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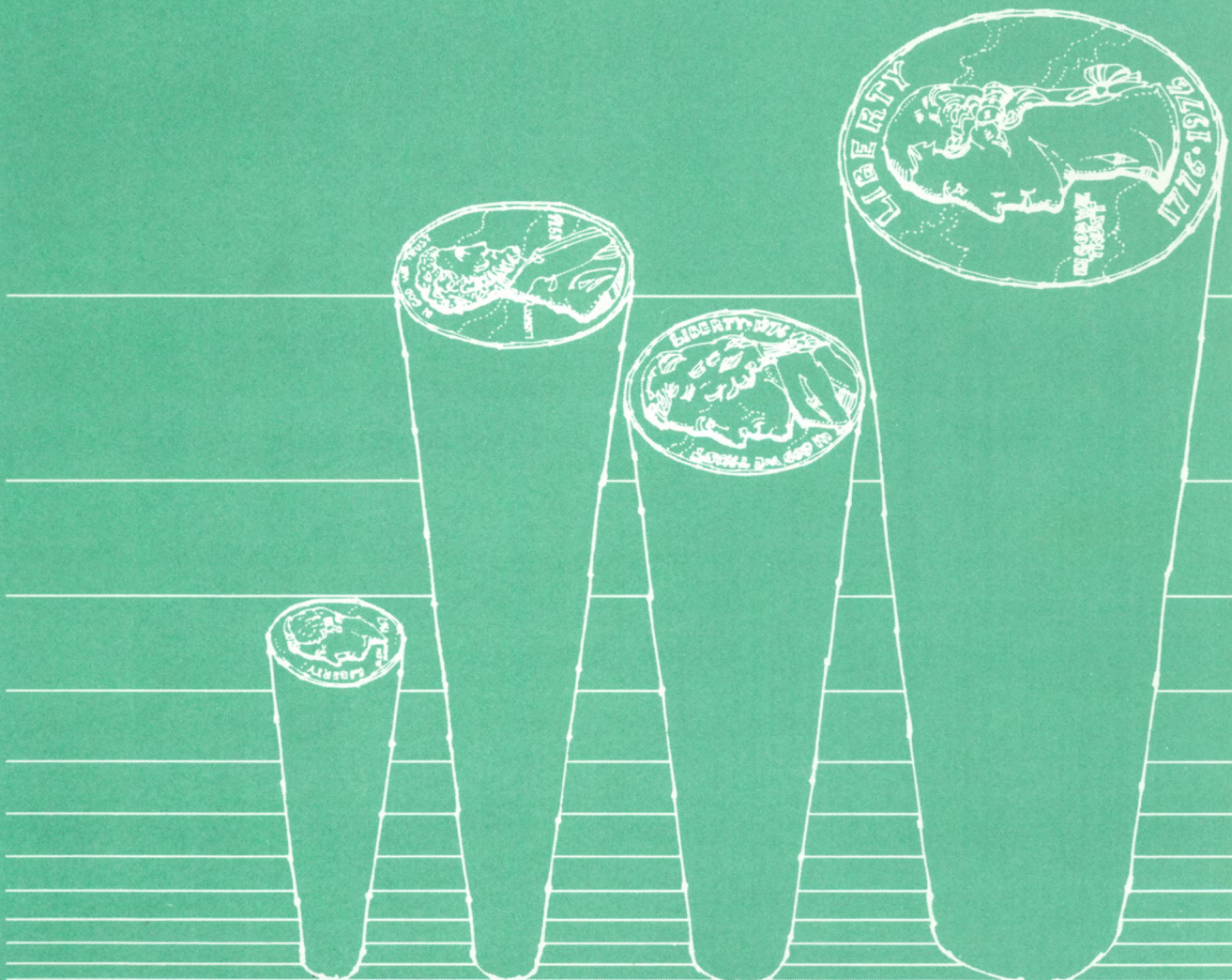
BLS Measures of Compensation



U.S. Department of Labor
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Ray Marshall, Secretary
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Julius Shiskin, Commissioner
1977

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Preface

The responsibilities of a data-collecting agency such as the Bureau of Labor Statistics (BLS) must extend beyond the preparation and publication of statistical series. The agency must also make available descriptions of its data, indicating both appropriate uses and limitations.

This bulletin is designed as an introduction to the various BLS series on employee compensation. It describes each set of data, indicates the manner in which it is developed, and points out its uses and limitations. Illustrative statistics supplement the discussion. The publication thus indicates to a potential data user the scope of the material available and provides guidance in the selection of series for particular studies.

Omitted from this bulletin are several BLS programs in the general area of compensation whose uses differ from those under discussion. Examples are studies of the incidence of various types of collective bargaining agreement provisions; wage chronology studies, which deal intensively with wage and benefit developments in one company or a group of companies; and monthly listings of terms of contract-renewal settlements in individual bargaining units.

This bulletin was prepared in the Office of Data Analysis of the Bureau. Individual chapters were written by the program office responsible for the particular body of data. Coordination of the work was provided by the Division of Trends in Employee Compensation under the direction of Victor J. Sheifer.

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Chapter 1. Introduction

Excluding the self-employed and unpaid family workers, over 80 million persons are employed in the American economy. The wages, salaries, and supplementary compensation paid to these workers account for about three-fourths of our national income. The magnitude of these figures underscores the importance of an adequate statistical program covering employee compensation. Over the years, in response to the varying needs of data users, the Bureau of Labor Statistics (BLS) has developed a variety of series on compensation.

This bulletin is designed to aid data users in finding and selecting from among these measures the statistical information appropriate for their studies. It describes each series and provides illustrative data. The publication thus combines descriptive material like that found in the *BLS Handbook of Methods for Surveys and Studies*¹ with pertinent summary statistics of the type published in the *Handbook of Labor Statistics 1975*,² although not in the detail found in these two works. To further aid data users, an appendix briefly describes series issued by other Federal agencies.

This chapter serves as a point of departure by briefly indicating the conceptual differences among the series and their significance to users of the data. It also provides a tabular summary comparison of the series for easy reference.

Pay concepts

At the outset, it is important to recognize that the individual statistical series vary in concept and, hence, in appropriate usage. They may measure rates of pay, earnings, compensation, or income. Although these concepts, of course, are related, the differences among them are significant.³

The fundamental concept is the *rate of pay*, consisting of the basic money return to a worker for a unit of time worked or output produced, plus the various supple-

mentary ("fringe") benefit practices in effect. This package of a wage rate plus benefit provisions is usually thought of as the "price" of labor and is a dominant factor in union-management negotiations and personnel policies of employers.

In one sense, the rate of pay, as just defined, functions as a building block; together with other factors, such as hours worked, it determines the size of employer payments to or on behalf of a worker. Such expenditures constitute employee *earnings* or *compensation*, the former if limited to employer payroll outlays and the latter if payments to public and private pension, health, and welfare funds are included.

We should note that the term "compensation" is used in two distinct contexts—first, to denote a specific concept, and, second, as a label for the total group of concepts relating to worker remuneration. The first of these usages is developed in the preceding paragraph; the second is used, for example, in the title of this publication.

Although wage and salary rates may be quoted on either a time or output basis—depending upon the pay system in force—earnings and compensation are almost always expressed in units of time—hourly, weekly, monthly, or annual.⁴ Since earnings and compensation series are developed by dividing employer expenditures by time units, they too express payments as a rate, that is, dollars per hour, week, month, or year. However, the term "rate of pay" will be limited in this publication to the building-block concept used in the price-of-labor context.

Income is an even broader concept, including receipts from all sources, for example, interest on savings accounts; it is not limited to payments for work performed, as are compensation measures. Income data are almost always presented in annual terms. Income measures tend to have uses that differ from those of compensation series and, consequently, statistical programs limited to the production of data on income will not be treated in this bulletin.

Compensation series typically exclude nonmonetary items such as food, lodging, other services, or merchan-

¹ BLS Bulletin 1910 (1976).

² BLS Bulletin 1865 (1975).

³ For a more detailed discussion of pay concepts than that which follows, see Robert H. Ferguson, *Wages, Earnings, and Incomes: Definitions of Terms and Sources of Data*, Bulletin 63 (Ithaca: New York State School of Industrial and Labor Relations, Cornell University, 1971), pp. 15–26. See also *Glossary of Current Industrial Relations and Wage Terms*, Bulletin 1438 (Bureau of Labor Statistics, 1965).

⁴ With regard to hourly compensation, it should be remembered that paid leave normally results in time off from work with a continuation of pay, rather than additional money receipts. To account for this, data on employer outlays for worker compensation may be expressed as expenditures per hour worked as well as on an hours paid for basis.

dise received by workers. Also, data usually are presented before deductions such as income taxes withheld, employees' share of social security taxes and insurance premiums, and union dues; that is, they refer to *gross earnings* rather than *take-home pay*.⁵

Statistics on the level and structure of pay

The distinctions discussed in the preceding section are evident in the Bureau's compensation measurement program. The foundation of this program is the collection of data on occupational wage and salary rates. These rates, as is true of prices generally, are important as allocators of productive resources. Pay differentials among various occupations, firms, industries, and areas affect the relative attractiveness of alternative work opportunities and, consequently, are among the forces influencing workers in their labor market behavior. Similarly, from the employer's side, geographic differentials in wage rates, for example, are given weight in decisions regarding location of new productive facilities.

Occupational wage and salary rate data often are collected by industry in individual labor markets and, as a result, are useful in studies of both levels of pay and variations in pay according to occupation, industry, and geographic area. Data are summarized to present average pay levels and, also, distributions of workers by pay level in each occupational-industrial-geographic unit of observation to permit consideration of differentials relating to personal characteristics and employing unit. To permit consideration of institutional forces, separate sets of data may be developed for union and nonunion employers and for metropolitan and nonmetropolitan areas.⁶

These occupational data are used for a variety of purposes, including wage and salary administration, union-management contract negotiations, mediation and arbitration proceedings, plant location planning, occupational counseling, evaluation of job offers to unemployment insurance recipients, minimum wage policy guidance, and analyses of wage differentials among occupations, industries, and areas.

For the most part, occupational pay data are limited

⁵ Although the conceptual distinctions drawn between wage rates and hourly earnings are well recognized, little is known about their practical significance. One study is reported in Victor J. Sheifer, "The Relationship Between Changes in Wage Rates and in Hourly Earnings," *Monthly Labor Review*, August 1970, pp. 10-17. Analysis of average hourly earnings data is considered in John T. Dunlop, *Wage Determination Under Trade Unions* (New York, Augustus M. Kelley, Inc., 1950), pp. 19-27. For a discussion of the importance of pay concepts to the development of a compensation series, see Victor J. Sheifer, "Employment Cost Index: A Measure of Change in the 'Price of Labor'," *Monthly Labor Review*, July 1975, pp. 3-12.

⁶ The discussion here emphasizes the ideal. Budget constraints may limit the amount of detail actually collected and published.

to basic wage rates; commonly, hourly earnings excluding premium payments for overtime, weekend, holiday, and late-shift work are collected as a proxy for wage rates. Benefit practices normally are excluded. Two factors are involved. First, benefits often are not occupationally determined and are uniform for larger employee groupings within an establishment. Second, vacation and holiday practices are normally spelled out in terms of a stipulated number of days off, overtime in terms of a premium pay rate, pensions in terms of the size of monthly payments to retired workers or a money rate of employer contribution to a pension fund, and so forth. To combine wage rates and the various supplementary benefit practices, it is necessary to measure all pay elements in common terms. The usual denominator is employer expenditures—thereby departing from the rate-of-pay concept developed earlier in this chapter.

One BLS program studies average hourly expenditures for the various wage-benefit elements of the compensation package, individually and combined, thereby providing data on both the level and structure of employee pay.⁷ Other series measuring the level of employer expenditures are limited to payroll outlays and provide data expressed on an hourly, weekly, or annual basis.

Although differing in industrial and occupational coverage, portion of the total compensation package measured, method of data collection, detail published, and timeliness, expenditure series have key elements in common. Essentially, they reflect the combined influence of basic rates of pay, some or all payments for fringe benefits, and labor utilization, that is, the aggregate money payments resulting from the employment relation. To the workers, these sums constitute the primary source of funds needed to finance purchases of goods and services. To the employers, these sums affect the cost of the items produced and, therefore, influence decisions regarding selling prices, volume of output, and level of employment.

Consequently, series on the level of employer payroll outlays and total compensation expenditures are particularly useful in studies emphasizing money flows in the economy, that is, those concerning purchasing power and welfare of workers or employer costs. Since the data often are for broad worker groupings, they may be useful also as convenient summary statistics for overall interindustry or interarea comparisons. Caution must be exercised in such usage, however; the broader the worker coverage of a series, the more difficult it is to interpret the data. For example, if one compares average hourly earnings data to detect, in a summary way, interindustry variations in wage rates, it is necessary to consider the degree to which the industries

⁷ Published data on benefits cover both employer expenditures and the types of benefit practices in force and their prevalence. Only the former are treated in this bulletin.

studied differ in job mix, which also affects the level of average hourly earnings.

Statistics on changes in pay

In a dynamic environment, data users are often interested in pay changes. They must be aware that a comparison of average pay at two points in time does not necessarily provide a meaningful measure of change over the time span. For example, average hourly earnings may change not only as a result of changes in wage rates but also because of such factors as employment shifts within and among industries, changes in the volume of work paid for at premium rates, and changes in the volume of output under incentive pay plans. Simple analysis of changes in average hourly earnings provides no clue as to the specific forces giving rise to the change.⁸

Examination of changes in average hourly earnings is appropriate for studies of changes in money flows over a time span, without regard to the causes of the change. However, for those who wish to study separately changes in rates of pay, special statistical series are available and should be used.⁹ These include changes in wage and benefit rates in major collective bargaining units and general wage-rate changes for production and related workers in manufacturing establishments. In addition, indexes of changes in union scales are prepared for several industries, as are salary trend indexes for selected groups of government employees. Pay setters use these data widely as indicators of decisions reached elsewhere as to appropriate wage adjustments. The series are also examined by economists concerned with the implications of wage-rate developments for the functioning of the economic system.

To provide such pay-rate-change data on a more comprehensive basis, a major new series—the Employment Cost Index (ECI)—is now being developed. When this work is completed, the ECI will measure, on a monthly basis, changes in the price (wages plus benefits) of a standardized mix of purchased labor services throughout the civilian economy, much as the Bureau's well-known Consumer Price Index measures changes in the price of a standardized "market basket" of consumer goods and services. In June 1976, the first

ECI data were published, covering, on a quarterly basis, percentage changes in wage and salary rates in the private nonfarm economy, excluding households.

Current-dollar and deflated series

Studies of pay changes may be concerned with effects on workers' purchasing power, in which case it is necessary to take into account movements in consumer prices. To facilitate such studies, a number of pay series are deflated, that is, adjusted for price changes, by dividing the pay data for individual time periods by the Consumer Price Index for the respective periods. Pay is thus expressed over the time period in dollars of constant purchasing power.

Selection of series

As the preceding discussion emphasizes, several general questions need to be answered before data users can determine which statistical series would be most suitable for their work:

1. Should the data cover rates of pay or money flows?
2. Are wage data sufficient, or is there need for statistics on the total compensation package?
3. Should the data be for pay levels or for pay changes?

Answers to those questions will limit the range of series from which a choice must be made. Nevertheless, several series may still seem appropriate. For example, the Bureau produces several data sets for analyses of the level of employee earnings.

Choice of a particular series involves such considerations as the portion of the economy covered by the data—few series cover all groups of workers or all industrial sectors. Another important consideration may be the amount of detail provided—in terms of industry, area, and type of worker. Also, the time period covered may be significant; for some purposes annual series may suffice, while other investigations may require monthly or quarterly data.

Finally, users should be familiar with the methods of compiling the series, since both the conceptual framework and the accuracy of the data may be affected. As observed above, there are several sets of earnings data. Some come from employer reports on employment, payrolls, and hours; others from household responses in the Current Population Survey. Nevertheless, both these sets of data stem from survey work specifically designed to produce the series. Earnings statistics are also produced based on reports filed pursuant to

⁸ For a more detailed discussion, see references cited in footnote 5.

⁹ In some cases, it is possible to adjust existing series better to reveal underlying wage-rate movements. Thus, the Bureau's Hourly Earnings Index adjusts average hourly earnings data to exclude the effects of fluctuations in overtime premiums in manufacturing (the only industry sector for which overtime data are available) and shifts in the proportion of workers in high- and low-wage industries. Similarly, indexes developed from occupational data collected in the area wage survey program minimize the impact of employment shifts. Nevertheless, while these adjustments provide closer approximations, they do not yield the ideal measures.

Table 1. Comparison of BLS compensation series

Characteristic	Occupational wage surveys	Union wage rate surveys	Employer expenditures for employee compensation	Average hourly and weekly earnings—establishment data	Earnings statistics from Current Population Survey—household data	Wages of workers covered by unemployment insurance (UI) programs
Type of data	Primarily hourly, weekly, or monthly straight-time earnings, by occupation	Hourly scales and indexes, by occupation	Hourly expenditures for components of compensation	Primarily hourly and weekly earnings, with industry and area detail ¹	Hourly, weekly, and annual earnings; hourly rates of pay. Demographic detail	Weekly earnings; aggregate payrolls, industry and area detail
Frequency of publication	Annual or longer	Quarterly, annual, or biennial	Comprehensive surveys biennially	Monthly	Annual	Quarterly
Compensation coverage	Wages and salaries	Minimum wage scales plus employer payments to benefit funds	Wages and salaries plus employer contributions for social insurance and private benefit plans	Wages and salaries	Wages and salaries	Wages and salaries
Workers included	Primarily non-supervisory employees ²	Workers under collective bargaining agreements	All employed workers	Production and nonsupervisory workers	Wage and salary workers	All employed workers
Industrial coverage	Private nonfarm economy, excluding households, plus large city governments	Local trucking, printing, local transit, construction, and grocery stores	Primarily private non-farm economy, excluding households	Private nonfarm economy, excluding households	All industries	Industries subject to UI laws
Emphasis on pay rates or employer expenditures	Rates ³	Rates	Expenditures	Expenditures	Expenditures and rates	Expenditures
Emphasis on pay levels or change	Levels	Levels and change ⁴	Levels	Levels	Levels and change	Levels
Data source	Statistical survey	Statistical survey	Statistical survey	Statistical survey	Statistical survey	Employer reports for administration of UI laws
Where published ⁵	BLS bulletins	BLS bulletins for annual and biennial surveys; <i>Current Wage Developments</i> for quarterly building trades surveys	BLS bulletins	<i>Employment and Earnings</i> and <i>Current Wage Developments</i>	Special labor force reports; <i>Monthly Labor Review</i> articles	<i>Employment and Wages</i>

See footnotes on page 6.

Table 1. Comparison of BLS compensation series—Continued

Characteristic	Annual earnings	Hourly compensation measures of Office of Productivity and Technology	Developments in major collective bargaining units	Wage developments in manufacturing	Salary data for government employees	Employment Cost Index ⁶
Type of data	Annual earnings. Demographic and duration-of-employment detail	Indexes of change and labor share	Pay rate changes in cents per hour and percent	Pay rate changes in cents per hour and percent	Annual salaries and indexes	Percent change, with industry, occupation, region, union-status detail
Frequency of publication	Annual	Quarterly	Quarterly	Quarterly	Annual or biennial	Quarterly
Compensation coverage	Wages and salaries	Wages, salaries, and supplements plus estimate of labor compensation of self-employed	Wage rates and private supplementary benefits	Wage rates	Wage and salary rates	Wages and salaries
Workers included	All employed workers	All persons (employees and self-employed)	Production and non-supervisory workers in bargaining units of 1,000 workers or more (5,000 or more for wages and benefits combined)	Production and related workers in establishments making general wage rate changes	Teachers, police, fire-fighters, refuse collectors, and Federal General Schedule employees	All employed workers
Industrial coverage	Private non-farm economy	Private business sector ⁷	Private non-farm economy	Manufacturing sector	Government	Private non-farm economy, excluding households
Emphasis on pay rates or employer expenditures	Expenditures	Expenditures	Rates	Rates	Rates	Rates ³
Emphasis on pay levels or change	Levels	Change	Change	Change	Levels and change ⁴	Change
Data source	Sample of social security and railroad retirement administrative files	Employee compensation data from National Income Accounts. Hours and proprietors' compensation estimated by BLS	Developed largely from secondary sources	Statistical survey supplemented by data from secondary sources	Secondary sources supplemented by direct inquiries by BLS	Statistical survey
Where published ⁵	BLS bulletins	<i>Employment and Earnings</i> and <i>Current Wage Developments</i>	<i>Current Wage Developments</i>	<i>Current Wage Developments</i>	<i>Current Wage Developments</i>	<i>Current Wage Developments</i>

See footnotes on page 6.

¹ Indexes also are developed removing effects of overtime changes in manufacturing and interindustry employment shifts.

² Major exception is expanded coverage of National Survey of Professional, Administrative, Technical, and Clerical Pay.

³ Straight-time earnings are studied as an approximation of rates of pay.

⁴ Different weighting procedures are employed for computing measures of level and change.

⁵ Summary data for many of the series can be found in the

Monthly Labor Review and the Handbook of Labor Statistics. Initial publication of data may be in press releases or summary reports.

⁶ Description applies to data published as of early 1977. See ch. 12 for expansion plans.

⁷ Prior to July 1976, data were published quarterly for the total private economy. This series is still maintained but on an annual basis.

regulations of agencies administering the unemployment compensation and social security programs. Such data, of course, are affected by the needs and legal authority of the administrative agencies.

Table 1 and the detailed descriptions in the following chapters are designed to aid users in treating these considerations. The table classifies the series in accordance with their emphasis on rates of pay or employer expenditures and on levels of pay or changes in levels. In addition, information is presented on industry and

worker coverage, frequency of publication, types of compensation included, and data sources.¹⁰

Despite the great variety of series produced, available statistics may not precisely meet the needs of an investigator. In such instances, an effort should be made to select the closest approximation to the desired data and to take account of the deficiency in the analysis.

¹⁰ Income and earnings data from the 1972-73 Consumer Expenditure Survey, described in ch. 13, are not included in the tabular summary, which is limited to continuing series.

Chapter 2. Occupational Wage Surveys

The Bureau of Labor Statistics (BLS) has systematically collected wage data by occupation since the turn of the century—first by industry, then across industry lines by metropolitan area, and most recently, across industry lines on a nationwide basis. Four major types of surveys are conducted currently in the Bureau's Office of Wages and Industrial Relations to provide information on the level of straight-time earnings by occupation: (1) *Industry wage surveys* in selected manufacturing and nonmanufacturing industries covering occupations peculiar to a particular industry; (2) *area wage surveys* in selected metropolitan areas (and, on a more limited scope, nonmetropolitan areas) covering occupations common to a variety of manufacturing and nonmanufacturing industries; (3) a *national survey of professional, administrative, technical, and clerical pay* in private industry; and (4) *municipal government wage surveys* in large cities. Although differing in industrial, geographic, and occupational coverage, these surveys form an integrated program on occupational wages.¹

Data for all four types of surveys are supplied voluntarily by employers. The Bureau's field economists compile the data, which are subsequently published in BLS bulletins, summaries, and *Monthly Labor Review* articles in a manner that will avoid disclosure of an individual establishment's rates. This restriction on disclosure does not apply to municipal government wage surveys since the data supplied are a matter of public record.

Description of surveys

Industry wage surveys provide data for occupations selected to be representative of the range of rates and different methods of wage payment in the industry. Consideration also is given, in selection of occupations, to their prevalence in the industry, their importance as reference points in collective bargaining, and the degree to which their job duties can be clearly defined.

Surveys in most industries provide straight-time earnings averages of wage data collected for individual workers, and wage frequency distributions of these individual earnings data (figures 1 and 2). This type of information is often shown for broad employment

groups, such as production and related workers or nonsupervisory workers, in addition to that for selected occupations. Information also is published, for broad employment groups, on weekly work schedules; shift operations and differentials; paid holiday and vacation practices; health, insurance, and pension benefits; and additional items which may be applicable only to certain industries (figure 3). The studies also provide estimates of labor-management agreement coverage, proportions of workers employed under incentive pay plans, and the extent to which establishments provide a single rate or range of rates for individual job categories.

About 50 manufacturing and 20 nonmanufacturing industries, accounting for over 20 million employees, are surveyed on a regularly recurring basis. A majority are studied on a 5-year cycle, but a number of comparatively low-wage industries are studied on a 3-year cycle. Also, special wage surveys are carried out, under contract, for other Federal agencies.

Nearly all manufacturing, utilities, and mining industries are studied on a nationwide basis; estimates also are provided for regions and major areas of concentration. Surveys in construction, trade, finance, and service industries usually are limited to about 25 metropolitan areas. Nationwide surveys generally develop separate estimates by size of establishment, size of community, and labor-management agreement coverage.

Area wage surveys consist of two basic types: Regular surveys conducted annually as part of the Bureau's program, and special limited surveys. The latter, conducted for the U.S. Department of Labor's Employment Standards Administration, are used in setting minimum pay rates for workers providing services to the Federal Government under the Service Contract Act.

Regular surveys measure the level and distribution of wages by occupational category in over 70 labor markets. The 75 occupational categories currently studied include 28 office clerical; 17 professional and technical; and 30 maintenance, toolroom, powerplant, custodial, and material movement jobs. (See figure 4.) In addition, these surveys provide measures of wage movement for five occupational groups. (See figure 5.)

Industry divisions included in the regular surveys are (1) manufacturing; (2) transportation, communication, and other public utilities; (3) wholesale trade; (4) retail trade; (5) finance, insurance, and real estate; and (6) selected services. Establishments employing fewer than

¹ Union wage rate surveys are also part of this program. These are discussed separately in ch. 3 because of major differences in concepts and methodology.

50 workers are excluded in all industries; in addition, establishments employing 50–99 workers are excluded in manufacturing, in transportation, communication, and other public utilities, and in retail trade in the Nation's 13 largest communities.

Separate data are provided for manufacturing and nonmanufacturing in each geographical area and, wherever possible, for individual industry divisions in the nonmanufacturing sector. In 31 of the largest areas, wage data are presented separately for establishments that have 500 workers or more.

Data on scheduled weekly hours and days; paid holiday and vacation practices; and health, insurance, and pension benefits are published separately for full-time nonsupervisory office and plant workers (nonoffice). Shift operations and differentials are published for plant workers in manufacturing. Data on minimum entrance rates for inexperienced office workers are published separately for manufacturing and nonmanufacturing industries. These establishment practices and employee benefits are studied every 3 years in all areas.

A sample of 70 areas is selected to represent all Standard Metropolitan Statistical Areas of the United States. This enables the Bureau to publish national and regional estimates of wage levels, wage trends, and related benefits.

Pay levels in the individual areas are compared to national levels for four broad occupational groups—office clerical, electronic data processing, skilled maintenance, and unskilled plant workers. (See figure 6). These estimates (pay relatives) eliminate differences caused by varying survey dates and occupational structures among the areas surveyed.

Special surveys measure the level and distribution of wages by occupational category in over 100 labor markets but are more limited than regular surveys in that: (1) Fewer occupational categories and establishment practices are studied; (2) published data are restricted to all-industry estimates (no industry detail); (3) measures of wage trends are not provided for occupational groups; (4) data are not projected beyond the individual area estimates.

The National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC survey) provides information annually on nationwide salary levels and distributions in private industry for approximately 80 work level categories in about 20 white-collar occupations. Definitions for these occupations provide for classification of employees according to appropriate work levels (or classes). Although reflecting duties and responsibilities in private industry, the definitions were designed to be translatable to specific pay grades in the General Schedule applying to Federal white-collar employees. Thus, this survey provides information

suitable for comparing the compensation of salaried employees in the Federal civil service with pay in private industry.

Average salaries relate to straight-time salaries corresponding to employees' normal work schedules, excluding overtime hours. Salary distributions and averages are published for the Nation as a whole. Averages also are shown for establishments in all metropolitan areas combined and for establishments employing 2,500 workers or more. Information is presented on annual increases in average salaries since 1961. Figure 7 shows monthly and annual salary data for the occupations surveyed.

Industry divisions included in the national white-collar study are: (1) Manufacturing; (2) transportation, communication, electric, gas, and sanitary services; (3) wholesale trade; (4) retail trade; (5) finance, insurance, and real estate; and (6) engineering and architectural services, and commercially operated research, development, and testing laboratories.

Municipal government wage surveys cover the 26 U.S. cities with 500,000 inhabitants or more plus Atlanta. Averages and distributions of straight-time earnings are presented for a wide range of white- and blue-collar occupations in city governments, including office clerical; data processing; maintenance, custodial, trades, and labor; public safety; and professional, administrative, and technical. (See figure 8.) Information on a city's salary structure and work practices, along with brief descriptions of employee benefits, is also provided. The surveys exclude city employees in educational facilities and hospitals, and all workers in special districts and authorities operating autonomously from the city.

Survey methods

PLANNING

Consultations are held with appropriate management, labor, and Government representatives to obtain views and recommendations on scope, timing, selection and definitions of survey items, and types of tabulations. Particularly in planning surveys in specific industries, these discussions form important supplements to BLS regional office comments and suggestions made at the conclusion of the previous study. The design of the National Survey of Professional, Administrative, Technical, and Clerical Pay was developed in conjunction with the Office of Management and Budget and the Civil Service Commission so that it could be used in evaluating Federal white-collar pay. Changes in the survey's scope, item coverage, and job definitions are initiated by these agencies.

DATA COLLECTION

Bureau field economists collect data by personal visits to each of the sample establishments. First, job functions in the establishment are carefully compared with those included in the Bureau's job definitions. This job matching may involve review of company records such as pay structure plans, organizational charts, and position descriptions, as well as interviews with appropriate officials and, on occasion, observation of jobs within plants. Generally, once job matching has been completed, field economists secure wage or salary rates (or hours and earnings, when needed) from payroll or other records and obtain data on compensation practices and supplementary benefits from company officials, company booklets, and labor-management agreements. If company officials prefer, they may prepare and submit reports if job matching has been completed by Bureau economists.

After the initial visit, data for the annual area wage surveys are collected by personal visit every third year and by mail in the intervening years. Establishments participating in the mail collection receive a transcript of the job matching and wage data obtained earlier by the field economist, together with the job definitions. The updated returns are scrutinized and questionable entries are checked with the respondent. Personal visits are made to establishments not responding to the mail request and to those reporting unusual changes from the previous year.

The work of all field economists is checked for quality of reporting, with particular attention directed to accuracy in job matching. The revisits are made by supervisory and senior economists. For the technically complex nationwide white-collar salary survey, systematic technical audits of the validity of survey definitions, made by staff having specialized training, also are maintained.

Uses and limitations

Occupational wage data developed in these surveys have a variety of uses. They are used by Federal, State, and local agencies in wage and salary administration and in formulation of public policy on wages, such as setting minimum wages. They are of value to Federal and State mediation and conciliation services and to State employment security agencies in judging the suitability of job offers to unemployment insurance recipients. Knowledge of levels and trends of pay rates by occupation, industry, locality, and region is required by economists both in and out of government to analyze current economic developments and to study wage dispersion and wage differentials.

Bureau data are used by employers and unions in

wage and salary determinations and negotiations. To the extent that wages are a factor, survey data also are considered by employers in selecting locations for new facilities and in estimating costs.

Occupational wage surveys are not designed to supply mechanical answers to questions of pay policy. The applicability of survey results depends upon the selection and definition of industries, the geographic units for which estimates are developed, the occupations and associated items studied, and the reference dates of particular surveys. Depending upon specific needs, the user may find it necessary to interpolate for occupations or areas missing from the survey.

In addition, users will find that the method of wage payment can affect earnings averages, and that the incidence of the different methods of payment varies greatly among the occupations and establishments studied. Since hourly averages for workers under incentive plans generally exceed those for hourly rated workers in the same job, averages for some incentive-paid jobs may equal or exceed averages for jobs positioned higher on a job evaluation basis but normally paid on a time basis. Thus, wherever possible, data are shown separately for time workers and incentive workers in the industry surveys. In area wage surveys, incentive plans (generally plantwide in application) apply to only a very small proportion of workers in the nonproduction jobs.

Users of survey data must also be aware that, although changes in averages for a job or job group primarily reflect general wage and salary changes or merit increases received by individuals, these averages also may reflect other factors—changes in the labor force resulting from labor turnover, labor force expansions and reductions for other reasons, and changes in the proportion of workers employed in establishments with different pay levels. For example, a labor force expansion might increase the proportion of lower paid workers, thereby lowering the average, or the closing of a relatively high-paying establishment might cause average earnings in the area to drop.

The regular area wage survey program provides wage trend indexes for five occupational groups: Office clerical, electronic data processing, industrial nurses, skilled maintenance, and unskilled plant occupations. These indexes are published, where possible, for all industries combined and for manufacturing and non-manufacturing industry groups separately. To eliminate changes in average earnings resulting from employment shifts among establishments or turnover of establishments included in survey samples, these indexes are based on changes in average hourly earnings only in establishments reporting the same jobs in both the current and previous year. The indexes are, however, still affected by factors other than wage increases.

Hirings, layoffs, and turnover may affect average earnings within an establishment when workers are paid under plans providing a range of rates for individual jobs.

The effects of employment shifts among occupations between survey dates are eliminated in measuring average earnings increases for workers covered by the PATC survey and by selected industry wage surveys. Employment shifts among establishments or turnover of establishments included in survey samples, however, are not controlled in these computations.

RELIABILITY

Results of the surveys generally will be subject to sampling error. This error will not be uniform, since, for most occupations, the dispersion of earnings among establishments and the frequency of occurrence of the occupation will differ.

The sampling error of the percentage of workers receiving any given supplementary benefit differs with the size of the percentage. However, the error is such that rankings of predominant practices almost always will appear in their true position. Small percentages may be subject to considerable error, but will always remain in the same scale of magnitude. For instance, the proportion of employees in establishments providing more than 4 weeks' paid vacation to long-service employees may be given as 2 percent, when the true percentage for *all* establishments might be only 1 percent. Such a sampling error, while considerable, does not affect the essential inference that the practice is a rare one.

Estimates of the number of workers in a given occupation are subject to considerable sampling error, due to the wide variation among establishments in the number of workers found in individual occupations. (It is not unusual to find these estimates subject to sampling error of as much as 20 percent.) Hence, the estimated number of workers can be interpreted only as a rough measure of the relative importance of various occupations.

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Figure 1

Table 1. Number and average straight-time hourly earnings¹ of production and related workers² in men's and boys' separate trousers manufacturing establishments, United States and selected regions,³ June 1974

CHARACTERISTIC	UNITED STATES ^{4/}		MIDDLE ATLANTIC		BORDER STATES		SOUTHEAST		GREAT LAKES		MIDDLE WEST	
	WORKERS	EARNINGS	WORKERS	EARNINGS	WORKERS	EARNINGS	WORKERS	EARNINGS	WORKERS	EARNINGS	WORKERS	EARNINGS
ALL PRODUCTION WORKERS-----	71,086	\$2.64	4,994	\$3.19	3,375	\$2.72	30,680	\$2.60	1,808	\$2.70	2,936	\$2.53
MEN-----	10,305	2.95	876	3.64	448	2.98	4,632	2.87	261	3.13	338	2.92
WOMEN-----	60,781	2.59	4,118	3.10	2,927	2.69	26,048	2.55	1,547	2.63	2,598	2.48
SIZE OF COMMUNITY:												
METROPOLITAN AREAS ^{5/} -----	28,796	2.72	4,220	3.24	-	-	1,806	2.68	1,037	2.69	-	-
NONMETROPOLITAN AREAS-----	42,290	2.59	774	2.93	1,609	2.82	28,874	2.60	771	2.72	2,451	2.53
SIZE OF ESTABLISHMENT:												
20-249 WORKERS-----	26,105	2.65	3,331	3.25	615	2.68	13,314	2.52	1,285	2.65	1,420	2.41
250 WORKERS OR MORE-----	44,981	2.64	1,663	3.09	2,760	2.73	17,366	2.66	-	-	1,516	2.64
LABOR-MANAGEMENT CONTRACT COVERAGE:												
ESTABLISHMENTS WITH--												
MAJORITY OF WORKERS COVERED-----	23,868	2.85	4,630	3.21	-	-	3,901	2.90	1,808	2.70	1,938	2.69
NONE OR MINORITY COVERED-----	47,218	2.54	-	-	-	-	26,779	2.56	-	-	998	2.21
SELECTED OCCUPATIONS ^{6/}												
ADJUSTERS-----	835	3.80	44	4.24	-	-	399	3.68	14	3.76	24	3.88
ASSEMBLERS (GARMENT BUNDLERS)-----	794	2.64	86	2.99	-	-	339	2.63	41	2.70	87	2.43
CUTTERS, CLOTH, MACHINE-----	729	3.62	54	4.27	-	-	339	3.64	31	3.54	49	3.43
CUTTERS AND MARKERS, CLOTH-----	165	3.62	22	4.44	36	3.98	18	3.22	-	-	-	-
GARMENT REPAIRERS-----	752	2.50	-	-	33	2.41	262	2.32	24	2.63	19	2.61
INSPECTORS, FINAL-----	2,039	2.66	186	3.06	-	-	906	2.66	69	2.68	71	2.53
JANITORS-----	641	2.32	24	2.67	39	2.48	278	2.20	24	2.52	36	2.42
MARKERS-----	415	3.14	12	3.99	-	-	192	3.09	14	3.35	13	3.35
PACKERS-----	584	2.71	34	3.25	34	2.58	295	2.59	18	3.01	22	2.49
PRESSERS, FINISH, MACHINE-----	3,390	3.01	146	4.12	-	-	1,816	2.98	109	3.25	98	3.05
SEWING MACHINE OPERATORS ^{7/} -----	43,292	2.59	2,710	3.21	1,952	2.74	17,635	2.56	929	2.62	1,343	2.47
ATTACH CROTCH PIECES-----	438	2.52	41	3.29	-	-	118	2.28	12	2.50	13	2.25
ATTACH POCKETS-----	3,822	2.60	258	3.16	172	2.75	1,566	2.59	58	2.57	95	2.36
ATTACH BELT LOOPS-----	1,621	2.49	86	3.29	56	2.69	640	2.50	29	2.51	20	2.44
ATTACH FLY-----	1,922	2.61	101	3.50	89	2.99	800	2.57	27	2.70	45	2.44
ATTACH WAISTBAND-----	2,121	2.61	157	3.14	115	2.71	896	2.50	47	2.51	59	2.52
ATTACH ZIPPER-----	878	2.70	51	3.33	17	3.47	190	2.75	19	2.64	-	-
BARTACKING-----	3,289	2.57	126	3.08	100	2.81	1,480	2.53	35	2.42	101	2.44
BUTTONHOLE MAKERS-----	482	2.68	53	3.05	16	2.78	209	2.59	26	2.28	17	2.54
HEM LEG BOTTOMS-----	1,296	2.56	36	3.05	40	2.77	543	2.54	22	2.40	35	2.37
JOIN INSEAMS AND OUTSEAMS-----	3,779	2.57	201	3.19	188	2.53	1,584	2.55	79	2.61	129	2.34
JOIN SEATSEAMS-----	1,615	2.60	82	3.31	69	2.60	727	2.53	33	2.63	44	2.59
MAKE LOOPS-----	488	2.70	46	3.00	20	2.96	213	2.68	11	2.98	14	2.58
MAKE POCKETS-----	1,610	2.71	167	3.57	-	-	696	2.57	76	2.72	-	-
PIECING FLYS-----	622	2.80	36	3.74	47	2.95	230	2.66	23	2.63	7	2.84
PIECING POCKETS-----	1,657	2.59	108	3.21	96	2.80	831	2.56	37	2.45	48	2.30
SERGING-----	1,896	2.64	134	2.94	126	2.75	627	2.60	55	2.51	62	2.47
SEW ON BUTTONS-----	336	2.62	45	3.09	27	2.54	129	2.55	14	3.05	14	2.50
SEW ON WAISTBAND LINING-----	639	2.65	49	3.25	58	2.71	279	2.55	26	2.55	25	2.59
STITCH POCKETS-----	1,301	2.66	104	3.27	96	2.79	707	2.61	46	2.79	39	2.37
SHIPPING CLERKS-----	149	3.02	26	3.65	-	-	46	2.76	-	-	-	-
SPREADERS-----	674	2.98	34	3.27	26	3.28	336	3.13	21	2.86	28	2.84
STOCK CLERKS, GARMENTS-----	349	2.59	10	3.32	-	-	114	2.67	25	2.61	71	2.73
STOCK CLERKS, PIECE GOODS-----	279	2.58	9	3.65	31	2.61	121	2.43	15	2.95	17	2.49
THREAD TRIMMERS												
AND BASTING PULLERS-----	1,680	2.68	100	3.32	60	2.79	602	2.60	49	2.75	71	2.62
UNDERPRESSERS-----	1,627	2.76	225	3.58	136	2.61	664	2.65	76	2.81	71	2.73
WORK DISTRIBUTORS-----	1,940	2.42	109	2.87	81	2.47	735	2.38	46	2.63	83	2.39

^{1/} EXCLUDES PREMIUM PAY FOR OVERTIME AND FOR WORK ON WEEKENDS, HOLIDAYS, AND LATE SHIFTS.

^{2/} THE TERMS "PRODUCTION WORKERS" AND "PRODUCTION AND RELATED WORKERS," ARE USED INTERCHANGEABLY IN THIS REPORT AND INCLUDE WORKING FOREMEN AND ALL NONSUPERVISORY WORKERS ENGAGED IN NONOFFICE FUNCTIONS. ADMINISTRATIVE, EXECUTIVE, PROFESSIONAL AND TECHNICAL PERSONNEL AND FORCE-ACCOUNT CONSTRUCTION EMPLOYEES, WHO ARE UTILIZED AS A SEPARATE WORK FORCE ON THE FIRMS OWN PROPERTIES, WERE EXCLUDED.

^{3/} THE REGIONS IN THIS STUDY INCLUDE: MIDDLE ATLANTIC--NEW JERSEY, NEW YORK, AND PENNSYLVANIA; BORDER STATES--DELAWARE, DISTRICT OF COLUMBIA, KENTUCKY, MARYLAND, VIRGINIA, AND WEST VIRGINIA; SOUTHEAST--ALABAMA, FLORIDA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, AND TENNESSEE; GREAT LAKES--ILLINOIS, INDIANA, MICHIGAN, MINNESOTA, OHIO, AND WISCONSIN; AND MIDDLE WEST--IOWA, KANSAS, MISSOURI, NEBRASKA, NORTH DAKOTA, AND SOUTH DAKOTA.

^{4/} INCLUDES DATA FOR REGIONS IN ADDITION TO THOSE SHOWN SEPARATELY. ALASKA AND HAWAII WERE NOT INCLUDED IN THE SURVEY.

^{5/} STANDARD METROPOLITAN STATISTICAL AREAS AS DEFINED BY THE U.S. OFFICE OF MANAGEMENT AND BUDGET THROUGH APRIL 1973.

^{6/} WORKERS CLASSIFIED IN DIRECT PROCESSING JOBS, SUCH AS CUTTING, SEWING, AND PRESSING WERE LIMITED TO THOSE ENGAGED IN THE FABRICATION OF MEN'S AND BOYS' SEPARATE TROUSERS.

^{7/} INCLUDES DATA FOR WORKERS IN CLASSIFICATIONS IN ADDITION TO THOSE SHOWN SEPARATELY.

NOTE: DASHES INDICATE NO DATA REPORTED OR DATA THAT DO NOT MEET PUBLICATION CRITERIA.

Figure 2

Area DALLAS-FORT WORTH, TEX.²

Estimated total
in industry
and area

Actually studied

Number of establishments with
4 or more workers³ . . . 142 . . . 37

Repair activity
employment⁴ 1,159 610

Electrical Appliance Repair¹

Payroll Period NOVEMBER 1975

Occupational Earnings

U.S. GOVERNMENT PRINTING OFFICE: 1963-O-688-047

Occupation ⁵	Number of workers ⁶	Average hourly earnings ⁷	NUMBER OF WORKERS RECEIVING STRAIGHT-TIME HOURLY EARNINGS OF—																									
			\$2.20 and under	\$2.40	\$2.60	\$2.80	\$3.00	\$3.20	\$3.40	\$3.60	\$3.80	\$4.00	\$4.20	\$4.40	\$4.60	\$4.80	\$5.00	\$5.20	\$5.40	\$5.60	\$5.80	\$6.00	\$6.20	\$6.40	\$6.60	\$6.80	\$7.00	\$7.20 and over
			\$2.40	\$2.60	\$2.80	\$3.00	\$3.20	\$3.40	\$3.60	\$3.80	\$4.00	\$4.20	\$4.40	\$4.60	\$4.80	\$5.00	\$5.20	\$5.40	\$5.60	\$5.80	\$6.00	\$6.20	\$6.40	\$6.60	\$6.80	\$7.00	\$7.20	over
Television-radio technicians (487 men, 9 women)-----	496	\$4.77	-	-	1	-	6	31	16	26	9	64	44	24	70	16	31	21	13	42	30	24	2	8	11	2	-	5
Inside (bench)-----	221	4.91	-	-	1	-	1	5	11	16	4	19	27	9	35	1	12	5	6	27	11	4	1	8	11	2	-	5
Outside (home repair)-----	178	4.61	-	-	-	-	-	15	5	10	5	34	17	6	15	11	14	8	6	10	18	3	1	-	-	-	-	-
Combination-----	97	4.74	-	-	-	-	5	11	-	-	-	11	-	9	20	4	5	8	1	5	1	17	-	-	-	-	-	-
Television-radio technicians, apprentice-----	27	3.12	-	11	6	-	1	-	1	-	2	2	1	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Electrical appliance technicians-----	430	4.88	-	5	-	-	5	15	8	50	17	24	24	22	18	9	36	49	19	37	60	18	2	6	-	-	6	-
Inside (bench)-----	62	4.62	-	-	-	-	-	-	5	15	-	5	6	2	1	-	10	3	5	-	5	4	1	-	-	-	-	-
Outside (home repair)-----	290	4.96	-	5	-	-	5	15	3	30	16	4	11	10	12	7	19	35	14	26	55	10	1	6	-	-	6	-
Combination-----	78	4.77	-	-	-	-	-	-	-	5	1	15	7	10	5	2	7	11	-	11	-	4	-	-	-	-	-	-
Electrical appliance technicians, apprentice-----	17	2.80	10	1	-	-	1	-	-	1	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ The study covered major electrical appliance repair facilities in establishments classified in the following industries and employing 4 workers or more (except where otherwise specified). The industries are defined in the 1967 edition of the *Standard Industrial Classification Manual*, prepared by the U.S. Office of Management and Budget, as: Wholesale distribution of radio and television sets and major electrical household appliances (part of Industry 5064); department stores (Industry 5311) employing 25 workers or more; retail electrical household appliance stores (part of Industry 5722); retail radio and television stores (Industry 5732); and electrical repair shops (parts of Industries 7622, 7623, and 7629). The study also covered large manufacturers of major household appliances whose repair facilities were reported in a noncovered industry.

² The Dallas-Fort Worth Standard Metropolitan Statistical Area consists of Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwell, Tarrant and Wise Counties.

³ Includes only establishments which at the time of reference of the universe data, employed 4 workers or more (except department stores, where minimum size was 25 workers) and had at least one employee involved in repairing major household electrical appliances.

⁴ Refers to all nonsupervisory, nonoffice workers engaged in the major household electrical appliance repair activities of the establishment.

⁵ Unless otherwise shown, all workers were men.

⁶ Estimates relate to all establishments in the industries and locality as defined for the survey, and are intended as a general guide to the size and composition of the labor force. The advance planning necessary to make a wage survey compels the use of establishment lists assembled considerably in advance of the payroll period studied.

⁷ Excludes premium pay for overtime and for work on weekends, holidays, and late shifts as well as commissions paid for the sales of maintenance contracts, parts, or appliances. Premiums paid for licenses, if any, held by employees are included. These surveys, based on a representative sample of establishments, are designed to measure the level of occupational earnings at a particular time. Thus, comparisons made with previous studies may not reflect expected wage movements because of change in the sample composition, and shifts in employment among establishments with different pay levels. Such shifts, for example, could decrease an occupational average, even though most establishments increased wages between periods being compared. Ninety-two percent of the production workers covered by the survey were paid on a time basis.

Figure 3

Electrical Appliance Repair—Continued

Area DALLAS-FORT WORTH, TEX.

Establishment Practices and Supplementary Wage Provisions

Payroll Period NOVEMBER 1975

Job title	Current job openings		(B) Scheduled Weekly Hours	Percent of service technicians ³	(D) Vacation Policies	Percent of service technicians ³	(D) Vacation Policies—Continued	Percent of service technicians ³
	Number of current job openings ²	Number remaining unfilled for a month or longer						
			ALL WORKERS -----	100	ALL WORKERS -----	100	AMOUNT OF PAID VACATION AFTER -- CONTINUED	
			37 1/2 HOURS -----	4	IN ESTABLISHMENTS NOT PROVIDING PAID VACATIONS -----	2	20 YEARS OF SERVICE:	
			40 HOURS -----	80	IN ESTABLISHMENTS PROVIDING PAID VACATIONS -----	98	1 WEEK -----	6
			42 HOURS -----	4	LENGTH-OF-TIME PAYMENT -----	97	OVER 1 AND UNDER 2 WEEKS -----	4
TV-radio technician-----	6	-	44 HOURS -----	6	OTHER PAYMENT -----	2	2 WEEKS -----	38
TV-radio technician, apprentice----	3	-	45 HOURS -----	1	AMOUNT OF PAID VACATION AFTER:		3 WEEKS -----	10
Electrical appliance technician----	5	4	47 1/2 HOURS -----	4	6 MONTHS OF SERVICE:		4 WEEKS -----	41
Electrical appliance technician, apprentice-----	1	1	48 HOURS -----	1	1 WEEK -----	13	25 YEARS OF SERVICE:	
					OVER 1 AND UNDER 2 WEEKS -----	5	1 WEEK -----	6
					1 YEAR OF SERVICE:		OVER 1 AND UNDER 2 WEEKS -----	4
					1 WEEK -----	42	2 WEEKS -----	38
					OVER 1 AND UNDER 2 WEEKS -----	4	3 WEEKS -----	10
					2 WEEKS -----	53	4 WEEKS -----	8
					2 YEARS OF SERVICE:		5 WEEKS -----	33
					1 WEEK -----	12		
					OVER 1 AND UNDER 2 WEEKS -----	7		
					2 WEEKS -----	77		
					OVER 2 AND UNDER 3 WEEKS -----	2		
					3 YEARS OF SERVICE:			
					1 WEEK -----	10		
					OVER 1 AND UNDER 2 WEEKS -----	7		
					2 WEEKS -----	79		
					OVER 2 AND UNDER 3 WEEKS -----	2		
					4 YEARS OF SERVICE:			
					1 WEEK -----	10		
					OVER 1 AND UNDER 2 WEEKS -----	7		
					2 WEEKS -----	79		
					OVER 2 AND UNDER 3 WEEKS -----	2		
					5 YEARS OF SERVICE:			
					1 WEEK -----	6		
					OVER 1 AND UNDER 2 WEEKS -----	7		
					2 WEEKS -----	73		
					OVER 2 AND UNDER 3 WEEKS -----	7		
					3 WEEKS -----	5		
					10 YEARS OF SERVICE:			
					1 WEEK -----	6		
					OVER 1 AND UNDER 2 WEEKS -----	4		
					2 WEEKS -----	45		
					3 WEEKS -----	42		
					OVER 3 AND UNDER 4 WEEKS -----	2		
					12 YEARS OF SERVICE:			
					1 WEEK -----	6		
					OVER 1 AND UNDER 2 WEEKS -----	4		
					2 WEEKS -----	45		
					3 WEEKS -----	42		
					4 WEEKS -----	2		
					15 YEARS OF SERVICE:			
					1 WEEK -----	6		
					OVER 1 AND UNDER 2 WEEKS -----	4		
					2 WEEKS -----	43		
					3 WEEKS -----	15		
					4 WEEKS -----	31		
			(C) Paid Holidays	Percent of service technicians ³			(E) Health, Insurance, and Retirement Plans	Percent of service technicians ³
			ALL WORKERS -----	100			ALL WORKERS -----	100
			RECEIVING PAID HOLIDAYS -----	98			IN ESTABLISHMENTS PROVIDING AT LEAST ONE OF THE BENEFITS SHOWN BELOW -----	96
			4 HOLIDAYS -----	1			LIFE INSURANCE -----	71
			5 HOLIDAYS -----	33			ACCIDENTAL DEATH AND DISMEMBERMENT INSURANCE -----	56
			6 HOLIDAYS -----	11			SICKNESS AND ACCIDENT INSURANCE OR SICK LEAVE OR BOTH -----	76
			PLUS 1 HALF DAY -----	6			SICKNESS AND ACCIDENT INSURANCE -----	32
			7 HOLIDAYS -----	10			SICK LEAVE (FULL PAY AND NO WAITING PERIOD) -----	32
			8 HOLIDAYS -----	5			SICK LEAVE (PARTIAL PAY OR WAITING PERIOD) -----	23
			9 HOLIDAYS -----	21			LONG-TERM DISABILITY INSURANCE -----	31
			PLUS 1 HALF DAY -----	3			HOSPITALIZATION INSURANCE -----	96
			10 HOLIDAYS -----	9			SURGICAL INSURANCE -----	96
			RECEIVING NO PAID HOLIDAYS -----	2			MEDICAL INSURANCE -----	96
							MAJOR MEDICAL INSURANCE -----	95
							RETIREMENT PLANS -----	49
							PENSION PLANS -----	49
							SEVERANCE PAY -----	-

Footnotes:

¹ Unweighted observations in November 1975.² Full-time openings available for filling in September and for which the firm was actively trying to recruit workers from outside the firm.³ Refers to television-radio technicians, electrical appliance technicians, and apprentice technicians.

* Estimates of provisions for longer periods of service are identical.

NOTE: "Sickness and accident insurance or sick leave", and "Retirement plans" present unduplicated totals of workers receiving plans shown separately.

Figure 4

**Average earnings¹ for selected occupations in 6 industry divisions² in 41 areas,
July–December 1975**

Occupation	Akron, Ohio	Albany– Schenectady Troy, N.Y.	Occupation	Akron, Ohio	Albany– Schenectady Troy, N.Y.
	Dec. 1975	Sept. 1975		Dec. 1975	Sept. 1975
Office			Professional and technical—Continued		
Billers, machine (billing machine)	-	-	Drafter-tracers	-	-
Billers, machine (bookkeeping machine)	-	-	Electronics technicians	-	265.50
Bookkeeping-machine operators, class A	-	-	Class A	-	-
Bookkeeping-machine operators, class B	\$138.00	\$133.50	Class B	-	-
Clerks, accounting, class A	191.00	178.50	Class C	-	-
Clerks, accounting, class B	151.50	145.00	Nurses, industrial (registered)	230.50	220.50
Clerks, file, class A	161.00	-			
Clerks, file, class B	130.00	129.00			
Clerks, file, class C	106.50	112.50			
Clerks, order	168.00	150.00			
Clerks, payroll	173.00	149.50			
Keypunch operators, class A	176.50	164.50			
Keypunch operators, class B	142.50	143.00			
Messengers	115.00	141.50			
Secretaries	180.00	183.50			
Secretaries, class A	222.50	201.50			
Secretaries, class B	192.00	193.00			
Secretaries, class C	173.50	180.50			
Secretaries, class D	156.00	168.50			
Stenographers, general	144.50	155.50			
Stenographers, senior	172.00	163.50			
Switchboard operators ³	-	142.00			
Switchboard operators, class A ³	186.50	-			
Switchboard operators, class B ³	127.50	-			
Switchboard operator-receptionists	142.00	120.50			
Tabulating-machine operators, class A	-	-			
Tabulating-machine operators, class B	-	-			
Tabulating-machine operators, class C	-	-			
Transcribing-machine operators, general	150.00	140.50			
Typists, class A	150.00	161.50			
Typists, class B	123.00	122.00			
Professional and technical			Maintenance and powerplant		
Computer operators:			Boiler tenders	\$5.82	\$5.12
Class A	\$226.50	-	Carpenters	5.97	6.14
Class B	196.50	\$190.50	Electricians	6.15	5.83
Class C	154.50	-	Engineers, stationary	6.09	5.11
Computer programmers, business:			Helpers, trades	5.16	-
Class A	309.50	294.50	Machine-tool operators, toolroom	6.45	-
Class B	252.00	246.50	Machinists	5.96	5.95
Class C	209.00	-	Mechanics, automotive	6.88	6.31
Computer systems analysts, business:			Mechanics	6.04	5.76
Class A	360.00	-	Millwrights	7.13	5.84
Class B	321.00	-	Painters	6.02	5.41
Class C	-	-	Pipefitters	6.08	5.84
Drafters:			Sheet-metal workers	6.23	5.86
Class A	269.00	216.00	Tool and die makers	-	-
Class B	212.00	201.00			
Class C	191.50	-			
Professional and technical			Custodial and material movement		
			Guards and watchmen	3.74	2.83
			Janitors, porters, and cleaners	4.04	3.75
			Laborers, material handling	5.92	4.48
			Order fillers	4.72	3.69
			Packers, shipping	4.13	3.60
			Receiving clerks	5.02	4.53
			Shipping clerks	-	4.85
			Shipping and receiving clerks	4.68	4.45
			Truckdrivers ³	6.45	6.09
			Truckdrivers, light (under 1½ tons)	4.79	-
			Truckdrivers, medium (1½ to and including 4 tons)	5.99	5.59
			Truckdrivers, heavy (over 4 tons, trailer type)	6.76	6.57
			Truckdrivers, heavy (over 4 tons, other than trailer type)	-	5.56
			Truckers, power (forklift)	5.72	4.97
			Truckers, power (other than forklift)	4.81	4.63
			Warehousemen	5.29	4.90

Figure 5

Table A-7. Percent increases in average hourly earnings for selected occupational groups, adjusted for employment shifts, in Portland, Oreg.—Wash., for selected periods

Industry and occupational group (men and women combined)	May 1972 to May 1973	May 1973 to May 1974	May 1974 to May 1975	May 1975 to May 1976
All industries:				
Office clerical	5.4	9.0	10.3	8.3
Electronic data processing	*	*	10.4	7.7
Industrial nurses	4.6	4.3	**	**
Skilled maintenance trades ***	7.0	7.3	10.6	10.3
Unskilled plant workers ***	7.2	7.9	11.0	9.1
Manufacturing:				
Office clerical	4.7	8.0	10.8	8.7
Electronic data processing	*	*	**	**
Industrial nurses	3.5	4.2	**	**
Skilled maintenance trades ***	4.7	7.8	11.3	11.6
Unskilled plant workers ***	5.9	9.3	11.1	10.0
Nonmanufacturing:				
Office clerical	5.6	9.3	10.0	8.1
Electronic data processing	*	*	**	**
Industrial nurses	**	**	**	**
Skilled maintenance trades ***	**	**	**	**
Unskilled plant workers ***	8.2	6.7	10.7	8.6

* Data not available.

** Data do not meet publication criteria.

*** Percent increases for periods ending prior to 1976 relate to men only.

Figure 6

Relative pay levels for selected occupational groups in 92 metropolitan areas, March 1974 through July 1975

(Average pay levels for each industry and occupational group in 262 Standard Metropolitan Statistical Areas = 100)¹

Area	Office clerical			Electronic data processing			Skilled maintenance		Unskilled plant		
	All industries	Manufacturing industries	Nonmanufacturing industries	All industries	Manufacturing industries	Nonmanufacturing industries	All industries	Manufacturing industries	All industries	Manufacturing industries	Nonmanufacturing industries
Akron, Ohio	102	99	103	103	100	—	100	100	129	116	117
Albany-Schenectady-Troy, N.Y.	101	—	104	—	—	—	94	94	108	98	109
Albuquerque, N. Mex.	88	—	90	—	—	—	—	—	73	73	73
Allentown-Bethlehem-Easton, Pa.-N.J.	113	113	100	103	—	—	98	100	110	105	106
Anaheim-Santa Ana-Garden Grove, Calif.	104	105	102	109	108	107	99	102	92	—	88
Atlanta, Ga.	103	103	105	102	—	105	100	98	90	93	89
Austin, Tex.	85	82	86	91	—	—	—	—	70	66	73
Baltimore, Md.	99	103	98	96	—	98	101	102	90	101	83
Muskegon-Muskegon Heights, Mich.	98	96	—	—	—	—	92	92	113	108	—
Nassau-Suffolk, N.Y.	97	94	99	104	—	108	94	92	99	88	104
Newark, N.J.	104	101	106	107	105	109	99	99	104	101	108
New Orleans, La.	90	—	90	—	—	—	93	95	71	89	67
New York, N.Y.-N.J.	108	104	110	111	107	113	100	98	121	102	127
Norfolk-Virginia Beach-Portsmouth, Va.-N.C.	85	—	84	—	—	—	91	90	73	83	72
Northeast, Pa.	84	86	82	—	—	—	81	77	93	79	100
Oklahoma City, Okla.	89	89	90	89	—	—	94	93	78	82	77
Omaha, Nebr.-Iowa	94	93	96	93	—	95	98	95	89	99	87
Paterson-Clifton-Passaic, N.J.	98	96	96	97	—	95	95	94	93	91	92
Philadelphia, Pa.-N.J.	98	100	96	100	99	101	97	97	108	103	109
Phoenix, Ariz.	90	96	88	98	—	96	99	100	85	80	87
Pittsburgh, Pa.	104	108	99	99	102	93	102	103	111	113	100
Portland, Me.	86	—	87	—	—	—	75	74	89	78	94
Portland, Oreg.-Wash.	101	94	104	96	—	—	106	108	121	116	121
Poughkeepsie, N.Y.	110	—	—	—	—	—	—	—	93	93	—
Providence-Warwick-Pawtucket, R.I.-Mass.	87	84	87	—	—	—	81	78	83	75	90
Raleigh-Durham, N.C.	89	93	88	96	—	—	90	90	78	84	73
Richmond, Va.	94	97	93	93	100	90	100	99	85	92	78
Rockford, Ill.	93	91	91	89	87	—	97	97	117	108	—
Sacramento, Calif.	101	—	102	—	—	—	103	104	112	112	—
Saginaw, Mich.	112	—	—	—	—	—	—	—	137	—	—
St. Louis, Mo.-Ill.	101	101	100	99	—	102	103	104	112	111	107
Salt Lake City-Ogden, Utah	91	88	92	93	—	93	97	95	90	88	92
San Antonio, Tex.	81	—	83	—	—	—	—	—	66	69	65
San Diego, Calif.	99	103	98	98	99	—	101	104	104	—	—
San Francisco-Oakland, Calif.	110	111	111	107	110	107	117	116	136	126	140
San Jose, Calif.	110	110	109	110	109	—	113	115	118	112	—
Savannah, Ga.	94	—	—	—	—	—	86	87	78	79	—
Seattle-Everett, Wash.	102	—	101	101	—	103	108	108	—	120	—
South Bend, Ind.	91	92	90	96	—	—	95	96	102	101	88
Spokane, Wash.	97	—	95	—	—	—	—	—	106	—	105
Syracuse, N.Y.	97	95	97	94	—	—	94	95	97	99	87
Toledo, Ohio-Mich.	104	106	96	95	96	—	104	105	123	114	118
Trenton, N.J.	99	96	—	100	—	—	94	92	96	92	—
Washington, D.C.-Md.-Va.	105	—	107	100	—	102	103	105	89	103	90
Waterbury, Conn.	95	92	—	—	—	—	88	87	79	83	—
Wichita, Kans.	96	95	95	—	—	—	87	86	93	93	87
Worcester, Mass.	95	92	95	93	—	96	85	87	98	90	89
York, Pa.	89	90	—	—	—	—	87	85	106	97	108

¹ 262 Standard Metropolitan Statistical Areas in the United States (excluding Alaska and Hawaii) as established by the Office of Management and Budget through February 1974.

NOTE: Dashes indicate data that do not meet publication criteria.

Figure 7

Average salaries of employees in selected white-collar occupations in private establishments, March 1976 ^{1/}

Occupation and class	Number of employees 2/	Average salaries 3/		Occupation and class	Number of employees 2/	Average salaries 3/	
		Monthly	Annual			Monthly	Annual
<u>Accountants and Auditors</u>				<u>Chemists and Engineers--Cont'd.</u>			
Accountants I-----	5,636	\$955	\$11,453	Engineers I-----	11,648	\$1,160	\$13,918
Accountants II-----	15,559	1,117	13,394	Engineers II-----	29,235	1,266	15,184
Accountants III-----	31,603	1,286	15,428	Engineers III-----	82,307	1,457	17,482
Accountants IV-----	20,498	1,562	18,738	Engineers IV-----	119,970	1,730	20,749
Accountants V-----	7,423	1,951	23,402	Engineers V-----	85,907	2,007	24,082
Auditors I-----	1,428	981	11,769	Engineers VI-----	44,284	2,312	27,737
Auditors II-----	2,756	1,119	13,427	Engineers VII-----	17,608	2,571	30,850
Auditors III-----	5,304	1,339	16,059	Engineers VIII-----	4,526	3,020	36,236
Auditors IV-----	3,529	1,663	19,952	<u>Technical Support</u>			
Chief accountants I-----	552	1,705	20,460	Engineering technicians I-----	3,005	756	9,064
Chief accountants II-----	1,132	1,897	22,753	Engineering technicians II-----	12,355	904	10,841
Chief accountants III-----	742	2,345	28,136	Engineering technicians III-----	23,869	1,022	12,258
Chief accountants IV-----	340	2,827	33,916	Engineering technicians IV-----	28,795	1,182	14,178
<u>Attorneys</u>				Engineering technicians V-----	18,407	1,341	16,086
Attorneys I-----	740	1,285	15,413	Drafter-tracers-----	4,281	698	8,369
Attorneys II-----	1,565	1,556	18,667	Drafters I-----	17,602	814	9,763
Attorneys III-----	1,916	2,018	24,205	Drafters II-----	29,395	1,003	12,029
Attorneys IV-----	1,948	2,486	29,828	Drafters III-----	31,426	1,274	15,288
Attorneys V-----	1,133	3,026	36,308	Computer operators I-----	2,783	647	7,761
Attorneys VI-----	625	3,646	43,747	Computer operators II-----	8,172	732	8,774
<u>Buyers</u>				Computer operators III-----	21,718	847	10,162
Buyers I-----	4,222	978	11,732	Computer operators IV-----	13,617	991	11,881
Buyers II-----	12,480	1,184	14,200	Computer operators V-----	2,647	1,127	13,523
Buyers III-----	13,726	1,427	17,122	Computer operators VI-----	777	1,254	15,038
Buyers IV-----	5,010	1,673	20,075	<u>Clerical Supervisory</u>			
<u>Personnel Management</u>				Keypunch supervisors I-----	892	829	9,939
Job analysts II-----	274	1,130	13,559	Keypunch supervisors II-----	1,970	956	11,470
Job analysts III-----	576	1,341	16,091	Keypunch supervisors III-----	1,254	1,068	12,815
Job analysts IV-----	484	1,596	19,142	Keypunch supervisors IV-----	298	1,241	14,883
Directors of personnel I-----	1,163	1,517	18,193	<u>Clerical</u>			
Directors of personnel II-----	1,735	1,810	21,720	Clerks, accounting I-----	91,001	637	7,636
Directors of personnel III-----	1,079	2,238	26,845	Clerks, accounting II-----	74,328	805	9,652
Directors of personnel IV-----	271	2,755	33,060	Clerks, file I-----	25,685	490	5,875
<u>Chemists and Engineers</u>				Clerks, file II-----	17,556	554	6,637
Chemists I-----	1,284	1,040	12,473	Clerks, file III-----	6,448	684	8,205
Chemists II-----	3,337	1,174	14,077	Keypunch operators I-----	55,404	639	7,660
Chemists III-----	8,538	1,383	16,589	Keypunch operators II-----	44,358	735	8,811
Chemists IV-----	9,699	1,703	20,429	Messengers-----	21,257	557	6,676
Chemists V-----	7,555	2,009	24,099	Secretaries I-----	43,660	741	8,882
Chemists VI-----	4,104	2,406	28,868	Secretaries II-----	64,553	804	9,641
Chemists VII-----	1,477	2,797	33,559	Secretaries III-----	69,748	868	10,413
Chemists VIII-----	412	3,394	40,723	Secretaries IV-----	43,981	954	11,442
				Secretaries V-----	13,752	1,029	12,342
				Stenographers, general-----	32,578	706	8,472
				Stenographers, senior-----	39,135	788	9,445
				Typists I-----	46,214	569	6,827
				Typists II-----	33,784	665	7,975

^{1/} Includes establishments with 250 workers or more in manufacturing and retail trade; and 100 or more in transportation, communication, electric, gas, and sanitary services, wholesale trade, engineering and architectural services, commercially operated research, development, and testing laboratories, and finance, insurance, and real estate.

^{2/} Occupational employment estimates relate to the total in all establishments within scope of the survey and not to the number actually surveyed.

^{3/} Salaries reported relate to the standard salaries that were paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included.

Figure 8

Table 1. Average straight-time weekly hours and monthly earnings for selected occupations, Houston, Texas, Municipal Government, July 1976

Occupation	City pay grade	Number of workers	Average week hours	Monthly earnings		Occupation	City pay grade	Number of workers	Average weekly hours	Monthly earnings	
				Mean	Median					Mean	Median
<u>OFFICE CLERICAL OCCUPATIONS</u>						<u>PUBLIC SAFETY and CORRECTION OCCUPATIONS</u>					
Bookkeeping-machine operators, class A-----	F	7	40.0	\$949	-	Fire fighters-----	III	1,163	54.0	1,192	1,230
Clerks, accounting, class A-----	E,F	14	40.0	760	\$747	Fire captains-----	VI	103	54.0	1,675	1,675
Messengers-----	C	4	40.0	544	-	Police officers-----	III	1,875	40.0	1,228	1,239
Stenographers, general-----	D	65	40.0	712	681	Police sergeants-----	IV	204	40.0	1,455	1,454
Stenographers, senior-----	F	19	40.0	815	813						
Switchboard operators, class B-----	D	27	40.0	775	794						
Typists, class B-----	C	305	40.0	581	569						
<u>DATA PROCESSING OCCUPATIONS</u>						<u>SANITATION OCCUPATIONS</u>					
Keypunch operators, class A-----	G	8	40.0	703	-	Refuse truckdrivers-----		217	40.0	\$937	\$934
Keypunch operators, class B-----	C,D	46	40.0	645	646	Refuse collectors-----		555	40.0	836	837
Computer operators, class A-----	H	8	40.0	925	-	<u>PROFESSIONAL, ADMINISTRATIVE, and TECHNICAL OCCUPATIONS</u>					
Computer operators, class B-----	G	11	40.0	820	779	Accountants, class B-----	J	11	40.0	1,220	1,152
Computer operators, class C-----	E	7	40.0	751	-	Accountants, class C-----	G,H	22	40.0	966	903
Computer programmers, class A-----	M,N	11	40.0	1,347	1,391	Building inspectors-----	H,J	30	40.0	1,092	1,110
Computer programmers, class B-----	K	4	40.0	1,105	-	Chemists, class B-----	I,K	5	40.0	1,266	-
Computer programmers, class C-----	J	10	40.0	924	913	Chemists, class C-----	G,H	15	40.0	990	975
Computer systems analysts, class A-----	M,N	22	40.0	1,425	1,437	Employment interviewers, class B-----	K	4	40.0	888	-
Computer systems analysts, class B-----	K	11	40.0	1,173	1,160	Engineers, class A-----	M,R,T	10	40.0	1,941	1,889
Computer systems analysts, class C-----	J	2	40.0	1,045	-	Engineers, class B-----	L,M,P	34	40.0	1,449	1,424
<u>MAINTENANCE, CUSTODIAL, TRADES, and LABOR OCCUPATIONS</u>						Engineers, class C-----	J,L	31	40.0	1,051	1,037
Carpenters, maintenance-----	G	23	40.0	1,001	996	Electronic technicians, class A-----	K	4	40.0	1,277	-
Electricians, maintenance-----	I	126	40.0	1,339	1,328	Electronic technicians, class B-----	I	7	40.0	1,011	-
Guards-----	E	18	40.0	685	672	Electronic technicians, class C-----	G	4	40.0	673	-
Heavy equipment operators-----	-	78	40.0	996	999	Job analysts, class B-----	K	2	40.0	863	-
Janitors, porters, and cleaners-----	C	253	40.0	593	551	Library assistants-----	D	110	40.0	544	569
Laborers, class A-----	G,-	132	40.0	820	807	Librarians-----	H,J	86	40.0	998	963
Laborers, class B-----	F,-	838	40.0	731	733	Library directors-----	-	1	40.0	3,248	-
Mechanics, automotive (maintenance)-----	G,I	98	40.0	1,047	1,065	Recreation leaders-----	G	42	40.0	756	777
Painters, maintenance-----	G	33	40.0	1,027	1,014	Social workers, class A, medical-----	J	6	40.0	1,252	-
Park laborers (groundskeepers)-----	-	147	40.0	762	757	Social workers, class B, medical-----	I	3	40.0	1,062	-
Plumbers, maintenance-----	G	5	40.0	1,015	-	Social workers, class C, medical-----	G	12	40.0	901	903
Truckdrivers, combination of sizes-----	-	214	40.0	810	803	Surveyors-----	H	16	40.0	1,102	1,105
						Surveyor helpers-----	D	29	40.0	621	569

Chapter 3. Union Wage Rate Surveys

Union wage rate surveys, part of the Bureau's occupational wage survey program,¹ have been conducted annually since 1907. At present, these studies provide data on union wages and hours in four industries: Construction (building and heavy construction), local transit, local trucking, and printing. Since 1971 a biennial survey of grocery stores also has been conducted.

Union wage rates and hours are those agreed on through collective bargaining between employers and trade unions; they are defined as (1) the basic minimum wage rates (excluding holiday, vacation, or other benefit payments regularly made or credited to the worker each pay period) and (2) the maximum number of hours per week at straight-time rates.

The use of union agreements or other union records in studies of occupational wages is practicable in industries that are highly unionized and in which (1) well-defined craft groupings exist, as in building construction or printing, or (2) key occupations can be clearly delineated, as in local transit. In these industries, obtaining information from union sources, rather than employer payrolls, is an efficient means of compiling large masses of data.

Description of surveys

Each survey currently covers 66 cities, appropriately weighted to represent all cities having 100,000 inhabitants or more.² The surveys are designed to include all local unions in the covered industry whose jurisdiction includes the selected cities.

The annual survey of union wage rates and hours in building construction covers virtually all journeyman and helper and laborer classifications. Wage rates, indexes, and other data are shown as of the first workday in July for each important building trade as well as for all trades combined. (See figure 9.) Wage rates and data on benefits are provided as well for each

of five major trades in the heavy construction sector.

The annual survey of construction trades is supplemented by a quarterly survey of seven major building trades in 121 cities. Questionnaires are mailed to approximately 175 union officials to obtain information on wage rates and employer contributions to selected benefit funds as of the first workday of each calendar quarter. Estimates, relating to cities of 100,000 inhabitants or more, are published in a press release issued the month following the survey reference date. (See figures 10 and 11.) The release is reprinted in its entirety in *Current Wage Developments* 2 months after the survey reference date.

The annual trucking study embraces drivers and helpers engaged in local trucking. Over-the-road drivers and local city drivers paid on a mileage or commission basis are excluded. All data are presented separately for the two classifications studied—drivers and drivers' helpers.

Surveys of union wages and hours in the local-transit industry are limited to operating employees. Current data are shown separately for (1) operators of surface cars and buses and (2) operators on elevated and subway lines. Trend data (indexes), however, are shown only for the industry as a whole.

In the printing industry, 15 book and job trades, 8 newspaper trades, and 6 lithography trades are studied. For the newspaper trades, separate data are shown for daywork and nightwork. Data are presented separately by type of printing (except lithography) for each trade and for all trades combined. (See figure 9.)

The grocery store survey develops average wage rates for a number of jobs selected to represent the retail grocery industry. Figure 12 shows comparative pay levels in the occupations studied in 10 of the largest cities in 1975.

Survey methods

Information is collected by mail from local unions in the cities selected. When necessary, information also is collected from international unions and regional union organizations. Personal visits are made to unions that do not respond to the mail questionnaire.

On the basis of the survey data collected, an overall average hourly rate is computed for each of the

¹ For other surveys in this program see chapter 2, "Occupational Wage Surveys."

² Beginning with the July 1976 survey, a new sample of 66 cities, of 100,000 inhabitants or more. It will continue to include the 27 largest cities (500,000 inhabitants or more) and nearly half of the 43 cities previously studied in the 100,000–500,000 size group. Twenty new cities will fill out the sample.

industries except for the heavy construction sector, where only individual job rates are presented. In addition, averages are presented by industry branch, trade, city, and region for building construction and printing; by city and region for local transit and local trucking; and by trade and department, at the U.S. level only, for grocery stores.

Average union rates are calculated by weighting each quotation for the current year by reported active union membership, i.e., members working or immediately available for work. These averages are designed to provide comparisons among trades and cities at a given time; they are not designed to measure changes over time. Trends in wage rates are provided by the index series described below.

Indexes. To measure the trend of wage rates and weekly hours, chain indexes are calculated for each of the four annual surveys.³ In calculating these indexes, the percent change in aggregates is computed from quotations for all identical classifications in the industry for two successive years. To obtain the aggregates, rates and hours (for both the previous and current year) are weighted by membership in the particular classification for the current year. The index for the current year is computed by multiplying the index for the preceding year by the ratio of the aggregate change.

The series date back to different years: Building trades and the printing industry, 1907; local transit, 1929; and local trucking, 1936. The base year for all indexes is 1967.

Presentation

The averages and indexes mentioned, together with other summary data, are contained in BLS bulletins published annually for each industry (biennially for grocery stores). Information for individual occupations includes the proportion of union members at different hourly rates of pay and the proportion of union members who received wage rate increases of specified amounts, in cents per hour and percent. The average increase registered by the trade also is shown.

In addition, bulletins for each industry show individual city wage rates for each classification for both the previous and current year. (See figure 13.) These listings of union contract information also present data on employer payments for insurance (health and welfare) funds, pension funds, and also, for construction trades, vacation and other funds.

³ In the local transit industry, irregular hours of work for operating employees in many of the covered cities prevent the computation of an index for weekly hours.

Uses and limitations

Data from the Bureau's union wage series are used by both management and labor in collective bargaining in the private and public sectors. Wage-setting conferences at the U.S. Government Printing Office, for example, refer to data obtained from the annual printing survey. Data on wage rates of building trades workers are especially important in estimating construction costs since labor expenditures constitute an important element in the total expense of building construction. Concern over rising food and transportation costs is expected to increase the use made of the grocery store and local trucking surveys. Renewed interest in mass transit may lead to greater use of the local transit survey. Primary users of the union wage survey data thus include: Federal, State, and local government agencies; labor and management officials; and private researchers, job counselors, consumer groups, and lawyers.

Data on average wage rates are suitable for comparisons among industries, trades, and cities at a given time, but should not be used to measure year-to-year changes. To measure changes over time, the indexes should be used, since they have been adjusted to eliminate changes resulting from fluctuations in union membership and other factors.

Union rates are not necessarily the actual rates paid to all workers, and union hours are not necessarily hours actually worked. Workers with above-average experience and skill may be employed at rates above the union wage rates, especially during prosperous times when a tight job market creates competitive bidding for the better workers. During periods of depressed business activity, actual hours worked often are less than those specified in union agreements.

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Figure 9

TABLE 95. Indexes of Union Wage Rates¹ in Selected Building and Printing Trades, 1907-73—Continued

[1967=100]

Trade	July 1, 1955	July 1, 1956	July 1, 1957	July 1, 1958	July 1, 1959	July 1, 1960	July 1, 1961	July 1, 1962	July 1, 1963	July 1, 1964	July 1, 1965	July 1, 1966	July 1, 1967	July 1, 1968	July 1, 1969	July 1, 1970	July 1, 1971	July 1, 1972	July 1, 1973
Hourly wage rates																			
All building trades.....	60.0	62.8	66.0	69.0	72.4	75.4	78.4	81.3	84.2	87.3	90.9	94.7	100.0	106.6	115.4	128.8	144.0	153.2	160.8
Journeyman.....	60.6	63.3	66.5	69.5	72.7	75.5	78.4	81.4	84.4	87.4	90.9	94.7	100.0	106.7	115.7	128.9	143.9	153.4	160.8
Asbestos workers.....	60.4	62.8	65.6	69.6	72.5	75.0	77.3	80.6	83.6	86.7	90.5	94.3	100.0	107.0	116.6	129.5	145.9	155.8	161.9
Boilermakers.....	60.5	63.1	66.9	70.4	73.8	76.9	80.0	82.8	85.4	88.9	92.3	95.8	100.0	106.2	114.1	125.7	139.9	148.4	156.4
Bricklayers.....	65.3	68.3	70.9	73.3	76.5	78.8	81.8	84.3	86.7	89.3	91.8	95.0	100.0	106.8	115.0	127.7	144.9	153.4	159.5
Carpenters.....	59.8	62.3	65.6	68.6	72.1	75.0	77.9	80.7	83.6	86.6	90.7	94.6	100.0	107.0	115.8	128.9	141.5	150.9	160.1
Cement finishers.....	60.9	63.9	67.1	69.9	73.4	76.2	79.1	81.6	84.2	86.9	90.9	94.6	100.0	106.3	114.6	127.0	143.8	154.7	161.4
Electricians (inside wiremen).....	60.3	63.6	66.8	70.3	72.7	76.4	79.4	83.6	86.2	89.2	91.5	94.9	100.0	106.5	117.1	130.4	148.4	158.8	164.9
Elevator constructors.....	62.3	64.7	67.3	70.7	73.9	76.3	79.9	82.3	86.4	89.1	92.4	95.6	100.0	104.1	110.4	124.9	141.4	152.4	159.5
Glaziers.....	59.2	62.2	65.4	68.7	72.0	75.3	78.1	80.5	83.6	86.9	90.4	95.6	100.0	107.2	115.8	130.7	145.9	156.6	165.7
Lathers.....	65.2	68.0	70.9	73.9	76.5	79.1	81.4	84.1	86.2	89.2	92.4	95.2	100.0	106.3	115.4	128.6	147.0	155.9	165.4
Machinists.....	59.1	61.4	63.7	67.8	71.1	73.8	76.8	79.9	83.3	86.9	90.6	95.1	100.0	105.7	111.8	121.1	135.6	148.7	156.0
Marble setters.....	61.5	64.4	68.2	70.8	73.4	76.2	78.9	81.2	84.3	87.0	90.2	94.6	100.0	106.1	113.4	124.6	138.2	148.3	154.8
Mosaic and ter- razzo workers.....	61.7	64.9	68.0	70.8	74.1	76.7	79.6	82.4	85.2	88.1	91.8	95.8	100.0	105.8	112.9	124.0	136.4	143.9	150.5
Painters.....	60.9	63.4	66.7	69.1	71.8	74.9	77.7	80.6	83.3	87.3	90.9	94.6	100.0	106.3	115.1	126.6	139.5	152.1	160.6
Paperhangers.....	60.7	63.1	67.1	69.9	72.9	75.8	78.5	81.2	83.7	87.1	90.5	94.4	100.0	107.5	117.3	131.0	145.4	155.9	164.1
Pipefitters.....	60.0	62.8	66.1	69.5	72.5	75.2	78.0	80.9	83.6	86.8	90.4	94.6	100.0	106.6	115.7	129.5	145.8	154.0	159.5
Plasterers.....	66.7	69.2	71.7	74.0	76.4	79.6	81.4	84.0	86.0	89.7	92.1	95.6	100.0	105.1	113.3	126.0	140.9	150.9	157.5
Plumbers.....	60.3	62.9	66.4	69.3	72.9	75.3	78.1	81.1	84.4	87.8	91.4	94.6	100.0	106.8	115.9	130.5	145.8	158.8	158.8
Rodmen.....	58.7	61.4	64.8	67.4	71.0	74.2	77.0	80.5	83.2	86.6	89.4	93.8	100.0	107.3	118.0	130.4	145.7	154.9	160.8
Roofers, composition.....	59.2	62.2	65.4	67.8	71.3	74.6	77.6	80.7	83.8	87.0	90.6	94.6	100.0	107.7	116.4	130.0	147.4	156.1	164.3
Roofers, slate and tile.....	61.3	64.5	67.7	70.9	73.9	76.8	79.5	81.7	85.3	89.0	92.1	95.4	100.0	106.4	114.3	125.4	142.1	151.7	160.4
Sheet-metal workers.....	59.1	61.4	64.7	68.3	71.6	74.8	77.4	80.4	83.9	86.7	90.3	94.5	100.0	106.8	115.7	131.8	149.9	160.1	166.7
Stonemasons.....	65.0	67.9	69.9	72.5	74.9	77.4	80.7	82.7	85.2	87.5	90.0	94.6	100.0	105.7	114.0	128.6	142.0	151.0	157.5
Structural-iron workers.....	60.7	63.3	66.6	68.8	72.6	75.1	78.0	81.4	84.1	87.2	90.2	94.8	100.0	106.8	117.1	129.5	144.7	152.2	158.6
Tile layers.....	61.7	64.1	67.6	69.5	73.2	76.2	80.0	81.7	85.4	88.2	92.7	95.8	100.0	106.2	113.5	123.8	138.3	149.3	156.6
Helpers and laborers.....	56.5	59.9	63.4	66.5	70.7	74.0	76.7	80.3	83.2	86.8	90.8	94.6	100.0	105.9	113.9	128.1	144.4	152.2	160.8
Bricklayers' tenders.....	55.3	59.6	62.8	65.8	70.4	73.2	76.6	80.4	82.8	86.7	91.5	94.5	100.0	105.1	111.7	125.0	145.6	152.3	162.5
Building laborers.....	56.1	59.3	63.0	66.1	70.5	73.8	77.4	80.0	82.9	86.4	90.5	94.5	100.0	106.5	114.8	129.3	144.4	152.2	160.5
Composition roofers' helpers.....	55.1	58.3	62.3	65.1	68.7	71.6	74.8	77.2	80.8	84.6	89.3	94.0	100.0	107.2	116.7	128.6	148.5	159.5	169.7
Plasterers' laborers.....	62.1	65.4	68.6	71.5	74.5	77.8	80.7	83.3	85.7	89.8	91.6	94.6	100.0	106.1	116.4	131.6	148.2	156.2	166.5
Plumbers' laborers.....	55.2	58.1	61.4	64.7	68.4	72.4	75.9	79.4	81.9	86.1	90.2	94.1	100.0	107.0	115.1	130.1	148.8	157.5	166.1
Tile layers' helpers.....	56.9	59.7	62.2	64.9	69.2	73.8	76.8	80.4	84.2	87.7	91.9	95.4	100.0	107.3	114.4	128.5	149.1	159.6	167.5
All printing trades ²	69.0	70.8	73.3	75.8	78.3	80.6	83.2	85.6	88.1	90.4	93.0	96.1	100.0	105.0	111.9	121.2	133.6	144.2	153.3
Book and job.....	68.1	70.0	72.6	75.1	77.8	80.3	83.1	85.6	88.2	90.7	93.5	96.6	100.0	105.2	111.8	121.0	133.7	144.4	155.1
Bindery women.....	63.9	65.8	69.4	71.7	75.4	78.3	81.5	84.4	87.5	90.3	93.5	96.9	100.0	106.4	114.0	121.4	136.0	148.9	162.8
Bookbinders.....	66.1	68.1	70.6	73.2	76.4	79.0	81.8	84.1	86.9	90.2	92.7	96.7	100.0	104.6	111.7	121.8	135.3	147.9	157.3
Compositors, hand.....	69.1	70.8	73.4	75.6	77.7	80.4	83.1	85.6	88.2	90.5	93.6	96.6	100.0	105.9	111.8	121.9	135.4	145.5	157.4
Electrotypers.....	72.2	74.7	77.3	80.1	82.7	85.1	87.6	89.7	91.8	93.4	94.9	96.9	100.0	103.6	110.0	115.4	123.5	131.1	139.6
Machine operators.....	69.4	71.0	73.7	75.9	78.2	80.9	83.4	86.1	88.5	90.8	93.8	96.7	100.0	105.9	111.8	121.3	134.2	143.9	155.6
Machine tenders (machinists).....	63.8	65.3	67.8	69.9	71.7	74.2	76.7	79.1	81.7	84.0	86.4	89.7	100.0	106.6	112.5	122.3	137.1	148.1	159.5
Mailers.....	68.8	70.8	73.5	76.4	79.2	82.1	84.7	87.8	90.1	91.5	93.4	95.6	100.0	104.0	112.7	119.2	132.4	140.1	149.3
Photoengravers.....	70.6	72.2	74.4	76.8	79.5	82.1	84.7	87.6	90.0	92.0	94.5	97.5	100.0	104.0	110.2	119.8	128.9	138.3	147.7
Press assistants and feeders.....	66.4	68.4	70.9	73.5	75.9	78.3	81.1	83.5	86.1	89.1	91.5	95.7	100.0	105.9	113.1	122.5	141.6	154.0	165.8
Pressmen, cylinder.....	69.3	71.1	73.3	76.0	78.5	80.6	83.2	85.6	87.9	90.4	93.3	96.2	100.0	104.7	111.5	120.6	131.9	142.3	151.4
Pressmen, platen.....	67.0	69.5	72.2	75.1	78.0	80.0	83.3	85.7	88.4	90.8	93.7	96.7	100.0	104.8	112.5	121.7	133.5	145.1	154.3
Stereotypers.....	84.4	84.5	85.7	86.7	86.8	86.4	85.8	88.1	90.1	92.8	94.5	96.7	100.0	104.4	111.5	117.0	126.6	134.1	141.4
Newspaper.....	70.5	72.3	74.6	77.1	79.4	81.1	83.4	85.7	88.1	90.1	92.5	95.4	100.0	105.1	112.0	120.8	133.1	144.2	152.2
Compositors, hand.....	70.7	72.5	74.8	77.2	79.4	81.1	83.1	85.5	87.9	90.3	92.5	95.4	100.0	105.1	111.6	120.2	132.1	143.4	150.7
Machine operators.....	70.5	72.1	74.6	76.9	79.1	80.8	82.7	85.2	87.6	90.2	92.2	95.0	100.0	105.3	112.1	121.6	133.4	145.0	150.9
Machine tenders (machinists).....	70.6	72.3	74.6	76.8	79.2	80.9	82.9	85.5	87.9	90.5	92.6	95.4	100.0	105.0	111.4	119.8	131.9	142.7	149.6
Mailers.....	69.0	71.0	73.4	76.3	79.2	81.3	84.0	86.6	89.2	90.2	93.1	95.9	100.0	105.4	113.8	121.7	138.9	151.2	160.5
Photoengravers.....	72.0	73.6	75.7	78.2	80.5	82.4	85.0	86.7	89.2	91.7	93.8	96.3	100.0	105.1	112.0	123.1	132.9	144.2	152.5
Web pressmen: Journeyman.....	70.5	72.3	74.7	77.1	79.3	81.1	83.9	85.5	87.8	89.7	91.9	95.3	100.0	104.5	111.2	120.0	131.9	141.8	151.4
Men-in-charge.....	70.3	72.1	74.5	76.8	78.8	80.6	83.4	84.8	86.6	88.5	90.6	93.9	100.0	104.2	111.0	120.3	129.2	137.8	146.9
Journeyman and men-in-charge.....	70.4	72.2	74.5	76.9	79.1	80.9	83.8	85.4	87.6	89.5	91.7	95.1	100.0	104.4	111.1	119.9	131.5	141.3	150.9
Stereotypers.....	71.6	73.2	75.4	77.8	80.0	82.1	84.6	86.9	89.1	91.0	93.3	96.0	100.0	105.7	112.4	120.9	132.0	142.2	152.9

¹ Union scales are the minimum wage scales (excluding holiday and vacation payments made directly to the worker each pay period) or maximum schedule of hours agreed upon through collective bargaining between trade

unions and employers. Rates in excess of the negotiated minimum which may be paid for special qualifications or other reasons, are not included.

² Lithography (offset) workers are included in the index beginning in 1968

Figure 10

Table 1. Union wage rates in building trades in cities of 100,000 inhabitants or more

Trade or occupation	Hourly average, January 3, 1977	Change to January 3, 1977 from <u>1/</u> :			
		October 1, 1976		January 2, 1976	
		Cents	Percent	Cents	Percent
All trades -----	\$ 9.59	7.4	0.7	53.0	5.9
Bricklayers -----	10.00	4.3	.4	52.6	5.5
Building laborers -----	7.56	5.1	.6	47.2	6.6
Carpenters -----	9.92	5.0	.5	50.1	5.3
Electricians -----	10.62	19.1	1.8	66.4	6.6
Painters -----	9.45	10.7	1.1	54.6	6.2
Plasterers -----	9.60	5.2	.5	50.7	5.6
Plumbers -----	10.53	3.8	.3	57.1	5.7

1/ In computing changes in wage rates, increases in each trade were averaged among all workers in the trade, including those that did not receive wage rate increases.

Figure 11

Table 2. Union wage rates plus employer payments to specified worker benefit funds in building trades in cities of 100,000 inhabitants or more

Trade or occupation	Hourly average, January 3, 1977	Change to January 3, 1977, from <u>1/</u> :			
		October 1, 1976		January 2, 1976	
		Cents	Percent	Cents	Percent
All trades -----	\$11.55	9.9	0.8	75.7	7.1
Bricklayers -----	11.90	6.0	.5	65.9	5.8
Building laborers -----	9.25	6.4	.7	65.8	7.6
Carpenters -----	11.98	5.8	.4	76.3	6.8
Electricians -----	12.57	27.6	2.2	93.8	8.0
Painters -----	10.86	13.5	1.2	72.2	7.2
Plasterers -----	11.40	11.3	1.0	70.2	6.6
Plumbers -----	13.20	5.8	.4	82.2	6.6

1/ See footnote 1, table 1.

Figure 12

Table 4. Occupational pay relationships: All cities combined and 10 major population centers

(July 1, 1975; full-time grocery clerks = 100)

Department and occupation	All cities ¹	Northeast		South		North Central					West
		New York	Philadelphia	Houston	Washington	Chicago	Cleveland	Detroit	Milwaukee	St. Louis	Los Angeles
Checkout:											
Head cashiers	108	101	107	105	109	107	—	111	107	104	109
Cashiers:											
Full time	100	100	100	100	100	—	—	100	100	100	100
Part time	81	80	100	98	96	—	—	99	65	—	102
Baggers	54	—	59	52	78	49	—	44	58	47	50
Grocery:											
Head grocery clerks	115	106	125	124	109	122	132	118	125	122	109
Clerks:											
Full time	100	100	100	100	100	100	100	100	100	100	100
Part time	83	80	99	98	96	100	100	100	65	69	102
Meat:											
Head meatcutters	133	136	138	158	129	122	—	143	133	138	136
First cutters	126	125	126	—	118	—	—	—	—	—	—
Journeymen	122	122	124	149	114	117	—	137	126	120	128
Wrappers	95	100	93	118	95	81	—	100	94	93	107
Dairy:											
Head dairy clerks	105	105	105	—	—	—	107	110	—	—	—
Produce:											
Head produce clerks	115	110	125	122	109	119	132	118	125	120	109
Clerks:											
Full time	98	100	100	100	100	—	—	—	—	—	100
Miscellaneous:											
Stockers, day:											
Full time	95	100	—	100	100	—	—	—	—	—	—

¹ Includes all cities with 100,000 inhabitants or more, except Honolulu. The 70 cities studied were appropriately weighted to represent all cities of this size, based on the 1970 Census. The 10 cities shown separately were among the largest population centers at that time.

NOTE: For the 10 cities shown separately, the pay relatives are based on the highest top rate among all union agreements covering each occupation within a city. The "all cities" pay relatives, however, relate to averages of occupational rates computed by weighting each agreement's top rate by the total number of union members reported for the occupation. Dash indicates no data reported.

Figure 13

Union Wage Rates and Hours and Employer Contributions to Selected Funds in the Building Trades

HOUSTON, TEX.

July 1, 1974 and July 1, 1975

(Hours are 40 per week for both years unless otherwise indicated by footnote.)

Trade or occupation	July 1, 1974	July 1, 1975					Trade or occupation	July 1, 1974	July 1, 1975				
	Rate per hour ¹	Rate per hour ¹	Employer contributions for selected benefits ²					Rate per hour ¹	Rate per hour ¹	Employer contributions for selected benefits ²			
			Insur- ance ³	Pension	Vacation pay	Other ⁴				Insur- ance ³	Pension	Vacation pay	Other ⁴
BUILDING TRADES							BUILDING TRADES— Continued						
<u>Journeymen</u>							<u>Journeymen—Continued</u>						
Asbestos workers	\$ 8.100	\$ 8.950	70¢	70¢	—	56¢	Stonemasons	\$ 7.840	\$ 8.690	32 ¹ / ₂ ¢	40¢	—	7¢
Boilermakers	7.800	8.000	50¢	76¢	—	—	Structural-iron workers	7.645	8.770	55¢	70¢	—	—
Bricklayers	7.840	8.690	32 ¹ / ₂ ¢	40¢	—	7¢	Sheeters and buckers- up	7.645	8.770	55¢	70¢	—	—
Carpenters	7.770	8.675	50¢	50¢	—	—	Tile layers	7.560	7.560	—	—	25¢	5¢
Millwrights	8.040	9.005	50¢	50¢	—	—	<u>Helpers and laborers</u>						
Piledrivers	7.770	8.675	50¢	50¢	—	—	Bricklayers' tenders	5.775	6.385	28¢	40¢	—	—
Cement finishers	7.300	8.320	49¢	42¢	—	—	Mortar mixers	5.875	6.485	28¢	40¢	—	—
Electricians (inside wires)	8.064	9.264	30¢	2%	5 4%	—	Building laborers	5.600	6.210	28¢	40¢	—	—
Elevator constructors	7.360	7.790	44 ¹ / ₂ ¢	29¢	(⁶)	2¢	Elevator constructors' helpers	5.150	5.450	44 ¹ / ₂ ¢	29¢	(⁶)	2¢
Engineers — Power equipment operators:							Marble setters' helpers	5.150	5.450	—	—	25¢	15¢
Heavy equipment:							Plasterers' laborers	5.875	6.485	28¢	40¢	—	—
Bulldozers, cat tractors, cranes, derricks, draglines, hoists (2 drums or more), mixers (14 cu. ft. or more), piledrivers shovels	7.650	8.880	35¢	65¢	—	—	Terrazzo workers' helpers	5.150	5.450	—	—	25¢	15¢
Light equipment:							Base machine	5.450	5.750	—	—	25¢	15¢
Air compressors, hoists (1 drum), mixers (less than 14 cu. ft.), pumps	6.920	7.520	35¢	65¢	—	—	Floor machine	5.300	5.600	—	—	25¢	15¢
Glaziers	7.910	8.070	47 ¹ / ₂ ¢	20¢	5 15¢	—	Tile layers' helpers	5.150	5.450	—	—	25¢	15¢
Lathers	7.470	8.370	30¢	15¢	5 50¢	5¢	<u>OTHER HEAVY CONSTRUCTION</u>						
Machinists	8.750	10.100	—	—	—	—	<u>Journeyman</u>						
Marble setters	7.560	7.560	—	—	25¢	5¢	Carpenters	7.770	8.675	50¢	50¢	—	—
Mosaic and terrazzo workers	7.560	7.560	—	—	25¢	5¢	Engineers — Power equipment operators:						
Painters	6.285	7.085	36 ¹ / ₂ ¢	35¢	40¢	—	Pipelines:						
Industrial	6.385	7.185	36 ¹ / ₂ ¢	35¢	40¢	—	Group 1 — Heavy equipment	8.350	9.330	50¢	60¢	—	—
Spray	6.660	7.460	36 ¹ / ₂ ¢	35¢	40¢	—	Group 2 — Light equipment	6.350	7.040	50¢	60¢	—	—
Industrial	6.710	7.510	36 ¹ / ₂ ¢	35¢	40¢	—	Group 3 — Oilers	4.350	4.750	50¢	60¢	—	—
100 feet and over	6.910	7.710	36 ¹ / ₂ ¢	35¢	40¢	—	Engineers — Power equipment operators:						
Paperhangers	6.535	7.335	36 ¹ / ₂ ¢	35¢	40¢	—	Industrial plants:						
Pipefitters	7.100	8.100	40¢	60¢	5 70¢	—	Heavy equipment operators	7.650	8.880	35¢	65¢	—	—
Plasterers	7.275	7.680	42¢	30¢	5 52 ¹ / ₂ ¢	6¢	Light equipment operators	6.920	7.520	35¢	65¢	—	—
Plumbers	7.310	7.860	36¢	52¢	50¢	8 ¹ / ₂ ¢	Oilers	6.340	6.870	35¢	65¢	—	—
Reinforcing iron workers ..	7.645	8.770	55¢	70¢	—	—							
Roofers, composition	6.690	7.540	20¢	10¢	15¢	10¢							
Roofers, slate and tile	7.440	8.290	20¢	25¢	15¢	10¢							
Sheet-metal workers	8.335	8.585	22 ¹ / ₂ ¢	47 ¹ / ₂ ¢	20¢	8¢							

¹ Basic (minimum) wage rates (excluding holiday, vacation pay, or other benefits made or regularly credited to the employee) agreed upon through collective bargaining between employers and unions. Wage rates shown represent rates available and payable on July 1 of the survey year, and do not include increases made later that are retroactive to July 1 or before.

² Shown in terms of cents per hour or as percent of rate; in actual practice, however, some employer payments are calculated on the basis of total hours or gross payroll. These variations in method of computation are not indicated in the above tabulation. Amounts shown include contractually-authorized deductions from negotiated wage rates as well as direct employer contributions to specified benefit funds. Excluded, however, are voluntary deductions from wage rates authorized by individual employees.

³ Includes life insurance, hospitalization and other types of health and welfare benefits; excludes payments into holiday, vacation, and unemployment funds when such programs have been negotiated.

⁴ Includes all other nonlegally required employer contributions, except those for apprenticeship fund payments, as indicated in individual agreements.

⁵ Part of negotiated rate; not included in base rate shown.

⁶ After 6 months of service, 2 percent of hourly rate for all hours worked; after 5 years of service, 4 percent of hourly rate for all hours worked. An additional amount equal to one-half percent of the hourly rate shall accrue the employee on the effective date of each rate change until this amount reaches 2 percent.

NOTE: Dashes indicate no data, or no data reported.

Chapter 4. Employer Expenditures for Employee Compensation

Background

Prior to World War II, most American workers were compensated for time worked or for their product solely by the wages and salaries they received. Although forms of compensation other than wages and salaries were not unknown (the American Express Company had a pension plan as early as 1875), they were relatively rare.

Paid leave was provided to some salaried workers by the middle of the last century but it was not available to production workers until the beginning of this century. Another 20 years passed before paid leave became a widely accepted compensation practice.

By the Great Depression, most States had enacted workers' compensation laws to protect workers against the adverse economic effects of occupational accidents and diseases. In 1935, the Social Security Act was passed. For the first time, employers across the Nation were required by law to provide their employees with two types of supplements to pay for time worked—old-age insurance and unemployment insurance. Subsequent increases in supplements arose mainly out of collective bargaining and competition for labor rather than from legal fiat. The policy of the War Labor Board during World War II encouraged employers to hold the line on wages and to increase supplemental compensation items instead (vacations, life insurance, etc.). Shortly after the war, the National Labor Relations Board (NLRB) ruled that management must bargain with unions over nonwage supplements. Backed by court decisions upholding such NLRB rulings,¹ employees have successfully negotiated for many and varied benefit plans, notably health insurance, life insurance, and pension plans. Today, the portion of the compensation dollar paid for supplements is at its highest point in history; in all likelihood the importance of supplements will continue to increase.

Development of BLS measures. Along with these significant changes in the way American workers were being paid came the need to measure the incidence and magnitude of these relatively new nonwage components of compensation. As early as 1951 the Bureau of Labor Statistics (BLS) attempted to measure the cost of

supplementary wage benefits in the basic iron and steel industry. In 1959 BLS inaugurated its current series on employer expenditures for employee compensation (EEEC) by a study limited to production workers in manufacturing. For that study the Bureau collected information for the first time on three aspects of employee compensation: (1) Total wages and salaries, or gross payroll, which included, in addition to pay for time worked, payroll items such as vacation and holiday pay; (2) nonwage supplemental compensation items, both those that were legally required, such as social security and unemployment insurance and those that were privately initiated, such as pensions and life, accident, and health insurance; and (3) the composition of payroll hours, whether hours worked or paid leave hours.

In this study, the Bureau produced estimates of the cost per hour of wages and salaries and of each item of supplemental compensation. The study thus portrayed the structure of the compensation package—that is, the relative importance of individual compensation items when compared with each other. It also showed how paid hours were distributed among working time, vacations, holidays, sick leave, and other forms of paid leave.

In 1960, compensation and payroll hours for production workers were studied in the mining industries and in 1962 in manufacturing again. Between these surveys the Bureau conducted a study of compensation and payroll hours for white-collar workers in the finance, insurance, and real estate industries. Although outside salespeople were omitted from the scope of this survey, by its conclusion the Bureau had studied virtually every occupation.

In 1963 the Bureau approached an economywide survey of compensation. In that year it conducted a special study of supplementary compensation for white-collar employees in manufacturing and in many non-manufacturing industries. That study foreshadowed the expansion in the scope of the surveys from selected industries to the entire private nonfarm economy.

During the following 2 years, in the course of measuring compensation in 15 industries, the Bureau made a major change in its method of analysis. Instead of continuing to measure the importance of compensation components relative to gross payroll, all compo-

¹ For example, *Inland Steel vs. National Labor Relations Board*, 170 Federal Reports, Second Series 247 (1948), 251 (1949).

nents (including gross payroll) were measured in terms of their importance relative to total compensation.

In 1966, the Bureau undertook its first comprehensive study of the compensation of all workers in the entire private nonfarm economy. This study, employing the analytical techniques developed over the previous 7 years, has been conducted biennially since then; in the alternate years, selected industries are studied.²

Description of survey

The survey provides two measurements of the level of employer expenditures for each compensation practice: (1) The average amount spent for a paid hour and (2) the average amount spent for a work hour. In addition, the survey measures the relative importance of each element or component of compensation—the structure of compensation—by expressing the expenditures made for each as a percent of total expenditures for compensation (figure 14). Expenditures are grouped according to their nature or purpose. For example, expenditures for the Federal social security program and for private retirement plans are grouped under expenditures for retirement programs. The survey also measures the prevalence of compensation items and practices—that is, the proportion of the work force in establishments with a particular type of expenditure or practice. Thus, the Bureau provides three kinds of information for each item of compensation: Cost per hour (both per hour worked and per hour paid); its importance relative to total compensation; and the proportion of the work force in establishments with expenditures for the item.

The survey produces these measures of compensation biennially for all workers in the private nonfarm economy, and for the manufacturing and nonmanufacturing sectors separately. The studies provide separate compensation data for office and nonoffice employees and for establishments which are unionized and those which are not. The surveys cover the 50 States and the District of Columbia; tabulations are produced at the national level.

Data are collected for cash expenditures and hours paid for during the entire calendar reference year—shorter periods of time often do not accurately reflect typical expenditures or paid hours. For example, paid leave hours are usually spread unequally throughout the year. Also, the bulk of expenditures for unemployment taxes are typically paid during the first 6 months,

² A *Directory of BLS Studies in Employee Compensation, 1947-71* lists the titles of studies published through 1971. Since then, two studies of the private nonfarm economy have been conducted (in 1972 and 1974), in addition to four studies of compensation in banking and in the drug, plastics, and textile manufacturing industries in 1973. A study of compensation paid to employees of the 50 State governments (except higher education) was conducted in 1972.

as was the case until recently for social security taxes.

Cash expenditures for compensation include both payments made directly to employees and payments to third parties on the workers' behalf. Direct payments constitute gross payroll and include payments for hours worked (including premiums for work beyond the normal workday or workweek, or during late shifts); and payment for hours not worked (paid leave, severance pay, and nonproduction bonuses). Payments made to third parties are those paid to insurance companies, government agencies, trust funds, or any other third party which disburses the money to finance immediate or future benefits for the worker. These indirect payments may be legally required, such as those for social security, unemployment insurance, and workers' compensation, or they may be privately initiated and financed, such as those expended for life, accident, and health insurance; private pension plans; union-management vacation and holiday funds; supplemental unemployment funds; and savings and thrift plans.

Hours paid for during the reference year consist of total hours worked as well as hours not worked but paid for (figure 15). They include straight-time and overtime work hours, vacation and holiday hours, sick leave hours, and leave hours granted for civic and personal reasons (generally military leave, jury-duty leave, or bereavement time). Lunch periods, rest breaks, and clean-up time are not considered leave time and are included in hours worked whenever they are paid for.

Survey methods

DATA SOURCES AND COLLECTION METHODS

Most of the expenditures and hours data are obtained through a survey of establishments. Generally more than one record source is needed by an establishment to arrive at the annual totals requested on the survey form. Records employed include Federal and State tax forms, payroll ledgers, check registers, union payment records, and others. The employers then enter the annual totals onto the form supplied by the Bureau (BLS Form 2868) in accordance with detailed instructions. Occasionally, when the employer cannot produce the requested data, BLS personnel use documents filed with regulatory agencies, unions, and other sources—when considered public information—to arrive at annual totals. All data reported to the Bureau by employers are held in the strictest confidence.

Data are collected primarily by mail, although personal visits are customarily made by Bureau representatives to certain large employers and to a sample of employers who have not responded to two previous mail requests. Participation in the survey is voluntary.

SAMPLING PROCEDURES

The survey is conducted on the basis of a highly stratified probability sample of all nonfarm establishments.³ Sample establishments are chosen for industrial representation, location, and employment size. The sample is selected to yield the most accurate measurements with resources available by including a greater proportion of large establishments than of small. A single establishment's chance of selection to the sample of the private nonfarm establishments is roughly proportionate to its employment size. Data reported by each establishment are then weighted to reflect that establishment's probability of selection to the sample. Thus, a reporting establishment with 1,000 workers in an industry-location-size stratum which had 10,000 workers will be given a weight of 10 to represent its employees and the other 9,000 in like establishments in that stratum.

All establishments over a certain employment size are included. When data cannot be obtained from these establishments or from the sample of nonrespondents, the weights are distributed to other establishments with the most similar industry-location-size characteristics.

Uses

Employers use the measures produced by the surveys to compare their compensation payments and paid leave practices with averages in their industry and the economy as a whole. The three measures of compensation (percent of compensation, cents per hour, and prevalence) are suitable for making comparisons or assessing trends over time (see Limitations). The measures can indicate the emphasis employees and employers place on individual compensation items, the emphasis placed by them on supplements beyond those which are legally required, and that on immediate versus deferred compensation. The level of expenditures (cents per hour) for any item can indicate differences in benefit levels (see Limitations) or extent of coverage.

For example, in 1974 the proportion of office workers in establishments which contributed towards a life, accident, or health insurance plan for them was somewhat higher than the proportion of nonoffice workers—90 and 81 percent, respectively. Average hourly expenditures for plans for office workers (23 cents) compared to those for nonoffice workers (19 cents) could indicate this and also a higher level of benefits for office employees. Even so, more emphasis was placed on other items of compensation for office workers because these health benefits represented a

smaller proportion of the total compensation of office workers than of nonoffice workers (2.8 and 3.6 percent).

Labor and management use the data extensively during the collective bargaining process. Government administrative and regulatory agencies use the data for such purposes as formation of economic policy, and preparation of estimates of industry productivity (output per hour). These agencies also use the data for international comparisons of labor compensation and for studies comparing the relative importance of pay supplements in the compensation of employees in the Federal government and private industry. The data from the surveys are also used extensively by the academic community and others engaged in economic research and analysis.

Limitations

While the employer expenditures measured by the survey constitute the major components of total employee compensation, they do not represent total labor cost. The latter is a broader concept which includes items such as costs of recruiting and training labor, expenses of administering employee benefit programs, and other costs incurred in using labor.

The measurements of expenditures and hours are subject to both sampling and reporting errors. However, these errors are generally considered to fall within acceptable confidence ranges. Except for small cells where there are few observations, these errors in almost every case would have to be in the same direction to have a material effect on the measurements.

Although "employer expenditures" are generally equal to "employee compensation" (in this chapter, the two terms are usually used interchangeably), some exceptions may arise in the area of employee benefits. In the case of benefits, employee expenditures may not equal employee compensation because of differences in (1) the demographic composition of the work force and of workers' immediate dependents; and (2) the method of financing benefits. An example of the first exception would be an employer of an especially young and healthy group of workers who might spend less to finance a specific health benefit than the average employer might spend for it. Though the expenditures of the two employers would differ, the amount of compensation (the health benefit) purchased by them would be equal. However, over a large group of employers, these differences tend to average out.

The second type of exception involves methods of financing benefits. For example, two pension plans, equal in terms of benefits, could vary significantly in expenditures needed to finance them if one was a pay-as-you-go plan and the other was fully funded for past service liabilities. At least in the area of private pension

³ The discussion deals with the sampling procedure for the surveys in the total private nonfarm economy. Though basically the same, sampling procedures for individual industry studies may differ slightly.

plans, however, the funding requirements of the Employee Retirement Income Security Act will tend to lessen these differences.

Changes in expenditures for compensation, as measured by the survey, will, to a degree, reflect changes in the demographic composition of the work force in addition to actual changes in compensation. For example, the level of average straight-time pay will rise (even if pay rates are constant) if there is an increase in the proportion of employees in higher paid industries and occupations. The measures produced by the survey still provide an indication of the direction of any change and its magnitude.

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Figure 14

Table 3. Employee compensation, private nonfarm economy, 1966, 1972, and 1974

Compensation item	1966						1972						1974					
	All Industries		Manufacturing		Nonmanufacturing		All Industries		Manufacturing		Nonmanufacturing		All Industries		Manufacturing		Nonmanufacturing	
	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour	Per cent of compensation	Dollars per work hour
Total compensation	100.0	\$3.44	100.0	\$3.76	100.0	\$3.23	100.0	\$5.23	100.0	\$5.64	100.0	\$5.00	100.0	\$6.33	100.0	\$6.72	100.0	\$6.13
Pay for time worked	83.0	2.85	81.6	3.07	84.0	2.71	80.5	4.21	78.5	4.43	81.8	4.09	78.2	4.95	76.2	5.12	79.4	4.86
Straight-time pay	80.6	2.77	78.1	2.94	82.4	2.66	78.5	4.11	75.5	4.26	80.3	4.02	76.3	4.83	73.3	4.93	78.0	4.78
Premium pay	2.4	.08	3.5	.13	1.6	.05	2.0	.11	3.0	.17	1.5	.07	1.9	.12	2.9	.19	1.4	.09
Overtime, weekend and holiday work	2.1	.07	2.9	.11	1.5	.05	1.8	.09	2.5	.14	1.3	.07	1.7	.10	2.3	.16	1.3	.08
Shift differentials	0.3	.01	0.6	.02	0.1	.01	0.3	.01	0.5	.03	0.2	.01	0.3	.02	0.5	.04	0.1	.01
Paid leave (except sick leave)	5.2	.18	5.8	.21	4.7	.15	5.6	.29	6.5	.36	5.1	.26	6.0	.38	6.9	.47	5.4	.33
Vacations	3.1	.11	3.5	.13	2.7	.09	3.3	.17	3.8	.21	3.0	.15	3.4	.22	3.9	.26	3.1	.19
Holidays	1.9	.07	2.2	.08	1.7	.05	2.0	.11	2.4	.14	1.8	.09	2.3	.14	2.7	.18	2.0	.12
Civic and personal leave	0.1	.01	0.1	.01	0.1	.01	0.1	.01	0.2	.01	0.1	.01	0.2	.01	0.2	.01	0.1	.01
Employer expenditures for vacation and holidays funds	0.1	.01	.01	.01	0.2	.01	0.2	.01	0.1	.01	0.2	.01	0.1	.01	0.1	.01	0.2	.01
Employer expenditures for retirement programs	5.6	.20	5.9	.22	5.5	.17	7.0	.36	7.1	.40	6.9	.34	8.1	.51	8.4	.56	7.9	.49
Social security	3.1	.11	3.0	.11	3.2	.10	3.7	.19	3.6	.20	3.7	.19	4.4	.28	4.3	.29	4.4	.27
Private plans	2.5	.09	2.9	.11	2.3	.07	3.3	.17	3.6	.20	3.2	.16	3.7	.23	4.0	.27	3.5	.21
Employer expenditures for life insurance and health benefit programs ²	3.5	.12	3.8	.15	3.4	.11	4.7	.24	5.4	.31	4.2	.21	4.9	.31	5.9	.39	4.4	.27
Life, accident, and health insurance	2.1	.07	2.6	.10	1.8	.06	3.0	.16	4.0	.22	2.4	.12	3.3	.21	4.3	.29	2.7	.16
Sick leave	0.5	.02	0.5	.02	0.6	.02	0.7	.04	0.6	.03	0.8	.04	0.7	.04	0.6	.04	0.7	.04
Workers' compensation	0.9	.03	0.7	.03	1.0	.03	0.9	.05	0.9	.05	0.9	.05	1.0	.06	0.9	.06	1.0	.06
Employer expenditures for unemployment benefit programs	1.1	.04	1.2	.04	1.2	.04	1.0	.05	1.2	.07	1.0	.05	1.1	.07	1.1	.08	1.0	.06
Unemployment insurance	1.1	.04	1.1	.04	1.1	.04	0.9	.05	0.9	.05	0.9	.05	0.9	.06	1.0	.06	0.9	.06
Severance pay	.01	.01	.01	.01	0.1	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Severance pay funds and supplemental unemployment benefit funds	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
Nonproduction bonuses	1.2	.04	1.3	.05	1.2	.04	1.0	.05	1.0	.05	0.9	.05	1.5	.09	1.2	.08	1.6	.10
Savings and thrift plans	0.1	.01	0.2	.01	0.1	.01	0.2	.01	0.2	.01	0.1	.01	0.2	.01	0.3	.02	0.2	.01
Wages and salaries (gross payroll) ³	89.9	3.09	89.2	3.35	90.4	2.92	87.8	4.59	86.5	4.88	88.5	4.43	86.3	5.46	84.9	5.71	87.0	5.33
Supplements to wages and salaries ⁴	10.1	.35	10.8	.41	9.6	.31	12.2	.64	13.5	.76	11.5	.57	13.7	.87	15.1	1.01	13.0	.79

¹ Less than 0.05 percent or \$0.005

² Includes other health benefit programs, principally State temporary disability insurance not presented separately

³ Wages and salaries include all direct payments to workers. They consist of pay for time worked, pay for vacations, holidays, sick leave and civic and personal leave, severance pay, and nonproduction bonuses

⁴ Supplements to wages and salaries include all employer expenditures for compensation other than for wages and salaries. They consist of expenditures for retirement programs (including direct pay to pensioners under pay-as-you-go private pension plans), expenditures for health benefit programs (except sick leave), expenditures for unemployment benefit programs (except severance pay), payments to vacation and holiday funds, and payments to savings and thrift plans

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

Figure 15

Table 5. Composition of payroll hours, private nonfarm economy, 1972 and 1974

(Percent distribution of paid hours)

Industry and compensation item	All workers		Office workers		Nonoffice workers	
	1972	1974	1972	1974	1972	1974
All Industries						
All paid hours	100.0	100.0	100.0	100.0	100.0	100.0
Work hours	93.4	92.8	91.6	91.2	94.4	93.7
Straight-time hours	89.0	88.7	89.9	89.5	88.5	88.1
Overtime hours	4.4	4.1	1.7	1.7	5.9	5.6
Paid leave hours	6.6	7.2	8.4	8.8	5.6	6.3
Vacations	3.4	3.6	4.2	4.3	3.0	3.3
Holidays	2.3	2.6	2.8	3.1	2.0	2.3
Sick leave	0.7	0.8	1.2	1.2	0.5	0.6
Civic and personal leave	0.2	0.2	0.2	0.2	0.1	0.1
Manufacturing						
All paid hours	100.0	100.0	100.0	100.0	100.0	100.0
Work hours	92.1	91.4	90.6	90.2	92.7	91.9
Straight-time hours	85.8	85.4	88.1	87.8	85.0	84.6
Overtime hours	6.3	6.0	2.5	2.4	7.7	7.3
Paid leave hours	7.9	8.6	9.4	9.8	7.3	8.1
Vacations	4.2	4.4	4.7	4.9	3.9	4.2
Holidays	2.9	3.3	3.2	3.5	2.8	3.2
Sick leave	0.6	0.7	1.2	1.2	0.4	0.5
Civic and personal leave	0.2	0.2	0.3	0.3	0.2	0.2
Nonmanufacturing						
All paid hours	100.0	100.0	100.0	100.0	100.0	100.0
Work hours	94.0	93.5	91.9	91.5	95.4	95.0
Straight-time hours	90.6	90.4	90.6	90.1	90.6	90.6
Overtime hours	3.4	3.1	1.4	1.4	4.8	4.4
Paid leave hours	6.0	6.5	8.1	8.5	4.6	5.0
Vacations	3.0	3.2	4.0	4.1	2.4	2.6
Holidays	2.0	2.3	2.7	3.0	1.5	1.7
Sick leave	0.8	0.8	1.2	1.2	0.6	0.6
Civic and personal leave	0.1	0.2	0.2	0.2	0.1	0.1

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

Chapter 5. Average Hourly and Weekly Earnings — Establishment Data

Average hourly and weekly earnings statistics are developed from a monthly survey of employment, payrolls, and hours in nonagricultural establishments conducted by the Bureau of Labor Statistics (BLS) in cooperation with the Employment and Training Administration (formerly the Manpower Administration) of the U.S. Department of Labor, State employment security agencies, and State departments of labor.

Background

The first monthly studies of employment and payrolls by the BLS began in October 1915 and covered four manufacturing industries. By November 1916, the BLS program had been expanded to cover 13 manufacturing industries; this number remained unchanged until 1922.

The depression of 1921 directed attention to the importance of current employment statistics, and in 1922 Congress granted additional funds to provide for program expansion. By June 1923, the number of manufacturing industries covered by the monthly employment survey had increased to 52. In 1928, concern over increasing unemployment induced Congress to provide additional appropriations for the program. During the next four years, 53 industries were added—38 manufacturing industries and 15 nonmanufacturing industries.

In 1930, the deepening economic crisis impelled President Hoover to appoint an Advisory Committee on Employment Statistics to study the need for additional data in this field. The Committee made its report in the spring of 1931 with a number of recommendations for extension of the Bureau's program. The most important of these called for the development of series on hours and earnings. For the fiscal year 1932, Congress granted the Bureau a substantial increase in the appropriation for the program. In January 1933, average hourly earnings and average weekly hours were published for the first time for all manufacturing, for 90 manufacturing industries, and for 14 nonmanufacturing categories.

Throughout the period from 1915 to the beginning of World War II, there was a constantly growing interest in employment statistics for States and areas. Even before the BLS entered the field in 1915, three States (Massachusetts, New York, and New Jersey) were preparing employment statistics. As early as 1915, New York and Wisconsin had entered into "co-operative"

agreements with the Bureau, whereby sample data collected by the State agency were to be used jointly with the BLS for the preparation of State and national series. By 1928, five other States had entered into such compacts, and another five were added by 1936. Over the years the amount of published data on employment and payrolls for States and areas underwent a constant expansion. In 1940, estimates for all 48 States and the District of Columbia were published for the first time.

Over the years, the feeling grew that the proper place to estimate State and area employment was in the State agencies rather than in Washington. By 1949, all States had joined the system, and since that year the industry employment statistics program has been a fully integrated Federal-State project which provides employment, hours, and earnings information on a national, State, and area basis in considerable industrial detail. This cooperative program has as its formal base of authority a Congressional act of July 7, 1930 (ch. 873, 46 Stat. 1019; 29 U.S.C. 2). In 1976, cooperative arrangements were in effect with 49 State employment security agencies affiliated with the Employment and Training Administration and with 2 State labor departments.

Description of survey

The monthly survey collects data from a nationwide sample of over 160,000 nonagricultural establishments to provide detailed industry data for the Nation, States, and most major labor areas on the earnings of production and related workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory workers in the other nonmanufacturing components of the private nonfarm sector.

CONCEPTS

Definitions of the data requested in the survey are as follows:

Production and related workers include working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and guard services, product development, auxiliary production for a plant's own use (e.g., power plant), and recordkeeping and other services closely associated with the above production operations.

Construction workers include the following employees in the contract construction division: Working supervisors, qualified craft workers, mechanic's apprentices, laborers, etc., whether working at the site of construction or in shops or yards, at jobs (such as precutting and preassembling) ordinarily performed by members of the construction trades.

Nonsupervisory employees include employees (not above the working supervisory level) such as office and clerical workers, repairers, salespersons, operators, drivers, physicians, lawyers, accountants, nurses, social workers, research aids, teachers, drafters, photographers, beauticians, musicians, restaurant workers, custodial workers, attendants, line installers and repairers, laborers, janitors, guards, and similar occupational levels, and other employees whose services are closely associated with those of the employees listed.

Payroll covers the payroll for full- and part-time production, construction, or nonsupervisory workers who received pay for any part of the pay period which includes the 12th of the month. The payroll is reported before deductions of any kind, e.g., for old-age and unemployment insurance, group insurance, withholding tax, bonds, or union dues; also included is pay for overtime, holidays, vacations, and sick leave paid directly by the firm. Bonuses (unless earned and paid regularly each pay period), other pay not earned in the pay period reported (e.g., retroactive pay), tips, and the value of free rent, fuel, meals, or other payment in kind are excluded. "Fringe benefits" (such as health and other types of insurance, contributions to retirement, etc., paid by the employer) are also excluded.

Hours cover hours paid for, during the pay period which includes the 12th of the month, for production, construction, or nonsupervisory workers. The hours include hours paid for holidays and vacations, and for sick leave when pay is received directly from the firm.

Overtime hours cover hours worked by production and related workers for which overtime premiums were paid because the hours were in excess of the number of hours of either the straight-time workday or the workweek during the pay period which includes the 12th of the month. Weekend and holiday hours are included only if overtime premiums were paid. Hours for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded.

Establishments are classified into industries according to the 1967 *Standard Industrial Classification Manual* (SIC) on the basis of their major activity during the previous year.

COLLECTION METHODS

The primary collection of the current sample data is conducted by State agencies which have cooperative agreements with the BLS. In most States, this is the employment security agency, affiliated with the Employment and Training Administration. In a few cases the State department of labor acts as the agency. The agencies mail schedules to a sample of establishments in the States each month. A "shuttle" schedule is used; that is, one which is submitted each month in the calendar year by the respondent, edited by the State agency, and returned to the respondent for use again the following month. The State agency uses the information provided on the forms to develop State and area estimates of employment, hours, and earnings, and then forwards the data, either on the schedules themselves or in machine readable form, to the Washington, D.C., office of the BLS, where they are used to prepare estimates at the national level.

Earnings estimates

GROSS AVERAGE HOURLY EARNINGS

Gross average hourly earnings are probably the most widely used of the BLS earnings series based on establishment data. They are derived by dividing the total production or nonsupervisory worker payroll by total production or nonsupervisory worker hours. Figure 16 shows gross average hourly earnings by industry division from 1932 through 1974.

Changes in gross average hourly earnings reflect not only changes in basic hourly and incentive wage rates but also such variable factors as premium pay for overtime and late-shift work and changes in output of workers paid on an incentive plan. Shifts in the volume of employment between relatively high-paid and low-paid work and changes in workers' earnings in individual establishments also affect the general earnings averages. Averages for groups and divisions further reflect changes in average hourly earnings for individual industries.

Averages of hourly earnings differ from wage rates. Earnings are the actual return to the worker for a stated period of time; rates are the amounts stipulated for a given unit of work or time. The earnings series does not measure the level of total labor costs on the part of the employer since the following are excluded: Irregular bonuses, retroactive items, payments of various welfare benefits, payroll taxes paid by employers, and earnings for those employees not covered under the definitions of production workers, construction workers, or nonsupervisory employees.

Factors are applied to gross average hourly earnings

to eliminate purely seasonal fluctuations. By eliminating that part of the change which can be ascribed to usual seasonal variation, it is possible to observe the cyclical and other nonseasonal movements in the series.

STRAIGHT-TIME AVERAGE HOURLY EARNINGS

Average hourly earnings excluding overtime premium pay are computed for the manufacturing sector by dividing the total production worker payroll for the industry group by the sum of total production worker hours and one-half of total overtime hours. This method eliminates only earnings due to overtime paid for at 1 1/2 times straight-time rates. No adjustment is made for other premium payment provisions, such as holiday work, late-shift work, and overtime rates other than time and one-half.

GROSS AVERAGE WEEKLY EARNINGS

Gross average weekly earnings (figure 17) are derived by multiplying average weekly hours by average hourly earnings. Therefore, weekly earnings are affected not only by changes in gross average hourly earnings but also by changes in the length of the workweek. Monthly variations in such factors as the proportion of part-time workers, work stoppages, labor turnover, and absences for which employees are not paid may cause the average workweek to fluctuate.

Long-term trends of gross average weekly earnings can be affected by structural changes in the makeup of the work force. For example, persistent long-term increases in the proportion of part-time workers in retail trade and many of the service industries have reduced average workweeks in these industries and have affected the average weekly earnings series.

The seasonally adjusted average weekly earnings series is derived by multiplying seasonally adjusted average weekly hours by seasonally adjusted average hourly earnings.

SPENDABLE AVERAGE WEEKLY EARNINGS

Spendable average weekly earnings (for a worker who earned the average amount) in current dollars are obtained by deducting estimated Federal social security and income taxes from average weekly earnings. The amount of income tax liability depends on the number of dependents, marital status, and gross income. To reflect these variables, spendable earnings are computed for a worker with no dependents and a married worker with three dependents. The computations are based on gross average weekly earnings for all production or nonsupervisory workers in the industry division, excluding all other family income.

The series reflect the spendable earnings of only those workers whose gross weekly pay approximates the average earnings indicated for all production and

nonsupervisory workers. It does not reflect, for example, the average earnings of all married workers with three dependents; such workers, in fact, have higher gross average earnings than workers with no dependents.

Since part-time as well as full-time workers are included, and since the proportion of part-time workers has been rising, the series understates the increase in earnings for full-time workers. As noted, "fringe benefits" are not included in earnings.¹

This series (as well as gross average weekly earnings) can also be expressed in "real" dollars. "Real" earnings are computed by dividing the current Consumer Price Index into the earnings averages for the current month; the level of earnings is thereby adjusted for changes in purchasing power.

Presentation

The earnings series appear in several BLS publications. The earliest source of preliminary national data on gross average hourly and weekly earnings for industry divisions and major manufacturing groups is the press release, *The Employment Situation*, usually issued 3 weeks after the week of reference for the data. These preliminary estimates are based on tabulations of data for less than the full sample to permit early release of figures. A figure for a particular month is listed as preliminary for two consecutive months; a final figure is shown in the third month of publication. These data also appear in the same detail in the *Monthly Labor Review* approximately 1 1/2 months later.

The press release, *Real Earnings*, issued during the third week of each month, contains the most up-to-date spendable average weekly earnings statistics for industry divisions.

Current earnings statistics are printed in greater detail in the monthly publication, *Employment and Earnings*. This periodical is published approximately 2 weeks after *The Employment Situation* is issued. Figure 18 indicates the number of industries for which the four earnings series are published. Complete national historical data can be found in the latest edition of *Employment and Earnings, United States* (Bulletin Series 1312).

Current gross average hourly and weekly earnings data for States and metropolitan areas are also published in *Employment and Earnings*; however, these data are limited to the manufacturing sector (see figure 19). Historical statistics (annual averages) are presented for the full range of major industrial categories in the latest edition of *Employment and Earnings, States and Areas* (Bulletin Series 1370). In addition, detailed industry

¹ For a more complete discussion of the uses and limitations of these series, see the article by Paul M. Schwab, "Two Measures of Purchasing Power Contrasted," in the *Monthly Labor Review* for April 1971. Reprints of this article are available from the Bureau of Labor Statistics.

rates are available monthly in releases published by the cooperating State agencies (addresses are shown in figure 20).

The data also are disseminated through the publications of many other Federal agencies; e.g., the Department of Commerce, the Board of Governors of the Federal Reserve System, and the Council of Economic Advisers. They are also regularly republished in summary form or for specific industries in many trade association journals, the labor press, and in general reference works.

Uses

These series are used by labor unions, business firms, universities, trade associations, private research organizations, and many government agencies. Research workers in labor unions and industry, as well as others responsible for analyzing business conditions, use the trends reflected in these particular statistics as economic indicators. Labor economists and other social scientists find these series to be an important indicator of the Nation's economic activity, as well as a measure of the well-being of the millions of Americans who depend on salaries and wages.

Executives use the employment, earnings, and hours data for guidance in plant location, sales, and purchases. Also, firms negotiating long-term supply or construction contracts often utilize series on average hourly earnings as an aid in reaching an equitable agreement; "escalation clauses" may be included in the contracts, which permit an increase or a lowering of the settlement price depending on the movement of average hourly earnings in a selected industry. Wide need has been demonstrated by both labor and business for industry series on hourly earnings and weekly hours, to provide a basis for labor-management negotiations. They not only furnish current and historical information on a given industry but provide comparative data on related industries.

Limitations

The gross average hourly earnings series reflect actual earnings of workers, including premium pay. They differ from wage rates, which are the amounts stipulated for a given unit of work or time. Gross average hourly earnings do not represent total compensation costs per hour for the employer, for they exclude retroactive payments and irregular bonuses, various welfare benefits, and the employer's share of payroll taxes. Earnings for those employees not covered under the production worker and nonsupervisory employee categories are, of course, not reflected in the estimates. The hourly earnings series does not exclude the effects of interindustry shifts, such as the shift of workers between high-wage and low-wage industries.

To approximate straight-time average hourly earn-

ings, gross average hourly earnings are adjusted by eliminating only premium pay for overtime at the rate of time and one-half. Thus, no adjustment is made for other premium payment provisions such as holiday work, late-shift work, and premium overtime rates other than at time and one-half.

The workweek information relates to average hours paid for, which differ from scheduled hours or hours worked. Average weekly hours reflect the effects of such factors as absenteeism, labor turnover, part-time work, and strikes.

The series on spendable weekly earnings measures the net earnings of workers who earn the average gross weekly earnings, have the specified number of dependents and the appropriate marital status, and take the standard deductions for Federal income tax purposes. Thus they represent a very small number; only about 15 percent of all husband-wife families with one earner and three dependents earned this amount. Spendable earnings reflect deductions only for Federal income and social security taxes. They do not take into account payroll deductions for such purposes as State income taxes, union dues, or group insurance.

The "real" earnings data (those expressed in 1967 dollars), resulting from the adjustment of gross and spendable average weekly earnings by means of the Bureau's Consumer Price Index, indicate the changes in the purchasing power of money earnings as a result of changes in prices for consumer goods and services. These data cannot be used to measure changes in living standards as a whole, which are affected by other factors.

RELIABILITY

The earnings estimates are subject to sampling errors which may be expressed as relative errors of the estimates. (A relative error is a standard error expressed as a percent of the estimate.) Relative errors for major industries are presented in figure 21 and for individual industries with the specified number of employees in figure 22. The chances are about 2 out of 3 that the earnings estimates from the sample would differ by a smaller percentage than the relative error from the averages that would have been obtained from a complete census.

For the two most recent months, estimates of earnings are preliminary and are so footnoted in the tables. These figures are based on less than the total sample and are revised when all the reports in the sample have been received. Revisions of preliminary earnings estimates are normally not greater than 1 cent for hourly earnings.

Annually, employment figures are benchmarked to reflect reasonably complete employment counts. The earnings estimates for cells are not subject to benchmark revisions, although the broader groupings may be affected slightly by changes in employment weights.

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Table 1. Average hourly earnings of production or nonsupervisory workers^a on private nonagricultural payrolls, by industry division, 1932-74

[In dollars]

Year	Total private	Mining	Contract construction	Manufacturing ^b	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate ^c	Services
						Total	Wholesale trade	Retail trade		
1932				0 441						
1933				437						
1934				526						
1935				544			0 610			
1936				550			628			
1937				617			658			
1938				620			674			
1939				627			688	0 484		
1940				655			711	494		
1941				726			763	518		
1942				851			828	559		
1943				957			898	606		
1944				1 011			948	653		
1945				1 016			990	699		
1946				1 075			1 107	797		
1947	1 131	1 469	1 541	1 217		0 940	1 220	d 838	1 140	
1948	1 225	1 664	1 713	1 328		1 010	1 308	901	1 200	
1949	1 275	1 717	1 792	1 378		1 060	1 360	951	1 260	
1950	1 335	1 772	1 863	1 440		1 100	1 427	983	1 340	
1951	1 45	1 93	2 02	1 56		1 18	1 52	1 06	1 45	
1952	1 52	2 01	2 13	1 65		1 23	1 61	1 09	1 51	
1953	1 61	2 14	2 28	1 74		1 30	1 70	1 16	1 58	
1954	1 65	2 14	2 39	1 78		1 35	1 76	1 20	1 65	
1955	1 71	2 20	2 45	1 86		1 40	1 83	1 25	1 70	
1956	1 80	2 33	2 57	1 95		1 47	1 94	1 30	1 78	
1957	1 89	2 46	2 71	2 05		1 54	2 02	1 37	1 84	
1958	1 95	2 47	2 82	2 11		1 60	2 09	1 42	1 89	
1959	2 02	2 56	2 93	2 19		1 66	2 18	1 47	1 95	
1960	2 09	2 61	3 08	2 26		1 71	2 24	1 52	2 02	
1961	2 14	2 64	3 20	2 32		1 76	2 31	1 56	2 09	
1962	2 22	2 70	3 31	2 39		1 83	2 37	1 63	2 17	
1963	2 28	2 75	3 41	2 46		1 89	2 45	1 68	2 25	
1964	2 36	2 81	3 55	2 53	2 88	1 96	2 52	1 75	2 30	1 94
1965	2 45	2 92	3 70	2 61	3 03	2 03	2 61	1 82	2 39	2 05
1966	2 56	3 05	3 89	2 72	3 11	2 13	2 73	1 91	2 47	2 17
1967	2 68	3 19	4 11	2 83	3 24	2 24	2 88	2 01	2 58	2 29
1968	2 85	3 35	4 41	3 01	3 42	2 40	3 05	2 16	2 75	2 42
1969	3 04	3 61	4 79	3 19	3 64	2 55	3 23	2 30	2 93	2 61
1970	3 22	3 85	5 24	3 36	3 85	2 71	3 44	2 44	3 08	2 81
1971										
1972	3 44	4 06	5 69	3 57	4 21	2 86	3 67	2 57	3 27	3 02
1973	3 67	4 41	6 03	3 81	4 64	3 01	3 88	2 70	3 42	3 23
1974	3 92	4 73	6 37	4 08	5 04	3 20	4 12	2 87	3 58	3 46
1975	4 22	5 21	6 75	4 41	5 43	3 47	4 49	3 09	3 82	3 76

^aSee footnote a, table 3

^bPrior data are as follows:

1909-- 0 191	1922-- 0 482	1927-- 0 544
1914-- 221	1923-- 516	1928-- 556
1919-- 472	1924-- 541	1929-- 560
1920-- 549	1925-- 541	1930-- 546
1921-- 509	1926-- 542	1931-- 509

^cSee footnote c, table 3

^dSee footnote c, table 5

NOTE: Data include Alaska and Hawaii beginning in 1959

Table 5. Average weekly earnings of production or nonsupervisory workers^a on private nonagricultural payrolls, by industry division, 1909–74

[In dollars]

Year	Total private	Mining	Contract construction	Manufacturing ^b	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services
						Total	Wholesale trade	Retail trade		
1909				9 74						
1914				10 92						
1919				21 84						
1920				26 02						
1921				21 94						
1922				21 28						
1923				23 56						
1924				23 67						
1925				24 11						
1926				24 38						
1927				24 47						
1928				24 70						
1929				24 76						
1930				23 00						
1931				20 64						
1932				16 89			26 75			
1933				16 65			25 19			
1934				18 20			25 44			
1935				19 91			25 38			
1936				21 56			26 96			
1937				23 82			28 36			
1938				22 07			28 51			
1939				23 64			28 76	21 01		
1940				24 96			29 36	21 34		
1941				29 48			31 36	22 17		
1942				36 68			34 28	23 37		
1943				43 07			37 99	24 79		
1944				45 70			40 76	26 77		
1945				44 20			42 37	28 59		
1946				43 32			46 05	32 92		
1947	45 58	59 94	58 87	49 17		38 07	50 14	33 77	43 21	
1948	49 00	65 56	65 27	53 12		40 80	53 63	36 22	45 48	
1949	50 24	62 33	67 56	53 88		42 93	55 49	38 42	47 63	
1950	53 13	67 16	69 68	58 32		44 55	58 08	39 71	50 52	
1951	57 86	74 11	76 96	63 34		47 79	62 02	42 82	54 67	
1952	60 65	77 59	82 86	67 16		49 20	65 53	43 38	57 08	
1953	63 76	83 03	86 41	70 47		51 35	69 02	45 36	59 57	
1954	64 52	82 60	88 91	70 49		53 33	71 28	47 04	62 04	
1955	67 72	89 54	90 90	75 70		55 16	74 48	48 75	63 92	
1956	70 74	95 06	96 38	78 78		57 48	78 57	50 18	65 68	
1957	73 33	98 65	100 27	81 59		59 60	81 41	52 20	67 53	
1958	75 08	96 08	103 78	82 71		61 76	84 02	54 10	70 12	
1959	78 78	103 68	108 41	88 26		64 41	88 51	56 15	72 74	
1960	80 67	105 44	113 04	89 72		66 01	90 72	57 76	75 14	
1961	82 60	106 92	118 08	92 34		67 41	93 56	58 66	77 12	
1962	85 91	110 43	122 47	96 56		69 91	96 22	60 96	80 94	
1963	88 46	114 40	127 19	99 63		72 01	99 47	62 66	84 38	
1964	91 33	117 74	132 06	102 97	118 37	74 28	102 31	64 75	85 79	69 84
1965	95 06	123 52	138 38	107 53	125 14	76 53	106 49	66 61	88 91	73 60
1966	98 82	130 24	146 26	112 34	128 13	79 02	111 11	68 57	92 13	77 04
1967	101 84	135 89	154 95	114 90	131 22	81 76	116 06	70 95	95 46	80 38
1968	107 73	142 71	164 49	122 51	138 85	86 40	122 31	74 95	101 75	83 97
1969	114 61	155 23	181 54	129 51	148 15	90 78	129 85	78 66	108 70	90 57
1970	119 46	164 40	195 45	133 73	155 93	95 66	137 60	82 47	113 34	96 66
1971	127 28	172 14	211 67	142 44	169 24	100 39	146 07	86 61	120 66	103 28
1972	136 16	187 43	222 51	154 69	187 92	105 65	154 81	90 99	126 88	110 14
1973	145 43	201 03	235 69	166 06	204 62	111 04	162 74	95 57	132 10	117 64
1974	154 45	220 90	249 08	176 40	218 29	118 33	174 66	101 04	140 19	127 46

^aSee footnote a, table 3.

^bSee footnote c, table 3.

^cBeginning in 1947, includes data on eating and drinking places.

NOTE: Data include Alaska and Hawaii beginning in 1959.

Figure 17

Figure 18

Number of industries for which earnings series are published under BLS Industry Employment Statistics Program

Industry division	Gross average hourly earnings	Straight-time hourly earnings	Gross average weekly earnings ¹	Spensible average weekly earnings ¹
Total	366	24	366	8
Total private	1	—	1	1
Mining	11	—	11	1
Contract construction	11	—	11	1
Manufacturing	277	24	277	1
Transportation and public utilities	19	—	19	1
Trade	32	—	32	1
Finance, insurance, and real estate	9	—	9	1
Services	6	—	6	1

¹ In current and 1967 dollars.

Figure 19

Availability of gross average weekly and hourly earnings of production workers on manufacturing payrolls, by State and area

State and area	State and area	State and area
ALABAMA Birmingham Mobile	ILLINOIS	NEBRASKA Lincoln Omaha
ALASKA	INDIANA Indianapolis	NEVADA Las Vegas
ARIZONA Phoenix Tucson	IOWA Cedar Rapids Des Moines Dubuque Sioux City Waterloo—Cedar Falls	NEW HAMPSHIRE Manchester Nashua
ARKANSAS Fayetteville—Springdale Fort Smith Little Rock—North Little Rock Pine Bluff	KANSAS Topeka Wichita	NEW JERSEY Atlantic City Camden Hackensack Jersey City New Brunswick—Perth Amboy—Sayreville Newark Paterson—Clifton—Passaic Trenton
CALIFORNIA Anaheim—Santa Ana—Garden Grove Bakersfield Fresno Los Angeles—Long Beach Modesto Oxnard—Simi Valley—Ventura Riverside—San Bernardino—Ontario Sacramento Salinas—Seaside—Monterey San Diego San Francisco—Oakland San Jose Santa Barbara—Santa Maria—Lompoc Santa Rosa Stockton Vallejo—Fairfield—Napa	KENTUCKY Louisville	NEW MEXICO Albuquerque
COLORADO Denver—Boulder	LOUISIANA Baton Rouge New Orleans Shreveport	NEW YORK Albany—Schenectady—Troy Binghamton Buffalo Elmira Monroe County Nassau—Suffolk New York—Northeastern New Jersey New York and Nassau—Suffolk New York SMSA New York City Poughkeepsie Rochester Rockland County Syracuse Utica—Rome Westchester County
CONNECTICUT Bridgeport Hartford New Britain New Haven—West Haven Stamford Waterbury	MAINE Lewiston—Auburn Portland	NORTH CAROLINA Asheville Charlotte—Gastonia Greensboro—Winston-Salem—High Point Raleigh—D
DELAWARE Wilmington	MARYLAND Baltimore	NORTH DAKOTA Fargo—Moorhead
DISTRICT OF COLUMBIA: Washington SMSA	MASSACHUSETTS Boston Brockton Fall River Lawrence—Haverhill Lowell New Bedford Springfield—Chicopee—Holyoke Worcester	OHIO Akron Canton Cincinnati Cleveland Columbus Dayton Toledo Youngstown—Warren
FLORIDA Fort Lauderdale—Hollywood Jacksonville Miami Orlando Pensacola Tampa—St. Petersburg West Palm Beach—Boca Raton	MICHIGAN Ann Arbor Battle Creek Bay City Detroit Flint Grand Rapids Jackson Kalamazoo—Portage Lansing—East Lansing Muskegon—Norton Shore—Muskegon Heights Saginaw	OKLAHOMA Oklahoma Tulsa
GEORGIA Atlanta Savannah	MINNESOTA Duluth—Superior Minneapolis—St. Paul	OREGON Eugene—Springfield Jackson County Portland
HAWAII Honolulu	MISSISSIPPI Jackson	
IDAHO	MISSOURI Kansas City St. Joseph St. Louis Springfield	
	MONTANA	

Figure 19—Continued

Availability of gross average weekly and hourly earnings of production workers on manufacturing payrolls,
by State and area—Continued

State and area	State and area	State and area
PENNSYLVANIA Allentown—Bethlehem—Easton Altoona Delaware Valley Erie Harrisburg Johnstown Lancaster Northeast Pennsylvania Philadelphia SMSA Pittsburgh Reading Scranton Wilkes-Barre—Hazleton Williamsport York	TENNESSEE Chattanooga Knoxville Memphis Nashville—Davidson TEXAS Amarillo Austin Beaumont—Port Arthur—Orange Corpus Christi Dallas—Fort Worth El Paso Galveston—Texas City Houston Lubbock San Antonio Waco Wichita Falls UTAH Salt Lake City—Ogden VERMONT Burlington Springfield VIRGINIA Lynchburg Norfolk—Virginia Beach—Portsmouth	VIRGINIA—Continued Northern Virginia Richmond Roanoke WASHINGTON Seattle—Everett Spokane Tacoma WEST VIRGINIA Charleston Huntington—Ashland Parkersburg—Marietta Wheeling WISCONSIN Appleton—Oshkosh Green Bay Kenosha La Crosse Madison Milwaukee Racine WYOMING Casper Cheyenne

COOPERATING STATE AGENCIES

State and Local Area Unemployment Statistics Program (LAUS), Current Employment Statistics Program (CES), and Labor Turnover Statistics Program (LTS)

ALABAMA	-Department of Industrial Relations, Industrial Relations Building, Montgomery 36104
ALASKA	-Employment Security Division, Department of Labor, P.O. Box 3-7000, Juneau 99801
ARIZONA	-Department of Economic Security, P.O. Box 6123, Phoenix 85005
ARKANSAS	-Employment Security Division, Department of Labor, P.O. Box 2981, Little Rock 72203
CALIFORNIA	-Employment Development Department, P.O. Box 1679, Sacramento 95808 (LAUS and CES).
COLORADO	-Division of Employment, Department of Labor and Employment, Room 222, 1210 Sherman Street, Denver 80203
CONNECTICUT	-Employment Security Division, Labor Department, 200 Folly Brook Boulevard, Wethersfield 06109
DELAWARE	-Department of Labor, 205 West 14th Street, Wilmington 19899
DIST. OF COL.	-Office of Administration and Management Service, D.C. Manpower Administration, Room 626, 500 C Street, N.W., Washington 20001
FLORIDA	-Division of Employment Security, Department of Commerce, Caldwell Building, Tallahassee 32304
GEORGIA	-Employment Security Agency, Department of Labor, 254 Washington Street, S.W., Atlanta 30334
HAWAII	-Department of Labor and Industrial Relations, P.O. Box 3680, Honolulu 96811
IDAHO	-Department of Employment, P.O. Box 7189, Boise 83707
ILLINOIS	-Bureau of Employment Security, Department of Labor, 165 North Canal Street, Chicago 60606
INDIANA	-Employment Security Division, 10 North Senate Avenue, Indianapolis 46204
IOWA	-Employment Security Commission, 1000 East Grand Avenue, Des Moines 50319
KANSAS	-Employment Security Division, Department of Labor, 401 Topeka Avenue, Topeka 66603
KENTUCKY	-Department of Human Resources, 275 East Main Street, Frankfort, Kentucky 40601
LOUISIANA	-Department of Employment Security, P.O. Box 44094, Capitol Station, Baton Rouge 70804
MAINE	-Employment Security Commission, Department of Manpower Affairs, 20 Union Street, Augusta 04330
MARYLAND	-Department of Employment and Social Services, 1100 North Eutaw Street, Baltimore 21201
MASSACHUSETTS	-Division of Employment Security, Charles F. Hurley Employment Security Building, Government Center Boston 02114
MICHIGAN	-Employment Security Commission, Department of Labor, 7310 Woodward Avenue, Detroit 48202
MINNESOTA	-Department of Employment Services, 390 North Robert Street, St. Paul 55101
MISSISSIPPI	-Employment Security Commission, P.O. Box 1699, Jackson 39205
MISSOURI	-Division of Employment Security, Department of Labor and Industrial Relations, P.O. Box 59, Jefferson City 65101
MONTANA	-Employment Security Division, Department of Labor and Industry, P.O. Box 1728, Helena 59601
NEBRASKA	-Division of Employment, Department of Labor, P.O. Box 94600, State House Station, Lincoln 68509
NEVADA	-Employment Security Department, P.O. Box 602, Carson City 89701
NEW HAMPSHIRE	-Department of Employment Security, 32 South Main Street, Concord 03301
NEW JERSEY	-Department of Labor and Industry, 202 John Fitch Plaza, Trenton 08625
NEW MEXICO	-Employment Security Commission, P.O. Box 1928, Albuquerque 87103
NEW YORK	-Division of Employment, N.Y. State Department of Labor, State Campus—Building 12, Albany 12201
NORTH CAROLINA	-Employment Security Commission, P.O. Box 25903, Raleigh 27611
NORTH DAKOTA	-Employment Security Bureau, P.O. Box 1537, Bismarck 58505
OHIO	-Division of Research and Statistics, Bureau of Employment Services, 145S. Front St., Columbus 43216
OKLAHOMA	-Employment Security Commission, Will Rogers Memorial Office Building, Oklahoma City 73105
OREGON	-Employment Division, Department of Human Resources, Room 402, Labor and Industries Building, Salem 97310
PENNSYLVANIA	-Bureau of Employment Security, Department of Labor and Industry, Seventh and Forster Streets, Harrisburg 17121
RHODE ISLAND	-Division of Statistics and Census, Department of Labor, Room 117, 235 Promenade Street, Providence 02908 (CES). Department of Employment Security, 24 Mason Street, Providence 02903 (LAUS and LTS)
SOUTH CAROLINA	-Employment Security Commission, P.O. Box 995, Columbia 29202
SOUTH DAKOTA	-Department of Labor, P.O. Box 1730, Aberdeen 57401
TENNESSEE	-Department of Employment Security, Room 519, Cordell Hull Office Building, Nashville 37219
TEXAS	-Employment Commission, TEC Building, 15th and Congress Avenue, Austin 78778
UTAH	-Department of Employment Security, P.O. Box 11249, Salt Lake City 84147
VERMONT	-Department of Employment Security, P.O. Box 488, Montpelier 05602
VIRGINIA	-Division of Research and Statistics, Department of Labor and Industry, P.O. Box 12064, Richmond 23241 (CES). Employment Commission, P.O. Box 1358, Richmond 23211 (LAUS and LTS)
WASHINGTON	-Employment Security Department, P.O. Box 367, Olympia 98504
WEST VIRGINIA	-Department of Employment Security, State Office Building, 112 California Avenue, Charleston 25305
WISCONSIN	-Department of Industry, Labor, and Human Relations, P.O. Box 608, Madison 53701
WYOMING	-Employment Security Commission, P.O. Box 2760, Casper 82601

Figure 21

Relative errors ¹ for average hourly earnings
by industry division

Industry division	Relative error (in percent)
Total private	0.2
Mining	.5
Construction	.3
Manufacturing	.1
Durable goods	.1
Nondurable goods	.1
Transportation and public utilities	.4
Trade	.2
Wholesale	.3
Retail	.2
Finance, insurance, and real estate	.4
Services	.8

¹ Relative errors relate to March 1971 data.

Figure 22

Relative errors for average hourly earnings by size
of employment estimate

Size of employment estimate	Relative error (in percent)
50,000	1.5
100,000	1.1
200,000	.9
500,000	.8
1,000,000	.5
2,000,000	.5

Appendix to Chapter 5. The Hourly Earnings Index

The Bureau's Hourly Earnings Index, a key economic indicator, was first published in 1971 as an outgrowth of the basic hourly earnings series described in chapter 5. The index more closely reflects underlying wage rate movements than do other available monthly measures because it excludes the effects of two types of changes unrelated to wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available); and changes in the proportion of workers in high-wage and low-wage industries. In addition, the seasonal adjustment eliminates the effect of changes that normally occur at the same time and in about the same magnitude each year.

The index is constructed by weighting the average hourly earnings in each industry (at the 3-digit level of detail, as defined in the *Standard Industrial Classification Manual*) by the employee-hours paid for in that industry in 1967. The weighted average for that month is then compared with the 1967 level of earnings.

Starting with January 1964, data are available by month in both current and deflated (1967) dollars for the private nonfarm economy and for seven broad industry divisions; for the manufacturing division only, monthly data are available back to 1947. Annual averages are available from 1947 to 1963, for the private

nonfarm sector only, calculated at the 1-digit SIC level of industry detail. These are linked to the series starting in 1964.

The index is both timely and comprehensive. It has, however, certain shortcomings: (1) It provides no occupational or regional data; (2) it is not adjusted for the influence of overtime premium pay in the nonmanufacturing sector, which accounts for two-thirds of total employment; (3) it is restricted to the earnings of production and nonsupervisory employees; (4) it does not cover the farm and government sectors; and (5) supplements to pay are excluded. These shortcomings have in part, prompted the development of the Employment Cost Index. (See chapter 12.)

The data are published monthly in Bureau periodicals, including *Current Wage Developments* and the *Monthly Labor Review*, after initial presentation in the monthly press release, *The Employment Situation*. A bulletin containing historical data, *The Hourly Earnings Index, 1964 - August 1975*, BLS Bulletin 1897, was published in 1976. (See figure 23.)

—REFERENCES—

Samuels, Norman J. "New Hourly Earnings Index," *Monthly Labor Review*, December 1971, pp. 66-67.

Figure 23

Table 1. Hourly Earnings Index, private nonfarm economy, 1964-August 1975—Continued

(1967=100)

Period	Unadjusted data	Seasonal factor	Seasonally adjusted data	Quarterly average of seasonally adjusted data	Percent changes at annual rates ¹			
					From previous quarter	From same quarter a year earlier	From 6 months earlier	From 12 months earlier
1970:								
Annual average	120.8	-	-	-	-	-	-	-
January	117.2	100.2	117.0	-	-	-	6.1	6.6
February	117.9	100.1	117.8	117.8	5.6	6.6	6.5	6.6
March	118.4	99.9	118.5	-	-	-	6.7	6.7
April	118.8	99.9	119.0	-	-	-	5.9	6.6
May	119.7	100.0	119.7	119.7	6.6	6.6	5.8	6.6
June	120.2	99.8	120.4	-	-	-	6.7	6.5
July	121.0	99.9	121.1	-	-	-	7.1	6.6
August	121.8	99.7	122.2	122.0	7.9	6.8	7.6	7.0
September	123.2	100.4	122.7	-	-	-	7.1	6.9
October	123.2	100.0	123.2	-	-	-	7.2	6.5
November	123.9	100.0	123.9	123.8	6.2	6.6	7.1	6.5
December	124.5	100.0	124.5	-	-	-	6.9	6.8
1971:								
Annual average	129.4	-	-	-	-	-	-	-
January	125.8	100.2	125.5	-	-	-	7.4	7.3
February	126.6	100.1	126.5	126.3	8.2	7.2	7.2	7.4
March	126.8	99.9	126.9	-	-	-	7.1	7.1
April	127.6	99.9	127.8	-	-	-	7.6	7.4
May	128.7	100.0	128.7	128.5	7.3	7.4	8.0	7.6
June	128.9	99.8	129.2	-	-	-	7.7	7.3
July	129.6	99.8	129.9	-	-	-	7.1	7.2
August	130.3	99.7	130.6	130.5	6.3	7.0	6.7	6.9
September	131.5	100.4	131.0	-	-	-	6.5	6.8
October	131.4	100.1	131.3	-	-	-	5.5	6.6
November	131.6	100.0	131.6	132.0	4.8	6.6	4.5	6.2
December	133.3	100.0	133.3	-	-	-	6.5	7.1
1972:								
Annual average	137.8	-	-	-	-	-	-	-
January	134.6	100.2	134.3	-	-	-	7.0	7.0
February	134.9	100.1	134.8	134.9	8.8	6.8	6.5	6.6
March	135.3	99.9	135.4	-	-	-	6.9	6.7
April	136.4	99.9	136.6	-	-	-	8.3	6.9
May	136.7	100.0	136.7	136.8	5.9	6.4	8.0	6.2
June	136.8	99.8	137.1	-	-	-	5.8	6.1
July	137.6	99.8	137.9	-	-	-	5.4	6.2
August	137.9	99.7	138.4	138.5	4.9	6.1	5.3	5.9
September	139.7	100.4	139.1	-	-	-	5.5	6.2
October	140.3	100.1	140.2	-	-	-	5.4	6.8
November	140.7	100.0	140.7	140.9	7.2	6.7	5.9	6.9
December	141.9	100.1	141.7	-	-	-	6.9	6.3
1973:								
Annual average	146.6	-	-	-	-	-	-	-
January	142.6	100.2	142.3	-	-	-	6.5	6.0
February	142.8	100.1	142.7	142.8	5.5	5.9	6.3	5.8
March	143.2	99.9	143.3	-	-	-	6.1	5.8
April	144.5	99.9	144.6	-	-	-	6.4	5.9
May	145.0	100.0	145.0	145.2	6.9	6.1	6.1	6.0
June	145.7	99.8	146.0	-	-	-	6.1	6.5
July	146.7	99.8	147.0	-	-	-	6.6	6.6
August	147.3	99.7	147.7	147.8	7.4	6.8	7.2	6.8
September	149.5	100.5	148.8	-	-	-	7.7	6.9
October	149.6	100.1	149.5	-	-	-	6.9	6.6
November	150.3	100.0	150.3	150.3	7.0	6.7	7.5	6.8
December	151.4	100.1	151.2	-	-	-	7.3	6.7
1974:								
Annual average	158.6	-	-	-	-	-	-	-
January	152.1	100.2	151.8	-	-	-	6.7	6.7
February	153.0	100.1	152.8	152.8	6.8	7.0	7.0	7.1
March	153.6	99.8	153.9	-	-	-	7.0	7.3
April	154.7	100.0	154.7	-	-	-	7.0	6.9
May	156.5	100.0	156.5	156.5	10.1	7.8	8.5	8.0
June	158.1	99.8	158.5	-	-	-	9.8	8.5
July	158.8	99.8	159.2	-	-	-	9.9	8.3
August	160.1	99.7	160.6	160.6	10.7	8.6	10.4	8.7
September	162.8	100.5	162.0	-	-	-	10.9	8.9
October	163.5	100.1	163.3	-	-	-	11.5	9.2
November	164.2	100.0	164.2	164.3	9.6	9.3	10.0	9.2
December	165.6	100.1	165.4	-	-	-	9.0	9.4
1975:								
Annual average	-	-	-	-	-	-	-	-
January	166.6	100.2	166.3	-	-	-	9.1	9.5
February	167.8	100.0	167.8	167.7	8.6	9.7	9.2	9.8
March	168.9	99.9	169.1	-	-	-	8.9	9.9
April	169.4	100.0	169.4	-	-	-	7.6	9.6
May	170.6	100.0	170.6	170.7	7.5	9.1	8.0	9.0
June	171.9	99.8	172.2	-	-	-	8.4	8.7
July	172.8	99.8	173.1	-	-	-	8.4	8.8
August	174.1	99.7	174.6	-	-	-	8.3	8.8

¹ Computed from seasonally adjusted data to two decimal places.

Chapter 6. Earnings Statistics from the Current Population Survey—Household Data

The Current Population Survey (CPS), conducted by the Bureau of the Census for the Bureau of Labor Statistics (BLS) primarily to obtain statistics on employment and unemployment, also has become an increasingly valuable source of statistics on earnings.

What makes earnings statistics from the CPS so valuable is that they are derived from a household survey from which the age, sex, race, occupation, education, and other demographic characteristics of wage earners (and other members of their families) also can be easily obtained. Most other earnings information is collected from administrative records and surveys of establishment payrolls; these sources are extremely limited in demographic detail and usually cannot provide earnings information for specific population groups.

BLS publishes two major earnings series from the basic CPS data: 1) Annual earnings of household heads in production and nonsupervisory jobs, and 2) hourly and weekly earnings of all wage and salary workers.

Description of survey

The CPS is a probability sample survey of approximately 47,000 households, conducted in 461 areas in 923 counties and independent cities in the 50 States and the District of Columbia.¹ Participation in the survey is voluntary and respondents, who reply for themselves and all other members of the household, are assured that all information obtained is completely confidential.

Although employment and unemployment statistics are collected every month in the CPS, earnings statistics have, so far, been collected only in March and May from responses to supplemental questions.

ANNUAL EARNINGS

The earnings questions asked in March relate to the amount of wages and salaries workers living in that household received during the previous calendar year. The amount of other income such as interest, dividends,

public assistance, and so on, also is collected at that time. All this income information, collected each year since World War II, is used by the Bureau of the Census to estimate the distribution of family and personal income. The estimates, covering about 100 million workers in 1974, are published regularly in the Census' *Current Population Reports*.²

From the wage and salary data, the BLS develops its series on gross annual earnings, after-tax annual earnings, and real after-tax annual earnings of household heads employed in production and nonsupervisory jobs in the private nonfarm sector—about 30 million workers in 1974.³

Wage and salary earnings represent money wages and salaries (thus excluding any payments in kind) received for work performed as an employee. They may take the form of wages, salaries, commissions, tips, piece-rate payments, and cash bonuses earned before deductions for taxes, bonds, pensions, union dues, and the like.

The precise wording of the questions which ultimately provide the wage and salary statistics for the BLS annual earnings series is as follows:

"Last year did . . . receive any money in wages and salaries?"

(If yes)

"How much did . . . receive before any deductions?"

March is considered the best month to obtain such information since knowledge of the prior year's income and earnings is usually relatively fresh in the respondents' minds because of the deadline for filing income tax returns in the following month.

WEEKLY AND HOURLY EARNINGS

The earnings questions asked each May relate to weekly and hourly earnings of employed wage and

² See "Money Income in 1974 of Families and Persons in the United States," *Current Population Reports: Consumer Income*, Series P-60, No. 101, January 1976.

³ See Robert L. Stein and Paul M. Ryscavage, "Measuring Annual Earnings of Household Heads in Production Jobs," *Monthly Labor Review*, April 1974, pp. 3-11, for a thorough discussion of the development of these earnings statistics. For more recent data, see Paul M. Ryscavage, "Annual Earnings of Household Heads," *Monthly Labor Review*, August 1975, pp. 14-21.

¹ For a discussion of the Current Population Survey and the collection of monthly employment and unemployment statistics, see ch. 1, "Labor Force, Employment, and Unemployment," *BLS Handbook of Methods*, Bulletin 1910 (Bureau of Labor Statistics, 1976), pp. 5-23.

salary workers, about 63 million in May 1976. Weekly earnings data are available for the 1967–76 period⁴. The collection of hourly earnings statistics from the CPS was begun in May 1973. A series of questions was added that month — and each May thereafter — to obtain the rates of pay of wage and salary workers paid by the hour (about 34 million in May 1976) as well as to derive the usual hourly earnings of all wage and salary workers.

The precise wording of the questions is as follows:

“How many hours per week does . . . usually work at this job?”

“How much does . . . usually earn per week at this job before deductions?”

“Is . . . paid by the hour on this job?”
(If yes)

“How much does . . . earn per hour?”

The time reference to which the term “usual” applies, — as in “usual weekly earnings” — is not specified in the survey. Thus, the reference period is that which the household respondent perceives as determining how much is “usually” earned, or what is the “usual” number of hours worked in a week. Presumably, asking for “usual” weekly earnings instead of earnings and hours in a specific week reduces the risk of obtaining data which, because of sudden fluctuations in hours and earnings (such as might be produced by a few days of bad weather), would not represent the typical earnings pattern. In addition, a person supplying information for other members of the household is more likely to know the usual amount of weekly earnings or hours than the actual amounts in a given week. On the other hand, for those workers who are paid by the hour, the term “usual” is not used, since respondents are likely to be familiar with the current hourly rate of pay.

The Bureau of the Census conducted a test in November 1975 to determine the usefulness of special questions focusing on earnings of workers who are not paid at either a weekly or hourly rate—for example, those paid at monthly or yearly rates, on a piecework basis, salary plus commissions, etc. Another test conducted in January 1977 was designed to compare the earnings reported in the CPS for a given number of workers with the payroll records of their employers. The results of these two tests are to be used by the Bureau of Labor Statistics and the Bureau of the Census to chart the future course for the collection of earnings data from the CPS.

⁴ See Paul O. Flaim, *Weekly and Hourly Earnings Data from the Current Population Survey*, Special Labor Force Report No. 195 (Bureau of Labor Statistics, 1977), for a comprehensive discussion of the merits and limitations of weekly and hourly earnings data.

BLS calculation procedures

ANNUAL EARNINGS

Upon receipt of the CPS annual March supplement tapes containing data on wage and salary earnings, BLS identifies and tabulates the earnings of all household heads whose longest civilian employment the year before was as a wage and salary worker in a production or nonsupervisory job. Household heads may be either husbands in husband-wife families, other male family heads, women who head families, or unrelated individuals, that is, persons who live alone or with persons other than relatives. Production and nonsupervisory workers, as defined in this earnings series, are those whose longest employment during the preceding year was in clerical, sales, blue-collar, or service (excluding private household jobs) occupations in the private nonfarm sector of the economy.

To calculate after-tax earnings, BLS deducts the appropriate Federal income and social security tax liabilities from the gross annual earnings of household heads, arrayed by household type and family size. Gross earnings are not adjusted for State and local taxes or other deductions.

Four assumptions are made for the calculations: (1) The wage and salary earnings of the household head are the only income of the household; (2) the number of family members is equivalent to the number of allowable personal exemptions; (3) all household heads use the standard deduction; and (4) husbands file joint returns, other male and female family heads file as heads of households, and unrelated individuals file as single individuals. Social security tax liabilities are calculated on the basis of the household head's gross annual earnings in the year. (It should be noted, with respect to assumption (1) however, that the data base is sufficiently detailed and flexible to permit the estimation of spendable earnings distributions for households where both husbands and wives are workers. Some developmental work along these lines has been initiated.)

To derive the real after-tax earnings of household heads, BLS deflates the after-tax earnings by the Consumer Price Index (1967 = 100).

Since data on the length of time worked in the preceding year also are obtained in the March CPS, it is possible to develop separate annual earnings information for those household heads who work full time (35 hours or more a week) year round (50 to 52 weeks a year).

Gross, after-tax, and real after-tax earnings are published by BLS in the form of medians.

WEEKLY AND HOURLY EARNINGS

The weekly and hourly earnings statistics collected in the May CPS, unlike the annual earnings statistics

just discussed, relate to all earners in all occupations. Weekly and hourly earnings statistics, however, are not adjusted for Federal income and social security tax liabilities by the BLS. They represent earnings at the gross level before deductions.

BLS tabulates medians and means for usual weekly earnings, usual hourly earnings, and hourly rates of pay. Usual weekly earnings and hourly rates of pay are obtained directly from responses to the May questions; usual hourly earnings must be calculated by dividing hours per week into usual weekly earnings.

Usual hourly earnings and the hourly rate of pay are different measures of hourly earnings. Usual hourly earnings approximate the average hourly earnings derived from establishment surveys and can be obtained for all wage and salary workers. The hourly rate of pay, on the other hand, approximates the wage rate, and is obtained only for wage earners who work at stipulated rates of pay per hour.

Analysis

ANNUAL EARNINGS

As mentioned at the outset, earnings statistics from the CPS are extremely useful for economic analysis because they can be cross-classified by a great number of personal characteristics of workers to determine the earnings levels and trends of specific population groups (i.e., household heads, youths, blacks, etc.) As shown in figure 24, levels of gross, after-tax, and real after-tax earnings vary widely by type of household head. Husbands tend to have the highest earnings among all household heads employed in production and nonsupervisory jobs, followed, in descending order, by other male heads of families, unrelated individuals, and women who head families.

Obviously, among the 30 million household heads in production and nonsupervisory jobs, some work more during the course of the year than others. For example, the majority of husbands work full time, year round, whereas only slightly more than half of the women who head families and half of the unrelated individuals work full time, year around.

Between 1963 and 1974, inflation, and to some extent higher taxes, eroded gains in gross annual earnings. For all household heads employed in production and nonsupervisory jobs gross annual earnings rose from \$5,040 in 1963 to \$8,865 in 1974 or at a compound annual rate of 5.3 percent. After adjusting these earnings for increases in Federal income and social security taxes and consumer prices, the compound annual rate of increase in real after-tax earnings amounted to only 0.5 percent. Annual gains in real after-tax earnings for husbands (1.3 percent) were significantly

greater than those for all household heads, but gains for unrelated individuals and women who head families were significantly less (0.5 and 0.6 percent, respectively).

WEEKLY EARNINGS

The usual weekly earnings statistics published by the BLS provide earnings information for a much wider spectrum of wage and salary workers than the annual earnings statistics just discussed.⁵

As shown in figure 25, usual weekly earnings of all wage and salary workers were \$169 in May 1976, up from \$100 in May 1967, an annual rate of gain of 6.0 percent. Among male heads of households who work full time (35 hours or more a week), usual weekly earnings rose from \$131 in May 1967 to \$245 by May 1976, an annual rate of increase of 7.2 percent. During the same period, wives and other relatives of family heads earned lower weekly pay than male heads, and their weekly earnings rose somewhat more slowly.

Usual weekly earnings can be analyzed for many other groups of workers. For example, figure 25 shows that black men, working full time, have substantially lower weekly earnings than white men, but black women have earnings nearly as high as their white counterparts. Among occupational groups, managers, professionals, and craft workers have the highest weekly earnings; private household and farm workers have the lowest. Statistics of earnings by age group show that older workers generally earn more than younger workers.

Although not shown in figure 25, usual weekly earnings are also available for various educational, industrial, and regional groupings of workers as well as for part-time workers, and even for some workers who were unemployed at the time of the survey.

HOURLY EARNINGS

Figure 26 presents some statistics on usual hourly earnings and hourly rates of pay for the Nation as a whole and for the manufacturing industry, cross-classified by race-sex groups. This table also illustrates how CPS earnings statistics can be disaggregated.

About one-half of all employed wage and salary workers (about 34 million in 1976) are reported in the CPS as being paid at an hourly rate (as opposed to a weekly, monthly, or annual rate of pay). Hourly workers tend to be employed in blue-collar occupations in the goods-producing sector of the economy. In May 1976, the median hourly rate of pay for these wage and

⁵ See Paul O. Flaim and Nicholas I. Peters, "Usual Weekly Earnings of American Workers," *Monthly Labor Review*, March 1972, pp. 28-38 for a comprehensive analysis of these data for the year 1971. For a review of the trends in these data between May 1967 and May 1975, see John Stinson and Thomas Bradshaw, "An Analysis of Trends in Weekly Earnings of American Workers," *Monthly Labor Review*, August 1975, pp. 22-32.

salary workers was \$3.55, compared with \$3.39 in May 1975 and \$3.20 in May 1974. Yearly increases in percentage terms amounted to 5.9 percent between 1974 and 1975 and 4.7 percent between 1975 and 1976.

White male workers in manufacturing have the highest hourly rate of pay among the race-sex groups—\$5.05 an hour in May 1976. The hourly rate of pay of black men was about 12 percent lower, while for black and white women employed in manufacturing, the hourly rates of pay were about 35 to 40 percent lower.

These earnings statistics could have been disaggregated by other demographic characteristics. For example, it is possible to examine the hourly rates of pay for full-time and part-time workers in all industries combined.

Usual hourly earnings, which relate to all wage and salary workers, are generally higher than hourly rates of pay because they include the earnings of more highly paid salaried workers. As shown, in figure 26, usual hourly earnings for all wage and salary earners rose from \$3.71 in May 1974 to \$4.02 in May 1975 and \$4.26 in May 1976.

Uses

Annual earnings statistics of household heads in production and nonsupervisory jobs, developed from the March CPS, provide some indication of long-run trends in earnings of rank-and-file workers. In addition, the demographic orientation of the CPS and the design of the data base make it possible to gauge the progress made by heads of households of different types and sizes.

Usual weekly earnings, usual hourly earnings, and hourly rates of pay, developed from the May CPS, on the other hand, are more useful in observing the impact of recent economic activity on the earnings of the various demographic groups in the Nation. These statistics not only are more comprehensive in their coverage, but are available more quickly from the Bureau of the Census and, therefore, are more useful for current analysis.

Earnings information from the CPS, whether from the March or May surveys, also are useful in interpreting changes in other measures of earnings. Because CPS statistics can be disaggregated, they can help determine whether changes in some broad measure of earnings result from changes in compensation or simply from shifts in the demographic composition of the work force.

Lastly, CPS earnings statistics are useful in research designs requiring micro-oriented data bases.⁶ Since the earnings statistics of individual workers and their

demographic characteristics are contained on the same computer tape record, information can be tabulated according to any specification and used in more sophisticated statistical routines such as multiple regression analysis.

Limitations

CPS earnings statistics are, however, subject to important limitations. In obtaining earnings data through a household survey, some reliability is sacrificed. Earnings derived from a sample of households are subject to error because: 1) the household respondent may incorrectly report his or her earnings and the earnings of other members of the household; 2) the respondents may refuse to report the earnings and this nonreporting may be more common among some groups than others; and 3) the earnings averages estimated from a sample of workers may differ from those averages obtained through a complete census of workers.

The error due to misreporting earnings is difficult to quantify. Obviously, in many cases, the household respondent's memory serves as the only source of earnings information. The Bureau of the Census attempts to minimize the errors associated with faulty memories by scheduling the questions on annual income and earnings for the March survey. The deadline for filing income tax returns is then less than a month away, and respondents should at this time be fairly familiar with the earnings they or other members of the household received in the previous year. With respect to the May survey, the Bureau of the Census asks respondents for their "usual" amount of weekly earnings in contrast to their actual earnings. Presumably, respondents are more likely to know the general level of earnings rather than the actual amount for a particular week. On the other hand, it is assumed that the respondents would have a much firmer idea as to what the hourly rate of pay is for those workers paid by the hour, since it is this rate for which the worker has contracted his or her labor.

The nonreporting of earnings in both the March and May surveys is another source of potential error which is difficult to quantify. Error due to nonresponse can be large if the nonreporting of earnings is clustered at one end of the earnings distribution. In the March survey, the nonresponse rate on the earnings question has ranged from about 6 percent to 11 percent during the past several years. In the May survey, the nonresponse rate on the weekly earnings question has ranged from about 16 to 20 percent over the 1967-76 period, and the nonresponse rate on the hourly rate of pay question has been somewhat lower, 14 percent in 1976. To lessen the degree of error that can arise because of nonresponse,

⁶ Usual hourly earnings statistics have recently been used (at the micro-level) in an analysis of union-nonunion earnings differentials. See Paul M. Ryscavage, "Measuring Union-Nonunion Earnings Differences," *Monthly Labor Review*, December 1974, pp. 3-9.

the Bureau of the Census generally imputes earnings to those workers for whom no earnings were reported; the basis of the imputation is the earnings of workers with characteristics similar to those who did not report earnings. This procedure is currently used with the data derived from the March survey, but not with the findings from the May survey.

Since the CPS is based upon a scientifically drawn probability sample, measures of sampling variability, such as the standard error, can be calculated and are presented below for earnings obtained from both surveys. These errors show the amount of variation that occurs by chance because only a sample of the population is surveyed rather than the whole universe. In terms of income and earnings, the standard error also partially measures the effect of those response and enumeration errors which occur at random. It does not, however, measure the impact of any systematic bias such as a possible tendency on the part of a majority of respondents to underreport earnings. Provided there is no such systematic bias, an estimate based on a sample of the population should not, in two out of three cases, on average, differ from one based on a complete survey of the universe by more than one standard error.

Standard errors have been calculated on the median gross annual earnings in 1973 of the four groups of household heads discussed above, as follows:

	<i>Median</i>	<i>Standard error</i>
Husbands	\$9,859	\$ 50
Other male family heads	8,117	280
Female family heads	4,205	125
Unrelated individuals	5,281	75

Since estimates of median after-tax and median real after-tax earnings are derived from the actual median gross annual earnings collected in the survey, standard errors can only be approximated for these data. As a rough approximation, the relationship between the error and the median at the gross level can be applied to the median after-tax and median real after-tax earnings levels.

For the May data on earnings, the standard errors associated with some of the largest numbers for 1975 were estimated by the Bureau of the Census to be of the following magnitudes:

	<i>Median</i>	<i>Standard error</i>
Usual weekly earnings of all wage and salary workers	\$161.00	\$0.60
Usual weekly earnings of full-time wage and salary workers	185.00	.80
Hourly rates of pay of wage and salary workers paid by the hour	3.39	.02
Usual hourly earnings of all wage and salary workers	4.02	.02

The standard errors on the median earnings from the March and May survey, then, provide some measure of the extent of the error associated with earnings statistics obtained through the CPS.

In sum, while obtaining estimates of workers' earnings through a household survey such as the CPS involves some imprecision, this handicap must be viewed in light of the fact that the CPS is the only regular source of earnings statistics which provides a wealth of demographic detail.

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Figure 24

Median annual earnings of household heads employed in production and nonsupervisory jobs, 1963-74

Group	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	Annual average percent change ¹
All household heads:													
Gross earnings	\$5,040	\$5,199	\$5,409	\$5,693	\$5,948	\$6,342	\$6,739	\$6,956	\$7,271	\$7,823	\$8,430	\$8,865	5.3
After-tax earnings	4,385	4,597	4,815	4,980	5,173	5,431	5,697	5,889	6,245	6,763	7,153	7,485	5.0
Real after-tax earnings . . .	4,782	4,948	5,095	5,123	5,173	5,212	5,189	5,064	5,148	5,397	5,374	5,068	0.5
Husbands:													
Gross earnings	5,418	5,681	5,989	6,322	6,611	7,105	7,626	7,876	8,272	8,947	9,859	10,408	6.1
After-tax earnings	4,741	5,047	5,356	5,549	5,772	6,103	6,465	6,696	7,130	7,730	8,353	8,775	5.8
Real after-tax earnings . . .	5,170	5,433	5,668	5,709	5,772	5,857	5,888	5,758	5,878	6,169	6,276	5,941	1.3
Other male family heads:													
Gross earnings	4,686	4,745	5,009	5,043	5,612	5,756	6,449	6,620	6,786	7,113	8,117	8,121	5.1
After-tax earnings	3,988	4,131	4,400	4,385	4,832	4,909	5,382	5,751	5,774	6,521	6,840	6,861	5.1
Real after-tax earnings . . .	4,349	4,447	4,656	4,511	4,832	4,711	4,902	4,945	4,760	5,204	5,139	4,645	0.6
Female family heads:													
Gross earnings	2,685	2,753	2,814	2,933	3,223	3,377	3,482	3,614	3,866	4,058	4,205	4,629	5.1
After-tax earnings	2,427	2,501	2,575	2,661	2,913	3,029	3,096	3,220	3,449	3,728	3,813	4,165	5.0
Real after-tax earnings . . .	2,647	2,692	2,725	2,738	2,913	2,907	2,820	2,769	2,843	2,975	2,865	2,820	0.6
Unrelated individuals:													
Gross earnings	3,403	3,320	3,502	3,741	3,901	4,115	4,220	4,493	4,686	4,933	5,281	5,682	4.8
After-tax earnings	2,778	2,782	2,960	3,128	3,246	3,375	3,426	3,615	3,866	4,197	4,430	4,726	4.9
Real after-tax earnings . . .	3,029	2,994	3,132	3,218	3,246	3,239	3,120	3,108	3,187	3,350	3,328	3,200	0.5

¹ Reflects compounded rates of change for 1963-74 period.

Figure 25

Table 1. Median usual weekly earnings of wage and salary workers, by selected characteristics, in current dollars, May 1967-May 1976

Characteristic	May 1967	May 1969	May 1970	May 1971	May 1972	May 1973	May 1974	May 1975	May 1976	Average annual percent change ^{1/}
ALL WAGE AND SALARY WORKERS										
Total.....	\$100	\$111	\$118	\$124	\$130	\$140	\$151	\$161	\$169	6.0
FULL-TIME WAGE AND SALARY WORKERS										
Total.....	109	121	130	138	144	159	169	185	197	6.8
Household status:										
Male head of household.....	131	147	158	170	175	198	214	231	245	7.2
Male relative of head.....	88	101	105	108	111	122	131	136	144	5.6
Male nonrelative of head.....	104	119	121	131	135	147	157	160	174	5.9
Female head of household.....	81	91	100	106	114	124	134	149	156	7.6
Wife of head.....	79	87	95	101	108	117	126	139	147	7.1
Female relative of head.....	72	79	85	89	93	99	105	115	121	5.9
Female nonrelative of head.....	69	84	89	95	105	110	115	138	144	8.5
Sex and age:										
Male, 16 years and over.....	125	142	151	162	168	188	204	221	234	7.2
16 to 24 years.....	97	108	112	114	118	136	146	149	159	5.6
25 years and over.....	131	148	160	172	178	203	219	235	251	7.5
Female, 16 years and over.....	78	86	94	100	106	116	124	137	145	7.1
16 to 24 years.....	74	82	88	91	96	103	111	117	125	6.0
25 years and over.....	79	88	96	103	110	121	131	146	154	7.7
Race and sex:										
White, total.....	113	125	134	142	149	162	173	190	202	6.7
Male.....	130	146	157	168	172	193	209	225	239	7.0
Female.....	79	88	95	102	108	117	125	138	147	7.1
Black and other, total.....	79	90	99	107	115	129	140	156	162	8.3
Male.....	90	104	113	123	129	149	160	173	187	8.5
Female.....	63	73	81	87	99	107	117	130	138	9.1
Occupation:										
Professional and technical workers.....	145	167	181	189	192	212	228	246	256	6.5
Managers and administrators, except farm.....	164	178	190	200	214	238	250	274	289	6.5
Sales workers.....	113	123	133	141	151	163	172	189	198	6.4
Clerical workers.....	91	102	109	115	121	130	140	150	158	6.3
Craft and kindred workers.....	131	146	157	167	172	195	211	223	239	6.9
Operatives, except transport ^{2/}	--	--	--	--	119	132	141	157	162	8.0
Transport equipment operatives ^{2/}	--	--	--	--	152	169	180	198	214	8.9
Nonfarm laborers.....	93	106	110	117	122	138	149	154	161	6.3
Private household workers.....	32	34	38	38	40	39	50	54	60	7.2
Other service workers.....	75	82	87	96	104	111	117	123	134	6.7
Farm workers.....	58	66	71	74	80	96	107	111	120	8.4

^{1/} Reflects compounded rates of change for 1967-1976 period.^{2/} Separate data for these two groups not available prior to 1972.

Figure 26

Median usual hourly earnings and hourly rates of pay of wage and salary workers in the manufacturing industry, by race-sex group, May 1974, May 1975, and May 1976

Group	Usual hourly earnings					Hourly rates of pay				
	Amount			Percent change		Amount			Percent change	
	May 1974	May 1975	May 1976	1974 to 1975	1975 to 1976	May 1974	May 1975	May 1976	1974 to 1975	1975 to 1976
All industries	\$3.71	\$4.02	\$4.26	8.4	6.0	\$3.20	\$3.39	\$3.55	5.9	4.7
Manufacturing	4.06	4.61	4.78	13.5	3.7	3.71	4.16	4.29	12.1	3.1
White:										
Male	4.81	5.34	5.59	11.0	4.7	4.33	4.77	5.05	10.2	5.9
Female	2.97	3.27	3.41	10.1	4.3	2.81	3.06	3.21	8.9	4.9
Black and other:										
Male	3.85	4.54	4.65	17.9	2.4	3.76	4.34	4.45	15.4	2.5
Female	2.70	3.00	3.10	11.1	3.3	2.58	2.90	2.93	12.4	1.0

Chapter 7. Wages of Workers Covered by Unemployment Insurance Programs

Employment and wage data for workers covered by State unemployment insurance (UI) laws and for Federal civilian workers covered by the program of Unemployment Compensation for Federal Employees (UCFE) provide a virtual census of workers and their wages in private nonagricultural employment and in the Federal Government. As of the first quarter of 1975, almost 81 percent of State government employees, 20 percent of local government employees, and 5 percent of agricultural workers were covered. Beginning in 1978, all State and local government employees will be included.

The data are compiled by State employment security agencies from quarterly tax reports submitted by employers subject to UI laws and by Federal installations covered by UCFE programs. More than 3.9 million employers in private industry and about 34,000 reporting units of the Federal Government submitted reports in the first quarter of 1975, covering about 64 million workers and representing \$165.1 billion in total quarterly wages. State employment security agencies - in the 50 States, the District of Columbia, and Puerto Rico - summarize the data from these reports and transmit them quarterly to the Bureau of Labor Statistics (BLS). The BLS, in turn, summarizes and publishes the data quarterly in *Employment and Wages*.

Background

When the Federal Unemployment Insurance Tax Act first became effective in January 1938, it applied only to firms employing at least eight persons in 20 weeks in a calendar year and excluded certain categories of workers. Amendments to the Social Security Act extended coverage to Federal civilian employees on January 1, 1955, and to workers in firms employing four to seven workers on January 1, 1958.

In 1958, the Unemployment Compensation for Ex-servicemen (UCX) program, covering a significant portion of men and women who had served in the Armed Forces, became effective. Earlier programs for former service personnel had been temporary.

Over the years many States, through changes in State legislation, have provided unemployment insurance protection to additional categories of workers above the base established through Federal legislation.

Federal legislation effective January 1, 1972, extended UI coverage in 28 States to firms employing one or more workers, and expanded some statutory coverage provisions. The remaining States had expanded coverage for small employers before the Federal minimum requirement was passed. These amendments as well as additional changes in State legislation have broadened the base of workers protected by UI to 4 out of 5 workers.

Data on employment and wages of workers covered by UI have been published quarterly since 1950. Earlier reports were issued semiannually beginning with 1938.

Description of data

TOTAL WAGES

Total wages, as reported on the quarterly contribution report of employers in private industry covered by State UI laws, are, in most States, the total compensation paid by the employer during the quarter for services performed, whether or not they were performed during the calendar quarter. A few State laws specify that the wages reported shall be on a payable basis, i.e., for services performed during the quarter. Under most State laws or regulations, wages include bonuses, the cash value of meals and lodging when supplied, and tips and other gratuities.

Employer contributions for old-age, survivors', disability, and health insurance (OASDHI), unemployment insurance, workers' compensation, and private pension and welfare funds are not reported as wages. On the other hand, employee contributions for the same purposes, as well as money withheld for income taxes, union dues, etc., are reported even though they are deducted from the worker's gross pay.

Wages of Federal workers represent the gross amount of all payrolls for all periods ending within the quarter, including cash allowances, the cash equivalent of any type of remuneration, and all payments for sick leave, lump-sum payments for terminal leave, withholding taxes, and civil service retirement deductions. Federal employee remuneration generally covers the same types of services as those for workers in private industry. Depending upon the method used by the Federal agency in preparing its quarterly summary balance (cash or accrual basis), the gross amount of payrolls is either paid or payable.

TAXABLE WAGES AND CONTRIBUTIONS

Taxable wages, that part of wages subject to the State UI tax, and contributions paid on such wages, also are reported quarterly.

State law, which has varied substantially over time, determines the portion of wages subject to taxation. In all but five States, an employer pays contributions on only the first \$4,200 of an employee's annual wage. In 25 States, employers may obtain lower tax rates by contributing voluntarily to the unemployment fund. Three States—Alabama, Alaska, and New Jersey—also accept contributions from employees. Such contributions are not identified separately.

Under Federal law, certain units of State and local government after 1942 and certain nonprofit establishments in the private sector after 1972 could reimburse the State to which they were liable for any claims filed against them. For these reimbursable accounts, which are not subject to quarterly assessments, and for accounts under UCX and UCFE, the taxable wage item would not be reported.

WORKERS COVERED

Private industry. Employment data, as reported quarterly by employers in private industry, represent the number of workers earning wages during the pay period including the 12th of the month. The pay period will vary in both date and length from employer to employer. For most employers, the payroll period is a 7-day period, not necessarily a calendar week. An employer who pays on more than one basis (such as production employees weekly and office employees semimonthly) reports the total number of workers on each type of payroll for the appropriate period.

The count of workers in private industry includes all corporation officials, executives, supervisory personnel, clerical workers, wage earners, persons on paid vacations, piece workers, and part-time workers. Since the employment count is based on individual establishments, workers are reported as working in the State of the physical location of their job.

Persons on paid sick leave, paid holiday, paid vacation, and so forth, are included, but those on leave without pay for the entire payroll period are excluded. Persons on the payroll of more than one establishment during the period are counted each time reported. Workers are counted even though, in the latter months of the year, their wages may not be subject to the unemployment insurance tax. The employment count excludes the following: (1) Workers who earned no wages during the entire applicable pay period because of strikes or work stoppages, temporary layoffs, illness, or unpaid vacations; (2) workers who earned wages during the month but earned no wages during the

applicable pay period; and (3) proprietors, the self-employed, unpaid family workers, most farm workers, and most domestics in private households.

State and local government employees. Federal legislation, according to provisions of PL 91-373, now requires States to cover employees in State-owned and operated hospitals and State institutions of higher education. In addition, UI laws of 42 States provide coverage for some portion of State and local government employees, although some States do not implement these laws. In 21 States coverage is mandatory for all State employees, and in 2 States coverage is mandatory for both State and local government workers. In the remaining States only 25 percent of all State and local government employees are now covered. Complete coverage will begin in 1978.¹

Federal employees. Employment data for Federal civilian employees are a byproduct of the operations of State employment security agencies in administering provisions of Title XV of the Social Security Act—the program of Unemployment Compensation for Federal Employees.

In government, the equivalent of a reporting unit is an "installation" and the organization of which it is a part, i.e., the department, agency, or instrumentality responsible for an activity of government, is the employer (firm equivalent). A Federal installation is a single physical location at which an organizational unit of a Federal department or agency has civilian employment.

Data are based on reports of monthly employment submitted each quarter to State agencies for all installations of Federal agencies having employees covered by the act, except the Central Intelligence Agency and the National Security Agency, which are omitted for security reasons.

The Department of Defense (except units paid from nonappropriated funds) submits data under a special arrangement. In lieu of quarterly reports, installations of the Departments of Army, Navy, Air Force, and other Defense units submit monthly reports to State agencies covering each installation with 101 employees or more. Quarterly data for all installations including those with fewer than 101 employees are reported directly to the BLS, which then transmits the figures to the States for inclusion in the Department of Defense totals.

As in private industry, the employment count in any given month for all agencies (except the Department of Defense) is based on the number on the payroll for the

¹ Details on coverage are provided in *Comparisons of State Unemployment Insurance Laws*, available on request from the Employment and Training Administration - UI Service, U.S. Department of Labor, Washington, D.C. 20213.

period including the 12th of the month. The count in installations of the Department of Defense includes persons employed on the last workday of the month plus all intermittent employees during the month. Intermittent workers are those employed occasionally at any time during the month.

Classification of data

Reporting units which are summarized to produce the aggregate statistics are classified individually according to several attributes—industrial economic activity, geographic location, and employment size interval. Such classification enables tabulation of data for any combination of these attributes. However, the accuracy of the resulting aggregates depends on both the validity of the classifications and the proper definition of the reporting unit.

Reporting unit. An establishment is defined as a single physical location at which one, or predominantly one type of economic activity is performed. Most employers covered under UI laws operate only one place of business. In such instances the establishment, the reporting unit, and the employer are identical. State agencies request employers who operate at two or more locations and employ more than 50 workers in all secondary locations to identify separately the employment and payrolls of each location. To the extent that State agencies have successfully obtained employer cooperation, reporting units and establishments of such employers are identical. When multi-establishment employers do not furnish this breakdown, employment and payrolls for secondary locations are combined with the primary location as one reporting unit. Also, particularly in industries characterized by small branch establishments (e.g., food stores, drug stores, banks), employers may combine all branch establishments in a county as a single reporting unit.

In contrast to reporting by private industry, Federal agencies may combine as a single statewide reporting unit (a) all installations of 10 or fewer workers or (2) all installations which have fewer than 50 workers. Also, fewer than 25 workers in all secondary installations in a State may be reported with the major installation. Because of these procedures, the number of reporting units is always larger than the number of employers (or government agencies) but is smaller than the number of establishments (or installations).

Industry. Each of these reporting units is assigned an industrial code on the basis of its principal activity according to the *Standard Industrial Classification Manual*. Detail of classification has varied over time. Presently, almost all States assign a 4-digit code to all

reporting units, using “nature of business” information collected every 3 years. The possibility that a reporting unit comprises several establishments is also determined from this information.

Location. In most States each reporting unit is assigned the county code of its location, or its principal location, according to the criteria delineated above. In some industries, however, the degree to which small establishments have been lumped into one reporting unit does affect the county aggregates of these reporting units.

Employment size. Reporting units also are classified by employment into nine size classes in the first quarter of each year. Except for nonprofit organizations of fewer than four employees, the actual business population is accurately represented by the size class distribution.

Presentation

Employment and Wages, a quarterly BLS publication, contains national aggregates of employment and wage data to the 3-digit industry level (figure 27). The data also are distributed by State and region for important industry groups (figure 28). Because of space limitations, BLS does not publish State and regional data for all industry detail but such information may be requested for specific industries. Publications for the first quarter of each year include national totals for 4-digit manufacturing industries. Employment and wage data also are tabulated for Federal workers by agency and, for the largest agencies, by State.

Except for 3 years (1964–66), tabulations are published for the first quarter of each year from 1959 to the present to show the distribution of employment and wages by employment size class of reporting unit for each major industry division within each State and for 2-, 3-, and 4-digit (manufacturing) reporting units for the United States as a whole.

Many State agencies either publish or have figures available on covered employees and wages by county and for important local labor areas. A number of agencies can furnish such data for detailed industries within the industry groups for which totals are shown. Requests for such detail should be made directly to the State employment security agencies listed in chapter 5.

DISCLOSURE RESTRICTIONS

To preserve the anonymity of establishments, the BLS withholds release of employment and wage data for any industry level containing fewer than three reporting units. A State may request that data also be withheld for any industry level if (1) the “fewer than three” rule would not prevent disclosure of information

relating to an individual reporting unit and (2) a single installation or establishment accounts for over 80 percent of the industry.

Uses and limitations

Data produced by this program represent the largest universe of monthly employment and quarterly wage information by industry, county, and State regularly available. In addition to their basic use in administering the UI laws, they have broad economic significance in evaluating labor trends and major industry developments, both for the Nation as a whole and for individual States.

Private employer contribution reports and government reports provide data for administering State UI programs. Private industry employment data reflect the extent of UI coverage of individual State laws, and corresponding wage data provide a basis for estimating the future flow of income into State UI funds. The revenue for these funds is derived from a tax on payrolls of covered private employers. Actuarial studies and evaluation of the financial solvency of State UI funds must take into account employment and payroll fluctuations, and the State's industrial composition.

Other organizations use these data, either independently or in cooperation with the BLS and the State agencies, to prepare other statistical series. For example, the Bureau of Economic Analysis, Department of Commerce, uses State UI wage data as the major wage and salary component of national income and its distribution by State. In addition, State UI data are used to estimate that part of wage and salary supplements accounted for by employer contributions to State UI funds, as well as the Federal employer taxes paid for OASDHI.

Data on wages and average employment of both private and Federal workers are used to calculate, with reasonable accuracy, average weekly wages of covered workers. The average weekly wage is computed by dividing total wages for the year by 52 to derive a figure on wages paid during the average week of the year. This figure is then divided by the corresponding figure on average monthly employment. Similarly, quarterly wages are divided by 13. This procedure assumes that "average monthly employment" is approximately the same in an average week, since pay periods for which employment is reported are in most cases single weeks.

Caution should be exercised in using these average weekly wages, particularly those developed from quarterly total wages. The wage data for quarters may be affected by strikes, bonus payments (usually in the October-December quarter), retroactive payments, and the influx of young summertime workers in the July-

September quarter. The average weekly wage per covered worker will not measure precisely the average annual or quarterly wage of workers, since such averages would be overstated due to the effect of labor turnover, short-time jobs, etc. The number of different workers employed at one time or another during an entire quarter or year, and hence sharing in the wages paid for the quarter or year, is substantially larger than the average number employed in the pay periods including the 12th of each month of the quarter or year. More extensive data on annual per capita earnings of workers can be obtained from individual continuous work history tabulations prepared by the Social Security Administration (see chapter 8) and from special studies prepared by some State employment security agencies from their files.

LIMITATIONS OF COVERAGE

In analyzing and comparing UI data geographically and over time, the effects of nonuniform coverage of the UI laws among States must be taken into consideration, particularly for periods prior to 1972. Starting in 1972, Federal legislation extended coverage to practically all private nonagricultural employers of one or more employees in all States. Beginning in 1978, coverage will be extended to include employees of State and local governments, agricultural laborers of larger firms, and domestic workers. Major groups of workers still not covered by Federal requirements will be self-employed workers, agricultural laborers of smaller firms, and employees of private educational institutions and religious organizations.

Excluded from private industry coverage during January-March 1975 were approximately 1.0 million agricultural workers, 1.6 million self-employed farmers, 5.4 million self-employed nonagricultural workers, 1.3 million domestic workers, 1.3 million employees of nonprofit religious, charitable, medical, scientific, and educational institutions, 0.7 million unpaid family workers, and 0.6 million workers covered by the railroad unemployment insurance system.

In addition, 7.8 million State and local government workers were not protected by unemployment compensation laws. Also excluded from the data were 2.2 million members of the Armed Forces.

RELIABILITY

Because the data comprise a universe count of employees covered by UI, the report is not subject to sampling variability. Error sources, of course, do exist. One of the most important arises from the need to estimate delinquent accounts — estimates may be required for as many as 10 percent of the total reporting units in a State. Another source of error is the lack of

adequate information on which to base industrial classification of establishments. Efforts are being made to lessen the error arising from these sources.

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Figure 27

INDUSTRY DETAIL U.S. TOTALS

Table C-1. Private industry, monthly employment and quarterly wages, first quarter 1975

INDUSTRIAL CODE AND TITLE	EMPLOYMENT			QUARTERLY WAGES (IN 000S)
	JANUARY	FEBRUARY	MARCH	
PRIVATE INDUSTRY TOTAL.....	59,973,274	59,253,591	59,335,708	\$141,550,601
AGRICULTURE, FORESTRY, AND FISHERIES.....	277,427	270,490	284,310	478,484
01 COMMERCIAL FARMS.....	54,972	54,054	57,673	108,561
011 FIELD CROP FARMS.....	8,798	8,778	8,468	24,893
012 FRUIT, TREE NUT, AND VEGETABLE FARMS.....	15,879	15,641	17,284	29,344
013 LIVESTOCK FARMS.....	8,002	7,915	7,946	13,673
014 GENERAL FARMS.....	5,608	4,669	5,616	9,924
019 MISCELLANEOUS COMMERCIAL FARMS.....	16,685	17,051	18,359	30,726
07 AGRICULTURAL SERVICES AND HUNTING AND TRAPPING.....	199,433	193,530	202,950	316,823
071 AGRICULTURAL SERVICES, EXCEPT ANIMAL HUSBANDRY AND HORTICULTURAL SERVICES.....	32,622	30,717	33,293	54,358
072 ANIMAL HUSBANDRY SERVICES.....	94,692	93,374	94,651	135,132
073 HORTICULTURAL SERVICES.....	71,767	69,114	74,691	126,872
074 HUNTING AND TRAPPING, AND GAME PROPAGATION.....	352	325	315	462
08 FORESTRY.....	10,511	10,474	10,676	19,803
081 TIMBER TRACTS.....	4,174	4,234	4,113	9,472
082 FOREST NURSERIES AND TREE SEED GATHERING AND EXTRACTING...	836	858	845	1,367
084 GATHERING OF GUMS AND BARKS.....	51	52	53	78
085 FORESTRY SERVICES.....	5,368	5,230	5,569	8,745
086 GATHERING OF FOREST PRODUCTS, NOT ELSEWHERE CLASSIFIED....	82	100	96	140
09 FISHERIES.....	12,511	12,432	13,011	33,296
091 FISHERIES.....	11,208	11,125	11,625	31,054
098 FISHERY SERVICES.....	1,303	1,307	1,386	2,243
MINING.....	731,908	730,852	735,193	2,543,516
10 METAL MINING.....	96,391	94,790	93,026	323,946
101 IRON ORES.....	23,452	23,501	23,516	85,717
102 COPPER ORES.....	43,239	41,589	39,798	145,152
103 LEAD AND ZINC ORES.....	8,300	8,308	8,361	24,836
104 GOLD AND SILVER ORES.....	3,617	3,661	3,726	10,658
105 BAUXITE AND OTHER ALUMINUM ORES.....	469	471	471	1,525
106 FERROALLOY ORES, EXCEPT VANADIUM.....	4,587	4,623	4,617	15,606
108 METAL MINING SERVICES.....	4,125	3,960	3,818	12,965
109 MISCELLANEOUS METAL ORES.....	8,602	8,677	8,719	27,487
11 (111) ANTHRACITE MINING.....	3,565	3,568	3,618	9,982
12 (121) BITUMINOUS COAL AND LIGNITE MINING.....	197,033	198,346	201,589	753,632
13 CRUDE PETROLEUM AND NATURAL GAS.....	324,972	325,969	326,828	1,154,568
131 CRUDE PETROLEUM AND NATURAL GAS.....	150,586	151,324	151,825	615,094
132 NATURAL GAS LIQUIDS.....	3,982	3,984	4,006	14,857
138 OIL AND GAS FIELD SERVICES.....	170,404	170,661	170,997	524,617
14 MINING AND QUARRYING OF NONMETALLIC MINERALS, EXCEPT FUELS..	109,947	108,179	110,132	301,387
141 DIMENSION STONE.....	3,834	3,782	3,814	8,337
142 CRUSHED AND BROKEN STONE, INCLUDING RIPRAP.....	37,925	37,151	37,761	100,466
144 SAND AND GRAVEL.....	32,328	31,259	32,155	85,141
145 CLAY, CERAMIC, AND REFRACTORY MINERALS.....	7,794	7,704	7,700	19,850
147 CHEMICAL AND FERTILIZER MINERAL MINING.....	23,001	23,118	23,468	74,114
148 NONMETALLIC MINERALS (EXCEPT FUEL) SERVICES.....	705	723	718	2,107
149 MISCELLANEOUS NONMETALLIC MINERALS, EXCEPT FUELS.....	4,360	4,442	4,516	11,372
CONTRACT CONSTRUCTION.....	3,341,833	3,224,889	3,240,254	9,674,451
15 (151) BUILDING CONSTRUCTION--GENERAL CONTRACTORS.....	1,044,703	1,003,932	1,002,157	2,929,167
16 CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION--GENERAL CONTRACTORS.....	603,225	591,627	605,450	1,927,687
161 HIGHWAY AND STREET CONSTRUCTION, EXCEPT ELEVATED HIGHWAYS.....	219,751	213,017	221,333	633,023
162 HEAVY CONSTRUCTION, EXCEPT HIGHWAY AND STREET CONSTRUCTION.....	383,474	378,610	384,117	1,294,664
17 CONSTRUCTION--SPECIAL TRADE CONTRACTORS.....	1,693,905	1,629,330	1,632,647	4,817,596
171 PLUMBING, HEATING, AND AIR CONDITIONING.....	435,119	421,091	415,921	1,348,985
172 PAINTING, PAPER HANGING, AND DECORATING.....	104,439	100,311	101,580	251,605
173 ELECTRICAL WORK.....	331,149	319,965	317,193	1,085,513
174 MASONRY, STONEWORK, TILE SETTING, AND PLASTERING.....	177,815	169,817	173,220	422,016
175 CARPENTERING AND WOOD FLOORING.....	91,165	86,915	87,238	206,305
176 ROOFING AND SHEET METAL WORK.....	116,633	109,689	111,555	279,817
177 CONCRETE WORK.....	69,769	65,743	68,852	161,262
178 WATER WELL DRILLING.....	15,717	15,218	15,372	36,630
179 MISCELLANEOUS SPECIAL TRADE CONTRACTORS.....	352,099	340,581	341,716	1,025,463
MANUFACTURING.....	18,570,048	18,232,609	18,102,250	50,649,776
19 ORDNANCE AND ACCESSORIES.....	179,063	177,245	175,752	636,071
191 (1911) GUNS, HOWITZERS, MORTARS, AND RELATED EQUIPMENT....	2,534	2,508	2,481	8,055
192 AMMUNITION, EXCEPT FOR SMALL ARMS.....	133,588	131,798	130,139	494,362
1925 GUIDED MISSILES AND SPACE VEHICLES, COMPLETELY ASSEMBLED.....	100,091	99,366	98,517	412,110
1929 AMMUNITION, NOT ELSEWHERE CLASSIFIED.....	33,497	32,432	31,622	82,252
193 (1931) TANKS AND TANK COMPONENTS.....	5,573	5,670	5,808	18,799
194 (1941) SIGHTING AND FIRE CONTROL EQUIPMENT.....	5,316	5,271	5,271	20,174
195 (1951) SMALL ARMS.....	15,591	15,781	15,956	45,770
196 (1961) SMALL ARMS AMMUNITION.....	12,745	12,658	12,582	37,896
199 (1999) ORDNANCE AND ACCESSORIES, N.E.C.....	3,716	3,559	3,515	11,015
20 FOOD AND KINDRED PRODUCTS.....	1,623,170	1,597,353	1,598,605	4,108,846
201 MEAT PRODUCTS.....	332,224	328,209	325,573	834,622

See notes at end of table.

Figure 28

STATE AND REGION DETAIL

Table C-6. Total all industries, monthly employment and quarterly wages of workers covered under State UI and UCFE programs, first quarter 1975 — Continued

STATE AND REGION	INDUSTRY DIVISION - MINING					
	EMPLOYMENT			QUARTERLY WAGES (IN 000'S)	PERCENT CHANGE FROM SAME PERIOD OF PRECEDING YEAR	
	JANUARY	FEBRUARY	MARCH		MARCH EMPL.	QUARTERLY WAGES
MAINE.....	213	215	217	519	6.9	18.0
NEW HAMPSHIRE.....	300	293	284	741	-12.3	2.6
VERMONT.....	705	711	720	2,057	-4.9	20.3
MASSACHUSETTS.....	615	571	574	1,676	-17.9	-12.3
RHODE ISLAND.....	76	66	78	215	-20.4	-35.4
CONNECTICUT.....	721	685	761	2,737	8.3	21.7
NEW ENGLAND.....	2,630	2,541	2,634	7,944	-5.4	7.9
NEW YORK.....	7,795	7,633	7,734	34,534	-2.6	5.9
NEW JERSEY.....	2,564	2,554	2,608	8,025	-12.9	-3.9
PENNSYLVANIA.....	44,276	44,256	45,018	160,145	10.9	30.0
MIDDLE ATLANTIC.....	54,635	54,443	55,360	202,704	7.4	23.5
OHIO.....	25,637	25,636	25,923	89,188	9.2	24.1
INDIANA.....	6,886	6,962	7,100	24,093	2.7	18.7
ILLINOIS.....	25,187	24,950	25,348	91,068	5.4	19.7
MICHIGAN.....	12,925	12,806	12,948	43,704	2.3	17.5
WISCONSIN.....	1,936	1,839	1,904	5,664	-8.9	3.8
EAST NORTH CENTRAL	72,571	72,193	73,223	253,719	5.4	20.3
MINNESOTA.....	13,265	13,280	13,343	46,798	3.0	24.2
IOWA.....	2,445	2,408	2,506	6,750	-10.1	-1.0
MISSOURI.....	8,644	8,593	8,630	26,819	2.4	15.7
NORTH DAKOTA.....	1,626	1,641	1,692	5,246	18.0	39.1
SOUTH DAKOTA.....	2,421	2,373	2,388	6,566	4.6	12.7
NEBRASKA.....	1,311	1,278	1,330	3,017	-18.6	1.9
KANSAS.....	10,120	10,217	10,392	28,407	8.6	26.0
WEST NORTH CENTRAL	39,832	39,790	40,281	123,603	3.1	20.2
DELAWARE.....	237	234	230	976	-19.6	8.4
MARYLAND.....	1,731	1,705	1,692	4,703	3.3	33.8
DIST. OF COL.....	52	51	51	296	30.8	56.1
VIRGINIA.....	19,497	19,764	19,997	66,160	17.4	35.8
WEST VIRGINIA.....	59,266	59,964	60,765	214,788	14.7	40.7
NORTH CAROLINA.....	4,160	4,014	4,034	9,128	-1.2	5.5
SOUTH CAROLINA.....	1,994	1,970	1,957	4,276	1.6	3.4
GEORGIA.....	7,034	6,912	6,780	16,606	-12.2	-4.7
FLORIDA.....	10,247	10,129	10,350	31,799	1.7	13.4
SOUTH ATLANTIC.....	104,218	104,743	105,856	348,733	10.4	32.0
KENTUCKY.....	43,963	43,756	44,368	158,423	27.2	54.9
TENNESSEE.....	8,434	8,445	8,499	24,065	13.9	44.0
ALABAMA.....	10,634	10,943	11,034	40,715	21.6	52.1
MISSISSIPPI.....	6,396	6,487	6,572	17,032	9.2	20.5
EAST SOUTH CENTRAL	69,427	69,631	70,473	240,236	22.7	50.3
ARKANSAS.....	4,043	4,031	4,031	11,010	-2.9	14.3
LOUISIANA.....	58,882	59,581	59,349	197,909	9.7	26.1
OKLAHOMA.....	41,684	41,583	41,618	148,331	10.4	33.3
TEXAS.....	131,815	132,141	132,872	476,092	14.5	34.4
WEST SOUTH CENTRAL	236,424	237,336	237,870	833,342	12.2	31.8
MONTANA.....	7,193	6,914	6,944	22,980	-1.9	15.3
IDAHO.....	3,534	3,566	3,560	10,409	3.7	23.8
WYOMING.....	17,702	17,781	17,688	60,252	21.4	44.6
COLORADO.....	18,185	18,202	18,259	68,164	19.2	37.0
NEW MEXICO.....	19,732	19,826	19,929	59,554	8.5	27.0
ARIZONA.....	27,052	25,629	25,121	90,674	-11.2	8.9
UTAH.....	14,191	13,938	13,177	46,394	3.1	29.9
NEVADA.....	4,665	4,545	4,464	14,191	27.7	43.6
MOUNTAIN.....	112,254	110,401	109,142	372,619	5.7	26.1
WASHINGTON.....	1,753	1,723	1,799	5,892	-4.0	22.3
OREGON.....	1,393	1,361	1,441	4,047	.4	12.6
CALIFORNIA.....	32,343	31,966	32,234	123,404	2.2	16.5
ALASKA.....	3,519	3,806	3,977	25,989	45.4	114.9
HAWAII.....	4	4	3	6	-86.4	-87.9
PACIFIC.....	39,012	38,860	39,454	159,338	4.9	26.0
PUERTO RICO.....	905	914	900	1,278	-13.6	3.6
VIRGIN ISLANDS.....						
TOTAL ¹	731,908	730,852	735,193	\$2,543,516	9.7	29.5

See footnotes at end of table.

Chapter 8. Annual Earnings and Employment Patterns

The Bureau's series on annual earnings and employment patterns (AEEP) is the most accurate and comprehensive source of data available on annual earnings of wage and salary workers. The primary classification of the earnings data is by industry, with cross-classification by demographic characteristics of workers, such as age, sex, and race, and by number of quarters worked and geographic location of employment.

For 1964, the first year for which the series is available, information was presented only for private nonagricultural workers who were covered under the provisions of old-age, survivors, disability, and health insurance, more commonly referred to as social security. For 1965, the series was extended to include workers covered by the Railroad Retirement Act. The series does not include workers in agriculture and government (civilian and military) and self-employed individuals.

Description of data

The data for the AEEP program are obtained from a 1-percent random sample of the earnings records of individual employees maintained by the Social Security Administration and the Railroad Retirement Board. A multi-stage systematic cluster procedure insures that the sample is strictly random and that the same individuals are included in the sample in each year. Each individual employee's record contains information on sex, race, year of birth, employers' locations, and total estimated annual wages and salaries. This total includes estimates by the Social Security Administration of earnings that exceed the limits for which social security taxes are collected (\$15,300 in 1976).

Employers covered under the Railroad Retirement Act are required to report monthly employee earnings, also subject to a taxable limit. To compensate for this limitation the Railroad Retirement Board has developed a series of step-up factors for each occupation which raises creditable earnings to total earnings for workers who earn more than the taxable limit.

Summary data. Summary tables, which are published annually in the bulletin *Annual Earnings and Employment Patterns of Private Nonagricultural Employees*, contain means, medians and frequency distributions, by industry, of the annual earnings of wage and salary earners by selected characteristics. These include race,

sex, age, region, industry of major earnings, and the number of quarters worked during the year. Two kinds of earnings information are tabulated for each worker by industry division, by 2-digit Standard Industrial Classification (SIC) industry groups, and by most 3-digit SIC industries: (1) Earnings in the industry of major earnings during a given year; and (2) total earnings, regardless of industry, in that year (figure 29).

Detailed data. Extensive cross-tabulations also are available for a combination of any of the following: Industry, geographic area, race, sex, quarters of work, number of employers, age and/or earnings interval (figure 30).

Measures of inequality of income distribution. The AEEP program also provides measures of the degree of inequality of the distribution of income in a population through the use of Gini indexes. The Gini index measures the cumulative percent of total income received by cumulative population percentiles. The graphic representation of this relationship, a Lorenz curve, provides the concept from which the index is derived. (See figure 31.) When a situation of complete income equality exists (all units receiving the same income), the Lorenz curve for the distribution becomes a straight line (line of equality). This indicates that any percentage of the total population, as plotted on the X-axis, receives a like percentage of total income. An actual income distribution results in a curve with the same end points but lying beneath this straight line. Figure 31 shows this relationship with the hypothetical line of equality AB and the actual Lorenz curve of a distribution. The Gini index is the proportion of the area bounded by the Lorenz curve and the line of equality to the area of the triangle ABC. The less equally distributed the income, the greater will be the area between the line of equality and the Lorenz curve, and consequently the larger the Gini index.

Uses and limitations

The AEEP program provides data for use in public and private policy determination as well as in general economic analysis. Of particular significance in this program is the capability to stratify industry data in numerous ways according to the needs of the data user.

The result is the ability to gain some insights, at several levels of detail, into the demographic and industrial characteristics which affect the economic behavior of an individual or group of individuals.

One distinguishing feature of the data is the ability to classify workers by the number of quarters worked. The data for individuals employed in four quarters of the year (approximately 65 percent of the work force) present the most meaningful picture when assessing the overall work and earnings experience of the private nonfarm labor force. This is because workers who were only peripherally attached to the labor force or who were either entering or leaving the labor force during the year would generally not be included among the 4-quarter workers. The value of other than 4-quarter data lies in the aid they provide in the identification of possible seasonal and other employment patterns within certain economic groups.

The data are used in collective bargaining, in making interindustry comparisons, in analyzing earnings and employment distributions by industry for different demographic groups, and in determining quarterly employment patterns by industry.

Two primary limitations of the series are the inability to determine hours or weeks worked or paid for and the lack of occupational information. The time lag of 2-3 years between the reference year and publication also limits the use of the data in analyzing current economic conditions. Despite the delays caused by the reporting requirements established by law, the data requirements of the collecting agencies, and the time required to extract a sample and reduce the raw data to statistical tables, it is expected that the lag can soon be reduced to 2 years. There is also reason to believe that, owing to an interagency effort, occupational information will become available in the not too distant future.

Comparison with other series

The AEEP series is the most accurate source of data on the annual earnings of wage and salary workers. Other series, such as the Bureau's data on average weekly earnings based on establishment reports (see chapter 5), do not provide any information on annual earnings since they lack data on the average number of weeks worked during the year. The most comparable data are found in the Census Bureau's reports on annual income,¹ but these contain the omissions and inaccuracies inherent in household interview data. Only the AEEP series shows annual earnings for all of the following classifications and cross-classifications: Workers' demographic characteristics, quarters of work, industry of employment, and the geographic location of place of employment. It also provides the capability for following a cohort of workers through many years of employment. The Census Bureau series, on the other hand, has the advantage of showing total money earnings for occupational groups in each industry division and a few industry subdivisions.

¹ See *Current Population Reports*, series P-60, No. 97, pp. 179-80.

—REFERENCES—

Gastwirth, Joseph L. "The Estimation of the Lorenz Curve and Gini Index," *The Review of Economics and Statistics*, Vol. LIV, No. 3, August 1972, pp. 306-16.

U.S. Department of Labor, Bureau of Labor Statistics. *Annual Earnings and Employment Patterns of Private Nonagricultural Employees, 1971 and 1972*. Bulletin 1928, 1976.

Table B-1. Median annual earnings of all workers employed in any quarter and in four quarters, by industry of major earnings, 1972

INDUSTRY	EARNINGS FROM MAJOR INDUSTRY BY QUARTERS WORKED IN—			EARNINGS FROM ALL EMPLOYMENT BY QUARTERS WORKED IN—		
	MAJOR INDUSTRY		ANY INDUSTRY	MAJOR INDUSTRY		ANY INDUSTRY
	ANY QTR	4 QTRS	4 QTRS	ANY QTR	4 QTRS	4 QTRS
PRIVATE ECONOMY	\$ 4,640	\$ 7,228	\$ 7,228	\$ 4,640	\$ 7,228	\$ 7,228
MINING	8,428	10,214	9,805	8,757	10,284	9,920
METAL MINING	9,071	9,885	9,683	9,205	9,980	9,796
COAL MINING	9,731	10,629	10,425	9,828	10,663	10,504
ANTHRACITE MINING	6,250	7,500	7,333	6,750	7,583	7,583
BITUMINOUS COAL AND LIGNITE MINING	9,807	10,688	10,488	9,896	10,721	10,570
OIL AND GAS EXTRACTION	7,740	10,490	9,847	8,098	10,528	9,973
CRUDE PETROLEUM, NATURAL GAS & LIQUIDS	9,653	10,842	10,538	9,750	10,879	10,613
OIL AND GAS FIELD SERVICES	5,458	9,705	8,375	6,250	9,797	8,875
NONMETALLIC MINERALS, EXCEPT FUELS	6,913	9,096	8,432	7,538	9,146	8,740
STONE, SAND, AND GRAVEL	6,609	9,107	8,333	7,279	9,167	8,676
OTHER NONMETALLIC MINERALS	7,750	9,092	8,750	8,071	9,125	8,917
CONTRACT CONSTRUCTION	5,495	9,753	8,845	5,914	9,953	9,178
GENERAL BUILDING CONTRACTORS	4,386	9,220	7,750	5,213	9,790	8,768
HEAVY CONSTRUCTION CONTRACTORS	5,437	9,537	8,263	6,120	9,844	8,962
HIGHWAY AND STREET CONSTRUCTION	5,177	8,452	7,513	5,779	8,706	8,076
HEAVY CONSTRUCTION, NEC	5,486	11,048	8,894	6,596	11,500	10,078
SPECIAL TRADE CONTRACTORS	5,606	10,074	8,940	6,228	10,411	9,565
PLUMBING, HEATING, AIR CONDITIONING	6,858	10,797	9,427	7,556	11,181	10,228
PAINTING, PAPER HANGING, DECORATING	3,533	8,738	7,333	3,956	8,934	7,917
ELECTRICAL WORK	8,608	11,824	10,859	9,083	12,056	11,429
MASONRY, STONEMANSHIP, AND PLASTERING	4,270	8,724	7,538	4,970	9,227	8,462
CARPENTRY AND FLOORING	3,208	8,313	6,587	3,908	8,537	7,300
ROOFING AND SHEET METAL WORK	4,406	8,906	7,971	5,000	9,136	8,526
CONCRETE WORK	3,711	8,859	7,042	4,620	9,375	8,000
OTHER SPECIAL TRADE CONTRACTORS	5,288	10,481	8,730	6,404	11,229	10,042
MANUFACTURING	6,275	8,572	8,215	6,437	8,654	8,361
ORDNANCE AND ACCESSORIES	9,213	10,481	10,134	9,375	10,600	10,291
AMMUNITION, EXCEPT FOR SMALL ARMS	9,656	10,948	10,510	9,778	11,038	10,680
OTHER ORDNANCE AND ACCESSORIES	8,511	9,783	9,543	8,656	9,875	9,716
FOOD AND KINDRED PRODUCTS	4,866	8,330	7,727	5,177	8,440	7,957
MEAT PRODUCTS	5,325	8,875	8,137	5,625	8,969	8,390
DAIRY PRODUCTS	6,085	8,391	7,745	6,438	8,536	8,044
CANNED, CURED, AND FROZEN FOODS	1,734	6,417	5,775	1,953	6,511	5,968
GRAIN MILL PRODUCTS	6,445	8,907	8,460	6,700	8,977	8,663
BAKERY PRODUCTS	6,400	8,663	8,220	6,726	8,776	8,417
BEVERAGES	6,952	9,155	8,681	7,238	9,229	8,880
OTHER FOOD AND KINDRED PRODUCTS	4,726	7,770	7,112	5,054	7,959	7,378

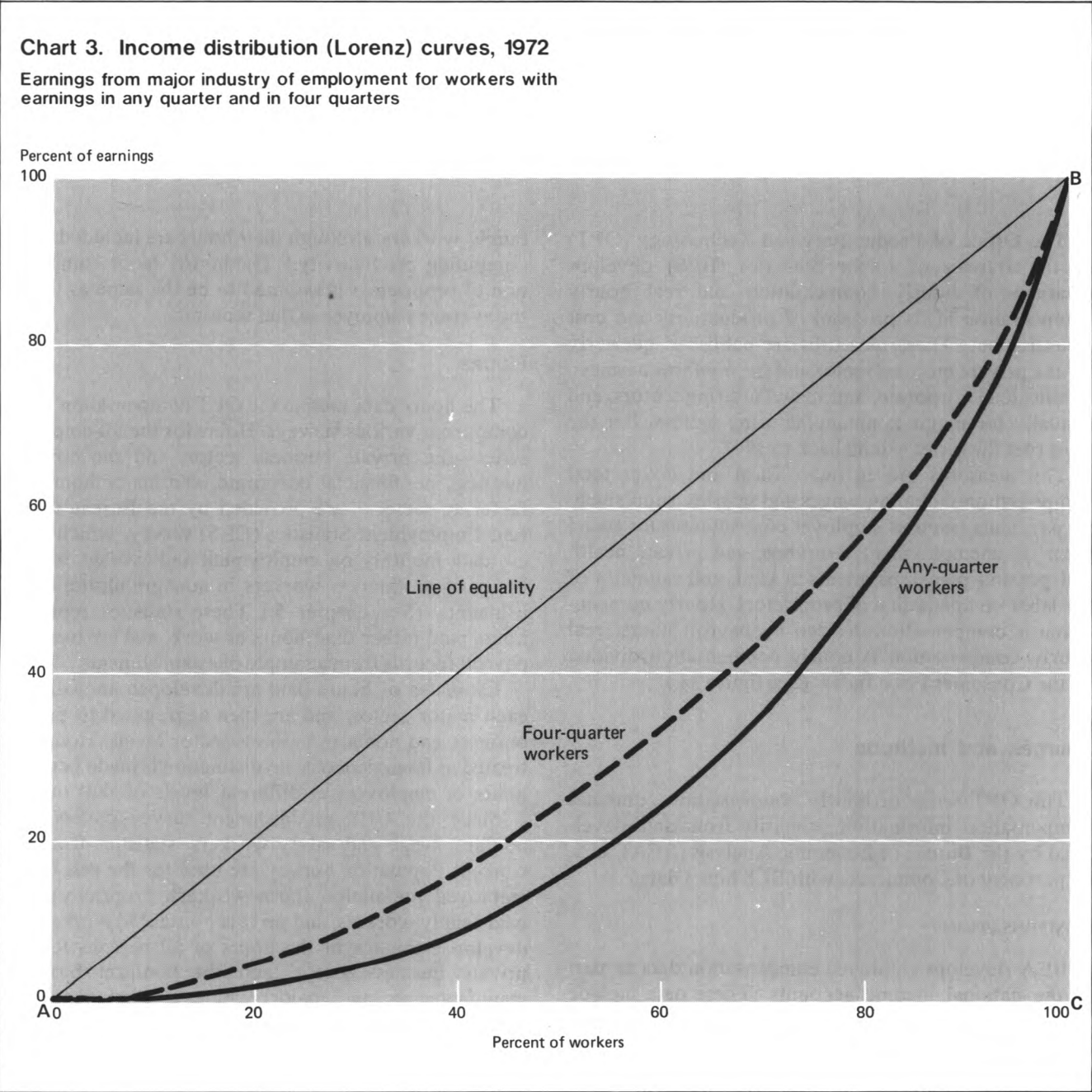
Figure 30

Table B-12. Median annual earnings of black four-quarter workers, by age, 1972 —Continued

INDUSTRY	UNDER 18	18-19	20-24	25-29	30-39	40-49	50-59	60-64	65-69	70 AND OVER
PRIVATE ECONOMY - CONTINUED										
SERVICES - CONTINUED										
PERSONAL SERVICES	\$ -	\$ 2,750	\$ 4,150	\$ 3,700	\$ 4,192	\$ 3,900	\$ 4,219	\$ 3,833	\$ 3,000	\$ 1,667
LAUNDRIES AND DRY CLEANING PLANTS	-	2,750	4,250	3,600	4,179	4,050	4,339	4,125	2,250	1,583
PHOTOGRAPHIC STUDIOS	-	-	-	-	-	-	-	-	-	-
BEAUTY SHOPS AND BARBER SHOPS	-	-	3,250	3,500	4,042	3,125	3,125	1,000	-	-
APPAREL REPAIR AND CLEANING SHOPS	-	-	-	4,000	3,750	3,688	3,500	-	-	-
OTHER PERSONAL SERVICES	-	-	-	4,250	5,250	3,250	4,500	4,750	-	-
MISCELLANEOUS BUSINESS SERVICES	1,875	2,750	4,500	5,143	5,479	5,000	4,583	5,083	3,625	4,250
AUTO REPAIR, SERVICES, AND GARAGES	1,500	3,250	5,250	6,417	7,625	6,500	6,500	4,500	2,000	-
AUTO RENTALS AND PARKING	-	-	6,583	7,250	8,000	6,667	7,000	-	-	-
AUTO REPAIR SHOPS AND SERVICES	1,500	3,250	4,250	5,500	6,500	6,250	5,000	4,500	2,000	-
MISCELLANEOUS REPAIR SERVICES	-	-	6,000	7,625	8,750	6,875	5,750	-	-	-
MOTION PICTURES	-	-	3,750	6,000	8,500	5,375	3,500	-	-	-
MOTION PICTURE FILMING & DISTRIBUTING	-	-	4,750	6,500	8,500	5,500	5,750	-	-	-
MOTION PICTURE THEATERS AND SERVICES	-	-	2,500	-	-	5,250	3,375	-	-	-
AMUSEMENT AND RECREATION SERVICES, NEC	2,000	2,167	4,125	5,000	5,625	4,667	5,000	5,250	4,250	4,250
INDOOR AMUSEMENTS AND RECREATION	-	-	4,000	-	3,500	1,750	3,250	-	-	-
MISC. AMUSEMENT AND RECREATION SERVICE	1,500	2,250	4,250	5,000	5,750	4,750	5,000	5,250	4,250	-
MEDICAL AND OTHER HEALTH SERVICES	2,000	2,833	4,482	5,083	5,401	5,563	5,216	5,375	4,333	4,500
HOSPITALS	2,167	2,750	4,703	5,447	5,811	5,921	5,784	5,722	4,750	5,500
OTHER MEDICAL AND HEALTH SERVICES	1,000	3,000	3,833	3,929	4,318	4,346	3,865	4,083	2,250	2,000
LEGAL SERVICES	-	-	5,250	6,583	6,250	6,000	1,750	1,500	-	-
EDUCATIONAL SERVICES	1,000	2,083	5,045	6,603	6,700	6,281	5,482	5,875	4,188	2,250
ELEMENTARY AND SECONDARY SCHOOLS	917	2,100	5,500	6,865	6,903	6,639	5,857	6,125	4,000	2,250
COLLEGES AND UNIVERSITIES	1,500	3,000	4,893	5,786	6,333	5,844	5,182	5,500	5,000	4,750
OTHER SCHOOLS AND EDUCATIONAL SERVICES	-	-	3,250	6,250	6,625	5,750	6,250	-	-	-
MUSEUMS, BOTANICAL & ZOOLOGICAL GARDENS	-	-	-	-	8,500	-	-	-	-	-
NONPROFIT MEMBERSHIP ORGANIZATIONS	778	1,321	4,375	5,531	5,292	5,800	4,339	4,917	2,125	1,938
RELIGIOUS ORGANIZATIONS	-	-	5,375	4,250	4,500	4,250	3,167	4,750	1,563	2,500
CHARITABLE ORGANIZATIONS	-	-	4,750	5,833	5,167	6,250	4,625	4,750	-	2,250
BUSINESS, LABOR, & OTHER NONPROFIT ORG	764	1,286	4,214	5,607	5,700	6,025	4,750	5,000	3,500	1,750
PRIVATE HOUSEHOLDS	-	-	2,250	1,469	1,586	1,487	1,492	1,369	1,175	1,000
MISCELLANEOUS SERVICES	-	5,125	6,000	7,875	8,500	7,500	5,000	-	-	-
ENGINEERING & ARCHITECTURAL SERVICES	-	-	6,333	5,500	10,125	10,750	-	-	-	-
NONPROFIT RESEARCH AGENCIES	-	-	5,833	9,250	8,500	7,750	7,750	-	-	-
OTHER MISCELLANEOUS SERVICES	-	-	6,500	8,000	8,250	6,000	3,250	-	-	-

NOTE: A dash (-) indicates either that the sample did not include any workers with these characteristics, or that the data did not meet the Bureau publication criteria.

Figure 31



Chapter 9. Hourly Compensation Measures of the Office of Productivity and Technology

The Office of Productivity and Technology (OPT) of the Bureau of Labor Statistics (BLS) develops measures of hourly compensation and real hourly compensation in its program of productivity and cost measurement. These measures are published quarterly for the private business sector and the nonfarm business, nonfinancial corporate, and manufacturing sectors, and annually for major nonmanufacturing sectors. For the most part the series extend back to 1947.

The measures are in index form and cover total compensation including wages and salaries, supplemental payments (such as employer contributions for social security, unemployment insurance, and private health and pension plans), payments in kind, and estimates of the labor compensation of proprietors. Hourly compensation is compensation divided by payroll hours; real hourly compensation is hourly compensation divided by the Consumer Price Index. (See figure 32.)

Sources and methods

The OPT series of hourly compensation combines compensation information primarily from data developed by the Bureau of Economic Analysis (BEA), U.S. Department of Commerce, with BLS hours data.

COMPENSATION

BEA develops employee compensation data as part of the national income accounts. These data include both direct payments and supplements. Direct payments are wages and salaries (including executive compensation), commissions and tips, bonuses, and payments in kind which represent income to the recipients. Supplements include such items as employer contributions for social insurance, private pension and health and welfare plans, compensation for injuries, doctors' fees, and pay for military leave.

BEA compensation measures cover only wage and salary workers, and therefore omit the cost of labor inputs contributed by proprietors. Since labor costs would be seriously underestimated as a result of this omission in sectors where these hours represent a substantial portion of the labor input, as in farming and retail trade, the OPT imputes a payment for proprietors' labor services. (No payments are imputed for unpaid

family workers, although their hours are included when computing productivity.) The hourly labor compensation of proprietors is assumed to be the same as that of the average employee in that sector.

HOURS

The hours data used in the OPT compensation series come from various surveys. Hours for the all-employee series—the private business sector, and the nonfarm business, nonfinancial corporate, and major nonmanufacturing sectors—are provided by the Bureau's Current Employment Statistics (CES) survey, which gathers data monthly on employment and average weekly hours of production workers in nonagricultural establishments. (See chapter 5.) These statistics represent hours paid rather than hours at work, and are based on payroll records from a sample of establishments.

Estimates of hours paid are developed annually for each major sector, and are then aggregated to private business and nonfarm business sector levels. Hours are treated as homogeneous; no distinction is made between hours of employees at different levels of skill or pay.

Since the CES establishment survey covers only nonfarm wage and salary workers, statistics from the Current Population Survey are used for the rest of the employed population (farm workers, proprietors, unpaid family workers, and private household workers) to develop estimates of the hours of all persons for the private business sector, and the nonfarm business, manufacturing, and major nonmanufacturing sectors. These statistics represent hours at work, not hours paid, and are based on a monthly survey of a nationwide sample of households conducted for the BLS by the Bureau of the Census.

In the manufacturing sector, estimates of total hours are derived separately for production and nonproduction workers and then combined to produce the entire manufacturing sector. Since the establishment survey covers only production workers, the length of the average workweek for nonproduction workers is developed from BLS studies of wages and supplements which provide data on the regularly scheduled workweek of white-collar employees. For nonmanufacturing sectors, it is assumed that hours for supervisory employees are the same as for the nonsupervisory wage and salary workers covered.

Presentation

The hourly compensation indexes produced by the Office of Productivity and Technology are published in the quarterly BLS press releases *Productivity and Costs: Private Business*, *Nonfarm Business*, and *Manufacturing Sectors* and *Productivity and Costs: Nonfinancial Corporations*. The former appears 1 month after the reference period; the latter, 2 months after. Tables 31–34 in the *Monthly Labor Review* contain information on productivity and related measures each month. The indexes for the major sectors, which are derived annually, are not published regularly, but are available from the Office of Productivity and Technology.

Uses and limitations

The hourly compensation series are designed to be used with the related productivity and cost measures for economic analysis. These series are useful in areas such as wage determination and analysis of prices and living conditions. However, since the OPT compensation series are presented in index form, their use is limited to analysis of changes over time.

Hourly compensation measures are especially relevant to a discussion of productivity and production costs. Unit labor cost, or compensation per unit of output, represents a major portion of total unit cost and reflects the combined effects of changes in compensation per hour and productivity (output per hour). An increase in compensation per hour tends to increase unit labor costs, while an increase in output per hour tends to reduce these costs. Therefore, the degree to which gains in compensation put pressure on prices or profits depends in large part on what is happening to productivity.

Indexes of hourly compensation help to provide understanding of what is occurring in the economy. For instance, in the recent recession, real compensation did not recover from the initial decline (which began with the second quarter of 1973) until the fourth quarter of 1976. Thus a total of 14 quarters elapsed before real hourly compensation returned to its former level. During the period, the index initially registered four straight quarters of decline (the longest decline on record) before showing any upward movement. Beginning with the fourth quarter of 1975, the index grew steadily and in the fourth quarter of 1976 surpassed its previous peak. This was the longest recovery period in the series (which begins in 1947); previously, the longest recovery period included only 3 quarters.

The labor share (compensation as a percent of output

measured in current dollars) was virtually unchanged over the entire postwar period. (See figure 32.) This shows that nonlabor payments (profits, depreciation, interest, and indirect taxes) were also affected by the recent recession.

One limitation of the hourly compensation measures arises from the manner in which the indexes are extended from compensation per hour of *all employees* to compensation per hour of *all persons*. Since compensation data are reported directly only for employees, forcing an imputation of labor compensation for proprietors, the measures are not as reliable at the all-persons level as at the employee level, although they are obviously more complete. This problem is mitigated somewhat for the annual series, as opposed to the quarterly series, because the annual aggregates are built up from the estimates for the major sectors.¹

Over the long term, the aggregate compensation measure is affected by shifts in the relative importance of the various component sectors as well as by changes in compensation within them. Studies of labor productivity have shown that the shift in employment from the farm sector into the nonfarm sector that occurred from World War II to 1965 contributed to the increase in labor productivity over that period since productivity is higher in the nonfarm sectors. Similarly, the shift to nonfarm employment, where compensation levels tend to be higher, raised the level—and rate of growth—of hourly compensation for the entire private business sector.

¹ In the private business sector, about 15 percent of 1975 hours of all persons were worked by proprietors and unpaid family workers. The reliability of the proprietors' imputation undoubtedly varies from sector to sector: It may be adequate for manufacturing, where the labor compensation of the proprietor of a toolmaking shop may well approximate that of an employee in a similar enterprise, but may be inadequate for services, where the labor compensation of a proprietor such as a doctor or a lawyer generally exceeds an employee's labor compensation by a substantial amount. However, since indexes of hourly compensation are developed rather than measures of levels, the imputation poses less serious problems.

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Figure 32

Indexes of hourly compensation and labor share in the private business sector, all persons, selected years, 1947-76

(1967=100)

Year	Compensation per hour	Consumer Price Index	Real compensation per hour	Labor share
1947	35.1	66.9	52.5	103.0
1950	41.6	72.1	57.7	98.2
1955	54.9	80.2	68.5	99.4
1960	71.4	88.6	80.5	102.3
1965	88.4	94.5	93.6	99.1
1970	123.3	116.3	106.0	103.7
1971	131.5	121.3	108.4	102.5
1972	138.9	125.3	110.8	101.6
1973	150.3	133.1	112.9	102.0
1974	164.3	147.7	111.2	104.6
1975	180.2	161.2	111.8	102.7
1976	195.0	170.5	114.3	101.7

Chapter 10. Changes in Wage Rates and Benefits — the Current Wage Developments Program

The Bureau of Labor Statistics (BLS) prepares quarterly statistical summaries of general changes in wage rates for 1) workers covered by major collective bargaining agreements and 2) all production and related workers in manufacturing industries. Major collective bargaining summaries present data relating to the size of newly negotiated settlements and total wage-rate changes effective in a time period. The quarterly manufacturing series tabulates general wage-rate changes by the bargaining status (union versus nonunion) of the establishments involved. Summaries are published in the monthly periodical *Current Wage Developments*.

Background

The quarterly statistical summaries of major collective bargaining agreements grew out of a monthly listing of settlements by company and union. This listing was initiated because of the rapid increase in wage rates and prices in the early post-World War II period, the interest in determining the extent to which settlement patterns spread from industry to industry, and the discontinuance of an index of wage rates that had been initiated during World War II. Interest was further stimulated by the Korean emergency when the Wage Stabilization Board needed data on the extent to which wages and benefits were being changed. In 1949, and again in 1951 and 1952, statistical summaries of wage-rate changes were prepared to supplement the listing, but regular preparation of a statistical summary began in 1954.

Beginning in 1959, another statistical summary, entitled *Wage Developments in Manufacturing* (WDM), was instituted. It is limited to manufacturing, but includes information on general wage-rate changes for nonunion and small union units, as well as for large collective bargaining units. From 1959 through 1970, this summary also included information on changes in supplementary benefits.

Growing concern during the 1960's over the extent to which increased labor costs were contributing to inflation heightened interest in the size of collective bargaining settlements. Whereas in earlier years the economic terms of negotiated settlements could be equated largely with agreed-upon changes in wages rates, more recently changes in a host of pay supplements have grown in importance. The BLS began

estimating the cost of wage and benefit (package) changes in a limited number of key settlements in 1964. The work was expanded the following year and, since 1966, the Bureau has attempted to determine the price of all settlements affecting 5,000 workers or more in the private nonfarm sector. In addition, a separate series has been developed for the construction industry, covering settlements for 1,000 workers or more.

Description of data

The statistical summary of developments in major collective bargaining units hereafter is referred to as the "major" series; the summary based on changes in wage rates in manufacturing firms of all kinds is described as the "manufacturing" series.

The major series describes general wage-rate changes and changes in benefits¹ in all collective bargaining settlements involving 1,000 production and related workers or more in manufacturing and 1,000 nonsupervisory workers or more in the nonmanufacturing sector, excluding government.² Contracts covering multiplant firms are included if the agreement as a whole covers 1,000 workers or more even though each individual plant employs fewer workers. Also included are contracts with trade associations or with groups of firms that bargain jointly with a union or unions, even though the firms are not associated formally and each has fewer than the minimum number of workers covered by the series. Two unions or more (together representing more than 1,000 workers but individually accounting for fewer than this number) are tabulated as one bargaining unit when essentially identical contracts with one firm or a group of firms are negotiated.

The manufacturing series represents all establishments with four employees or more that adjust wages by means of general wage-rate changes,³ regardless of whether the workers are represented by a union.

A wide variety of measures of wage change are available for analysis from both the major series and the

¹ Only changes in benefits that represent changes in costs are included.

² Prior to 1966, the construction, service, and finance industries were also excluded.

³ General wage-rate changes are defined as changes affecting at least one-tenth of the workers at any one time or all workers in an occupation. Changes resulting from promotions, merit increases, etc., are excluded.

manufacturing series. While it is not feasible to describe all of these measures in this brief summary, some key features are as follows:

1. The data on major collective bargaining settlements focus on newly negotiated contracts and thus provide information on the current economic bargaining climate.
2. Separate statistics are presented on second- and third-year wage-rate increases in long-term contracts, in addition to first-year increases and annual rates over the life of the contracts.
3. Data are presented on the impact of escalator adjustments on first-year settlements.
4. Quarterly and annual data are also available on "effective" wage-rate changes, i.e., those wage gains going into effect in a given time period, regardless of when they were negotiated. (Figures 33 and 34 present annual data.)
5. The data available on wage developments in manufacturing focus primarily on the differential movement of current wage decisions in the union and nonunion sectors of the economy. (See figure 35.)

Data sources and collection methods

The major series is compiled primarily from secondary sources, including general circulation newspapers and periodicals and union, management, and trade publications. Other important sources of information are the file of union contracts maintained by the BLS and the files of pension and health and welfare agreements maintained by the Office of Employee Benefits Security of the U.S. Department of Labor. At the end of the year, the BLS contacts either management or labor representatives if information on wage and benefit changes during the year has not been obtained from these other sources.

For the manufacturing series, information for nonunion and small unionized firms is gathered quarterly (semiannually in 1965 and 1966) by a questionnaire mailed to participating establishments. This information on general wage changes is supplemented by the contract file (for unionized establishments) and newspaper clippings purchased from a commercial clipping service. At the end of each year, BLS field representatives contact (primarily by telephone) a sample of firms that have failed to respond to the mail questionnaire or have not provided complete information.

Sampling and estimating procedures

For the major collective bargaining series, it is believed that the current list of about 2,200 major

collective bargaining units, built up since the listing was begun in 1948, represents the universe of such units. A bargaining unit is withdrawn from the universe list if it ceases to be within the scope of the survey (e.g., a change to a business classification outside the scope of the survey, a change to nonunion from union, or an apparently permanent drop in employment to substantially below 1,000).

For the manufacturing series, a sample is derived from State unemployment insurance (UI) listings which show reporting units with four employees or more by location, number of employees, and industry classification. The sample is a highly stratified probability design, with sampling ratios varying from 1 out of 150 establishments with 4 to 19 employees to all establishments with 1,000 employees or more. The ratios are uniform for all industries. Since data are available from secondary sources for those unionized units with at least 1,000 production and related workers, data for all establishments meeting this criterion also are included in the summary for manufacturing. The sample selected from the UI listings is compared with this list of establishments for which information already is available. Since data for these sample members are obtained from secondary sources, these establishments are not sent questionnaires. Approximately 6,000 establishments are left for the questionnaire survey.

Although the sampling design yields a sample in which large firms are relatively overrepresented, this bias is overcome by the estimating procedure. Each establishment in the sample is assigned a weight which is the reciprocal of the sampling ratio in the stratum from which it was selected. An establishment selected from a stratum from which 1 out of 4 establishments is chosen is assigned a weight of 4, so that it represents itself and three other establishments. Information for each establishment is multiplied by the weight assigned to the establishment. Thus, all establishments, regardless of size, are represented appropriately in the final estimates.

A new sample of nonunion and small unionized plants in manufacturing usually is selected every 3 years. After the initial contact, establishments of any size indicating that they have a policy of adjusting wages on an individual basis, rather than by means of general wage changes, are omitted from the survey.

Presentation

Preliminary information on both the general wage changes resulting from collective bargaining settlements involving the major units (1,000 workers or more) and the wage and benefit "package" cost in units covering 5,000 workers or more is presented in press releases issued about 4 weeks after every quarter. In addition, the information is presented in the monthly

publication, *Current Wage Developments*. Final data are not available until sometime early in the following year, at which time they are published in *Current Wage Developments* and the *Monthly Labor Review*.

Quarterly tabulations of the manufacturing data and an article covering the full year are published in *Current Wage Developments*. The 3-, 6-, and 9-month tabulations which are based on preliminary data primarily stress wage changes resulting from settlements or management decisions made during the period, while the year-end article, based on final data, also analyzes trends in the size, frequency, and type of wage changes, and the prevalence and results of wage escalation policies. Because data are available separately for large and small establishments, unionized and nonunionized, the analysis can provide many useful comparisons.

Uses and limitations

Both the major series and the manufacturing series are used extensively by labor, management, and the Federal Mediation and Conciliation Service in collective bargaining; by private institutions and universities in studies of industries or groups of industries; and by local and Federal Government agencies and others interested in current and future trends in wages and benefits.

In the pricing of collective bargaining settlements, since a value is placed on settlements at the time they

are reached, the costs attributed to them obviously are estimates of outlays to be made in the future. The estimates are made on the assumption that conditions existing at the time the contract is negotiated will not change. For example, estimators assume that methods of financing pensions will not change, and that expenditures for insurance will not change except as a result of altered benefit provisions or modified participation because of changes in company contributions. They also assume that the composition of the labor force will not change. Although package cost estimates are extremely valuable as comprehensive measures of change resulting from union-management negotiations, to use the estimates as precise, unambiguous, and unfailing measures of the economic effects of collective bargaining is adding an assignment which the data are incapable of fulfilling.

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Figure 33

Table 1. Average general wage-rate changes in collective bargaining units covering 1,000 workers or more, 1954-75

Year	Private nonfarm industries				Manufacturing				Nonmanufacturing			
	Median adjustment		Median increase		Median adjustment		Median increase		Median adjustment		Median increase	
	Cents	Percent	Cents	Percent	Cents	Percent	Cents	Percent	Cents	Percent	Cents	Percent
First-year changes in contracts negotiated during year												
1954	5.6	13.1	5.7	(2)	5.6	(2)	5.7	(2)	5.6	(2)	5.6	(2)
1955	10.1	15.4	10.3	(2)	9.4	(2)	9.5	(2)	13.3	(2)	13.9	(2)
1956	10.7	15.4	10.7	(2)	10.7	(2)	10.7	(2)	10.5	(2)	10.6	(2)
1957	10.1	14.9	10.4	(2)	9.9	(2)	10.4	(2)	10.4	(2)	10.4	(2)
1958	8.6	3.9	8.8	(2)	7.1	(2)	7.2	(2)	9.7	(2)	9.8	(2)
1959	8.8	3.9	8.8	3.9	7.3	3.5	7.4	3.7	8.8	4.0	8.9	4.0
1960	8.5	3.2	8.7	3.2	8.7	3.2	8.9	3.2	7.4	3.3	7.5	3.3
1961	6.9	2.8	7.0	2.9	6.0	2.4	6.5	2.5	9.0	3.6	10.0	3.6
1962	7.0	2.9	8.0	3.6	5.0	2.4	6.8	2.9	10.2	4.0	10.2	4.1
1963	7.4	3.0	8.5	3.4	6.8	2.5	8.0	3.0	8.5	3.4	9.5	3.5
1964	8.4	3.2	9.0	3.2	5.7	2.0	6.0	2.2	10.0	3.6	10.0	3.6
1965	10.0	3.8	10.0	3.9	10.0	4.0	10.0	4.1	11.0	3.7	11.0	3.7
1966	12.7	4.8	12.8	4.8	10.2	4.2	10.3	4.2	14.5	5.0	14.6	5.0
1967	16.0	5.6	16.1	5.7	17.5	6.4	18.0	6.4	15.0	5.0	15.0	5.0
1968	23.5	7.2	23.5	7.2	23.5	6.9	23.5	6.9	23.6	7.5	23.6	7.5
1969	25.0	8.0	25.0	8.0	21.4	7.0	21.5	7.0	36.8	10.0	36.8	10.0
1970	32.9	10.0	32.9	10.0	26.3	7.5	26.3	7.5	56.0	14.2	56.0	14.2
1971	44.1	12.2	44.1	12.5	38.4	10.0	39.0	10.1	44.1	12.8	44.1	13.0
1972	28.0	6.3	28.0	6.6	23.3	6.2	24.0	6.2	31.6	6.6	32.2	6.6
1973	26.4	5.5	26.4	5.5	26.4	5.6	26.4	5.6	30.0	5.5	30.0	5.5
1974	45.0	9.0	45.0	9.0	40.0	7.7	40.0	7.7	51.3	9.2	52.0	9.3
1975	61.7	10.0	65.0	10.0	42.0	9.0	45.0	9.2	70.0	10.0	70.0	10.2
Annual rate of change over life of contracts negotiated during year												
1963	(2)	(2)	(2)	2.5	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1964	(2)	(2)	(2)	3.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1965	(2)	(2)	(2)	3.3	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1966	(2)	3.9	(2)	3.9	(2)	3.8	(2)	3.8	(2)	3.9	(2)	3.9
1967	14.7	5.0	14.7	5.0	14.5	5.1	14.5	5.1	14.7	5.0	14.7	5.0
1968	17.2	5.2	17.2	5.2	17.0	4.9	17.0	4.9	20.1	5.9	20.1	5.9
1969	21.2	6.8	21.2	6.8	15.8	5.8	15.8	5.8	32.6	8.5	32.6	8.5
1970	31.4	8.1	31.4	8.1	19.0	5.8	19.0	5.8	47.3	12.1	47.3	12.1
1971	31.7	8.0	31.9	8.0	27.6	7.4	28.0	7.5	38.8	8.4	38.9	8.5
1972	25.4	6.0	25.6	6.0	21.0	5.6	21.1	5.6	30.7	6.6	31.6	6.7
1973	23.3	5.2	23.3	5.2	20.6	5.0	20.6	5.0	31.4	5.5	31.7	5.5
1974	33.6	6.6	33.6	6.6	27.9	5.3	27.9	5.3	41.7	7.7	41.8	7.7
1975	47.2	7.4	49.1	7.4	33.6	7.4	34.5	7.5	52.2	7.4	52.2	7.4
Changes effective in year												
1956	(2)	(2)	10.8	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1957	(2)	(2)	12.7	(2)	(2)	(2)	11.5	(2)	(2)	(2)	14.0	(2)
1958	12.5	(2)	12.6	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1959	7.8	3.5	8.8	3.6	8.4	3.5	9.1	3.7	7.0	3.1	7.6	3.4
1960	8.5	3.3	9.4	3.6	9.0	3.3	9.4	3.7	7.0	3.2	8.5	3.7
1961	6.2	2.7	8.0	3.1	6.9	2.7	8.0	3.0	5.7	2.6	9.0	3.6
1962	7.3	2.8	9.0	3.4	6.5	2.6	8.0	3.0	10.0	3.5	10.2	3.8
1963	7.5	2.9	9.4	3.4	7.5	2.7	9.0	3.2	7.4	3.2	10.0	3.7
1964	7.1	2.7	8.5	3.2	5.5	2.0	7.0	2.6	9.2	3.5	10.0	3.6
1965	9.2	3.4	10.0	3.5	10.0	3.4	10.0	3.7	9.0	3.4	9.6	3.4
1966	10.0	3.6	12.4	4.0	9.9	3.3	12.0	4.2	11.6	3.8	12.7	3.9
1967	12.9	4.4	15.0	4.8	12.0	4.0	12.0	4.4	14.9	4.8	18.0	5.2
1968	19.0	5.5	19.2	5.7	18.2	5.2	19.0	5.4	20.0	6.0	21.8	6.5
1969	19.0	5.1	19.1	5.1	17.5	5.0	18.0	5.0	20.0	5.2	20.0	5.6
1970	25.4	7.3	27.5	7.8	20.0	6.0	20.6	6.0	37.5	8.3	42.5	9.7
1971	31.3	8.0	37.8	9.2	25.3	6.3	27.1	6.6	44.1	10.7	45.1	12.1
1972	25.6	6.0	26.0	6.4	23.0	5.2	23.0	5.4	30.4	7.2	40.1	7.6
1973	34.3	7.3	35.5	7.4	30.0	7.3	30.2	7.4	36.2	7.2	36.2	7.5
1974	43.3	9.5	45.0	9.6	46.0	11.1	46.8	11.3	42.5	8.0	42.5	8.2
1975	53.7	8.6	53.7	8.6	53.3	8.6	53.7	8.6	55.2	8.6	55.2	8.8

¹ Estimated.² Not available.

NOTE: Adjustments include these types of wage-rate actions: No

wage changes, decreases in wages, and increases in wages. Increases include only those situations where wages were raised. For years prior to 1966, the construction, service, finance, insurance, and real estate industries were excluded.

Figure 34

Table 2. Average percent changes in hourly cost of wages and benefits in collective bargaining units covering 5,000 workers or more, 1965-75

Year	Private nonfarm industries		Manufacturing		Nonmanufacturing	
	Mean adjustment	Median	Mean adjustment	Median adjustment	Mean adjustment	Median adjustment
First-year changes in contracts negotiated during year ¹						
1966	6.1	5.8	5.6	5.6	6.9	6.0
1967	7.4	7.3	8.4	9.0	6.5	4.9
1968	8.7	8.1	8.7	8.1	8.6	8.2
1969	10.9	10.9	9.6	8.8	12.3	11.8
1970	13.1	12.0	9.9	8.8	15.9	14.0
1971	13.1	13.9	11.7	13.5	14.1	16.0
1972	8.5	7.9	8.5	8.2	8.5	7.9
1973	7.1	6.8	7.0	5.9	7.1	7.0
1974	10.7	10.5	8.8	7.0	11.6	10.5
1975	11.4	11.4	10.4	11.3	11.6	11.9
Annual rate of change over life of contracts negotiated during year						
1965 ¹	(²)	3.3	(²)	(²)	(²)	(²)
1966	4.1	4.0	4.1	3.8	4.2	4.1
1967	5.1	5.2	5.1	5.2	5.2	4.8
1968	6.5	6.0	5.9	5.9	7.1	6.5
1969	8.2	7.4	6.6	6.6	9.7	9.6
1970	9.1	8.4	6.2	5.5	11.5	11.7
1971	8.8	9.0	7.7	8.8	9.5	9.0
1972	7.4	6.9	6.3	6.2	7.9	7.9
1973	6.1	5.5	6.0	5.5	6.2	6.1
1974	7.8	6.5	6.7	6.2	8.3	7.2
1975	8.1	7.8	9.2	11.3	7.8	7.8
Changes effective in year						
1968	6.8	6.4	6.3	6.3	7.1	7.1
1969	6.5	5.7	5.7	5.0	7.4	6.2
1970	9.0	8.7	7.7	6.3	10.1	10.6
1971	9.8	8.5	8.2	8.5	11.1	11.6
1972	7.6	6.7	6.2	5.7	8.7	8.0
1973	7.9	7.8	8.0	7.8	7.9	8.5
1974	10.4	10.5	12.1	13.2	9.2	8.1
1975	9.4	8.4	9.0	8.0	9.3	9.4

¹ Coverage limited to settlements for 10,000 workers or more in 1965.
² Not available.

³ Changes negotiated during the year and going into effect within 12 months from the effective date of the contract.

Figure 35

Table 1. Mean first-year wage changes in union settlements and wage decisions in nonunion establishments and production workers covered, 1969-75¹

Item	1969	1970	1971	1972	1973	1974	1975
Workers covered (in thousands)	6,193	6,664	6,190	6,038	8,223	8,392	5,812
Percent of workers receiving increases:							
All manufacturing	87.4	88.6	85.9	89.9	94.9	93.7	89.2
All union	98.9	98.1	98.3	97.8	98.7	98.3	98.6
Major union	99.8	99.8	98.8	98.3	99.2	99.2	97.3
Nonunion	75.8	76.7	69.6	82.9	89.8	87.4	82.3
Mean adjustment (percent):							
All manufacturing	5.9	6.2	6.9	5.0	6.0	7.8	7.0
All union	7.3	7.6	9.2	5.7	6.0	8.1	8.7
Major union	7.9	8.1	10.9	6.6	5.9	8.7	9.8
Nonunion	4.6	4.6	3.9	4.4	5.9	7.5	5.7
Mean increase (percent):							
All manufacturing	6.8	7.1	8.1	5.6	6.3	8.4	7.8
All union	7.4	7.7	9.4	5.8	6.1	8.2	8.9
Major union	7.9	8.1	11.0	6.7	6.0	8.7	10.1
Nonunion	6.1	6.0	5.7	5.3	6.6	8.6	6.9
Mean adjustment (cents per hour):							
All manufacturing	16.4	19.3	24.3	16.6	21.6	31.1	29.7
All union	21.2	25.0	33.7	20.1	23.8	35.3	41.0
Major union	23.0	28.2	40.8	24.2	25.4	41.0	45.9
Nonunion	11.7	12.2	11.7	13.4	18.5	26.1	21.4
Mean increase (cents per hour):							
All manufacturing	18.8	21.8	28.3	18.4	22.8	33.4	33.3
All union	21.4	25.4	34.3	20.6	24.2	35.9	41.6
Major union	23.0	28.2	41.3	24.7	25.6	41.3	47.2
Nonunion	15.5	16.0	17.0	16.2	20.7	29.7	26.1

¹ This table includes union workers covered by collective bargaining agreements which were negotiated during the period and all nonunion workers employed by firms which normally grant general wage increases. The Bureau assumes that except in those establishments which make individual wage adjustments only, all nonunion firms make annual wage decisions whether wages are actually changed or not, since, in the absence of reports of wage changes, there is no objective way of determining if a change was considered. Except as noted below, the first-year measures for union workers include all changes negotiated during the period and

scheduled to go into effect during the first 12 months of the agreements; for nonunion workers they include all changes resulting from unilateral management decisions during the period. Except for guaranteed minimum increases, automatic cost-of-living escalator adjustments resulting from movements in the price index are excluded. Measures of increase include only those workers whose wages were increased; measures of adjustment include workers whose wages were unchanged or decreased as well as increased. Medians are available from 1959 to the present. Means are not available for periods prior to 1969.

Chapter 11. Salary Data for Government Employees

The Bureau of Labor Statistics currently prepares reports on salary levels and trends for selected categories of government employees—U.S. General Schedule employees, firefighters, police of the patrol rank, urban public classroom teachers, and refuse collectors. Salary levels published are minimum and maximum annual salary scales for firefighters, police, and refuse collectors; average salaries for teachers; and both salary scales and average salaries for U.S. General Schedule employees. All except the relatively new report on refuse collectors contain indexes of long-term salary movements.

Data for the four occupations of firefighters, police, teachers, and refuse collectors apply to cities of 100,000 inhabitants or more in 1970, and are published for the Nation as a whole and by region and city-size group (figures 36–38). Material on individual cities is not presented. Data for U.S. General Schedule employees are published only for the Nation as a whole (figure 39); they are supplemented by textual discussion of wage developments.

Data sources

Salary trend reports are prepared largely from secondary sources. For U.S. General Schedule employees, reports are based on data published by the U.S. Civil Service Commission in its annual report *Pay Structure of the Federal Civil Service*; for teachers, reports are based mainly on data from the Educational Research Service, Inc. (formerly obtained from the National Education Association); and for firefighters, police, and refuse collectors, data are obtained mainly from the International City Management Association. This information is supplemented by data from annual surveys of salaries and working conditions conducted by the International Association of Fire Fighters and the Fraternal Order of Police and, when necessary, by direct inquiries by the Bureau of Labor Statistics.

Statistical procedures

Statistical analysis for these series is confined largely to the preparation of indexes of salary movements of the various groups of government employees. Sampling problems do not arise since in each case an effort is

made to examine the total universe, i.e., all U.S. General Schedule employees; all firefighters and police in cities of 100,000 population or more in 1970; all refuse collectors in cities of this size which have municipal refuse collection systems; and all public classroom teachers in cities of 100,000 inhabitants or more and also, since 1967, in counties of this size in Standard Metropolitan Statistical Areas that have countywide school systems.

Indexes are computed by a method that minimizes the effect of year-to-year changes in relative employment in the cities or occupational categories covered. As a rule, chain indexes are employed; i.e., the index for the current year is obtained by adjusting the index for the prior year by the percentage change in average salaries over the intervening period. To preserve a pure measure of salary change, average salaries for each of the 2 years are computed using constant weights (employment in the most recent year).

Presentation

Reports appear annually in the monthly periodical *Current Wage Developments* (CWD). Press releases containing summary data for firefighters and police precede publication of the articles. Until 1977, salary changes for teachers were reported biennially, since the basic data were issued at 2-year intervals.

Uses and limitations

Salary trend reports are useful as sources of comparative wage data for union, management, and government officials engaged in wage setting and as research tools for economic analysts. These reports are one of the relatively few sources of data on wage movements and levels in the government sector, in which labor-management negotiations have become increasingly important. The temptation may be to use salary trend reports as indicators of salary movements for government employees in general. However, the particular groups covered by these reports are by no means a representative sample for this purpose. Since the statistical series presented are largely derived from materials collected by other agencies, presentation of consistent data for all employee groups is not always possible.

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Figure 36

Table 1. Percent change in minimum and maximum annual salary scales of firefighters and police, by city population size and region, 1971-76

Occupational group and year	City population size					Region 2/			
	All cities 100,000 and over	Over 999,999	500,000 to 999,999	250,000 to 499,999	100,000 to 249,999	North-east	South	North Central	West
Minimum									
Firefighters and police									
1971-1976.....	35.9	35.4	36.8	36.5	35.4	34.8	39.1	32.3	39.3
1971-1972.....	6.5	8.2	5.9	4.0	5.5	9.6	3.9	4.6	6.1
1972-1973.....	5.3	4.0	6.5	6.3	6.1	5.3	8.4	3.3	4.8
1973-1974.....	6.2	6.7	4.5	7.2	6.2	6.2	6.1	6.0	6.4
1974-1975.....	6.7	3.9	9.7	8.7	7.6	3.2	9.8	7.8	8.5
1975-1976.....	6.9	8.6	5.7	6.0	5.8	6.6	5.9	7.0	8.6
Firefighters									
1971-1976.....	36.4	36.4	36.5	37.2	35.8	34.4	39.8	33.0	39.7
1971-1972.....	6.4	8.4	6.5	3.7	5.7	9.3	4.0	5.0	6.0
1972-1973.....	5.5	4.3	5.6	6.8	6.2	5.4	8.1	3.8	4.9
1973-1974.....	6.1	6.6	4.3	7.6	6.0	6.4	6.4	5.2	6.5
1974-1975.....	7.2	3.8	10.4	8.3	7.8	3.4	9.8	8.9	8.7
1975-1976.....	6.8	9.1	5.6	6.4	5.7	6.3	6.5	6.5	8.6
Police									
1971-1976.....	35.6	35.0	36.9	35.9	35.1	35.0	38.6	32.0	39.1
1971-1972.....	6.6	8.1	5.6	4.3	5.4	9.7	3.9	4.4	6.1
1972-1973.....	5.2	3.9	7.1	6.0	6.0	5.3	8.7	3.0	4.7
1973-1974.....	6.2	6.7	4.7	6.9	6.4	6.2	6.0	6.4	6.4
1974-1975.....	6.4	4.0	9.3	9.0	7.4	3.1	9.9	7.3	8.4
1975-1976.....	6.9	8.4	5.7	5.7	5.8	6.8	5.4	7.2	8.6
Maximum									
Firefighters and police									
1971-1976.....	42.1	44.1	42.3	40.9	39.1	42.2	47.0	37.8	42.4
1971-1972.....	7.1	8.7	6.0	4.8	6.4	8.6	4.9	6.3	7.6
1972-1973.....	8.5	9.9	8.6	6.6	6.4	12.5	10.7	4.3	4.4
1973-1974.....	6.4	6.6	5.1	8.1	6.4	6.3	6.6	5.9	7.3
1974-1975.....	7.6	4.7	11.1	9.6	8.6	3.3	12.0	9.5	8.5
1975-1976.....	7.0	8.3	5.7	6.4	6.4	6.5	6.2	7.0	9.0
Firefighters									
1971-1976.....	41.9	44.4	42.0	42.0	38.9	40.3	47.8	38.1	41.5
1971-1972.....	6.8	8.4	6.6	4.8	6.4	8.2	5.3	6.3	6.7
1972-1973.....	8.1	10.6	7.4	7.0	6.2	11.6	9.6	4.8	4.4
1973-1974.....	6.6	6.6	5.3	8.3	6.5	6.6	7.0	5.6	7.3
1974-1975.....	8.1	4.6	11.4	9.5	8.6	3.5	11.9	10.0	8.7
1975-1976.....	6.9	8.7	5.6	6.8	6.2	6.1	6.8	6.6	8.8
Police									
1971-1976.....	42.2	43.9	42.5	40.0	39.2	43.2	46.3	37.7	42.9
1971-1972.....	7.2	8.9	5.6	4.8	6.4	8.8	4.6	6.4	8.2
1972-1973.....	8.7	9.7	9.4	6.3	6.6	13.0	11.4	4.1	4.4
1973-1974.....	6.4	6.6	5.0	7.8	6.3	6.2	6.4	6.0	7.3
1974-1975.....	7.3	4.7	10.9	9.8	8.5	3.2	12.1	9.2	8.3
1975-1976.....	7.0	8.1	5.7	6.1	6.6	6.6	5.6	7.2	9.1

1/ Data for 1976 are preliminary.

2/ Regions comprise the following states: North-east--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; West--Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. However, not every state is represented.

NOTE: To limit the influence of extraneous factors in computing percentage change in average minimum or maximum salaries between each pair of years (for example, 1975-76 or 1971-76), the average is obtained for each of the two periods using constant weights (employment in the last of each pair of years). Slight revisions in some of the data are due to revised computational procedures.

Figure 37

Table 1. Percent change in minimum and maximum annual salary scales of refuse collectors, by city population size and region, 1972-76¹

Year	City population size					Region 2/			
	All cities 100,000 and over	Over 999,999	500,000 to 999,999	250,000 to 499,999	100,000 to 249,999	North-east	South	North Central	West
Minimum									
1972-1976.....	28.8	26.9	31.8	30.6	31.0	24.1	34.1	33.6	30.6
1972-1973.....	5.8	5.2	6.6	5.9	7.1	5.1	7.3	6.2	4.6
1973-1974.....	6.9	6.6	8.6	5.6	7.1	6.0	8.7	7.0	7.4
1974-1975.....	8.0	8.2	6.7	9.2	7.6	7.4	7.4	9.9	8.9
1975-1976.....	5.4	4.6	6.9	6.5	6.2	3.8	6.8	7.2	7.4
Maximum									
1972-1976.....	34.5	36.5	26.8	34.7	35.1	35.7	35.6	32.1	29.6
1972-1973.....	10.6	14.2	3.7	5.7	7.2	15.2	6.0	5.3	3.8
1973-1974.....	7.2	6.6	7.3	9.7	7.4	6.5	9.4	6.5	7.7
1974-1975.....	8.6	8.1	8.3	9.9	9.9	7.5	10.1	10.3	9.3
1975-1976.....	5.0	4.2	6.2	5.5	6.6	3.4	6.6	6.8	6.3

1/ Data for 1976 are preliminary.

2/ Regions comprise the following states: North-east--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; West--Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. However, not every state is represented.

NOTE: To limit the influence of extraneous factors in computing percentage change in average minimum or maximum salaries between each pair of years (for example, 1975-76 or 1972-76), the average is obtained for each of the two periods using constant weights (employment in the last of each pair of years). Slight revisions in some of the data are due to revised computational procedures.

Figure 38

Table 4. Percent distribution of urban public classroom teachers by change in average annual salary, 1971 to 1973

Change in average annual salary	All systems	Inhabitants				Region ¹								
		1,000,000 or more	500,000 and under 1,000,000	250,000 and under 500,000	100,000 and under 250,000	New England	Middle Atlantic	Border States	South-east	Great Lakes	Middle West	Central South-west	Mountain	Pacific
Percent														
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Increases:														
Under 2.5	1.8	-	2.2	-	4.6	-	-	3.1	2.7	-	12.9	3.6	-	0.4
2.5 and under 5.0	8.9	5.9	7.7	13.2	9.3	6.6	-	2.7	15.8	3.8	32.1	34.3	-	1.2
5.0 and under 7.5	14.0	-	23.2	15.6	18.2	10.2	1.0	8.9	13.2	12.0	21.7	26.4	21.1	27.1
7.5 and under 10.0	12.7	-	20.2	17.7	14.4	13.7	2.3	23.3	11.3	14.4	18.4	22.5	12.6	6.9
10.0 and under 12.5	12.4	6.8	12.5	14.8	15.6	13.0	7.7	13.9	24.7	13.5	-	5.7	6.0	8.4
12.5 and under 15.0	14.2	15.7	15.1	17.7	9.2	16.9	4.5	13.9	7.6	4.1	6.7	7.4	45.1	46.9
15.0 and under 17.5	10.9	7.4	14.7	9.7	11.9	28.3	16.0	23.9	8.2	9.6	-	-	-	7.3
17.5 and under 20.0	3.3	-	4.4	-	8.1	4.5	.6	8.0	2.2	4.9	4.9	-	15.2	-
20.0 and under 22.5	4.6	6.4	-	6.8	5.0	6.8	2.9	2.3	9.2	10.9	-	-	-	-
22.5 and under 25.0	11.5	41.6	-	1.6	0.9	-	65.0	-	-	-	-	-	-	1.9
25.0 and under 27.5	4.5	16.2	-	-	1.1	-	-	-	1.7	24.6	-	-	-	-
27.5 and under 30.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.0 and under 32.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32.5 and under 35.0	.8	-	-	2.8	.5	-	-	-	3.4	-	3.3	-	-	-
35.0 and under 37.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37.5 or more	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decreases	.4	-	-	-	1.3	-	-	-	-	2.1	-	-	-	-
Dollars														
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Increases:														
Under \$100	0.8	-	2.2	-	1.0	-	-	-	1.2	-	12.9	-	-	0.4
\$100 and under \$200	1.0	-	-	-	3.6	-	-	3.1	1.5	-	-	3.6	-	-
\$200 and under \$300	1.2	-	-	2.9	2.0	-	-	-	3.5	-	4.9	2.3	-	1.2
\$300 and under \$400	5.0	-	7.7	10.2	3.3	-	-	2.7	11.3	1.2	27.2	13.2	-	-
\$400 and under \$500	5.5	5.9	2.5	6.0	7.2	6.6	-	1.6	5.1	2.6	-	37.7	-	-
\$500 and under \$600	3.6	-	6.1	1.8	6.2	-	-	3.3	4.9	8.2	-	-	21.1	-
\$600 and under \$700	7.2	-	6.9	13.7	8.9	-	1.0	9.1	10.2	3.8	21.7	18.5	-	4.9
\$700 and under \$800	5.8	-	8.8	7.2	7.6	18.3	1.0	6.8	5.2	1.1	12.3	2.1	-	17.6
\$800 and under \$900	5.3	-	13.9	2.1	5.7	-	1.3	11.4	3.4	2.7	6.1	13.6	7.5	4.6
\$900 and under \$1,000	6.7	-	13.1	5.2	8.9	12.4	-	4.2	8.6	16.9	-	3.6	5.1	5.5
\$1,000 and under \$1,100	6.4	6.8	-	10.6	7.8	-	7.7	-	22.5	2.1	-	-	6.0	1.4
\$1,100 and under \$1,200	2.6	-	-	4.1	5.9	6.2	-	1.4	1.0	5.0	6.7	5.4	-	3.0
\$1,200 and under \$1,300	3.0	-	4.7	4.6	2.9	7.4	.9	8.4	1.7	2.6	-	-	-	5.5
\$1,300 and under \$1,400	2.7	-	-	6.7	4.3	-	-	7.9	3.2	-	-	-	14.3	4.3
\$1,400 and under \$1,500	4.3	-	12.2	1.8	3.7	-	4.5	10.8	2.2	1.5	-	-	30.9	1.7
\$1,500 and under \$1,600	7.3	15.7	9.9	-	3.3	9.5	1.3	9.1	-	6.5	4.9	-	-	32.4
\$1,600 and under \$1,700	4.4	-	3.9	12.6	2.2	-	2.5	2.3	8.2	3.1	-	-	-	11.7
\$1,700 and under \$1,800	5.0	7.4	3.8	4.7	4.2	28.3	12.0	8.3	1.0	-	-	-	15.2	1.9
\$1,800 and under \$1,900	.5	-	-	1.2	.8	-	-	1.7	-	-	-	-	-	2.1
\$1,900 and under \$2,000	1.5	-	4.4	-	1.7	4.5	-	8.0	-	1.9	-	-	-	-
\$2,000 and under \$2,100	.7	-	-	-	2.4	6.8	1.2	-	-	1.4	-	-	-	-
\$2,100 and under \$2,200	.3	-	-	-	1.0	-	-	-	-	1.6	-	-	-	-
\$2,200 and under \$2,300	.9	-	-	-	3.0	-	1.6	-	1.7	-	-	-	-	1.9
\$2,300 and under \$2,400	1.7	6.4	-	-	-	-	-	-	-	9.8	-	-	-	-
\$2,400 and under \$2,500	.4	-	-	1.6	-	-	2.2	-	-	-	-	-	-	-
\$2,500 and under \$2,600	.1	-	-	-	.5	-	-	-	-	-	3.3	-	-	-
\$2,600 and under \$2,700	11.7	41.6	-	2.8	.7	-	62.8	-	3.4	1.2	-	-	-	-
\$2,700 and under \$2,800	4.2	16.2	-	-	-	-	-	-	-	24.6	-	-	-	-
\$2,800 or more	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Decreases	.4	-	-	-	1.3	-	-	-	-	2.1	-	-	-	-
Number of teachers (in thousands)	562	146	129	127	159	17	97	72	106	96	22	55	22	75

¹ The regions used in this study are: New England-Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Middle Atlantic-New Jersey, New York, Pennsylvania; Border States-Delaware, District of Columbia, Kentucky, Maryland, Virginia, West Virginia; Southeast-Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee; Great Lakes-Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Middle West-Iowa, Kansas, Missouri, Ne-

braska, North Dakota, South Dakota; Central Southwest-Arkansas, Louisiana, Oklahoma, Texas; Mountain-Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming; and Pacific-Alaska, California, Hawaii, Oregon, Washington.

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

Figure 39

Table 2. Minimum General Schedule salary scales by grade, selected dates, August 1939-October 1975

Effective date of change	Minimum basic salary scale, by grade								
	1 ¹	2	3	4	5	6	7	8	9
August 1939	\$1,180	\$1,440	\$1,620	\$1,800	\$2,000	\$2,300	\$2,600	\$2,900	\$3,200
August 1942	1,260	1,440	1,620	1,800	2,000	2,300	2,600	2,900	3,200
July 1945	1,506	1,704	1,902	2,100	2,320	2,650	2,980	3,310	3,640
July 1946	1,756	1,954	2,168	2,394	2,645	3,021	3,397	3,773	4,150
July 1948	2,086	2,284	2,498	2,724	2,975	3,351	3,727	4,103	4,480
November 1949	2,200	2,450	2,650	2,875	3,100	3,450	3,825	4,200	4,600
July 1951	2,500	2,750	2,950	3,175	3,410	3,795	4,205	4,620	5,060
March 1955	2,690	2,960	3,175	3,415	3,670	4,080	4,525	4,970	5,440
January 1958	2,960	3,255	3,495	3,755	4,040	4,490	4,980	5,470	5,985
July 1960	3,185	3,500	3,760	4,040	4,345	4,830	5,355	5,885	6,435
October 1962	3,245	3,560	3,820	4,110	4,565	5,035	5,540	6,090	6,675
January 1964	3,305	3,620	3,880	4,215	4,690	5,235	5,795	6,390	7,030
July 1964	3,385	3,680	4,005	4,480	5,000	5,505	6,050	6,630	7,220
October 1965	3,507	3,814	4,149	4,641	5,181	5,702	6,269	6,869	7,497
July 1966	3,609	3,925	4,269	4,776	5,331	5,867	6,451	7,068	7,696
October 1967	3,776	4,108	4,466	4,995	5,565	6,137	6,734	7,384	8,054
July 1968	3,889	4,231	4,600	5,145	5,732	6,321	6,981	7,699	8,462
July 1969	3,889	4,360	4,917	5,522	6,176	6,882	7,639	8,449	9,320
December 1969	4,125	4,621	5,212	5,853	6,548	7,294	8,098	8,956	9,881
January 1971	4,326	4,987	5,524	6,202	6,938	7,727	8,582	9,493	10,470
January 1972	4,564	5,166	5,828	6,544	7,319	8,153	9,053	10,013	11,046
January 1973	4,798	5,432	6,112	6,882	7,694	8,572	9,520	10,528	11,614
October 1973	5,017	5,682	6,408	7,198	8,055	8,977	9,969	11,029	12,167
October 1974	5,294	5,996	6,764	7,596	8,500	9,473	10,520	11,640	12,841
October 1975	5,559	6,296	7,102	7,976	8,925	9,946	11,046	12,222	13,482
	10	11	12	13	14	15	16	17	18
August 1939	\$3,500	\$3,800	\$4,600	\$5,600	\$6,500	\$8,000	(²)	(²)	(²)
August 1942	3,500	3,800	4,600	5,600	6,500	8,000	(²)	(²)	(²)
July 1945	3,970	4,300	5,100	6,230	7,175	8,750	(²)	(²)	(²)
July 1946	4,526	4,902	5,905	7,102	8,180	9,975	(²)	(²)	(²)
July 1948	4,856	5,232	6,235	7,432	8,510	10,305	(²)	(²)	(²)
November 1949	5,000	5,400	6,400	7,600	8,800	10,000	\$11,200	\$12,200	\$14,000
July 1951	5,500	5,940	7,040	8,360	9,600	10,800	12,000	13,000	14,800
March 1955	5,915	6,390	7,570	8,990	10,320	11,610	12,900	13,975	14,800
January 1958	6,500	7,030	8,330	9,890	11,355	12,770	14,190	15,375	17,500
July 1960	6,995	7,560	8,955	10,635	12,210	13,730	15,255	16,530	18,500
October 1962	7,290	8,045	9,475	11,150	12,845	14,565	16,000	18,000	20,000
January 1964	7,690	8,410	9,980	11,725	13,615	15,665	16,000	18,000	20,000
July 1964	7,900	8,650	10,250	12,075	14,170	16,460	18,935	21,445	24,500
October 1965	8,184	8,961	10,619	12,510	14,680	17,055	19,619	22,217	25,382
July 1966	8,421	9,221	10,927	12,873	15,106	17,550	20,075	22,760	25,890
October 1967	8,821	9,657	11,461	13,507	15,841	18,404	20,982	23,788	27,055
July 1968	9,297	10,203	12,174	14,409	16,946	19,780	22,835	26,264	28,000
July 1969	10,252	11,233	13,389	15,812	18,531	21,589	25,044	28,976	33,495
December 1969	10,869	11,905	14,192	16,760	19,643	22,885	26,547	30,714	35,505
January 1971	11,517	12,615	15,040	17,761	20,815	24,251	28,129	32,546	36,000
January 1972	12,151	13,309	15,866	18,737	21,960	25,583	29,678	34,355	36,000
January 1973	12,775	13,996	16,682	19,700	23,088	26,898	31,203	36,000	36,000
October 1973	13,379	14,671	17,497	20,677	24,247	28,263	32,806	36,000	36,000
October 1974	14,117	15,481	18,463	21,816	25,581	29,818	34,607	36,000	36,000
October 1975	14,824	16,225	19,386	22,906	26,861	31,309	36,338	37,800	37,800

¹ All grades in the subprofessional, the clerical, administrative, and fiscal, and in the professional schedules established by the Classification Act of 1923 have been converted to equivalent General Schedule grades as established by the Classification Act of 1949. Minimum basic salary scales of grade 1 under the 1923 Act were computed by weighting equally the base pay for each of the three grades (subprofessional grades 1 and 2 and clerical, administrative, and fiscal grade 1) that were combined into this General Schedule grade.

² General Schedule grades 16-18 were established by the Classification Act of 1949. Some employees previously worked in positions

classified at a level equivalent to the GS-16. The rates paid workers in these positions, however, were established by specific legislation.

³ Under provisions of the Classification Act of 1949, the former rate of \$10,330 (the second step of the grade under preceding legislation) was converted to \$10,500, the middle rate of the new GS-15.

⁴ Raised to \$16,000 by the Federal Executive Pay Act of 1956, approved July 31, 1956, effective on the first day of the first pay period after June 30, 1956.

⁵ Increased to \$30,239 on the first day of the first pay period after Feb. 14, 1969.

Chapter 12. The Employment Cost Index

In May 1975, representatives of the Bureau of Labor Statistics (BLS) began visiting employers across the Nation to gather information on wages and salaries for a major new compensation series - the Employment Cost Index (ECI). This survey was the first step in the development of a monthly measure of the trend in wages, salaries, and benefit costs in the total civilian economy, which would provide, as well, detailed subindexes for occupational, industrial, geographic, and other characteristics of the measure.

The index is being implemented in stages. The first stage, publication of a quarterly measure of changes in straight-time hourly earnings in the private nonfarm economy, was completed in 1976. The second stage, expansion to a measure of total compensation including benefits for the same industrial coverage, is now underway. This is to be followed by coverage of the remainder of the civilian economy (governments, agriculture, and households), and finally, to complete the index, publication of monthly measures with expanded industry detail.

Background

For many years a need had been evident for a comprehensive measure of change in the price of labor (defined as the rate of compensation) comparable to the measure of change in the price of commodities provided by the Consumer Price Index. The attempt to understand and cope with inflation in the late 1960's provided the immediate stimulus to fill this gap in our national statistics.

In the course of developing the ECI, the Bureau obtained the advice of representatives of government, business, labor, and the academic and professional statistics communities, and tested alternative methods to accomplish the objectives of the program at minimum cost to taxpayers and with a minimum burden on employers participating in the survey. Taking into consideration the suggestions received and the experience gained in testing, the Bureau established the conceptual and statistical framework for the ECI.

Description of survey

The current survey covers all employees in the private nonfarm economy with the exception of private

household workers. Agricultural and government employees are excluded, as well as the self-employed, proprietors, unpaid family workers, and the initial and temporary exclusion of Alaska and Hawaii. Establishments of all sizes are included.

The ECI is based on a probability sample of both establishments and occupations. Approximately 2,300 establishments, representing the entire spectrum of employers in the private nonfarm economy, are participating in the survey. This size was determined to be the minimum from which reliable subindex statistics could be obtained. These establishments were selected in two phases.

The first phase consisted of selecting 10,000 establishments from the complete universe of employers in the private nonfarm economy and obtaining employment information for a sample of 23 occupations per industry from a total of 441 occupations. Five certainty occupations were selected for each industry in the first-phase sample on the basis of their importance in the industry according to the 1970 Census; the remaining 18 (2 per occupational group) were selected by probability sampling.

The occupational employment information reported by the establishments in the first-phase survey (or in some instances from a prior independent occupational employment survey) was used to select the final sample of 2,300 establishments and a set of up to 23 occupations for which data would be collected from each establishment. This sample has a built-in statistical flexibility for expansion in detail and scope, and for sample replenishment within the framework of the survey design.

Data collection

The basic unit of data collection is an occupation in an establishment. These occupations—such as accountant, electrician, truckdriver, and nurse—are generally broader in scope than required in other BLS occupational wage surveys. Each occupation in an establishment is broken down into specific jobs for which compensation data are collected. In situations where it is not feasible to report data for every job in the occupation, sampling procedures are used to select a limited set of jobs or workers to represent the occupation.

In addition to being capable of disaggregation into specific jobs, the data reported for occupations can be

aggregated into the broader families of occupational classifications which are the major occupational groups. Thus a complete and integrated framework is available for organizing the survey data.

The primary information collected in the ongoing wage and salary survey is the straight-time average hourly earnings for the pay period encompassing or closest to the 12th of the survey month. Straight-time earnings are total earnings before deductions, excluding premium payments (for overtime and for work on weekends and holidays) and shift differentials. Production bonuses and cost-of-living allowances are included in straight-time earnings. Earnings are calculated as an hourly rate, even for workers paid on some other basis, such as salaried employees or employees paid under an incentive wage system.

The computation of the average pay rate for an occupation involves averaging the individual rates by workers, using employment rather than hourly weights for the component jobs.

Other data collected in the wage and salary survey are employment for occupations in the index, certain characteristics of workers in the occupation, such as union or nonunion status, or part- or full-time employment, incentive or time-rated work, and year-round or seasonal work, and certain characteristics of the establishment, i.e., industry and location. These characteristics are used in controlling for employment shifts and in tabulation of the data.

Data on benefits are now also being collected along with wage and salaries. The benefit data include information on benefit practices, employer expenditures, and workweeks, from which an employer's cost in cents per hour worked is calculated for the survey occupations. This cost is added to the occupational earnings to obtain a total compensation cost per hour worked. A quarterly report of changes in benefit practices provide data for repricing benefit costs, which are also automatically recalculated, if wage-related, when wage changes occur.

Another area of ECI expansion now underway is the extension of coverage to include governments. The sampling frame for this phase is being developed. Data from governments will be combined with data from the private economy to compute measures for the total civilian economy, excluding agriculture and households, and will provide an industry subseries "Public Administration", as defined in the 1972 *Standard Industrial Classification Manual*.

Computation

The ECI is a fixed employment, base-weighted average of changes in the rate of compensation expressed as a relative of average rates in a reference base

period. ECI statistics are computed from comparable wage and benefit cost data collected from a matched sample of establishments and occupations from quarter to quarter. Average compensation for each occupation in each of 62 industry groupings is computed for the current and previous survey quarters. These averages are weighted by occupational employment reported in the 1970 census. The ratios of the weighted aggregates of one quarter to the prior quarter form a time series of relatives that can be chained to form indexes which are expressed as a percentage of the base reference period. The ECI statistics are now published as quarterly percentage changes rather than in index form to avoid confusion caused by shifts of the reference base as the index is expanded in scope. When the expansion is complete, indexes will be published.

Presentation

ECI statistics are now regularly published for the reference months of March, June, September, and December. The statistics appear quarterly in a press release, in the second month after the survey period. For example, statistics computed from the survey data for December, March, June, and September, are published in February, May, August, and December, respectively. Data from the press release presenting the September 1976 ECI are shown in figure 40. Reprints of the release and the complete series starting with September 1975 appear in the monthly BLS publication *Current Wage Developments*.

Separate detail is now published for the total private nonfarm economy, for each of four broad geographic areas of the United States, for five major industry divisions, and for eight major occupational groups. At the national level, measures are also published for workers covered by collective bargaining agreements and those not covered, and for establishments in or outside of metropolitan areas.

The regional coverage is as follows: *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.

The five major industry divisions are:

Contract construction

Manufacturing
Wholesale and retail trade
Transportation, communication, electric, gas, and
sanitary services
Services, except private household

All other private nonfarm industries, except households, are covered in the survey and in the overall measure, but the sample size is insufficient to support publication at this time for the other private nonfarm major industry divisions, e.g., mining, and finance, insurance, and real estate.

The eight occupational groups are:

Professional, technical, and kindred workers
Managers and administrators, except farm
Clerical and kindred workers
Craft and kindred workers
Operatives, except transport equipment
Transport equipment operatives
Laborers, except farm
Service workers, except private household

In 1978 the group "Salesworkers" will be added to the published series.

When sufficient benefit data are collected to establish a base period, a set of measures of changes in compensation will be computed from the data, generally in the same manner and with the same detail as for wages and salaries. In addition some limited series on benefits alone are under consideration for publication.

Comparison with other series

The ECI, when fully developed, will differ from other major series primarily in the greater degree of occupational detail it will provide. Also, it will cover more industries and types of compensation than the hours and earnings series (chapter 5); be more timely than the survey of employer expenditures for employee compensation (EEEC) (chapter 4), and be freer of the effects of employment shifts which influence the movement of most of the other major series. On the other hand, the ECI does not have the industrial detail provided by the hours and earnings series, and was not designed to provide the information on levels of pay available from either the hours and earnings or the EEEC surveys.

There are also differences in the statistical design between the ECI and other compensation series. ECI data are collected from a joint probability sample of occupational and establishment employment, rather than from a universe or sample of establishments. The ECI statistics therefore represent changes in occupa-

tional compensation rather than changes in compensation for the establishment.

Uses and limitations

The Employment Cost Index will provide, for the first time, a comprehensive and timely measure of changes in the rate of employment compensation, free of much of the influence of employment shifts. Such a measure may be especially useful for understanding and explaining trends in compensation, forecasting such trends, and relating them to other economic variables. In addition, it may be of use in the formation of wage decisions by parties to collective bargaining and in contract cost escalation, as well as for those presently unforeseen uses which inevitably arise from the ingenuity of the users. The ECI is not, however, intended as a substitute for existing measures of compensation, all of which are useful for their purposes. In many instances, it may complement or illuminate existing statistical series.

The limitations of the index must be kept in mind. Because the ECI is an index, it measures changes rather than levels of compensation. Further, the index is not a measure of the total cost of employing labor. Some labor costs (e.g., training expenses, retroactive pay, etc.) do not fall under the Employment Cost Index definition of compensation. Also, total employment costs vary with the amounts and types of labor used—factors which are held constant in the Employment Cost Index. In its initial stage the ECI will not cover all employers and employees and all compensation; ultimately this limitation will be eliminated. Moreover, the index is not a pure rate measure. Although straight-time hourly earnings provide a close approximation of the rate and the Employment Cost Index is designed to eliminate employment shifts among establishments, industries, and occupations, employment shifts within the occupations and longevity pay increases will influence the level of earnings reported by the respondent.

Some of these limitations are temporary; some are built into the conceptual framework of the measure; others stem from deficiencies in the state of the art of measurement which will be resolved in time with research and improvements in technique.

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Figure 40

Rate of wage and salary changes in Employment Cost Index,
September 1975 through September 1976

(In percent)

Series	3 months ending				12 months ending in September 1976
	December 1975	March 1976	June 1976	September 1976	
All private nonfarm workers	1.8	1.9	1.7	1.5	7.2
<u>Workers, by occupational group</u>					
Professional, technical, and kindred workers.	1.7	1.4	1.1	1.7	6.1
Managers and administrators, except farm	1.3	1.3	2.1	1.0	5.8
Clerical and kindred workers	1.8	2.2	1.3	2.0	7.4
Craft and kindred workers	1.8	1.9	2.0	2.0	7.9
Operatives, except transport	2.2	2.8	0.8	2.0	8.0
Transport equipment operatives	1.7	1.2	4.5	0.6	8.3
Laborers, except farm	2.4	2.1	1.9	1.2	7.8
Service workers, except private household ...	3.3	1.9	3.3	0.4	9.1
<u>Workers, by industry division</u>					
Construction	-	-	3.1	2.6	-
Manufacturing	2.1	1.9	1.5	1.8	7.4
Transportation and public utilities	2.6	1.9	2.8	1.3	8.9
Wholesale and retail trade	1.8	2.2	2.2	0.9	7.3
Services	1.8	1.5	1.5	1.7	6.6
<u>Workers, by region</u>					
Northeast	1.4	0.9	1.4	2.5	6.3
South	1.5	2.4	1.3	1.7	7.0
North Central	2.3	1.5	1.6	1.5	7.1
West	2.1	3.3	2.3	0.5	8.6
<u>Workers, by bargaining status</u>					
Occupations covered by collective bargaining agreements	2.4	1.6	1.8	2.4	8.5
Occupations not covered by collective bar- gaining agreements	1.6	2.0	1.6	1.1	6.5
<u>Workers, by area</u>					
Metropolitan areas	1.9	1.9	1.5	1.7	7.1
Other areas	1.6	2.2	2.4	0.9	7.1

Note: The statistics are percent changes in straight-time average hourly earnings over the period indicated. For example, the 1.7 percent change for the "all private nonfarm worker" series in the second quarter 1976 is the actual percent change in straight-time average hourly earnings from the pay period including the 12th of the survey month of March to the comparable period in June. The statistics are not annualized, nor are they adjusted for seasonal influences.

The computation of percent changes spanning more than one survey period is accomplished by compounding successive changes for individual quarters. In actual practice, the compounding calculations are made to the fifth decimal place.

Dashes in the table indicate that the data collected were insufficient to meet statistical criteria for publication during the periods indicated.

Chapter 13. Income and Earnings Data from the 1972-73 Consumer Expenditure Survey

Consumer expenditure surveys are specialized studies in which the primary emphasis is on collecting data relating to family expenditures for goods and services. In order to analyze the determinants of expenditures, the surveys also collect information on the amount and composition of family income, on changes in savings and debts, and on major demographic and socioeconomic characteristics of families.

Since 1888, the Bureau of Labor Statistics (BLS) has periodically conducted surveys of consumer expenditures, savings, and income. These have been the only comprehensive sources of detailed information on expenditures, income, and changes in assets and liabilities related to the socioeconomic and demographic characteristics of families in the United States. The Consumer Expenditure Survey of 1972-73, the eighth major survey of this type, and the first since 1960-61, extends this tradition. Unlike previous surveys, the collection of data was carried out by the Bureau of the Census under contract to the Bureau of Labor Statistics. Past surveys have been designed to meet a great variety of user demands. The 1972-73 survey was undertaken in part to revise the weights and associated pricing samples in the current Consumer Price Index, and in part to help meet the need for timely, accurate, and detailed information on how American families earn and spend their income.

Description of survey

The BLS completed the 1972-73 Consumer Expenditure Survey in June 1974. Covering the civilian noninstitutional population over a period of 2 years, the survey consisted of two separate components: (1) A diary or recordkeeping survey completed by respondents for two 1-week periods, and (2) an interview panel survey in which consumer units, or families, reported information to interviewers every 3 months over a 15-month period.¹ The diary component covered the period July 1972-June 1974, and the interview component covered the 1972 and 1973 calendar years.

¹ A consumer unit is defined as (1) a family of two persons or more usually living together who pool their income and draw from a common fund for their major items of expense, or (2) a single consumer who is financially independent of any family group. The single consumer may be living alone in a separate housing unit; rooming in a private home, lodging house, or hotel; or sharing a unit.

In each year, the sample for each component consisted of approximately 10,000 families. More complete information concerning the design and conduct of both components of the survey appears in "The 1972-73 Consumer Expenditure Survey," published in the December 1974 issue of the *Monthly Labor Review*.

REFERENCE PERIOD

The interview survey collected information on wages and salaries from employment and on income from self-employment for each member of the consumer unit aged 14 years old and over. In addition, data were obtained on income received by the consumer unit from other sources. (See figure 41 for details.) Income data reported in 1972, the first year of the interview survey, consisted of estimates of total income from all sources for 1971 and estimates of income detail for 1972; income data reported in the second survey year consisted of total estimates for 1972 and detailed estimates for 1973.

In the diary survey, income data were collected for each consumer unit member for the previous 12 months. Income from other sources covered the same period. (See figure 42 for details.) Thus, the reference period for income covered the 12 months prior to the time that the consumer unit participated in the survey.

CONCEPT OF INCOME

Income as collected in both the diary and interview surveys is conceptually identical—that is, it reflects total money income from all sources earned by all family members during a 12-month period. The concept excludes other money receipts such as inheritances or bequests, lump-sum settlements from casualty insurance, and occasional gifts of cash from persons outside the family. On the other hand, the estimates of income as published in separate reports of the two surveys can vary due to differences in the collection of income detail. A review of figures 41 and 42 points out these differences in collection detail. The estimate of income as presented in tables from the interview survey provides for a reduction in money wages and salaries for occupational expenses but includes food and rent received as pay. These adjustments are not possible in the diary survey because such detailed information was not collected.

The estimates of income as published may differ

between the two surveys in several other respects. The income estimate in the interview survey is adjusted for the net value of food stamps (exchange value minus cost). This adjustment cannot be made in the diary survey because food stamp information was not collected in the first-year diary. A similar explanation applies to the net value from the sale of stock (sale price minus cost). This value is included in the income estimate in the interview survey, but since it was not specifically collected in the diary survey, it is excluded from the estimate of income in that survey.

Uses and limitations

The BLS consumer expenditure survey is the only nationwide study which links the levels of family income to patterns of consumer expenditure and saving. This linkage permits the user to classify expenditures by income alone or in conjunction with other socioeconomic and demographic characteristics of the consumer unit. For example, the income information can be of value in studies of the welfare of particular population groups such as the aged, low-income earners, urban dwellers, or food stamp recipients. The Internal Revenue Service has used average expenditures of families classified by income and family size as the basis for revising its average sales tax tables, which taxpayers may use in filing Federal income tax returns. Aside from its importance in the CPI revision program, the Bureau of Labor Statistics will use the information to revise and update its family budget estimates. The income data from the survey will be of interest to policymakers studying income differences over time or the distribution of income among different socioeconomic groups or different geographic areas. Econometricians will find the data useful in constructing models of consumption and savings behavior. Market researchers will find them valuable, together with the expenditure data, in analyzing the demand for a broad group of consumer goods and services.

RELIABILITY

The income data from the interview and diary surveys are subject to two types of errors—sampling and nonsampling. Sampling errors could have occurred because observations were not taken from the entire population. Nonsampling errors can be attributed to many sources, such as inability to obtain information about all the respondents in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness of the respondent to provide correct information, mistakes in recording or coding the data obtained, and other errors of collection, response, processing, and coverage. With regard to consumption categories, this applies especially to the “alcoholic beverages” and “tobacco” components,

which historically have been underreported in household surveys. The accuracy of the results of a survey is determined by the joint effects of sampling and nonsampling errors.

The limitations of income data collected from household surveys are discussed in chapter 6 in some detail. Most of the caveats apply to the data collected in the expenditure survey as well. While standard errors for the expenditure survey income data have not been computed, they are likely to be larger than those shown in chapter 6 for the CPS because the sample is smaller for each year. A rough estimate is that the standard error for 1 year’s data would be about twice that shown in chapter 6 and about 1.6 times that for the 2 years’ data combined.

Comparison with other series

Two agencies of the Department of Commerce—the Bureau of the Census and the Bureau of Economic Analysis—regularly publish estimates of family income. While there are some similarities between the BLS income concept and that of the Bureau of the Census, which collects family money income information annually in its Current Population Survey (CPS), some differences do exist.² First, the population coverage of the CPS is somewhat broader than that of the BLS survey, as the CPS includes military personnel living on-post with their families. Second, the CPS definition of a family differs from the BLS definition of a consumer unit. The CPS defines a family as a group of persons living together who are related by blood, marriage, or adoption. Members of a group who are unrelated to the head of the family are treated as separate families or unrelated individuals. A third difference, which applies only to the BLS diary survey, concerns the time period covered by the income data. The CPS income estimates are based on surveys conducted in March of each year and cover the preceding calendar year (as does the BLS interview survey). Income data from the diary survey, on the other hand, are obtained throughout the year, covering the 12 months preceding the time of the interview. Finally, the Bureau of the Census imputes values when respondents fail to answer income questions; the BLS does not apply imputation techniques to the income section. In addition, the BLS interview survey collected income in more detail than the CPS survey.

There are also differences between income in the BLS survey and the income estimate published by the Bureau of Economic Analysis (BEA), which annually compiles the National Income and Product Accounts.

² For a detailed discussion of earnings data from the CPS, see ch. 6.

First, the population coverage of the BLS survey is not as broad as that of the BEA, the latter including nonprofit institutions, inmates of institutions, and on-post military personnel. Second, personal income data in the National Accounts reflect various imputed values, the most important of which are rental value of owner-occupied homes and services furnished without payment by financial intermediaries. Third, BEA includes as income the value of food and clothing issued to military personnel and the accrued interest on government bonds. None of these items are considered as income in the BLS survey.

Excluded from total personal income in the National Accounts is a large and growing component in the BLS survey—that is, the Social Security contribution of employees and the self-employed. These contributions are a part of BLS wages and salaries and self-employment income but are deducted in arriving at personal income in the National Accounts. Other exclusions from BEA's income component are income received in the form of alimony, separate maintenance payments, and contributions for support. All of these are included in the BLS definition of income.

Presentation

The 1972–73 Consumer Expenditure Survey data are

being made available in two different forms. First, publications can be obtained containing tables which are similar to those produced for the 1960–61 Survey, showing income in detail by socioeconomic and demographic characteristics. Second, tapes are to be made available with as much detail as is consistent with the confidentiality policies of BLS and the Bureau of the Census. Users may then decide on their own definition of income.

—REFERENCES—

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Carlson, Michael D. "The 1972–73 Consumer Expenditure Survey," *Monthly Labor Review*, December 1974, pp. 16–23.

U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Expenditure Survey Series: Diary Survey, 1972 and 1973*. Report Series 448, 1976.

_____, _____. *Consumer Expenditure Survey Series: Interview Survey, 1972 and 1973*. Report Series 455, 1976.

Figure 41**Level of income detail collected—interview survey ¹****Money income before taxes****Wages and salaries****Civilian occupations****Wages and salaries**

Minus: Occupational expenses

Plus: Food received as pay

Rent received as pay

Armed Forces

Pay on active or reserve duty

Quarters and subsistence allowances

Self-employment income

Net income from own business and professional practice

Net income from own farm

Income from roomers and boarders**Income from rental property and royalties****Profit from stocks and bonds ²****Interest from bonds, savings accounts, loans, etc.****Dividends from stock, mutual funds, etc.****Other income**

Social security and railroad retirement

Federal civil service retirement

State and local government retirement

Private pensions, annuities, and retirement

Veterans' compensation and benefits

Unemployment insurance, government

Unemployment insurance, private

Welfare and other public assistance

Regular contributions for support

Insurance refunds

Other money income, including workers' compensation

Income from subleasing

Federal food stamps (value received minus cost)

Refunds from property taxes, from Federal, State, and

local taxes, from social security taxes,

or from other taxes received in the survey year

Personal taxes paid

Federal income taxes

State and local income taxes

Personal property taxes

Other taxes

Money income after taxes**Figure 42****Level of income detail collected—diary survey****Money income before taxes****Wages and salaries**

Net income from own business and professional practice

Net income from own farm

Social security and railroad retirement

Estates, trusts, and dividends; net rental income; and interest
on savings accounts and bonds

Welfare payments and other public assistance

Unemployment and workers' compensation, government
pensions, and veterans' payments

Private pensions and annuities, alimony, and other income

¹ The level of detail in publications may vary from the level of collection depending on the reliability of the detail.

² The transactions value of securities sold in the survey year less the cost of those same securities purchased in the survey year.

Chapter 14. Comparing Statistical Series

Analysts frequently compare statistical series.¹ One goal is the indirect study of the *difference* between two available series. At other times, the aim is to explain variations in the signals given out by different sets of data which purport to measure the same basic phenomenon. Such studies may be complicated by a multiplicity of factors. Aside from reporting errors, variations in series findings may be the result of differences in:

1. Concept
2. Worker coverage
3. Geographic coverage
4. Industrial coverage
5. Establishment size cutoff
6. Timing
7. Unit of measurement
8. Collection techniques
9. Estimating techniques
10. Sample size and variability

The more closely related the series being compared, the fewer are the factors that have to be considered and the greater the confidence that can be placed in the result. The following examples use a relatively simple technique and serve as an introduction to the comparison of statistical series.

Figure 43 illustrates measurement of the factors resulting in different levels of series on average weekly earnings and real spendable weekly earnings for a married worker with three dependents who earned the average weekly earnings. Since the latter series is derived from data on average weekly earnings, the factors causing variation are controlled and it is possible accurately to account for differences between the series. Thus, application of the formula² for computing current-dollar spendable weekly earnings to seasonally adjusted average weekly earnings of \$176.89 in the third quarter of 1976 yields spendable earnings of \$156.95, implying a tax liability of \$19.94 for Federal

income and social security taxes. By separately computing social security contributions (5.85 percent of earnings), we can estimate the independent influence of income taxes. In similar fashion, by comparing current-dollar and real spendable earnings—the latter obtained by dividing the former by the CPI—we can isolate the impact of price changes since 1967.

Figures 44 and 45 are illustrative of reconciliation of some of the compensation series discussed in the preceding chapters. In figure 44 an attempt is made to identify and quantify the factors responsible for differences in the movement of the Hourly Earnings Index and the hourly compensation series, using the intermediate series shown in the upper half of the table. Comparison of the 7.1-percent annual rate of increase in the Hourly Earnings Index during the third quarter of 1976 with the 6.5-percent gain in gross hourly earnings implies a combined impact of -0.6 percentage points because of fluctuations in overtime in manufacturing and interindustry employment shifts.³ The separate effect of overtime in manufacturing can be approximated by multiplying the difference between changes in straight-time and gross hourly earnings in manufacturing by one-third, the relative weight of manufacturing in the private nonfarm economy. By subtraction, the separate impact of interindustry employment shifts can then be found.

Assuming that the difference between the 6.5-percent rise in hourly earnings in the private nonfarm economy and the 6.2-percent gain in hourly wages and salaries reflects coverage differences in the two series, we attribute a -0.3 percentage-point impact to the inclusion of supervisory or nonproduction workers in the private sector and all employees in government enterprises in the wages and salaries series and the exclusion from these data of employees in nonprofit institutions. Finally, comparison of hourly wages and salaries and hourly compensation indicates a 0.5-percent effect of changes in supplementary benefits.

The individual factors shown in the lower half of figure 44 “explain” the different movements of the Hourly Earnings Index and hourly compensation. Moreover, the sum of their effects, -0.4 percentage points in the third quarter of 1976, equals the difference between the changes in the two series.

³ The effect is negative since gross earnings rose less rapidly than the Index.

¹ For example, see Paul M. Schwab, “Two Measures of Purchasing Power Contrasted,” *Monthly Labor Review*, April 1971, pp. 3–14; Victor J. Sheifer, “The Relationship Between Changes in Wage Rates and in Hourly Earnings,” *Monthly Labor Review*, August 1970, pp. 10–17; and Victor J. Sheifer, “Reconciling Labor Department and Stabilization Agency Wage Data,” *Monthly Labor Review*, April 1973, pp. 24–30.

² See Eric Dmytrow and Janet Grimes, “Changes in the Spendable Earnings Series for 1976: Effects of The Tax Adjustment Act of 1975 and the Social Security Tax Base Change,” *Employment and Earnings*, March 1976, pp. 6–13.

Figure 45 presents a similar comparative analysis—in this case between changes in hourly compensation of all persons in the private business sector and real spendable weekly earnings of married production or nonsupervisory workers in the private nonfarm economy with three dependents who earned the average weekly earnings.

The procedure followed in figures 43–45 is most satisfactory where the differences among series can be attributed solely to conceptual and coverage differences, rather than measurement errors. Thus, in figure 44 the combined effect of overtime in manufacturing and interindustry employment shifts is readily apparent in the comparative movements of the Hourly Earnings Index and gross hourly earnings, which are generated from the same statistical data base and differ solely in terms of computational procedures designed to isolate the Index from the two forces under consideration.⁴ Moreover, since consistent gross and straight-time hourly earnings data are available for manufacturing, it is possible to separate the influence of overtime fluctuations in this sector, thereby allowing the isolation of employment shifts.

⁴ See above, p. 39.

When series are developed independently, however, errors in measurement in both sets of data—reporting errors, random sampling errors, and so forth—may affect the spread between them. Therefore, differential changes in hourly wages and salaries of all employees in the nonfarm business sector and hourly earnings of production or nonsupervisory workers in the private nonfarm economy, although attributed in figures 44 and 45 to the coverage differences of the two series, also reflect the measurement errors in the two sets of data. In this regard, attributing the 1.4-percentage point difference in the second quarter of 1976 between the 8.3-percent increase in wages and salaries of all employees and the 6.9-percent increase in earnings of production or nonsupervisory workers to the effect of pay changes for the residual group implies substantial adjustments for these employees, who constitute a small fraction of the total work force.⁵

⁵ For detailed comparisons of series emphasizing these techniques, see Jack Alterman, "Compensation per Man-Hour and Take-Home Pay," *Monthly Labor Review*, June 1971, pp. 25–34; John F. Early, "Factors Affecting Trends in Real Spendable Earnings," *Monthly Labor Review*, May 1973, pp. 16–19; and Thomas W. Gavett, "Measures of Change in Real Wages and Earnings," *Monthly Labor Review*, February 1972, pp. 48–53.

Figure 43

Factors accounting for differences between average weekly earnings and real spendable weekly earnings of production or nonsupervisory workers in the private nonfarm economy, 1974 I - 1976 III

(Earnings data are seasonally adjusted.)

Item	1974				1975				1976		
	I	II	III	IV	I	II	III	IV	I	II	III
Average weekly earnings	\$149.87	\$152.76	\$156.55	\$158.39	\$159.63	\$161.61	\$165.07	\$169.16	\$172.34	\$174.61	\$176.89
Less:											
Income taxes ¹	10.27	10.75	11.41	11.71	11.92	7.98	6.38	7.05	8.78	9.18	9.59
Social security taxes ¹	8.77	8.94	9.16	9.27	9.34	9.45	9.66	9.90	10.08	10.21	10.35
Current-dollar spendable weekly earnings ²	130.83	133.07	135.98	137.41	138.37	144.18	149.03	152.21	153.48	155.22	156.95
Less:											
Price change	38.45	41.60	45.16	48.26	50.37	53.85	57.51	60.23	61.76	63.50	65.55
Real spendable weekly earnings ²	92.38	91.47	90.82	89.15	88.00	90.33	91.52	91.98	91.72	91.72	91.40
	Percent of average weekly earnings										
Income taxes	6.9	7.0	7.3	7.4	7.5	4.9	3.9	4.2	5.1	5.3	5.4
Social security taxes	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Consumer price change	25.7	27.2	28.8	30.5	31.6	33.3	34.8	35.6	35.8	36.4	37.1

¹ Taxes are those which are applicable to a married worker with 3 dependents who earned the average weekly earnings.

² Married worker with 3 dependents who earned the average weekly earnings.

Figure 44

Factors "explaining" differences in changes¹ in the Hourly Earnings Index for the private nonfarm economy and in hourly compensation of employees in the nonfarm business sector, 1974 I - 1976 III

Item	1974				1975				1976		
	I	II	III	IV	I	II	III	IV	I	II	III
Quarterly percent changes at annual rates											
<i>Basic measures</i>											
Production or nonsupervisory workers:											
Hourly Earnings Index, private nonfarm economy	7.2	10.3	10.4	9.4	9.0	7.3	8.4	8.0	6.9	6.5	7.1
Straight-time hourly earnings, manufacturing	6.1	11.7	14.1	12.3	11.0	6.0	6.5	6.4	7.8	7.6	10.1
Gross hourly earnings, manufacturing	5.2	10.1	14.6	10.5	7.8	6.1	8.4	6.8	9.2	6.8	10.3
Gross hourly earnings, private nonfarm economy	6.5	9.1	10.3	8.7	6.3	5.8	7.6	7.5	7.3	6.9	6.5
All employees:											
Hourly wages and salaries, nonfarm business sector	8.4	11.0	11.0	10.5	11.0	7.0	6.6	7.4	8.3	8.3	6.2
Hourly compensation, nonfarm business sector	9.2	11.3	11.3	11.2	12.1	7.6	6.6	7.2	9.3	8.4	6.7
<i>Analysis of spread</i>											
Hourly Earnings Index, production or nonsupervisory workers, private nonfarm economy	7.2	10.3	10.4	9.4	9.0	7.3	8.4	8.0	6.9	6.5	7.1
Effect (in percentage points) of:											
Overtime in manufacturing ²	-.3	-.5	.2	-.6	-1.1	-	.6	.1	.5	-.3	.1
Interindustry employment shifts	-.4	-.7	-.3	-.1	-1.6	-1.5	-1.4	-.6	-.1	.7	-.7
Supervisory or nonproduction workers in the private sector and all employees in government enterprises, less employees in nonprofit institutions	1.9	1.9	.7	1.8	4.7	1.2	-1.0	-.1	1.0	1.4	-.3
Supplementary benefits	.8	.3	.3	.7	1.1	.6	-	-.2	1.0	.1	.5
Equals: Hourly compensation, all employees, nonfarm business sector	9.2	11.3	11.3	11.2	12.1	7.6	6.6	7.2	9.3	8.4	6.7

¹ Computed from seasonally adjusted data.

² Computed by multiplying the difference between changes in straight-time and gross hourly earnings in manufacturing by one-third.

Figure 45

Factors "explaining" differences in changes¹ in hourly compensation of all persons in the private business sector and real spendable weekly earnings of married production or nonsupervisory workers (with three dependents) in the private nonfarm economy, 1974 I - 1976 III

Item	1974				1975				1976		
	I	II	III	IV	I	II	III	IV	I	II	III
Quarterly percent changes at annual rates											
<i>Basic measures</i>											
Private business sector:											
Hourly compensation, all persons	8.0	12.7	12.6	9.9	13.1	6.9	5.2	8.3	10.9	7.5	7.4
Nonfarm business sector:											
Hourly compensation, all persons	9.3	11.5	11.5	10.9	11.8	7.9	6.8	6.6	9.5	8.9	6.9
Hourly compensation, all employees	9.2	11.3	11.3	11.2	12.1	7.6	6.6	7.2	9.3	8.4	6.7
Hourly wages and salaries, all employees	8.4	11.0	11.0	10.5	11.0	7.0	6.6	7.4	8.3	8.3	6.2
Hourly earnings, production or nonsupervisory workers ..	6.5	9.1	10.3	8.7	6.3	5.8	7.6	7.5	7.3	6.9	6.5
Weekly earnings, production or nonsupervisory workers ..	4.2	7.9	10.3	4.8	3.2	5.1	8.8	10.3	7.7	5.4	5.3
Spendable weekly earnings, production or nonsupervisory workers ²	3.7	7.0	9.1	4.3	2.8	17.9	14.1	8.8	3.4	4.6	4.5
Real spendable weekly earnings, production or nonsupervisory workers ²	-8.0	-3.9	-2.8	-7.2	-5.1	11.0	5.4	2.0	-1.1	-	-1.4
<i>Analysis of spread</i>											
Hourly compensation	8.0	12.7	12.6	9.9	13.1	6.9	5.2	8.3	10.9	7.5	7.4
Effect (in percentage points) of:											
Farm economy	-1.3	-1.2	-1.1	1.0	-1.3	1.0	1.6	-1.7	-1.4	1.4	-.5
Self-employed	-.1	-.2	-.2	.3	.3	-.3	-.2	.6	-.2	-.5	-.2
Supplementary benefits	-.8	-.2	-.3	-.7	-1.1	-.6	-	.2	-1.0	-.1	-.5
Supervisory or nonproduction workers in the private sector and all employees in government enterprises, less employees in nonprofit institutions	-1.9	-2.0	-.7	-1.8	-4.7	-1.2	1.0	.1	-1.0	-1.4	.3
Weekly hours	-2.3	-1.2	-	-3.9	-3.1	-.7	1.2	2.8	.4	-1.5	-1.2
Federal income and social security taxes	-.5	-.9	-1.2	-.5	-.4	12.8	5.3	-1.5	-4.3	-.8	-.8
Consumer price change	-11.7	-10.9	-11.9	-11.5	-7.9	-6.9	-8.7	-6.8	-4.5	-4.6	-5.9
Equals: Real spendable weekly earnings	-8.0	-3.9	-2.8	-7.2	-5.1	11.0	5.4	2.0	-1.1	-	-1.4

¹ Computed from seasonally adjusted data.

² Married worker with 3 dependents who earned the average weekly earnings.

Appendix A - Selected Compensation Series Published by Other Federal Agencies

Although the Bureau of Labor Statistics is the principal source of Federal data on employee compensation, other Federal agencies also compile and publish such data. Several of the more important or representative series are summarized in this appendix.

Statistics on compensation are produced by three types of agencies—analytic and research agencies, administrative and regulatory agencies, and general-purpose statistical agencies.¹

ANALYTICAL AND RESEARCH AGENCIES

Analytical and research agencies primarily compile, analyze, and interpret compensation series obtained or derived from other sources; they seldom collect primary data. The principal Federal agency of this type is the Bureau of Economic Analysis (BEA) of the Department of Commerce. Based on statistics compiled from other sources and various internal estimating procedures, the Bureau produces annual and quarterly data on compensation, including series on total compensation, wages and salaries, and supplements to wages and salaries; and average annual earnings per full-time employee, by industry.

All except the last are aggregates of money flows at annualized rates. The measure of earnings is an average derived from the wage and salary statistics and estimates of full-time employment. These series appear in the *Survey of Current Business* as part of the National Income and Product Accounts. Corresponding information for historical periods is available in the *National Income and Product Accounts of the United States, 1929–65, Statistical Tables*, a supplement to the *Survey of Current Business*.

The series on total compensation, wages and salaries, supplements, and employer contributions for social insurance appear in table 7 of the *Survey*, as shown in figure A-1.

The series on wages and salary disbursements appears with subtotals for major industry groupings in table 10 of the *Survey*, as shown in figure A-2.

¹ An introductory orientation to Federal statistical sources is presented in J. E. Morton's, "A Student's Guide to Federal Government Statistics," *Journal of Economic Literature*, June 1972, vol. X, 2; pp. 371–97.

The series on compensation, wages and salaries, and employer contributions to social insurance, classified by industry, as shown in figures A-3–5, appear annually in the July issue of the *Survey of Current Business*. Average annual earnings per full-time employee by industry (figure A-6) also are published in the July issue.

ADMINISTRATIVE AND REGULATORY AGENCIES

Administrative and regulatory agencies collect compensation statistics to carry out their statutory responsibilities or produce them as byproducts of their operations. Among such administrative agencies are the Social Security Administration, the Railroad Retirement Board, the Education Division of the Department of Health, Education, and Welfare, the Internal Revenue Service of the Treasury Department, the Civil Service Commission, and the National Science Foundation. Regulatory agencies producing compensation series include the Interstate Commerce Commission, the Federal Aviation Administration, the Maritime Administration, and the Securities and Exchange Commission.

Social Security Administration (SSA)

The SSA publishes statistics on the annual earnings of workers in employment covered by the Social Security program. Statistics are based on a 1-percent sample of all covered workers. Median annual earnings of wage and salary workers and the self-employed, by sex, are published annually in the *Social Security Bulletin, Annual Statistical Supplement* (figure A-7). Periodically, the SSA publishes distributions of covered workers' earnings by age bracket, sex, and race, for all workers and for those working in four quarters of the year. National summaries and geographic and metropolitan area detail are available for these distributions. Average earnings by age bracket and by four quarter and all-worker classifications are also published with corresponding geographic detail. The latest publication containing these statistics is *Earnings Distributions in the United States, 1969*, prepared by the Office of Research and Statistics, Social Security Administration.

The 1-percent sample data are also the source of the detailed annual earnings statistics compiled and published by BLS. (See chapter 8.)

The *Social Security Bulletin, Annual Statistical Supplement*, also prepared by the Office of Research and Statistics, contains a chronology of employer contribution rates dating back to the inception of the social security program (figure A-8), and an annual series of employer aggregate contributions to private pension and profit-sharing plans (figure A-9).

The Social Security Administration also prepares annual statistics on coverage, contribution, and benefits under private employer benefit and pension plans. These statistics appear in articles in the *Social Security Bulletin*. Tables from these articles are shown in figures A-10 and -11.

Railroad Retirement Board

The Railroad Retirement Board publishes annual and quarterly statistics on the financing and amount of benefits provided under the Railroad Retirement Act to employees (or their survivors) of railroads and other organizations affiliated with railroad transportation. The principal source of annual statistics is the *Statistical Supplement* to the *Annual Report* of the Railroad Retirement Board. These annual statistics include aggregate contributions and payments under the act; average amounts of annuities, unemployment, and sickness benefits by various classifications of recipients, including occupational groups (figures A-12 and -13); and data on the average and distribution of taxable compensation for covered employees of Class 1 railroads (figures A-14 and -15). Some data are available by age, sex, and employer.

The *Quarterly Review*, published by the Railroad Retirement Board, contains current quarterly statistics on contributions to the fund and the average amount of benefit payments under the program.

Education Division of Department of Health, Education, and Welfare

The National Center for Educational Statistics of the Education Division, Department of Health, Education, and Welfare, collects and publishes compensation statistics for instructional staff in elementary, secondary, and higher education. Average annual salaries of professional educational staff and classroom teachers in public elementary and secondary schools are published annually for the school year for States, other areas of the United States, and the 20 most populous cities (figure A-16).

Statistics also are published, by school year, on the salaries and fringe benefits of faculty in institutions of higher education (figures A-17 and -18).

Internal Revenue Service (IRS)

The IRS annually publishes statistics on aggregate salaries and wages for the calendar year based on a sample of tax returns, in *Statistics of Income: Individual Income Tax Returns* (figure A-19).

Civil Service Commission (CSC)

The Bureau of Intergovernment Personnel Programs of the CSC conducts an annual survey of salary ranges now covering 104 State government job titles in 31 occupational categories. The survey is conducted to assist States in the establishment of pay systems consistent with the Intergovernmental Personnel Act of 1970. The results of the survey are published each year in *State Salary Survey*. The mean minimum and maximum salaries are shown for each occupation for every State reporting that occupation. An example of these data is shown in figure A-20.

Average annual pay and pay distributions for Executive Branch employees, by pay system, are presented in *Pay Structure of the Federal Civil Service* (annual). Statistics are shown for the United States, the Washington, D.C., area (figure A-21), U.S. territories, and foreign countries.

Average annual salaries of Federal white-collar workers by occupation, occupational group, and sex are presented in *Occupations of Federal White-Collar Workers* (annual). Data are presented at a national level and for the Washington, D.C., area (figure A-22).

Monthly data on Federal employment and payrolls are presented in *Federal Civilian Manpower Statistics* (monthly)(figure A-23).

Interstate Commerce Commission (ICC)

The Interstate Commerce Commission compiles statistics on compensation of employees of railroad companies, electric railways, carriers by water, pipelines, motor carriers, freight forwarders, and private railroad car owners subject to the Interstate Commerce Act. The ICC reports statistics for each type of regulated carrier for the calendar year in an annual report, *Transport Statistics in the United States*. Part I of this report covers railroads, the REA, and electric railways. Statistics are provided on aggregate employment, hours, and payrolls by occupational classification.

Part II contains statistics on annual aggregate employment, hours paid or worked, salaries and wages by occupational category, and fringe benefit costs for motor carriers.

Parts III, IV, V, and VI show total annual compensation costs and employment for employees of freight

forwarders, private railroad car lines, carriers by water, and pipelines, respectively.

The Interstate Commerce Commission also collects monthly data on payrolls and hours for employees of Class I railroads. Data are published in June and December, in total and for 128 occupations, in *Wage Statistics of Class I Railroads in the United States* (Statement No. 300). Average straight-time wage rates and overtime rates are shown for six occupational groupings (figure A-24).

Annual summaries of the monthly data appear in Statement A-300 under the same title as the monthly publication.

National Science Foundation

The median annual salaries of full-time employees in selected science fields reporting to the National Register of Scientific and Technical Personnel were published biennially in *American Science Manpower* until 1970, when the register was discontinued. Data are classified by sex, experience, level of education, age, type of employer, and work activity. A national mail survey of scientific and engineering personnel was subsequently conducted from which salary data could be obtained. Median annual salaries obtained from this survey are shown in figure A-25.

Federal Aviation Administration (FAA)

Payrolls, employment, and average annual salaries for employees of domestic and international air carriers regulated by the FAA are published in the *FAA Statistical Handbook of Aviation (annual)* (figure A-26).

Maritime Administration

Monthly base rates paid to licensed and unlicensed personnel employed on board oceangoing ships covered by collective bargaining agreements were published biennially until 1968, in *Seafaring Wage Rates*, by the Maritime Administration, U.S. Department of Commerce. Rates are shown by occupation and type of ship for the Atlantic, Gulf, and Pacific districts. A chronology of employer contributions per day to pension, welfare, and vacation plans is also included in the publication. The source materials used in preparation of this publication are records of the Maritime Administration, labor-management agreements, arbitrators' awards, trustees' actions, and pension, welfare, and vacation plans. Excerpted data from the publication are shown in figure A-27.

Although publication has ceased, the data continue to be collected by the Office of Maritime Manpower, Maritime Administration. Current data are therefore

available in their files. Computer printouts of data may be obtained on a fee basis by writing to the Office of Maritime Manpower.

Securities and Exchange Commission (SEC)

The SEC publishes a series covering employer contributions to private noninsured pension funds in an annual release, *Private Noninsured Pension Funds*. This series covers all pension funds of corporations, nonprofit organizations, and union and multiemployer groups, except funds managed by insurance companies. It also includes deferred profit-sharing plans but excludes health, welfare, and bonus plans. These statistics are shown in figure A-28.

GENERAL-PURPOSE STATISTICAL AGENCIES

General-purpose statistical agencies produce the great bulk of Federal statistics on compensation. In addition to the Bureau of Labor Statistics, these agencies include the Bureau of the Census of the Department of Commerce and the Statistical Reporting Service of the Department of Agriculture.

Bureau of the Census

The Bureau of the Census collects and publishes two basic types of compensation statistics—individual income data and payroll data.

The data on individual wage and salary income are obtained every 10 years from a census of households and annually from a sample of households which comprise the Current Population Survey. The decennial census provides average annual wage and salary information and earnings distributions on a national, regional, and State basis for the entire labor force, with detail by occupation, sex, industry of employment, class of worker, and weeks worked annually. The basic published source is the *1970 Census of Population*, which is published in a national summary volume as well as by State. An excerpt from the summary document is shown in figure A-29.

The Current Population Survey provides annual average wage or salary income for the sample of persons in the household on a national basis by major industry division and occupational group, sex, race, and class of worker, for year-round full-time workers. The source is Bureau of the Census, *Consumer Income*, Current Population Reports, Series P-60, published annually. An example of information in that publication is shown in figure A-30.

For an explanation of CPS methodology, see Bureau of the Census, *The Current Population Survey—A Report on Methodology*, Technical Paper No. 7, Series P-60, No. 51, January 12, 1967.

Annual aggregate payroll data and corresponding employment totals are obtained from mail enumerations of business enterprises and political units, usually conducted at 5-year intervals. Hours data are also obtained for production workers in manufacturing, and an average wage per production worker is calculated. The data pertain to the calendar year of the census.

The censuses include the *Census of Agriculture*, *Census of Business*, *Census of Manufactures*, *Census of Commercial Fisheries*, *Census of Mineral Industries*, and the *Census of Governments*. Similar but less detailed data are obtained annually from a sample of manufacturing establishments—the *Annual Survey of Manufactures*—and a sample survey of local government units.

The *Census of Agriculture* collects and reports data on hours worked and cash payments for hired farm labor (including wages to members of the farm operator's family). Cash payments cover wages and contributions to social security. The data are available by type of farm product, type of farm ownership, size of farm, and aggregate number of hours worked. Geographic detail is presented in the individual State volumes published by the Bureau.

The *Census of Business* covers retail trade, wholesale trade, selected service industries, and construction. National, State, SMSA, and, in some instances, business district detail are published. Detail is available by kind of business, size, and SIC group.

The *Census of Manufactures* covers manufacturing plants. Annual payroll and employment data are published for all employees and for production and related workers. Data are shown to the 4-digit SIC level, by geographic region, for 50 States and the District of Columbia, and for Standard Metropolitan Statistical Areas (SMSA's). Figures A-31 and A-32 show examples of tabulations.

Hours data and wages per hour are provided for production and related workers. Data are published for 422 manufacturing industries, and by State and SMSA. Data are available by employment size of establishments, degree of product specialization within the plant, and type of ownership.

The *Annual Survey of Manufactures* carries forward for the intercensal years the statistics covered in more detail by the quinquennial *Census of Manufactures*.

The *Census of Commercial Fisheries* provides data on payroll and employment by major type of catch, and region for selected States.

The *Census of Mineral Industries* provides data for 53 mineral industries and subindustries on employment, payroll, and work hours. Detail is shown by geographic region, State, and type of operation.

The *Census of Governments* provides employment and payroll data from all government units in the

United States. Employment relates to all persons on government payrolls during a specified month; payroll relates to total wages, salaries, and fees paid during the month.

The Bureau of the Census also conducts an annual survey of State and local governments. This survey covers all State government agencies and a sample consisting of approximately 16,000 local government and public school systems. Payroll and employment data, by full- and part-time workers, are collected for the month of October. Additional data are collected and published on government contributions to State and local retirement systems. A derived published series is the average monthly pay of full-time employees.

Payroll, employment, and earnings statistics are published by function (education, police protection, natural resources, etc.), type of political jurisdiction, and State. Statistics from the annual surveys are published in *Public Employment*, *City Employment*, and *Finances of Employee-Retirement Systems of State and Local Governments*.

The Bureau also publishes statistics on payrolls and employment, by county, in *County Business Patterns* (annual). Payroll data pertain to the January-March pay period. Industrial detail extends to the 4-digit SIC level depending on the county. National and State summary data as well as selected SMSA and city statistics are presented (figure A-33).

The *County Business Patterns* reports are statistical byproducts of employment and payroll information on Treasury Form 941 furnished by employers under the social security programs.

Department of Agriculture

STATISTICAL REPORTING SERVICE

The Statistical Reporting Service's publication *Farm Labor* provides a quarterly series of average wage rates and corresponding indexes for hired farm workers, with detail by method of pay, type of work, and geographic region (figure A-34). Annual averages are also shown. Data for this measure are obtained from a probability sample of agricultural employers reporting for the pay period including the 12th of the survey month.

ECONOMIC RESEARCH SERVICE

Annual aggregate wages, salaries, and other labor income of farm resident workers, and contributions of farm operators to social insurance are reported in *The Farm Income Situation*, July (annual).

The average number of days worked, and annual and per day earnings are reported yearly for farm workers

by selected demographic and other characteristics in *The Hired Farm Work Force* (figure A-35).

This survey of Federal Statistics on compensation is not intended as a comprehensive catalog or a complete description of existing sources. Useful reference publications for information on most of the series cited here and other sources are the Bureau of the Census'

Statistical Abstract of the United States (annual), *Historical Statistics of the United States, Colonial Times to 1970, Parts 1 and 2* (1975), and the Bureau of the Budget's *Statistical Services of the United States Government* (1975).

Recent developments in Federal statistics, including those on compensation, are reported in the *Statistical Reporter*, a monthly publication of the Statistical Policy Division, Office of Management and Budget.

Figure A-1

	1974	1975	1975			1976		
			II	III	IV	I	II	III
Seasonally adjusted at annual rates								
Billions of dollars								

Table 7.—National Income by Type of Income (1.13)

	1,135.7	1,207.6	1,182.7	1,233.4	1,264.6	1,304.7	1,337.4	
National income.....								
Compensation of employees.....	875.8	928.8	912.9	935.2	963.1	994.4	1,017.2	1,037.3
Wages and salaries.....	764.5	806.7	792.8	811.7	836.4	861.5	881.1	897.7
Government and government enterprises.....	160.4	175.8	173.8	177.3	182.2	185.4	188.7	191.7
Other.....	604.1	630.8	619.0	634.4	654.1	676.1	692.4	706.0
Supplements to wages and salaries.....	111.3	122.1	120.1	123.5	126.7	132.9	136.2	139.6
Employer contributions for social insurance.....	55.8	59.7	58.7	60.2	61.6	65.9	67.1	68.6
Other labor income.....	55.5	62.5	61.4	63.8	65.2	67.1	69.0	71.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, October 1976, p. 14.

Figure A-2

	1974	1975	1975			1976		
			II	III	IV	I	II	III ^a
			Seasonally adjusted at annual rates					
			Billions of dollars					

Table 10.—Personal Income and Its Disposition (2.1)

	1,153.3	1,249.7	1,230.3	1,265.5	1,299.7	1,331.3	1,362.0	1,386.2
Personal income.....								
Wage and salary disbursements.....	765.0	806.7	792.8	811.7	836.4	861.5	881.1	897.7
Commodity-producing industries ¹	273.9	275.3	269.1	276.2	285.8	295.3	302.9	306.8
Manufacturing.....	221.4	211.7	206.9	212.5	220.3	229.6	235.6	238.8
Distributive industries ²	184.4	195.6	192.5	196.8	202.3	208.3	212.8	216.4
Service industries ³	145.9	159.9	157.4	161.3	166.1	172.4	176.7	182.8
Government and government enterprises.....	160.9	175.8	173.8	177.3	182.2	185.4	188.7	191.7
Other labor income.....	55.5	62.5	61.4	63.3	65.2	67.1	69.0	71.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, October 1976, p. 15.

Figure A-3

Table 6.5.—Compensation of Employees by Industry

Table 6.6.—Wages and Salary by Industry

[Millions of dollars]

[Millions of dollars]

	1972	1973	1974	1975	1972	1973	1974	1975
All industries.....	715,145	799,194	875,823	928,781	633,765	701,214	764,486	806,663
Domestic industries.....	715,100	799,150	875,777	928,733	633,720	701,170	764,440	806,615
Agriculture, forestry, and fisheries.....	6,287	7,378	8,399	9,054	5,798	6,734	7,639	8,208
Farms.....	4,542	5,302	6,078	6,516	4,218	4,873	5,576	5,952
Agricultural services, forestry, and fisheries.....	1,745	2,076	2,321	2,538	1,580	1,861	2,063	2,256
Mining.....	7,797	8,697	10,501	12,831	6,625	7,290	8,834	10,736
Metal mining.....	1,104	1,252	1,429	1,532	918	1,012	1,197	1,273
Coal mining.....	2,221	2,449	2,999	4,173	1,785	1,945	2,385	3,331
Oil and gas extraction.....	3,229	3,600	4,531	5,519	2,821	3,115	3,903	4,738
Nonmetallic minerals, except fuels.....	1,243	1,396	1,542	1,607	1,101	1,218	1,349	1,394
Contract construction.....	43,005	48,440	51,517	50,220	38,857	43,339	46,003	44,651
Manufacturing.....	203,306	229,894	249,358	251,422	175,249	196,186	211,403	211,658
Nondurable goods.....	76,482	83,331	90,121	93,152	66,789	72,061	77,306	79,604
Food and kindred products.....	16,818	17,906	19,513	21,104	14,627	15,405	16,819	18,103
Tobacco manufactures.....	749	839	932	988	609	672	733	771
Textile mill products.....	7,409	8,212	8,332	7,778	6,641	7,283	7,376	6,862
Apparel and other textile products.....	8,526	9,314	9,469	9,394	7,601	8,219	8,359	8,291
Paper and allied products.....	7,701	8,518	9,276	9,414	6,704	7,290	7,885	7,961
Printing and publishing.....	11,178	12,086	12,962	13,502	10,042	10,763	11,487	11,940
Chemicals and allied products.....	12,864	14,052	16,102	17,264	11,149	12,136	13,649	14,650
Petroleum and coal products.....	2,893	3,073	3,706	4,175	2,271	2,420	2,731	3,085
Rubber and plastic products, n.e.c.....	6,301	7,241	7,739	7,502	5,333	6,039	6,433	6,165
Leather and leather products.....	2,043	2,090	2,090	2,031	1,812	1,834	1,894	1,774
Government and government enterprises.....	152,489	165,785	180,620	199,737	137,589	148,584	160,360	175,833
Federal.....	59,724	62,407	66,732	72,302	55,095	57,210	60,490	64,605
Government.....	50,060	51,923	54,924	59,300	46,484	47,913	50,124	53,395
Civilian.....	27,417	29,020	31,556	35,068	24,521	25,792	27,618	30,140
Military ¹	22,643	22,903	23,368	24,232	21,963	22,121	22,506	23,255
Government enterprises.....	9,664	10,484	11,808	13,002	8,111	9,297	10,366	11,210
State and local.....	92,765	103,378	113,888	127,435	82,494	91,374	99,870	111,228
Government.....	87,312	97,139	106,688	119,230	77,625	85,834	93,526	104,029
Education.....					42,380	46,402	50,334	55,755
Other.....					35,245	39,432	43,192	48,274
Government enterprises.....	5,453	6,239	7,200	8,205	4,869	5,540	6,344	7,199
Rest of the world.....	45	44	46	48	45	44	46	48

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July 1976, p. 51.

Figure A-4

Table 6.13.—Other Labor Income by Industry and by Type

[Millions of dollars]

	1972	1973	1974	1975
Other labor income.....	41,956	48,691	55,499	62,460
By industry:				
Domestic industries.....	41,956	48,691	55,499	62,460
Agriculture, forestry, and fisheries.....	200	266	314	370
Mining.....	845	986	1,147	1,473
Contract construction.....	1,874	2,194	2,401	2,563
Manufacturing.....	18,358	21,246	24,355	26,521
Nondurable goods.....	5,968	6,623	7,771	8,463
Durable goods.....	12,390	14,623	16,584	18,058
Transportation.....	2,111	2,492	2,882	3,202
Communication.....	2,572	2,889	2,978	3,389
Electric, gas, and sanitary services.....	1,068	1,213	1,362	1,508
Wholesale and retail trade.....	5,275	6,245	7,258	8,503
Wholesale trade.....	2,308	2,816	3,490	4,167
Retail trade.....	2,967	3,429	3,768	4,326
Finance, insurance, and real estate.....	3,268	3,713	3,999	4,417
Services.....	4,184	4,976	5,773	6,714
Government and government enterprises.....	2,201	2,471	3,030	3,710
Rest of the world.....	0	0	0	0
By type:				
Employer contributions to private pension and welfare funds.....	41,240	47,897	54,643	61,539
Pension and profit-sharing.....	17,782	20,691	24,765	28,449
Group health insurance.....	15,459	18,399	20,057	22,270
Group life insurance.....	3,565	3,652	3,925	4,015
Workmen's compensation.....	4,279	4,995	5,731	6,633
Supplemental unemployment.....	155	160	165	172
Other.....	716	794	856	921
Addenda:				
Benefits paid by private pension and welfare funds.....	33,838	37,772	43,684	
Pension and profit-sharing.....	10,015	11,220	12,930	
Group health insurance.....	17,728	19,648	23,023	
Group life insurance.....	3,091	3,172	3,359	
Workmen's compensation.....	2,864	3,622	3,972	
Supplemental unemployment.....	140	110	400	

NOTE.—The industry classification is on an establishment basis and is based on the 1967 Standard Industrial Classification.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July 1976, p. 53.

Figure A-5

Table 6.12.—Employer Contributions for Social Insurance by Industry

[Millions of dollars]

	1972	1973	1974	1975
Employer contributions for social insurance.....	39,424	49,289	55,838	59,658
Domestic industries.....	39,424	49,289	55,838	59,658
Agriculture, forestry, and fisheries.....	289	378	446	476
Mining.....	327	421	520	622
Contract construction.....	2,274	2,907	3,113	3,006
Manufacturing.....	9,699	12,462	13,600	13,243
Nondurable goods.....	3,725	4,647	5,044	5,085
Durable goods.....	5,974	7,815	8,556	8,158
Transportation.....	1,778	2,561	3,065	3,056
Communication.....	554	708	795	841
Electric, gas, and sanitary services.....	360	454	508	540
Wholesale and retail trade.....	5,754	7,349	8,249	8,676
Wholesale trade.....	1,986	2,570	2,942	3,101
Retail trade.....	3,768	4,779	5,307	5,575
Finance, insurance, and real estate.....	1,662	2,126	2,382	2,531
Services.....	4,028	5,193	5,930	6,473
Government and government enterprises.....	12,699	14,730	17,230	20,194
Rest of the world.....	0	0	0	0

NOTE.—The industry classification is on an establishment basis and is based on the 1967 Standard Industrial Classification.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July 1976, p. 53.

Figure A-6

Table 6.8.—Full-Time
Equivalent Employees by
Industry¹Table 6.9.—Wages and
Salaries per Full-Time
Equivalent Employee
by industry

	[Thousands]				[Dollars]			
	1972	1973	1974	1975	1972	1973	1974	1975
All industries.....	72,348	75,484	76,416	74,061	8,760	9,290	10,004	10,892
Domestic industries.....	72,359	75,493	76,424	74,071	8,758	9,288	10,003	10,890
Agriculture, forestry, and fisheries.....	1,229	1,332	1,365	1,362	4,718	5,056	5,596	6,026
Farms.....	994	1,057	1,081	1,088	4,244	4,610	5,158	5,471
Agricultural services, forestry, and fisheries.....	235	275	284	274	6,724	6,767	7,264	8,234
Mining.....	614	624	685	733	10,790	11,683	12,896	14,647
Metal mining.....	86	88	96	95	10,675	11,500	12,469	13,400
Coal mining.....	159	158	177	210	11,227	12,310	13,475	15,862
Oil and gas extraction.....	258	263	294	315	10,935	11,844	13,276	15,041
Nonmetallic minerals, except fuels.....	111	115	118	113	9,919	10,591	11,432	12,336
Contract construction.....	3,612	3,843	3,764	3,253	10,758	11,277	12,222	13,726
Manufacturing.....	18,548	19,566	19,494	17,726	9,449	10,027	10,845	11,941
Nondurable goods.....	7,731	7,916	7,785	7,251	8,640	9,103	9,930	10,978
Food and kindred products.....	1,650	1,645	1,635	1,587	8,865	9,365	10,287	11,407
Tobacco manufactures.....	74	76	77	70	8,230	8,842	9,519	11,014
Textile mill products.....	969	1,003	951	815	6,854	7,261	7,756	8,421
Apparel and other textile products.....	1,307	1,344	1,267	1,155	5,816	6,115	6,597	7,178
Paper and allied products.....	674	689	688	628	9,947	10,581	11,461	12,678
Printing and publishing.....	983	1,009	1,012	980	10,216	10,667	11,351	12,184
Chemicals and allied products.....	993	1,022	1,045	1,021	11,228	11,875	13,061	14,349
Petroleum and coal products.....	183	184	189	187	12,410	13,152	14,450	16,497
Rubber and plastic products, n.e.c.....	612	662	658	574	8,715	9,122	9,777	10,740
Leather and leather products.....	286	282	263	234	6,336	6,504	6,973	7,581
Durable goods.....	10,817	11,650	11,709	10,475	10,027	10,655	11,452	12,607
Lumber and wood products.....	603	623	607	502	7,606	8,238	8,883	9,916
Furniture and fixtures.....	488	519	496	421	7,302	7,728	8,286	9,090
Stone, clay, and glass products.....	645	681	671	605	9,543	10,129	10,909	11,701
Primary metal industries.....	1,214	1,304	1,327	1,185	11,048	11,982	13,317	14,278
Fabricated metal products.....	1,360	1,469	1,470	1,314	9,654	10,216	11,031	12,209
Machinery, except electrical.....	1,864	2,053	2,194	2,027	10,576	11,242	12,014	13,088
Electrical equipment and supplies.....	1,810	2,001	2,015	1,700	9,487	9,899	10,574	11,876
Transportation equipment, except motor vehicles and equip- ment, and ordnance.....	1,085	1,118	1,086	1,063	11,010	11,564	12,657	13,969
Motor vehicles and equipment.....	877	961	901	777	12,573	13,559	13,898	15,313
Instruments and related products.....	455	488	509	492	9,930	10,455	11,165	12,270
Miscellaneous and manufacturing industries.....	416	433	433	389	7,796	8,095	8,711	9,522
Government and government enterprises.....	14,586	14,799	15,057	15,320	9,433	10,040	10,650	11,477
Federal.....	5,333	5,186	5,152	5,116	10,331	11,032	11,741	12,628
Government.....	4,487	4,350	4,302	4,270	10,360	11,014	11,651	12,505
Civilian.....	1,934	1,911	1,957	1,978	12,679	13,497	14,112	15,238
Military ²	2,553	2,439	2,345	2,292	8,603	9,070	9,597	10,146
Government enterprises.....	846	836	850	846	10,179	11,121	12,195	13,251
State and local.....	9,253	9,613	9,905	10,204	8,916	9,505	10,083	10,900
Government.....	8,723	9,053	9,304	9,567	8,899	9,481	10,052	10,874
Education.....	4,577	4,753	4,912	4,990	9,260	9,763	10,247	11,173
Other.....	4,146	4,300	4,392	4,577	8,501	9,170	9,834	10,547
Government enterprises.....	530	560	601	637	9,187	9,893	10,556	11,301
Rest of the world.....	-11	-9	-8	-10				

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July 1976, p. 52.

Figure A-7

TABLE 37.—Workers with taxable earnings: Estimated number and median annual earnings, by type of worker and sex, 1937–74
[Based on sample data]

Year	All workers			All wage and salary workers			4-quarter wage and salary workers ¹			All self-employed workers ²		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Number (in thousands)												
1937.....	32,904	23,811	9,093	32,904	23,811	9,093	(³)	(³)	(³)	-----	-----	-----
1940.....	35,393	25,572	9,821	35,393	25,572	9,821	22,682	16,971	5,711	-----	-----	-----
1945.....	46,392	28,825	17,567	46,392	28,825	17,567	26,669	17,575	9,094	-----	-----	-----
1950.....	48,283	32,621	15,662	48,283	32,621	15,662	31,932	23,051	8,881	-----	-----	-----
1951.....	58,120	38,518	19,602	54,631	35,508	19,123	36,916	25,880	11,036	4,191	3,625	566
1952.....	59,576	39,184	20,392	56,059	36,150	19,909	38,221	26,615	11,606	4,241	3,685	556
Median earnings ⁵												
1937.....	\$761	\$945	\$484	\$761	\$945	\$484	(³)	(³)	(³)	-----	-----	-----
1940.....	746	935	472	746	935	472	\$1,157	\$1,353	\$757	-----	-----	-----
1945.....	1,159	1,654	770	1,159	1,654	770	2,020	2,560	1,347	-----	-----	-----
1950.....	1,926	2,532	1,124	1,926	2,532	1,124	2,759	3,212	1,862	-----	-----	-----
1951.....	2,097	2,838	1,192	2,037	2,810	1,162	2,919	3,502	1,920	\$2,663	\$2,850	\$1,271
1952.....	2,258	3,046	1,278	2,183	3,031	1,239	3,113	3,731	2,065	2,737	2,934	1,589
1953.....	2,400	3,275	1,357	2,336	3,258	1,338	3,325	3,973	2,181	2,788	3,001	1,619
1954.....	2,425	3,263	1,374	2,363	3,250	1,359	3,341	3,977	2,195	2,815	3,065	1,621
1955.....	2,438	3,315	1,351	2,383	3,348	1,338	3,464	4,197	2,251	2,397	2,550	1,552
1956.....	2,599	3,546	1,454	2,548	3,572	1,451	3,605	4,355	2,346	2,573	2,746	1,610
1957.....	2,651	3,538	1,544	2,612	3,575	1,544	3,619	4,343	2,454	2,674	2,863	1,641
1958.....	2,674	3,516	1,589	2,629	3,548	1,581	3,692	4,424	2,528	2,777	2,957	1,642
1959.....	2,837	3,783	1,634	2,781	3,780	1,639	3,880	4,680	2,642	2,854	3,070	1,685
1960.....	2,894	3,879	1,679	2,833	3,875	1,676	3,995	5,837	2,706	2,903	3,129	1,695
1961.....	2,938	3,936	1,742	2,876	3,919	1,736	4,052	4,950	2,776	3,017	3,266	1,703
1962.....	3,058	4,132	1,808	2,990	4,112	1,809	4,190	4,139	2,876	3,202	3,475	1,755
1963.....	3,149	4,266	1,856	3,082	4,239	1,851	4,325	5,298	2,956	3,283	3,574	1,776
1964.....	3,298	4,480	1,945	3,224	4,449	1,941	4,511	5,629	3,063	3,499	3,834	1,803
1965.....	3,414	4,685	1,984	3,319	4,630	1,979	4,675	5,739	3,168	3,858	4,242	1,898
1966.....	3,566	5,010	2,082	3,449	4,902	2,077	4,883	6,124	3,338	4,327	4,775	2,069
1967.....	3,716	5,208	2,259	3,660	5,179	2,276	5,080	6,398	3,509	4,472	4,962	2,152
1968.....	3,945	5,546	2,435	3,843	5,448	2,434	5,382	6,819	3,762	4,865	5,385	2,282
1969.....	4,173	5,933	2,585	4,111	6,038	2,554	5,782	7,457	3,972	5,012	5,655	2,321
1970.....	4,370	6,185	2,735	4,317	6,173	2,770	6,194	7,701	4,300	5,104	5,683	2,360
1971.....	4,603	6,475	2,882	4,541	6,410	2,943	6,509	8,121	4,509	5,242	5,833	2,408
1972 ⁴	4,865	6,908	2,983	4,751	6,725	3,022	6,884	8,813	4,750	5,771	6,448	2,661
1973 ⁴	5,170	7,445	3,146	5,069	7,356	3,179	7,362	9,429	5,036	6,586	7,513	2,780
1974 ⁴	5,495	7,930	3,395	5,394	7,851	3,457	7,931	10,154	5,417	6,889	8,041	2,812

Source: Social Security Administration, Office of Research and Statistics, *Social Security Bulletin, Annual Statistical Supplement*, 1974, p. 69.

Figure A-8

Maximum Amount of Contribution

Beginning—	Employee				Self-employed			
	Total	OASI	DI	HI	Total	OASI	DI	HI
Annual:								
1937.....	\$30.00	\$30.00						
1950.....	45.00	45.00						
1951.....	54.00	54.00			\$81.00	\$81.00		
1954.....	72.00	72.00			108.00	108.00		
1955.....	84.00	84.00			126.00	126.00		
1957.....	94.50	84.00	\$10.50		141.75	126.00	\$15.75	
1959.....	120.00	108.00	12.00		180.00	162.00	18.00	
1960.....	144.00	132.00	12.00		216.00	198.00	18.00	
1962.....	150.00	138.00	12.00		225.60	207.60	18.00	
1963.....	174.00	162.00	12.00		259.20	241.20	18.00	
1966.....	277.20	231.00	23.10	\$23.10	405.90	348.15	34.65	\$23.10
1967.....	290.40	234.30	23.10	33.00	422.40	354.75	34.65	33.00
1968.....	343.20	259.35	37.05	46.80	499.20	396.825	55.575	46.80
1969.....	374.40	290.55	37.05	46.80	538.20	435.825	55.575	46.80
1970.....	374.40	284.70	42.90	46.80	538.20	427.05	64.35	46.80
1971.....	405.60	315.90	42.90	46.80	585.00	473.85	64.35	46.80
1972.....	468.00	364.50	49.50	54.00	675.00	546.75	74.25	54.00
1973.....	631.80	464.40	59.40	108.00	864.00	670.14	85.86	108.00
1974.....	772.20	577.50	75.90	118.80	1,042.80	816.42	107.58	118.80
1975.....	824.85	616.875	81.075	126.90	1,113.90	872.085	114.915	126.90
1976.....	895.05	669.375	87.975	137.70	1,208.70	946.305	124.695	137.70
Cumulative:								
1937-50.....	435.00	435.00						
1951-60.....	855.00	810.00	45.00		1,282.50	1,215.00	67.50	
1961-70.....	2,475.60	2,055.90	223.20	196.50	3,623.10	3,091.80	334.80	196.50
1937-76.....	7,763.10	6,309.45	664.95	788.70	10,395.00	8,632.35	973.95	788.70

Source: Social Security Administration, Office of Research and Statistics, *Social Security Bulletin, Annual Statistical Supplement*, 1974, p. 33.

Figure A-9

TABLE 18.—Selected social insurance programs: Source of funds from contributions and transfers, 1965-74

(In millions)

Program and source	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Retirement, survivor, and disability insurance:										
OASI ¹	\$16,017	\$20,658	\$23,216	\$24,100	\$28,389	\$30,705	\$34,211	\$38,256	\$46,416	\$52,528
Employer.....	7,618	9,966	10,923	11,284	13,519	14,489	16,264	18,231	22,199	25,031
Employee.....	7,440	9,754	10,660	11,077	13,058	14,204	15,884	17,899	21,845	24,662
Self-employed.....	959	859	1,555	1,358	1,370	1,564	1,575	1,651	1,930	2,388
Government ²		78	78	382	442	449	488	475	442	447
DI ¹	1,188	2,022	2,302	3,348	3,615	4,497	4,670	5,158	5,984	6,878
Employer.....	564	977	1,073	1,602	1,733	2,154	2,224	2,462	2,863	3,281
Employee.....	551	962	1,054	1,582	1,679	2,117	2,167	2,417	2,814	3,234
Self-employed.....	73	67	159	132	187	210	229	227	255	311
Government ²		16	16	32	16	16	50	51	52	52
Railroad retirement ³	647	752	858	935	1,023	968	1,027	1,034	1,306	1,495
Employer.....	315	369	436	473	515	510	533	556	734	1,137
Employee.....	315	367	405	443	489	439	454	477	528	358
Government ²	17	17	18	18	18	19	40		44	
Federal civil service ⁴	2,197	2,381	2,571	2,889	3,098	3,870	5,126	5,483	5,627	7,293
Employer.....	1,123	1,220	1,313	1,472	1,577	2,001	3,154	3,360	3,424	4,878
Employee.....	1,073	1,161	1,259	1,417	1,521	1,869	1,972	2,123	2,203	2,415
State and local government ⁵	4,225	4,705	5,395	6,095	6,902	7,895	8,775	9,985	11,420	12,750
Employer.....	2,525	2,840	3,320	3,780	4,288	4,920	5,495	6,200	7,235	8,400
Employee.....	1,700	1,865	2,075	2,315	2,614	2,975	3,280	3,785	4,185	4,350
Health insurance (Medicare) under OASDHI:										
Hospital insurance (HI) ⁶		1,911	3,464	5,160	5,101	5,818	5,537	6,223	10,540	11,495
Employer.....		937	1,497	2,028	2,194	2,411	2,441	2,839	4,935	5,348
Employee.....		937	1,497	2,008	2,121	2,364	2,378	2,791	4,883	5,261
Self-employed.....			158	81	158	169	166	164	222	362
Government ²		37	312	1,044	628	874	551	429	490	519
Voluntarily insured ⁷									2	5
Supplementary medical insurance (SMI) ¹		322	1,573	1,691	1,821	2,189	2,615	2,771	3,255	4,029
Voluntarily insured aged ⁸		322	640	832	914	1,096	1,302	1,382	1,492	1,664
Voluntarily insured disabled ⁸									59	140
Government.....			933	888	907	1,093	1,313	1,389	1,705	2,225

Source: Social Security Administration, Office of Research and Statistics, *Social Security Bulletin, Annual Statistical Supplement*, 1974, p. 47.

Figure A-10

TABLE 1.—Private pension and deferred profit-sharing plans:¹ Estimated coverage, contributions, beneficiaries, benefit payments, and reserves, 1940–74

Year	Coverage, ² end of year (in thousands)			Employer contributions (in millions)			Employee contributions (in millions)			Number of bene- ficiaries, end of year (in thousands)			Amount of benefit payments (in millions)			Reserves, book value, end of year (in billions)		
	Total, net	In- sured, gross	Non- in- sured, gross	Total	In- sured	Non- in- sured	Total	In- sured	Non- in- sured	Total	In- sured	Non- in- sured	Total ³	In- sured	Non- in- sured ³	Total	In- sured	Non- in- sured
1940	4,100			180			130			160			140			2.4	1.0	1.4
1945	6,400			830			160			310			220			5.4	2.6	2.8
1950	9,800	2,600	7,200	1,750	720	1,030	330	200	130	450	150	300	370	80	290	12.1	5.6	6.5
1951	10,800	2,900	8,100	2,280	820	1,460	380	210	170	540	170	370	450	100	350	14.5	6.6	8.0
1952	11,300	3,200	8,500	2,540	910	1,630	430	240	190	650	200	450	520	120	400	17.3	7.7	9.6
1953	12,600	3,400	9,800	2,990	1,010	1,980	485	260	225	750	230	520	620	140	480	20.5	8.8	11.7
1954	13,400	3,600	10,600	3,000	1,030	1,970	515	270	245	880	270	610	710	160	550	23.8	10.0	13.8
1955	14,200	3,800	11,600	3,280	1,100	2,180	560	280	280	980	290	690	850	180	670	27.5	11.3	16.1
1956	15,500	4,100	12,800	3,600	1,110	2,490	625	290	335	1,090	320	770	1,000	210	790	31.4	12.5	18.9
1957	16,700	4,400	13,700	4,030	1,220	2,810	690	300	390	1,240	370	870	1,140	240	900	36.1	14.1	22.0
1958	17,200	4,500	14,300	4,100	1,250	2,850	720	310	410	1,400	430	970	1,290	290	1,000	40.9	15.6	25.3
1959	18,200	4,800	15,100	4,590	1,330	3,260	770	330	440	1,590	500	1,090	1,540	340	1,200	46.6	17.6	29.1
1960	18,700	4,900	16,300	4,710	1,190	3,520	780	300	480	1,780	510	1,240	1,720	390	1,330	52.0	18.8	33.1
1961	19,200	5,100	17,100	4,830	1,180	3,650	780	290	490	1,910	570	1,340	1,970	450	1,520	57.8	20.2	37.5
1962	19,700	5,100	17,900	5,200	1,240	3,960	830	310	520	2,100	630	1,470	2,330	510	1,820	63.5	21.6	41.9
1963	20,300	5,400	18,400	5,560	1,390	4,170	860	360	560	2,280	690	1,590	2,590	570	2,020	69.9	23.3	46.6
1964	20,900	6,000	18,600	6,370	1,520	4,850	910	310	600	2,490	740	1,750	2,990	640	2,350	77.7	25.2	52.4
1965	21,800	6,200	19,100	7,370	1,770	5,600	990	320	670	2,750	790	1,960	3,520	720	2,800	86.5	27.3	59.2
1966	22,700	6,900	19,400	8,210	1,850	6,360	1,040	330	710	3,180	870	2,310	4,190	810	3,380	95.5	29.3	66.2
1967	24,300	7,700	19,800	9,050	2,010	7,040	1,130	340	790	3,460	930	2,530	4,790	910	3,880	106.1	31.9	74.2
1968	24,800	7,900	20,100	10,020	2,320	7,700	1,230	340	890	3,920	1,010	2,810	5,530	1,030	4,500	117.8	34.7	83.1
1969	26,000	8,700	21,300	11,390	2,900	8,490	1,360	350	1,010	4,180	1,070	3,110	6,450	1,160	5,290	127.8	37.2	90.6
1970	26,100	9,300	22,000	12,580	2,860	9,720	1,420	350	1,070	4,740	1,220	3,520	7,360	1,330	6,030	137.1	40.1	97.0
1971	26,400	9,600	22,700	15,150	3,830	11,320	1,490	370	1,120	5,180	1,300	3,880	8,590	1,510	7,080	151.4	45.0	106.4
1972	27,500	10,300	23,200	16,940	4,200	12,740	1,600	400	1,200	5,550	1,350	4,200	10,000	1,700	8,300	167.8	50.3	117.5
1973	29,200	11,300	24,100	19,390	5,020	14,370	1,710	440	1,270	6,080	1,480	4,600	11,220	1,910	9,310	180.2	53.7	126.5
1974	29,800	11,700	24,400	23,020	6,050	16,970	2,000	510	1,460	6,390	1,550	4,840	12,930	2,190	10,740	191.7	58.0	133.7

¹ Includes pay-as-you-go, multiemployer, and union-administered plans, those of nonprofit organizations, and railroad plans supplementing the Federal railroad retirement program. Excludes pension plans for Federal, State, and local government employees as well as pension plans for the self-employed. Insured plans are underwritten by insurance companies; noninsured plans are, in general, funded through trustees.

² Excludes beneficiaries.

³ Includes refunds to employees and their survivors and lump sums paid under deferred profit-sharing plans.

Source: Compiled by the Social Security Administration from data furnished primarily by the Institute of Life Insurance and the Securities and Exchange Commission.

Source: Alfred M. Skolnik, "Private Pension Plans, 1950-74," *Social Security Bulletin*, June 1976, p. 4.

Figure A-11

TABLE 3.—Estimated total employer and employee contributions¹ under employee-benefit plans,² by type of benefit, 1950-74

[In millions]

Year	Total	All wage and salary workers						Wage and salary workers in private industry			
		Life insurance and death ³	Accidental death and dismemberment ⁴	Health benefits				Temporary disability, including formal sick leave		Supplemental unemployment benefits ⁵	Retirement ¹⁰
				Total	Hospitalization ⁶	Surgical and regular medical ⁵	Major-medical expense ⁷	Total ⁸	Written in compliance with law		
1950.....	\$3,940.0	\$480.0	\$18.4	\$856.3	\$562.4	\$293.9	-----	\$505.3	\$75.9	-----	\$2,080.0
1951.....	4,986.4	524.4	23.2	1,139.1	727.2	411.9	-----	639.7	143.8	-----	2,660.0
1952.....	5,676.8	619.8	27.0	1,373.4	880.5	492.9	-----	686.6	155.8	-----	2,970.0
1953.....	6,629.8	693.6	31.2	1,663.8	1,070.8	593.0	-----	766.2	186.5	-----	3,475.0
1954.....	6,988.5	731.5	33.5	1,923.6	1,221.4	684.2	\$18.0	784.9	178.1	-----	3,515.0
1955.....	7,856.6	880.5	43.4	2,193.6	1,385.1	769.5	39.0	859.1	178.8	\$40.0	3,840.0
1956.....	8,910.5	1,002.0	49.7	2,594.7	1,603.2	897.5	94.0	914.1	177.1	125.0	4,225.0
1957.....	10,041.7	1,076.9	56.5	2,995.8	1,805.5	1,021.3	169.0	1,022.5	217.2	170.0	4,720.0
1958.....	10,520.6	1,179.0	60.9	3,286.4	1,944.9	1,075.5	266.0	1,049.3	232.3	125.0	4,820.0
1959.....	11,714.5	1,291.7	66.0	3,774.2	2,230.3	1,186.9	357.0	1,097.6	232.8	125.0	5,360.0
1960.....	12,530.1	1,416.2	70.0	4,257.0	2,504.8	1,282.2	470.0	1,178.9	238.8	118.0	5,490.0
1961.....	13,482.4	1,556.6	75.0	4,924.2	2,833.6	1,439.6	651.0	1,214.6	255.3	102.0	5,610.0
1962.....	14,758.4	1,677.1	80.0	5,507.9	3,159.0	1,595.9	753.0	1,311.4	255.4	152.0	6,030.0
1963.....	15,880.6	1,867.0	92.0	5,993.3	3,472.2	1,684.1	837.0	1,360.3	244.4	148.0	6,420.0
1964.....	17,657.4	2,043.6	99.0	6,725.7	3,884.6	1,876.1	965.0	1,397.1	238.0	112.0	7,280.0
1965.....	19,918.8	2,233.0	116.0	7,520.0	4,332.8	2,109.2	1,078.0	1,573.8	258.4	116.0	8,360.0
1966.....	21,682.6	2,375.7	131.0	8,041.5	4,546.8	2,299.7	1,195.0	1,754.4	280.1	130.0	9,250.0
1967.....	23,419.0	2,538.0	142.0	8,548.8	4,702.7	2,552.1	1,294.0	1,897.2	310.6	113.0	10,180.0
1968.....	26,888.8	2,936.5	169.0	10,075.6	5,539.4	2,915.2	1,621.0	2,332.7	342.0	125.0	11,250.0
1969.....	30,568.9	3,221.9	190.0	11,594.8	6,341.4	3,363.4	1,890.0	2,702.2	399.1	110.0	12,750.0
1970.....	34,873.0	3,566.5	224.0	13,877.6	7,569.3	3,998.3	2,310.0	3,074.9	417.4	130.0	14,000.0
1971.....	39,792.1	3,853.9	229.0	15,702.7	8,578.4	4,489.3	2,635.0	3,226.5	442.8	140.0	16,640.0
1972.....	45,299.7	4,323.2	283.6	18,248.2	9,527.5	5,152.3	3,568.4	3,749.7	499.3	155.0	18,540.0
1973.....	50,370.5	4,368.7	302.8	20,500.2	10,512.0	5,937.8	4,050.4	3,938.8	522.2	160.0	21,100.0
1974.....	57,512.0	4,684.6	329.2	23,068.1	11,437.2	7,022.4	4,608.5	4,250.1	517.1	160.0	25,020.0

¹ Excludes dividends in group insurance.² See footnote 1, table 1.³ Group and wholesale life insurance premiums based on data from Institute of Life Insurance, *Group Life Insurance and Group Annuity Coverage in the United States*, annual issues, modified to exclude group plans not related to employment. Also excludes premiums for servicemen's group life insurance. Self-insured death benefit costs based on data for various trade-union, mutual benefit association, and company administered plans.⁴ Data from Health Insurance Association of America, *Group Health Insurance Coverages in the United States*, annual issues.⁵ Data from "Private Health Insurance in 1974: A Review of Coverage, Enrollment, and Financial Experience," *Social Security Bulletin*, March 1976; and Health Insurance Association of America (see footnote 4). In estimating contributions for employees under plans other than group insurance and union and company plans, it was assumed that the proportion of subscription income attributable to employed groups increased gradually from 75 percent in 1950-60 to 85 percent in 1974.⁶ Includes private hospital plans written in compliance with State temporary disability insurance law in California; separate data not available for these plans.⁷ Represents premiums for group supplementary and comprehensive

major-medical insurance underwritten by commercial insurance carriers. Data from Health Insurance Association of America (see footnote 4).

⁸ Data from "Cash Benefits for Short-Term Sickness, 1948-74," *Social Security Bulletin*, July 1976. Includes private plans written in compliance with State temporary disability insurance laws in California, New Jersey, and New York, shown separately in next column. Includes contributions under long-term disability policies.⁹ Based on trade-union and industry reports, and "Financing Supplemental Unemployment Benefit Plans," *Monthly Labor Review*, November 1969. Excludes dismissal wage and separation allowances, except when financed by supplemental unemployment benefit funds covering temporary and permanent layoffs.¹⁰ Estimated by the Social Security Administration from data compiled by the Institute of Life Insurance, *Pension Facts 1975*, and the Securities and Exchange Commission, *1974 Survey of Private Noninsured Pension Funds*. Includes contributions to pay-as-you-go and deferred profit-sharing plans, plans of nonprofit organizations, union pension plans, and railroad plans supplementing the Federal railroad retirement program. Excludes contributions to plans for Federal, State, and local employees, to tax-sheltered annuity plans, and to plans for the self-employed.Source: Alfred M. Skolnik, "Twenty-five Years of Employee Benefit Plans," *Social Security Bulletin*, September 1976, p. 8.

Figure A-12

Table B-11a.—Number and average amount of employee annuities
in current-payment status on Dec. 31, 1974, by occupational group

Occupational group	Employee also receiving							
	Regular annuities		Supplemental annuity			Social security benefit		
	Total number	Average amount	Number	Average amount		Number	Average amount	
				Regular	Supplemental		Regular railroad	Social security ^{1/}
Total ^{2/} -----	457,410	\$305	120,314	\$383	\$66	178,182	\$235	\$139
Office employees:								
Executives, officials and staff assistants-----	11,265	376	879	400	63	3,441	300	167
Supervisors and professionals-----	35,617	361	7,691	406	65	11,266	288	149
Station agents and telegraphers-----	14,403	315	4,299	388	67	5,765	263	135
Clerks and other office employees-----	55,706	301	15,977	382	65	23,934	241	144
Train-and-engine-service employees:								
Engineers-----	24,154	373	9,526	410	68	5,989	331	114
Conductors-----	22,687	365	8,200	407	68	6,249	308	124
Firemen and hostlers-----	8,974	302	1,947	383	63	3,935	249	133
Brakemen, baggagemen, and switchtenders--	26,284	329	6,696	393	65	9,778	268	125
Gang foremen-----	23,664	341	8,654	396	67	6,855	258	138
Maintenance employees:								
Way and structures craftsmen-----	14,012	312	4,027	386	66	4,939	228	136
Shop craftsmen-----	68,524	318	20,563	392	67	26,380	252	142
Way and structures helpers and apprentices-----	2,732	242	418	360	65	1,331	176	144
Shop helpers and apprentices-----	17,640	242	2,603	363	65	8,951	189	153
Other maintenance-of-way employees-----	47,343	236	8,518	346	65	19,106	159	136
Other shop and stores employees-----	23,513	254	5,285	351	64	10,537	197	135
Station and platform employees-----	21,226	254	4,537	347	63	10,735	201	140
All other employees-----	39,035	273	10,454	357	65	18,651	215	141

Source: Railroad Retirement Board, *Statistical Supplement, 1975 Annual Report*, 1976, p. 28.

Figure A-13

Table C-5.—Beneficiaries both unemployed and sick in 1974-75, and related data,
by selected occupational group

Occupational group	Beneficiaries				Average per beneficiary					
	Number	Percent of all beneficiaries		Median age	Days on benefit rolls			Amount of benefits		
		Unemployed	Sick		Total	Unemployment	Sickness	Total	Unemployment	Sickness
Total 1/-----	6,900	9	12	39	110	54	56	\$906	\$446	\$460
Office employees:										
Executives, officials, and staff assistants-----	2/	3/	3/	3/	3/	3/	3/	3/	3/	3/
Supervisors and professionals-----	100	9	5	46	120	67	53	1,005	573	432
Station agents and telegraphers-----	100	8	6	33	112	63	49	920	521	399
Clerks and other office employees---	800	10	10	38	111	47	63	909	383	526
Train-and-engine-service employees:										
Engineers-----	300	9	9	55	92	38	54	745	303	442
Conductors-----	400	8	9	44	102	42	61	837	338	499
Firemen and hostlers-----	200	6	16	45	81	42	39	632	332	299
Brakemen, baggagemen, and switchtenders-----	2,200	9	26	31	106	54	51	856	440	416
Gang foremen-----	100	8	4	51	121	47	74	1,025	407	618
Maintenance employees:										
Way and structures craftsmen-----	200	9	7	43	104	46	58	871	398	473
Shop craftsmen-----	1,100	10	9	41	104	51	53	873	443	430
Way and structures helpers and apprentices-----	2/	3/	3/	3/	3/	3/	3/	3/	3/	3/
Shop helpers and apprentices-----	200	10	20	39	123	50	73	1,041	437	604
Other maintenance-of-way employees--	500	10	13	40	142	77	66	1,221	673	548
Other shop and stores employees-----	200	8	8	45	100	49	51	840	429	412
Station and platform employees-----	100	6	13	51	125	57	69	1,047	473	573
All other employees-----	500	12	16	48	132	69	63	1,072	566	506

Source: Railroad Retirement Board, *Statistical Supplement, 1975 Annual Report*, 1976, p. 68.

Figure A-14

Table D-3.—Employees and averages of months of service and taxable compensation, for all classes of employer and for class I railroads, 1964-74

Year	All employees				Employees with 12 months of service		
	Number (thousands)	Average months of service	Average taxable compensation		Number (thousands)	Average taxable compensation	
			Per month	In year		Per month	In year
ALL CLASSES OF EMPLOYER							
1964-----	990	10.2	\$417	\$4,254	702	\$433	\$ 5,191
1965-----	969	10.1	423	4,272	685	438	5,256
1966-----	955	10.0	494	4,941	669	514	6,162
1967-----	911	10.2	496	5,064	643	521	6,253
1968-----	879	10.1	563	5,688	606	592	7,108
1969-----	865	9.9	580	5,741	585	608	7,296
1970-----	825	10.1	588	5,935	570	616	7,389
1971-----	774	10.2	618	6,240	542	630	7,561
1972-----	737	10.3	705	7,259	529	727	8,720
1973 <u>1</u> /-----	726	10.4	830	8,629	529	859	10,305
1974-----	730	10.3	961	9,910	527	994	11,923
CLASS I RAILROADS							
1964-----	827	10.4	\$419	\$ 4,360	601	\$434	\$ 5,210
1965-----	799	10.3	428	4,408	584	440	5,277
1966-----	793	10.3	495	5,095	572	516	6,194
1967-----	767	10.3	500	5,155	550	523	6,278
1968-----	747	10.2	569	5,807	526	596	7,148
1969-----	742	10.0	587	5,868	512	611	7,334
1970-----	719	10.1	595	6,007	502	618	7,416
1971-----	680	10.3	614	6,324	482	633	7,592
1972-----	652	10.4	707	7,350	472	730	8,758
1973 <u>1</u> /-----	645	10.5	832	8,736	476	863	10,354
1974-----	653	10.4	967	10,012	474	999	11,985

Source: Railroad Retirement Board, *Statistical Supplement, 1975 Annual Report*, 1976, p. 99.

Figure A-15

Table D-10. Employees in 1974, by occupational group and by amount of taxable compensation

Occupational group	Total	Number by amount of taxable compensation							
		Under \$4,000	\$4000- \$5,999	\$6,000- \$7,999	\$8,000- \$9,999	\$10,000- \$10,999	\$11,000- \$11,999	\$12,000- \$13,199	\$13,200
Total 1/-----	729,763	97,015	33,392	40,888	74,124	70,559	105,080	183,484	125,221
Office employees:									
Executives, officials, and staff assistants-----	21,177	501	301	434	343	203	399	1,545	17,451
Supervisors and professionals-----	63,834	2,277	1,317	1,909	1,962	2,358	5,325	17,526	31,160
Station agents and telegraphers-----	19,871	1,579	634	822	1,087	1,945	6,216	6,241	1,347
Clerks and other office employees-----	93,240	9,393	4,247	5,086	9,804	19,464	24,883	17,128	3,235
Train-and-engine-service employees:									
Engineers-----	40,161	1,291	542	1,104	1,338	958	2,100	11,462	21,366
Conductors-----	44,150	1,569	764	1,687	2,234	1,855	3,588	17,755	14,698
Firemen and hostlers-----	22,968	1,237	625	891	1,469	1,403	2,815	8,636	5,892
Brakemen, baggagemen, and switchtenders-----	103,232	11,655	4,911	6,653	9,682	7,042	11,916	35,590	15,783
Gang foremen-----	26,375	1,016	695	1,331	1,419	2,340	5,242	9,976	4,356
Maintenance employees:									
Way and structures craftsmen-----	35,029	4,311	1,826	2,244	3,209	5,446	6,705	8,571	2,717
Shop craftsmen-----	97,437	5,529	3,743	5,263	7,002	7,245	24,539	40,174	3,942
Way and structures helpers and apprentices-----	5,057	1,516	474	441	974	875	452	295	30
Shop helpers and apprentices-----	13,230	3,197	1,294	1,364	4,369	1,457	739	745	65
Other maintenance-of-way employees-----	74,571	35,977	6,394	5,798	12,927	7,480	3,707	2,083	205
Other shop and stores employees-----	21,282	5,038	1,856	1,998	7,438	2,980	1,168	742	62
Station and platform employees-----	9,906	2,836	765	790	1,960	1,699	906	790	160
All other employees-----	33,868	7,166	2,782	2,762	6,432	5,573	4,156	3,944	1,053

Source: Railroad Retirement Board, *Statistical Supplement, 1975 Annual Report*, 1976, p. 120.

Figure A-16

Table 10.--Estimated revenue and nonrevenue receipts for public elementary and secondary education from Federal, State, intermediate, and local sources, by State or other area and in large cities: United States, 1975-76

State or other area and city	Total receipts cols. 3 and 12 (in thousands)	Revenue receipts by source (in thousands)					Percent of revenue receipts by source				Non-revenue receipts (in thousands)
		Total	Federal	State	Inter-mediate	Local	Federal	State	Inter-mediate	Local	
1	2	3	4	5	6	7	8	9	10	11	12
UNITED STATES....	\$70,273,125	\$67,136,937	\$5,345,912	\$29,321,594	\$341,348	\$32,128,083	8.0	43.7	.5	47.8	\$3,136,188
Alabama.....	870,615	858,774	<u>1</u> /138,308	545,029	--	175,437	16.1	63.5	--	20.4	11,841
Alaska.....	242,881	232,881	35,157	151,201	--	46,523	15.1	64.9	--	20.0	10,000
Arizona.....	827,617	763,757	80,438	365,258	3,259	314,802	10.5	47.8	.4	41.2	63,860
Arkansas.....	523,396	472,634	73,361	246,733	--	152,540	15.5	52.2	--	32.3	50,762
California.....	7,013,788	6,831,788	<u>2</u> /630,037	2,759,494	--	3,442,257	9.2	40.4	--	50.4	182,000
Colorado.....	900,000	880,000	60,000	350,000	NA	470,000	6.8	39.8	NA	53.4	20,000
Connecticut.....	1,055,105	1,027,105	42,096	284,297	NA	700,712	4.1	27.7	NA	68.2	28,000
Delaware.....	234,220	219,220	17,500	148,420	--	53,300	8.0	67.7	--	24.3	15,000
District of Columbia.....	269,420	269,420	<u>3</u> /47,931	--	--	<u>3</u> /221,489	17.8	--	--	82.2	--
Florida.....	2,127,304	2,097,669	130,328	1,145,103	--	822,238	6.2	54.6	--	39.2	29,635
Georgia.....	1,217,179	1,155,179	139,506	599,488	--	416,185	12.1	51.9	--	36.0	62,000
Hawaii.....	285,881	285,881	20,736	265,145	--	--	7.3	92.7	--	--	--
Idaho.....	254,673	225,723	24,599	111,788	6,542	82,794	10.9	49.5	2.9	36.7	28,950
Illinois.....	4,526,229	4,305,729	266,524	1,988,132	2,738	2,048,335	6.2	46.2	.1	47.6	220,500
Indiana.....	<u>4</u> /1,536,000	1,501,000	85,000	610,000	6,000	800,000	5.7	40.6	.4	53.3	35,000
OUTLYING AREAS:											
American Samoa.....	\$ 6,803	<u>6</u> /5 6,803	<u>6</u> /5 2,394	--	--	<u>6</u> /5 4,409	35.2	--	--	64.8	--
Canal Zone.....	22,240	22,240	11,592	--	--	10,648	52.1	--	--	47.9	--
Guam.....	42,363	42,363	5,501	(2/)	--	<u>7</u> /36,862	13.0	--	--	87.0	--
Puerto Rico.....	394,969	394,969	95,959	\$1,062	--	297,948	24.3	.3	--	75.4	--
Virgin Islands.....	37,334	37,334	3,644	--	--	33,690	9.8	--	--	90.2	--
DOD Overseas Schools..				N	O	R	O	R	T		
Trust Territory of the Pacific Islands..				N	O	R	O	R	T		
LARGE CITIES:											
Baltimore, Md.....	262,502	262,502	23,943	123,125	--	115,434	9.1	46.9	--	44.0	--
Boston, Mass.....	NA	NA	NA	NA	NA	NA	--	--	--	--	NA
Chicago, Ill.....	1,162,780	1,125,903	135,300	515,091	--	475,512	12.0	45.8	--	42.2	\$36,877
Cleveland, Ohio.....	228,101	227,786	32,775	57,000	\$33,540	104,471	14.4	25.0	14.7	45.9	315
Dallas, Tex.....	186,381	186,279	3,016	68,342	1	114,920	1.6	36.7	(8/)	61.7	102
Detroit, Mich.....	356,709	350,634	41,743	170,138	200	138,553	11.9	48.5	.1	30.5	6,075
Houston, Tex.....	242,398	242,383	5,354	111,934	--	125,095	2.2	46.2	--	51.6	15
Indianapolis, Ind.....	113,969	112,969	8,000	37,669	300	67,000	7.1	33.3	.3	59.3	1,000
Los Angeles, Calif.....	1,039,022	1,038,722	89,016	282,329	3,486	663,891	8.6	27.2	.3	63.9	300
Memphis, Tenn.....	121,209	121,209	1,069	47,956	16,200	55,984	.9	39.6	13.4	46.2	--
Milwaukee, Wis.....	230,701	211,751	19,805	63,377	--	128,569	9.4	29.9	--	60.7	18,950
New Orleans, La.....	127,395	123,395	23,190	60,255	--	39,950	18.8	48.8	--	32.4	4,000
New York, N.Y.....	2,601,000	2,601,000	232,000	801,000	--	1,568,000	8.9	30.8	--	60.3	--
Philadelphia, Pa.....	594,864	594,864	91,057	305,413	--	198,394	15.3	51.3	--	33.4	--
Phoenix, Ariz.....	264,320	259,694	13,216	130,706	79	115,693	5.1	50.3	(8/)	44.6	4,626
St. Louis, Mo.....	110,594	103,560	20,576	37,196	2,353	43,435	19.9	35.9	2.3	41.9	7,034
San Antonio, Tex.....	73,491	73,481	8,740	43,044	--	21,697	11.9	58.6	--	29.5	10
San Diego, Calif.....	196,139	195,639	19,458	47,647	1,989	126,545	10.0	24.3	1.0	64.7	500
San Francisco, Calif..	163,822	163,322	14,748	31,095	220	117,259	9.0	19.0	.1	71.8	500
Washington, D.C.....	269,420	269,420	<u>3</u> /47,931	--	--	<u>3</u> /221,489	17.8	--	--	82.2	--

Source: U.S. Department of Health, Education, and Welfare, Education Division, National Center for Educational Statistics, *Statistics of Public Elementary and Secondary Schools, Fall 1975, 1976*, pp. 34-35.

Figure A-17

Table A.—Mean and percent increase in salaries of full-time instructional faculty in institutions of higher education, by sex, length of contract, and academic rank: 50 States and District of Columbia, 1972-73 and 1974-75

Length of contract and academic rank	Men and women			Men			Women		
	1972-73	1974-75	Percent increase	1972-73	1974-75	Percent increase	1972-73	1974-75	Percent increase
9-10 month contracts									
All ranks combined . . .	\$13,580	\$15,611	12.7	\$14,415	\$16,290	13.0	\$11,925	\$13,470	13.0
Professors	19,182	21,263	10.8	19,405	21,517	10.9	17,122	19,011	11.0
Associate professors . . .	14,572	16,128	10.7	14,714	16,260	10.5	13,826	15,481	12.0
Assistant professors . . .	12,029	13,290	10.5	12,190	13,452	10.4	11,510	12,857	11.7
Instructors	10,736	12,691	18.2	11,147	13,350	19.8	10,099	11,740	16.2
Lecturers	11,637	12,575	8.1	12,105	13,231	9.3	10,775	11,443	7.1
Undesignated ranks . . .	12,676	13,532	6.8	13,047	14,007	7.4	11,913	12,618	5.9
11-12 month contracts									
All ranks combined . . .	\$16,675	\$18,876	13.2	\$17,577	\$19,815	12.7	\$13,150	\$15,536	18.1
Professors	2,631	25,377	12.1	22,882	25,608	11.9	19,162	22,570	17.8
Associate professors . . .	17,728	20,261	14.3	17,986	20,459	13.7	16,144	19,117	18.4
Assistant professors . . .	14,859	16,710	12.5	15,288	17,035	11.9	13,562	15,795	16.5
Instructors	11,773	13,378	13.6	12,284	13,791	12.3	10,919	12,718	16.5
Lecturers	13,487	16,179	20.0	14,201	16,672	17.4	12,245	15,515	26.7
Undesignated ranks . . .	12,579	14,275	13.5	13,012	14,689	12.9	11,570	13,365	15.5

Source: U.S. Department of Health, Education, and Welfare, Education Division, National Center for Educational Statistics, *Salaries and Tenure of Instructional Faculty in Institutions of Higher Education, 1974-75, 1976*, p. 1.

Figure A-18

TABLE 5.--MEAN FRINGE-BENEFIT EXPENDITURES FOR FULL-TIME ACADEMIC DEANS AND RESIDENT FACULTY ON 9-10-MONTH CONTRACTS IN INSTITUTIONS OF HIGHER EDUCATION, BY ACADEMIC RANK, CONTROL OF INSTITUTION, AND TYPE OF BENEFIT PLAN: 50 STATES AND DISTRICT OF COLUMBIA, 1971-72

(ALL INSTITUTIONS)

CONTROL OF INSTITUTION AND TYPE OF BENEFIT PLAN	NUMBER OF INSTI- TUTIONS	ALL RANKS	ACADEMIC DEANS	PRO- FESSORS	ASSOC. PRO- FESSORS	ASST. PRO- FESSORS	INSTRUC- TORS	LEC- TURERS	UNDES- IGNATED RANKS
1	2	3	4	5	6	7	8	9	10
PUBLIC AND PRIVATE, TOTAL . . .	1,833	\$1,612	\$2,259	\$2,300	\$1,756	\$1,453	\$1,170	\$1,403	\$1,178
RETIREMENT, TOTAL	1,578	1,056	1,609	1,599	1,127	920	711	1,026	633
VESTED	1,205	1,164	1,731	1,695	1,186	968	747	1,105	806
NOT VESTED	534	775	1,098	1,157	919	765	645	716	552
HOSPITALIZATION	1,462	189	171	176	173	172	184	198	317
DISABILITY	697	64	71	75	61	54	63	63	78
TUITION PLANS	603	584	1,288	971	585	396	304	411	264
HOUSING PLAN	90	656	1,610	717	683	614	452	589	803
SOCIAL SECURITY	1,588	461	465	467	467	465	445	440	448
UNEMPLOYMENT COMPENSATION . .	454	93	109	94	92	90	98	98	91
GROUP LIFE INSURANCE	1,059	82	102	103	90	74	66	63	73
WORKMAN'S COMPENSATION . . .	969	37	37	39	33	30	33	37	60
OTHER	93	219	1,033	137	132	128	141	355	461
PUBLIC, TOTAL	829	1,558	2,259	2,100	1,712	1,470	1,222	1,508	1,168
RETIREMENT, TOTAL	707	1,036	1,660	1,567	1,156	953	730	1,067	620
VESTED	420	1,171	1,856	1,694	1,244	1,027	778	1,170	794
NOT VESTED	406	787	1,122	1,186	944	783	656	737	547
HOSPITALIZATION	613	204	174	178	180	180	194	213	334
DISABILITY	211	66	71	78	62	52	68	63	81
TUITION PLANS	88	163	240	216	191	183	119	184	106
HOUSING PLAN	10	462	570	328	373	672	318		255
SOCIAL SECURITY	615	462	466	467	467	466	449	448	456
UNEMPLOYMENT COMPENSATION . .	112	86	93	90	81	80	99	94	71
GROUP LIFE INSURANCE	431	84	54	112	96	76	67	66	75
WORKMAN'S COMPENSATION . . .	374	43	37	46	37	34	35	48	63
OTHER	38	199	170	98	84	75	128	242	466
PRIVATE, TOTAL	1,004	1,747	2,258	2,669	1,852	1,416	998	1,124	1,258
RETIREMENT, TOTAL	871	1,114	1,531	1,664	1,060	822	591	829	921
VESTED	785	1,148	1,578	1,698	1,085	841	616	859	871
NOT VESTED	128	561	965	755	559	485	375	208	697
HOSPITALIZATION	849	162	167	174	160	159	153	155	164
DISABILITY	486	62	71	73	61	56	57	63	55
TUITION PLANS	515	796	1,330	1,100	730	523	576	452	685
HOUSING PLAN	80	700	1,783	763	748	597	524	589	895
SOCIAL SECURITY	973	458	464	466	466	462	435	424	428
UNEMPLOYMENT COMPENSATION . .	342	98	118	97	100	97	97	100	115
GROUP LIFE INSURANCE	628	78	156	93	80	70	64	57	62
WORKMAN'S COMPENSATION . . .	595	29	37	34	29	25	27	23	33
OTHER	55	363	1,156	358	384	391	248	636	320

Source: U.S. Department of Health, Education, and Welfare, Education Division, National Center for Educational Statistics, *Salaries and Fringe Benefits 1971-72 and 1972-73*, 1975, p. 86.

Figure A-19

Table 1A.—Sources of Income and Selected Tax Items, 1972 and 1973

(All figures are estimates based on samples—number of returns are in thousands, money amounts are in millions)

Item	1972	1973	Increase or decrease (-), 1973 over 1972
	(1)	(2)	(3)
Number of returns, total	77,573	80,693	3,120
Taxable	60,869	64,267	3,398
Nontaxable	16,704	16,425	-278
Adjusted gross income (less deficit)	745,975	827,148	81,174
Sources of income:			
Salaries and wages (gross)	622,599	687,179	64,580
Business or profession net profit less net loss	34,453	38,102	3,650
Farm net profit less net loss	4,106	7,228	3,121
Partnership net profit less net loss	11,058	11,160	101
Small business corporation net profit less net loss	2,112	2,136	24
Sales of capital assets net gain less net loss	17,075	16,671	-404
Dividends in adjusted gross income	16,794	18,734	1,940
Interest received	27,400	32,174	4,774
Rent net income less net loss	2,989	3,763	774
Royalty net income less net loss	911	1,160	248
Estates and trusts net income less-net loss	1,823	2,019	195
All other sources (net) ¹	14,218	17,488	3,270
Statutory adjustments ²	9,565	10,665	1,100
Taxable income	447,633	511,929	64,297
Total credits	1,083	1,493	411
Income tax after credits	93,360	107,901	14,542
Additional tax for tax preferences	216	182	-34
Total income tax	93,576	108,084	14,508
Self-employment tax	2,330	3,011	681
Total tax liability ³	95,949	111,175	15,226

¹Comprises income from pensions and annuities (taxable portion), gains and losses from sales of property other than capital assets, State income tax refunds, alimony, and other income or loss.²Comprises sick pay exclusion, moving expense deduction, employee business expense deduction, and self-employed retirement deduction.³The sum of total income tax, self-employment tax, social security taxes on tip income, tax from recomputing prior-year investment credit, and tax from recomputing prior-year Work Incentive (WIN) credit.

NOTE: Detail may not add to total because of rounding.

Source: U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income 1973: Individual Income Tax Returns*, p. 2.

Figure A-20

CHIEF FISCAL OFFICER

District of Columbia	\$31309-37800	Iowa	\$17524-24648 (f)
Alaska	30408-36576 (a)	Idaho	17340-23664
Texas	25700 (z)	Maryland	17112-22478 (b)
Oregon	23292-29736	Hawaii	17088-21564 (a)
Michigan	23156-28439 (a, z)	Ohio	17056-21757 (a)
North Carolina	22836-29016 (a)	Delaware	16642-23186 (a)
Illinois	22680-31068	Florida	16620-23135
Utah	21948-32052	Wyoming	16608-21192 (a)
North Dakota	20124-26964	Maine	16556-19957 (a)
Washington	19500-24876	Nevada	16490-22861
New Jersey	19428-26225	Oklahoma	16380-21780 (a)
California	19068-22992	Alabama	16354-20995
Montana	18922-22528 (a)	Minnesota	16176-22140 (z)
Tennessee	18912-26316	Nebraska	16044-22416
Connecticut	18904-22990 (a)	South Carolina	15943-22670
Colorado	18624-24972	Virgin Islands	15497-19612
Pennsylvania	18484-24294	Missouri	14592-19224
Indiana	18356-23894	South Dakota	14551-21578
Arizona	18165-24714	Mississippi	14532-20472 (a)
Rhode Island	18063-20547 (a, z)	New Hampshire	13916-17046 (a)
Massachusetts	18039-22875	Kentucky	13860-18588 (a)
Virginia	17900-24500	Louisiana	13788-21264
Wisconsin	17868-25008	Vermont	13078-19058 (d)
Kansas	17796-22560	Arkansas	13026-19331
Georgia	17586-23190 (a)	Puerto Rico	12000-16800
West Virginia	17568-25956		

Mean Minimum Salary - \$18106

Mean Maximum Salary - \$23788

Source: U.S. Civil Service Commission, *State Salary Survey*, August 1976, p. 4.

Figure A-21

TABLE 14.—Employees by Pay Group and Pay System, Washington, D.C., Metropolitan Area, Mar. 31, 1974

[See headnote, table 1]

Annual—equivalent pay group	All employees		General schedule		Wage system		Postal Service		Other acts and administrative determination	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All groups.....	297, 759	100. 0	226, 519	100. 0	34, 784	100. 0	16, 039	100. 0	20, 417	100. 0
Average salary:										
Mean.....	\$15, 508		\$16, 129		\$10, 683		\$12, 689		\$19, 052	
Median.....	\$12, 441		\$13, 522		\$10, 157		\$11, 377		\$16, 046	
Less than \$999.....	4	0			1	0			3	0
\$1,000 to \$1,499.....	2	0							2	0
\$1,500 to \$1,999.....	6	0							6	0
\$2,000 to \$2,499.....	2	0							2	0
\$2,500 to \$2,999.....	11	0							11	. 1
\$3,000 to \$3,499.....	369	. 1							369	1. 8
\$3,500 to \$3,999.....	138	0			2	0			136	. 7
\$4,000 to \$4,499.....	44	0							44	. 2
\$4,500 to \$4,999.....	19	0			4	0			15	. 1
\$5,000 to \$5,499.....	656	. 2	618	. 3	1	0			37	. 2
\$13,000 to \$13,499.....	4, 408	1. 5	3, 358	1. 5	581	1. 7	149	. 9	320	1. 6
\$13,500 to \$13,999.....	4, 161	1. 4	3, 027	1. 3	526	1. 5	223	1. 4	380	1. 9
\$14,000 to \$14,499.....	3, 026	1. 0	1, 972	. 9	434	1. 2	146	. 9	474	2. 3
\$14,500 to \$14,999.....	8, 452	2. 8	7, 249	3. 2	464	1. 3	268	1. 7	471	2. 3
\$15,000 to \$15,499.....	5, 006	1. 7	4, 026	1. 8	413	1. 2	132	. 8	435	2. 1
\$15,500 to \$15,999.....	5, 139	1. 7	2, 507	1. 1	2, 309	6. 6	128	. 8	195	1. 0
\$16,000 to \$16,499.....	3, 621	1. 2	3, 037	1. 3	290	. 8	76	. 5	218	1. 1
\$16,500 to \$16,999.....	2, 713	. 9	2, 154	1. 0	143	. 4	114	. 7	302	1. 5
\$17,000 to \$17,499.....	7, 021	2. 4	6, 417	2. 8	147	. 4	55	. 3	402	2. 0
\$17,500 to \$17,999.....	1, 791	. 6	1, 244	. 5	88	. 3	127	. 8	332	1. 6
\$18,000 to \$18,499.....	3, 839	1. 3	3, 463	1. 5	79	. 2	72	. 4	225	1. 1
\$18,500 to \$18,999.....	2, 895	1. 0	2, 602	1. 1	135	. 4	60	. 4	98	. 5
\$19,000 to \$19,499.....	4, 368	1. 5	3, 965	1. 8	173	. 5	57	. 4	173	. 8
\$19,500 to \$19,999.....	2, 864	1. 0	2, 604	1. 1	58	. 2	64	. 4	138	. 7
\$20,000 to \$20,999.....	7, 959	2. 7	7, 181	3. 2	50	. 1	120	. 7	608	3. 0
\$21,000 to \$21,999.....	4, 272	1. 4	3, 840	1. 7	37	. 1	107	. 7	290	1. 4
\$22,000 to \$22,999.....	8, 714	2. 9	8, 103	3. 6	9	0	114	. 7	488	2. 4
\$23,000 to \$23,999.....	4, 708	1. 6	4, 105	1. 8	4	0	95	. 6	504	2. 5
\$24,000 to \$24,999.....	8, 709	2. 9	7, 989	3. 5	19	. 1	85	. 5	616	3. 0
\$25,000 to \$25, 999.....	5, 939	2. 0	5, 462	2. 4	8	0	109	. 7	360	1. 8
\$26,000 to \$26 999.....	5, 300	1. 8	4, 925	2. 2			71	. 4	304	1. 5
\$27,000 to \$27 999.....	3, 418	1. 1	3, 078	1. 4	6	0	88	. 5	246	1. 2
\$28,000 to \$28,999.....	3, 642	1. 2	3, 268	1. 4			87	. 5	287	1. 4
\$29,000 to \$29,999.....	5, 103	1. 7	4, 657	2. 1	2	0	72	. 4	372	1. 8
\$30,000 and over.....	21, 110	7. 1	16, 515	7. 3	1	0	329	2. 1	4, 265	20. 9

Source: U.S. Civil Service Commission, *Pay Structure of the Federal Civil Service*, March 31, 1974, p. 29.

Figure A-22

TABLE C-2 FULL-TIME WHITE-COLLAR EMPLOYMENT AND AVERAGE SALARY BY PATCO CATEGORY, OCCUPATION, MAJOR GEOGRAPHIC AREA, AND SEX, OCTOBER 31, 1975

OCCUPATION WITHIN PATCO CATEGORY		ALL AREAS					
		TOTAL		MEN		WOMEN	
		EMPLT	AVG SAL	EMPLT	AVG SAL	EMPLT	AVG SAL
CODES	TITLES						
GRAND TOTAL		1,975,745	15,152	1,279,141	17,155	696,604	11,475
PROFESSIONAL							
00020 P	COMMUNITY PLANNING	394	23,568	343	24,459	51	17,905
00060 P	CHAPLAIN	478	21,393	475	21,454	3	19,604
00000	MISCELLANEOUS OCCUPATIONS	872	22,376	818	22,654	54	18,000
00101 P	SOCIAL SCIENCE	2,210	22,664	1,557	23,557	653	20,534
00110 P	ECONOMIST	4,954	23,588	4,317	24,159	637	19,650
00130 P	FOREIGN AFFAIRS	2,283	25,868	2,012	26,582	271	20,566
00131 P	INTERNATIONAL RELATIONS	71	28,449	60	29,841	11	20,858
00135 P	FOREIGN AGRICULTURE AFFAIRS	136	31,383	134	31,553	2	19,386
00140 P	MANPOWER RES AND ANALYSIS	56	27,327	44	28,154	12	24,256
00150 P	GEOGRAPHY	148	20,834	122	21,750	26	16,487
00170 P	HISTORY	473	22,313	389	23,256	84	17,897
00180 P	PSYCHOLOGY	2,864	23,948	2,446	24,532	418	20,528
00184 P	SOCIOLOGY	85	22,651	58	24,191	27	19,344
00185 P	SOCIAL WORK	3,038	18,988	1,705	19,425	1,333	18,431
00190 P	GENERAL ANTHROPOLOGY	64	25,687	52	26,578	12	22,127
00193 P	ARCHAEOLOGY	101	18,115	86	19,310	15	11,264
00100	SOCIAL SCI PSYCH WELFARE	16,483	23,001	12,982	23,958	3,501	19,450

Source: U.S. Civil Service Commission, Manpower Statistics Division, *Occupations of Federal White-Collar Workers*, October 31, 1974 and 1975, p. 18.

Figure A-23

TABLE 6 -- FEDERAL CIVILIAN EMPLOYMENT AND COMPENSATION BY BRANCH, AGENCY, AND AREA AS OF JULY 1976

AGENCY	TOTAL, ALL AREAS		UNITED STATES		WASHINGTON, D.C. SMSA	
	EMPLOYMENT	COMPENSATION	EMPLOYMENT	COMPENSATION	EMPLOYMENT	COMPENSATION
TOTAL, ALL AGENCIES.....	2,901,791	3,704,934,035	2,775,064	3,608,483,082	301,606	548,355,221
LEGISLATIVE BRANCH.....	(39,728) (	51,571,507)	(39,652, (	51,441,496)	(37,131, (	49,966,491)
CONGRESS.....	(18,356) (	23,593,389)	(18,356) (	23,593,389)	(18,356) (	23,593,389)
UNITED STATES SENATE.....	7,009	8,780,230	7,009	8,780,230	7,009	8,780,230
U.S. HOUSE OF REPRESENTATIVES.....	11,347	14,813,159	11,347	14,813,159	11,347	14,813,159
ARCHITECT OF THE CAPITOL.....	2,153	2,542,839	2,153	2,542,839	2,153	2,542,839
BUTANIC GARDEN.....	62	79,946	62	79,946	62	79,946
CUST ACCOUNTING STANDARDS BOARD.....	39	82,694	39	82,694	39	82,694
GENERAL ACCOUNTING OFFICE.....	5,465	8,143,276	5,395	8,027,475	3,437	5,076,516
GOVERNMENT PRINTING OFFICE.....	8,306	10,876,546	8,306	10,876,546	7,743	10,352,500
LIBRARY OF CONGRESS.....	4,934	5,755,030	4,928	5,740,820	4,928	5,740,820
CONGRESSIONAL BUDGET OFFICE.....	216	179,175	216	179,175	216	179,175
NATIONAL STUDY COMMISSION.....		3,179		3,179		3,179
UNITED STATES TAX COURT.....	197	315,433	197	315,433	197	315,433
JUDICIAL BRANCH.....	(11,255) (	16,317,172)	(11,133) (	16,144,170)	(1,539) (	2,190,754)
SUPREME COURT.....	316	425,908	316	425,908	316	425,908
UNITED STATES COURTS.....	10,939	15,891,264	10,817	15,718,262	1,223	1,764,846
EXECUTIVE BRANCH.....	(2,850,808) (	3,637,045,356)	(2,724,279) (	3,540,897,416)	(322,936) (	498,197,976)
EXECUTIVE OFFICE OF THE PRESIDENT:						
WHITE HOUSE OFFICE.....	530	811,571	530	811,571	530	811,571
OFFICE OF THE VICE PRESIDENT.....	24	44,512	24	44,512	24	44,512
OFFICE OF MANAGEMENT AND BUDGET.....	727	1,870,076	727	1,870,076	727	1,870,076
COUNCIL OF ECONOMIC ADVISERS.....	38	97,509	38	97,509	38	97,509
CITIZENS' ADVISORY COMMITTEE ON						
ENVIRONMENTAL QUALITY.....	1	3,199	1	3,199	1	3,199
COUNCIL ON ENVIRONMENTAL QUALITY.....	63	108,944	63	108,944	63	108,944
COUNCIL ON INTERNATIONAL ECONOMIC						
POLICY.....	37	59,083	37	59,083	37	59,083
COUNCIL ON WAGE AND PRICE STABILITY...	56	96,731	56	96,731	56	96,731
DOMESTIC COUNCIL.....	49	131,717	49	131,717	49	131,717
EXECUTIVE MANSION AND GROUNDS.....	82	120,976	82	120,976	82	120,976
NATIONAL SECURITY COUNCIL.....	91	152,676	91	152,676	91	152,676
OFFICE OF SPECIAL REPRESENTATIVE FOR						
TRADE NEGOTIATIONS.....	47	97,863	47	97,863	47	97,863
OFFICE OF TELECOMMUNICATIONS POLICY...	94	155,700	94	155,700	94	155,700
STATE (INCLUDES AID).....	30,317	36,558,243	10,759	17,196,425	9,522	15,309,332

Source: U.S. Civil Service Commission, Bureau of Manpower Information Systems, *Federal Civilian Manpower Statistics, Monthly Release*, October 1976, p. 16.

Figure A-24

GP. NO.	GROUP	COMPENSATION					
		STRAIGHT TIME PAID FOR 1	PERCENT OF TOTAL COMPEN- SATION	AVERAGE STRAIGHT TIME RATES	OVERTIME PAID FOR 2	PERCENT OF TOTAL COMPEN- SATION	AVERAGE OVERTIME RATES
		(H)	(I)	(J)	(K)	(L)	(M)
I	EXECUTIVES, OFFICIALS AND STAFF ASSISTANTS	\$35,155,407	98.92	11.967	\$2,641	.01	\$22.381
II	PROFESSIONAL, CLERICAL, AND GENERAL.....	116,342,147	87.78	6.956	4,742,359	3.58	9.646
III	MAINTENANCE OF WAY AND STRUCTURES.....	92,717,627	83.31	6.236	11,050,017	9.93	9.341
IV	MAINTENANCE OF EQUIPMENT AND STORES.....	115,111,002	84.82	6.824	7,679,572	5.66	10.438
V	TRANSPORTATION (OTHER THAN TRAIN, ENGINE, AND YARD).....	32,359,399	83.18	6.827	2,252,453	5.79	9.908
VI-A	TRANSPORTATION (YARDMASTERS, SWITCH TENDERS, AND HOSTLERS).....	10,529,201	80.34	7.698	1,042,462	7.95	11.070
VI-B	TRANSPORTATION (TRAIN AND ENGINE SERVICE).....	174,029,289	70.85	6.648	21,997,290	8.96	9.973
	ALL EMPLOYEES (EXCLUDING SWITCHING AND TERMINAL COMPANIES).....	576,244,072	80.85	6.886	48,766,794	6.84	9.876
	ALL EMPLOYEES (INCLUDING SWITCHING AND TERMINAL COMPANIES).....	593,601,815	80.72	6.894	50,991,170	6.93	9.901

Source: Interstate Commerce Commission, Bureau of Accounts, *Wage Statistics of Class I Railroads in the United States* (No. 300), June 1976, p. 2.

Figure A-25

Table 2. Median annual salaries of the 1970 science and engineering labor force by field and type of employer: 1974

Field	Type of employer												No Report
	Total	Business and industry	University & 4-year college	2-year college	Other educational inst.	Hospital or clinic	Federal Government	State government	Local government	Other government	Non-profit organizations	Other	
Total.....	\$19,300	\$19,000	\$19,400	\$17,400	\$19,000	\$17,500	\$21,700	\$16,400	\$18,900	\$19,400	\$20,100	\$19,600	\$25,100
Physical scientists.....	19,500	19,700	18,700	17,600	(1)	18,300	21,700	15,600	18,200	18,200	21,400	19,500	(1)
Chemists.....	18,900	19,000	18,700	17,700	(1)	17,700	20,300	14,300	16,500	18,300	18,300	18,400	(1)
Physicists/astronomers.....	21,300	22,300	18,500	17,400	(1)	(1)	22,600	18,900	(1)	(1)	23,500	21,900	(1)
Other physical scientists.....	21,700	21,600	18,000	(1)	(1)	(1)	23,900	(1)	20,000	(1)	(1)	22,600	(1)
Mathematical scientists.....	19,800	20,700	19,400	16,000	(1)	(1)	21,700	15,000	17,000	(1)	23,100	20,700	(1)
Mathematicians.....	19,700	21,800	19,200	16,000	(1)	(1)	20,900	(1)	16,800	(1)	23,900	20,200	(1)
Statisticians.....	20,000	20,200	20,200	(1)	(1)	(1)	23,200	14,200	17,400	(1)	(1)	21,800	(1)
Computer specialists.....	18,400	18,200	17,000	(1)	(1)	(1)	20,900	15,700	18,300	19,500	17,800	19,300	(1)
Environmental scientists.....	20,100	20,200	19,300	18,100	(1)	(1)	21,400	14,900	19,700	20,800	(1)	19,300	(1)
Earth scientists.....	19,700	20,200	18,800	18,100	(1)	(1)	20,600	14,700	18,900	20,800	(1)	18,800	(1)
Oceanographers.....	20,700	(1)	21,400	(1)	(1)	(1)	22,100	(1)	(1)	(1)	(1)	(1)	(1)
Atmospheric scientists.....	22,300	(1)	20,900	(1)	(1)	(1)	22,800	(1)	(1)	(1)	(1)	(1)	(1)
Engineers.....	19,400	19,000	20,800	18,500	19,700	(1)	22,300	17,400	19,400	19,300	20,700	19,700	(1)
Life scientists.....	17,800	18,300	19,200	16,500	13,600	15,200	17,700	13,900	15,000	(1)	15,600	17,000	(1)
Biological scientists.....	17,900	18,900	19,000	15,700	13,400	(1)	18,800	14,100	15,400	(1)	16,000	16,800	(1)
Agricultural scientists.....	17,100	17,900	18,600	(1)	(1)	(1)	17,100	13,400	14,700	(1)	(1)	20,100	(1)
Medical scientists.....	19,700	(1)	20,700	(1)	(1)	15,700	25,000	(1)	(1)	(1)	(1)	17,600	(1)
Psychologists.....	19,400	19,600	19,300	18,300	19,400	18,300	22,700	17,700	18,400	(1)	21,300	25,700	(1)
Social scientists.....	20,200	24,300	20,100	18,200	19,700	16,400	24,600	14,100	17,900	25,500	17,500	20,800	(1)
Economists.....	22,300	24,500	21,100	(1)	(1)	(1)	24,600	16,700	21,400	(1)	23,400	23,700	(1)
Sociologists/anthropologists.....	19,000	(1)	19,400	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Other social scientists.....	18,600	23,600	19,900	(1)	(1)	(1)	24,700	12,700	17,500	(1)	16,700	(1)	(1)

(1) Less than 20 cases reporting salary

Source: National Science Foundation, "National Sample of Scientists and Engineers: Median Annual Salaries, 1974," *Science Resources Studies Highlights*, December 1975.

Figure A-26

TABLE 6.30 - PERSONNEL, PAYROLL, AND AVERAGE SALARY OF CERTIFICATED ROUTE AIR CARRIERS BY TYPE OF SERVICE AND CARRIER GROUP: 1974 1/

Type of Service and Carrier Group	Total	Pilots and Copilots	Other Flight Personnel	Purser, Stewards, Stewardesses	Communications Personnel	Mechanics 2/	Aircraft and Traffic Servicing Personnel	Office Employees	All Other
Personnel									
Total	<u>305,301</u>	<u>26,045</u>	<u>7,431</u>	<u>41,426</u>	<u>1,713</u>	<u>46,581</u>	<u>88,103</u>	<u>59,600</u>	<u>34,402</u>
Domestic passenger/cargo--total ..	<u>260,453</u>	<u>23,580</u>	<u>6,075</u>	<u>36,209</u>	<u>1,094</u>	<u>41,044</u>	<u>75,280</u>	<u>49,781</u>	<u>27,390</u>
Trunk carriers	226,146	19,429	5,922	32,501	951	36,424	63,001	43,290	24,628
Local service carriers	29,337	3,712	84	3,270	112	3,881	10,570	5,536	2,172
Intra-Alaska carriers	2,339	216	69	182	17	378	815	367	295
Intra-Hawaii carriers	2,231	176	---	239	12	240	770	524	270
Helicopter carriers	400	47	---	17	2	121	124	64	25
International and Territorial passenger/cargo carriers	<u>38,670</u>	<u>1,928</u>	<u>1,054</u>	<u>5,103</u>	<u>574</u>	<u>4,630</u>	<u>10,644</u>	<u>8,527</u>	<u>6,210</u>
All-cargo carriers	<u>6,022</u>	<u>518</u>	<u>291</u>	<u>114</u>	<u>43</u>	<u>876</u>	<u>2,118</u>	<u>1,264</u>	<u>798</u>
Other carriers	<u>156</u>	<u>19</u>	<u>11</u>	<u>---</u>	<u>2</u>	<u>31</u>	<u>61</u>	<u>28</u>	<u>4</u>
Annual Payroll (\$000)									
Total	<u>4,948,620</u>	<u>994,883</u>	<u>202,139</u>	<u>431,819</u>	<u>20,099</u>	<u>773,325</u>	<u>1,231,180</u>	<u>766,516</u>	<u>528,659</u>
Domestic passenger/cargo--total ..	<u>4,277,015</u>	<u>887,146</u>	<u>161,420</u>	<u>371,369</u>	<u>14,440</u>	<u>681,386</u>	<u>1,086,328</u>	<u>647,110</u>	<u>427,816</u>
Trunk carriers	3,729,734	749,997	159,013	336,559	12,757	605,311	912,978	566,025	387,094
Local service carriers	474,627	124,561	687	31,202	1,311	63,641	150,144	69,174	33,907
Intra-Alaska carriers	35,200	5,897	1,720	1,333	214	6,805	11,538	4,719	2,974
Intra-Hawaii carriers	31,974	5,764	---	2,120	142	3,921	10,187	6,355	3,485
Helicopter carriers	5,480	927	---	155	16	1,708	1,481	837	356
International and Territorial passenger/cargo carriers	<u>574,214</u>	<u>86,723</u>	<u>33,507</u>	<u>59,408</u>	<u>5,276</u>	<u>78,897</u>	<u>117,468</u>	<u>101,220</u>	<u>91,715</u>
All-cargo carriers	<u>95,807</u>	<u>20,664</u>	<u>7,152</u>	<u>1,042</u>	<u>365</u>	<u>12,667</u>	<u>26,903</u>	<u>17,911</u>	<u>9,103</u>
Other carriers	<u>1,584</u>	<u>350</u>	<u>60</u>	<u>---</u>	<u>18</u>	<u>375</u>	<u>481</u>	<u>275</u>	<u>25</u>
Average Annual Salary									
Total	<u>16,209</u>	<u>38,199</u>	<u>27,202</u>	<u>10,424</u>	<u>11,733</u>	<u>16,602</u>	<u>13,974</u>	<u>12,861</u>	<u>15,367</u>
Domestic passenger/cargo--total ..	<u>16,421</u>	<u>37,623</u>	<u>26,571</u>	<u>10,256</u>	<u>13,199</u>	<u>16,601</u>	<u>14,430</u>	<u>12,999</u>	<u>15,619</u>
Trunk carriers	16,493	38,602	26,851	10,355	13,414	16,618	14,491	13,075	15,718
Local service carriers	16,178	33,556	8,179	9,542	11,705	16,398	14,205	12,495	15,611
Intra-Alaska carriers	15,049	27,301	24,928	7,324	12,588	18,003	14,157	12,858	10,081
Intra-Hawaii carriers	14,332	32,750	---	8,870	11,833	16,338	13,230	12,128	12,907
Helicopter carriers	13,700	19,723	---	9,118	8,000	14,116	11,944	13,078	14,240
International and Territorial passenger/cargo carriers	<u>14,849</u>	<u>44,981</u>	<u>31,790</u>	<u>11,642</u>	<u>9,192</u>	<u>17,040</u>	<u>11,036</u>	<u>11,871</u>	<u>14,769</u>
All-cargo carriers	<u>15,909</u>	<u>39,892</u>	<u>24,577</u>	<u>9,140</u>	<u>8,488</u>	<u>14,460</u>	<u>12,702</u>	<u>14,170</u>	<u>11,407</u>
Other carriers	<u>10,154</u>	<u>18,421</u>	<u>5,455</u>	<u>---</u>	<u>9,000</u>	<u>12,097</u>	<u>7,885</u>	<u>9,821</u>	<u>6,250</u>

1/ Based on average number of employees at beginning and end of last payroll period.

2/ Includes mechanics and other maintenance personnel.

Source: Federal Aviation Administration, *FAA Statistical Handbook of Aviation*, 1974, p. 82.

Figure A-27

MASTERS, MATES, AND PILOTS - PACIFIC DISTRICT

DOCUMENT DATED	6- 9-66	6-30-67	9-13-68
INCREASE GRANTED	2 $\frac{1}{4}$ %	4/	4% ^{5/}
EFFECTIVE DATE	6-16-66	6-16-67	6-16-68

RATINGS AND POWER

TONNAGE CLASSIFICATIONMONTHLY BASE WAGE RATES

Class D (5,001 to 7,500

Single Screw) (3,501 to 5,500

Twin Screw)

Master	\$1,275.64	\$1,372.32	\$1,768.78 ^{6/}
First Officer	746.43	803.07	1,053.59 ^{6/}
Second Officer	660.00	710.05	738.45
Third Officer	600.28	645.80	671.63

Class E (Less than 5,001 Single

Screw) (Less than 3,501 Twin

Screw)

Master	1,275.64	1,372.32	1,768.78 ^{6/}
First Officer	732.00	787.52	1,037.42 ^{6/}
Second Officer	645.57	694.56	722.34
Third Officer	585.86	630.33	655.54

HOURLY OVERTIME RATE

4.33	4.43	4.53
------	------	------

U. S. Ports when cargo activity is involved - overtime rate

4.84	4.95	5.15
------	------	------

HOURLY PENALTY RATE

3.07	4.43	4.53
------	------	------

NON-WATCHSTANDERS MONTHLY PAY^{7/}

153.21	210.00	218.40
--------	--------	--------

RELIEF OFFICERS - HOURLY RATE^{8/}

(When cargo activity is involved)	4.33	4.43	4.61
	4.84	4.95	5.15

Pilots - (Employed as regular crew members on ships in the Alaska trade)

840.03	903.70	939.85
--------	--------	--------

⁴ Wage increased 2 $\frac{1}{4}$ % plus 5.212%.⁵ Except base wages of Masters which were increased to reflect the same percentage differential that existed between Masters and Chief Engineers as of 6-16-67.⁶ Includes non-watch pay.⁷ Additional sum paid monthly to non-watchstanding officers.⁸ Receive a minimum of 7 hours pay for each call.Source: U.S. Maritime Administration, Office of Maritime Manpower, *Seafaring Wage Rates*, December 1968, April 1969, p. 59.

Figure A-28

Table 1

RECEIPTS AND DISBURSEMENTS OF PRIVATE NONINSURED PENSION FUNDS

(Millions of Dollars)

	1968	1969	1970	1971	1972	1973	1974	1975
Total Receipts	13,152	14,151	13,195	17,545	20,070	19,673	21,063	26,583
Employer Contributions	7,702	8,487	9,717	11,324	12,745	14,368	16,971	19,828
Employee Contributions	893	1,011	1,074	1,120	1,199	1,273	1,460	1,604
Investment Income	3,193	3,549	3,866	4,102	4,302	4,843	5,982	6,703
Net Profit (Loss) on Sale of Assets	1,265	991	(1,592)	904	1,723	(924)	(3,477)	(1,659)
Other Receipts	99	113	130	95	101	115	127	107
Total Disbursements	4,621	5,428	6,180	7,263	8,493	9,539	11,030	12,597
Benefits Paid Out	4,503	5,290	6,030	7,083	8,297	9,313	10,740	12,334
Expenses and Other Disbursements	118	138	150	180	196	226	290	263
Net Receipts	8,531	8,723	7,015	10,282	11,577	10,134	10,033	13,986

NOTE: Includes deferred profit sharing funds and pension funds of corporations, unions, and multiemployer groups, and nonprofit organizations.

Source: Securities and Exchange Commission, *1975 Survey of Private Noninsured Pension Funds*, 1976, table 1.

Figure A-29

Table 296. Occupation of the Male Experienced Civilian Labor Force by Earnings in 1969 and Race, for Regions: 1970

[Data based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

Regions	Males with earnings in 1969										Median earnings (dollars)	
	Total, 16 years old and over	\$1 to \$1,999 or less	\$2,000 to \$3,999	\$4,000 to \$4,999	\$5,000 to \$5,999	\$6,000 to \$6,999	\$7,000 to \$7,999	\$8,000 to \$9,999	\$10,000 to \$14,999	\$15,000 or more	Earners All 50 to 52 weeks	worked 50 to 52 weeks
NORTHEAST												
Total	12 084 604	1 097 615	915 395	644 704	970 499	1 139 693	1 283 871	2 139 918	2 522 463	1 370 346	7 993	8 856
Experienced civilian labor force	1 890 775	94 466	100 603	47 777	66 809	90 334	123 334	280 013	592 893	494 546	11 198	12 156
Professional, technical, and kindred workers	155 905	5 498	6 032	3 327	4 986	6 995	10 559	26 231	55 044	37 233	11 301	11 973
Accountants	14 886	488	539	286	355	337	458	1 279	4 837	6 307	13 826	14 619
Architects	62 195	2 058	2 274	1 437	1 935	2 440	3 736	10 338	26 065	11 912	11 320	11 943
Computer specialists	327 181	5 943	5 079	3 266	5 643	5 641	9 494	33 720	141 374	117 021	13 353	13 704
Engineers	13 185	231	163	143	198	201	225	855	5 508	5 661	14 154	14 573
Aeronautical and astronautical	40 685	848	758	689	879	934	1 459	4 686	17 341	13 091	12 909	13 374
Civil	83 861	1 482	1 328	746	1 489	1 125	1 870	6 672	35 651	33 498	13 817	14 170
Electrical and electronic	48 751	730	664	379	743	767	1 209	4 547	21 904	17 806	13 501	13 820
Mechanical	140 699	2 652	2 166	1 309	2 334	2 614	4 731	16 960	60 970	46 963	13 082	13 403
Other engineers	78 477	2 247	2 660	1 073	1 551	1 358	1 992	3 996	14 309	49 291	15 000+	15 000+
Lawyers and judges	46 371	1 269	1 647	862	1 211	1 431	2 437	6 588	16 473	14 453	12 349	12 914
Life and physical scientists	31 954	817	955	537	832	992	1 756	4 982	12 037	9 046	12 121	12 653
Chemists	142 299	4 208	4 749	2 911	2 934	3 120	4 583	10 448	25 756	83 590	15 000+	15 000+
Physicians, dentists, and related practitioners	27 095	693	703	366	548	449	501	1 190	3 933	18 712	15 000+	15 000+
Dentists	26 024	1 546	1 162	584	699	773	1 358	3 352	10 297	6 253	11 718	12 303
Pharmacists	77 286	1 521	2 384	1 688	1 334	1 474	2 283	4 988	9 195	52 419	15 000+	15 000+
Physicians, medical and osteopathic	11 894	448	500	273	353	424	441	918	2 331	6 206	15 000+	15 000+
Other related practitioners	18 716	2 265	2 061	965	1 524	1 932	1 967	2 877	3 375	1 750	7 311	8 351
Health technologists and technicians	43 818	5 918	8 831	3 334	4 368	4 988	4 178	5 147	4 945	2 109	5 876	6 161
Religious workers	27 720	941	948	527	575	840	900	2 748	8 478	11 763	13 763	14 658
Social scientists	31 952	3 338	2 482	908	1 517	2 471	3 968	7 381	7 620	2 267	8 350	9 135
Social and recreation workers	313 465	19 490	24 980	9 032	10 019	20 174	27 158	57 129	101 094	44 389	9 606	10 983
Teachers	83 156	6 076	6 867	2 500	2 291	2 221	2 908	8 864	25 616	25 813	11 923	13 800
College and university	64 568	4 693	6 176	2 258	2 566	6 203	7 999	13 591	17 443	3 639	8 352	9 258
Elementary and prekindergarten	146 495	6 085	10 192	3 427	4 053	10 423	14 672	31 275	53 417	12 951	9 560	10 301
Secondary	197 370	8 947	10 841	6 363	11 228	17 033	23 775	50 541	56 658	11 984	8 811	9 271
Engineering and science technicians	88 434	4 057	5 660	3 367	5 590	7 628	9 980	20 841	26 321	4 990	8 761	9 296
Draftsmen and surveyors												

Source: Bureau of the Census, 1970 Census of Population: Detailed Characteristics, United States Summary, PC(1)-D1, February 1973, vol. 1, part 1, section 2, p. 1316.

Figure A-30

Table 66. INDUSTRY AND OCCUPATION OF LONGEST JOB IN 1974—CIVILIAN WORKERS 14 YEARS OLD AND OVER BY TOTAL MONEY EARNINGS IN 1974, BY SEX AND WORK EXPERIENCE

(Persons 14 years old and over as of March 1975)

MAJOR INDUSTRY GROUP	NUMBER (THOU- SANDS)	NUMBER WITH EARN- INGS (THOUS.)	PERCENT DISTRIBUTION																MEDIAN EARN- INGS (DOL- LARS)	MEAN EARN- INGS (DOL- LARS)
			TOTAL	\$1 TO \$499 OR LOSS	\$500 TO \$999	\$1,000 TO \$1,499	\$1,500 TO \$1,999	\$2,000 TO \$2,499	\$2,500 TO \$2,999	\$3,000 TO \$3,999	\$4,000 TO \$4,999	\$5,000 TO \$5,999	\$6,000 TO \$6,999	\$7,000 TO \$7,999	\$8,000 TO \$8,999	\$10,000 TO \$14,999	\$15,000 TO \$24,999	\$25,000 AND OVER		
MALE																				
ALL WORKERS																				
TOTAL	60 102	59 752	100.0	6.4	4.2	3.1	2.6	3.1	1.9	4.1	3.9	4.8	4.8	5.5	10.8	24.8	15.7	4.5	9 064	9 853
AGRI., FORESTRY, & FISHERIES	3 901	3 692	100.0	26.2	8.6	6.2	4.2	5.2	2.5	6.0	5.4	6.5	5.0	3.5	4.8	7.2	5.8	2.8	2 458	5 001
MINING	700	700	100.0	1.8	1.2	0.7	3.0	2.0	0.5	3.0	3.2	2.6	3.6	3.3	8.2	44.6	18.6	3.7	11 903	11 862
CONSTRUCTION, TOTAL	6 294	6 277	100.0	4.4	4.1	3.1	2.2	3.2	2.1	5.0	4.6	5.7	6.2	6.2	12.7	22.3	15.5	3.0	8 537	9 354
PROF'L. & MANAG'L WKRS.	814	811	100.0	3.0	1.9	2.1	0.4	0.8	1.5	1.0	1.7	1.2	4.8	3.4	6.7	22.7	31.6	17.1	14 719	16 449
CLERICAL & SALES WKRS.	130	130	100.0	1.2	2.5	2.8	1.6	2.7	1.3	5.1	1.3	4.6	5.0	8.2	14.0	26.6	19.6	3.6	9 971	10 608
CRAFT WKRS. & OPERS.	4 098	4 086	100.0	2.6	3.2	2.6	1.9	3.2	1.5	5.3	4.2	6.2	6.2	6.6	13.9	25.6	15.9	1.1	8 949	9 216
OTHER WORKERS	1 252	1 250	100.0	11.3	8.9	5.3	4.2	5.0	4.3	6.9	7.9	7.1	7.1	6.2	12.3	10.5	2.9	-	4 516	5 072
MANUFACTURING, TOTAL	16 005	15 993	100.0	2.1	1.9	1.8	1.7	1.9	1.4	3.2	3.2	4.5	4.9	6.2	13.3	32.0	17.9	3.8	10 586	10 896
PROF'L. & MANAG'L WKRS.	3 062	3 062	100.0	0.7	0.5	0.5	0.4	0.4	0.4	0.7	1.4	1.7	2.0	2.3	6.4	28.8	38.5	15.3	15 981	17 148
CLERICAL & SALES WKRS.	1 309	1 302	100.0	5.8	2.0	1.9	1.0	1.6	0.8	3.4	2.1	3.9	2.4	5.2	14.4	33.7	17.6	4.3	10 838	10 772
CRAFT WKRS. & OPERS.	9 973	9 968	100.0	1.5	1.9	1.8	1.7	2.0	1.4	3.3	3.5	4.6	5.9	7.4	15.2	35.1	13.9	0.8	9 985	9 743
OTHER WORKERS	1 662	1 662	100.0	5.1	4.9	4.7	4.8	4.9	3.9	6.9	5.9	9.0	6.6	7.5	13.5	18.0	3.8	0.5	5 982	6 397
DURABLE GOODS	10 268	10 265	100.0	1.6	1.5	1.6	1.6	1.8	1.2	3.1	3.2	4.3	4.6	5.9	13.7	33.2	18.8	3.6	10 850	11 073
PROF'L. & MANAG'L WKRS.	1 975	1 975	100.0	0.7	0.3	0.3	0.3	0.2	0.4	0.8	1.6	1.6	1.9	2.2	6.1	29.7	39.3	14.5	15 954	17 033
CLERICAL & SALES WKRS.	724	723	100.0	2.1	0.2	0.7	1.3	1.9	0.5	2.5	2.7	3.7	3.0	4.6	16.0	38.3	19.1	3.4	11 403	11 356
CRAFT WKRS. & OPERS.	6 542	6 540	100.0	1.3	1.6	1.7	1.4	2.0	1.2	3.2	3.5	4.7	5.3	7.0	15.5	35.7	14.9	0.9	10 211	9 937
OTHER WORKERS	1 027	1 027	100.0	5.0	4.4	4.3	5.2	3.7	3.5	6.9	5.0	8.0	6.9	7.1	15.1	20.5	4.2	0.3	6 592	6 649
NONDURABLE GOODS	5 737	5 729	100.0	3.0	2.6	2.2	2.0	2.1	1.8	3.4	3.3	4.7	5.4	6.7	12.5	29.9	16.2	4.2	10 060	10 579
PROF'L. & MANAG'L WKRS.	1 086	1 086	100.0	0.7	0.7	0.8	0.6	0.7	0.3	0.6	1.0	1.9	2.2	2.4	7.0	27.2	37.0	16.8	16 032	17 357
CLERICAL & SALES WKRS.	584	579	100.0	10.3	4.1	3.4	0.5	1.2	1.2	4.5	1.4	4.2	1.6	5.8	12.4	28.0	15.8	5.5	9 886	10 042
CRAFT WKRS. & OPERS.	3 431	3 428	100.0	2.0	2.4	1.9	2.3	1.8	1.8	3.4	3.6	4.6	7.0	8.0	14.5	34.0	12.2	0.6	9 559	9 372
OTHER WORKERS	635	635	100.0	5.4	5.6	5.3	4.0	6.9	4.6	7.0	7.5	10.7	6.0	8.0	10.9	14.1	3.2	0.8	5 343	5 989
TRANSPORTATION, COMMUNI- CATION & OTHER PUB. UTIL.	4 621	4 615	100.0	2.4	1.4	1.1	1.8	1.8	1.0	2.7	3.7	3.9	4.5	4.9	10.7	34.8	21.9	3.5	11 462	11 464
PROF'L. & MANAG'L WKRS.	804	804	100.0	0.6	0.2	0.2	0.4	1.1	0.2	1.4	1.5	1.2	2.6	3.1	5.8	26.8	39.3	15.8	16 279	16 935
CLERICAL & SALES WKRS.	476	476	100.0	1.1	1.7	0.7	0.6	1.1	0.7	2.5	2.4	3.9	5.2	4.8	11.0	47.8	15.4	1.1	11 497	10 843
CRAFT WKRS. & OPERS.	2 689	2 689	100.0	2.1	0.9	1.1	1.9	1.6	1.0	2.4	3.6	4.2	4.7	5.2	11.5	37.3	21.5	1.0	11 306	10 941
OTHER WORKERS	653	647	100.0	6.9	4.6	2.8	3.5	3.8	2.4	5.6	7.8	6.1	5.3	6.0	13.3	24.5	7.2	0.2	7 203	7 292
WHOLESALE TRADE, TOTAL	2 753	2 747	100.0	1.8	3.1	2.7	2.0	1.8	1.7	3.3	3.0	3.9	5.0	7.0	12.2	26.2	18.8	7.4	10 458	11 770
PROF'L. & MANAG'L WKRS.	703	703	100.0	0.6	0.5	0.5	1.1	1.0	-	3.0	0.9	2.0	0.7	3.8	10.2	25.1	32.3	18.4	15 210	17 419
CLERICAL & SALES WKRS.	859	859	100.0	0.2	1.6	0.7	1.5	2.4	1.9	1.5	3.1	3.7	5.5	6.8	13.1	26.2	24.6	7.6	11 605	12 674
CRAFT WKRS. & OPERS.	847	846	100.0	3.3	4.0	4.3	2.6	1.7	1.9	3.6	4.9	3.8	7.3	9.2	13.1	30.7	9.2	0.4	8 517	8 468
OTHER WORKERS	344	339	100.0	5.8	10.5	8.0	4.0	2.3	4.0	7.7	2.3	8.9	7.0	8.3	12.4	17.0	0.5	1.4	8 610	6 008

Source: Bureau of the Census, *Consumer Income: Money Income in 1973 of Families and Persons in the United States*, Current Population Reports, Series P-60, No. 97, January 1976.

Figure A-31

1972 CENSUS OF MANUFACTURES

GENERAL SUMMARY 3

TABLE 1. General Statistics for All Operating Manufacturing Establishments: 1972 and Earlier Years

(See appendix, Explanation of Terms)

Year	Establishments		All employees ¹		Production workers			Value added by manufacture ³	Value of industry shipments	Capital expenditures, new ⁴	Index of industrial production (1967=100)
	Total	With 20 employees or more	Number ²	Payroll	Number ²	Man-hours	Wages				
	(number)	(number)	(1,000)	(million dollars)	(1,000)	(millions)	(million dollars)	(million dollars)	(million dollars)	(million dollars)	
1972	312,662	109,941	18,032.4	160,414.4	13,526.5	26,696.7	105,494.7	353,973.4	756,466.9	24,073.1	115.1
1971 ⁵	(NA)	(NA)	17,426.3	144,246.3	12,874.9	25,265.9	93,231.7	314,138.4	670,970.5	20,940.7	106.8
1970 ⁵	(NA)	(NA)	18,289.5	141,886.4	13,528.0	26,669.3	91,109.0	300,227.6	634,322.1	22,164.3	106.6
1969 ⁵	(NA)	(NA)	19,155.6	142,645.1	14,357.8	28,599.8	93,459.6	304,440.7	642,635.8	22,291.4	110.7
1968 ⁵	(NA)	(NA)	18,681.0	132,568.4	14,041.2	28,156.8	87,480.4	285,058.9	603,220.1	20,613.1	105.7
1967	305,680	107,138	18,492.0	123,480.6	13,955.3	27,837.6	81,393.6	261,983.8	557,297.8	21,503.0	100.0
1966 ⁵	(NA)	(NA)	18,200.3	117,157.4	13,826.5	28,102.5	78,256.4	250,880.1	538,736.9	20,235.4	97.9
1965 ⁵	(NA)	(NA)	17,250.5	106,643.2	13,076.0	26,567.8	71,361.5	226,939.9	492,005.7	16,615.0	89.2
1964 ⁵	(NA)	(NA)	16,485.7	98,685.3	12,403.3	25,245.5	65,838.9	206,193.6	447,985.1	13,294.3	81.7
1963	306,617	99,352	16,231.9	93,283.3	12,232.0	24,509.4	62,093.6	192,082.9	420,528.1	11,370.0	76.5
1962 ⁵	(NA)	(NA)	16,154.7	89,819.2	12,126.5	24,269.5	59,134.1	179,071.1	399,308.9	10,436.2	72.2
1961 ⁵	(NA)	(NA)	15,729.6	83,677.4	11,778.5	23,289.4	54,764.6	164,281.1	369,994.3	9,779.8	66.7
1960 ⁵	(NA)	(NA)	16,149.9	83,672.5	12,209.5	24,174.4	55,555.5	163,998.5	(NA)	10,097.8	66.2
1959 ⁵	(NA)	(NA)	16,062.9	81,203.6	12,272.6	24,443.6	54,714.1	161,535.8	(NA)	9,140.0	64.8
1958 ⁵	299,017	95,278	15,423.1	73,875.2	11,681.1	22,679.2	49,605.2	141,540.6	326,722.8	9,543.5	57.9
1957 ⁵	(NA)	(NA)	16,621.1	76,314.6	12,838.9	25,208.0	52,569.0	147,838.4	(NA)	12,144.0	61.9
1956 ⁵	(NA)	(NA)	16,694.4	74,015.1	13,131.3	26,088.5	52,040.8	144,909.3	(NA)	11,233.2	61.1
1955 ⁵	(NA)	(NA)	16,335.5	69,096.6	12,954.4	25,898.3	49,217.9	135,022.5	(NA)	8,233.1	58.5
1954	286,814	90,470	15,645.5	62,962.7	12,372.0	24,334.1	44,590.5	117,032.3	(NA)	8,200.7	51.9

Source: Bureau of the Census, 1972 Census of Manufactures: General Summary, p. 3.

Figure A-32

TABLE 3. General Statistics for Establishments by Industry Group and Industry: 1972 and 1967

(See appendix, Explanation of Terms)

1972 code	Industry group and industry	1972									
		Companies	Establishments		All employees		Production workers			Value added by manufac- ture	Value of shipments
			Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages		
	ALL MFG. ESTABS. INCL. C.A.O.'S.	267 422	320 701	114 186	19 026.8	174 186.7	13 526.5	26 696.7	105 494.7	353 973.4	756 466.9
20	FOOD AND KINDRED PRODUCTS. . . .	22 171	28 183	12 325	1 569.3	12 920.2	1 085.3	2 166.8	8 007.0	35 614.8	115 051.5
201	MEAT PRODUCTS.	3 944	4 437	1 882	307.7	2 543.6	250.6	506.7	1 913.3	4 960.9	131 477.9
2011	MEATPACKING PLANTS	2 291	2 474	863	157.5	1 532.1	123.4	254.4	1 148.4	2 968.1	23 003.4
2013	SAUSAGES AND OTHER PREPARED MEATS. . .	1 207	1 311	557	58.1	542.2	43.5	88.2	372.2	1 099.9	4 632.4
2016	POULTRY DRESSING PLANTS.	407	522	369	77.6	391.8	70.7	139.3	331.1	724.4	3 254.1
2017	POULTRY AND EGG PROCESSING	110	130	93	14.6	77.5	13.0	24.7	61.7	168.5	588.1
202	DAIRY PRODUCTS	3 557	4 590	2 067	188.7	1 596.4	93.0	188.7	732.5	4 054.1	16 311.5
2021	CREAMERY BUTTER.	201	231	63	4.0	31.0	2.9	6.0	22.1	82.3	808.3
2022	CHEESE, NATURAL AND PROCESSED.	739	872	281	25.2	186.3	20.6	40.8	137.1	492.3	3 195.0
2023	CONDENSED AND EVAPORATED MILK.	172	283	163	12.3	108.3	9.4	19.4	77.8	467.3	1 667.8
2024	ICE CREAM AND FROZEN DESSERTS.	561	697	273	21.1	184.7	12.0	23.5	94.7	459.8	1 244.7
2026	FLUID MILK	2 025	2 507	1 287	126.1	1 086.1	48.0	99.1	400.8	2 552.4	9 395.7
203	PRESERVED FRUITS AND VEGETABLES. . . .	1 923	2 557	1 389	233.1	1 533.5	199.3	382.1	1 179.1	4 514.4	11 478.6
2032	CANNED SPECIALTIES	178	203	88	29.1	217.8	24.0	46.9	167.0	2 814.6	1 876.6
2033	CANNED FRUITS AND VEGETABLES	765	1 038	621	89.8	559.9	78.8	147.1	447.9	1 625.1	4 043.8
2034	DEHYD. FRUITS, VEGETABLES, SOUPS	133	178	88	12.4	84.3	10.6	19.8	63.0	235.7	607.3
2035	PICKLES, SAUCES, SALAD DRESSINGS	429	495	191	20.8	146.2	16.6	32.4	102.2	2 428.0	1 166.7
2037	FROZEN FRUITS AND VEGETABLES	136	208	190	42.8	261.2	37.6	74.5	208.8	2 694.6	1 848.8
2038	FROZEN SPECIALTIES	388	435	211	38.3	264.1	31.8	61.5	190.1	2 716.3	1 935.5
204	GRAIN MILL PRODUCTS.	2 223	3 080	1 093	111.4	1 012.8	78.5	168.9	665.6	3 698.7	12 162.2
2041	FLOUR, OTHER GRAIN MILL PRODUCTS	340	457	181	16.1	152.8	11.9	26.9	108.1	509.8	2 380.0
2043	CEREAL BREAKFAST FOODS	34	47	26	12.9	140.9	10.7	21.6	111.6	688.4	1 125.5
2044	RICE MILLING	48	57	35	4.0	30.9	3.0	6.6	19.1	148.3	680.6
2045	BLENDED AND PREPARED FLOUR	115	137	57	7.9	74.9	5.7	12.3	53.2	306.8	704.6

Source: Bureau of the Census, 1972 Census of Manufactures: General Summary, pp. 1-37.

Table 2. **Counties—Employees, Payroll, and Establishments, by Industry: 1974—Continued**

(Excludes government employees, railroad employees, self-employed persons, etc.—see "General Explanation." Size class 1 to 4 includes establishments having payroll during 1st quarter but no employees during mid-March pay period. "D" denotes figures withheld to avoid disclosure of operations of individual establishments)

SIC code	Industry	Number of employees for week including March 12	Payroll (\$1000)		Number of establishments, by employment-size class									
			First quarter	Annual	Total	1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 to 999	1000 or more
	CAMERON													
	Total	38 972	52 337	224 795	3 328	1 982	645	363	211	64	50	9	3	
...	Agricultural services, forestry, fisheries	879	1 227	6 454	204	149	36	14	5	-	-	-	-	-
07	Agricultural services	(B)	(D)	(D)	21	14	6	1	-	-	-	-	-	-
09	Fishing, hunting, and trapping	781	1 122	5 931	182	134	30	13	5	-	-	-	-	-
	Mining	72	157	573	8	3	1	3	1	-	-	-	-	-
	Contract construction	2 700	3 635	14 443	262	141	51	40	25	3	2	-	-	-
15	General contractors and operative builders	892	1 103	4 107	57	27	11	10	8	-	-	-	-	-
151	General building contractors	781	984	3 586	50	25	9	9	6	-	1	-	-	-
153	Operative builders	111	119	521	7	2	2	1	2	-	-	-	-	-
16	Heavy construction contractors	352	650	2 583	20	8	4	2	4	2	-	-	-	-
161	Highway and street construction	194	355	1 372	10	4	2	2	1	1	-	-	-	-
162	Heavy construction, except highway	127	235	952	9	4	2	-	2	1	-	-	-	-
17	Special trade contractors	1 456	1 882	7 753	185	106	36	28	13	1	1	-	-	-
171	Plumbing, heating, air conditioning	303	483	1 836	39	24	8	3	3	1	-	-	-	-
172	Painting, paper hanging, decorating	99	120	371	13	8	1	3	1	-	-	-	-	-
173	Electrical work	280	451	1 820	33	16	6	8	3	-	-	-	-	-
174	Masonry, stonework, and plastering	190	222	1 051	22	12	3	4	3	-	-	-	-	-
1741	Masonry and other stonework	120	160	827	14	7	2	3	2	-	-	-	-	-
175	Carpentering and flooring	188	163	757	34	23	6	4	1	-	-	-	-	-
1751	Carpentering	126	100	512	23	17	4	1	1	-	-	-	-	-
1752	Floor laying and floor work, nec	61	63	242	10	5	2	3	-	-	-	-	-	-
176	Roofing and sheet metal work	241	262	1 115	20	9	6	4	-	-	1	-	-	-
177	Concrete work	(B)	(D)	(D)	5	2	-	2	1	-	-	-	-	-
179	Misc. special trade contractors	91	107	519	17	10	6	-	1	-	-	-	-	-
1799	Special trade contractors, nec	(B)	(D)	(D)	6	2	3	-	1	-	-	-	-	-
	Manufacturing	8 950	13 203	58 430	131	38	14	21	16	16	19	5	1	1
20	Food and kindred products	2 627	3 225	13 215	33	7	2	4	3	6	9	2	-	-
201	Meat products	(B)	(D)	(D)	2	-	1	-	-	1	-	-	-	-
2011	Meat packing plants	(B)	(D)	(D)	2	-	1	-	-	1	-	-	-	-
202	Dairy products	(C)	(D)	(D)	1	-	-	-	-	-	1	-	-	-
2026	Fluid milk	(C)	(D)	(D)	1	-	-	-	-	-	1	-	-	-
203	Preserved fruits and vegetables	(E)	(D)	(D)	2	-	-	-	-	-	2	-	-	-
2037	Frozen fruits and vegetables	(E)	(D)	(D)	2	-	-	-	-	-	2	-	-	-
205	Bakery products	(C)	(D)	(D)	2	-	-	-	-	1	1	-	-	-
2051	Bread, cake, and related products	(C)	(D)	(D)	2	-	-	-	-	1	1	-	-	-
207	Fats and oils	222	313	1 378	4	-	-	1	1	1	1	-	-	-
2074	Cottonseed oil mills	(C)	(D)	(D)	3	-	-	-	1	1	1	-	-	-
208	Beverages	172	227	1 014	4	-	-	1	2	1	-	-	-	-
2086	Bottled and canned soft drinks	172	227	1 014	4	-	-	1	2	1	-	-	-	-
209	Misc. foods and kindred products	1 415	1 406	5 892	17	6	1	2	-	2	4	2	-	-
2092	Fresh or frozen packaged fish	(G)	(D)	(D)	10	1	-	1	-	2	4	2	-	-

Source: Bureau of the Census, *County Business Patterns, 1972, Ohio*, (January 1977), p. 14.

Figure A-34

FARM WAGE RATES, OCT 1976, WITH COMPARISONS, UNITED STATES

ITEM	ANNUAL AVERAGE 1974	ANNUAL AVERAGE 1975	OCT 12-18, 1975	JUL 11-17, 1976	OCT 10-16, 1976
DOLLARS PER HOUR					
METHOD OF PAY:					
ALL HIRED FARM WORKERS	2.25	2.43	2.63	2.53	2.80
PAID BY PIECE-RATE	2.58	2.96	3.13	2.93	3.27
PAID BY OTHER THAN PIECE-RATE	2.21	2.38	2.56	2.48	2.75
PAID BY HOUR ONLY ^{1/}	2.23	2.39	2.57	2.50	2.74
PAID CASH WAGES ONLY ^{2/}	2.43	2.60	2.82	2.65	2.94
PAID BY HOUR CASH WAGES ONLY ^{3/}	2.32	2.45	2.65	2.52	2.81
TYPE OF WORK PERFORMED:					
FIELD AND LIVESTOCK WORKERS	2.08	2.26	2.46	2.37	2.60
PACKINGHOUSE WORKERS	2.41	2.52	2.64	2.73	2.89
MACHINE OPERATORS	2.25	2.50	2.58	2.66	2.79
MAINTENANCE AND BOOKKEEPING	2.85	3.15	3.38	3.39	3.42
SUPERVISORS	3.77	4.00	4.12	4.32	4.47
OTHER AGRICULTURAL WORKERS	2.40	2.76	2.92	2.76	2.96
INDEXES ^{4/}					
(1910-14=100)	1,492	1,612	1,656	1,804	1,742
(1967=100)	176	190	196	213	206

^{1/} MAY INCLUDE PERQUISITES SUCH AS ROOM AND BOARD, INCLUDES ONLY THOSE PAID BY THE HOUR.

^{2/} DOES NOT INCLUDE PERQUISITES, INCLUDES ALL METHODS OF PAY.

^{3/} DOES NOT INCLUDE PERQUISITES, INCLUDES ONLY THOSE PAID BY THE HOUR.

^{4/} INDEXES ARE BASED ON ALL HIRED FARM WORKERS AND ARE ADJUSTED FOR SEASONAL VARIATION.

Source: U.S. Department of Agriculture, Statistical Reporting Service, *Farm Labor*, November 24, 1976, p. 3.

Figure A-35

Table 7.--Average number of days worked and wages earned at farm and nonfarm wage work, for all farm wage workers, by selected characteristics, 1974

Selected characteristics	Number of workers	Farm and nonfarm				Farm			Nonfarm		
		Days worked	Wages earned		Days worked	Wages earned		Days worked	Wages earned		
			Per year	Per day ^{1/}		Per year	Per day ^{1/}		Per year	Per day ^{1/}	
	Thou.	No.	Dol.	Dol.	No.	Dol.	Dol.	No.	Dol.	Dol.	
ALL WORKERS, 1974	2,737	138	2,476	17.95	87	1,447	16.60	51	1,030	20.25	
RACE AND SEX											
White	2,277	142	2,613	18.45	86	1,461	16.95	56	1,153	20.75	
Negro and other races	460	120	1,798	14.95	93	1,377	14.90	28	421	15.25	
Male	2,165	154	2,871	18.60	99	1,663	16.85	56	1,208	12.65	
White	1,869	154	2,941	19.10	95	1,633	17.25	59	1,309	22.10	
Negro and other races	296	158	2,428	15.40	123	1,854	15.05	34	574	16.70	
Female	572	76	983	12.95	44	629	14.25	32	354	11.15	
White	408	85	1,112	13.05	47	673	14.35	38	438	11.40	
Negro and other races	164	52	662	12.65	37	518	13.95	15	144	9.45	
CHIEF ACTIVITY											
Farmwork	823	218	3,942	18.05	205	3,680	18.00	14	262	19.15	
Farm wage work	708	239	4,303	18.05	226	4,082	18.05	12	220	18.25	
Without nonfarm work	572	241	4,374	18.15	241	4,374	18.15	--	--	--	
With nonfarm work	136	229	4,001	17.45	166	2,852	17.15	63	1,149	18.25	
Other farmwork ^{2/}	115	93	1,723	18.45	70	1,201	17.25	24	522	21.95	
Nonfarm work	445	235	5,278	22.50	30	461	15.25	204	4,817	23.55	
Unemployed ^{3/}	35	--	--	--	--	--	--	--	--	--	
Not in labor force	1,435	63	787	12.50	38	488	12.75	25	299	12.15	
Keeping house	234	55	700	12.65	36	457	12.65	19	243	12.65	
Attending school	1,046	65	770	11.80	40	491	12.40	26	279	10.85	
Other	155	58	1,034	17.75	33	515	15.50	25	519	20.80	
RESIDENCE, SEX, AND DURATION OF FARM WAGE WORK											
All workers											
REGION, MIGRATORY STATUS, AND RACE											
All workers											
Migratory											
White	193	139	3,097	22.20	77	1,614	21.05	63	1,483	23.65	
Negro and other races ^{3/}	16	--	--	--	--	--	--	--	--	--	
Nonmigratory											
White	2,084	142	2,568	18.10	87	1,446	16.65	55	1,122	20.45	
Negro and other races	444	119	1,751	14.75	92	1,334	14.45	26	417	15.75	
South											
Migratory	67	140	2,794	19.95	82	1,541	18.85	58	1,253	21.50	
White	58	134	2,730	20.40	78	1,387	17.75	56	1,343	24.05	
Negro and other races ^{3/}	9	--	--	--	--	--	--	--	--	--	
Nonmigratory	971	128	2,061	16.10	84	1,205	14.30	44	856	19.45	
White	593	136	2,371	17.45	82	1,261	15.35	54	1,110	20.65	
Negro and other races	378	116	1,575	13.55	87	1,117	12.80	29	459	15.85	
West											
Migratory	66	143	3,448	24.10	96	2,547	26.40	47	900	19.30	
White	58	146	3,510	24.00	98	2,542	25.95	48	968	20.10	
Negro and other races ^{3/}	7	--	--	--	--	--	--	--	--	--	
Nonmigratory	633	145	2,845	19.65	110	2,169	19.75	35	676	19.35	
White	593	143	2,775	19.40	106	2,057	19.40	37	718	19.40	
Negro and other races ^{3/}	40	--	--	--	--	--	--	--	--	--	

Numbers of workers are rounded to the nearest thousand without being adjusted to group totals.

^{1/} Rounded to the nearest 5 cents.

^{2/} Includes operating a farm and unpaid family labor.

^{3/} Averages not shown where base is less than 50,000 persons.

Source: U.S. Department of Agriculture, Economic Research Service, *The Hired Farm Work Force of 1974*, July 1975, pp. 15-16.

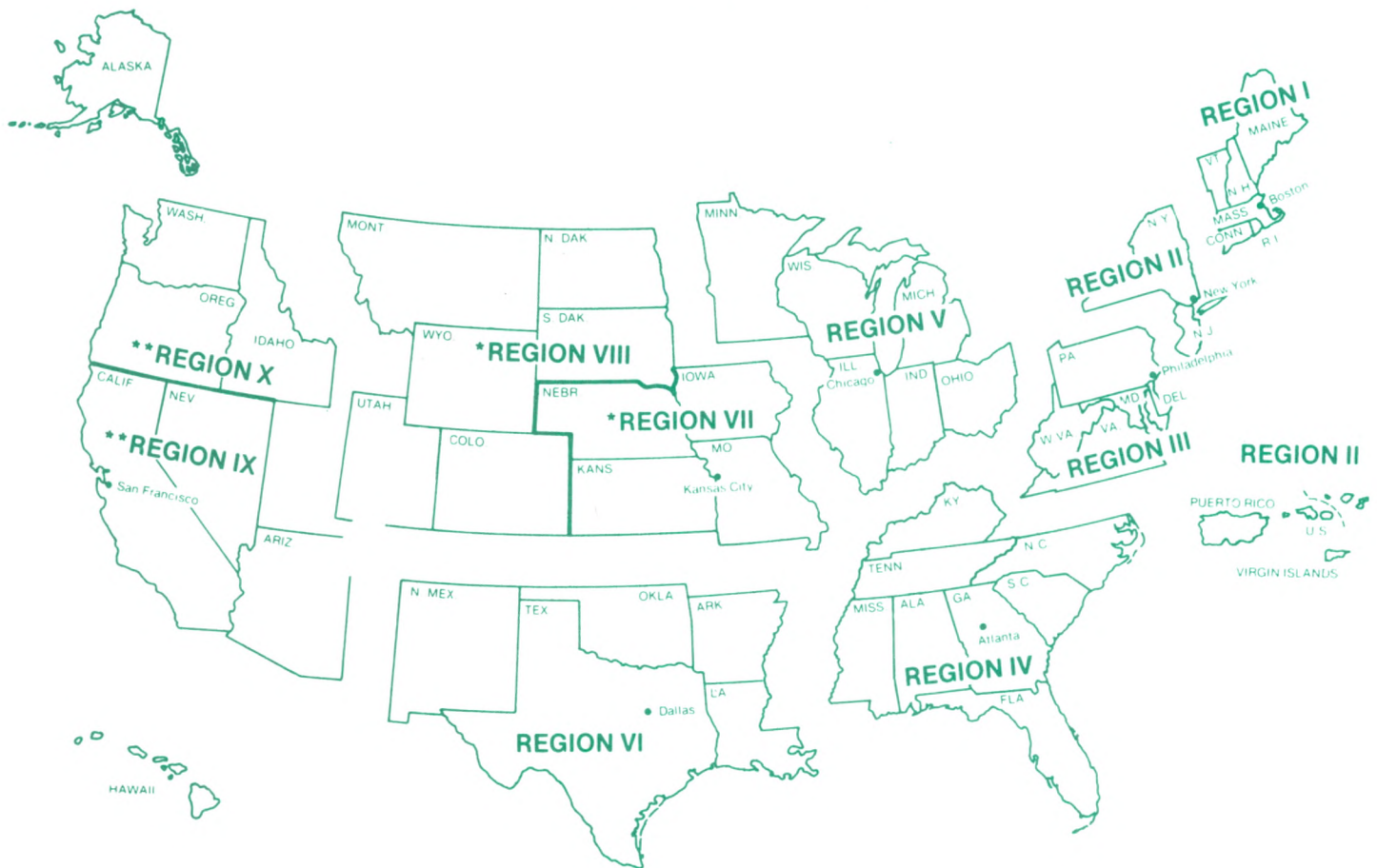
Appendix B. Selected Bibliography

The works listed below are either indicative of the subject areas in which compensation statistics are used or serve to provide introductory materials for data users. These works should be supplemented by the references cited in the individual chapters of this bulletin.

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