

Introduction

Adequate employment and pay-roll data are essential to an employment security program. Upon these data depend actuarial estimates of income and benefit liability, studies of labor market trends, administrative requirements and problems of partial and seasonal unemployment, as well as analyses needed for adjusting benefits and contribution rates. Because of the importance of employment and pay-roll data, State administrative agencies made arrangements to obtain from employers subject to unemployment compensation laws information necessary for classifying employers according to the nature of their business. Subsequently, these employers have regularly reported employment and pay-roll information to provide a reasonably complete picture of the changes which have occurred in each State.

The inclusiveness of the data varies from State to State. This is because some States, following the example set in the Social Security Act, have extended coverage only to employers employing 8 or more workers, while other States have extended coverage to firms of smaller size. In almost every instance, however, the coverage has been sufficient to reflect accurately the changes which have occurred in employment and pay rolls during the year. Although data are available for the 70 industry groups provided in the Social Security Board Industrial Classification Code (March 1937 edition),^{1/}

^{1/} The District of Columbia, Massachusetts, North Carolina and West Virginia used the 1936 edition of the code. The classifications, however, were practically the same as those of the 1937 edition.

certain related industries have been combined to facilitate tabulation and in some cases to avoid disclosure when the firms included in a major industry group have not reported average monthly employment of more than 100 workers.

Character of Data Reported - The concepts which underlie the employment and pay-roll data have an important bearing on the proper interpretation of the data. Employers required to pay contributions for unemployment compensation purposes are obliged to report the number of workers employed during last pay periods of all types ending within the month.^{1/} Thus, if an employer has some workers who are paid on a weekly basis, others on a semimonthly, and still others on a monthly pay-roll basis, the figure to be reported as "the number employed during the last pay periods ending within the month" represents the sum of the number of workers on a weekly pay basis who were working during the last week of the month, those paid on a semimonthly basis who were working during the second of the semimonthly pay periods, and those workers who were employed on a monthly pay-roll basis. Should the employer have other types of pay periods, viz., ten-day or daily, the number employed on the last of each type ending within the month are also included.

^{1/}

The revised statistical reporting instructions (ES-201) which became effective in January of this year provide for quarterly data on wages and monthly data on employment based on identical firms reporting for consecutive calendar quarters. These data will supplement the annual report on employment and pay rolls in 1940. They make available comprehensive information on industrial patterns of employment and pay rolls for the periods between the dates at which annual reports are issued and further supplement similar data derived from business censuses.

This method of counting the number of employed workers is similar to that used by the United States Bureau of Labor Statistics, except that the latter agency requests an employment count for pay periods ending nearest the 15th of each month. Furthermore, unemployment compensation reports make no distinction between types of workers, i.e., wage earners, executive and office personnel, etc. All persons who worked at some time during the last pay period of the month and whose wages were subject to contributions are included in the employment figures.

The pay-roll data presented in these volumes include as "wages" all cash remuneration for employment, as well as the cash value of tips, bonuses, meals, etc., which are regarded as taxable wages under most State laws.

Pay-roll data have been also reported monthly by employers, either on a cash or accrued basis, for pay periods ending within the month. Because of the varying number of weeks which end in any one month and also because of the wide variations in types of pay periods found in different industries and areas, the monthly figures have not been tabulated. Instead, pay-roll data are shown only on a quarterly basis, which minimizes the distortion resulting from the variation in the number of pay periods included.

Industrial Classification - In order that the employment and pay-roll data may be used effectively for studies that are undertaken, a uniform industrial classification system has been introduced

by State employment security agencies.^{1/} From the information reported by the employer on his liability report^{2/} concerning the nature of his business, it has been possible to assign a code number or numbers to identify the type or types of business activity in which an employer is engaged. Under the industrial classification procedure used by State agencies, each place of business is classified on the basis of its principal activity. If, therefore, a firm conducts different activities at its various establishments, separate industry numbers are assigned to identify each industrial activity and a contribution or supplemental report is submitted by an employer for each such activity. For example, should a firm which operates a manufacturing establishment also operate retail outlets, separate employment and pay-roll data are reported for each activity. This classification procedure permits accurate reports of employment and pay rolls on an establishment basis without making it necessary for employers to submit a detailed break-down for each separate establishment.

In most State agencies, the industry assignments are incorporated into the employer account number or account numbers assigned to

^{1/} All State agencies, with the exception of Pennsylvania and Wisconsin, had installed the code prior to 1938. Wisconsin had established its own code prior to the introduction of the Social Security Board Industrial Classification Code. (March 1937 edition) Lack of information regarding the "nature of business" prevented Pennsylvania from installing the code in 1938.

^{2/} The report which is used by the State agencies to determine whether employers are liable or exempt from the provisions of the State unemployment compensation laws.

the employer for identification purposes. In addition to industry, the account numbers usually identify the area of the State in which the business is conducted. These area identifications make it possible for a State agency to compile series of employment and pay-roll data for areas and communities within the State hitherto available only for a few metropolitan areas.

The Industrial Classification Code of the Social Security Board, designed primarily to serve the needs of the social security program, is similar but not identical to industrial classification systems used by other Federal agencies. The content of each major industry group for which data are presented may be ascertained by reference to the 1937 edition of the code.

Coverage - Large groups of the working population are not covered under the unemployment compensation program. The coverage provisions of the State unemployment compensation laws, therefore, must be taken into consideration in connection with interpretation of the employment and pay-roll data.

Liability of employers for unemployment compensation contributions depends upon two coverage conditions specified in the State laws--the size-of-firm and the nature of the business.^{1/} "Size-of-firm" is usually defined in terms of the number of workers employed for some portion of a day, each day falling in a different week of the year. "Nature of business" is negatively defined in most State laws--

^{1/} See Social Security Board, A Comparison of State Unemployment Compensation Laws, Washington, D.C. August 1933.

i.e., in terms of the employments exempt from the provisions of the unemployment compensation law. As a rule, the employments excluded under most State laws correspond to those specified in section 1600 of the Internal Revenue Code.^{1/} These are:

- 1) Agricultural labor;
- 2) Domestic service in a private home;
- 3) Service performed as an officer or member of a crew of a vessel on the navigable waters of the United States;
- 4) Service performed by an individual in the employ of his son, daughter, or spouse, and service performed by a child under the age of twenty-one in the employ of his father or mother;
- 5) Service performed in the employ of the United States Government or of an instrumentality of the United States;
- 6) Service performed in the employ of a State, a political subdivision thereof, or an instrumentality of one or more States or political subdivisions;
- 7) Service performed in the employ of a corporation, community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private shareholder or individual.

^{1/} This section was formerly section 907 of Title IX of the Social Security Act.

These provisions exempt certain types of employment in the sense that wages earned in such employments are not subject to contributions, hence employers or firms engaged in a business which requires only such services are exempt from the liability provisions. These, however, are not the only exempted employers. As a consequence of the joint conditions that govern liability for contributions, there will be certain employers who are engaged in subject employments but who do not employ a specified number of workers for a period of sufficient duration to make them liable for contributions. In 1938, the "size-of-firm" coverage provision varied as follows:^{1/}

8 or more workers	28 States ^{2/}
7 or more workers	1 State
5 or more workers	1 State
4 or more workers	9 States
3 or more workers	2 States
1 or more workers	10 States

As a general rule, the respective minimum number of workers specified had to be employed during a portion of one day in each of twenty different weeks of the year. The joint conditions of size-of-firm and subject employments result in some employers being exempt because they do not operate their business over a long enough period in the year, even though they employ more than the minimum number of workers for services

^{1/} Most States permit elective coverage to employers of fewer workers than specified in the State law.

^{2/} Includes Louisiana, which extended coverage to employers of 4 or more workers, effective October 1, 1938.

covered by unemployment compensation laws. Other groups of employers operating the year round, employ workers in covered services, but are exempt because they do not employ the minimum number specified in the State law. The former group is exemplified by highly seasonal business enterprise, such as resort hotels, canneries, etc.; and the latter group by retail trade, and service, such as groceries, filling stations, etc.

Although it is difficult to determine either the number of employers or the number of workers who are excluded because of the size-of-firm limitations in the State laws, estimates indicate that for the country as a whole, between 10 and 15 percent of the workers ordinarily engaged in subject employment are excluded. In terms of the total gainful worker population, about half are "covered" by State unemployment compensation laws, i.e., they earn wages at some time during the year for services performed in employments subject to State laws. If the self-employed were excluded from the gainful worker population, approximately two-thirds of the remaining "wage earners" would be covered by unemployment compensation.

In using the data for comparative purposes or for projecting census data, account must be taken of the fact that the employment data reported to the State agencies are necessarily based on the place of employment. Hence, in those areas where there is a significant amount of commuting across State lines, a correction factor must be introduced in projecting data based on "place of residence." Data for New York, Rhode Island, and the District of Columbia, for example,

undoubtedly reflect employment of a significant number of workers who reside in neighboring States. Although complete quantitative evidence of migration among the States is not available, unemployment compensation operations have been influenced by such migration.

Since the report on employment and pay rolls in 1938 was the first to be made by State employment security agencies to the Social Security Board, it was anticipated that some States would be unable to comply completely with the instructions for reporting these data. As will be noted from the tabulations, no industry data are shown for Pennsylvania, since that State agency had not at the time introduced the social security industrial classification code in its employer identification system and largely for this reason no national totals by industry are shown. Wisconsin data are included only in the tabulations for divisions, and are omitted from the major industry tabulations, because in 1938 that State was using its own industrial classification system, pending the completion of the more refined 1939 edition of the social security code. In addition, there are two other factors which affect the data—namely, delinquency on the part of employers in submitting contribution reports to the State agencies and errors made in classifying employers.

Although only inadequate data are available for determining the degree to which delinquent submittal of employer contribution reports affect the data, there is evidence that the factor is not significant in terms of the State employment and pay-roll pattern as a whole. The degree to which employment and pay rolls are understated

because of delinquency varies between States and for the individual major industry groups in each State. As a general rule, it was found that delinquency was more significant among industry groups in which small operating units predominate--such as trade and service--than in the groups in which firms generally employ fairly large numbers of workers, as in manufacturing. The coverage of the State law, therefore, has a bearing on the importance of this factor. Data for States which extended coverage to employers of one or more workers undoubtedly reflect a greater degree of delinquency than do the State laws which limit coverage only to employers of eight or more. Despite this delinquency factor, it is believed that there is no serious understatement or distortion in the data. The reports still outstanding when books were closed for purposes of compilation related chiefly to employment and pay rolls for December for those States collecting contributions monthly and for the fourth quarter for those States collecting every three months. The trends exhibited by certain industries in some States suggest the possibility that the data for the closing months of the year may be affected by this factor.

Sample checks of the accuracy of the coding of employers, which have been subsequently made to this compilation, have revealed some errors in coding. Such errors were largely the result of incomplete information available at the time an employer was classified. Certain difficulties in obtaining as much information as was necessary prevented some State agencies from classifying a few of the employers in strict accordance with recommended classification procedures.

Thus, selected major groups may include related activities in the same industry. With steady improvement in industrial classification work, however, the classification assignments have become more reliable.

Another qualification to be noted relates to the pay-roll data for New York and Michigan. In 1938 both State laws limited taxable wages for unemployment compensation purposes to the first \$3,000 of a worker's annual wages or salary from an individual employer. Michigan, however, reported total wages for covered employments rather than only the amount subject to contributions. The aggregate amount in excess of the taxable wages in this State is estimated as ranging between 7 and 8 percent of the total wages for subject employment in 1938. Pay-roll data for New York, on the other hand, represent only the taxable amount, i.e., the first \$3,000 in wages. The amount of wages excluded in this State is estimated to range between 12 and 15 percent of the total wages in subject employment in 1938.

Social Security Uses of the Data - The development of statistical reporting procedures designed to yield employment and pay-roll data were directed toward actuarial needs of State agencies. These needs were recognized from the very beginning of work on development of an unemployment compensation program in this country. The lack of adequate information even on a national basis was frequently pointed out in the report of the Committee on Economic Security when it was engaged in the development of draft legislation.^{1/} Only with the initiation of State unemployment compensation operations were sufficiently comprehensive and reliable data on employment and unemployment to become available for use in analyzing contribution rates relative to a benefit formula that may be supported.^{2/}

In this connection we have had an opportunity to profit from British experience. Sir Alfred Watson, the British actuary, noted in 1920 that the failure to provide for the periodic collection of employment data seriously handicapped his work. One commentator on the British experience observed that there was "little evidence of effort to build the necessary statistical foundation" in the early years; also that "the opportunities such a system offers to build

^{1/} Social Security Board, Social Security in America, (United States Government Printing Office, Washington, D.C., 1937)

^{2/} Although unemployment compensation contributions collected from employers engaged in the various industrial activities are not shown, approximations of employer contributions paid may be derived by multiplying the pay-roll figures by the contribution rate prevailing in the respective States in 1938. All States required contributions of 2.7 percent of taxable wages with the exception of the District of Columbia, Michigan and New York in which 3 percent was required.

up, through internal records, a vast amount of useful information seems not to have been capitalized by an Administration that has labored honestly, but blindly."^{1/}

Since State employment and pay-roll data have become available, they have been continuously used in determining the effect of suggested changes in unemployment compensation legislation and in the planning and administration of State systems. Local area employment and pay-roll data provide some basis for the location and staffing of public employment offices. Moreover, the problem of seasonality of operations and its relation to unemployment compensation has been analyzed primarily on the basis of employment data for industries characterized by regularly recurring fluctuations. As further refinement in industrial classification is introduced, the data will become increasingly useful, and more careful analyses of State industrial patterns and activities will be possible.

From the administrative standpoint, there is a variety of ways in which employment data for covered industries may be used in connection with the placement function of the employment security program. For example, the availability of employment records for each subject employer enables the public employment service to know the seasonal fluctuations in employment of employers. With this information, the employment service is able to plan its field visits in order to effect the maximum economy and efficiency

^{1/} Reede, Arthur Hallam. The Actuarial Aspect of Unemployment Insurance: British Experience, p. 28. State College, Pennsylvania. 1936.

in finding jobs for workers registered with the local employment offices. In addition to knowing when employers generally expand their working forces, this information aids in determining the effectiveness of the placement work of the employment service and indicates the industries and the employers who utilize the local placement service.

The Industrial Distribution of Covered Employment - One important value of the data for 1938 lies in the fact that they provide a bench mark hitherto not available. Although the year was characterized for the most part by depressed employment conditions, the distribution of employment and pay rolls according to industry divisions and major industry groups provides a fairly reliable measure of the relative importance of the respective industries in the State. It is to be remembered, however, that these distributions are based on the subject employments in the States and are therefore affected by the size-of-firm provisions of the State laws. Consideration must be given to this in any comparison made among States and among industries within the different States.

Concentration of covered employment and pay rolls in the different industries is evident from the data shown for the individual States. In terms of the broad major divisions, it is observed that, as a general rule, there is a decided concentration of both employment and pay rolls in manufacturing. Both North and South Carolina show the most extreme concentration in manufacturing, with about

two-thirds of their covered workers ordinarily engaged in that type of activity, principally in textile manufacturing. Connecticut, New Hampshire, and Rhode Island follow closely, with over 60 percent of their 1938 employment in manufacturing. While manufacturing in Connecticut is comprised of diversified industries, it is largely concentrated in shoe production in New Hampshire and in woollens in Rhode Island. Maine and Michigan had 58 percent of their covered employment in manufacturing. Textiles and shoe manufacturing dominate the Maine pattern, while the automotive industry predominates in Michigan. To a considerable degree, therefore, these industries which dominate the pattern for the States will significantly affect the operations of the unemployment compensation system. The lack of diversification of industry within a State will in most instances make pooling of risks difficult and implies that during recession periods of the business cycle, there may be a severe drain on the funds of these agencies, assuming that benefits are adequate to meet the hazards of unemployment. Although a considerable number of other States exhibit concentrations of over half their covered workers in manufacturing, the distribution of employment within that type of activity evidences no such pronounced dependence on the level of operations in a single kind of business. At the other extreme are the District of Columbia, Nevada, New Mexico, and Wyoming, which have 10 percent or less of their employment in covered industries concentrated in manufacturing.

The next largest area of concentration in most States is in trade. In no instance, however, does it comprise more than 42 percent,

which is the proportion shown for North Dakota. The District of Columbia and South Dakota closely follow with 41 and 38 percent, respectively. Trade comprised between 20 and 30 percent inclusive of all covered employment in 27 States. Aside from Alaska, the smallest degree of concentration in trade exists in West Virginia and the Carolinas.

The proportion of employment in the construction industry in no instance exceeded 10 percent. The greatest degree of concentration for this activity is shown in the District of Columbia, Mississippi, and Wyoming. In 38 States, however, 5 percent or less of the covered employment is found to be in the construction industry. This relatively small proportion is explained partly by the fact that the construction industry operated at a fairly low level in 1938 and also because the coverage provisions probably exclude many firms engaged in construction work.

Transportation, communication, and utilities, collectively, comprise between 10 and 20 percent inclusive of covered employment in each of 36 States.^{1/} The highest proportions in this group are shown for the Great Plains and Mountain States, due largely to the relatively large number of workers employed in the railroad industry.

Relatively few States are found to have any significant proportion of covered workers employed in mining and quarrying activities. In West Virginia, however, the influence of the mining industry,

^{1/} Effective July 1, 1939, the unemployment compensation program for railroad workers was transferred from the States to the Federal Railroad Retirement Board, in accordance with the provisions of the Railroad Unemployment Insurance Act.

chiefly bituminous coal, on unemployment compensation operations is evidenced by the fact that 38 percent of the covered employment is concentrated in that activity. In no other State does the mining industry represent such an important source of employment, although in Alaska, over 30 percent of the covered workers are engaged in mining. In 3 of the Mountain States--Nevada, New Mexico, and Wyoming--mining operations account for more than 20 percent of the total covered employment. Kentucky also showed a concentration of 20 percent in mining, principally in the bituminous coal industry.

The service division represents a combination of various types of services, including business, personal, and professional service. Hotels, amusements, and personal service enterprises, such as laundries, comprise the major portion of this group. Exclusive of Alaska, the relative importance of this group to total covered employment ranges from 4 percent in West Virginia to 19 percent in the District of Columbia. In 38 of the 50 jurisdictions shown, service accounts for 5 to 10 percent inclusive of the total covered worker employment.

Delaware is the only State to show any sizable proportion of employment in the miscellaneous group designated "other." This reflects employment in holding companies and administrative offices. Another relatively important group in the miscellaneous division is "logging and lumber camps not attached to sawmills and logging contractors." In Maine and the Western States, such activity constitutes most of this group.

Fluctuation in State Employment and Pay Rolls - The seasonality of industrial operations in this country has been given increasing attention during the past few years, not only because of the problems it presents to the operations of an unemployment compensation system but also because of its implications in the planning of work projects and other social programs directed toward unemployment relief. Up to the present, very little data have been available with respect to the magnitude of the problem and practically no data are available on the socio-economic characteristics of the workers who are employed in highly seasonal industries. The data presented in this monograph represent the most comprehensive tabulations of monthly employment and quarterly wage data that have been hitherto compiled on a State basis. Because seasonal unemployment is a recurring risk of considerable importance in some States, a few State laws have placed restrictions on the benefit rights of workers who earn wages in highly seasonal industries. Apart from this factor, States with seasonal industries or with industries whose seasonal pattern presents sharp fluctuations are concerned with the administrative implications for unemployment compensation.

The year 1938 for the country as a whole was characterized by a continuation of the precipitous reduction in employment and pay rolls which began in the fall of 1937. The decline from the 1937 peak to the 1938 low is probably the most extreme ever to occur in such a short period of time. Since the major part of the decline occurred in 1937, the levels of employment and pay rolls in 1938 fail

to reflect the volume of unemployment among the covered worker group at the low point in 1938. Furthermore, since the decline in the fall of 1937 was contra-seasonal for many industries, the data for 1938 in terms of the normal seasonal pattern tend to be distorted for a number of States.

As a general rule the States with diversified industries tend to show the minimum difference in employment between the low and high months of 1938. There were 25 States which showed a variation of 10 percent or less; however, in 11 States, there was a difference of 5 percent or less over the 12-month period.^{1/} This group was largely comprised of the States in which manufacturing of a diversified character employs the largest number of covered workers. The only exception to this generalization occurs in the case of Kansas and Oklahoma, where a few stable manufacturing industries dominate the employment pattern.

A middle group of 17 States showed from 10 to 20 percent variation from the high to the low month of employment. This group was largely comprised of States of relatively small or sparse populations.

Although 8 States showed variations of 20 percent or more, the maximum difference in employment between the low and high month occurred in Alaska, because of the extreme variation in the operations

^{1/} Excludes Virginia, for which first quarter data were not reported.

of the fish canneries. Marked fluctuations also occurred in the other States of this group.

The quarterly pattern of pay rolls in covered industries was somewhat different from the employment pattern described above. This may be accounted for by the fact that a large number of workers were at times not fully employed and hence suffered some loss of earnings. The pay-roll data are shown for quarters only, with the result that the fluctuations within a quarter are not reflected. Despite this, all but 3 of the 24 States which showed less than a 10 percent variation between the high and low months of employment in 1938 had a somewhat larger variation from the low to the high quarter of pay rolls.^{1/} Indeed, some of these States with comparatively little fluctuation in employment in 1938 exhibited extreme variations in pay rolls; such variations were almost as sharp as the pay-roll variations in States with the maximum fluctuations in employment. Outstanding among the States with relatively stable employment and fluctuating pay rolls were Connecticut, Indiana, Massachusetts, and New Jersey. In Massachusetts, employment varied only 5 percent while pay rolls varied 17 percent. On the whole, States with variations in employment ranging from 10 to 20 percent showed similar variations in pay rolls, although Delaware, Rhode Island, and Vermont had somewhat larger pay-roll fluctuations. All of the States whose monthly

^{1/} New York pay-roll data are excluded because they were not valid for seasonal comparisons with other States; Virginia, because data were reported only for 3 quarters.

employment varied as much as 20 percent, except Michigan and Nevada, had somewhat smaller pay-roll fluctuations.

Since over-all data for the States tend to level out the variations for any particular industry division and to an even greater extent for any major industry group, a further analysis was made for the manufacturing division. A comparison of the measures of variation between the low and high months of employment and the low and high quarters of pay rolls in covered manufacturing employment is shown in the following table:

Ratios of Low to High Month of Employment and
Low to High Quarter of Pay Rolls in Manufacturing, 1938^{1/}
(In percentages)

<u>State</u>	<u>Employment</u>	<u>Pay Roll</u>	<u>State</u>	<u>Employment</u>	<u>Pay Roll</u>
Kansas	96	92	West Virginia	87	83
New Jersey	95	85	Maine	87	90
Missouri	95	85	Iowa	87	84
District of Columbia	95	89	Minnesota	87	86
Ohio	94	83	Mississippi	86	86
Wisconsin	94	91	Nevada	86	81
Texas	93	91	Arkansas	86	86
Oklahoma	93	93	Kentucky	85	80
North Carolina	92	81	California	83	85
Illinois	92	87	Washington	83	86
Maryland	91	83	South Dakota	83	80
Massachusetts	^{2/} 91	84	New Mexico	^{4/} 82	83
Nebraska	91	84	Rhode Island	82	77
Connecticut	91	80	Florida	81	85
Georgia	91	81	Delaware	78	83
New York	90	(3)	Montana	78	82
Indiana	90	79	Colorado	77	77
Alabama	90	85	Oregon	74	75
South Carolina	89	83	Utah	72	80
Tennessee	89	81	Michigan	69	67
Vermont	89	83	North Dakota	68	75
Arizona	89	86	Wyoming	64	67
New Hampshire	89	88	Hawaii	62	74
			Idaho	59	60
			Alaska	8	7

^{1/} Excludes Pennsylvania, for which data were not reported; Louisiana, which extended its coverage October 1, 1938; and Virginia, which did not report first quarter data.

^{2/} Based on quarterly data.

^{3/} Not comparable because taxable wages were limited to the first \$3,000 of a worker's annual earnings with an individual employer.

^{4/} Based on eight months' data.

It is evident from these data that wide differences in the degree of variation exist among the States. These differences would probably assume even greater proportions if pay-roll data were available on a monthly basis. On the other hand, if the variations in employment were measured on the basis of the average monthly employment per quarter, it is doubtful whether any significant differences would result between that measure and the one computed on a monthly basis, because the low and high months of employment tended to be typical of the quarter in which these months occurred.

EMPLOYMENT AND WAGES, 1939

EMPLOYMENT AND WAGES, 1939

1 Changes, 1938-1939

Industries covered by State unemployment compensation laws probably participated to a greater extent than industry as a whole in the general economic improvement that characterized the year 1939. Covered employment in 1939 averaged 21,377,500, approximately 7 percent above 1938.^{1/} The Bureau of Labor Statistics estimates indicate an increase from 1938 of only 4.6 percent for employees in nonagricultural establishments. Wages ^{2/} earned in covered employment in 1939 aggregated \$28,518 million, about 11 percent more than in 1938. The comparable gain in total nonagricultural wages and salaries in the Nation as a whole, however, was only 7.9 percent, according to recently revised estimates of the Bureau of Foreign and Domestic Commerce.

Comparisons with the volume of covered employment and wages in the previous year indicate the persistence in 1939 of the upward trend which began late in 1938. In March 1939, employment of covered workers totaled 20,754,000, 4.6 percent above the level of March 1938. By June, the gain over the same month of the previous year was 9.2 percent and in September it reached 9.6 percent. Although covered employment declined in the last 2 months of the year, the December 1939 total of nearly 22 million was 9.1 percent above the last month of 1938.

Similar increases were reported ^{3/} for workers included under the Federal old-age and survivors insurance program which covers all employers, irrespective of size of establishment, in virtually the same industries and services as those included under State unemployment compensation programs. The average number of employees reported as earning taxable wages under this program on the last day or last pay roll of March, June, September, and December 1939 was 8.8 percent above the average of similar figures for 1938. In March 1939 the number of such

^{1/} All comparisons between 1938 and 1939 are based on figures excluding data for railroad and other groups transferred to coverage under the Railroad Unemployment Insurance Act on July 1, 1939.

^{2/} "Wages" include the earnings of all employees of firms subject to unemployment compensation laws. Many of these employees are salaried workers.

^{3/} Social Security Bulletin, August 1941.

4

workers was 6.5 percent higher than in March 1938. By the end of June employment had increased by 10 percent over the same month of the previous year and in September by 9.7 percent—an increase almost identical with that indicated by State unemployment compensation figures. Likewise, in spite of the slight decline that followed, employment of workers covered by the old-age and survivors insurance program was 8.9 percent higher in December 1939 than in the last month of 1938.

Wages of workers included under State unemployment compensation programs in the first quarter of 1939 exceeded earnings during the corresponding period of 1938 by 6.8 percent. By the second quarter the relative increase was 10.9 percent, and by the third quarter 13.1 percent. As in the case of employment, there was a slight decline in relative position at the end of the year, but earnings in the last 3 months were 12.1 percent above those in the same period of 1938. Between the first and fourth quarters of 1939, wages earned in covered employment increased 19.0 percent, as against a corresponding rise of only 13.3 percent in 1938.

Variations in the inclusiveness of the data for the 2 years prevent accurate analysis of industrial differences in covered employment from 1938 to 1939 for the country as a whole. Such comparisons as are feasible,^{1/} however, indicate that average monthly covered employment in construction in 1939 was 25 percent above 1938, in manufacturing about 10 percent, and in trade more than 7 percent. The increases in the corresponding period in wages earned in these industrial divisions were even more striking. Wages earned in construction rose more than 30 percent, in manufacturing 15 percent, and in trade 8 percent.

2 Character and Limitations of the Data

Comprehensive monthly data on employment and wages, by major industry group, were reported to the Social Security Board in 1939 by the 51 State agencies administering the State unemployment compensation laws.^{2/} Only a few States compiled such statistics in 1937, and although all States submitted reports for 1938, complete data by major industry group for all States

^{1/} Covered employment and wages in Pennsylvania, for which no industry data were reported in 1938, were excluded from the totals for 1939 in making these comparisons.

^{2/} Including Alaska and Hawaii in addition to the 48 States and the District of Columbia.

first became available in 1939. Figures for 1938 have already been published,^{1/} and 1939 figures are presented in this volume. Final data for 1940 were not due from State employment security agencies until July 31, 1941, but preliminary estimates have been prepared and published.^{2/}

Employers subject to unemployment compensation laws are required to report to State employment security agencies the number of workers on their pay rolls during the last pay period of any type ending within the month. Thus, an employer who reimburses his employees on more than one basis reports a figure which is the sum of the number of workers on a weekly pay basis who were employed during the last week of the month, plus the number paid on a semi-monthly basis who were employed during the last half of the month, plus the number employed on a monthly pay roll basis. Should the employer have other types of pay periods, such as 10-day or daily, the number of employees during the last pay period of each type ending within the month is included.

Wages are reported on a quarterly basis. Except for New York, they represent the total amount of wages paid or payable to all covered workers during each calendar quarter, even though the entire amount may not be subject to taxation for unemployment compensation purposes. Under most State laws, the cash value of such perquisites as tips, bonuses, and meals are regarded as taxable wages and included in the employers' reports. New York reported taxable wages only, thus excluding all but \$3,000 of the wages of individual employees with annual earnings from any one employer in excess of \$3,000. It is estimated that this limitation reduced the reported figure for total wages earned in covered employment for the 51 States by about 3 percent; it especially distorts the wage pattern for industries in which high salaries are frequent and in which New York predominates, particularly finance, insurance, and real estate.

Because of the differences in the bases upon which they are reported, employment data are not strictly comparable with wage data. The wages of all workers employed at any time in the calendar quarter are included in the State reports, but their employment is excluded unless it occurred during the last

-
- ^{1/} Bureau of Employment Security, Employment and Pay Rolls in State Unemployment Compensation Systems 1938, Employment Security Memorandum No. 6, Washington, D.C., April 1940.
- ^{2/} Social Security Bulletin, July 1941.

pay period of a month. Quotients obtained by dividing wages by employment, therefore, have little significance.^{1/}

Unemployment compensation reports cover all persons whose wages are subject to taxation for unemployment compensation purposes and, therefore, include many officers, executives, and other supervisory employees as well as wage earners.

Covered employment and wages are classified and reported on an establishment and not on an employer basis and so are properly allocated to the State in which they originate. Data for many States, therefore, reflect the employment of workers who reside in neighboring States.

Various limitations which must be taken into consideration in any interpretation of the figures, attach to the use of employment and wage data for covered workers as measures of total employment and wages. Large groups of the working population are excluded from coverage by most State unemployment compensation laws. These exclusions, moreover, vary considerably among the States.^{2/} In general, unemployment compensation coverage is limited by two broad conditions--the nature of the business and the size of the firm.

"Nature of business" is negatively defined in most State laws in terms of the types of employment exempt from contribution requirements. Generally excluded in 1939 were:

1. Agricultural labor.
2. Domestic service in a private home;
3. Service performed as an officer or member of a crew of a vessel on the navigable waters of the United States;
4. Service performed by an individual in the employ of his son, daughter, or spouse, and service performed by a child under the age of twenty-one in the employ of his father or mother;
5. Service performed in the employ of the United States Government or of an instrumentality of the United States;
6. Service performed in the employ of a corporation, community chest, fund, or foundation, organized and

^{1/} The average annual wage earned in covered industries could be computed by dividing total wages earned by the number of workers with wage credits.

^{2/} See Comparison of State Unemployment Compensation Laws, as of October 1, 1940. Employment Security Memorandum No. 8, Washington, D.C., November 1940.

operated exclusively for religious, charitable, scientific, literary, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which inures to the benefit of any private shareholder or individual.

Deviations from this general pattern are frequent. New York, for example, covers domestic service in a private home if the employer has four or more servants.

These are, however, not the only types of excluded employment. As a consequence of the joint conditions that govern liability for unemployment compensation contributions, there are large groups of employers engaged in subject industries and services who are exempt because they do not employ a specified number of workers for a period of sufficient duration, usually a portion of one day in each of twenty different weeks. Thus, some employers operating the year round in covered industries are exempt because they do not employ the minimum number specified in the State law. Others are exempt, even though they employ the minimum number of workers in employments subject to the State law, because they did not employ the required number of workers over the required period. In 1939, in 8 States an employer's minimum annual or quarterly pay roll was a factor in determining coverage.

A change in industrial coverage was made in 1939 by Wisconsin whereby about 8,500 out of approximately 13,500 government (non-Federal) employees who were formerly included were excluded after July 1. The most important change in the "nature-of-business" exclusions in 1939 became effective July 1, when, by Federal statute, employees of interstate railroads and certain allied employers were transferred from coverage by State unemployment compensation systems to a special Federal system of unemployment insurance.

Massachusetts reduced its "size-of-firm" limitation from employers of at least eight to employers of at least four workers, effective January 1, 1939. Six States, all of which had previously covered employers of less than eight workers, changed their coverage in 1939 by basing it on the size of the employer's pay roll as well as on the number of workers employed; the new basis extended coverage in New Mexico and Utah and reduced it slightly in Idaho, Montana, Nevada, and Wyoming. More

than half of the States were still following the pattern of the Federal Unemployment Tax Act in 1939 and covering only firms employing eight or more.^{1/} The other laws covered smaller firms; in December 1939, 11 States, all (with the exception of Pennsylvania) relatively small in terms of the volume of employment, required contributions from all employers in covered industries, provided their businesses had been in operation for the requisite period of time during the year.

The "size-of-firm" coverage limitations in State laws in December of each of the years 1938-1940 were as follows:

<u>Coverage Limitation</u>	<u>Number of States 2/</u>		
	<u>1938</u>	<u>1939</u>	<u>1940</u>
Employers of:			
8 or more	28	26	25
7 or more	1	0	0
6 or more	0	1	2
5 or more	1	1	1
4 or more	9	3/9	3/9
3 or more	2	2	2
2 or more	0	1	1
1 or more	10	11	11

It is believed that there is no serious understatement or distortion in the 1939 figures resulting from delinquency on the part of employers in submitting contribution reports to the State agencies.

3 Industrial Classification

The Social Security Board Industrial Classification Code, designed primarily to serve the needs of the Social Security program, is similar to but not identical with systems used by

-
- 1/ Most States permit elective coverage to employers of fewer workers than specified in the State law and to certain types of employment specifically excluded by these laws. The extent of such voluntary coverage is not known.
 - 2/ States having coverage based on both number of workers employed and size of pay roll are tabulated according to the number of workers.
 - 3/ Includes Kentucky where, as an alternative to coverage of employers of 4 or more workers paid at least \$50 each in each of 3 quarters, there is provision for the coverage of firms employing 8 or more workers in 20 weeks.

other Federal agencies. Under the Social Security Board industrial classification procedure adopted by all State unemployment compensation agencies, each place of business is coded on the basis of its principal activity. If a firm conducts different activities at its various establishments, separate industry identification numbers are assigned to each establishment. For example, should a firm which is engaged primarily in manufacturing also operate retail outlets, separate employment and wage data would be reported for each of the functions. Thus, employment and wages for multi-unit employers reported to the Bureau of Employment Security are classified under the industrial activity and State to which they properly belong rather than according to the primary industry or location of the reporting employer.

There have been several editions of the Social Security Board Industrial Classification Code. During 1939, most State unemployment compensation agencies used the latest (1939)1/ edition, some classified employers according to the March 1937 edition and four State agencies—Massachusetts, North Carolina, West Virginia, and the District of Columbia—were still using the 1936 Code. Industrial classification of employment and wage data for 1940 and subsequent years will be made by all State agencies on the basis of the 1939 edition of the Code.

Classifications in the 1936 edition were almost identical to those in the 1937. The 1939 Code provided for a few changes in 2-digit industry classifications. In addition, while the 1937 code provided only for classifications by major industry groups (2-digits) full use of the 1939 code makes possible subclassification into smaller industry groups (3-digits) or even industries (4-digits). Employment and wage data by industry groups (3-digits) for all States will first become available with the 1942 figures. The detailed classification will make possible similarly detailed analyses of Nation-wide and State trends in employment and wages.

4 Unemployment Compensation Coverage

Estimates based on figures supplied by State unemployment compensation agencies indicate that 31,530,500 workers,^{2/} or nearly 50 percent more than the average of 21,377,500

-
- 1/ For a description of major industry groups (2-digits) in the 1939 edition of the code see pp. 37-54.
- 2/ Adjusted to exclude estimated duplicate reporting among the States.

covered workers reported as employed during the last pay period of each month, obtained wage credits toward unemployment benefits during 1939. This figure represents the maximum number of workers who may be eligible for benefits during their periods of unemployment. The total number of employees who received some wages taxable under the old-age and survivors insurance program in 1939 was 33,100,000, 5 percent more than under the unemployment compensation program.

Workers with wage credits under the unemployment compensation program in 1939 constituted approximately 60 percent of the total labor force of the continental United States, including employers and the self-employed.^{1/} To an indeterminate extent, this proportion overstates the degree to which the labor force is covered by unemployment compensation because certain individuals regarded as not in the labor force during the Census week undoubtedly had earned wages in covered employment in the preceding year. Women cannery workers who are ordinarily housewives are one example, students another, of workers with wage credits but not included in the labor force by the Census Bureau.

The ratio of the number of workers with wage credits under unemployment compensation laws to the total labor force in 1939 ranged from 21.0 percent in North Dakota to 91.3 percent in Rhode Island.^{2/} The ratio is, of course, higher in industrialized States than in States in which a large part of the working population is employed in agriculture or other industries not usually included under unemployment compensation laws. The ratio of coverage to total labor force is also affected by the size-of-firm limitations in State laws.

The average number of workers employed during the last pay period of each month in establishments covered by State unemployment compensation programs in 1939 amounted to 85 percent of the average employment of workers covered by the Federal

^{1/} The Bureau of the Census preliminary figure of 52,841,000 for the total labor force of the United States (excluding Alaska and Hawaii) as of the last week in March 1940 is used here. It includes all persons 14 years old and over with a job, at work on public emergency projects (WPA, NYA, CCC, etc.), or seeking work.

^{2/} See Table I, p. 33.

old-age and survivors insurance program ^{1/} and 93 percent of all employees in covered industries, as derived from estimates of the Bureau of Labor Statistics.^{2/}

A comparison of employment in covered industries as derived from Bureau of Labor Statistics estimates with employment under the unemployment compensation program by industry division, presented on page 12, clearly indicates that the ratios of unemployment compensation coverage were lowest in industries generally characterized by small establishments. The inverses of the ratios of coverage for employment in trade and in transportation, communication, and other public utilities probably represent fairly good indications of the proportion of workers excluded from unemployment compensation coverage by size-of-firm and employment requirements in State laws. The same factor affects the degree of

^{1/} Social Security Bulletin, August 1941. Comparison is based on employment in the 4 months of March, June, September, and December, the only months for which old-age and survivors insurance data are available. The difference in coverage under the two programs is due principally to size-of-firm limitations under State unemployment compensation laws. A further difference between the figures is that under the old-age and survivors insurance program employers are asked to report the number of employees on the last day or last pay roll of the month; under the employment security program they report the number on the last pay roll of the month. Old-age and survivors insurance data have been adjusted upward to cover delinquent reporting; the corresponding proportion before the adjustment was 88 percent. See table, p. 12.

^{2/} The Bureau of Labor Statistics series used is the estimates of the number of employees in all nonagricultural establishments, excluding self-employed persons, casual workers, domestic servants, and the military and naval forces of the government, revision of April 1941. There have been some observations that these estimates are too low. See W. S. Woytinsky "Controversial Aspects of Unemployment Estimates in the United States," Review of Economic Statistics, Volume XXIII, No. 2, May 1941, and Arthur H. Reede, "Adequacy of Employment Statistics," Journal of the American Statistical Association, March 1941.

Comparison of average monthly employment, by industry divisions, as estimated by the Bureau of Labor Statistics and as reported under the State unemployment compensation and the Federal old-age and survivors insurance programs, for covered industries, 1939

(Employment in thousands)

Industry division	Bureau of Old-Age and Survivors Insurance Employees covered by Federal old-age and survivors insurance program 1/	Bureau of Employment Security Employees covered by State unemployment compensation programs 2/	Ratio of UC to OASI coverage (percent)	Bureau of Labor Statistics Employees in covered industries 3/	Bureau of Employment Security Employees covered by State unemployment compensation programs 4/	Ratio of UC coverage to BLS estimates of employment in covered industries (percent)
Total, all covered industries.....	5/ 24,659	6/ 21,584	88	7/ 22,888	8/ 21,263	93
Mining.....	842	840	100	791	810	102
Construction.....	1,156	959	83	1,241	955	77
Manufacturing.....	10,536	9,825	93	9,544	9,693	102
Transportation, communication, and other public utilities.....	1,758	1,625	92	1,735	1,603	92
Trade.....	6,228	5,462	88	6,144	5,355	87
Finance, insurance, and real estate...	1,214	1,051	87	} 3,433	2,847	83
Service.....	2,273	1,704	75			
Miscellaneous.....	2/ 652	118	—			

1/ *Social Security Yearbook*, 1939, p. 68-9; adjusted for employment in secondary industries. Averages are derived from the 4 month data for March, June, September, and December, the only months for which OASI data are available. Monthly data represent employment as of the last day or last pay period ending in the month, not adjusted for delinquent reporting.

2/ Averages derived from employment as of the last pay period in the 4 months of March, June, September, and December, the comparable months for which OASI data are available.

3/ Estimates of employees in nonagricultural establishments, Department of Labor, Bureau of Labor Statistics, release of April 1941; adjustments for noncovered industries obtained directly from the BLS. Averages derived from the 12 monthly estimates of employment as of the pay period ending nearest the 15th of the month.

4/ Averages derived from the 12 months of employment as of the last pay period ending in the month.

5/ Includes Alaska and Hawaii.

6/ Includes Alaska and Hawaii, but excludes certain covered domestic service and government employment reported by New York and Wisconsin respectively.

7/ Excludes employment for interstate railroads and allied employers, government and maritime employment, government banks, private education, and nonprofit hospitals and other medical services. BLS estimates already exclude domestic service and agricultural labor.

8/ Excludes employment for Alaska and Hawaii; and certain covered domestic service and government employment reported by New York and Wisconsin respectively.

9/ Includes approximately 488,000 workers reported on employer returns which did not carry industrial codes.

coverage for the construction industry;^{1/} the exclusion from coverage by most State unemployment compensation laws of small contractors, who may have a marked increase in employment during the seasonal peak—an increase which does not, however, extend over 20 or more weeks—may account for most of this difference. The excess of covered employment in manufacturing as compared with the Bureau of Labor Statistics estimate may be due to differences in definition—the unemployment compensation series includes administrative offices and auxiliary units which are classified with the principal manufacturing activity to which they are related. Figures for employment in mining in 1939 are greatly affected by the stoppage in bituminous production which began on April 1 and continued for approximately 7 weeks. The prevalence of small establishments in service and in finance, insurance, and real estate is undoubtedly responsible for the low ratio of unemployment compensation coverage for those industries.

Limitations in State laws relating to the minimum size-of-firm, i.e., the minimum number of covered employees which a firm must employ for a specified period in order to be subject to the unemployment compensation law, had the effect of excluding from unemployment compensation coverage 12 percent of the employees in trade and 25 percent of those in services who were covered by old-age and survivors insurance, as indicated in the tabulation on page 12. Comparisons of covered employment under the two programs, however, are of limited significance for some industries because of differences in the method of classifying multi-industry employers. Under the old-age and survivors insurance program, employment for multi-industry employers is classified according to the primary industry of the company, rather than by establishment, and an estimated adjustment is then made for secondary employment. This factor especially affects comparisons of covered employment under the two programs in manufacturing and mining.

As indicated in the tabulation on page 14, 87 percent of estimated total wages and salaries earned in industries and services covered by State unemployment compensation laws in 1939, as derived from estimates of the Bureau of Foreign and

^{1/} Unemployment compensation data are used extensively by the Bureau of Labor Statistics for measuring monthly trends in the construction industry, especially by States.

Comparison of total wages, by industry division, as estimated by the Bureau of Foreign and Domestic Commerce and as reported under the State unemployment compensation programs, for covered industries, 1939

(Wages in millions)

Industry division	Bureau of Foreign and Domestic Commerce Wages and salaries earned in covered industries <u>1/</u>	Bureau of Employment Security Wages earned in covered employment <u>2/</u>	Ratio of wages under U. C. coverage to total wages in covered industries (percent)
Total, all covered industries.....	<u>3/</u> \$33,333	<u>4/</u> \$28,933	87
Mining.....	1,080	1,113	103
Construction.....	1,689	1,256	74
Manufacturing.....	13,260	13,171	99
Transportation, communications, and other public utilities....	2,676	2,466	92
Trade.....	<u>5/</u> 7,713	6,879	89
Finance, insurance, and real estate.....	} 6,915	4,048	58
Service.....			
Miscellaneous.....			

1/ U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, National Income Division, Survey of Current Business, June 1941, with adjustments for noncovered industries obtained directly from the National Income Division.

2/ Represents total wages earned in covered employment, including nontaxable individual employee annual earnings from one employer in excess of \$3,000 (such wages were estimated for New York which reported taxable wages only).

3/ Excludes wages for agricultural labor, interstate railroads and allied employers, government and maritime employment, domestic service, national banks, and certain private and nonprofit enterprises not covered by State unemployment compensation programs.

4/ Excludes Alaska and Hawaii and certain covered domestic service and governmental employment reported by New York and Wisconsin respectively.

5/ Wage data for restaurants have been excluded from Service and included with Trade to make the two series comparable.

Domestic Commerce,^{1/} was earned by covered workers. Only 74 percent of all wages in construction and 58 percent in service, finance, insurance, real estate, and miscellaneous industries was earned by covered employees. On the other hand, covered employees earned 92 percent of all wages in transportation, communication, and other public utilities and 89 percent in trade. Differences in industrial classification between the two series probably account for the indicated excess of wages earned in establishments covered by State unemployment compensation programs over estimated wages earned in all mining establishments and for the very high ratio of coverage in manufacturing.

Comparisons of wages earned in employment covered by State unemployment compensation programs with wages taxable under the Federal old-age and survivors insurance program have little significance because, in addition to differences due to size-of-firm exclusions under the State laws, wages taxable under the Federal program exclude wages of an individual employee in excess of \$3,000 a year from a given employer, whereas, except for New York, figures for wages of employees covered by State unemployment compensation programs include such earnings.

In 8 States the number of employees covered by the unemployment compensation program equaled or exceeded the number estimated by the Bureau of Labor Statistics to be employed in covered industries.^{2/} In these 8 States coverage extended to all firms regardless of size.^{3/} In 31 States covered employment accounted for 90 percent or more of all employment in covered industries. In the 11 States in which the proportion was less than 85 percent, coverage did not extend to employers having less than 8 workers.

The Bureau of Labor Statistics figures used for comparison are based on unpublished preliminary estimates subject to revisions which may materially affect the ratios for some States. Such revisions may reduce the ratios for States in which covered employment exceeds the present estimates of all employment in covered industries, and, for example, may increase the present ratios of 68 and 72 for North and South Dakota, respectively.

-
- ^{1/} Estimates of the National Income Division. See Survey of Current Business, June 1941.
^{2/} See p. 16 and Table II, p. 34.
^{3/} Except for the District of Columbia, however, all these States had pay roll or employment requirements.

Distribution of States according to ratio of covered employment to total employment in covered industries, 1939 ^{1/}

Ratio (percent)	Total number of States ^{2/}	Number of States limiting coverage to employers of:			Number of States hav- ing change in size-of-firm coverage during year
		1 or more	3-6 or more	8 or more	
100 and over	8	8			
95-99	7	1	5	1	
90-94	16		6	8	2
85-89	7		2	5	
80-84	7			7	
75-79	2			2	
70-74	1			1	
Under 70	1			1	

A similar comparison between wages earned by covered employees and all wages and salaries earned in covered industries, derived from estimates compiled by the Bureau of Foreign and Domestic Commerce, ^{1/} indicates that in 8 States earnings of covered workers accounted for 90 percent or more of all earnings in covered industries. Four of these 8 were States which had no size-of-firm limitation to coverage. ^{3/} In 25 States earnings of covered workers accounted for 80 to 89 percent of all earnings in covered industries. Of the 16 States in which the ratio was less than 80 percent, 15 did not cover firms employing less than 8 workers.

The Bureau of Foreign and Domestic Commerce figures, like those of the Bureau of Labor Statistics, represent estimates which are undergoing constant revision. When final adjustments of the estimates are made, some of the more unusual relationships, such as the 92 percent coverage of wages for a State (Illinois) which excludes from coverage firms having less than 8 workers, may be modified. Similarly, the coverage of only 72 percent for a State (Nevada) which subjects all firms, regardless of size, to unemployment compensation contributions may be adjusted upward.

^{1/} See p. 17 and Table II, p. 34.

^{2/} Excluding Alaska and Hawaii for which the Bureau of Labor Statistics does not estimate employment.

^{3/} There were, however, employment requirements.

Distribution of States according to ratio of wages earned in covered employment to total wages and salaries in covered industries, 1939 ^{1/}

Ratio (percent)	Total number of States ^{2/}	Number of States limiting coverage to employers of:			Number of States hav- ing change in size-of-firm coverage during year
		1 or more	3-6 or more	8 or more	
90 and over	8	4	2	1	1
84-89	12	2	6	3	1
80-84	13	2	5	6	
75-79	7			7	
70-74	6	1		5	
Under 70	3			3	

The total coverage of the State unemployment compensation program in 1939 would probably have been increased about 11 percent if the size-of-firm exclusions in all State laws had been eliminated, estimates based on comparisons with data of the Bureau of Old-Age and Survivors Insurance indicate. These data indicate further that coverage in the nine States in which it was limited to employers of four or more workers, would have been increased an average of 7.9 percent in 1939 if it had extended to all employers regardless of size, and the total coverage of the State unemployment compensation program would have been increased 2.5 percent. Similarly, had coverage provisions been altered in the 26 States covering only employers of eight or more to include all employers regardless of the size-of-firm, coverage in those States would have been increased 18.3 percent and the total coverage of the State unemployment compensation program 7.7 percent.

5 Industrial Trends

Except for relatively slight declines in April and July, covered employment rose moderately but steadily during the

^{1/} See Table II, p. 34, for ratios by State.

^{2/} Excluding Alaska and Hawaii for which the Bureau of Foreign and Domestic Commerce does not estimate wages.

first 10 months of 1939 from 20.2 million in January to a peak of 22.5 million in October, an increase of 11.1 percent. The decline in April was caused by the widespread work stoppage in the bituminous coal industry which was reflected in sharp decreases in employment in Alabama, Kentucky, Pennsylvania, and West Virginia. The down-turn in July is attributable largely to normal seasonal factors, such as the reduction of employment in Michigan resulting from lay-offs during the period when preparations are made for producing new models in automobile manufacturing establishments. Customary shutdowns to take year-end inventories and seasonal declines in construction, mining, and certain manufacturing industries such as food, clothing, and tobacco probably accounted for the 2.1 percent decline in covered employment in the last 2 months of the year. December 1939 employment, however, was still 9.2 percent above the level of December 1938.

Wages earned in covered employment increased steadily from \$6.6 billion in the first quarter to \$7.8 billion in the last, a 19 percent rise, reflecting fuller employment as well as the usual year-end bonuses. Declines in some industries for a single quarter, as in bituminous coal mining in April-June and in automobile manufacturing in July-September were insufficient to reverse the upward national trend.

The expansion in the number of covered workers employed, which characterized the last half of 1939, was led by a substantial increase in mining, after the stoppage in the Spring, and was shared by manufacturing, utilities, and wholesale and retail trade. Increases of about 200,000 from July to December in the number of covered workers employed in the manufacture of iron and steel and their products, 180,000 in the manufacture of automobiles and automobile equipment, and 109,000 in the production of electrical and other machinery, accounted for the larger part of the rise in manufacturing. Employment in trade increased 413,000 from July to December. More than 70 percent of this increase was due to expansion of employment in retail general merchandising, which is greatly affected by the year-end holidays.

In the service industries, of which personal service is the largest, covered employment rose gradually from January to June, then declined slightly during the summer before attaining

a peak in September, attributable to an increase in employment in the amusement and recreation industry. Thereafter, it declined and, by the end of December, was only 2.2 percent above the January figure.

Construction and finance furnished contrasts to the generally persistent upward tendency. Covered employment in the highly seasonal construction industry fluctuated widely during 1939. From a low of 733,000 in February, it rose 52.7 percent to a peak in August, and then declined 27.5 percent to 811,000 at the end of December, although 8.9 percent above the first month of the year. Covered employment in finance, insurance, and real estate remained comparatively steady throughout the year and was slightly lower in December than in January.

The pattern of industrial trends in quarterly wages earned in covered employment in 1939 generally followed that of employment. The distortion in the wage figures due to the exclusion from the New York reports of wages for an individual worker in excess of \$3,000 a year from any single employer is especially apparent in the high-wage finance, insurance, and real estate division, for which reported wages declined more than \$10 million from the first to the second quarter, and an almost equal drop took place between the second and third quarters, although no comparable decrease occurred in the number of workers employed. If data for New York were omitted from the total for the industry division, wages earned in finance and related industries would have shown a steady increase from \$298 million in the first quarter to \$338 million in the fourth. The effect of the wage exclusion in New York was to increasingly understate the amounts paid during the last 3 quarters of the year.^{1/} Christmas and other bonus payments during the last quarter tend to offset this factor somewhat.

6 Industrial and Geographical Concentrations

Due both to the statutory exclusion from coverage of certain classes, such as agricultural, maritime, and domestic employees, and also to size-of-firm and pay roll limitations which have the effect of excluding a wide variety of industries and services characterized by small establishments, covered employment and wages are highly concentrated.

^{1/} After the first \$3,000 has been reported, employer reports in New York exclude wages paid to an employee for subsequent periods of the year.

Manufacturing industries in 1939 accounted for 45.5 percent of the average monthly employment of all workers covered by State unemployment compensation programs and 45.7 percent of their wages. Covered employment within the manufacturing division was almost equally divided between industries producing durable and nondurable goods. Durable goods industries accounted for 46.3 percent and nondurable goods industries for 53.7 percent of covered employment in the division.^{1/} In spite of the exclusions arising from size-of-firm limitations, the wholesale and retail trade division^{2/} ranked second, with 25.2 percent of the employment and 23.7 percent of the wages. Thus, more than 70 percent of all covered employment and wages in 1939 was to be found in these two industry divisions combined. The remaining 30 percent was distributed among five industry divisions—transportation, communication, and other public utilities^{3/} had 7.5 percent of all employment and 8.5 percent of wages; service industries 8.1 percent of total employment and 7.1 percent of wages; finance, insurance, and real estate 4.9 percent of employment and 6.2 percent of wages; construction 4.5 percent of employment and 4.4 percent of wages; and mining 3.8 and 3.9 percent, respectively.

The concentration of covered employment in certain industry divisions accounts for a similar concentration in States with large numbers of workers in such industries. The 8 highly industrialized States of California, Illinois, Massachusetts, Michigan, New Jersey, New York, Ohio, and Pennsylvania had 58 percent of all covered workers and 63 percent of total wages earned in covered employment. On the other hand, 24 States, mostly located in the Rocky Mountain area and the agricultural West, each had less than 1 percent, and together only about 10 percent of total covered employment.

In both New York and Pennsylvania more than a million covered workers were employed in manufacturing. These States, together with the 6 others mentioned above, accounted for about 60 percent of all covered employment and 65 percent of the total wages earned by covered workers in manufacturing—

-
- ^{1/} Durable goods industries include major industry groups 24, 25, 32-39; nondurable include groups 20-23, 26-31.
 - ^{2/} Includes garages and filling stations, and eating and drinking places.
 - ^{3/} Excludes interstate railroads and certain of their subsidiaries.

a distribution which corresponds closely to that shown by the 1939 Census of Manufactures. These 8 States also embraced 57 percent of covered employment and 61 percent of wages in wholesale and retail trade. The ratios for wages would have been higher if New York had reported total, instead of merely taxable, wages.

New York, partly because its coverage provisions extend to employers of 4 or more workers, and California, because of its motion-picture industry, had more than 513,000 of the 1,723,240 covered workers employed in service industries. In the service division, these two States, together with Illinois, Ohio, and Pennsylvania, accounted for 52 percent of all covered employment and 59 percent of total wages.

Workers in transportation, communication, and other public utilities (excluding railroads and other employers under the jurisdiction of the Railroad Retirement Board) were similarly concentrated with slightly more than half of the covered workers in California, Illinois, New York, Ohio, Pennsylvania, and Texas.

There was even less geographical dispersion among covered workers in finance, insurance, and real estate. Because of the concentration of large financial institutions in New York City, New York State alone accounted for 325,235, or 31 percent, of the average covered employment in that industry division—more than the combined total of California, Illinois, and Pennsylvania, which had the next largest numbers.

Pennsylvania, where much of the bituminous, and the entire anthracite, mining industry of the country is located, together with West Virginia, Illinois, Kentucky, and Texas, (where there were 55,437 covered workers engaged in the production of crude petroleum and natural gas) accounted for approximately 56 percent of both the average monthly covered employment and the wages earned by covered workers in mining industries.

Covered employment in construction was more evenly distributed geographically, although 29 percent of the covered workers and 34 percent of the wages were concentrated in New York, Pennsylvania, and California.

The higher proportions of wages than of employment for some industry divisions and groups of States reflect higher

annual per capita earnings, resulting from more regular employment or higher wage rates.

7 State Industrial Patterns

The industrial composition of covered employment and wages within the boundaries of each State is highly significant in relation to the unemployment compensation program. While covered employment in some States is highly diversified, in others it is concentrated in a few major industry groups. Untoward developments of a cyclical, seasonal, technological, or fortuitous nature, which may affect these industries, will have repercussions on the operation of the unemployment compensation program in these States, through heavy administrative burdens, and possibly also serious drains on funds.

The relative importance of each industry division and major industry group in each of the 51 jurisdictions is shown in the tables which follow.^{1/} The distributions are based on employment covered by State unemployment compensation laws and consequently are influenced by size-of-firm and other limitations which greatly affect their broad economic significance. Consideration of such limitations is also extremely important in drawing comparisons between States, and even in interpreting data for a single State, since size-of-firm limitations will have the effect of understating the proportion of employment in industries characterized by small establishments.

No single major industry group accounted for as much as 10 percent of all covered employment in 15 States, including New York, New Jersey, and Illinois. In Alaska, on the other hand, more than 60 percent of covered employment was concentrated in two major industry groups--the manufacture of food and kindred products and the mining of metals. A single major industry group--textile manufacturing--accounted for 50 percent of covered employment in South Carolina, 44 percent in North Carolina, 34 percent in Rhode Island, and 26 percent in Georgia. Similarly, nearly 43 percent of all covered workers in Hawaii were employed in food manufacturing alone, 37 percent in West Virginia in bituminous coal mining, and 28 percent in Nevada in metal mining. New Hampshire had 38 percent of its covered employment in leather products factories and textile mills. The manufacture of automobiles and automobile equipment accounted for 29 percent of all covered employment

^{1/} See Series B, State Tables, pp. 98-199.

in Michigan, and lumber and basic timber products for more than 22 percent in Oregon. In 26 States, between 10 and 20 percent of all covered employment was concentrated in one major industry group.

The following tabulation indicates States with more than 10 percent of their total covered employment in a single major industry group:

40-50 percent

Food and kindred products	Hawaii
Textile-mill products	North Carolina, South Carolina

30-40 percent

Bituminous and other soft-coal mining	West Virginia
Food and kindred products	Alaska
Metal mining	Alaska
Textile-mill products	Rhode Island

20-30 percent

Automobiles and automobile equipment	Michigan
Leather and leather products	New Hampshire
Lumber and timber basic products	Oregon
Metal mining	Nevada
Textile-mill products	Georgia

10-20 percent

Bituminous and other soft-coal mining	Kentucky, Wyoming
Crude-petroleum and natural-gas production	Oklahoma
Food and kindred products	Iowa, Kansas, Nebraska, North Dakota, South Dakota
Iron and steel and their products	Alabama, Connecticut, Indiana, Ohio, Pennsylvania
Leather and leather products	Maine
Lumber and timber basic products	Arkansas, Idaho, Mississippi, Washington
Machinery (except electrical)	Wisconsin
Metal mining	Arizona, Idaho, Montana
Other wholesale and retail trade	North Dakota
Paper and allied products	Maine
Retail general merchandise	North Dakota
Textile-mill products	Alabama, Maine, Massachusetts, New Hampshire, Tennessee, Vermont
Wholesale distributors	Florida

The proportion of total covered employment in the highly seasonal construction industry in no State exceeded 13 percent, and ranged between 5 and 10 for most. In 19 States, less than 5 percent of the covered workers were engaged in construction. The generally low ratios of covered workers in this industry division are due largely to size-of-firm exclusions in State laws.

The size-of-firm factor also affected the State patterns of covered employment in the service industries. There were higher proportions in this industry division in Arizona, Arkansas, District of Columbia, Idaho, Minnesota, Montana, Nevada, and Wyoming—all of which cover employers of 1 or more—than in most other States. California led all the remaining States with 13.8 percent of its total covered employment in service industries, which include the motion picture industry, hotels, and personal services. New York had 10.8 percent of its covered employment in services. In spite of the effect of size-of-firm limitations and of the exclusion of domestic service in private homes, service industries accounted for not less than 3.6 percent of all covered employment in every State.

The proportion of covered employment in the transportation, communication, and public utilities division, which comprised between 10 and 20 percent of all covered employment in 34 States in 1938, was sharply reduced in 1939 by the removal from State coverage of interstate railroads and certain of their subsidiaries. The bulk of covered employment in the industry division in 1939 was concentrated in the communication, public utilities, and trucking groups. In relation to total employment, the proportion of covered workers in this industry division did not vary greatly among the States, ranging from 3.5 percent in North Carolina to 13.2 percent in Texas.

Although there were 13 States in which the number of covered employees in trade comprised less than one-half of one percent of the Nation's total, for no jurisdiction was employment in this industry division less than 10 percent of its total coverage. The lowest proportion, 10.9 percent, was for Alaska. In the remaining States, it ranged from about 14 to a high of 51 percent, most States having between 25 and 35 percent of their total covered employment in trade.

Workers engaged in finance, insurance, and real estate, on the other hand, exceeded 6 percent of total covered employment only in California, Delaware, the District of Columbia, and New York.

8 Monthly Fluctuations in Employment

Measures of monthly fluctuations in covered employment, for industries and States, are presented below. They are coefficients which represent the mean deviation of employment in each month from the average monthly employment during the year, expressed as a percentage of the average monthly employment.^{1/} They are uncorrected for secular trend.

Although the coefficient of monthly fluctuation in employment for all industries was only 3.1, the sharply divergent patterns of individual industries are indicated by a range from 0.7 to 12.4 for industry divisions, from 0.6 to 18.4 for major industry groups, and from 1.7 to 40.5 for States. These figures, moreover, are based on total employment in groups of industries or in a State, and so may conceal wider fluctuations in employment in individual industries through the cancellation of possible coinciding peaks and troughs.

For industry divisions, the coefficients of monthly fluctuation in employment were as follows:

<u>Industry division</u>	<u>Coefficient of monthly fluctuation, 1939</u>
Mining	6.4
Construction	12.4
Manufacturing	4.1
Transportation, communication, and other public utilities	1.8
Wholesale and retail trade	2.9
Finance, insurance, and real estate	0.7
Service industries	2.4
Miscellaneous ^{2/}	9.4

^{1/} The coefficient may be expressed mathematically as:

$$C = \left[\frac{\sum d}{12} \div M \right] \times 100 \text{ where}$$

C = coefficient

M = average monthly employment for the 12 months of 1939.

$\sum d$ = sum of the monthly deviations from M.

^{2/} Includes establishments in agriculture, forestry, and fishing which may be covered, and others not elsewhere classified.

Within these divisions, there was considerable variation among major industry groups.^{1/} Although the coefficient for the entire mining division averaged 6.4, it was 14.4 for bituminous and other soft-coal mining and 8.6 for non-metallic mining and quarrying. Included in mining is one of the most stable major industry groups--crude petroleum and natural gas production, with a coefficient of 1.4--which reduced the average for the division.

Covered employment in all branches of the construction industry showed sharp monthly fluctuations. The range of the measure of monthly fluctuation for groups in the manufacturing division was comparatively narrow--from 0.6 in printing, publishing and allied industries to 8.1 in the manufacture of automobiles and automobile equipment. The industrial coverage of many major industry groups in this division, however, is so wide as to allow for mutual cancellation of peaks and troughs among individual industries and possibly to conceal wide monthly fluctuations. The apparel group, for example, has a coefficient of only 3.8 although it includes the men's and women's clothing industries, which are subject to wide monthly fluctuations.

Even the relatively stable utilities division includes a major industry group with fairly wide monthly fluctuations in employment--trucking and/or warehousing for hire has a coefficient of 6.0. Due to the requirements of a specified number of weeks during which a minimum number of workers must be employed in a year, many seasonal employers in trade, as in other industries, are not subject to unemployment compensation programs. Even after these exclusions, however, covered employment in retail general merchandising had a coefficient of monthly fluctuation of 8.2. Other coefficients in the trade division ranged from 1.6 for the retailing of food (including liquor stores) to 7.0 for the retailing of apparel and accessories.

Covered employment in all major industry groups in the finance, insurance, and real estate division was quite stable. The only exception was employment in holding companies (except real estate holding companies) which had a coefficient of 4.0. The service division embraces both some of the most stable and some of the most unstable industry groups. The coefficient of

^{1/} See Table III, p. 35, for coefficients of monthly fluctuation in employment by major industry group.

fluctuation was 1.0 for business services (not elsewhere classified), and 1.2 for motion pictures, for medical and other health services, and for law offices and related services; but for the amusement and recreation group it was 10.6, and for educational institutions and agencies, 11.6.

Inclusion in the miscellaneous division of covered employment in establishments engaged in agricultural activities accounts for the high coefficient of 9.4.

For the country as a whole, the major industry groups with the highest coefficients 1/ of monthly fluctuation in employment in 1939 were:

<u>Major industry group</u>	<u>Coefficient of monthly fluctuation, 1939</u>
General contractors, other than building	18.4
Bituminous and other soft-coal mining	14.4
Educational institutions and agencies	11.6
Construction--special trade contractors	10.6
Amusement and recreation and related services, not elsewhere classified	10.6
Building construction--general contractors	10.0
Nonmetallic mining and quarrying	8.6
Retail general merchandise	8.2
Manufacture of automobiles and automobile equipment	8.1
Manufacture of food and kindred products	7.6
Manufacture of iron and steel and their products	7.1
Retail apparel and accessories	7.0
Manufacture of lumber and timber basic products	6.8

1/ "Regular government agencies" (major industry group 94) has been omitted because the coefficient was greatly affected by a change during the year in the coverage provision of the Wisconsin State law.

The major industry groups in the country as a whole with the lowest coefficients of monthly fluctuation were:

<u>Major industry group</u>	<u>Coefficient of monthly fluctuation, 1939</u>
Insurance carriers	0.6
Printing, publishing and allied industries	0.6
Insurance agents and brokers	0.8
Communication: Telephone, telegraph and related services	0.9
Finance agencies, not elsewhere classified	0.9
Business services, not elsewhere classified	1.0
Banks and trust companies	1.2
Motion pictures	1.2
Medical and other health services	1.2
Law offices and related services	1.2
Crude petroleum and natural gas production	1.4
Employment agencies and commercial and trade schools	1.4
Street, suburban, and interurban railways (other than those in group 40) and city and suburban bus lines	1.5
Other transportation, except water transportation	1.5

A similar ranking of States,^{1/} shown on page 29, indicates that, in general, the highest coefficients of fluctuation were associated with States in which covered employment was either not diversified or was concentrated in a few unstable industries, and the lowest with States which had either a high degree of diversification or a high proportion of employment in relatively stable industries.

^{1/} See Table IV, p. 36, for coefficients of monthly fluctuation in employment by State.

<u>State</u>	<u>Highest coefficients of monthly fluctuation, 1939</u>	<u>State</u>	<u>Lowest coefficients of monthly fluctuation, 1939</u>
Alaska	40.5	Texas	1.7
Oregon	10.1	Missouri	1.8
Wyoming	10.1	Oklahoma	1.9
Idaho	9.8	New York	2.2
Hawaii	7.4	Tennessee	2.2
Florida	7.3	Arizona	2.3
Nevada	6.9	Kansas	2.4
West Virginia ^{1/}	6.7	District of Columbia	2.5
Montana	6.3	Massachusetts	2.5

Covered employment in almost every State with a high coefficient of fluctuation was dominated by one or two industry groups in which employment fluctuated widely. The coefficient in each of the predominant groups of industries in these States in 1939 was as follows:

<u>State</u>	<u>Industry division or major industry group</u>	<u>Percentage of all covered employment in the State, 1939</u>	<u>Coefficient of monthly fluctuation, 1939</u>
Alaska	Manufacture of food and kindred products	30.5	89.1
	Metal mining	30.8	25.1
Oregon	Manufacture of lumber and basic timber products	22.3	16.7
Wyoming	Total construction	11.0	32.7
Idaho	Manufacture of lumber and basic timber products	13.9	30.5
Hawaii	Manufacture of food and kindred products	42.8	16.7
Florida	Wholesale distributors	10.5	24.7
West Virginia	Bituminous and other soft- coal mining	37.4	13.2
Montana	Total construction	8.4	28.4

^{1/} Unadjusted for the increase in the coefficient caused by the stoppage of work in bituminous coal mining in April-May.

In some of these States, such as Alaska and Hawaii, climatic conditions are the major factor determining the monthly pattern of covered employment. In others, a lack of industrial diversification contributes to the immobility of labor; workers are dependent on a few, often seasonal, industries and when layoffs occur there are rare opportunities for employment in other kinds of enterprise.

Covered employment in New York and Missouri, on the other hand, is highly diversified and there are many opportunities for interindustry migration in times of slack. A single stable industry—crude petroleum and natural gas production—dominates covered employment in Texas and Oklahoma. The coefficient of fluctuation for this major industry group in Texas was only 1.3, and in Oklahoma, 2.5. The pattern of covered employment in Kansas is determined by a few relatively stable industries. The textile manufacturing industry of Tennessee, which accounted for 13 percent of all covered employment in the State in 1939, had a coefficient of fluctuation of only 1.9.