeded the lowest regional averages by about 14 and 10 percent, respectively. The interregional spread in the average for clerical supervisory employees amounted to 7 percent.

The West led in salary levels for the clerical and clerical supervisory series, but the North Central region was a close second in the clerical area and this region and the Northeast were only slightly below the West in clerical supervisory pay. Drafting-room salaries were highest in the North Central region. In the other four occupational series, the Northeast had the highest salary levels, with the West ranking second in three of the four professional and administrative job series.

Within the several regions, pay differentials among occupations were greatest in the South, and smallest in the West. Measuring such differentials by the ratio of the average salary for the engineering and scientific job series to that for the clerical group showed a spread of 175 percent in the South, compared with 144 percent in the West.

Salary levels were quite similar in manufacturing and in the transportation, communication, electric, gas, and sanitary services industries for each of the broad occupational groups, and average salaries for these industries were above those for all industries combined. In engineering and architectural services, and the research, development, and testing laboratories combined, salary levels for the engineering and scientific and the drafting occupational groups were slightly above those for manufacturing and public utilities industries. Retail trade and the finance, insurance, and real estate industries had similar pay levels, which were usually somewhat lower than in manufacturing and public utilities industries in the professional and administrative occupational groups that could be compared, and considerably lower in clerical occupations. In the finance, insurance, and real estate group, particularly, lower salary levels were at least partly offset by the shorter average workweek schedules.

Weekly Pay Including Cash Bonuses

In addition to salary data for employees classified in professional and administrative occupations,[8] information was obtained on the extent to which these

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[7] The regions used in this study are: Northeast—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; South—Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia; North Central—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; and West—Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

[8] As explained in appendix A, salary data for the clerical and drafting occupations were obtained from occupational wage surveys conducted separately by the Bureau in 60 labor markets. Information on cash bonuses was not collected in these studies. Earlier studies conducted by the Bureau indicated that when averaged over all employees in office clerical occupations, cash bonus payments added little to their average weekly pay.

employees were paid cash bonuses during the year preceding the survey and the amount of such payments. Among the 56 job categories covered by the bonus inquiry, the proportion of employees receiving cash bonuses ranged from 11 to 50 percent; in about half, bonuses were received by more than 25 percent of the employees (table 4).

The proportion of employees receiving bonuses varied among work levels of the same occupations. In some occupations, the incidence of bonus payments was greater in the lower levels. Occupations in which bonuses were received by fewer than 20 percent of the employees in three or more work levels were engineers, mathematicians, and job analysts. In comparison, bonuses were more widely received by personnel directors and chemists. Variations noted in the incidence of bonus payments are believed to reflect, in part, differences in the manner in which employment in the occupations and work levels is distributed among industries and establishments.

Cash bonus payments were added to salary data relating to all employees in each category, including those who did not participate in such payments. Average weekly salaries with and without bonuses added are compared in table 4. Averaged over all employees in each of the 56 professional and administrative job categories, bonuses added less than 1 percent to weekly pay in 17 categories and as much as 1 percent but less than 2 percent in 16 others. As shown in the following summary, the impact of bonus payments tended to be greatest in the higher work levels.

Bonus payments as percentage of average salaries	Number of job categories	Job category
8.7-10.9	3	Directors of personnel IV Directors of research and development Mathematicians V
5.2-5.7	2	Directors of personnel III Mathematicians VI
3.0-4.8	8	Accountants III, IV, and V Attorneys VI Chemists V and VI Directors of personnel II Engineers VI
Less than 3.0	43	All other categories

For those employees who actually received cash bonuses, the supplementary payments added considerably more to pay than is indicated by the overall averages. The maximum increase (19-20 percent) for those receiving bonuses occurred in weekly pay averages for directors of personnel IV, directors of research and development, and for mathematicians V and VI. Bonuses averaged from 10 to 13 percent of weekly salary for recipients in 7 other jobs and from 5 to 10 percent for those in 18 additional jobs.

Employees receiving bonuses tended to have lower salary rates (excluding bonuses) than employees in the same job categories who were paid on a straight salary basis. Average salaries (excluding bonuses) of employees receiving bonuses

were lower than all-employee averages in 32 categories and identical in 3 others. With bonus payments included, however, average weekly pay for bonus-paid employees exceeded the average salaries for all employees in the great majority of the 56 job categories.

Characteristics of Rate Systems

The survey design also provided for the collection of information on the nature of the establishment pay and classification plans. This segment of the study was concerned largely with determining the extent to which establishments had adopted formal salary plans, i.e., plans providing a single rate or a rate range for each occupation. Where such plans are not found, pay rates are personalized in that they are determined primarily in relation to the qualifications of the individual employee.

Where formal rate range plans were in effect, the policy on intermediate rates and on progression within the formal ranges was also recorded. At the time of the survey, salary rate systems were in the process of being formalized in at least some respects in a number of establishments. Determination of the appropriate classification, therefore, was not always clear-cut. In this study, an establishment was considered to have a formal rate system with rate ranges if minimum and maximum rates had been established for occupations classified within a group. Information was not obtained in this survey on specific rates or on time periods related to either automatic progression or salary review policy.

The salary rate system may differ among employee groups within an establishment, and sometimes by level within an occupation. For example, the pay system may differ between employees covered by the Fair Labor Standards Act and those not covered; between employees covered by a labor-management agreement and those not covered; or between employees on the general payroll and those on the management or confidential payroll. Establishments were classified according to the system applying to a majority of the employees reported in each of the seven broad occupational groups covered in the survey. In these tabulations, therefore, differences among occupational groups in the estimates relating to various types of salary rate systems may be due not to employer policies applying to various occupational groups but to differences in the number of such groups in which employees were found in each establishment. The proportion of establishments with employees classified in the selected occupational groups ranged from 8 percent for attorneys to 98 percent for clerical occupations.

Among establishments having employees in the occupational group, those with formal salary rate systems ranged from 33 percent of the establishments employing accountants and auditors to 55 percent of those employing draftsmen (table 6). Virtually all of the establishments with formal rate policies had a range of rates applying to a majority of workers within each occupational group. Among the seven occupational groups, the proportion of establishments with a formal rate range policy varied from 33 percent for accountants and auditors to 53 percent for draftsmen. The clerical occupational group was the only one in which formal single rates applied to these workers in as many as 1 of every 10 of the establishments with formal rate policies. The proportion of employees paid under formal salary rate systems was greater than indicated by the proportion of establishments with such systems, since informal policies (with salaries determined on an individual basis) were much more prevalent in small establishments.

A majority of the establishments that had formal rate range plans with specified minimum and maximum rates had flexibility in regard to intermediate step rates. Such rates were not specified in 43 percent of the establishments having formal rate range plans and progression policies applicable to clerical workers; this proportion reached 77 percent in the case of attorneys. Among all occupational groups, the highest proportion of establishments with formal rate range plans in which the step rates within each range were specified was 35 percent, relating to clerical workers. Establishments reported under "other policy" included those with plans in which only some of the lower step rates were specified, and those with specified minimum and maximum rates but in which the policy on progression was not definitely established.

Periodic merit review was by far the most prevalent basis for progression or advancement under rate range plans. Even among clerical workers, 72 percent of the establishments used periodic merit review for salary advancement within rate ranges. Only in the case of clerical workers was there a significant proportion of establishments (11 percent) with provisions for automatic increases after specified periods. Combination plans providing for one or more automatic increases followed by merit reviews applied to personnel management occupations in 10 percent of the establishments with formal rate range plans; the highest proportion of arrangements of this nature (20 percent) applied to draftsmen.

A flexible policy was also reported on the application of rate range minimums to new employees hired in an occupation. Among all establishments with formalized rate ranges applying to one or more of the occupational groups studied, 94 percent permitted hiring of new employees above the minimum of the rate range.

Inquiry was also made into distinctions in rates of pay among engineers employed within establishments in two or more fields of specialization (e. g., civil, mechanical, and electrical) or in two or more functions (e. g., research, design, operation and maintenance, production). Among establishments employing engineers in two or more specializations, 94 percent reported no rate differences on the basis of field of specialization; among those employing engineers in two or more functions, 92 percent reported no rate differences based on function. In the small proportion of establishments with distinctions in rates of pay for engineers solely on the basis of specialization or function (6 and 8 percent, respectively), nearly all had rate differences at all or most of their work levels (table 7).

Entrance Rate Policies for Engineers, Chemists, and Mathematicians

Establishment entrance rate policies for inexperienced college graduates with only a bachelor's degree in engineering, chemistry, and mathematics were studied to determine hiring practices, entry salaries, and criteria used to establish salaries paid if a range in hiring rates was permitted by the employer. If known at the time data were collected, information on policies effective in June 1960 was obtained. About half of the establishments indicated that hiring salaries quoted at the time of the visit would be effective in hiring June 1960 graduates.

Engineers were employed in 32 percent, chemists in 17 percent, and mathematicians in 2 percent of the establishments within the scope of the survey. For each of the three occupations, approximately two-thirds of the establishments represented by the above percentages hired inexperienced college graduates. Almost half of the employers hiring inexperienced engineers and approximately the same proportion hiring inexperienced chemists had established formal hiring salaries. For inexperienced mathematics majors, 9 out of 10 establishments employing recruits in the occupation had formal hiring salaries.

The discussion below is based on information from all establishments with formal hiring salary policies for inexperienced engineers, chemists, and mathematicians with only a bachelor's degree (tables 8 and 9). Excluded are establishments which did not hire personnel in these occupations and those which did not hire inexperienced college graduates.

For the establishments with formal hiring salaries, the most common practice was to permit a range in hiring salaries with a fixed minimum and an allowable spread above the minimum. Inexperienced engineers and chemists were hired under such a policy in 65 percent and 67 percent, respectively, of the establishments with formal hiring salaries. More than 90 percent of the establishments with formal hiring salaries for mathematicians permitted a spread in entrance salaries. Single entrance salary policies were operative in about one-third of the establishments with formal hiring salaries for inexperienced engineers and chemists, and for less than 10 percent of the establishments hiring graduates majoring in mathematics.

Both in establishments with single entry rates in these three occupations and in those with a range in hiring rates, a wide range in entry salaries was found. A few of the establishments hiring at one rate for all recruits in an occupation had entry rates for engineers, chemists, and mathematicians that were below $360 per month. At the other extreme, entry rates of $540 and over were found for engineers and chemists in a limited number of cases. The median establishment entrance salary, under single rate policies, was $476 for engineers, $453 for chemists, and $403 for mathematicians.[9] The middle 50 percent of establishment single entrance rates fell between $451 and $501 for engineers, $408 and $493 for chemists, and $350 and $437 for mathematicians.

Minimum monthly entrance salaries in establishments which permitted a range in recruitment rates, showed approximately the same extremes in the distributions for both engineers and chemists, with a few lows under $360 and a few highs over $540. In the group of establishments with a range in entrance salaries for mathematicians, minimum monthly salaries varied from approximately $390 to over $540. Median minimum monthly recruitment rates in establishments with a range in entrance salaries were $478 for engineers, $471 for chemists, and $500 for mathematicians.

One-half of the establishments permitting a range in entrance rates had lowest monthly entrance salaries for engineers between $453 and $501. The middle 50 percent of the distribution for chemists was between $411 and $501, and for mathematicians half of the establishments had lowest monthly entrance salaries of $482 to $505.

The allowable spread from lowest to highest monthly entrance salary was obtained for establishments with such policies. For all three occupations, the median establishment spread between the lowest and highest monthly recruitment rate was between 11 and 12 percent, with the allowable percentage spreads ranging from less than 5 percent to over 25 percent.

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[9] Differences in median establishment rates among these occupations, in part at least, reflect differences in the manner in which these occupations are distributed among all establishments studied. Approximately four-fifths of the establishments which had single hiring rates for engineers and which also hired chemists or mathematicians applied the same hiring rate to those recruits.

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A relatively large proportion of establishments, in fact, fixed the maximum of the range at either 10 or 11 percent above the minimum. A total of 21 percent of the establishments hiring inexperienced engineer graduates under a range of rates policy, 23 percent of those hiring chemists, and 51 percent hiring mathematicians allowed the 10 or 11 percent spread. Analysis of the percentage spread for individual establishments revealed no general pattern of relationship of the amount of percentage spread to the level of the minimum entry salary.

The criteria used in determining actual hiring salaries in establishments permitting a range in hiring rates were provided by the surveyed establishments. The two criteria most often considered for each of the three beginning professional occupations were "related experience prior to graduation" and "scholastic standing." "Military service completed" and "evidence of leadership" were next in occurrence, although their rank was not the same for all three occupations. These four most commonly cited criteria were often found in the same establishment. In fact, nearly all of the establishments using "related experience prior to graduation" for determining entry salaries for engineers also considered "scholastic standing," "evidence of leadership," and "military service completed." Other criteria used in determining hiring salaries and the percentages of establishments using them for each of the three occupations appear in table 8. Less than one-tenth of establishments cited only one criterion used in determining rates above the minimum of the range and almost two-thirds applied four or more criteria. Slightly more than half of all establishments with a range of entrance salaries used either four or five criteria in judging the value of applicants.

Determination of the amount paid beginners varied from placing specific dollar amounts on each criterion with a relatively precise method of arriving at the starting salary to an indication by employers various criteria were considered in establishing salary offers, but that dollar amounts were subjective determinations based on the criteria considered for each individual hired.

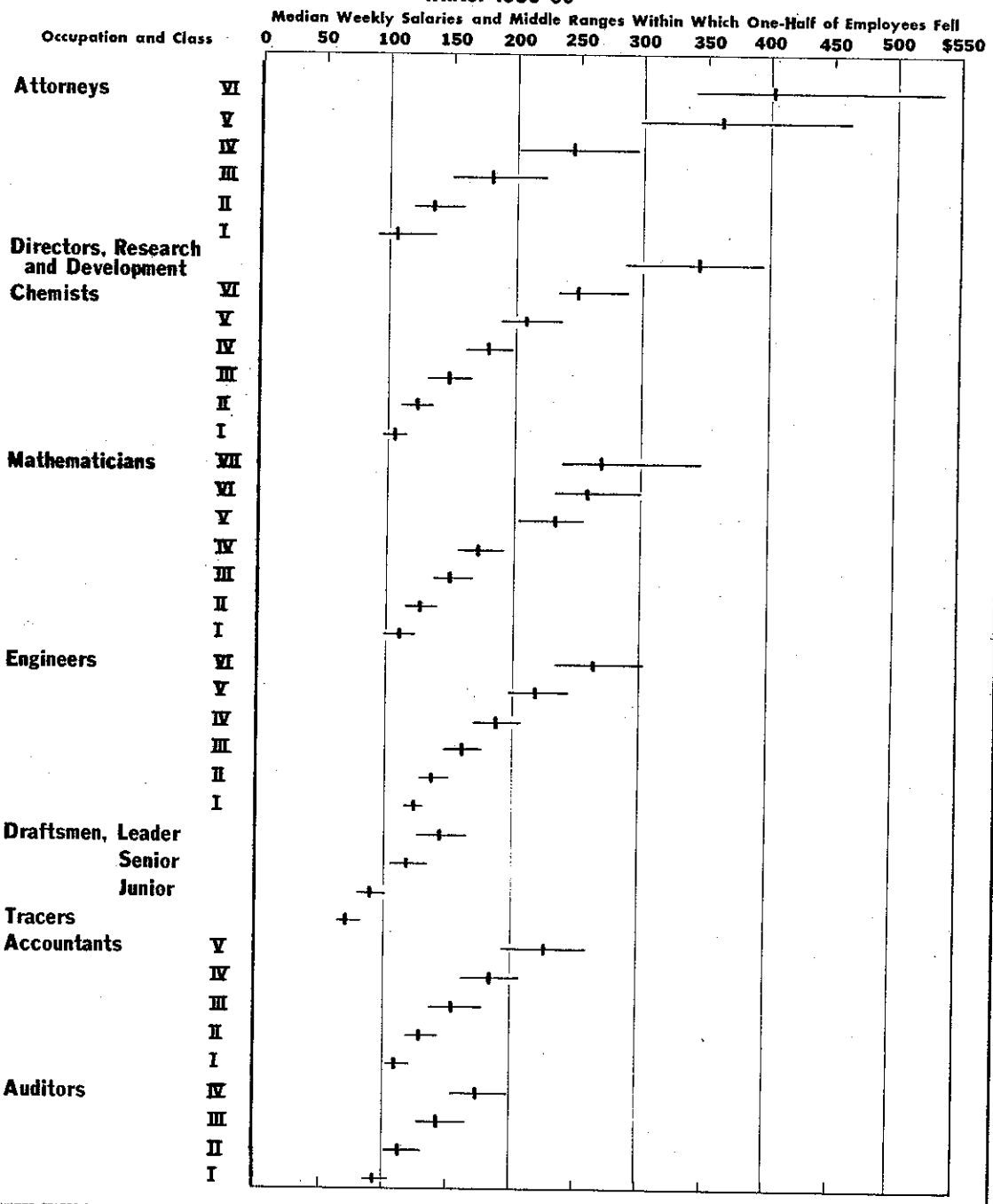
Supplementary Cash Bonus Plans

Estimates were presented earlier in this report on the proportions of employees in each job category studied (other than in clerical and drafting jobs) that received cash bonuses. The incidence of bonus plans on an establishment basis, together with a classification by type of bonus, was established separately. The estimates presented in table 10 for each of 7 job groupings, including those for clerical employees and draftsmen, are in terms of the proportion of establishments with employment in the job group that had cash bonus plans applicable to all or a majority of the employees in the group. The measures used in developing the estimates in tables 4 and 10 thus differ conceptually. It may be noted that individual establishments quite obviously contribute differently to the two separate types of estimates of the incidence of bonus plans.

Bonus pay plans were in effect in from 31 percent of the establishments employing draftsmen to 48 percent of those employing accountants and auditors. For the two largest groups of employees, the clerical and the engineering and scientific group, the proportion of establishments with cash bonus plans was 39 and 41 percent, respectively. The most prevalent type of cash bonus was a Christmas or yearend payment. The proportion of establishments paying that type of bonus was 16 percent for those employing attorneys and ranged from 23 to 35 percent of the establishments among the other six occupational groups. Profit-sharing plans, providing for at least annual cash payments, applied to clerical workers in 4 percent of the establishments and to 10 percent for the engineering and scientific group. "Other" types of bonus plans, which included combination plans, applied in the largest proportion of establishments to attorneys (14 percent). Examples of these types of plans were management incentive bonuses, Christmas and profit-sharing bonuses, and length of service bonuses.

Chart 1. Salaries in Professional and Technical Occupations

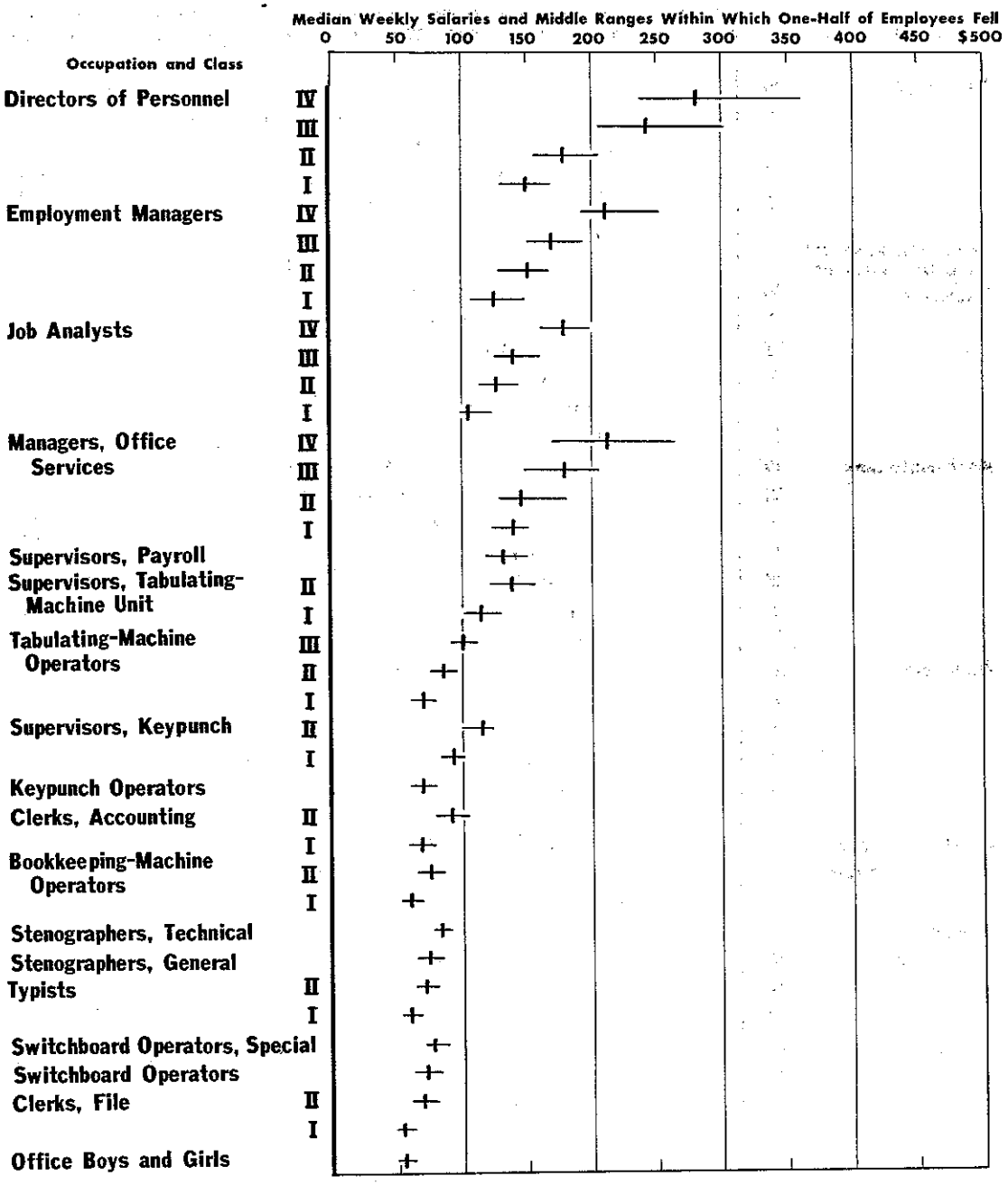
Winter 1959-60



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Chart 2. Salaries in Administrative and Clerical Occupations

Winter 1959-60



UNITED STATES DEPARTMENT OF LABOR
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Table 1. Employment, average weekly hours, and average weekly salaries for selected professional and administrative occupations,[1] winter 1959–60

Occupation and class (See descriptions in appendix B)	Number of employees	Average weekly hours[2] (standard)	Average weekly salaries[2] (standard)		Middle range[3]	
			Mean	Median	First quartile	Third quartile
Accountants and Auditors						
Accountants I	13,684	39.5	$112	$110	$102	$122
Accountants II	18,495	39.5	132	129	118	143
Accountants III	14,913	39.5	159	155	136	178
Accountants IV	6,419	39.5	189	185	162	208
Accountants V	2,417	39.0	231	228	193	259
Auditors I	836	38.5	96	93	85	104
Auditors II	4,110	38.5	116	113	101	130
Auditors III	4,343	39.0	147	143	127	165
Auditors IV	2,006	39.0	179	174	154	198
Attorneys						
Attorneys I	427	39.0	115	106	91	137
Attorneys II	1,434	38.5	140	136	120	158
Attorneys III	2,913	38.5	192	181	150	223
Attorneys IV	1,326	39.0	255	246	202	296
Attorneys V	555	38.0	387	362	298	464
Attorneys VI	559	38.5	442	403	341	536
Engineers and Scientists						
Chemists I	3,902	40.0	106	105	97	114
Chemists II	6,121	40.0	124	122	110	135
Chemists III	8,454	39.5	149	148	132	165
Chemists IV	5,657	40.0	182	179	161	198
Chemists V	3,402	39.5	211	208	188	236
Chemists VI	1,481	39.5	263	249	234	288
Engineers I	19,276	40.0	122	123	115	130
Engineers II	43,145	40.0	139	137	127	150
Engineers III	75,956	40.0	161	160	146	176
Engineers IV	63,535	40.0	189	187	170	206
Engineers V	32,132	40.0	223	218	197	245
Engineers VI	12,705	39.5	272	264	235	302
Mathematicians I	389	40.0	111	110	98	122
Mathematicians II	679	40.0	130	127	116	141
Mathematicians III	714	40.0	153	150	137	167
Mathematicians IV	510	39.5	175	172	156	191
Mathematicians V	351	39.5	226	233	203	253
Mathematicians VI	174	39.0	272	257	232	300
Mathematicians VII	85	39.0	289	269	238	346
Directors, research and development	1,148	40.0	349	344	286	395
Personnel Management						
Job analysts I	203	39.0	114	106	99	123
Job analysts II	570	39.0	128	127	113	143
Job analysts III	870	39.5	142	140	126	160
Job analysts IV	603	39.5	180	179	161	199
Employment managers I	2,355	40.0	128	125	108	149
Employment managers II	1,568	40.0	151	151	128	168
Employment managers III	671	39.5	175	169	151	193
Employment managers IV	115	39.5	224	212	192	253
Directors of personnel I	1,045	39.5	152	149	130	168
Directors of personnel II	4,155	40.0	182	179	156	205
Directors of personnel III	877	39.5	252	243	206	302
Directors of personnel IV	554	39.0	302	281	237	361
Clerical Supervisory						
Managers, office services I	819	39.5	139	140	123	151
Managers, office services II	539	39.5	154	146	129	181
Managers, office services III	375	39.5	180	179	148	206
Managers, office services IV	102	39.0	218	213	169	264
Supervisors, keypunch I	2,074	39.0	93	93	83	102
Supervisors, keypunch II	1,018	39.5	114	115	100	124
Supervisors, payroll	3,847	39.5	135	131	117	151
Supervisors, tabulating-machine unit I	5,306	39.5	114	115	101	130
Supervisors, tabulating-machine unit II	6,208	39.0	140	138	121	157

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

[2] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the standard salaries correspond to these weekly hours. Salaries reported on an annual or monthly basis were converted to weekly salaries by dividing by factors 52.1 or 4.33, respectively.

[3] The middle (interquartile) range is the central part of the array of employees by salary, excluding the upper and lower fourths.

Table 2. Employment, average weekly hours, and average weekly salaries for selected technical and clerical occupations,[1] winter 1959–60

Occupation and class (See descriptions in appendix B)	Number of employees	Average weekly hours[2] (standard)	Average weekly salaries[2] (standard)		Middle range[3]	
			Mean	Median	First quartile	Third quartile
Draftsmen						
Draftsmen, junior	27,937	40.0	$90.00	$89.00	$79.00	$101.00
Draftsmen, senior	50,247	40.0	120.00	118.00	105.00	134.00
Draftsmen, leader	8,844	40.0	146.00	144.00	126.00	164.00
Tracers	3,668	39.5	72.50	70.00	63.00	81.00
Clerical						
Bookkeeping-machine operators I	40,743	39.0	61.50	60.00	53.00	69.00
Bookkeeping-machine operators II	10,247	39.0	75.00	75.00	65.00	86.00
Clerks, accounting I	72,692	39.0	69.50	68.00	58.00	79.00
Clerks, accounting II	51,366	39.0	93.00	92.00	79.00	106.00
Clerks, file I	47,900	38.5	55.50	54.00	48.00	62.00
Clerks, file II	15,035	38.5	70.50	69.00	60.00	80.00
Keypunch operators	49,181	39.0	70.00	69.00	60.00	80.00
Office boys or girls	30,402	38.5	57.00	55.00	49.00	63.00
Stenographers, general	111,769	39.0	75.00	74.00	64.00	85.00
Stenographers, technical	8,700	39.5	84.50	84.00	77.00	91.00
Switchboard operators	20,544	39.0	71.50	72.00	62.00	83.00
Switchboard operators, special	1,277	39.5	78.50	77.00	71.00	89.00
Tabulating-machine operators I	10,912	38.5	70.50	70.00	61.00	80.00
Tabulating-machine operators II	19,751	39.0	84.50	85.00	75.00	96.00
Tabulating-machine operators III	9,083	39.0	101.50	101.00	91.00	112.00
Typists I	84,893	39.0	60.50	60.00	53.00	67.00
Typists II	48,823	39.0	72.00	71.00	63.00	81.00

[1] For scope of study see table in appendix A.
[2] See footnote 2, table 1.
[3] See footnote 3, table 1.

Table 3. Average annual and monthly salaries[1] for employees in selected technical and clerical occupations,[2] winter 1959–60

Occupation and class (See descriptions in appendix B)	Average salaries[1]	
	Annual	Monthly
Draftsmen		
Draftsmen, junior	$4,698	$390
Draftsmen, senior	6,252	520
Draftsmen, leader	7,597	631
Tracers	3,788	315
Clerical		
Bookkeeping-machine operators I	3,210	267
Bookkeeping-machine operators II	3,902	324
Clerks, accounting I	3,620	301
Clerks, accounting II	4,851	403
Clerks, file I	2,896	241
Clerks, file II	3,683	306
Keypunch operators	3,655	304
Office boys or girls	2,966	246
Stenographers, general	3,898	324
Stenographers, technical	4,413	367
Switchboard operators	3,734	310
Switchboard operators, special	4,078	339
Tabulating-machine operators I	3,679	306
Tabulating-machine operators II	4,415	367
Tabulating-machine operators III	5,277	439
Typists I	3,145	261
Typists II	3,751	312

[1] Average weekly salaries as shown in tables 1 and 2 were derived by dividing those reported on an annual or monthly basis by factors 52.1 or 4.33, respectively. The weekly averages were multiplied by the same factors to obtain annual and monthly averages.
[2] For scope of study, see table in appendix A.

Table 4. Average salaries and salaries plus cash bonuses for employees in selected professional and administrative occupations,[1] winter 1959–60

Occupation and class (See descriptions in appendix B)	Average salaries[2]				Percent added to salaries by cash bonuses[3]	Percent of employees receiving cash bonuses
	Annual	Monthly	Weekly	Weekly plus cash bonuses[3]		
Accountants and Auditors						
Accountants I	$ 5,845	$ 486	$112	$113	1.0	25
Accountants II	6,903	574	132	134	1.4	35
Accountants III	8,302	690	159	164	3.0	39
Accountants IV	9,858	819	189	196	3.5	32
Accountants V	12,031	1,000	231	238	3.1	22
Auditors I	4,980	414	96	97	1.4	35
Auditors II	6,062	504	116	117	1.2	32
Auditors III	7,648	636	147	151	2.7	30
Auditors IV	9,307	774	179	182	1.9	29
Attorneys						
Attorneys I	5,978	497	115	116	.4	36
Attorneys II	7,299	607	140	141	.6	20
Attorneys III	9,980	829	192	194	1.2	29
Attorneys IV	13,297	1,105	255	260	2.1	25
Attorneys V	20,173	1,677	387	394	1.8	19
Attorneys VI	23,020	1,913	442	460	3.6	19
Engineers and Scientists						
Chemists I	5,529	460	106	107	.5	19
Chemists II	6,447	536	124	126	1.9	41
Chemists III	7,763	645	149	152	1.8	37
Chemists IV	9,496	789	182	186	2.3	31
Chemists V	10,993	914	211	218	3.4	38
Chemists VI	13,696	1,138	263	276	4.8	43
Engineers I	6,371	529	122	123	.4	16
Engineers II	7,241	602	139	140	.6	17
Engineers III	8,411	699	161	162	.8	16
Engineers IV	9,868	820	189	191	1.0	19
Engineers V	11,620	966	223	227	1.8	22
Engineers VI	14,193	1,180	272	281	3.2	25
Mathematicians I	5,786	481	111	111	.2	11
Mathematicians II	6,760	562	130	131	.4	14
Mathematicians III	7,992	664	153	153	.3	11
Mathematicians IV	9,115	758	175	176	.6	17
Mathematicians V	11,788	980	226	251	10.9	50
Mathematicians VI	14,193	1,180	272	288	5.7	24
Mathematicians VII	15,054	1,251	289	295	2.0	22
Directors, research and development	18,189	1,512	349	380	8.7	35
Personnel Management						
Job analysts I	5,946	494	114	115	.5	17
Job analysts II	6,690	556	128	129	.9	16
Job analysts III	7,388	614	142	143	.8	23
Job analysts IV	9,354	777	180	181	.6	19
Employment managers I	6,668	554	128	131	2.3	45
Employment managers II	7,841	652	151	154	2.0	27
Employment managers III	9,110	757	175	179	2.1	19
Employment managers IV	11,680	971	224	226	.9	14
Directors of personnel I	7,921	658	152	156	2.5	42
Directors of personnel II	9,484	788	182	189	4.1	42
Directors of personnel III	13,141	1,092	252	265	5.2	39
Directors of personnel IV	15,747	1,309	302	328	8.7	38
Clerical Supervisory						
Managers, office services I	7,251	603	139	142	2.2	49
Managers, office services II	8,042	668	154	156	1.0	18
Managers, office services III	9,399	781	180	184	2.0	39
Managers, office services IV	11,356	944	218	219	.3	19
Supervisors, keypunch I	4,826	401	93	94	1.4	32
Supervisors, keypunch II	5,951	495	114	115	.9	21
Supervisors, payroll	7,051	586	135	137	1.3	30
Supervisors, tabulating-machine unit I	5,956	495	114	116	1.4	31
Supervisors, tabulating-machine unit II	7,271	604	140	142	1.6	38

[1] For scope of study, see table in appendix A.
[2] See footnote 1, table 3.
[3] Adjusted to include small proportion of employees who received cash bonuses but for whom data on amount of bonuses were not available, by assuming their average bonuses equaled those for whom such data were available. Percentages were computed from weekly averages before rounding.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations[2] by average weekly salaries, winter 1959–60

Average weekly salaries	Accountants					Auditors			
	I	II	III	IV	V	I	II	III	IV
Under $75	-	-	-	-	-	6.3	-	-	-
$75 and under $80	-	-	-	-	-	4.3	-	-	-
$80 and under $85	(2.1)	-	-	-	-	15.9	(1.1)	-	-
$85 and under $90	2.7	-	-	-	-	14.2	4.9	-	-
$90 and under $95	5.8	(0.9)	-	-	-	14.6	7.8	1.2	-
$95 and under $100	9.0	1.7	-	-	-	13.8	8.5	1.4	-
$100 and under $105	13.3	4.3	(1.5)	-	-	7.4	10.2	2.9	-
$105 and under $110	16.5	5.2	1.3	-	-	5.3	11.1	3.2	-
$110 and under $115	12.3	4.1	1.2	-	-	3.0	10.9	4.5	-
$115 and under $120	9.8	12.8	3.5	-	-	5.0	7.7	4.2	(1.2)
$120 and under $125	8.4	11.9	3.3	-	-	3.9	6.6	4.1	1.6
$125 and under $130	7.7	10.4	5.0	(1.5)	-	1.4	6.4	7.5	2.1
$130 and under $135	4.1	10.1	7.2	1.3	-	2.3	4.6	7.4	3.5
$135 and under $140	3.1	10.9	7.5	1.9	(1.0)	2.4	5.7	9.6	2.7
$140 and under $145	2.5	5.2	7.3	2.3	1.6	(.1)	3.8	5.9	3.4
$145 and under $150	.9	4.6	5.1	2.4	.3	-	4.6	6.3	6.5
$150 and under $160	1.1	6.8	14.9	12.7	2.7	-	3.6	12.7	11.1
$160 and under $170	(.9)	4.3	9.3	12.2	4.5	-	2.0	8.0	12.4
$170 and under $180	-	3.0	10.0	10.5	6.3	-	(.7)	9.0	13.0
$180 and under $190	-	1.6	6.7	10.5	5.9	-	-	3.7	8.3
$190 and under $200	-	1.1	4.5	12.3	8.1	-	-	3.6	11.7
$200 and under $210	-	(1.2)	4.2	9.5	6.1	-	-	1.8	5.5
$210 and under $220	-	-	2.7	6.6	8.9	-	-	.5	3.5
$220 and under $230	-	-	2.0	2.4	6.1	-	-	.1	2.8
$230 and under $240	-	-	1.2	4.3	9.8	-	-	2.3	4.8
$240 and under $250	-	-	(1.8)	2.4	5.0	-	-	-	3.4
$250 and under $260	-	-	-	2.1	9.6	-	-	-	(2.6)
$260 and under $270	-	-	-	1.7	3.8	-	-	-	-
$270 and under $280	-	-	-	.4	4.1	-	-	-	-
$280 and under $290	-	-	-	1.3	3.7	-	-	-	-
$290 and under $300	-	-	-	(1.7)	.9	-	-	-	-
$300 and under $310	-	-	-	-	5.6	-	-	-	-
$310 and under $320	-	-	-	-	1.1	-	-	-	-
$320 and under $330	-	-	-	-	.7	-	-	-	-
$330 and under $340	-	-	-	-	.6	-	-	-	-
$340 and under $350	-	-	-	-	.5	-	-	-	-
$350 and under $360	-	-	-	-	1.3	-	-	-	-
$360 and under $370	-	-	-	-	(1.7)	-	-	-	-
$370 and over	-	-	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	13,684	18,495	14,913	6,419	2,417	836	4,110	4,343	2,006
Average weekly salaries	$112	$132	$159	$189	$231	$96	$116	$147	$179

See footnotes at end of table.

Table 5. Percent distribution of employees [1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Attorneys			
	I	II	III	IV
$80 and under $85	15.0	-	-	-
$85 and under $90	8.0	-	-	-
$90 and under $95	9.4	-	-	-
$95 and under $100	8.4	5.9	-	-
$100 and under $105	8.4	7.5	-	-
$105 and under $110	4.2	5.5	-	-
$110 and under $115	.5	1.8	(0.4)	-
$115 and under $120	3.3	4.0	2.3	-
$120 and under $125	11.5	10.0	2.2	-
$125 and under $130	2.3	3.3	1.3	-
$130 and under $135	1.6	10.3	5.9	-
$135 and under $140	5.9	5.9	3.8	-
$140 and under $145	3.7	6.3	7.1	-
$145 and under $150	.5	5.2	1.8	-
$150 and under $160	12.4	11.3	7.3	(1.2)
$160 and under $170	1.9	7.3	8.1	4.3
$170 and under $180	.5	6.1	9.1	6.3
$180 and under $190	1.2	4.0	7.7	4.8
$190 and under $200	1.2	2.9	4.6	7.8
$200 and under $210	(.2)	(2.7)	5.3	3.3
$210 and under $220	-	-	6.7	5.8
$220 and under $230	-	-	4.4	3.9
$230 and under $240	-	-	4.5	9.9
$240 and under $250	-	-	3.2	4.9
$250 and under $260	-	-	4.7	6.0
$260 and under $270	-	-	1.0	4.6
$270 and under $280	-	-	1.2	2.4
$280 and under $290	-	-	2.0	8.7
$290 and under $300	-	-	.4	2.0
$300 and under $310	-	-	1.4	2.7
$310 and under $320	-	-	.7	3.6
$320 and under $330	-	-	.1	3.1
$330 and under $340	-	-	1.0	3.0
$340 and under $350	-	-	(1.8)	2.5
$350 and under $360	-	-	-	1.7
$360 and under $370	-	-	-	2.9
$370 and under $380	-	-	-	1.1
$380 and under $390	-	-	-	.2
$390 and under $400	-	-	-	.2
$400 and under $410	-	-	-	1.0
$410 and over	-	-	-	(2.2)
Total	100.0	100.0	100.0	100.0
Number of employees	427	1,434	2,913	1,326
Average weekly salaries	$115	$140	$192	$255

See footnotes at end of table.

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Table 5. Percent distribution of employees [1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Attorneys	
	V	VI
$190 and under $200	3.8	-
$200 and under $210	1.8	-
$210 and under $220	1.1	-
$220 and under $230	.4	-
$230 and under $240	1.1	(13.4)
$240 and under $250	.7	-
$250 and under $260	1.8	.9
$260 and under $270	7.6	-
$270 and under $280	4.5	-
$280 and under $290	.7	5.0
$290 and under $300	2.2	.9
$300 and under $310	2.2	.5
$310 and under $320	.5	4.1
$320 and under $330	4.3	-
$330 and under $340	7.2	-
$340 and under $350	4.3	2.7
$350 and under $360	5.0	-
$360 and under $370	4.7	.9
$370 and under $380	1.8	1.8
$380 and under $390	4.0	17.2
$390 and under $400	2.5	2.0
$400 and under $410	1.3	2.1
$410 and under $420	.7	-
$420 and under $430	4.1	-
$430 and under $440	2.5	2.3
$440 and under $450	1.1	3.8
$450 and under $460	.9	.5
$460 and under $470	5.2	1.8
$470 and under $480	2.3	2.3
$480 and under $490	2.0	8.1
$490 and under $500	5.0	1.3
$500 and under $510	.4	-
$510 and under $520	.4	-
$520 and under $530	.2	1.8
$530 and under $540	.2	3.2
$540 and under $550	-	2.0
$550 and under $560	-	.2
$560 and under $570	.4	-
$570 and under $580	.5	8.4
$580 and under $590	.2	-
$590 and under $600	1.8	.2
$600 and under $610	4.3	2.1
$610 and over	(4.3)	(10.6)
Total	100.0	100.0
Number of employees	555	559
Average weekly salaries	$387	$442

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations[2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Chemists						Engineers					
	I	II	III	IV	V	VI	I	II	III	IV	V	VI
$75 and under $80	0.2	-	-	-	-	-	-	-	-	-	-	-
$80 and under $85	4.0	-	-	-	-	-	-	-	-	-	-	-
$85 and under $90	4.0	-	-	-	-	-	(0.5)	-	-	-	-	-
$90 and under $95	13.5	(1.0)	-	-	-	-	1.4	-	-	-	-	-
$95 and under $100	9.1	8.9	-	-	-	-	3.0	-	-	-	-	-
$100 and under $105	19.4	6.3	(2.7)	-	-	-	5.2	(0.9)	-	-	-	-
$105 and under $110	13.8	9.1	2.1	-	-	-	6.2	1.1	-	-	-	-
$110 and under $115	13.5	6.9	3.2	-	-	-	8.4	2.1	-	-	-	-
$115 and under $120	7.9	12.7	4.8	-	-	-	14.5	6.5	(1.2)	-	-	-
$120 and under $125	5.6	12.5	5.2	(0.7)	-	-	20.5	9.9	2.0	-	-	-
$125 and under $130	3.0	9.3	5.4	1.4	-	-	15.5	12.1	2.8	-	-	-
$130 and under $135	2.8	7.8	5.0	.3	-	-	9.4	11.9	3.7	(0.8)	-	-
$135 and under $140	1.8	6.5	10.6	3.1	-	-	7.0	12.9	6.6	1.1	-	-
$140 and under $145	(1.3)	4.3	7.1	3.4	-	-	3.7	10.2	7.4	1.0	-	-
$145 and under $150	-	4.3	7.1	3.0	(4.5)	-	1.8	7.8	7.0	1.7	-	-
$150 and under $160	-	6.6	14.9	11.3	2.2	-	2.1	12.5	19.3	7.6	(1.3)	-
$160 and under $170	-	2.6	13.0	14.9	4.6	-	(.9)	7.3	18.1	12.9	1.8	-
$170 and under $180	-	(1.1)	7.8	13.2	7.8	-	-	2.8	12.6	15.7	4.9	(1.1)
$180 and under $190	-	-	5.0	14.1	7.2	-	-	1.1	8.9	14.0	8.6	1.0
$190 and under $200	-	-	2.5	11.7	12.3	(3.0)	-	(.9)	5.0	13.9	12.6	2.0
$200 and under $210	-	-	1.2	6.9	13.6	4.5	-	-	2.6	10.5	11.7	3.9
$210 and under $220	-	-	1.3	5.3	11.3	4.7	-	-	1.6	6.8	11.9	4.9
$220 and under $230	-	-	(1.0)	3.2	6.3	4.7	-	-	(1.2)	5.1	8.4	7.3
$230 and under $240	-	-	-	3.7	8.6	21.7	-	-	-	3.4	9.5	10.5
$240 and under $250	-	-	-	1.5	6.3	12.7	-	-	-	2.4	8.5	7.3
$250 and under $260	-	-	-	(2.4)	4.6	5.9	-	-	-	1.5	6.2	8.5
$260 and under $270	-	-	-	-	3.3	3.4	-	-	-	(1.5)	4.1	8.3
$270 and under $280	-	-	-	-	4.0	5.2	-	-	-	-	3.1	7.4
$280 and under $290	-	-	-	-	1.0	12.0	-	-	-	-	2.7	7.5
$290 and under $300	-	-	-	-	1.1	3.0	-	-	-	-	1.3	4.3
$300 and under $310	-	-	-	-	(1.3)	4.2	-	-	-	-	1.4	5.5
$310 and under $320	-	-	-	-	-	2.6	-	-	-	-	(2.0)	4.2
$320 and under $330	-	-	-	-	-	5.0	-	-	-	-	-	4.3
$330 and under $340	-	-	-	-	-	1.6	-	-	-	-	-	2.8
$340 and under $350	-	-	-	-	-	1.8	-	-	-	-	-	2.2
$350 and under $360	-	-	-	-	-	1.8	-	-	-	-	-	1.6
$360 and under $370	-	-	-	-	-	(2.0)	-	-	-	-	-	.9
$370 and under $380	-	-	-	-	-	-	-	-	-	-	-	.6
$380 and under $390	-	-	-	-	-	-	-	-	-	-	-	1.0
$390 and over	-	-	-	-	-	-	-	-	-	-	-	(3.1)
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
Number of employees	3,902	6,121	8,454	5,657	3,402	1,481	19,276	43,145	75,956	63,535	32,132	12,705
Average weekly salaries	$106	$124	$149	$182	$211	$263	$122	$139	$161	$189	$223	$272

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Mathematicians							Directors, research and development
	I	II	III	IV	V	VI	VII	
$80 and under $85	3.1	-	-	-	-	-	-	-
$85 and under $90	1.0	-	-	-	-	-	-	-
$90 and under $95	11.8	-	-	-	-	-	-	-
$95 and under $100	14.7	2.5	-	-	-	-	-	-
$100 and under $105	8.0	2.8	-	-	-	-	-	-
$105 and under $110	12.1	6.5	-	-	-	-	-	-
$110 and under $115	14.7	11.5	(1.0)		-	-	-	-
$115 and under $120	6.9	13.8	2.4	-	-	-	-	-
$120 and under $125	9.0	9.9	3.2	(0.6)	-	-	-	-
$125 and under $130	4.4	7.8	7.7	1.8	-	-	-	-
$130 and under $135	3.6	12.5	6.7	1.0	-	-	-	-
$135 and under $140	4.6	7.1	9.5	1.8	-	-	-	-
$140 and under $145	1.5	5.4	6.6	2.5	-	-	-	-
$145 and under $150	4.6	4.6	13.0	9.2	-	-	-	-
$150 and under $160	-	7.5	14.1	14.5	(1.1)	-	-	-
$160 and under $170	-	3.5	15.3	15.5	1.1	-	8.2	-
$170 and under $180	-	2.4	8.3	16.7	4.8	1.1	-	1.7
$180 and under $190	-	.9	6.2	10.8	9.1	2.3	-	-
$190 and under $200	-	1.0	2.9	8.4	6.8	3.4	-	1.8
$200 and under $210	-	(.3)	1.3	6.9	6.3	6.3	-	-
$210 and under $220	-	-	(1.8)	6.3	6.3	8.0	-	1.0
$220 and under $230	-	-	-	1.4	9.1	1.1	2.4	1.9
$230 and under $240	-	-	-	.8	17.7	12.6	17.6	1.8
$240 and under $250	-	-	-	-	4.8	3.4	2.4	4.1
$250 and under $260	-	-	-	1.8	29.3	16.1	11.8	2.6
$260 and under $270	-	-	-	(.2)	.3	4.6	8.2	1.0
$270 and under $280	-	-	-	-	3.1	4.0	5.9	.3
$280 and under $290	-	-	-	-	-	7.5	2.4	14.2
$290 and under $300	-	-	-	-	-	4.6	1.2	.8
$300 and under $310	-	-	-	-	-	2.9	3.5	2.0
$310 and under $320	-	-	-	-	-	1.1	1.2	3.9
$320 and under $330	-	-	-	-	-	1.7	1.2	5.3
$330 and under $340	-	-	-	-	-	1.1	4.7	1.9
$340 and under $350	-	-	-	-	-	5.2	8.2	13.7
$350 and under $360	-	-	-	-	-	-	3.5	1.3
$360 and under $370	-	-	-	-	-	-	8.2	7.8
$370 and under $380	-	-	-	-	-	-	-	1.1
$380 and under $390	-	-	-	-	-	5.7	3.5	5.2
$390 and under $400	-	-	-	-	-	-	-	2.3
$400 and under $410	-	-	-	-	-	6.9	-	1.9
$410 and under $420	-	-	-	-	-	-	-	3.5
$420 and under $430	-	-	-	-	-	-	-	5.3
$430 and under $440	-	-	-	-	-	-	-	1.1
$440 and under $450	-	-	-	-	-	-	-	2.0
$450 and under $460	-	-	-	-	-	-	3.5	.1
$460 and under $470	-	-	-	-	-	-	2.4	1.2
$470 and under $480	-	-	-	-	-	-	-	.1
$480 and under $490	-	-	-	-	-	-	-	3.6
$490 and under $500	-	-	-	-	-	-	-	.1
$500 and over	-	-	-	-	-	-	-	5.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	389	679	714	510	351	174	85	1,148
Average weekly salaries	$111	$130	$153	$175	$226	$272	$289	$349

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations[2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Job analysts				Employment managers				Directors of personnel			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Under $75	2.0	-	-	-	-	-	-	-	-	-	-	-
$75 and under $80	5.9	-	-	-	(0.4)	-	-	-	-	-	-	-
$80 and under $85	2.0	(0.5)	-	-	3.8	-	-	-	-	-	-	-
$85 and under $90	2.0	6.3	-	-	2.2	-	-	-	-	-	-	-
$90 and under $95	3.0	.2	(1.8)	-	3.1	(2.0)	-	-	-	-	-	-
$95 and under $100	13.8	1.6	2.5	-	5.4	1.3	-	-	-	-	-	-
$100 and under $105	17.7	6.0	2.9	-	5.9	1.8	-	-	(2.1)	-	-	-
$105 and under $110	13.8	2.1	5.4	-	7.0	3.2	-	-	2.2	-	-	-
$110 and under $115	2.5	16.8	2.4	(0.3)	9.3	1.2	-	-	-	(2.3)	-	-
$115 and under $120	7.4	4.9	3.0	5.6	3.3	6.5	3.0	-	6.5	2.0	-	-
$120 and under $125	7.4	9.1	5.3	1.7	10.1	4.1	.3	-	10.1	.2	-	-
$125 and under $130	2.5	8.1	11.6	3.5	4.7	9.1	4.5	-	3.8	.6	-	-
$130 and under $135	-	6.5	8.5	.3	8.6	5.5	1.3	-	12.0	.2	-	-
$135 and under $140	.5	6.1	7.1	1.7	4.8	5.4	5.1	-	3.3	5.1	-	3.4
$140 and under $145	3.9	11.8	4.7	1.7	3.4	4.7	4.0	-	4.5	10.1	1.6	-
$145 and under $150	1.5	5.8	7.7	2.0	3.7	3.7	6.3	(2.6)	7.3	([3])	.7	-
$150 and under $160	4.9	5.8	12.3	7.3	11.3	16.8	11.0	.9	8.3	7.4	1.9	-
$160 and under $170	4.4	4.4	12.6	13.1	7.1	11.6	16.7	3.5	18.6	10.2	3.1	.9
$170 and under $180	2.0	1.1	3.6	13.9	2.2	7.8	10.6	6.1	5.6	13.9	1.9	3.1
$180 and under $190	2.0	.5	3.2	15.1	.6	2.2	10.9	9.6	3.7	8.4	5.4	.5
$190 and under $200	(.9)	1.2	2.3	9.8	1.8	5.6	5.2	13.0	3.1	11.6	6.8	2.3
$200 and under $210	-	1.2	1.5	4.0	1.4	3.4	4.3	13.9	1.7	6.1	5.9	5.6
$210 and under $220	-	-	(1.3)	2.5	([3])	1.0	4.6	4.3	5.6	4.4	8.1	1.6
$220 and under $230	-	-	-	4.1	-	(3.1)	3.4	1.7	(1.1)	3.1	5.0	.7
$230 and under $240	-	-	-	.8	-	-	2.5	6.1	-	7.7	7.2	9.7
$240 and under $250	-	-	-	4.0	-	-	4.5	10.4	-	1.9	7.8	5.6
$250 and under $260	-	-	-	1.8	-	-	(1.6)	10.4	-	1.3	3.9	7.2
$260 and under $270	-	-	-	(.6)	-	-	-	2.6	-	1.3	3.5	3.2
$270 and under $280	-	-	-	-	-	-	-	5.2	-	.2	7.3	5.2
$280 and under $290	-	-	-	-	-	-	-	1.7	-	1.0	1.6	7.4
$290 and under $300	-	-	-	-	-	-	-	1.7	-	(.9)	2.1	-
$300 and under $310	-	-	-	-	-	-	-	-	-	-	5.5	4.2
$310 and under $320	-	-	-	-	-	-	-	1.7	-	-	6.3	2.2
$320 and under $330	-	-	-	-	-	-	-	.9	-	-	4.4	1.1
$330 and under $340	-	-	-	-	-	-	-	1.7	-	-	2.5	5.8
$340 and under $350	-	-	-	-	-	-	-	(1.7)	-	-	2.7	4.0
$350 and under $360	-	-	-	-	-	-	-	-	-	-	.5	.9
$360 and under $370	-	-	-	-	-	-	-	-	-	-	.8	7.2
$370 and under $380	-	-	-	-	-	-	-	-	-	-	.6	1.3
$380 and under $390	-	-	-	-	-	-	-	-	-	-	1.4	7.4
$390 and under $400	-	-	-	-	-	-	-	-	-	-	-	-
$400 and under $410	-	-	-	-	-	-	-	-	-	-	1.0	1.4
$410 and under $420	-	-	-	-	-	-	-	-	-	-	(.8)	.2
$420 and under $430	-	-	-	-	-	-	-	-	-	-	-	.4
$430 and under $440	-	-	-	-	-	-	-	-	-	-	-	-
$440 and under $450	-	-	-	-	-	-	-	-	-	-	-	.4
$450 and under $460	-	-	-	-	-	-	-	-	-	-	-	-
$460 and under $470	-	-	-	-	-	-	-	-	-	-	-	.4
$470 and under $480	-	-	-	-	-	-	-	-	-	-	-	-
$480 and under $490	-	-	-	-	-	-	-	-	-	-	-	-
$490 and under $500	-	-	-	-	-	-	-	-	-	-	-	1.4
$500 and over	-	-	-	-	-	-	-	-	-	-	-	5.2
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
Number of employees	203	570	870	603	2,355	1,568	671	115	1,045	4,155	877	554
Average weekly salaries	$114	$128	$142	$180	$128	$151	$175	$224	$152	$182	$252	$302

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Managers, office services				Supervisors, keypunch		Supervisors, payroll	Supervisors, tabulating-machine unit	
	I	II	III	IV	I	II		I	II
$60 and under $65	-	-	-	-	1.1	-	-	-	-
$65 and under $70	-	-	-	-	4.0	-	-	0.9	-
$70 and under $75	-	-	-	-	4.1	-	-	4.6	-
$75 and under $80	-	-	-	-	9.5	(0.8)	(1.3)	.8	-
$80 and under $85	-	-	-	-	9.7	2.1	1.0	1.6	-
$85 and under $90	2.2	-	-	-	12.1	4.1	2.1	4.7	-
$90 and under $95	-	-	-	-	14.8	6.6	7.0	3.8	(0.8)
$95 and under $100	.9	-	-	-	15.8	10.7	2.9	6.7	2.6
$100 and under $105	9.0	-	-	-	12.0	13.7	4.1	12.0	5.6
$105 and under $110	4.4	-	-	-	11.0	3.9	2.7	7.6	3.2
$110 and under $115	2.0	8.2	-	-	2.1	8.2	1.4	7.4	3.3
$115 and under $120	3.3	7.1	-	-	1.2	12.2	5.8	9.9	6.9
$120 and under $125	6.5	4.8	2.1	-	(2.7)	16.6	9.2	7.9	9.0
$125 and under $130	1.2	6.7	1.3	-	-	5.6	10.0	7.0	5.5
$130 and under $135	7.6	13.4	4.3	-	-	3.9	8.7	7.0	8.3
$135 and under $140	12.8	5.6	7.7	-	-	3.4	11.0	8.9	7.2
$140 and under $145	7.0	4.3	6.9	-	-	1.4	4.5	3.1	9.8
$145 and under $150	17.3	1.1	4.0	(1.0)	-	.6	2.6	1.2	5.1
$150 and under $160	10.5	9.1	7.5	9.8	-	3.9	7.2	3.7	10.8
$160 and under $170	2.4	3.9	12.3	16.7	-	(2.4)	4.2	(1.5)	8.4
$170 and under $180	2.4	10.4	4.3	6.9	-	-	4.1	-	7.1
$180 and under $190	7.0	7.4	5.1	3.9	-	-	3.0	-	3.8
$190 and under $200	3.5	9.3	1.9	2.9	-	-	2.6	-	(2.5)
$200 and under $210	-	6.5	29.3	7.8	-	-	1.0	-	-
$210 and under $220	-	1.3	.8	3.9	-	-	1.5	-	-
$220 and under $230	-	(1.1)	2.7	2.0	-	-	(2.2)	-	-
$230 and under $240	-	-	1.1	8.8	-	-	-	-	-
$240 and under $250	-	-	7.2	1.0	-	-	-	-	-
$250 and under $260	-	-	(1.6)	4.9	-	-	-	-	-
$260 and under $270	-	-	-	16.7	-	-	-	-	-
$270 and under $280	-	-	-	8.8	-	-	-	-	-
$280 and under $290	-	-	-	-	-	-	-	-	-
$290 and under $300	-	-	-	-	-	-	-	-	-
$300 and under $310	-	-	-	2.0	-	-	-	-	-
$310 and under $320	-	-	-	1.0	-	-	-	-	-
$320 and under $330	-	-	-	2.0	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	819	539	375	102	2,074	1,018	3,847	5,306	6,208
Average weekly salaries	$139	$154	$180	$218	$93	$114	$135	$114	$140

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly earnings	Draftsmen, junior	Draftsmen, senior	Draftsmen, leader	Tracers
Under $50	-	-	-	1.7
$50 and under $55	-	-	-	5.4
$55 and under $60	(1.4)	-	-	8.0
$60 and under $65	3.1	-	-	19.6
$65 and under $70	5.7	-	-	14.0
$70 and under $75	8.2	-	-	13.5
$75 and under $80	9.0	(1.4)	-	10.9
$80 and under $85	13.2	1.8	-	7.7
$85 and under $90	11.4	2.4	-	5.0
$90 and under $95	12.5	4.7	-	6.3
$95 and under $100	9.5	6.2	(0.7)	4.9
$100 and under $105	7.6	9.3	2.3	1.3
$105 and under $110	4.9	9.0	2.6	(1.7)
$110 and under $115	4.2	9.6	4.1	-
$115 and under $120	3.9	8.4	5.5	-
$120 and under $125	1.7	9.2	7.4	-
$125 and under $130	1.1	7.4	8.2	-
$130 and under $135	1.0	6.5	6.5	-
$135 and under $140	(1.5)	6.0	6.8	-
$140 and under $145	-	4.3	7.9	-
$145 and under $150	-	3.2	5.4	-
$150 and under $160	-	5.4	12.4	-
$160 and under $170	-	3.4	11.4	-
$170 and under $180	-	1.1	9.1	-
$180 and under $190	-	(.6)	4.7	-
$190 and under $200	-	-	2.4	-
$200 and under $210	-	-	1.3	-
$210 and over	-	-	1.2	-
Total	100.0	100.0	100.0	100.0
Number of employees	27,937	50,247	8,844	3,668
Average weekly salaries	$90.00	$120.00	$146.00	$72.50

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Bookkeeping-machine operators		Clerks, accounting		Clerks, file		Key-punch operators	Office boys or girls	Stenographers, general	Stenographers, technical
	I	II	I	II	I	II				
Under $35	-	-	-	-	0.2	-	-	-	-	-
$35 and under $40	(0.1)	-	(0.5)	-	1.3	-	-	(0.7)	-	-
$40 and under $45	3.8	1.0	2.7	-	11.4	1.0	(1.0)	9.9	(0.5)	-
$45 and under $50	10.9	1.9	5.1	-	19.8	4.2	4.2	17.1	1.8	-
$50 and under $55	16.4	4.4	10.1	(1.0)	22.3	8.0	8.2	22.2	4.3	(0.3)
$55 and under $60	17.4	7.8	11.1	2.0	16.4	12.5	10.7	17.4	7.7	1.2
$60 and under $65	17.5	10.7	14.0	3.3	11.0	14.1	14.9	11.9	12.9	5.1
$65 and under $70	12.3	13.3	12.5	5.0	6.5	12.6	13.4	6.8	12.3	6.8
$70 and under $75	7.0	12.0	11.2	6.7	4.3	12.4	11.4	4.6	12.5	7.0
$75 and under $80	5.2	11.7	9.1	8.3	2.9	9.2	11.5	3.1	13.3	10.8
$80 and under $85	3.7	11.1	6.9	9.6	1.6	8.6	8.0	3.7	10.2	22.2
$85 and under $90	2.9	8.5	4.4	9.4	1.3	4.6	6.2	1.5	8.2	18.9
$90 and under $95	1.5	7.9	3.7	11.0	(1.0)	3.9	6.6	(1.2)	6.2	9.5
$95 and under $100	(1.3)	4.0	3.1	7.9	-	4.2	2.5	-	5.5	5.9
$100 and under $105	-	2.7	2.4	8.6	-	1.9	1.1	-	2.4	4.9
$105 and under $110	-	1.7	1.4	8.1	-	(2.6)	(.4)	-	1.1	3.5
$110 and under $115	-	(1.1)	(1.7)	4.9	-	-	-	-	(1.2)	1.4
$115 and under $120	-	-	-	4.2	-	-	-	-	-	1.0
$120 and under $125	-	-	-	3.3	-	-	-	-	-	(1.3)
$125 and under $130	-	-	-	2.0	-	-	-	-	-	-
$130 and under $135	-	-	-	1.9	-	-	-	-	-	-
$135 and under $140	-	-	-	1.4	-	-	-	-	-	-
$140 and over	-	-	-	1.5	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	40,743	10,247	72,692	51,366	47,900	15,035	49,181	30,402	111,769	8,700
Average weekly salaries	$61.50	$75.00	$69.50	$93.00	$55.50	$70.50	$70.00	$57.00	$75.00	$84.50

See footnotes at end of table.

Table 5. Percent distribution of employees[1] in selected professional, administrative, technical, and clerical occupations [2] by average weekly salaries, winter 1959–60—Continued

Average weekly salaries	Switchboard operators	Switchboard operators, special	Tabulating-machine operators			Typists	
			I	II	III	I	II
Under $40	1.0	1.0	-	-	-	0.2	-
$40 and under $45	1.9	.2	(0.6)	-	-	3.8	(0.3)
$45 and under $50	3.6	1.5	2.9	(0.6)	-	10.6	1.6
$50 and under $55	6.3	1.9	7.6	1.4	-	16.5	5.2
$55 and under $60	8.1	5.1	11.4	2.0	-	19.5	9.6
$60 and under $65	10.8	5.8	14.1	4.3	-	19.1	16.0
$65 and under $70	12.5	7.0	14.8	7.7	(1.5)	12.7	15.4
$70 and under $75	13.1	22.4	11.2	9.2	3.1	7.8	13.2
$75 and under $80	12.2	10.7	13.0	12.5	3.9	4.6	11.9
$80 and under $85	9.8	11.8	9.3	13.0	7.1	2.4	9.7
$85 and under $90	9.5	9.8	6.1	11.4	7.3	1.4	6.0
$90 and under $95	5.4	15.0	3.9	11.8	11.6	(1.2)	5.0
$95 and under $100	4.2	3.2	3.0	9.8	13.1	-	4.4
$100 and under $105	1.0	2.8	1.5	7.8	14.0	-	1.1
$105 and under $110	(.6)	1.2	.7	4.0	10.2	-	(.6)
$110 and under $115	-	(.8)	-	2.1	9.0	-	-
$115 and under $120	-	-	-	1.4	7.3	-	-
$120 and under $125	-	-	-	(.9)	3.8	-	-
$125 and under $130	-	-	-	-	3.0	-	-
$130 and under $135	-	-	-	-	1.8	-	-
$135 and under $140	-	-	-	-	1.5	-	-
$140 and over	-	-	-	-	1.8	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of employees	20,544	1,277	10,912	19,751	9,083	84,893	48,823
Average weekly salaries	$71.50	$78.50	$70.50	$84.50	$101.50	$60.50	$72.00

[1] In order 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 most cases, in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses.

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

[3] Less than 0.05 percent.

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

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Table 6. Percent distribution of establishments[1] by type of salary rate system[2] for selected occupational groups, winter 1959-60

Item	Clerical	Clerical supervisory	Accountants and auditors	Personnel management	Attorneys	Draftsmen	Engineers and scientists
Salary rate system							
Establishments with employees in occupational group:							
Number of establishments	30,027	11,033	16,143	9,044	2,576	8,529	11,212
Percent	100	100	100	100	100	100	100
Formal rate policy	38	41	33	39	42	55	37
Single rates	4	(3)	(3)	1	(3)	2	1
Range of rates (minimum and maximum rate specified)	34	41	33	38	42	53	36
No formal rate policy—salaries determined on an individual basis	62	59	67	61	58	44	63
Formal rate range plans							
Establishments with range of rates (minimum and maximum specified):							
Number of establishments	10,266	4,488	5,254	3,443	1,089	4,540	4,067
Percent	100	100	100	100	100	100	100
Intermediate rate policy:							
Intermediate dollar rates (step rates) specified	35	21	21	14	3	27	19
Intermediate dollar rates not specified but established policy for determining progression within range	43	59	59	70	77	55	64
Other policy	23	19	19	16	20	18	17
Progression policy:							
Automatic increases after specified period	11	3	1	(3)	(3)	3	1
Periodic merit review	72	83	85	90	88	77	85
Combination of automatic and merit increases	17	13	14	10	12	20	14

[1] For scope of study, see table in appendix A.
[2] Salary rate system applicable to a majority of employees in jobs studied within selected job groups in each establishment.
[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual percentages may not equal totals.

Table 7. Percent distribution of establishments[1] employing engineers in 2 or more fields of specialization or function by type of pay distinctions, winter 1959-60

Item	Specialization	Function
Establishments employing engineers in 2 or more specializations or functions:		
Number of establishments	5,302	5,676
Percent	100	100
Pay distinctions on basis of field of specialization or function	6	8
Entry level only	1	(2)
All or most levels	6	7
Other	(2)	1
No pay distinctions on basis of field of specialization or function	94	92

[1] For scope of study, see table in appendix A.
[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual percentages may not equal totals.

Table 8. Percent distribution of establishments[1] hiring inexperienced college graduates[2] in selected occupations by type of entrance salary policy, winter 1959–60

Item	Engineers	Chemists	Mathematicians
Establishments hiring inexperienced college graduates in occupation:			
Number of establishments	6,101	3,378	487
Percent	100	100	100
Formal hiring salaries	49	48	89
Single hiring salary	17	16	8
Range in hiring salaries	32	32	81
No formal hiring salary	51	52	11
Criteria used in determining hiring salaries			
Establishments permitting a range in hiring rates:			
Number of establishments	1,930	1,078	395
Percent	100	100	100
Related experience (prior to graduation)	72	63	84
Scholastic standing	68	66	84
Military service completed	41	33	49
Evidence of leadership	40	35	42
Standing of college attended	27	27	18
Special curriculum	23	20	18
Offers of competitors	20	23	32
Field in short supply	17	15	10
Recommendation of interviewer, no established criteria	14	20	5
Special examination	9	10	1
Other criteria	18	17	25

[1] For scope of study, see table in appendix A.
[2] Policy applying to graduates holding bachelor's degree only.

NOTE: Because of rounding, sums of individual percentages may not equal totals. The percentages shown for criteria used in determining hiring salaries do not equal 100 because most establishments use more than one criteria.

Table 9. Percent distribution of establishments [1] with formal hiring salaries for inexperienced college graduates in selected occupations by monthly entrance salary, winter 1959–60 [2]

Item	Engineers	Chemists	Mathematicians
Establishments with formal entrance salaries:			
Number of establishments	2,979	1,616	434
Percent	100.0	100.0	100.0
Establishments with a single entrance salary	35.2	33.3	9.0
Monthly entrance salary			
Under $360	.4	1.7	2.5
$360 and under $380	.6	2.9	1.4
$380 and under $400	-	.5	.2
$400 and under $420	1.6	4.3	1.6
$420 and under $440	4.9	5.1	1.4
$440 and under $460	4.6	6.0	.5
$460 and under $480	8.4	2.8	-
$480 and under $500	5.1	5.5	.2
$500 and under $520	6.3	3.7	.2
$520 and under $540	2.9	.6	.9
$540 and over	.3	.1	-
Establishments with a range in entrance salaries	64.8	66.7	91.0
Lowest monthly entrance salary			
Under $360	1.6	2.4	-
$360 and under $380	.8	5.2	-
$380 and under $400	.5	1.0	.9
$400 and under $420	1.7	9.2	1.6
$420 and under $440	5.3	2.5	.5
$440 and under $460	15.2	11.0	8.3
$460 and under $480	9.6	6.4	9.2
$480 and under $500	12.9	11.3	24.2
$500 and under $520	14.2	15.6	44.9
$520 and under $540	1.6	.8	-
$540 and over	.5	.1	.9
Information not available	.7	1.2	.5
Percentage spread permitted above lowest monthly entrance salary			
Under 5 percent	1.8	1.7	.7
5 and under 10 percent	16.3	12.9	11.8
5 percent	5.8	3.9	8.3
10 and under 15 percent	26.8	30.4	61.5
10 percent	9.1	9.7	27.9
11 percent	11.7	13.6	22.8
15 and under 20 percent	7.0	8.4	3.5
20 and under 25 percent	6.1	3.2	2.5
25 percent and over	5.3	8.4	9.7
25 percent	1.9	5.1	6.2
Information not available	1.4	1.9	1.4

[1] For scope of study, see table in appendix A.
[2] Although information on hiring salaries was obtained largely between January 15 and April 30, in nearly half of the establishments it was indicated that the entrance salaries quoted would apply in hiring June 1960 graduates.

NOTE: Because of rounding, sums of individual percentages may not equal totals.

Table 10. Percent distribution of establishments [1] by type of supplementary cash bonus plan [2] for selected occupational groups, winter 1959–60

Cash bonus plan	Clerical	Clerical supervisory	Accountants and auditors	Personnel management	Attorneys	Draftsmen	Engineers and scientists
Establishments with employees in occupational group:							
Number of establishments	30,027	11,033	16,143	9,044	2,576	8,529	11,212
Percent	100	100	100	100	100	100	100
Supplementary cash bonus plan	39	44	48	44	36	31	41
Christmas or yearend	34	34	35	27	16	23	28
Profit-sharing	4	5	8	9	6	6	10
Other	2	5	6	8	14	2	3
No supplementary cash bonus plan	61	56	52	56	64	69	59

[1] For scope of study, see table in appendix A.
[2] Supplementary cash bonus plans applicable to a majority of employees in jobs studied within selected job groups in each establishment.

NOTE: Because of rounding, sums of individual percentages may not equal totals.

Appendix A: Scope and Method of Survey

Scope of Survey

This survey relates to all 188 Standard Metropolitan Statistical Areas in the United States, excluding Hawaii, as revised in 1959 by the Bureau of the Budget. Coverage within those areas was limited to establishments 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. Establishments with fewer than 100 workers at the time of reference of the universe data (in general, first quarter of 1959) were excluded. The estimated number of establishments and the total employment within the scope of the survey, and within the sample actually studied, are listed separately for each major industry division in the accompanying table. As indicated in the table, and explained later in detail, the scope of the study was the same for all occupations; however, the survey consisted of two separate parts, with one sample of establishments studied for the professional and administrative occupations, and another larger sample for drafting and clerical occupations.

Establishments and workers within scope of survey[1] and number studied by industry division, winter 1959–60

Industry division	Within scope of study[1]		Studied for professional and administrative occupations		Studied for technical and clerical occupations[2]	
	Number of establishments	Workers in establishments	Number of establishments	Workers in establishments	Number of establishments	Workers in establishments
All divisions surveyed	30,606	14,266,400	1,606	3,940,436	6,079	4,994,824
Manufacturing	18,773	9,175,600	1,146	2,894,355	3,132	2,670,482
Nonmanufacturing:						
Transportation,[3] communication, electric, gas, and sanitary services	1,906	1,705,300	165	599,546	697	864,366
Wholesale trade	2,914	555,900	44	13,549	572	172,487
Retail trade	3,944	1,701,400	121	206,248	945	801,488
Finance, insurance, and real estate	2,826	993,100	88	174,307	660	426,095
Services:						
Engineering and architectural services; and research, development, and testing laboratories only	243	135,100	42	52,431	73	59,906

[1] The study relates to establishments in industries listed employing 100 or more workers in the 188 Standard Metropolitan Statistical Areas in the United States (excluding Hawaii) as revised in 1959 by the Bureau of the Budget.
[2] The national estimates for the drafting and clerical occupations were developed from data collected in the Bureau's occupational wage surveys in major labor markets, excluding data for establishments not within the scope of the survey as determined for the study of professional and administrative occupations.
[3] Limited to railroad, local and suburban passenger, deep sea water (foreign and domestic), and air transportation industries as defined in the 1957 edition of the Standard Industrial Classification Manual.

Timing of Survey

Salary and related data for the professional and administrative occupations were collected by personal visits to sample establishments during the first half of 1960, largely between January 15 and April 30. The most recent information available at the time of the visit was obtained. For the drafting and clerical occupations, the survey was designed to develop nationwide estimates from data collected in the Bureau's occupational wage surveys by labor market, conducted between August 1959 and June 1960. Although some of the areas were surveyed in 1959, those surveyed in the first half of 1960 (with the areas they represented in the nationwide estimates) accounted for three-fourths of the office employment within the scope of the survey in all metropolitan areas combined.

Method of Collection

Data were obtained by personal visits of Bureau field economists to representative establishments within the scope of the survey.[10] Employees were classified according to occupation and level, with the assistance of company officials, on the basis of uniform job descriptions. In comparing actual duties and responsibilities of employees with those in the survey descriptions, extensive use was made of company occupational descriptions, organization charts, and other personnel records. The occupational descriptions used in classifying employees appear in appendix B.

Nature of Data Collected and Presented

The average weekly salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., to the straight-time salary corresponding to the employee's normal weekly work schedule excluding overtime hours.

Salaries reported on an annual or monthly basis were converted to weekly salaries by dividing by 52.1 or 4.33, respectively. These same factors were used to convert average weekly salaries to monthly and annual salaries in tables 3 and 4.

Data relating to cash bonuses, which were obtained in addition to salary data for employees in professional and administrative occupations, include cash payments made to employees annually or more frequently. Bonuses paid during the year preceding the survey were converted to a weekly basis by dividing by 52.1. In some cases, the companies indicated that reporting of actual bonus payments to individuals either was not possible or required an unreasonable amount of work. In such instances, estimates were accepted if there was a reasonable basis for estimating the amounts.

Under established policies of some companies, officials were not authorized to provide information relating to salaries or to cash bonuses for all occupations studied. In nearly all instances, however, information was provided on the number of such employees, the appropriate occupational classification, and whether a cash bonus was paid. It was thus possible to estimate the proportion of employees for whom salary or bonus data were not available. As indicated below, 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 and administrative occupations surveyed for whom salary data were not available
5	10 or more percent Attorneys VI (35 percent) Directors, research and development (23 percent) Directors of personnel IV (20 percent) Directors of personnel III (18 percent) Attorneys V (11 percent)
8	5 to 9.9 percent (Accountants V; attorneys IV; chemists IV, V, and VI; engineers VI; and employment managers III and IV)
43	Less than 5 percent

[10] The surveys in major labor markets, from which nationwide estimates were developed for the drafting and clerical occupations, provide for collection of data for some areas by a combination of mail and personal visits in alternate years. For establishments reporting by mail, the occupational classifications are based on those made on personal visits in the previous year.

Comparisons between establishments that provided salary data for each specific occupational 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.

Similarly, information on amount of the cash bonuses was not available for all employees receiving such bonus; usually, these employees for whom information was not available represented less than 5 percent of the total in the occupational levels surveyed.

Number of job categories	Percent of employees classified in professional and administrative occupations surveyed for whom data on amount of cash bonuses were not available
4	10 or more percent Mathematicians V (22.4 percent) Managers, office services IV (13.3 percent) Mathematicians IV (12 percent) Chemists VI (10 percent)
9	5 to 9.9 percent (Chemists II and V; engineers V; mathematicians II; directors, research and development; job analysts IV; directors of personnel II and III; managers, office services III)
43	Less than 5 percent

The average salaries presented relate to employees for whom salary data were available. However, in the tabulation showing average weekly salaries plus cash bonuses (table 4), the bonus data were adjusted to include employees who received cash bonuses but for whom data on amount of bonus were not available. It was assumed that their average bonuses equaled those of employees for whom such data were available.

Occupational employment estimates relate to the total in all establishments within the scope of the study and not the number actually surveyed. Employees for whom salary data were not available were not taken into account in the estimates. For this reason, 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 drafting occupations, one or the other sex was 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 occupational wage survey reports by labor market area.

Sampling and Estimating Procedures

Although the published estimates relate to 188 Standard Metropolitan Statistical Areas, as revised by the Bureau of the Budget in 1959, the survey was conducted almost entirely within a sample of 60 areas.[11] Within these 60 areas, a sample of establishments was chosen, so that the sampling plan can be described as a two-stage design.

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[11] In a few instances, establishments outside the 60 areas but within the 188 areas were added to the sample in certain industries when it was not possible to obtain within the sampled area a representative establishment for the stratum.

The sample of 60 areas was based upon the selection of 1 area from a stratum of similar areas. The criteria of stratification were region and type of industrial activity. Each area had a chance of selection roughly proportionate to its total nonagricultrual employment. Each of the 26 largest areas formed a stratum by itself, and was certain of inclusion in the sample. Each of these areas represented only itself, but each of the 34 other areas represented itself and similar units.

The design used in the selection of the establishments studied for the professional and administrative occupations differed from that used in the drafting and clerical occupations. As explained earlier, data for the latter occupations were collected in the Bureau's program of occupational wage surveys conducted in the 60 areas. The establishments in those surveys were chosen to provide separate area estimates, with industry division detail, while the design for the survey of professional and administrative occupations was intended to yield only nationwide data with no industrial breakdown, and hence required fewer establishments.

In the case of drafting and clerical occupations, each establishment sample within the area was selected independently to permit the presentation of separate data for that area. These samples were selected from a list of establishments stratified by size (employment) and industry. A greater proportion of the large establishments was selected, but in combining the data each establishment was given its appropriate weight—i.e., where an establishment was chosen as one of four, it was given a weight of four.

Nationwide estimates for the drafting and clerical occupations in 6,000 establishments were formed by applying to each set of data the weights needed to expand these into estimates for the stratum represented by the sample area, and then combining these stratum estimates. In the case of the 26 large self-representing areas, these weights were one. In each of the 34 smaller areas, the weight was the ratio of the total nonagricultural employment in the stratum to that in the sample area.

In the study of professional and administrative occupations, the sampling procedure called for the detailed stratification of the universe of 188 areas by industry and size of establishment. Where one of several areas was selected for study to represent a stratum of several areas, an estimate of the universe for that stratum was derived by weighting the industry and size-of-establishment employment totals in the sample area by the weight used in the larger survey described in the preceding paragraph. From this estimated universe, a sample of approximately 1,600 establishments was selected systematically so that each geographic unit was represented proportionately within the size-of-establishment and industry classes.[12] Although no conscious effort was made to control the representation for each area through all the industries, a count shows that each area contributes nearly its proportionate share to the whole sample.

Each industry was sampled separately, the sampling rates depending on the importance of the industry as an employer of the jobs surveyed, particularly in the scientific and engineering series. Within each industry, a greater proportion of large establishments was selected, but as in the clerical surveys, each establishment was weighted to represent all other units of the same class.

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 salary scales. Thus, for engineers III, the relative standard error of the average salary is 0.6 percent, whereas for attorneys VI, it is 4 percent. Most of the relative errors lie near 2 percent for the professional and administrative occupations. The nationwide estimates for the clerical and drafting room occupations, based on the much larger sample, are subject to much smaller sampling error.

[12] A few of the largest employers, together employing nearly a million, gave data on a companywide basis. These companies were eliminated from the universe to which the preceding sampling procedure applied. The sample count includes the establishments of these companies within the 188 metropolitan areas.

Appendix B: Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate 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 is essential in order to permit the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's occupational descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes.

Accountants and Auditors

ACCOUNTANT

I. Under direct supervision of higher level accountants, maintains varied accounting records; takes trial balances and makes adjusting and closing entries; prepares profit and loss, inventory, receipt and disbursement, and balance sheets and other reports; computes and distributes labor, material, and overhead costs; may supervise and review the work of accounting clerks, bookkeeping machine operators, and clerks. Work assignments are reviewed periodically by supervisor prior to completion. NOTE: This does not include trainees (normally employees who have been with a firm for less than 1 year and who had no previous accounting experience).

II. Under direction performs accounting work requiring professional knowledge of accounting principles and practices with wide latitude for discretionary judgment as to proper allocation of accounts; maintains complete and complex accounting records; assists in departmental audits, special investigations, and systems installation. Typical positions are: (1) Chief assistant to accountant III; (2) section head over general and subsidiary ledger accounts in a firm with less than 500 employees; (3) accounting specialist for cost, tax, or systems work in a firm with less than 500 employees.

III. Supervises or performs professional accounting work as the accountant with responsibility for maintaining accounting records for a manufacturing or commercial organization; maintains accounting and budgetary controls; prepares, reviews, and analyzes all types of accounts and records of financial transactions; prepares exhibits and drafts reports; and may supervise a group of accountants and accounting clerks. Typical positions are: (1) Chief accountant of a firm with less than 500 employees; (2) top accounting specialist in a firm with 500 to 1,000 employees in such subjects as costs, tax systems, etc., and may supervise a section engaged in such activities or maintaining specialized accounts; (3) section head over general and subsidiary ledger accounts in a firm with 500 to 1,000 employees; (4) chief assistant to accountant IV.

IV. Supervises the performance of difficult professional accounting work or general financial activities as the accountant with responsibility for maintaining accounting records for a large manufacturing or commercial organization; formulates, revises, and installs accounting and financial systems and procedures; prepares and supervises the preparation of reports and financial statements; and passes upon difficult technical problems. Typical positions are: (1) Chief accountant of firm with 500 to 1,000 employees; (2) top accounting specialist in a firm with 1,000 to 5,000 employees in such subjects as cost, tax, systems, etc., and may supervise a section engaged in such specialized activities or maintaining such accounts; (3) section head over general and subsidiary ledger accounts in a firm with 1,000 to 5,000 employees and (4) chief assistant to accountant V.

ACCOUNTANT—Continued

V. Supervises the performance of difficult professional accounting work or general financial activities as the accountant with responsibility for maintaining accounting records for a large manufacturing or commercial organization; formulates, revises, and installs accounting and financial systems and procedures; prepares and supervises the preparation of reports and financial statements; and passes upon difficult technical problems. Typical positions are: (1) Chief accountant of firm with 1,000 to 5,000 employees; (2) top accounting specialist in a firm with 5,000 to 10,000 employees in such subjects as cost, tax, systems, etc., and may supervise a section engaged in such specialized activities or maintaining such accounts; (3) section head over general and subsidiary ledger accounts in a firm with 5,000 to 10,000 employees.

AUDITOR

Audits the financial records of various companies, or divisions or components of companies, to systematically appraise and verify the accounting accuracy of the records and reports. 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, and (4) the degree of compliance with established policies and procedures concerning financial transactions. Evaluates the adequacy of the accounting system and internal financial control. Makes appropriate recommendations for improvement as necessary. (Work typically requires a bachelor's degree in accounting or the equivalent in experience and education combined.)

I. As a trainee auditor at the entering level, performs a variety of routine assignments under the close supervision of an experienced auditor.

II. As a junior member of an audit team independently performs assigned portions of the audit examination which are limited in scope and complexity such as physically counting to verify various inventory items, checking assigned subsidiary ledger accounts against supporting bills or vouchers, checking and balancing various subsidiary ledgers against control accounts, or other similar duties designed to help the team leader check, verify, or prove the accounting entries. Responsibility extends only to the verification of accuracy of computations and the determination that all transactions are properly supported. Any technical problems not covered by instructions are brought to the attention of a superior.

III. (1) As auditor in charge of an audit team or in charge of individual audits, independently conducts regular recurring audits, in accordance with a prescribed audit policy, of the accounts of smaller or less complex companies having gross income up to $3 million per year, or of similar sized branches or subsidiary organizations of larger companies. Under minimum supervision, either working alone or with the assistance of one or two subordinate auditors, examines transactions and verifies accounts, observes and evaluates local 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; or (2) as a member of an audit team auditing the accounts of a larger and more complex organization ($4 to $25 million gross income per year), independently performs the audit examination of a major segment of the audit such as the checking, verification, and balancing of all accounts receivable and accounts payable, the analysis and verification of assets and reserves, or the inspection and evaluation of controls and procedures.

IV. (1) As auditor in charge of an audit team or of individual audits under minimum supervision with the assistance of approximately five subordinate auditors independently conducts regular recurring audits of the accounts of companies having gross income of $4 to $25 million per year or in companies having much larger gross incomes, audits of accounts of the branches or subsidiary organizations of those companies each of which have gross income of $4 to $25 million. Plans and conducts the audit and prepares an audit report containing recommendations for changes or improvements in accounting practices, procedures, or policies; or (2) as a member of an audit team auditing the accounts of a larger and more complex organization (over $30 million gross income

AUDITOR—Continued

per year), is assigned relatively independent responsibility for a major segment of the audit such as the checking, verification, and balancing of all accounts receivable and accounts payable, the analysis and verification of assets and reserves, or the inspection and evaluation of controls and procedures.

Attorneys

ATTORNEY

Performs work involved in providing consultation and advice to operating officials of the company with respect to its legal rights, privileges, and obligations. Performs such duties as anticipating any legal problems or risks involving the company and advising company officials; preparing and reviewing various legal instruments and documents such as contracts for leases, licenses, sales, purchases, real estate, etc.; keeping informed of proposed legislation which might affect the company and advising the appropriate company officials; examining and checking for legal implications public statements or advertising material; advising company whether to prosecute or defend law suits; acting as agent of the company in its transactions; and applying for patents, copyrights, or registration of the company's products, processes, devices, and trademarks.

I. As a trainee (LL.B with membership in bar), performs routine legal work such as preparing briefs or drawing up contracts for review and evaluation by attorneys of higher grade. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of legal research, drafting of legal instruments, etc.

II. Performs a variety of legal assignments, primarily in drawing up contracts which require some ingenuity and an ability to evaluate the legal sufficiency of contract terms. Receives general supervision during assignments, with most of work reviewed by an attorney of higher grade. Responsibility for final action is usually limited to matters which are covered by instructions and subject to prior approval of a superior.

III. Performs a variety of broad legal assignments, primarily in the study and analysis of legal questions, problems, or cases. May specialize in certain legal areas such as real estate, labor law, or contracts. Receives general supervision during initial and final stages of assignments, but is expected to conduct work with relative independence. Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard forms and practices is involved. Any decisions or actions having a bearing on the company's business are reviewed by a superior.

IV. Responsible for a broad legal area in which assignments cover a wide range of difficult and complex legal questions and problems. Primarily serves in an advisory capacity, making studies and developing opinions which may have an important bearing on the conduct of the company's business (e.g., recommending action to protect the company's trademarks and copyrights in foreign countries). Receives a minimum of technical legal supervision.

V. Plans, conducts, and supervises legal assignments within one or more broad legal areas. Supervises a staff of attorneys and has responsibility for evaluating their performance and approving recommendations which may have an important bearing on the conduct of the company's business.

VI. As General Counsel or Chief Attorney for a company, provides top management with authoritative counsel as to the meaning and application of pertinent laws (Federal State, local, or international) to company activities or planned activities. Personally, or through his staff, represents the company in all legal matters such as contractual negotiations, real estate matters, liability cases, patents, investments, mergers, etc., including the trial of cases in courts. Directs the activities of a staff of attorneys and/or coordinates and generally oversees the work of private law firms engaged to represent the company on specific subjects. Has a significant role in the top policy councils of company management regarding all aspects of the company's activities.

Engineers and Scientists

CHEMIST

Performs research, development, interpretive, and analytical work 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 the equivalent in education and experience combined.

I. Performs elementary work in chemistry under close supervision, with assignments planned to provide experience in the application of common laboratory techniques and familiarization with methods and practices of the laboratory. Performs a variety of routine analyses, tests, and operations and assists experienced chemists by carrying out detailed steps or experiments according to specific and detailed instructions. Typically receives formal classroom instruction or on-the-job training.

II. In accordance with instructions on the determinations to be made, independently selects and applies standard chemical methods and techniques to the analysis of samples. Conducts specified phases of research projects as an assistant to an experienced chemist. Supervisors establish the nature and extent of analysis required, specify methods and criteria on new types of assignments, and review work for thoroughness of application of methods and adequacy of results. May receive advanced on-the-job training or formal classroom instruction.

III. Performs work requiring the knowledge of a specialized field of chemistry in the independent evaluation, selection, and application of standard methods and techniques. Ingenuity and experience are required in developing details of assignments in accordance with a line of approach indicated by the supervisor and in adapting methods to the specific requirements of assignments. On routine analytical work, supervision is very general; unusual problems are resolved with close collaboration of supervisor. May supervise technicians performing routine control analyses. Completed work is reviewed for application of sound judgment in choice of methods and adequacy of results.

IV. Plans and conducts work in chemistry requiring mastery of specialized techniques or considerable ingenuity in selecting and evaluating approaches to unforeseen or novel problems. Prepares interpretive reports of results and may provide technical advice on significance of results. Generally works independently of technical supervision, but refers proposed plans and unusually important or complex problems to supervisor for guidance. May supervise a small staff of chemists and technicians.

V. From broad program objectives, plans, organizes, and supervises or conducts research investigations with responsibility for defining projects and scope and independently selecting lines of approach. Participates in planning research programs on the basis of specialized knowledge of problems and methods and the probable value of results. As individual worker, carries out research projects requiring both origination of new scientific techniques and a mature background of knowledge of related fields of science. May supervise a small group of chemists engaged in varied research projects or a larger group on routine analytical work. May serve as an expert in a narrow specialty making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects. Supervision received relates largely to work objectives and administrative aspects. Usually discusses important developments with supervisor.

VI. Performs work requiring leadership and authoritativeness in a specialized field of chemistry. Determines the kinds of projects and data needed to meet objectives of programs and plans, organizes, directs, and evaluates the work of a group of chemists so as to advance the programs along profitable lines. Maintains liaison with related organizations and represents the laboratory in important conferences, with authority to commit the organization. As an authority in a specialized field of chemistry, conceives, plans, and directs projects of a pioneering nature to create new methods and techniques or to resolve problems which have proved unusually refractory. May serve as a consultant to other chemists in the specialty field. Supervision received is essentially administrative, with assignments broadly indicated in terms of objectives.

ENGINEER

Performs 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 which requires 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 experience and education combined.

Safety engineers, industrial engineers, quality control engineers, and sales engineers are to be excluded.

I. Performs professional engineering work of a beginning level under close supervision, with assignments planned to provide experience and familiarization with methods and practices of the company in the specialty field. Performs routine tasks such as taking measurements, compiling data, setting up equipment, preparing drawings, performing calculations, etc., according to specific and detailed instructions. Typically receives formal classroom instruction or on-the-job training.

II. Performs routine engineering work requiring the independent application of standard techniques, procedures, and criteria in carrying out a sequence of related engineering operations with limited requirements for the exercise of judgment on details of the work. Usually performs limited portions of a broader assignment of an experienced engineer. Supervisor screens assignments to eliminate difficult problems and selects techniques and procedures to be applied. May receive advanced on-the-job training or classroom instruction.

III. Performs engineering work requiring the independent evaluation, selection, and application of standard techniques, procedures, and criteria, using ingenuity to make minor adaptations and modifications. Assignments include equipment design and development, materials testing, preparation of specifications, process study, research investigation, report preparation, etc. The following are characteristics of many positions of this type.

(1) Is involved with conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features and for which there are precedents.

(2) Coordinates work of draftsmen, inspectors, and other technicians assigned to work projects.

(3) Receives instruction on specific assignment objectives, points of emphasis, reference and information sources, and possible solutions.

(4) Unusual problems are solved jointly with supervisor and work is reviewed for application of sound engineering judgment.

IV. Performs engineering work requiring originality and judgment in the independent evaluation, selection, and substantial adaptation or modification of standard techniques, procedures, and criteria. The following are characteristic of many positions of this type:

(1) Is involved with conventional engineering practices but includes a variety of complex features such as conflicting design requirements, unsuitability of standard materials, and difficult coordination requirements which require a broad knowledge or precedents in the speciality area and a good knowledge of principles and practices of related specialities.

(2) Plans, schedules, and coordinates phases of the engineering work in a part of a major project or in a total project of moderate scope. Devises new approaches to problems encountered in projects.

(3) Supervises small group of engineers and technicians.

(4) Receives direct supervision and guidance primarily on novel or controversial problems or questions. Makes unreviewed technical decisions on details of work covered by precedents.

ENGINEER—Continued

V. Plans, develops, coordinates, and conducts a large and important engineering project or a number of small projects with many complex features. Positions are of two general types: (A) supervisory and (B) nonsupervisory.

(A) The supervisory positions typically involve the supervision, coordination and review of a small staff of engineers and technicians which includes estimation of manpower needs and scheduling and assigning of work to meet completion dates.

(B) The nonsupervisory positions involve carrying out complex or novel research assignments requiring the development of new or improved techniques and procedures, and positions such as staff specialists who develop and evaluate plans and criteria for a variety of projects and activities.

The following are characteristic of both types of positions:

(1) Makes decisions independently on engineering problems and methods.

(2) Represents the organization in conferences to resolve important questions and to plan and coordinate work.

(3) Receives supervision and guidance only in terms of specific objectives and on critical issues.

VI. Programs, plans, coordinates a number of large and important projects or a project of major scope and importance. Positions may be either (A) supervisory or (B) nonsupervisory.

(A) The supervisory positions typically involve the direction and control of a staff of project engineers and assistants and of a number of technicians and draftsmen. Evaluates progress of the staff and the results obtained and recommends major changes to achieve overall objectives.

(B) The nonsupervisory positions include advisory, consulting, and other review work as specialists or experts in a specific field or related areas.

The following are characteristic of both types of positions:

(1) Maintains liaison with other organizations and companies.

(2) Conceives, plans, and executes engineering projects, involving exploration of subject area, definition and selection of problems for investigation, and development of novel design concepts and approaches.

(3) Usually has final technical responsibility for interpreting, organizing, executing, and coordinating assignments.

MATHEMATICIAN

Performs investigation, analysis, and solution of problems and relationships by means of the principles and methods of mathematics, where the primary concern is the exactitude of the relationships stated, the rigor and economy of operations performed, and the logical necessity of results which are provable by deduction, rather than the answering of questions about physical situations which can be validated by observation. Work typically requires a bachelor's degree in mathematics or the equivalent in experience and education combined.

This category includes mathematical statistician positions which are concerned with the development and adaptation of mathematical statistical theory and methodology for various types of statistical investigations. It does not include actuaries or survey or analytical statisticians.

MATHEMATICIAN—Continued

I. Applies a variety of standard mathematical techniques in carrying out assignments which are confined to a few related processes rather than to the full sequence of steps in recognizable problems. Assignments are planned to provide training for more advanced professional work. Supervision is close; methods and computing instructions are explained by the supervisor, and there is little opportunity for the exercise of mathematical judgment. May receive formal classroom instruction or on-the-job training.

II. Performs analyses and computations on assigned phases of problems where the objectives are specific and narrow and the outcome generally predictable, but which require extended calculations and involve some choice or a variety of standard mathematical numerical methods and techniques. The supervisor explains the objectives and boundaries of the assignments and how it fits into the total problem, but some original thinking is required in detailed planning of work. May receive advanced on-the-job training or classroom instruction.

III. Analyzes and solves specific problems for which already developed mathematical theory is available but which require the comparative evaluation, selection, and application of standard mathematical methods in solving problems or groups of problems. Critical relationships, restrictions on the solution, and anticipated results are outlined with the assignment, but the incumbent takes the initiative in locating and adapting significant data, useful formulas and other precedents. Completed work is reviewed for general consistency, methodology, and adequacy in meeting the objective.

IV. Performs mathematical work where original thinking in the adaptation or refinement of general methods is required to solve unique problems not covered by immediately applicable precedent. This is the first level at which responsibility is found for projects in mathematical research, such projects being quite restricted as to subject area.

Other positions at this level involve application of analytical and computational methods to a variety of problems in a narrow specialized subject-matter area, but where solutions may have general applicability to similar work. Incumbents are given a general statement of results desired, approach to be taken, and where appropriate, subject-matter background. They then assume the initiative in planning and carrying out the work independently, after obtaining approval of their proposed plan.

V. This level involves responsibility for relatively broad research assignments in one of the specialized branches of mathematics or for applications of mathematics to broad subject-matter specializations involving complex problems and interrelationships, and no limitations as to degree of difficulty. Incumbents may suggest research and analysis assignments on the basis of their recognition of need for new methods or knowledge about basic mathematical or subject-matter phenomena and the value of expected result. Technical judgments and decisions extend to all phases of planning and execution of assignments. Their conclusions are a significant part of the basis for commitments by others concerning methods to be applied to theoretical research or the adoption, modification or rejection of important research or development projects.

VI. As an authority within this branch of mathematics or in the application of mathematics to a subject-matter field, is responsible for the evaluation, initiation, and execution of complex mathematical research, or for the application of mathematics to a subject-matter field of broad scope and importance. Incumbents of positions at this level commonly serve as consultants to other mathematicians and subject-matter specialists. They initiate many of their own research projects. Assignments, when given, consist of broad outlines of the problem and its urgency. Methods developed are frequently used by others both within and outside the organization. Incumbents may also, within general policy, commit their organizations to participation in joint work with other organizations. Conclusions frequently relate to critical research projects involving large expenditures of money or important company commitments.

MATHEMATICIAN—Continued

VII. Plans, coordinates, and executes highly complex mathematical research or its applications to projects and programs of broad scope and importance, or provides high level consultation and advice to top technical and administrative personnel within the company. Incumbents typically serve as the top mathematical consultant to a laboratory or other organization on programs which constitute one of the major objectives of the organization but in which several sciences contribute and mathematics is only one approach. Research and evaluation studies by the incumbent concern major projects and policies of the organization and typically result in conclusions concerning the worth of theoretical or experimental projects, equipment, etc.

DIRECTOR, RESEARCH AND DEVELOPMENT

As incumbent of the top technical job in the company or plant, plans, organizes, and controls research and development program for company or major organization within company. The following are typical duties and responsibilities: Formulates and establishes programs to improve and develop new products and processes and reduce costs of present products and processes. Plans and effects coordination among the related research and development activities. Defines and establishes priorities for portions of the program or projects. Determines and establishes budget levels for research and development expenditures within overall financial policies. Reviews and evaluates project or program progress and results in terms of established plans and stated goals to determine effectiveness of approach and achievements.

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 the conduct of 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.

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

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.

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.

IV. Participates in the development, installation, and administration of evaluation and compensation systems, which may include those for merit rating programs. Receives very broad assignments and is usually responsible for evaluating the more difficult kinds of salaried jobs. May plan survey methods and conduct or direct wage surveys within a broad compensation area.

EMPLOYMENT MANAGER

Responsible for planning and operating a program to supply satisfactory manpower to meet the personnel requirements of a company. This program typically includes analyzing jobs to be filled to establish (in cooperation with operating supervisors) the experience, education, personal characteristics, and other qualifications required; recruiting new employees by use of a variety of sources and techniques; interviewing prospective employees and making initial selections subject to final selection by operating supervisors; reviewing employment and educational histories of applicants; administering written or performance tests when necessary; and checking references on applicants.

Other functions which are sometimes included in the employment manager's job or performed under his supervision are: Orientation training of new employees; reviewing and approving transfers and promotions; conducting "exit-interviews" with employees leaving the company; "out-placement" of employees separated because of cutbacks in labor force; handling unemployment compensation or workmen's compensation problems; maintaining personnel files and records, etc.

The employment manager has full responsibility for the above functions, subject only to general supervision, usually from the personnel director, industrial relations manager, or similar company official.

I. Responsible for an employment program covering plant (unskilled, semiskilled, and skilled trades and labor) jobs and office (clerical and office machine operator) jobs, when the number of jobs (employees) in organization serviced ranges from about 300 to 1,000. Area of recruitment is typically local, using such sources as newspaper ads, State or private employment offices, labor unions, local high schools, business schools, trade schools, or recommendations of present employees. Selection methods typically include such techniques as interviews, review of employment and education histories, administration of written or performance tests, and reference checking.

II. Responsible for an employment program similar to that of employment manager I, but where the number of jobs serviced ranges from about 1,000 to 5,000.

or

II. Responsible for an employment program covering plant and office jobs as for employment manager I, but, in addition, covering professional, technical, administrative, or managerial jobs when the total number of jobs in the organization serviced ranges from about 300 to 1,000. Area of recruitment is typically local but may be regional in scope for the professional, technical, and administrative positions. Sources of recruitment include, in addition to those for employment manager I, colleges and universities, technical schools, professional societies, or technical journals. Selection methods are the same as those used by employment manager I.

III. Responsible for an employment program similar to that of employment manager II (second paragraph), but where the number of jobs in the organization serviced ranges from about 1,000 to 5,000.

IV. Responsible for an employment program similar to that of employment manager II (second paragraph), but where the number of jobs in the organization serviced ranges from about 5,000 to 15,000.

DIRECTOR OF PERSONNEL

Responsible for a personnel management program for a company or a plant or establishment of a parent company. The program includes at least five of the following functions:

1. Recruitment and placement.
2. Job evaluation (job classification).
3. Wage or salary surveys.
4. Training.
5. Labor relations.
6. Industrial health or safety.
7. Personnel files and records.

DIRECTOR OF PERSONNEL—Continued

Other functions which may or may not be present include such things as: Recreational programs; cafeteria; personnel or plant security; beneficial suggestions; merit ratings; and administration of retirement, pension, or insurance plans.

I. Responsible for a plant or establishment personnel program, within policies, systems, and general methods established by the parent company. The work force served ranges in size from about 300 to 1,000 and consists almost exclusively of plant (unskilled, semiskilled, and skilled trades and labor) jobs and office (clerical and office machine operator) jobs. Labor relations responsibilities, if any, are confined to negotiations with unions on problems of contract interpretation.

II. Responsible for a plant or establishment personnel program, within policies, systems, and general methods established by the parent company. The work force served ranges in size from about 300 to 1,000 and consists of plant and office, and technical, professional, and administrative jobs. Labor relations responsibilities include serving as a member of the company team in union contract negotiations as well as handling negotiations on problems of contract interpretation.

or

Responsible for a plant or establishment personnel program, within policies, systems, and general methods established by the parent company. The work force served ranges in size from about 1,000 to 5,000 and consists almost exclusively of plant and office jobs. Labor relations responsibilities, if any, are confined to negotiations with unions on problems of contract interpretation.

or

Responsible for a company personnel program, including responsibility for developing and recommending personnel policies to top company management. The work force served ranges in size from about 300 to 1,000 and consists, almost exclusively, of plant and office jobs. May have labor relations responsibilities, either for negotiations with unions on problems of contract interpretation, or for serving as a member of the company team in union contract negotiations.

III. Responsible for a company personnel program including responsibility for developing and recommending personnel policies to top company management. The work force served ranges in size from about 1,000 to 5,000 and consists of plant and office, and technical, professional, and administrative jobs. May have labor relations responsibilities, either for negotiations with unions on problems of contract interpretation, or for serving as a member of the company team in union contract negotiations.

or

Responsible for a plant or establishment personnel program, within policies, systems, and general methods established by the parent company. The work force served ranges in size from about 5,000 to 15,000 and consists of plant and office, and technical, professional, and administrative jobs. Labor relations responsibilities, if any, are confined to negotiations with unions on problems of contract interpretation.

IV. Responsible for a company personnel program including responsibility for developing and recommending personnel policies to top company management. The work force served ranges in size from about 5,000 to 15,000 and consists of plant and office, and technical, professional, and administrative jobs. Labor relations responsibilities, if any, are confined to negotiations with unions on problems of contract interpretation.

or

Responsible for a company personnel program including responsibility for developing and recommending personnel policies to top company management. The work force served ranges from about 1,000 to 5,000 and consists of plant and office, and technical, professional, and administrative jobs. Labor relations responsibilities include major responsibility for representing the company as principal representative in union contract negotiations.

Clerical Supervisory

MANAGER, OFFICE SERVICES

Supervises a group of employees engaged in providing office services of a supporting or "housekeeping" nature for the primary operations of a company, an establishment, or an organizational unit of a company or establishment. Job includes full and independent responsibility for planning, directing, and controlling of office services, subject only to the most general policy supervision. Plays an active role in anticipating and planning to meet office services needs of the operating organization served. Typical office services include:

1. Receipt, distribution, and dispatch of mail.
2. Maintenance of central files.
3. Printing or duplication and distribution of forms, publications, etc.
4. Purchasing office supplies and equipment.
5. Records control and disposal.
6. Communications (telephone switchboard and/or teletype service).
7. Typing or stenographic pool.
8. Office equipment maintenance and repair.
9. Space control over office facilities (layout and arrangement of offices).

I. Supervises a staff of employees engaged in performing a few (e.g., 4 or 5) of the above functions as a service to a small organization (e.g., 300 to 600 employees, excluding nonsupervisory plant workers).

II. Supervises a staff of employees engaged in performing a few (e.g., 4 or 5) of the above functions as a service to a moderately large organization (e.g., 600 to 1,500 employees, excluding nonsupervisory plant workers).

or

Supervises a staff of employees engaged in performing most (e.g., 7 or 8) of the above functions as a service to a small organization (e.g., 300 to 600 employees, excluding nonsupervisory plant workers).

III. Supervises a staff of employees engaged in performing a few (e.g., 4 or 5) of the above functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

or

Supervises a staff of employees engaged in performing most (e.g., 7 or 8) of the above functions as a service to a moderately large organization (e.g., 600 to 1,500 employees, excluding nonsupervisory plant workers).

IV. Supervises a staff of employees engaged in performing most (e.g., 7 or 8) of the above functions as a service to a large organization (e.g., 1,500 to 3,000 employees, excluding nonsupervisory plant workers).

SUPERVISOR, KEYPUNCH

I. As a working supervisor, performs keypunch machine operation, and day-to-day supervision of the work and production of a group of keypunch operators. Distributes and assigns daily work, instructs operators in new procedures and answers operator questions regarding the assigned work. (Keypunch operators punch the basic data into punch cards which are then used by tabulating machine operators.)

II. As the chief of a keypunch operation unit, plans, organizes, and directs work of a group of keypunch operators. (The group may include working supervisors where the work volume warrants.) This is the first full-time supervisory level and includes the performance of such duties as: Planning the work of the unit, determining time requirements for jobs as assigned, sequencing work operation to make efficient use of personnel and machines, selecting new employees, planning and conducting training of employees, and planning and installing new methods and procedures.

SUPERVISOR, PAYROLL

As chief of a payroll office, supervises a group of payroll and time clerks, and machine operators as required in the maintenance of payroll and time records and the processing of the payroll. The work of the group typically involves the processing of regular and supplemental payrolls including pay changes; the clerical maintenance of various pay and time records; maintenance and clerical audit of controls and records to assure accuracy; and in some situations, the maintenance of vacation and sick leave records. It is also characteristic of positions of this type that they are concerned with a variety of pay plans or schedules including those for regular hourly and salaried employees, and in some cases for employees on a part-time or consulting basis. The work procedures and systems used are typically complicated by a number of the following factors: Pay computation involving use of overtime rates, special rates, piecework plus standard hourly rates, and other; and computation of a number of standard and nonstandard deductions including those for taxes, savings bonds, insurance, dues, and others. These payroll supervisors plan individual work procedures, organize and assign work, select and train new employees, perform other similar supervisory tasks, and are in full-time supervisory work situations.

SUPERVISOR, TABULATING-MACHINE UNIT

I. As a working supervisor, performs tabulating-machine operation and day-to-day supervision of the work and production of a group of tabulating-machine operators. The work performed by this group typically requires the use of a variety of machines, such as the tabulator, calculator, interpreter, reproducer, collator, and sorter. Distributes and assigns daily work, instructs operators in new procedures, and answers operator questions regarding the assigned work.

II. As the chief of a tabulating-machine unit, plans, organizes, and directs the work of a group of tabulating-machine operators. (The group may include working supervisors where the work volume warrants.) The work performed by the group typically requires the use of a variety of machines, such as the tabulator, calculator, interpreter, reproducer, collator, and sorter. This is the first full-time supervisory level and includes the performance of such duties as: Planning the work of the unit which typically includes a range of assignments from the more routine recurring reports to the more complex, longer, and nonrecurring reports; determining time requirements for jobs as assigned; sequencing work operation to make efficient use of personnel who have varying skill, and of a variety of machines; selecting new employees; planning and conducting training; and planning and installing new methods and procedures.

Draftsmen

DRAFTSMAN, JUNIOR

(Assistant draftsman)

Draws to scale units or parts of drawings prepared by draftsman or others for engineering, construction, or manufacturing purposes. Uses various types of drafting tools as required. May prepare drawings from simple plans or sketches, or perform other duties under direction of a draftsman.

DRAFTSMAN, SENIOR

Prepares working plans and detail drawings from notes, rough or detailed sketches for engineering, construction, or manufacturing purposes. Duties involve a combination of the following: Preparing working plans, detail drawings, maps, cross-sections, etc., to scale by use of drafting instruments; making engineering computations such as those involved in strength of materials, beams and trusses; verifying completed work, checking dimensions, materials to be used, and quantities; writing specifications; and making adjustments or changes in drawings or specifications. May ink in lines and letters on pencil drawings, prepare detail units of complete drawings, or trace drawings. Work is frequently in a specialized field such as architectural, electrical, mechanical, or structural drafting.

DRAFTSMAN, LEADER

Plans and directs activities of one or more draftsmen in preparation of working plans and detail drawings from rough or preliminary sketches for engineering, construction, or manufacturing purposes. Duties involve a combination of the following: Interpreting blueprints, sketches, and written or verbal orders; determining work procedures; assigning duties to subordinates and inspecting their work; and performing more difficult problems. May assist subordinates during emergencies or as a regular assignment, or perform related duties of a supervisory or administrative nature.

TRACER

Copies plans and drawings prepared by others, by placing tracing cloth or paper over drawing and tracing with pen or pencil. Uses T-square, compass, and other drafting tools. May prepare simple drawings and do simple lettering.

Clerical

BOOKKEEPING MACHINE OPERATOR

Operates a bookkeeping machine (Remington Rand, Elliott Fisher, Sundstrand, Burroughs, and National Cash Register, with or without a typewriter keyboard) to keep a record of business transactions.

I. Keeps a record of one or more phases or sections of a set of records usually requiring little knowledge of basic bookkeeping. Phases or sections include accounts payable, payroll, customers' accounts (not including simple type of billing described under biller, machine), cost distribution, expense distribution, inventory control, etc. May check or assist in preparation of trial balances and prepare control sheets for the accounting department.

II. Keeps a set of records requiring a knowledge of and experience in basic bookkeeping principles and familiarity with the structure of the particular accounting system used. Determines proper records and distribution of debit and credit items to be used in each phase of the work. May prepare consolidated reports, balance sheets, and other records by hand.

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.

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

I. Performs routine filing, usually of material that has already been classified or which is easily identifiable, or locates or assists in locating material in files. May perform incidental clerical duties.

II. In an established filing system containing a number of varied subject-matter files, classifies and indexes correspondence or other material; may also file this material. May keep records of various types in conjunction with files or may supervise others in filing and locating material in the files. May perform incidental clerical duties.

KEYPUNCH OPERATOR

Under general supervision and with no supervisory responsibilities, records accounting and statistical data on tabulating cards by punching a series of holes in the cards in a specified sequence, using an alphabetical or a numerical keypunch machine, following written information on records. May duplicate cards by using the duplicating device attached to machine. May keep files of punch cards. May verify own work or work of others.

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.

STENOGRAPHER, GENERAL

Primary duty is to take dictation from one or more persons, either in shorthand or by Stenotype or similar machine, involving a normal routine vocabulary, and to transcribe this dictation on a typewriter. May also type from written copy. May also set up and keep files in order, keep simple records, etc. Does not include transcribing-machine work.

STENOGRAPHER, TECHNICAL

Primary duty is to take 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, and to transcribe this dictation on a typewriter. May also type from written copy. May also set up and keep files in order, keep simple records, etc. Does not include transcribing-machine work.

SWITCHBOARD OPERATOR

Operates a single- or multiple-position telephone switchboard. Duties involve handling incoming, outgoing, intraplant, or office calls. May handle routine long distance calls and records toll calls. May perform limited information work, for example, furnishing telephone extension numbers when a specific name is furnished. May occasionally take telephone orders.

SWITCHBOARD OPERATOR, SPECIAL

In addition to the work described above for switchboard operator or as a full-time assignment, serves as a "special" operator who handles the more complex long distance calls (e.g., conference, collect, overseas, or similar calls) or performs full telephone information service (e.g., where a knowledge of the work done in different parts of the organization is required).

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.

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—Continued

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.

I. Performs one or more of the following: Copy typing from rough or clear drafts; routine typing of forms, insurance policies, etc.; and setting up simple standard tabulations, or copying more complex tables already set up and spaced properly.

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; and 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.

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