

# **EMPLOYMENT and payrolls**

**DETAILED REPORT**

**JULY 1951**

**UNITED STATES DEPARTMENT OF LABOR**

**Maurice J. Tobin - Secretary**

**BUREAU OF LABOR STATISTICS**

**Ewan Clague - Commissioner**

U. S. DEPARTMENT OF LABOR  
Bureau of Labor Statistics  
Washington 25, D. C.

EMPLOYMENT AND PAYROLLS

October 2, 1951

Detailed Report

July 1951

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# EMPLOYMENT TRENDS

## AUGUST 1951

### JULY - AUGUST EMPLOYMENT INCREASE LESS THAN SEASONAL

The number of employees in industry, commerce, and government rose by about 230,000 between mid-July and mid-August, the smallest gain for the season since the end of World War II. Further employment increases over the month were reported in defense-related activities, but employment in the soft-goods industries rose less than is usual at this time of year and continued to decline in certain consumer durable goods industries. (See tables 1 and 2)

Despite reduced activity in many consumer goods industries, the employment situation continued generally favorable. Employment in nonfarm establishments, at 46.7 million in August, was 1.6 million higher than a year earlier, and total unemployment remained at a postwar low for the month.

### NONDURABLES FALL BELOW 1950 LEVEL

In August, for the first time in 1951, employment in non-durable goods manufacturing fell below the levels of a year earlier. This reflected, primarily, over-the-year reductions in employment in the textile, leather, and apparel industries, where declines in consumer demand and rising inventories have been reported since early Spring. Between July and August 1951, the net employment gain in these three industry groups was only 36,000, compared with an average July-August increase of 125,000 in the postwar period.

Employment in durable goods manufacturing in August was 600,000 higher than a year earlier, largely because of expansion in defense-connected metalworking industries. Aircraft plants continued to add workers over the month, and, by mid-August, had close to a half million employees -- nearly twice as many as in June 1950. However, further declines were reported in such industries as automobiles and household machinery, where metals curtailment and reduced consumer demand have resulted in a downtrend in employment in recent months. As a result, August 1951 employment in these two industries was below last year's levels by about 10 percent.

Federal employment increased by 16,000 between July and August, as navy yards, arsenals, and military bases throughout the United States continued to add civilian workers. In August, Federal defense employment in the continental United States totaled 1.2 million, up by a half million since June 1950. In contrast, employment in non-defense activities of the Federal Government in August was slightly below the pre-Korea level.

Employment in contract construction increased seasonally by 47,000 over the month, reaching a new peak of 2.8 million in August. Expenditures for private residential and commercial building declined between July and August, reflecting the restrictions on non-defense construction. This was offset, however, by the continued uptrend in expenditures for construction of military facilities and defense-supporting industrial plants.

TABLE 1

3.

**Employees in Nonagricultural Establishments, by Industry Division and  
Selected Groups, August, July, June 1951 and August 1950**

(In thousands)

Industry division and group	1951			1950	Net Change	
	August <u>1/</u>	July	June	August	July 1951 to Aug. 1951	Aug. 1950 to Aug. 1951
<b>TOTAL</b>	46,670	46,436	46,559	45,080	+234	+1,590
<b>MANUFACTURING</b>	15,970	15,829	15,950	15,450	+141	+ 520
<b>MINING</b>	926	907	925	950	+ 19	- 24
Metal mining	106	106	105	103	0	+ 3
Bituminous-coal	372	360	379	408	+ 12	- 36
Nonmetallic mining and quarrying	110	108	108	103	+ 2	+ 7
<b>CONTRACT CONSTRUCTION</b>	2,796	2,749	2,687	2,629	+ 47	+ 167
<b>TRANSPORTATION AND PUBLIC UTILITIES</b>	4,195	4,180	4,159	4,120	+ 15	+ 75
Transportation	2,929	2,922	2,919	2,891	+ 7	+ 38
Communication	702	698	687	671	+ 4	+ 31
Other public utilities	564	560	553	558	+ 4	+ 6
<b>TRADE</b>	9,627	9,657	9,733	9,474	- 30	+ 153
Wholesale trade	2,591	2,592	2,580	2,582	- 1	+ 9
Retail trade	7,036	7,065	7,153	6,892	- 29	+ 144
General merchandise stores	1,394	1,407	1,460	1,387	- 13	+ 7
Food and liquor stores	1,260	1,268	1,271	1,200	- 8	+ 60
Automotive and accessories dealers	754	754	748	749	0	+ 5
Apparel and accessories stores	498	510	548	491	- 12	+ 7
Other retail trade	3,130	3,126	3,126	3,065	+ 4	+ 65
<b>FINANCE</b>	1,914	1,907	1,893	1,837	+ 7	+ 77
<b>SERVICE</b>	4,842	4,851	4,835	4,827	- 9	+ 15
<b>GOVERNMENT</b>	6,400	6,336	6,377	5,793	+ 44	+ 607
Federal	2,329	2,313	2,271	1,841	+ 16	+ 488
State and local	4,071	4,043	4,106	3,952	+ 28	+ 119

1/ Preliminary

TABLE 2

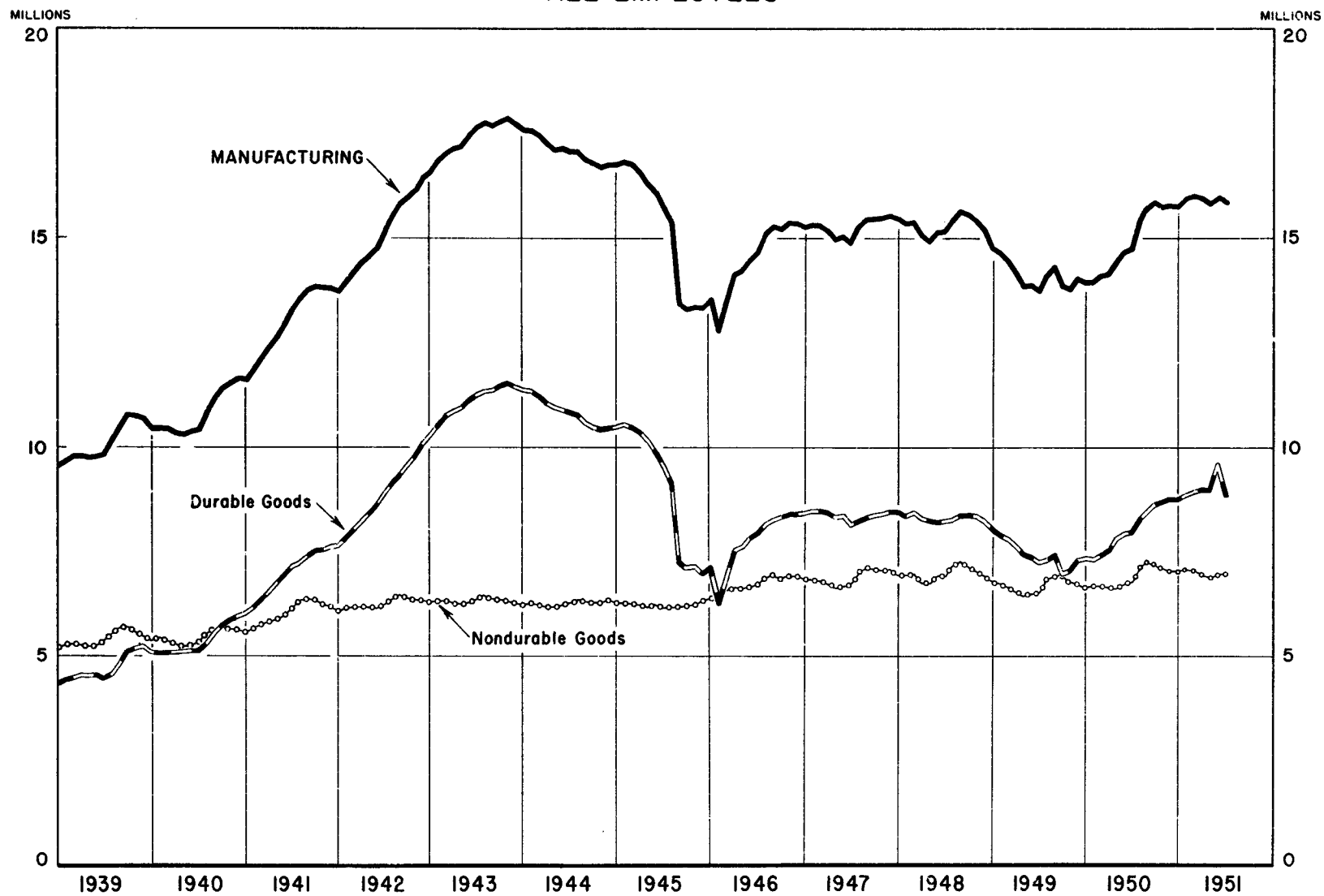
Employees in Manufacturing Industry Groups  
August, July, June 1951 and August 1950

(In thousands)

Industry group	1951			1950	Net Change	
	August	July	June	August	July 1951 to Aug. 1951	Aug. 1950 to Aug. 1951
	<u>1/</u>					
<b>MANUFACTURING</b>	15,970	15,829	15,950	15,450	+141	+520
<b>DURABLE GOODS</b>	8,900	8,855	8,996	8,294	+45	+606
Ordnance and accessories	49.4	44.0	42.2	25.0+	5.4	+24.4
Lumber and wood products (except furniture)	823	814	837	845	+9	-22
Furniture and fixtures	330	332	335	367	-2	-37
Stone, clay, and glass products	561	553	562	532	+8	+29
Primary metal industries	1,353	1,341	1,357	1,256	+12	+97
Fabricated metal products (except ordnance, machinery, and transportation equipment)	993	993	1,019	972	0	+21
Machinery (except electrical)	1,576	1,598	1,615	1,374	-22	+202
Electrical machinery	927	919	932	853	+8	+74
Transportation equipment	1,505	1,502	1,520	1,347	+3	+158
Instruments and related products	309	299	299	252	+10	+57
Miscellaneous manufacturing industries	474	460	478	471	+14	+3
<b>NONDURABLE GOODS</b>	7,070	6,974	6,954	7,156	+96	-86
Food and kindred products	1,654	1,624	1,533	1,718	+30	-64
Tobacco manufactures	95	81	83	89	+14	+6
Textile-mill products	1,240	1,256	1,296	1,316	-16	-76
Apparel and other finished textile products	1,147	1,106	1,117	1,208	+41	-61
Paper and allied products	496	493	501	479	+3	+17
Printing, publishing, and allied industries	757	758	761	741	-1	+16
Chemicals and allied products	756	745	742	684	+11	+72
Products of petroleum and coal	266	266	264	254	0	+12
Rubber products	275	272	275	258	+3	+17
Leather and leather products	384	373	382	409	+11	-25

1/ Preliminary

# EMPLOYMENT IN MANUFACTURING INDUSTRIES ALL EMPLOYEES



UNITED STATES DEPARTMENT OF LABOR  
BUREAU OF LABOR STATISTICS

# SECOND VOLUME ON STATE AND AREA EMPLOYMENT DATA NOW AVAILABLE . . . . .

NEW ANNUAL PUBLICATION      The second release in the Bureau of Labor Statistics' series on State and area data, entitled "Nonagricultural Employment by State, 1950" is now available for distribution. It follows the recently released volume "Area Employment, 1950", a description of which can be found in the May 1951 issue of EMPLOYMENT AND PAYROLLS. These publications are two in a series of 5 volumes, under the general title "Employment, Hours, and Earnings -- State and Area Data". All five volumes, containing employment data prepared by State agencies cooperating with the Bureau of Labor Statistics, will be prepared annually. The names of the remaining volumes are as follows: Hours and Earnings in Manufacturing by State and Area, Manufacturing Employment by State, and Summary Volume -- State and Area Data.

SCOPE OF THE DATA      The 1950 volume of "Nonagricultural Employment by State" presents complete broad industry data for both 1949 and 1950 for 42 States and the District of Columbia, including monthly figures on employment in mining, contract construction, manufacturing, transportation and public utilities, trade, finance, service, and government. Of the six remaining States, Louisiana and Kentucky provided all industry employment series with the exception of construction; Mississippi provided series on manufacturing, transportation, finance, and government. Data on manufacturing and government employment are available for Delaware, Michigan, and Ohio.

DATA HAVE MANY USES      Since statistics on employment are among the most comprehensive indicators of the economic situation, they are used widely by business and banking firms, Chambers of Commerce, State government agencies, and business research organizations. Data by industry, on a uniform basis, make possible comparisons of States in terms of their economic structure, the relative importance of each industry to the various States, as well as each State's share of the employment in the various industries. The data are therefore useful in determining potential markets, planning advertising campaigns, and assigning sales quotas. Employment statistics, continuous over the years, measure changes in the economic structure of States and indicate the general direction of State developments. They are valuable background material for investigations of proposed changes in State unemployment insurance, tax, and welfare programs. In a period of defense mobilization, knowledge of diversity of current economic conditions among States is helpful in framing national economic policy.

SUMMARY OF FINDINGS      New York, with 5.6 million workers in 1950, was the leading State in nonagricultural employment. New York, Pennsylvania, and New Jersey, comprising the Middle Atlantic region, had 11 million nonfarm workers. Nine other States

averaged more than 1 million workers each. At the other end of the scale, at least 3 States had fewer than 100,000 nonfarm workers and 8 States reported between 100,000 and 200,000 workers.

There were widespread differences in the industrial composition of the various States. The New England, Middle Atlantic, and Great Lakes States almost invariably reported that workers in manufacturing accounted for 40 percent or more of all nonagricultural workers.

Trade, the second largest field of employment, while concentrated in the metropolitan centers of the most populous States, was more widely dispersed than manufacturing. Government employment was the third largest segment in the American nonfarm economy; approximately 1 out of every 8 worked for local, State, and Federal agencies. Excluding the Nation's Capital where 1 in every 2 workers was a government employee, the ratio of government to total nonfarm employment ranged from 1 in 4 in the Dakotas to less than 1 in 10 in Rhode Island.

Nonagricultural employment in December 1950, 6 months after the beginning of hostilities in Korea, totaled 46.6 million, a swift rise of almost 3 million, or 6.6 percent, over December 1949. With the exception of the immediate post-war period, this was the largest 12-month gain since World War II. Every State shared in the increase with the most outstanding gains recorded on the West Coast.

COPIES  
AVAILABLE  
TO PUBLIC

Copies of the volume "Nonagricultural Employment by State, 1950" (as well as the previous volume "Area Employment, 1950") may be obtained by writing to the Bureau of Labor Statistics, Department of Labor,

Washington 25, D. C. Current employment data for the series contained in the foregoing volumes are available monthly in the Bureau's regular report EMPLOYMENT AND PAYROLLS, appearing on page A:13 and A:17 of the present issue. Requests for more detailed industry information should be directed to the Bureau of Labor Statistics or to the appropriate State agency. Names and addresses of these agencies appear on page iv.



# INDUSTRY HIGHLIGHTS

## PRIMARY ALUMINUM

Employment in the primary refining of aluminum has climbed steadily during 1950 and 1951, rising from the postwar low of 4,700 production workers in November 1949 to over 10,000 in July 1951. Further increases in employment are expected during the rest of this year and in 1952 and early 1953. An estimated 6,000 additional workers will be needed by the industry as it increases its production to meet mobilization goals. Present plans call for the industry to increase output from the current level of somewhat over 800,000 tons to nearly 1,500,000 tons by mid-1953. A moderate increase in average weekly hours from the 42.4 worked in June 1951 and some productivity gains should enable the industry to almost double production with a smaller than proportionate increase in employment.

Heavy demands for aluminum are due primarily to its extensive use in aircraft and guided missiles. Further demand has been created by its use, as a substitute for copper, in electrical equipment.

The new facilities will include both new plants and additions to existing plants. Most new jobs will be in Texas and Washington, with smaller numbers in Arkansas, Montana, and Louisiana.

## CRUDE PETROLEUM AND NATURAL GAS PRODUCTION

A gradual upward trend in employment in crude petroleum and natural gas production was evident during the first 7 months of 1951. July employment of 266,000 workers was above the 1950 average of 255,300 and slightly above July 1950, which was about 262,000.

The intensified exploratory and drilling program now underway is the greatest in the industry's history. Wildcat drilling is on a level 20 to 25 percent above last year and producers have stepped up their regular drilling operations substantially over those of last year. In June, 4,125 wells were completed and the total footage drilled was the highest ever recorded by the industry. Over 20,000 wells were drilled in this country during the first half of

this year, whereas about 24,000 are expected to be drilled during the last half of 1951. Meanwhile, new productive areas are being opened in a number of States. One of these, the Spraberry Trend in West Texas may prove to be one of the largest discoveries in this country in the last 20 years. The Williston Basin in western North Dakota and eastern Montana is attracting much attention. Nearly all the larger oil companies are active in the area.

Increased military demands have made it necessary to boost our oil production considerably. Domestic consumption has shown a sharp increase during the last few years, putting a further strain on the industry, and some of the oil lost to the western nations, because of the crisis in Iran, is now being supplied from American fields.

Crude production in the first 7 months of this year was about 19 percent above the corresponding period of 1950. A continued high level of production is expected. Texas has increased its allowable crude oil production for September to 3,059,367 barrels daily, the first time Texas has permitted production to rise over 3 million barrels a day.

## INDUSTRIAL CHEMICALS

Industrial chemicals recorded a sharp rise in employment over the past year in spite of shortages in domestic raw materials. The work force in organic chemicals rose from 199,800 in July 1950 to 230,800 in July 1951, an increase of 15.5 percent; and employment in inorganic chemicals increased from 70,300 to 83,700 during the same period, a gain of 19.1 percent. Increases in imports of benzene, naphthalene, soda ash, caustic soda, and other basic chemicals have helped the industry to maintain production. Further increases in production and employment are expected because of new construction and expansion of present plant facilities planned by chemical manufacturers.

## TEXTILE MILL PRODUCTS

Textile mill products establishments reported 1,161,000 production workers for July 1951, a decrease of 38,000 from June. Although the July figure was about the same as for July 1950, employment in most of the intervening months was considerably higher. The peak was reached in February 1951, when 1,269,000 workers were reported. Since then employment has declined steadily.

The industry can be expected to recover somewhat in the months ahead as accumulated inventories are reduced and the demand for textiles increases. Good business conditions and a growing volume of military purchases will have a favorable effect. In the long run, the greater use of synthetic fibers will make the industry less dependent on cotton and wool, thus reducing the seasonal fluctuations in employment.

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# INDUSTRY EMPLOYMENT REPORTS

## METAL MINING

. . . labor supply will be critical factor in future production

A shortage of workers in metal mines was one of the most critical manpower problems of World War II. The current mobilization program is creating a heavy demand for metals and the metal mining industry is again threatened with a shortage of workers at a time when it must expand its work force.

### Nature of the Industry

The United States is more nearly self-sufficient in metallic ores than any other industrial nation. It ranks first in world production of the four most extensively used industrial metals: iron, copper, lead, and zinc. It produces 40 percent of the total world output of iron, 30 percent of the copper and zinc, and about 25 percent of the total production of lead. (See table I.) Despite the Nation's leadership in the production of these metals, it imports increasingly large quantities of them because of the tremendous rate of consumption. Moreover, the United States is almost completely dependent upon other countries for such important metals as tin, cobalt, chromite, and manganese.

The major metal mining areas of the United States are the Great Lakes region, the Rocky Mountain States, and the far Western States. Iron mines are located primarily in the Lake Superior region, comprising parts of Minnesota, Michigan, and Wisconsin. Together these States account for about 81 percent of the total United States output, Minnesota producing 66 percent.

Over the years the center of copper production has shifted from Michigan to Montana, and in recent years to Arizona and New Mexico. Six States produced approximately 97 percent of the total United States copper output in 1949: Arizona, Utah, Montana, New Mexico, Nevada, and Michigan. Arizona alone accounted for nearly 48 percent of the total copper production in the United States.

In 1949, the Western States, principally Idaho, Arizona,

**Table 1**  
**United States Production of Metal as a Percent**  
**of World Output, 1939-49**

Year	Iron	Copper	Lead	Zinc
1939 . .	26.3	29.4	23.3	28.1
1940 . .	35.8	33.0	26.6	37.8
1941 . .	43.0	33.9	28.7	42.7
1942 . .	46.2	36.0	29.2	44.9
1943 . .	44.5	36.7	28.5	33.4
1944 . .	47.1	34.9	31.1	38.2
1945 . .	55.4	32.4	31.0	36.9
1946 . .	46.9	29.6	27.1	34.2
1947 . .	50.9	34.4	26.4	35.0
1948 . .	47.5	32.5	26.1	33.2
1949 . .	39.5	30.6	25.7	30.4

SOURCE: United States Bureau of Mines

Montana, Colorado, Utah, and Nevada, produced more than 52 percent of the total domestic output of zinc and approximately 54 percent of the lead. Missouri, however, continued to rank first among the States in lead production, with the southeastern Missouri district supplying 31 percent of the total domestic output.

Arkansas produces about 95 percent of the country's bauxite, the ore from which aluminum is made. Some important metals mined in small quantities are: tungsten produced principally in Nevada, North Carolina, and California; molybdenum in Arizona, California, Colorado, and Nevada; vanadium ore in the Colorado-Utah area; chromite in California; cobalt in Pennsylvania, Missouri, and Idaho; and deposits of carnotite-roscelite, which provide most of the domestic uranium ore in Colorado, Utah and Arizona.

The 25 leading gold mines produced 73 percent of the gold in 1949 and are located in South Dakota, Utah, Alaska, California, Idaho, Washington, Arizona, Nevada, Colorado, and Montana. More than two-thirds of the United States output of silver was mined by the 25 leading silver mines located in Montana, Idaho, Utah, Arizona, Nevada, Colorado, and California.

Iron, copper, lead, and zinc account for approximately 82 percent of the total employment in metal mining. Gold and silver mines employ another 11 percent of the workers in the industry. Production of the other metals provides employment for only 7 percent of the total metal mining work force.

### Mining Operations

Metallic ore deposits occur in nature in varied form and location: some are almost pure, others are mixed with rock and minerals; some are in horizontal seams, others are vertical and angular; some are at the earth's surface, others are far underground.

Two widely different methods are used in ore extraction: underground and open-pit mining. Bodies of ore which lie deep beneath the earth's surface are exploited by underground mining. In this method a shaft is driven down to the ore deposit. In successive operations, holes are drilled and packed with explosives, and a blast is set off to loosen the ore, which is loaded in cars, hauled to the surface, and processed for transportation to the smelters. Much of the work done in underground mining requires a high degree of skill.

Ore lying near the surface of the earth is exploited by open-pit mining. The overburden, or waste material covering the ore is first removed. The ore is then loosened by blasting, loaded into railroad cars or trucks, and taken to the smelter or refinery. This type of operation requires fewer skilled workers than underground mining.

### Work Force.

The work force in metal mining is almost entirely male. Women, and young men under 18, are for the most part excluded by State laws from all work except clerical and a few technical and surface jobs. The workers are mainly white, although some Negroes are found in a few Southern States. A substantial proportion of Mexican labor is employed in the Southwest. Approximately 78 percent of all workers in the industry are engaged in underground or deep mine operations, and 22 percent work in open-pit mines.

According to a study of the occupational structure in underground mining reported by the United States Employment Service in 1947, professional employees constituted approximately 3 percent of the mining labor force; administrative, protective, and material control and handling personnel, 9 percent; construction and maintenance personnel, 13 percent; and underground operations employed the remaining 75 percent. More than two-thirds of the underground production workers were classified as skilled. Occupational patterns vary considerably in this industry, depending upon size and type of mining operation, and kind of ore.

Among professional jobs in mining are those of mining engineer, safety engineer, metallurgist, mine surveyor, mineral surveyor, geologist, mineralogist, chemist, and assayer. These occupations generally require a college education and varying amounts of specific training and experience directed toward such activities as locating ore bodies, analyzing their size, shape, and potentialities, determining the best methods of extracting the ore and developing the mine, directing the mining operations, assaying the quality and value of the ore, or performing metallurgical processes to treat certain grades of ore.

### Trends in Production and Employment

Production of all the major metals increased substantially in 1950 over the 1949 levels: usable iron by 16 percent for a total of 98 million gross tons; recoverable copper by 21 percent to a total of 886 thousand short tons; and lead-zinc usable metal by 6 percent to 1 million short tons. Production of all these metals was much higher than in 1939, but well below World War II peaks in production.

Employment in metal mining averaged 101,000 employees in 1950, a slight increase over the 1949 total employment. Of these 101,000 workers, 35,500 were employed in iron mines, 28,100 in copper mines, 19,700 in lead-zinc mines, and the remainder in other metal mining. The largest gain in employment over the 1949 level was in iron mining, which increased 5.3 percent. Copper mining increased 2.9 percent but lead-zinc mining decreased 4.5 percent. Total metal mining employment in 1950 was 1.6 percent lower than the 1939 average, and far below the World War II peak of 135,800 reached in March 1942.

### Trends in Hours and Earnings

Average weekly hours in the metal mining industry have increased since the outbreak of the Korean war from 41.6 in the first half of 1950 to 43.6 during the first half of 1951. In iron mining there was an increase of 2.4 hours for a total of 42.4 hours, whereas in copper and lead-zinc mining, the average weekly hour increases were 1.7 and 1.6 hours for totals of 46.2 and 43.1 hours per week, respectively.

The average workweek of 46.2 hours reported for copper mining was even greater than the average of 45.4 hours reported for this metal for the war years 1942-1944. However, iron mining with 42.4 and lead-zinc with 43.1 average weekly hours during January-June 1951 fell short of their 1942-1944 average weekly hours of 42.7 and 43.8 respectively.

Production workers in the metal mining industry earned an average of \$1.69 per hour during the first half of 1951, an increase of 12 percent over the corresponding period of 1950. This rise was similar to the 11 percent rise in earnings in all manufacturing. The average hourly rate in lead and zinc mining was \$1.76 (a rise of 14.3 percent); in copper mining, \$1.69 (8.1 percent); and in iron mining, \$1.69 (13.8 percent).



Table 2

Production, Employment, Hours, and Output Per Man-Hour  
in Iron Mining

Year	Crude ore <u>1/</u> gross tons (000's)	Usable iron <u>1/</u> gross tons (000's)	All em- ployees <u>2/</u> (000's)	Produc- tion workers <u>2/</u> (000's)	Average weekly hours <u>2/</u>	Indexes of ore output per man-hour (1939 = 100)	
						Crude	Usable
1939	57,353	51,732	n/a	21.1	35.7	100.0	100.0
1940	83,404	73,696	n/a	23.8	38.5	119.8	117.4
1941	107,720	92,410	n/a	28.3	40.6	123.4	117.3
1942	126,527	104,883	n/a	33.7	42.1	117.3	107.8
1943	119,575	100,595	n/a	35.3	42.8	104.0	96.9
1944	111,020	93,525	n/a	31.6	43.3	106.7	99.7
1945	106,312	87,859	n/a	26.5	43.7	120.7	110.5
1946	84,194	70,336	n/a	25.9	37.7	113.3	104.9
1947	113,972	92,549	34.3	31.6	40.2	117.8	106.0
1948	126,225	110,523	35.6	33.6	41.3	119.5	105.5
1949	104,351	84,401	33.7	30.4	39.8	113.8	101.6
1950	124,596	98,160	35.5	31.9	40.9	125.5	109.5

1/ Source: United States Bureau of Mines

2/ Source: United States Bureau of Labor Statistics

n/a: Not available

Table 3

Production, Employment, Hours, and Output Per Man-Hour  
in Copper Mining

Year	Crude ore <u>1/</u>	Recoverable: copper <u>1/</u>	All employees <u>2/</u>	Production workers <u>2/</u>	Average weekly hours <u>2/</u>	Indexes of ore output per man-hour (1939 = 100)	
	short tons (000's)	short tons (000's)				Copper ore	Recoverable copper
1939 . .	55,239	714	n/a	25.0	41.9	100.0	100.0
1940 . .	59,278	862	n/a	29.4	41.7	107.2	103.2
1941 . .	78,453	941	n/a	32.8	42.3	107.0	99.3
1942 . .	92,285	1,064	n/a	34.0	45.2	113.9	101.6
1943 . .	98,120	1,069	n/a	33.3	45.8	122.9	103.6
1944 . .	91,064	950	n/a	27.4	45.2	140.4	113.1
1945 . .	77,473	757	n/a	21.8	44.7	151.0	114.1
1946 . .	62,232	595	n/a	20.5	42.8	134.3	99.4
1947 . .	87,729	832	27.5	24.6	44.8	151.2	110.8
1948 . .	84,729	818	27.8	25.0	45.2	142.2	106.2
1949 . .	76,033	731	27.3	24.3	42.3	140.2	105.9
1950 . .	94,586	886	28.1	24.6	45.0	162.0	117.6

1/ Source: United States Bureau of Mines  
2/ United States Bureau of Labor Statistics

n/a: Not available

Table 4

Production, Employment, Hours, and Output Per Man-Hour  
in Lead and Zinc Mining

Year	Crude ore lead and zinc	Recoverable metal lead and zinc	All employees	Production workers	Average weekly hours	Indexes of ore output per man-hour (1939 = 100)	
	short tons (000's) <sup>1/</sup>	short tons (000's) <sup>1/</sup>		<sup>2/</sup>	(000's)	<sup>2/</sup>	Copper ore
1939 . .	24,568	972	n/a	16.3	38.7	100.0	100.0
1940 . .	28,582	1,095	n/a	18.7	39.4	99.6	96.6
1941 . .	32,850	1,182	n/a	19.5	40.0	108.1	98.3
1942 . .	35,458	1,236	n/a	20.5	43.3	102.5	90.5
1943 . .	37,457	1,171	n/a	23.0	44.0	95.1	75.3
1944 . .	38,829	1,112	n/a	20.8	44.2	108.4	78.7
1945 . .	35,451	976	n/a	18.2	44.3	113.0	78.7
1946 . .	33,177	980	n/a	19.5	41.7	104.8	70.3
1947 . .	29,029	1,095	22.9	20.7	41.3	87.2	76.4
1948 . .	23,786	1,002	21.7	19.2	41.3	77.0	82.1
1949 . .	25,099	984	20.6	18.1	41.4	86.0	85.5
1950 . .	n/a	1,044	19.7	17.2	41.6	n/a	94.9

<sup>1/</sup> Source: United States Bureau of Mines

<sup>2/</sup> Source: United States Bureau of Labor Statistics

n/a: Not available

### Output Per Man-Hour

In metal mining, technological progress fights a constant battle against dwindling resources. Improvements in equipment and in mining methods in recent years have brought about sizable gains in the amount of crude ore produced per man-hour, but the industry has not shown corresponding increases in man-hour output of recoverable metal because the quality of ore mined tends to deteriorate progressively.

Two principal factors account for increases in the quantity of crude ore mined per hour--the rise in the proportion of ore coming from open-pit mines requiring less labor per ton of ore produced, and the increasing mechanization of mining operations. The proportion of ore obtained from open-pit iron mines increased from 63 percent in 1939 to 75 percent in 1949, and these surface mines required only one-half as many workers to produce three times as much ore as compared with underground mines. Open-pit copper mines accounted for 78 percent of the crude ore in 1949 compared with 68 percent in 1945. Lead and zinc are mined almost entirely through underground operations.

Mechanization is also of primary importance in contributing to increased man-hour output of crude ore. The trend toward mechanization has been pronounced during the past 10 years.

Other important factors affecting the productivity per man-hour include: the availability of skilled workers, prices of metals and price supports, efficiency of management and production methods, labor-management cooperation, weather conditions, and the position or location of ore bodies. The percentage of working time used in direct production of ore as compared with time used in mine development and improvement also affects the number of man-hours required to produce a given amount of ore.

Although there has been a general increase in productivity per man-hour in terms of crude ore mined over the years, there has not been a corresponding increase in terms of recoverable metal produced. The output of recoverable ore per man-hour depends on the quality of ore mined and the efficiency of the concentrating, smelting, and refining processes; and over the years, the percentage of recoverable metal in ore has declined. This deterioration in the quality of ore has been offset by technological developments in concentrating, smelting, and refining, and also, by the discovery of new, richer ore bodies.

Output of usable iron per man-hour was 10 percent higher in 1950 than in 1939 whereas output of crude ore produced per man-hour increased 26 percent in the same period. The case in copper is even more striking, with an increase of 18 percent in production of recoverable copper per man-hour and 62 percent in crude ore production. Output per man-hour of both recoverable metal and crude ore lead-zinc declined about 5 percent between 1939 and 1950. During this period, there were sharp fluctuations from year to year in the productivity of each metal.

### Manpower Demand and Supply

To meet defense production goals an estimated 112,000 workers will be needed in the metal mining industry by 1953, compared with 101,000 in 1950. By 1955, total manpower requirements will be 117,000, an increase of 16 percent over 1950. Among the three main types of mining, the greatest proportionate increase in requirements will be in copper, followed by lead-zinc. The smallest proportionate increase will be in iron mining.

As the mobilization program progresses, recruitment and maintenance of adequate manpower in the metal mining industry is expected to become an increasingly critical problem. The mining industry's experience during World War II illustrates the seriousness of the manpower problem.

In the period preceding World War II, metal mining activity decreased considerably along with the general decline in industrial activity of the 1930's. As the country began to mobilize, mining employment increased from 102,600 in 1939 to 128,300 in 1941. After the war started, it became a serious problem to hold the existing personnel and recruit new workers, although employment still continued to rise. Workers left the mines for jobs with better working conditions and higher pay in other defense activities, such as shipyards, airplane factories, and military camps. In addition, many miners were taken into the armed forces.

As the situation became critical, appeals were made to the miners in the form of personal letters from the War Production and Selective Service directors requesting the miners to stay on their jobs. Direct recruiting campaigns for new miners were conducted in many parts of the country. Wages were raised and working hours were increased. Selective Service deferments were authorized and attempts were made to keep workers in their jobs by requiring that a certificate of separation be obtained from the United States Employment Service.

In November 1942 and again in August 1943, when the military forces began to feel the shortage of strategic metals, the Army first furloughed 4,253 and then an additional 4,546 enlisted men from the service for employment in metal mines. Despite these measures, the shortage of mining manpower remained a critical problem to the end of World War II.

Today it is much more difficult to recruit and hold workers than it was in the period immediately preceding World War II. There are virtually no reserves of unemployed workers such as were available in 1940 and 1941. Further, the industry now has a higher proportion of workers who are likely to leave the mines when the outside job market is good. In the past, a large proportion of the miners in certain types of mines were foreign born men who, once in the mines, tended to stay there. Younger, native-born men, many of whom have had experience in the armed forces or in other types of work are more likely to leave the mines for more pleasant jobs. Moreover, the groups in the population from which most "extra" workers are drawn when the labor supply is tight—women, teenagers, physically handicapped, and older workers—are groups which cannot be used in mine work. State laws forbid the employment of women in mines, except in a few surface and technical operations. Most States require a minimum age of 16 for underground mine work. The work is generally too strenuous for the physically handicapped and older workers who are not accustomed to such labor. Many young men physically qualified for mine work are also subject to military service.

## EMPLOYMENT AND PAY ROLLS

## Detailed Report

Statistical Tables

July 1951

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Data for the 2 most recent months  
shown are subject to revision

\* \* \* \* \*

Explanatory notes outlining briefly the  
concepts, methodology, and sources used  
in preparing data presented in this re-  
port appear in the appendix. See pages  
i - vii.

TABLE 1: Employees in Nonagricultural Establishments, by Industry Division  
(In thousands)

Year and month	Total	Mining	Contract construction	Manufacturing	Transportation and public utilities	Trade	Finance	Service	Government
<b>Annual average:</b>									
1939	30,287	845	1,150	10,078	2,912	6,612	1,382	3,321	3,987
1940	32,031	916	1,294	10,780	3,013	6,940	1,419	3,477	4,192
1941	36,164	947	1,790	12,974	3,248	7,416	1,462	3,705	4,522
1942	39,697	983	2,170	15,051	3,433	7,333	1,440	3,857	5,431
1943	42,042	917	1,567	17,381	3,619	7,189	1,401	3,919	6,049
1944	41,480	883	1,094	17,111	3,798	7,260	1,374	3,934	6,026
1945	40,069	826	1,132	15,302	3,872	7,522	1,394	4,055	5,967
1946	41,412	852	1,661	14,461	4,023	8,602	1,586	4,621	5,607
1947	43,371	943	1,982	15,247	4,122	9,196	1,641	4,786	5,454
1948	44,201	981	2,165	15,286	4,151	9,491	1,716	4,799	5,613
1949	43,006	932	2,156	14,146	3,977	9,438	1,763	4,782	5,811
1950	44,124	904	2,318	14,884	4,010	9,524	1,812	4,761	5,910
<u>1950</u>									
May..	43,311	940	2,245	14,413	3,885	9,326	1,812	4,790	5,900
June..	43,945	946	2,414	14,666	4,023	9,411	1,827	4,826	5,832
July..	44,096	922	2,532	14,777	4,062	9,390	1,831	4,841	5,741
Aug..	45,080	950	2,629	15,450	4,120	9,474	1,837	4,827	5,793
Sept..	45,684	946	2,626	15,685	4,139	9,641	1,827	4,816	6,004
Oct..	45,898	939	2,631	15,827	4,132	9,752	1,821	4,757	6,039
Nov..	45,873	938	2,571	15,765	4,123	9,896	1,820	4,723	6,037
Dec..	46,595	937	2,403	15,789	4,125	10,443	1,828	4,694	6,376
<u>1951</u>									
Jan..	45,246	932	2,281	15,784	4,072	9,592	1,831	4,666	6,088
Feb..	45,390	930	2,228	15,978	4,082	9,554	1,839	4,657	6,122
Mar..	45,850	924	2,326	16,022	4,112	9,713	1,854	4,682	6,217
Apr..	45,998	911	2,471	15,955	4,132	9,627	1,865	4,745	6,292
May..	46,226	915	2,598	15,853	4,137	9,683	1,874	4,789	6,377
June..	46,559	925	2,687	15,950	4,159	9,733	1,893	4,835	6,377
July..	46,436	907	2,749	15,829	4,180	9,657	1,907	4,851	6,356

See explanatory notes, sections A-G, and the glossary for definitions.



TABLE 2: Employees in Nonagricultural Establishments, by Industry  
Division and Group

(In thousands)

Industry division and group	1951			1950	
	July	June	May	July	June
TOTAL	46,436	46,559	46,226	44,096	43,945
MINING	907	925	915	922	946
Metal mining	105.5	105.2	103.3	103.3	101.8
Anthracite	67.7	70.2	70.3	73.6	75.3
Bituminous-coal	360.3	379.0	377.2	382.1	410.4
Crude petroleum and natural gas production	266.0	262.3	258.4	261.9	258.9
Nonmetallic mining and quarrying	107.7	108.0	105.9	101.3	100.0
CONTRACT CONSTRUCTION	2,749	2,687	2,598	2,532	2,414
NONBUILDING CONSTRUCTION	551	537	508	519	493
Highway and street	239.4	230.0	213.5	228.8	213.5
Other nonbuilding construction	311.6	307.4	294.2	290.4	279.3
BUILDING CONSTRUCTION	2,198	2,150	2,090	2,013	1,921
GENERAL CONTRACTORS	946	927	892	870	827
SPECIAL-TRADE CONTRACTORS	1,252	1,223	1,198	1,143	1,094
Plumbing and heating	305.9	300.0	291.3	278.7	267.4
Painting and decorating	179.2	173.9	167.6	149.8	140.0
Electrical work	151.3	146.1	142.1	131.0	127.6
Other special-trade contractors	615.7	603.3	596.6	583.5	558.6
MANUFACTURING	15,829	15,950	15,853	14,777	14,666
DURABLE GOODS	8,855	8,996	8,975	7,978	7,964
NONDURABLE GOODS	6,974	6,954	6,878	6,799	6,702
TRANSPORTATION AND PUBLIC UTILITIES	4,180	4,159	4,137	4,062	4,023
Transportation	2,922	2,919	2,911	2,839	2,813
Interstate railroads	1,468	1,468	1,463	1,414	1,407
Class I railroads	1,295	1,295	1,290	1,246	1,240
Local railways and bus lines	142	142	144	148	147
Trucking and warehousing	615	618	620	589	577
Other transportation and services	697	691	684	689	682
Air transportation (common carrier)	83.2	81.3	79.4	75.7	74.6
Communication	698	687	680	667	662
Telephone	648.3	637.3	630.4	619.5	614.6
Telegraph	48.5	48.3	48.8	46.7	46.7

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 2: Employees in Nonagricultural Establishments, by Industry Division and Group (Continued)

(In thousands)

Industry division and group	1951			1950	
	July	June	May	July	June
<b>TRANSPORTATION AND PUBLIC UTILITIES</b> (Continued)					
Other public utilities	560	553	546	556	548
Gas and electric utilities	533.5	527.0	521.0	530.4	522.3
Electric light and power utilities	237.5	234.9	232.4	238.4	235.2
Gas utilities	119.6	118.1	116.1	117.6	115.5
Electric light and gas utilities combined	176.4	174.0	172.5	174.4	171.6
Local utilities, not elsewhere classified	26.1	25.5	24.9	25.7	25.6
<b>TRADE</b>	9,657	9,733	9,683	9,390	9,411
Wholesale trade	2,592	2,580	2,568	2,528	2,502
Retail trade	7,065	7,153	7,115	6,862	6,909
General merchandise stores	1,407	1,460	1,475	1,372	1,411
Food and liquor stores	1,268	1,271	1,271	1,203	1,205
Automotive and accessories dealers	754	748	742	746	733
Apparel and accessories stores	510	548	550	501	536
Other retail trade	3,126	3,126	3,077	3,040	3,024
<b>FINANCE</b>	1,907	1,893	1,874	1,831	1,827
Banks and trust companies	469	460	452	432	427
Security dealers and exchanges	64.2	63.8	63.8	61.3	60.0
Insurance carriers and agents	683	671	663	652	646
Other finance agencies and real estate	691	698	695	686	694
<b>SERVICE</b>	4,851	4,835	4,789	4,841	4,826
Hotels and lodging places	510	480	452	515	482
Laundries	368.2	365.0	359.5	363.4	362.1
Cleaning and dyeing plants	157.3	161.2	158.7	151.6	155.9
Motion pictures	245	248	249	245	249
<b>GOVERNMENT</b>	6,356	6,377	6,377	5,741	5,832
Federal <sup>1/</sup>	2,313	2,271	2,244	1,820	1,851
State and local	4,043	4,106	4,133	3,921	3,981

See explanatory notes, sections A-G, and the glossary for definitions.

<sup>1/</sup> Fourth class postmasters are excluded here but are included in Table 6.

TABLE 3: All Employees and Production Workers in Mining and Manufacturing Industries

(In thousands)

Industry group and industry	All employees			Production workers		
	1951			1951		
	July	June	May	July	June	May
<b>MINING</b>	907	925	915	--	--	--
<b>METAL MINING</b>	105.5	105.2	103.3	92.9	93.0	91.3
Iron mining	38.1	38.3	37.6	34.2	34.5	33.8
Copper mining	29.0	29.0	28.5	25.3	25.3	24.9
Lead and zinc mining	20.7	20.5	19.9	17.9	17.9	17.4
<b>ANTHRACITE</b>	67.7	70.2	70.3	63.7	66.0	66.1
<b>BITUMINOUS-COAL</b>	360.3	379.0	377.2	335.1	354.0	353.1
<b>CRUDE PETROLEUM AND NATURAL GAS PRODUCTION</b>	266.0	262.3	258.4	--	--	--
Petroleum and natural gas production (except contract services)	--	--	--	132.1	130.1	126.0
<b>NONMETALLIC MINING AND QUARRYING</b>	107.7	108.0	105.9	94.6	94.8	93.0
<b>MANUFACTURING</b>	15,829	15,950	15,853	12,904	13,053	12,993
<b>DURABLE GOODS</b>	8,855	8,996	8,975	7,240	7,406	7,406
<b>NONDURABLE GOODS</b>	6,974	6,954	6,878	5,664	5,647	5,587
<b>ORDNANCE AND ACCESSORIES</b>	44.0	42.2	40.1	35.4	34.0	32.2
<b>FOOD AND KINDRED PRODUCTS</b>	1,624	1,533	1,478	1,233	1,146	1,099
Meat products	300.4	296.3	291.2	234.6	232.6	229.2
Dairy products	162.0	157.7	150.4	117.9	115.6	109.5
Canning and preserving	259.0	180.1	162.7	232.6	154.2	136.9
Grain-mill products	131.4	128.3	123.1	98.5	96.7	91.1
Bakery products	288.2	288.0	284.6	192.2	192.1	189.5
Sugar	30.0	30.1	29.6	24.9	24.8	24.4
Confectionery and related products	87.6	90.2	90.5	71.4	73.4	73.6
Beverages	230.1	223.3	211.8	161.1	154.7	145.3
Miscellaneous food products	134.8	139.2	134.5	99.3	101.8	99.1
<b>TOBACCO MANUFACTURES</b>	81	83	81	74	76	74
Cigarettes	26.0	25.7	25.4	23.5	23.3	22.9
Cigars	39.3	40.5	39.4	37.1	38.3	37.2
Tobacco and snuff	11.5	11.9	12.1	10.0	10.3	10.4
Tobacco stemming and redrying	4.4	4.4	4.4	3.6	3.6	3.6

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 3: All Employees and Production Workers in Mining and Manufacturing Industries (Continued)

(In thousands)

Industry group and industry	All employees			Production workers		
	1951			1951		
	July	June	May	July	June	May
<b>TEXTILE-MILL PRODUCTS</b>	<b>1,256</b>	<b>1,296</b>	<b>1,302</b>	<b>1,162</b>	<b>1,200</b>	<b>1,206</b>
Yarn and thread mills	163.9	168.6	171.0	153.1	157.5	160.1
Broad-woven fabric mills	601.2	615.3	605.8	570.6	584.6	574.3
Knitting mills	229.5	235.2	241.4	210.0	215.2	221.6
Dyeing and finishing textiles	84.9	88.4	89.4	74.9	78.0	79.2
Carpets, rugs, other floor coverings	49.9	55.1	58.6	41.9	47.2	50.7
Other textile-mill products	126.5	132.9	135.8	111.6	117.6	120.4
<b>APPAREL AND OTHER FINISHED TEXTILE PRODUCTS</b>	<b>1,106</b>	<b>1,117</b>	<b>1,118</b>	<b>989</b>	<b>998</b>	<b>998</b>
Men's and boys' suits and coats	138.0	146.7	148.9	124.9	132.9	135.0
Men's and boys' furnishings and work clothing	252.0	265.5	271.6	235.6	247.5	252.9
Women's outerwear	306.6	288.1	283.4	272.0	254.1	249.1
Women's, children's under garments	93.4	96.7	99.3	83.0	86.1	88.9
Millinery	19.2	17.0	17.1	16.5	14.4	14.6
Children's outerwear	65.3	65.5	61.8	59.7	59.7	56.3
Fur goods and miscellaneous apparel	94.2	98.0	94.4	81.8	85.7	82.7
Other fabricated textile products	137.4	139.8	141.2	115.3	117.2	118.6
<b>LUMBER AND WOOD PRODUCTS (EXCEPT FURNITURE)</b>	<b>814</b>	<b>837</b>	<b>828</b>	<b>749</b>	<b>773</b>	<b>764</b>
Logging camps and contractors	78.9	80.9	78.0	74.4	76.6	74.2
Sawmills and planing mills	475.7	489.1	482.0	442.4	456.3	449.2
Millwork, plywood, and prefabricated structural wood products	117.4	122.7	122.5	102.1	107.3	107.2
Wooden containers	79.3	81.5	82.0	73.4	75.7	76.2
Miscellaneous wood products	62.4	63.0	63.5	56.3	56.6	57.3
<b>FURNITURE AND FIXTURES</b>	<b>332</b>	<b>335</b>	<b>349</b>	<b>285</b>	<b>287</b>	<b>301</b>
Household furniture	226.0	227.7	240.5	197.4	198.6	211.4
Other furniture and fixtures	106.4	107.5	108.6	87.4	88.6	89.7

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 3: All Employees and Production Workers in Mining and Manufacturing Industries (Continued)

(In thousands)

Industry group and industry	All employees			Production workers		
	1951			1951		
	July	June	May	July	June	May
<b>PAPER AND ALLIED PRODUCTS</b>	493	501	497	420	427	424
Pulp, paper, and paperboard mills	248.3	249.6	246.0	215.0	216.4	213.0
Paperboard containers and boxes	132.3	137.1	137.4	112.2	116.6	117.0
Other paper and allied products	112.1	113.8	114.0	92.3	94.1	94.3
<b>PRINTING, PUBLISHING, AND ALLIED INDUSTRIES</b>	758	761	759	508	511	510
Newspapers	297.5	299.3	299.7	151.1	152.4	151.9
Periodicals	52.2	52.4	52.6	34.0	33.7	34.6
Books	49.1	49.3	48.9	35.2	35.9	35.7
Commercial printing	204.5	206.2	204.8	167.2	168.7	167.8
Lithographing	40.5	41.0	41.1	31.7	32.1	32.1
Other printing and publishing	113.7	113.1	112.1	88.4	88.4	87.7
<b>CHEMICALS AND ALLIED PRODUCTS</b>	745	742	742	527	528	531
Industrial inorganic chemicals	83.7	83.2	81.4	60.9	60.5	59.4
Industrial organic chemicals	230.8	228.5	225.6	172.4	171.3	169.5
Drugs and medicines	108.0	106.5	105.5	71.2	70.6	70.1
Paints, pigments, and fillers	77.6	76.7	76.5	50.4	50.0	49.8
Fertilizers	29.9	31.3	36.4	22.9	24.6	29.6
Vegetable and animal oils and fats	47.4	47.9	49.1	35.6	36.3	37.6
Other chemicals and allied products	167.4	167.6	167.7	113.4	114.5	115.1
<b>PRODUCTS OF PETROLEUM AND COAL</b>	266	264	260	198	197	194
Petroleum refining	212.9	210.5	207.7	153.9	153.4	150.8
Coke and byproducts	22.3	22.1	21.6	19.3	19.1	18.7
Other petroleum and coal products	30.5	31.0	30.4	24.3	24.8	24.4
<b>RUBBER PRODUCTS</b>	272	275	272	218	221	220
Tires and inner tubes	115.7	114.7	112.8	90.3	89.8	88.3
Rubber footwear	30.4	31.2	30.8	24.8	25.7	25.4
Other rubber products	126.3	128.6	128.3	103.1	105.5	106.0
<b>LEATHER AND LEATHER PRODUCTS</b>	373	382	369	335	343	331
Leather	45.7	47.0	47.6	41.2	42.4	42.8
Footwear (except rubber)	236.9	244.1	232.7	214.6	221.1	210.4
Other leather products	90.4	90.6	88.9	79.3	79.6	77.4

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 3: All Employees and Production Workers in Mining and Manufacturing Industries (Continued)

(In thousands)

Industry group and industry	All employees			Production workers		
	1951			1951		
	July	June	May	July	June	May
<b>STONE, CLAY, AND GLASS PRODUCTS</b>	<b>553</b>	<b>562</b>	<b>560</b>	<b>476</b>	<b>485</b>	<b>484</b>
Glass and glass products	138.4	147.1	148.3	121.2	129.6	131.1
Cement, hydraulic	43.6	43.5	42.7	37.6	37.3	36.5
Structural clay products	93.5	93.3	91.1	85.0	84.8	83.0
Pottery and related products	58.0	59.7	60.4	52.3	54.0	54.6
Concrete, gypsum, and plaster products	103.6	102.4	101.0	88.1	86.9	85.8
Other stone, clay, and glass products	115.8	116.2	116.4	91.5	92.5	92.8
<b>PRIMARY METAL INDUSTRIES</b>	<b>1,341</b>	<b>1,357</b>	<b>1,347</b>	<b>1,154</b>	<b>1,171</b>	<b>1,162</b>
Blast furnaces, steel works, and rolling mills	656.0	654.9	648.7	570.6	571.1	565.0
Iron and steel foundries	277.2	285.2	284.1	246.4	253.7	252.5
Primary smelting and refining of nonferrous metals	51.1	57.1	55.4	48.1	47.9	46.4
Rolling, drawing, and alloying of nonferrous metals	98.1	101.4	100.0	79.7	83.1	81.9
Nonferrous foundries	106.6	109.7	111.1	88.2	91.3	93.2
Other primary metal industries	146.0	148.6	147.5	120.8	123.8	123.2
<b>FABRICATED METAL PRODUCTS (EXCEPT ORNANCE, MACHINERY, AND TRANSPORTATION EQUIPMENT)</b>	<b>993</b>	<b>1,019</b>	<b>1,026</b>	<b>814</b>	<b>843</b>	<b>850</b>
Tin cans and other tinware	49.2	49.7	49.0	43.0	43.5	42.9
Cutlery, hand tools, and hardware	157.9	162.1	163.4	131.8	137.0	138.1
Heating apparatus (except electric) and plumbers' supplies	151.8	157.8	159.1	122.2	128.6	130.1
Fabricated structural metal products	229.4	227.4	229.8	177.9	176.9	178.5
Metal stamping, coating, and engraving	174.7	185.6	188.2	147.6	158.9	161.9
Other fabricated metal products	230.4	236.5	236.0	191.4	197.9	198.0
<b>MACHINERY (EXCEPT ELECTRICAL)</b>	<b>1,598</b>	<b>1,615</b>	<b>1,598</b>	<b>1,233</b>	<b>1,253</b>	<b>1,242</b>
Engines and turbines	90.9	91.6	90.2	67.7	68.9	67.9
Agricultural machinery and tractors	194.6	196.0	193.1	151.0	152.9	151.6
Construction and mining machinery	120.3	120.4	118.2	90.6	90.9	88.9
Metalworking machinery	296.9	295.7	289.6	232.5	232.7	227.9
Special-industry machinery (except metalworking machinery)	197.1	198.5	197.7	150.2	150.8	149.8
General industrial machinery	231.0	230.2	227.6	166.3	166.9	165.7
Office and store machines and devices	102.0	105.3	104.4	85.9	88.4	88.0
Service-industry and household machines	164.0	173.9	176.9	127.8	137.9	141.5
Miscellaneous machinery parts	201.2	203.0	200.3	160.7	163.2	161.1

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 3: All Employees and Production Workers in Mining and Manufacturing Industries (Continued)  
(In thousands)

Industry group and industry	All employees			Production workers		
	1951			1951		
	July	June	May	July	June	May
<b>ELECTRICAL MACHINERY</b>	<b>919</b>	<b>932</b>	<b>930</b>	<b>689</b>	<b>703</b>	<b>707</b>
Electrical generating, transmission, distribution, and industrial apparatus	374.0	376.7	369.9	271.5	275.3	270.0
Electrical equipment for vehicles	81.7	81.8	81.7	66.9	67.4	67.1
Communication equipment	317.5	323.2	327.5	233.3	239.2	247.2
Electrical appliances, lamps, and miscellaneous products	145.6	149.8	150.9	117.0	120.9	122.2
<b>TRANSPORTATION EQUIPMENT</b>	<b>1,502</b>	<b>1,520</b>	<b>1,513</b>	<b>1,203</b>	<b>1,235</b>	<b>1,233</b>
Automobiles	838.0	873.6	891.4	704.8	738.2	752.4
Aircraft and parts	467.4	448.3	428.5	342.8	331.0	317.9
Aircraft	318.1	303.8	289.1	234.5	225.1	216.2
Aircraft engines and parts	89.7	87.4	84.5	62.4	61.3	59.4
Aircraft propellers and parts	10.2	10.3	10.5	7.2	7.4	7.5
Other aircraft parts and equipment	49.4	47.3	44.4	38.7	37.2	34.8
Ship and boat building and repairing	114.2	112.3	109.1	99.5	97.8	94.7
Ship building and repairing	99.6	97.6	94.3	86.4	84.5	81.5
Boat building and repairing	14.6	14.7	14.8	13.1	13.3	13.2
Railroad equipment	72.0	74.3	73.2	46.6	59.1	58.3
Other transportation equipment	10.8	10.9	11.2	9.0	9.1	9.3
<b>INSTRUMENTS AND RELATED PRODUCTS</b>	<b>299</b>	<b>299</b>	<b>297</b>	<b>221</b>	<b>223</b>	<b>222</b>
Ophthalmic goods	27.7	27.8	27.9	22.5	22.6	22.8
Photographic apparatus	59.4	60.6	59.1	42.3	44.0	43.0
Watches and clocks	33.1	34.2	34.0	27.9	29.0	28.6
Professional and scientific instruments	178.4	176.4	175.5	128.5	127.4	127.6
<b>MISCELLANEOUS MANUFACTURING INDUSTRIES</b>	<b>460</b>	<b>478</b>	<b>487</b>	<b>381</b>	<b>399</b>	<b>409</b>
Jewelry, silverware, and plated ware	48.9	50.7	52.8	39.9	41.5	43.3
Toys and sporting goods	71.0	74.9	77.2	61.6	65.5	67.6
Costume jewelry, buttons, notions	51.8	53.7	56.1	43.2	45.1	47.5
Other miscellaneous manufacturing industries	238.2	299.1	300.4	236.7	247.1	251.0

See explanatory notes, sections A-G, and the glossary for definitions.

TABLE 4: Indexes of Production Worker Employment and Weekly Payrolls in  
Manufacturing Industries

(1939 Average = 100)

Period	Production-worker employment index	Production-worker pay-roll index
<b>Annual average:</b>		
1939	100.0	100.0
1940	107.5	113.6
1941	132.8	164.9
1942	156.9	241.5
1943	183.3	331.1
1944	178.3	343.7
1945	157.0	293.5
1946	147.8	271.7
1947	156.2	326.9
1948	155.2	351.4
1949	141.6	325.3
1950	149.7	371.7
<u>1950</u>		
May	144.5	348.0
June	147.3	362.7
July	148.3	367.5
August	156.3	394.4
September	158.9	403.2
October	160.3	415.8
November	159.2	414.6
December	159.4	426.0
<u>1951</u>		
January	158.9	424.0
February	161.0	430.0
March	161.0	435.0
April	160.0	433.2
May	158.6	428.4
June	159.3	435.5
July	157.5	425.5

See explanatory notes, section D, and the glossary for definitions.



TABLE 5: Employees in the Shipbuilding and Repairing Industry, by Region <sup>1/</sup>

(In thousands)

Region	1951			1950	
	July	June	May	July	June
ALL REGIONS	224.9	221.7	217.0	137.5	134.8
PRIVATE	99.6	97.6	94.3	67.4	66.4
NAVY	125.3	124.1	122.7	70.1	68.4
NORTH ATLANTIC	102.6	100.9	99.7	68.4	68.0
Private	46.7	45.0	44.4	36.6	37.0
Navy	55.9	55.9	55.3	31.8	31.0
SOUTH ATLANTIC	39.7	38.5	37.2	22.9	22.8
Private	15.9	15.1	14.1	7.9	7.9
Navy	23.8	23.4	23.1	15.0	14.9
GULF:					
Private	16.4	18.2	16.3	9.8	9.3
PACIFIC	55.0	53.4	53.4	30.2	28.5
Private	9.4	8.6	9.1	6.9	6.0
Navy	45.6	44.8	44.3	23.3	22.5
GREAT LAKES:					
Private	6.3	6.3	6.0	1.9	2.1
INLAND:					
Private	4.9	4.4	4.4	4.3	4.1

<sup>1/</sup> The North Atlantic region includes all yards bordering on the Atlantic in the following states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

The South Atlantic region includes all yards bordering on the Atlantic in the following states: Georgia, Virginia, North Carolina, and South Carolina.

The Gulf region includes all yards bordering on the Gulf of Mexico in the following states: Alabama, Florida, Louisiana, Mississippi, and Texas.

The Pacific region includes all yards in California, Oregon, and Washington.

The Great Lakes region includes all yards bordering on the Great Lakes in the following states: Illinois, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin.

The Inland region includes all other yards.

TABLE 6: Federal Civilian Employment and Pay Rolls in All Areas and in Continental United States, and Total Civilian Government Employment and Pay Rolls in Washington, D. C. <sup>1/</sup>

(In thousands)

Area and branch	Employment (as of first of month)			Pay rolls (Total for month)		
	1951			1951		
	July	June	May	July	June	May
<u>All areas</u>						
TOTAL FEDERAL	2,506.4	2,462.3	2,432.6	\$755,087	\$721,693	\$742,529
Executive	2,494.0	2,450.1	2,420.5	750,264	716,681	737,428
Defense agencies	1,265.3	1,237.5	1,212.1	379,638	360,686	370,700
Post Office Department <sup>2/</sup>	492.4	491.2	492.1	132,621	131,156	131,353
Other agencies	736.3	721.4	716.3	238,005	224,839	235,375
Legislative	8.5	8.3	8.2	3,195	3,379	3,338
Judicial	3.9	3.9	3.9	1,628	1,633	1,763
<u>Continental United States</u>						
TOTAL FEDERAL	2,332.8	2,290.5	2,263.9	708,613	677,493	698,694
Executive	2,320.5	2,278.4	2,251.9	703,834	672,525	693,638
Defense agencies	1,141.2	1,113.3	1,089.8	350,633	330,332	340,465
Post Office Department <sup>2/</sup>	490.5	489.3	490.3	132,038	130,613	130,850
Other agencies	688.8	675.8	671.8	221,163	211,580	222,323
Legislative	8.5	8.3	8.2	3,195	3,379	3,338
Judicial	3.8	3.8	3.8	1,584	1,589	1,718
<u>Washington, D. C.</u>						
TOTAL GOVERNMENT	280.2	272.9	271.4	97,299	94,102	104,400
D. C. government	19.8	20.5	20.1	4,485	5,623	5,883
Federal	260.4	252.4	251.3	92,814	88,479	98,517
Executive	251.2	243.4	242.4	89,318	84,798	94,863
Defense agencies	87.7	83.9	83.6	31,350	29,480	31,082
Post Office Department	7.9	7.7	7.8	2,865	2,839	2,946
Other agencies	155.6	151.8	151.0	55,103	52,479	60,835
Legislative	8.5	8.3	8.2	3,195	3,379	3,338
Judicial	.7	.7	.7	301	302	316

See the glossary for definitions.

<sup>1/</sup> Data for Central Intelligence Agency are excluded.

<sup>2/</sup> Includes fourth class postmasters, excluded from Table 2.

TABLE 7: Employees in Nonagricultural Establishments by Industry Division,  
by State  
(In thousands)

State	Total			Mining			Contract Construction		
	1951		1950	1951		1950	1951		1950
	July	June	July	July	June	July	July	June	July
Alabama	631.0	634.7	598.2	21.3	22.9	24.9	32.5	30.5	29.1
Arizona	177.0	177.8	159.6	12.3	12.4	11.9	13.5	14.0	11.9
Arkansas	305.7	309.4	292.6	6.5	6.6	6.3	26.0	26.0	19.9
California	3,463.7	3,419.0	3,206.5	35.9	35.2	33.8	242.6	234.0	226.3
Colorado	382.8	377.9	343.9	9.5	9.2	9.0	32.4	34.3	22.0
Connecticut	818.0	820.6	759.0	2/	2/	2/	45.5	44.1	42.6
Delaware									
District of Columbia	529.5	521.2	479.4	3/	3/	3/	26.0	26.0	25.9
Florida	660.6	680.4	633.0	6.9	6.4	6.1	65.3	65.5	62.3
Georgia	831.6	828.2	782.1	4.5	4.5	4.1	53.9	52.5	46.9
Idaho	140.5	139.6	134.8	5.3	5.4	5.8	14.7	15.0	12.3
Illinois	3,219.0	3,231.4	3,103.5	44.7	45.2	48.2	167.3	163.8	152.3
Indiana	1,288.1	1,298.0	1,227.7	14.0	14.5	13.9	65.8	64.3	57.0
Iowa	617.1	620.2	591.6	2.1	2.3	3.0	38.8	38.0	33.6
Kansas	N.A.	495.9	463.1	N.A.	17.7	17.4	N.A.	36.7	33.4
Kentucky				55.8	57.6	60.6			
Louisiana				25.6	26.2	27.1			
Maine	274.0	270.8	264.7	.6	.7	.7	10.7	10.2	10.6
Maryland	752.3	743.5	697.6	2.5	2.4	2.3	59.8	57.0	57.2
Massachusetts	1,786.7	1,806.4	1,721.7	3/	3/	3/	72.3	69.1	61.6
Michigan									
Minnesota	829.5	823.9	794.1	18.6	18.3	17.8	47.2	44.9	43.7
Mississippi									
Missouri	1,203.1	1,212.1	1,160.9	9.3	9.2	8.6	55.7	57.6	53.8
Montana	154.6	154.4	154.4	9.9	9.9	10.6	13.5	13.5	13.8
Nebraska	325.7	327.2	315.2	3/	3/	3/	17.5	17.4	20.1
Nevada	59.2	57.8	57.0	3.5	3.5	3.1	4.2	3.9	5.2
New Hampshire	173.0	171.2	169.5	.4	.3	.3	7.6	7.5	8.3
New Jersey	1,683.5	1,687.5	1,600.3	4.1	4.0	3.9	89.4	87.3	81.1
New Mexico	156.3	156.6	147.7	13.3	13.1	11.7	16.6	16.8	17.3
New York	5,726.4	5,721.3	5,523.8	11.5	11.5	10.6	249.3	243.5	240.8
North Carolina	917.1	923.9	870.0	3.5	3.6	3.5	62.5	61.4	46.9
North Dakota	115.7	116.1	115.1	.8	.8	.8	11.1	11.1	11.3
Ohio									
Oklahoma	501.5	496.3	474.5	44.6	44.0	43.3	36.0	34.1	34.1
Oregon	466.9	466.0	459.0	1.7	1.8	1.5	29.9	28.7	31.1
Pennsylvania	3,712.9	3,741.1	3,520.5	173.4	180.6	179.5	183.2	175.0	171.0
Rhode Island	293.3	299.2	285.2	3/	3/	3/	16.6	16.3	15.6
South Carolina	475.4	474.1	440.9	1.0	1.0	1.1	36.6	33.7	25.8
South Dakota 1/	124.8	125.0	125.7	2.1	2.2	2.8	9.0	9.3	10.2
Tennessee	749.3	750.1	726.9	12.3	12.5	12.6	46.1	45.7	49.1
Texas	2,030.6	2,018.7	1,884.7	116.9	115.1	106.7	169.7	164.0	136.7
Utah	211.2	210.0	192.9	11.1	12.4	12.3	15.0	15.0	14.0
Vermont	101.4	101.4	97.3	1.2	1.2	1.1	4.2	4.1	4.9
Virginia	844.6	839.5	776.2	23.1	22.5	23.5	65.1	61.5	54.3
Washington	730.7	726.5	688.3	2.8	2.8	3.1	46.1	45.9	48.7
West Virginia	529.1	537.3	519.7	121.3	125.5	125.5	19.9	19.5	21.9
Wisconsin	1,073.9	1,054.3	1,026.1	3.8	3.9	3.7	48.4	47.8	45.4
Wyoming	88.2	86.8	87.1	8.8	9.1	9.1	7.1	6.9	8.9

See footnotes at end of table and explanatory notes, sections G and H.

TABLE 7: Employees in Nonagricultural Establishments by Industry Division  
by State  
(In thousands)

State	Manufacturing			Trans. & Public Util.			Trade & Retail		
	1956			1957			1958		
	July	June	July	July	June	July	July	June	July
Alabama	220.5	224.0	212.7	51.8	52.3	50.2	121.6	121.6	117.3
Arizona	18.3	18.8	15.3	23.1	23.1	21.5	43.8	43.4	40.8
Arkansas	77.1	78.6	74.5	31.7	32.1	31.2	69.4	69.9	70.4
California	877.4	850.8	763.9	317.8	313.3	305.6	792.2	796.4	793.2
Colorado	64.4	62.0	56.9	44.5	43.9	42.2	96.1	95.8	92.0
Connecticut	413.2	417.3	364.8	42.5	42.1	41.6	133.0	133.8	129.3
Delaware	50.9	50.6	46.9						
District of Columbia	17.5	17.2	16.1	31.0	30.7	29.2	92.2	92.2	88.0
Florida	95.9	99.5	86.9	65.5	66.2	64.2	184.4	197.5	183.1
Georgia	291.9	288.5	277.9	70.1	70.0	66.0	177.7	178.6	173.5
Idaho	26.5	25.3	25.7	17.8	17.5	17.0	34.1	34.5	33.1
Illinois	1,202.5	1,216.7	1,151.6	302.4	301.0	297.1	680.4	683.3	669.8
Indiana	591.2	597.4	565.7	112.9	112.5	109.4	238.2	241.4	233.1
Iowa	162.2	161.9	150.7	63.6	64.2	62.4	165.3	166.7	160.7
Kansas	N.A.	113.6	92.3	N.A.	53.3	62.3	N.A.	118.1	118.9
Kentucky	144.4	145.6	138.6	60.1	60.0	57.5	113.3	114.2	112.6
Louisiana	139.5	140.8	132.2	79.5	80.1	77.7	144.2	145.0	145.1
Maine	116.2	115.6	113.3	19.1	18.9	19.4	50.8	49.8	50.4
Maryland	259.8	255.3	222.9	72.6	71.5	71.2	144.7	145.4	144.5
Massachusetts	723.0	735.4	683.0	127.7	128.4	125.5	360.0	368.2	355.7
Michigan	N.A.	1,132.6	1,117.4						
Minnesota	211.1	206.1	198.3	99.4	98.4	87.5	207.0	209.4	207.4
Mississippi	88.3	88.7	85.2	25.3	25.5	25.8			
Missouri	370.4	373.2	350.1	129.9	130.0	124.6	296.7	303.6	301.8
Montana	17.5	17.5	19.5	23.7	23.8	22.5	37.7	37.2	37.2
Nebraska	55.3	55.2	50.6	43.5	43.5	42.3	91.7	92.4	91.4
Nevada	3.6	3.5	3.4	8.3	8.8	8.7	12.5	11.8	12.1
New Hampshire	79.6	80.1	76.1	10.8	10.7	10.5	29.1	28.8	29.0
New Jersey	757.8	766.3	705.3	140.3	141.0	134.9	277.0	276.3	276.4
New Mexico	13.4	13.4	11.9	16.8	16.8	15.6	35.5	35.5	33.7
New York	1,882.9	1,885.8	1,764.1	488.1	486.9	487.3	1,224.1	1,238.1	1,217.3
North Carolina	410.9	416.6	395.5	60.4	60.8	55.3	165.3	166.3	161.6
North Dakota	6.0	6.0	6.3	15.1	14.9	14.1	36.7	36.9	36.9
Ohio	1,269.8	1,285.0	1,178.2						
Oklahoma	74.4	73.5	67.2	50.1	49.8	49.6	122.6	122.8	123.1
Oregon	151.5	152.9	149.8	49.1	48.5	47.8	104.8	103.8	102.4
Pennsylvania	1,481.8	1,500.8	1,364.3	355.1	352.5	339.6	665.6	678.1	658.8
Rhode Island	143.5	147.6	139.9	15.4	15.5	15.8	50.9	52.5	49.8
South Carolina	213.5	216.6	204.9	27.2	26.4	25.1	86.5	85.1	81.4
South Dakota	11.7	11.6	11.9	11.1	11.1	11.4	36.2	36.2	37.8
Tennessee	254.9	255.7	245.7	60.1	60.1	57.6	163.0	163.3	158.7
Texas	394.3	391.1	345.4	217.1	217.3	216.2	518.5	516.7	503.8
Utah	32.9	30.7	30.7	22.4	22.2	21.5	46.0	46.0	44.6
Vermont	38.9	39.3	34.8	9.1	9.1	9.1	18.2	17.9	18.5
Virginia	238.7	239.1	220.7	82.6	81.9	78.8	175.1	174.4	167.1
Washington	197.0	195.3	182.6	71.4	70.0	66.5	160.6	160.4	157.5
West Virginia	140.7	142.5	131.7	54.8	54.7	51.6	85.9	87.5	84.9
Wisconsin	482.2	457.2	446.1	77.4	79.1	76.9	206.7	211.0	207.2
Wyoming	6.4	6.2	6.3	16.2	16.2	15.5	20.0	19.2	18.7

See footnotes at end of table and explanatory notes, sections G and H.

TABLE 7: Employees in Nonagricultural Establishments by Industry Division  
by State  
(In thousands)

State	Finance			Service			Government		
	1951		1950	1951		1950	1951		1950
	July	June	July	July	June	July	July	June	July
Alabama	17.9	17.7	17.5	54.6	54.2	52.6	110.8	111.5	73.9
Arizona	5.7	5.7	5.3	24.1	24.1	19.1	36.2	36.3	33.8
Arkansas	8.0	8.0	7.8	35.0	35.5	34.9	52.0	52.7	47.6
California	153.6	153.3	143.6	448.0	446.4	436.3	587.2	589.6	505.8
Colorado	15.1	15.0	15.0	48.4	45.8	45.6	72.4	71.8	61.2
Connecticut	37.3	36.9	37.8	80.9	80.1	78.7	65.6	66.3	64.2
Delaware							10.6	10.7	9.5
District of Columbia	23.9	23.4	22.9	58.7	59.3	53.2	280.2	272.4	239.1
Florida	30.8	30.9	30.2	93.0	94.3	88.4	119.4	120.1	111.8
Georgia	25.7	25.4	25.2	75.2	75.4	75.8	132.6	133.3	112.7
Idaho	3.8	3.8	3.9	14.6	14.2	14.5	23.8	24.0	22.7
Illinois	150.6	149.6	148.2	345.6	344.6	337.5	325.5	327.2	298.9
Indiana	36.2	35.8	34.5	91.1	91.6	90.1	138.8	140.5	124.1
Iowa	24.7	24.3	23.6	67.5	68.4	67.1	93.0	94.6	90.7
Kansas	N.A.	18.0	16.5	N.A.	47.9	47.2	80.8	81.6	75.1
Kentucky	15.5	15.5	15.1	56.2	56.6	56.1	84.0	84.8	75.6
Louisiana	20.2	20.1	19.4	69.1	68.7	69.2	93.5	94.2	88.7
Maine	6.8	6.8	6.7	26.0	25.3	26.0	43.8	43.5	37.6
Maryland	31.9	31.2	30.5	78.1	78.6	77.7	103.5	102.1	71.3
Massachusetts	82.9	81.6	78.7	195.3	197.4	193.0	225.5	226.3	204.0
Michigan							227.6	230.0	213.7
Minnesota	30.0	37.1	36.2	97.5	97.6	96.6	110.8	112.1	106.6
Mississippi	7.9	7.9	7.7				62.0	62.9	60.3
Missouri	55.9	55.1	53.7	139.1	138.5	134.4	144.1	144.9	133.9
Montana	4.2	4.2	4.0	20.4	20.4	20.0	27.7	27.9	26.8
Nebraska	17.2	17.2	16.5	39.3	39.7	38.8	61.2	61.7	55.5
Nevada	1.2	1.2	1.2	13.3	12.9	12.9	12.0	12.2	10.4
New Hampshire	4.5	4.5	4.5	21.2	19.2	21.7	19.9	20.1	19.2
New Jersey	60.6	59.9	60.2	173.5	170.6	173.3	180.8	182.1	165.2
New Mexico	3.8	4.1	4.6	23.1	23.1	22.2	33.8	33.8	30.7
New York	393.0	389.3	383.1	792.4	779.1	772.9	685.1	687.2	641.6
North Carolina	22.9	22.6	21.9	86.3	85.6	86.0	105.5	107.0	99.3
North Dakota	4.1	4.1	4.1	12.9	13.0	13.5	29.0	29.3	28.1
Ohio							310.3	312.2	281.2
Oklahoma	18.4	18.4	18.1	51.2	50.9	50.3	104.2	104.8	88.8
Oregon	14.9	14.8	14.9	52.0	51.9	50.6	63.0	63.6	60.8
Pennsylvania	121.6	120.8	117.6	362.5	362.9	360.4	369.7	370.4	328.7
Rhode Island	10.7	10.6	10.5	23.6	23.8	24.1	32.6	32.9	29.5
South Carolina	8.5	8.4	8.4	34.9	35.2	36.0	67.3	67.7	58.2
South Dakota	4.3	4.2	4.1	15.6	15.5	14.4	34.9	35.1	33.3
Tennessee	24.8	24.6	23.2	77.6	77.4	77.5	110.5	110.8	102.5
Texas	78.9	78.0	74.2	240.1	240.7	240.3	295.1	295.8	261.4
Utah	6.6	6.6	6.3	21.7	21.6	20.9	55.2	55.5	42.6
Vermont	2.9	2.9	2.9	12.0	11.9	11.5	14.9	15.1	14.5
Virginia	29.0	28.4	26.0	78.1	78.1	76.6	152.9	153.6	129.2
Washington	27.2	27.0	26.7	81.0	79.9	79.4	144.6	145.2	123.8
West Virginia	9.8	9.7	9.5	41.7	41.9	40.1	55.0	56.0	54.4
Wisconsin	33.5	32.7	31.7	95.9	95.1	95.0	126.1	127.6	120.3
Wyoming	1.9	1.9	2.0	12.6	12.0	12.4	15.2	15.3	14.2

See footnotes at end of table and explanatory notes, sections G and H.

TABLE 7: Employees in Nonagricultural Establishments by Industry Division,  
by State

See explanatory notes, sections G and H.

1/ Revised series; not strictly comparable with previously published data.

2/ Mining combined with construction.

3/ Mining combined with service.

N.A. Not available.

TABLE 8: Employees in Nonagricultural Establishments by Industry Division, Selected Areas  
(In thousands)

AREA	Number of Employees			AREA	Number of Employees		
	1951		1950		1951		1950
	July	June	July		July	June	July
<b>ALABAMA</b>				<b>Washington-Continued</b>			
<u>Birmingham</u>				Manufacturing	26.0	25.8	21.7
Mining	14.6	16.3	18.0	Trans. & Public Util.	41.8	41.2	39.5
Manufacturing	56.2	58.5	56.5	Trade	116.0	115.8	111.5
<b>ARIZONA</b>				Finance	30.9	30.4	29.6
<u>Phoenix</u>				Service 2/ Government	74.4	74.8	73.4
Mining	.1	.1	.1		289.9	282.1	248.8
Manufacturing	11.2	11.6	8.2	<b>FLORIDA</b>			
Trans. & Public Util. 1/	7.6	7.7	7.3	<u>Jacksonville</u>			
Trade	23.8	23.6	21.7	Manufacturing	17.6	17.4	13.9
Finance	3.7	3.7	3.5	Trans. & Public Util.	14.2	14.5	13.7
Service	10.7	10.7	9.4	Trade	30.9	31.0	30.1
<u>Tucson</u>				Finance	5.8	5.7	5.8
Mining	1.7	1.7	1.7	Service 2/ Government	11.7	11.8	11.3
Manufacturing	1.9	2.1	1.8		14.4	14.5	12.8
Trans. & Public Util. 1/	2.9	3.1	2.5	<u>Miami</u>			
Trade	8.1	8.1	7.9	Manufacturing	13.3	14.0	12.9
Finance	1.2	1.2	1.0	Trans. & Public Util.	21.9	21.7	19.2
Service	8.9	9.0	5.3	Trade	53.1	52.4	46.6
<b>ARKANSAS</b>				Finance	8.6	8.4	8.6
<u>Little Rock</u>				Service 2/ Government	27.7	27.4	24.4
Total	64.2	64.3	64.4		16.6	16.6	17.4
Contract Construction	6.3	6.4	6.6	<u>Tampa-St. Petersburg</u>			
Manufacturing	12.0	12.0	11.4	Total	101.3	103.2	98.5
Trans. & Public Util.	6.4	6.5	6.7	Contract Construction	9.3	9.3	9.6
Trade	17.3	17.2	17.5	Manufacturing	19.1	19.2	18.5
Finance	3.5	3.5	3.4	Trans. & Public Util.	9.6	9.6	9.4
Service 2/ Government	8.2	8.3	8.3	Trade	32.0	33.8	31.6
	10.6	10.5	10.6	Finance	5.2	5.1	4.6
				Service 2/ Government	13.3	13.5	12.8
					12.9	12.9	12.2
<b>CALIFORNIA</b>				<b>GEORGIA</b>			
<u>Los Angeles</u>				<u>Atlanta</u>			
Manufacturing	483.2	476.0	408.4	Total	266.1	264.9	253.7
<u>Sacramento</u>				Contract Construction	18.1	18.2	17.4
Manufacturing	8.7	10.0	8.5	Manufacturing	65.0	64.1	59.1
<u>San Diego</u>				Trans. & Public Util.	30.6	30.4	29.1
Manufacturing	38.2	37.7	23.5	Trade	73.1	73.1	71.6
<u>San Francisco-Oakland</u>				Finance	15.7	15.5	15.6
Manufacturing	180.3	174.4	167.1	Service 2/ Government	31.8	32.0	32.6
					31.8	31.6	28.3
<u>San Jose</u>				<u>Savannah</u>			
Manufacturing	31.3	21.0	29.5	Total	40.8	41.1	39.0
				Contract Construction	3.2	3.2	2.2
<b>COLORADO</b>				Manufacturing	12.7	12.6	12.4
<u>Denver</u>				Trans. & Public Util.	6.5	6.8	6.4
Mining	1.0	1.0	1.0	Trade	8.3	8.5	8.5
Contract Construction	19.4	20.3	13.8	Finance	1.2	1.2	1.2
Manufacturing	43.0	42.0	37.3	Service 2/ Government	4.5	4.4	4.2
Trans. & Public Util.	25.8	25.6	24.4		4.4	4.4	4.1
Trade	57.6	57.7	55.8	<b>ILLINOIS</b>			
Finance	10.7	10.6	10.3	<u>Davenport-Rock Island-Moline</u>			
				Manufacturing	46.1	45.7	39.5
<b>DISTRICT OF COLUMBIA</b>				<u>Peoria</u>			
<u>Washington</u>				Manufacturing	N.A.	47.8	44.3
Total	621.9	612.2	568.9				
Contract Construction	42.9	42.1	44.4				

See footnotes at end of table and explanatory notes, sections G, H, and I.

TABLE 8: Employees in Nonagricultural Establishments by Industry Division, Selected Areas  
(In thousands)

AREA	Number of Employees			AREA	Number of Employees		
	1951		1950		1951		1950
	July	June	July		July	June	July
<u>Illinois-Continued</u>				<u>Portland-Continued</u>			
<u>Roskford</u>				Finance	2.5	2.4	2.4
Manufacturing	N.A.	40.5	36.3	Service 2/	8.0	8.0	7.9
				Government	3.4	3.4	3.2
<u>INDIANA</u>				<u>MARYLAND</u>			
<u>Evansville</u>				<u>Baltimore</u>			
Total	61.1	63.0	64.0	Total	521.6	520.0	487.0
Manufacturing	30.1	31.6	32.3	Mining	.5	.6	.5
Nonmanufacturing	31.0	31.4	31.6	Contract Construction	39.0	37.6	36.3
				Manufacturing	191.9	192.4	168.1
<u>Fort Wayne</u>				Trans. & Public Util.	53.9	53.1	53.6
Total	80.9	79.7	75.5	Trade	100.8	101.5	100.6
Manufacturing	43.1	42.1	38.8	Finance	24.3	24.3	23.6
Nonmanufacturing	37.8	37.5	36.7	Service	55.0	54.9	53.6
				Government	56.2	55.6	50.7
<u>Indianapolis</u>				<u>MASSACHUSETTS</u>			
Total	275.4	274.6	250.9	<u>Boston</u>			
Contract Construction	16.6	16.0	14.0	Manufacturing	301.5	303.1	276.0
Manufacturing	112.9	112.9	95.3				
Trans. & Public Util.	25.8	25.3	24.6	<u>Fall River</u>			
Trade	60.0	60.5	58.3	Manufacturing	29.5	30.5	25.1
Finance	14.1	14.0	13.4				
Other-Nonmanufacturing 3/	46.0	45.8	45.4	<u>New Bedford</u>			
				Manufacturing	34.3	36.2	31.9
<u>IOWA</u>							
<u>Des Moines</u>				<u>Springfield-Holyoke</u>			
Manufacturing	20.9	21.1	19.2	Manufacturing	74.0	76.1	72.9
<u>KANSAS</u>				<u>Worcester</u>			
<u>Topeka</u>				Manufacturing	54.6	55.3	50.1
Total	41.1	41.8	38.2				
Mining	.1	.1	.1	<u>MINNESOTA</u>			
Contract Construction	2.0	2.3	1.8	<u>Duluth</u>			
Manufacturing	6.3	6.7	6.4	Total	41.2	41.6	42.4
Trans. & Public Util.	7.3	7.3	6.9	Contract Construction	2.2	2.1	2.3
Trade	8.7	9.0	8.3	Manufacturing	10.3	11.3	11.4
Finance	2.0	2.0	2.0	Trans. & Public Util.	7.4	7.1	7.2
Service	4.4	4.3	4.4	Trade	10.5	10.3	10.8
Government	10.4	10.2	8.6	Finance	1.4	1.4	1.4
				Service 2/	5.3	5.3	5.3
<u>Wichita</u>				Government	4.1	4.1	4.0
Total	101.6	99.6	79.5				
Mining	1.3	1.3	1.3	<u>Minneapolis</u>			
Contract Construction	4.9	4.8	5.3	Total	259.7	260.2	247.3
Manufacturing	44.8	43.0	25.2	Contract Construction	17.0	16.5	14.7
Trans. & Public Util.	7.0	6.9	6.9	Manufacturing	72.1	72.7	66.7
Trade	23.6	23.7	21.7	Trans. & Public Util.	26.6	26.3	24.6
Finance	3.8	3.7	3.7	Trade	75.0	76.1	75.2
Service	9.1	9.1	8.7	Finance	17.4	16.9	16.4
Government	7.2	7.2	6.9	Service 2/	28.5	28.4	28.3
				Government	23.1	23.4	21.4
<u>LOUISIANA</u>							
<u>New Orleans</u>				<u>St. Paul</u>			
Manufacturing	50.3	51.9	46.2	Total	144.9	144.7	141.5
				Contract Construction	7.9	7.7	7.7
<u>MAINE</u>				Manufacturing	41.9	41.7	41.3
<u>Portland</u>				Trans. & Public Util.	21.1	20.6	19.8
Total	48.0	47.4	46.9	Trade	34.6	34.9	34.4
Contract Construction	2.6	2.3	2.3	Finance	8.8	8.6	8.5
Manufacturing	12.9	12.9	12.2	Service 2/	14.6	15.0	14.1
Trans. & Public Util.	5.5	5.5	5.7				
Trade	13.1	12.9	13.2				

See footnotes at end of table and explanatory notes, sections G, H, and I.



TABLE 6: Employees in Nonagricultural Establishments by Industry Division, Selected Areas  
(In thousands)

AREA	Number of Employees			AREA	Number of Employees		
	1951		1950		1951		1950
	July	June	July		July	June	July
Minnesota-Continued				NEW JERSEY			
<u>St. Paul-Continued</u>				<u>Newark-Jersey City</u>			
Government	16.8	16.2	15.7	Manufacturing	359.6	363.6	334.2
MISSISSIPPI				<u>Paterson</u>			
<u>Jackson</u>				Manufacturing	161.9	163.4	145.4
Manufacturing	7.4	7.6	7.8	<u>Perth Amboy</u>			
MISSOURI				Manufacturing	76.0	77.6	74.5
<u>Kansas City (including</u>				<u>Trenton</u>			
Kansas City, Kansas)				Manufacturing	44.4	45.3	44.1
Total	N.A.	340.1	323.4	NEW MEXICO			
Mining	N.A.	.9	.7	<u>Albuquerque</u>			
Contract Construction	N.A.	21.4	16.2	Contract Construction	5.7	5.8	6.2
Manufacturing	N.A.	100.2	92.0	Manufacturing	6.5	6.6	5.1
Trans. & Public Util.	N.A.	43.6	41.0	Trans. & Public Util.	4.9	4.9	4.5
Trade	N.A.	93.5	92.6	Trade	11.5	11.7	11.4
Finance	N.A.	19.5	19.2	Finance	2.0	2.2	2.6
Service	N.A.	39.8	41.0	Service 2/	6.2	6.3	6.2
Government	N.A.	21.2	20.7	NEW YORK			
<u>St. Louis</u>				<u>Albany-Schenectady-Troy 4/</u>			
Manufacturing	207.1	209.4	199.1	Manufacturing	86.4	86.6	75.8
MONTANA				<u>Binghamton 4/</u>			
<u>Great Falls</u>				Manufacturing	36.8	39.1	36.0
Manufacturing	2.8	2.7	3.1	<u>Buffalo 4/</u>			
Trans. & Public Util.	2.5	2.6	2.5	Manufacturing	203.2	203.1	182.1
Trade	5.8	5.8	5.9	<u>Elmira 4/</u>			
Service 5/	3.3	3.3	3.3	Manufacturing	17.2	17.2	15.0
NEBRASKA				<u>New York City</u>			
<u>Omaha</u>				Contract Construction	119.3	116.8	128.8
Total	141.7	141.5	135.1	Manufacturing	963.1	967.7	936.4
Contract Construction	6.9	6.6	6.3	Trade	824.3	838.9	817.3
Manufacturing	32.6	32.5	30.3	<u>Rochester 4/</u>			
Trans. & Public Util.	23.1	23.1	21.9	Manufacturing	108.9	107.0	97.8
Trade	37.4	37.7	36.7	<u>Syracuse 4/</u>			
Finance	10.7	10.6	10.2	Manufacturing	59.5	60.4	50.8
Service 2/	17.1	17.3	16.7	<u>Utica-Rome 4/</u>			
Government	14.0	14.0	12.9	Manufacturing	44.9	45.8	43.4
NEVADA				NORTH CAROLINA			
<u>Reno</u>				<u>Charlotte</u>			
Contract Construction	1.8	1.8	2.3	Contract Construction	10.3	10.5	8.4
Manufacturing 2/	1.7	1.6	1.6	Manufacturing	22.2	22.4	21.0
Trans. & Public Util.	3.1	3.1	3.0	Trans. & Public Util.	10.4	10.6	9.8
Trade	5.0	5.8	5.7	Trade	22.3	22.3	21.7
Finance	.9	.9	.8	Finance	4.5	4.5	4.3
Service	5.4	5.2	5.3	OKLAHOMA			
NEW HAMPSHIRE				<u>Oklahoma City</u>			
<u>Manchester</u>				Total	125.2	124.0	114.3
Total	40.3	40.5	36.6	Mining	5.7	5.7	5.6
Contract Construction	1.6	1.6	1.6				
Manufacturing	20.4	20.7	19.2				
Trans. & Public Util.	2.4	2.3	2.2				
Trade	7.6	7.7	7.6				
Finance	1.6	1.6	1.6				
Service	4.1	4.1	4.0				
Government	2.6	2.6	2.5				

See footnotes at end of table and explanatory notes, sections G, H, and I.

TABLE 8: Employees in Nonagricultural Establishments by Industry Division, Selected Areas  
(In thousands)

AREA	Number of Employees			AREA	Number of Employees		
	1951		1950		1951		1950
	July	June	July		July	June	July
<b>Oklahoma-Continued</b>				<b>Omaha-Continued</b>			
<b>Oklahoma City-Continued</b>				<b>Trans. &amp; Public Util.</b>			
Contract Construction	8.4	8.3	9.8	Trade	16.5	17.0	15.3
Manufacturing	14.0	13.9	13.2	Finance	2.9	2.3	2.7
Trans. & Public Util.	11.3	11.2	10.2	Service	9.5	9.6	9.6
Trade	33.8	33.9	34.9	Government	7.8	7.8	7.8
Finance	6.7	6.7	6.6	<b>Knoxville</b>			
Service	13.5	13.3	13.2	Mining	2.5	2.7	2.5
Government	31.7	31.1	20.9	Manufacturing	41.5	40.3	37.0
<b>Tulsa</b>				Trans. & Public Util.	6.8	7.0	7.2
Total	90.6	90.5	86.8	Trade	21.0	21.2	21.0
Mining	9.7	9.6	8.8	Finance	3.7	3.7	3.6
Contract Construction	5.3	5.6	6.8	Service	9.4	9.4	9.0
Manufacturing	20.9	20.3	17.1	Government	12.9	12.9	12.4
Trans. & Public Util.	11.0	10.9	11.1	<b>Memphis</b>			
Trade	24.1	24.4	23.4	Mining	.4	.4	.4
Finance	4.5	4.5	4.7	Manufacturing	41.1	41.7	39.4
Service	9.5	9.6	9.6	Trans. & Public Util.	15.3	15.2	15.2
Government	5.7	5.7	5.5	Trade	46.7	46.8	44.9
<b>OREGON</b>				Finance	7.5	7.5	6.9
<b>Portland</b>				Service	22.5	22.6	23.0
Manufacturing	60.5	62.2	58.4	Government	19.4	19.3	13.4
<b>PENNSYLVANIA</b>				<b>Nashville</b>			
<b>Philadelphia</b>				Manufacturing	34.3	35.0	33.2
Manufacturing	569.7	582.6	514.4	Trans. & Public Util.	11.4	11.4	11.2
<b>Pittsburgh</b>				Trade	23.7	23.8	23.5
Mining	32.3	32.9	33.6	Finance	6.3	6.1	6.0
Manufacturing	373.2	376.8	338.7	Service	14.1	13.8	14.3
Trans. & Public Util.	76.7	75.9	73.8	Government	13.1	13.1	13.1
Finance	27.3	27.6	26.7	<b>UTAH</b>			
<b>RHODE ISLAND</b>				<b>Salt Lake City</b>			
<b>Providence</b>				Mining	6.0	6.0	5.8
Total	288.2	293.7	275.8	Contract Construction	9.2	8.6	8.4
Contract Construction	14.8	14.4	13.7	Manufacturing	13.6	14.6	13.7
Manufacturing	149.6	153.5	142.9	Trans. & Public Util. 1/	7.3	7.1	6.9
Trans. & Public Util.	13.8	13.3	14.3	Trade	28.4	28.6	27.2
Trade	48.9	50.3	47.0	Finance	5.1	5.0	4.7
Finance	10.6	10.6	10.5	<b>VERMONT</b>			
Service 2/	21.7	22.0	22.0	<b>Burlington</b>			
Government	28.2	29.1	25.4	Manufacturing	5.9	6.0	5.1
<b>SOUTH CAROLINA</b>				<b>WASHINGTON</b>			
<b>Charleston</b>				<b>Seattle</b>			
Manufacturing	8.7	8.7	8.2	Total	268.9	267.3	246.8
Trans. & Public Util.	5.8	4.3	4.2	Contract Construction	13.6	13.5	15.2
<b>Columbia</b>				Manufacturing	72.9	72.2	59.6
Manufacturing	7.3	7.9	7.3	Trans. & Public Util.	29.9	29.1	27.4
<b>SOUTH DAKOTA</b>				Trade	65.8	66.2	64.7
<b>Sioux Falls</b>				Finance	14.6	14.5	14.5
Manufacturing	5.2	5.2	5.3	Service 2/	33.7	33.4	33.4
<b>TENNESSEE</b>				Government	38.4	38.4	32.0
<b>Chattanooga</b>				<b>Spokane</b>			
Mining	.2	.2	.2	Total	67.0	66.9	65.6
Manufacturing	42.0	42.0	39.7	Contract Construction	3.9	4.1	4.3

See footnotes at end of table and explanatory notes, sections G, H, and I.

TABLE 8: Employees in Nonagricultural Establishments by Industry Division, Selected Areas  
(In thousands)

AREA	Number of Employees			AREA	Number of Employees		
	1951		1950		1951		1950
	July	June	July		July	June	July
<u>Washington-Continued</u>				<u>WEST VIRGINIA</u>			
<u>Spokane-Continued</u>				<u>Charleston</u>			
Manufacturing	14.2	14.0	13.3	Total	98.5	98.2	96.8
Trans. & Public Util.	10.5	10.5	10.8	Mining	21.1	21.3	22.0
Trade	18.2	18.2	17.8	Contract Construction	4.1	4.2	6.0
Finance	3.0	2.9	3.1	Manufacturing	28.9	28.6	25.7
Service <sup>2/</sup>	9.6	9.7	9.4	Trans. & Public Util.	9.1	9.1	8.7
Government	7.6	7.5	6.8	Trade	16.6	16.5	16.6
				Finance	3.0	2.7	2.7
<u>Tacoma</u>				Service	7.1	7.1	7.1
Total	72.7	73.3	69.2	Government	8.8	8.8	8.2
Contract Construction	4.6	4.6	5.1				
Manufacturing	18.2	18.9	19.3	<u>WISCONSIN</u>			
Trans. & Public Util.	6.5	6.5	6.4	<u>Milwaukee</u>			
Trade	14.7	14.8	14.5	Manufacturing	196.9	196.6	181.6
Finance	2.7	2.7	2.6				
Service <sup>2/</sup>	7.4	7.1	7.4	<u>Racine</u>			
Government	18.6	18.7	13.9	Manufacturing	24.1	25.1	21.4

See explanatory notes, sections G, H, and I.

1/ Excludes interstate railroads.

2/ Includes mining.

3/ Includes mining, service, and government.

4/ Revised series; not strictly comparable with previously published data.

5/ Includes mining and finance.

TABLE 9: Production Workers in Selected Manufacturing Industries

(In thousands)

Industry	1951		
	July	June	May
<b>FOOD AND KINDRED PRODUCTS:</b>			
Meat packing, wholesale	163.1	160.9	158.9
Prepared meats	34.5	34.0	33.8
Concentrated milk	14.1	14.2	13.5
Ice cream and ices	23.4	22.9	21.2
Flour and meal	27.9	27.3	27.0
Cane-sugar refining	14.2	14.3	14.0
Beet sugar	6.1	6.0	5.8
Confectionery products	52.8	55.4	55.8
Malt liquors	69.7	66.7	62.8
Distilled liquors, except brandy	19.4	18.5	17.3
<b>TEXTILE-MILL PRODUCTS:</b>			
Yarn mills, wool (except carpet), cotton and silk systems	106.8	109.9	111.8
Cotton and rayon broad-woven fabrics	407.1	415.5	405.3
Woolen and worsted fabrics	97.7	101.9	102.8
Full-fashioned hosiery mills	58.4	60.5	63.5
Seamless hosiery mills	49.4	50.1	51.2
Knit underwear mills	33.7	34.1	34.5
Wool carpets, rugs, and carpet yarn	28.7	33.4	35.8
Fur-felt hats and hat bodies	8.0	8.3	8.6
<b>APPAREL AND OTHER FINISHED TEXTILE PRODUCTS:</b>			
Men's dress shirts and nightwear	77.5	81.9	84.7
Work shirts	12.8	13.2	13.1
<b>FURNITURE AND FIXTURES:</b>			
Wood household furniture, except upholstered	100.7	104.3	109.7
Mattresses and bedsprings	26.5	22.4	27.4
<b>CHEMICALS AND ALLIED PRODUCTS:</b>			
Plastics materials	22.9	22.8	22.5
Synthetic rubber	7.5	7.4	7.5
Synthetic fibers	56.5	56.4	56.4
Soap and glycerin	18.6	18.8	19.3
<b>STONE, CLAY, AND GLASS PRODUCTS:</b>			
Glass containers	43.7	44.1	44.1
Pressed and blown glass, not elsewhere classified	27.2	34.0	35.4
Brick and hollow tile	29.5	29.9	29.2
Sewer pipe	9.1	9.0	8.7

See explanatory notes, section A.

TABLE 9: Production Workers in Selected Manufacturing Industries (Continued)

(In thousands)

Industry	1951		
	July	June	May
<b>PRIMARY METAL INDUSTRIES:</b>			
Gray-iron foundries	155.4	161.9	162.6
Malleable-iron foundries	27.5	28.4	28.1
Steel foundries	63.2	63.4	62.2
Primary copper, lead, and zinc	26.5	26.6	26.4
Primary aluminum	10.2	10.3	9.4
Iron and steel forgings	34.3	34.9	34.3
Wire drawing	42.4	44.4	44.1
<b>FABRICATED METAL PRODUCTS (EXCEPT ORDNANCE, MACHINERY, AND TRANSPORTATION EQUIPMENT):</b>			
Cutlery and edge tools	22.9	23.9	24.2
Hand tools, not elsewhere classified, files, hand saws, and saw blades	37.0	38.6	38.9
Hardware, not elsewhere classified	68.6	71.2	71.8
Metal plumbing fixtures and fittings	29.4	30.9	31.1
Oil burners, heating and cooking apparatus, not elsewhere classified	74.2	78.1	79.4
Structural and ornamental products	64.0	64.9	64.4
Boiler shop products	57.0	53.4	56.1
Metal stampings	107.2	116.6	119.7
<b>MACHINERY (EXCEPT ELECTRICAL):</b>			
Tractors	71.1	73.7	72.5
Farm machinery, except tractors	76.1	75.7	75.8
Machine tools	60.5	59.6	58.6
Metalworking machinery, not elsewhere classified	42.1	42.9	41.3
Cutting tools, jigs, fixtures, etc.	91.5	92.1	90.8
Computing and related machines	41.8	41.7	41.5
Typewriters	21.6	21.8	21.4
Refrigeration machinery	89.2	99.0	101.9
Ball and roller bearings	46.1	47.4	46.6
Machine shops	46.8	47.0	46.4
<b>ELECTRICAL MACHINERY:</b>			
Radios and related products	144.3	148.7	157.0
Telephone and telegraph equipment and communication equipment, not elsewhere classified	41.5	40.4	39.3
<b>TRANSPORTATION EQUIPMENT:</b>			
Locomotives and parts	16.5	25.2	24.9
Railroad and streetcars	33.3	35.9	35.1
<b>MISCELLANEOUS MANUFACTURING INDUSTRIES:</b>			
Silverware and plated ware	15.6	16.3	16.9

See explanatory notes, section A.

## EXPLANATORY NOTES

**Section A. Scope of the BLS Employment Series** The Bureau of Labor Statistics publishes each month the number of employees in all nonagricultural establishments and in the 8 major industry divisions; mining, contract construction, manufacturing, transportation and public utilities, trade, finance, service, and government. Both all-employee and production-worker employment series are also presented for 21 major manufacturing groups, over 100 separate manufacturing industries, and the durable and nondurable goods subdivisions. Within nonmanufacturing, total employment information is published for over 30 series. Production worker employment is also presented for most of the industry components of the mining division.

Table 9 shows production-worker data for 69 new industries. These series are based on the levels of employment indicated by the 1947 Census of Manufactures and have been carried forward by use of the employment changes reported by the BLS monthly sample of cooperating establishments. These series are not comparable with the data shown in table 3 since the latter are adjusted to bench-mark levels indicated by social insurance agency data through 1947.

Hours and earnings information for manufacturing and selected nonmanufacturing industries are published monthly in the Hours and Earnings Industry Report and in the Monthly Labor Review.

**Section B. Definition of Employment** - For privately operated establishments in the nonagricultural industries the BLS employment information covers all full- and part-time employees who were on the pay roll, i.e., who worked during, or received pay for, the pay period ending nearest the 15th of the month. For Federal establishments the employment period relates to the pay period ending prior to the first of the month; in State and local governments, during the pay period ending on or just before the last of the month. Proprietors, self-employed persons, domestic servants, unpaid family workers, and members of the armed forces are excluded from the employment information.

**Section C. Comparability With Other Employment Data** - The Bureau of Labor Statistics employment series differ from the Monthly Report on the Labor Force in the following respects: (1) The BLS series are based on reports from cooperating establishments, while the MRLF is based on employment information obtained from household interviews; (2) persons who worked in more than one establishment during the reporting period would be counted more than once in the BLS series, but not in the MRLF; (3) the BLS information covers all full- and part-time wage and salary workers in private nonagricultural establishments who worked during, or received pay for, the pay period ending nearest the 15th of the month; in Federal establishments during the pay period ending just before the first of the month; and in State and local government during the pay period ending on or just before the last of the month, while the MRLF series relates to the calendar week which contains the 8th day of the month; (4) proprietors, self-employed, domestic servants, and unpaid family workers are excluded from the BLS but not the MRLF series.

**Section D. Methodology** - Changes in the level of employment are based on reports from a sample group of establishments, inasmuch as full coverage is prohibitively costly and time-consuming. In using a sample, it is essential that a complete count or "bench mark" be established from which the series may be carried forward. Briefly, the BLS computes employment data as follows: first, a bench mark or level of employment is determined; second, a sample of establishments is selected; and third, changes in employment indicated by this reporting sample are applied to the bench mark to determine the monthly employment between bench-mark periods. An

illustration of the estimation procedure used in those industries for which both all-employee and production-worker employment information is published follows: The latest production-worker employment bench mark for a given industry was 50,000 in January. According to the BLS reporting sample, 60 establishments in that industry employed 25,000 workers in January and 26,000 in February, an increase of 4 percent. The February figure of 52,000 would be derived by applying the change for identical establishments reported in the January-February sample to the bench mark:

$$50,000 \times \frac{26,000}{25,000} \text{ (or } 1.04) = 52,000$$

The estimated all-employee level of 65,000 for February is then determined by using that month's sample ratio (.800) of production workers to total employment

$$\frac{52,000}{.800} \text{ (or multiplied by } 1.25) = 65,000.$$

When a new bench mark becomes available, employment data prepared since the last bench mark are reviewed to determine if any adjustment of level is required. In general, the month-to-month changes in employment reflect the fluctuations shown by establishments reporting to the BLS, while the level of employment is determined by the bench mark.

The pay-roll index is obtained by dividing the total weekly pay roll for a given month by the average weekly pay roll in 1939. Aggregate weekly pay rolls for all manufacturing industries combined are derived by multiplying gross average weekly earnings by production-worker employment.

Section E. Sources of Sample Data - Approximately 143,000 cooperating establishments furnish monthly employment and pay-roll schedules, by mail, to the Bureau of Labor Statistics. In addition, the Bureau makes use of data collected by the Interstate Commerce Commission, the Civil Service Commission, and the Bureau of the Census.

APPROXIMATE COVERAGE OF MONTHLY SAMPLE USED IN  
BLS EMPLOYMENT AND PAY-ROLL STATISTICS

Division or industry	Number of establishments	Employees	
		Number in sample	Percent of total
Mining	3,000	467,000	50
Contract construction	19,300	539,000	26
Manufacturing	39,000	9,092,000	64
Transportation and public utilities:			
Interstate railroads (ICC)	--	1,329,000	98
Rest of division (BLS)	12,500	1,309,000	51
Trade	58,100	1,676,000	18
Finance	7,900	367,000	20
Service:			
Hotels	1,300	144,000	33
Laundries and cleaning and dyeing plants	1,800	97,000	20
Government:			
Federal (Civil Service Commission)	--	1,939,000	100
State and local (Bureau of Census - quarterly)	--	2,450,000	62

Section F. Sources of Bench-Mark Data - Reports from Unemployment Insurance Agencies presenting (1) employment in firms liable for contributions to State unemployment compensation funds, and (2) tabulations from the Bureau of Old-Age and Survivors Insurance on Employment in firms exempt from State unemployment insurance laws because of their small size comprise the basic sources of bench-mark data for nonfarm employment. Most of the employment data in this report have been adjusted to levels indicated by these sources for 1947. Special bench marks are used for industries not covered by the Social Security program. Bench marks for State and local government are based on data compiled by the Bureau of the Census, while information on Federal Government employment is made available by the U. S. Civil Service Commission. The Interstate Commerce Commission is the source for railroads.

Bench marks for production-worker employment are not available on a regular basis. The production-worker series are, therefore, derived by applying to all-employee bench marks the ratio of production-worker employment to total employment, as determined from the Bureau's industry samples.

Section G. Industrial Classification - In the BLS employment and hours and earnings series, reporting establishments are classified into significant economic groups on the basis of major postwar product or activity as determined from annual sales data. The following references present the industry classification structure currently used in the employment statistics program.

- (1) For manufacturing industries - Standard Industrial Classification Manual; Vol. I, Manufacturing Industries, Bureau of the Budget, November 1945;
- (2) For nonmanufacturing industries - Industrial Classification Code, Federal Security Agency Social Security Board, 1942.

Section H. State Employment - State data are collected and prepared in cooperation with various State Agencies as indicated below. The series have been adjusted to recent data made available by State Unemployment Insurance Agencies and the Bureau of Old-Age and Survivors Insurance. Since some States have adjusted to more recent bench-marks than others, and because varying methods of computation are used, the total of the State series differs from the national total. A number of States also make available more detailed industry data and information for earlier periods which may be secured directly upon request to the appropriate State Agency.

The following publications are available upon request from the BLS Regional Offices or the Bureau's Washington Office:

Nonagricultural Employment, by State, 1947-48-49;

Employment in Manufacturing Industries, by State, 1947-48-49.



COOPERATING STATE AGENCIES

Alabama - Department of Industrial Relations, Montgomery 5.  
Arizona - Unemployment Compensation Division, Employment Security Commission,  
Phoenix.  
Arkansas - Employment Security Division, Department of Labor, Little Rock.  
California - Division of Labor Statistics and Research, Department of Industrial  
Relations, San Francisco 1.  
Colorado - Department of Employment Security, Denver 2.  
Connecticut - Employment Security Division, Department of Labor, Hartford 5.  
Delaware - Federal Reserve Bank of Philadelphia, Philadelphia 1, Pennsylvania.  
District of Columbia - U. S. Employment Service for D. C. Washington 25.  
Florida - Unemployment Compensation Division, Industrial Commission, Tallahassee.  
Georgia - Employment Security Agency, Department of Labor, Atlanta 3.  
Idaho - Employment Security Agency, Boise.  
Illinois - Division of Placement and Unemployment Compensation, Department of Labor,  
Chicago 54.  
Indiana - Employment Security Division, Indianapolis 9.  
Iowa - Employment Security Commission, Des Moines 8.  
Kansas - Employment Security Division, State Labor Department, Topeka.  
Kentucky - Bureau of Employment Security, Department of Economic Security, Frankfort.  
Louisiana - Division of Employment Security, Department of Labor, Baton Rouge 4.  
Maine - Employment Security Commission, Augusta.  
Maryland - Department of Employment Security, Baltimore 1.  
Massachusetts - Division of Statistics, Department of Labor and Industries,  
Boston 10.  
Michigan - Employment Security Commission, Detroit 2.  
Minnesota - Division of Employment and Security, St. Paul 1.  
Mississippi - Employment Security Commission, Jackson.  
Missouri - Division of Employment Security, Department of Labor and Industrial  
Relations, Jefferson City.  
Montana - Unemployment Compensation Commission, Helena.  
Nebraska - Division of Employment Security, Department of Labor, Lincoln 1.  
Nevada - Employment Security Department, Carson City.  
New Hampshire - Division of Employment Security, Department of Labor, Concord.  
New Jersey - Department of Labor and Industry, Trenton 8.  
New Mexico - Employment Security Commission, Albuquerque.  
New York - Bureau of Research and Statistics, Division of Placement and Unemployment  
Insurance, New York Department of Labor, 1440 Broadway, New York 18.  
North Carolina - Department of Labor, Raleigh.  
North Dakota - Unemployment Compensation Division, Bismarck.  
Ohio - Bureau of Unemployment Compensation, Columbus 16.  
Oklahoma - Employment Security Commission, Oklahoma City 2.  
Oregon - Unemployment Compensation Commission, Salem.  
Pennsylvania - Federal Reserve Bank of Philadelphia, Philadelphia 1 (mfg.); Bureau of  
Research and Information, Department of Labor and Industry,  
Harrisburg (nonmfg.).  
Rhode Island - Department of Labor, Providence 2.  
South Carolina - Employment Security Commission, Columbia 10.  
South Dakota - Employment Security Department, Aberdeen.  
Tennessee - Department of Employment Security, Nashville 3.  
Texas - Employment Commission, Austin 19.  
Utah - Department of Employment Security, Industrial Commission, Salt Lake City 13.  
Vermont - Unemployment Compensation Commission, Montpelier.  
Virginia - Division of Research and Statistics, Department of Labor and Industry,  
Richmond 19.

Washington - Employment Security Department, Olympia.  
West Virginia - Department of Employment Security, Charleston.  
Wisconsin - Industrial Commission, Madison 3.  
Wyoming - Employment Security Commission, Casper.

Section I. Area Employment - Figures on area employment are prepared by cooperating State agencies. The methods of adjusting to bench marks and of making computations used to prepare State employment are also applied in preparing area information. Hence, the appropriate qualifications should also be observed. For a number of areas, data in greater industry detail and for earlier periods can be obtained by writing directly to the appropriate State agency.

#### GLOSSARY

All Employees or Wage and Salary Workers - In addition to production and related workers as defined elsewhere, includes workers engaged in the following activities: executive, purchasing, finance; accounting, legal, personnel (including cafeterias, medical, etc.), professional and technical activities, sales, sales-delivery, advertising, credit collection, and in installation and servicing of own products, routine office functions, factory supervision (above the working foreman level). Also includes employees on the establishment pay roll engaged in new construction and major additions or alterations to the plant who are utilized as a separate work force (force-account construction workers).

Continental United States - Covers only the 48 States and the District of Columbia.

Contract Construction - Covers only firms engaged in the construction business on a contract basis for others. Force-account construction workers, i.e., hired directly by and on the pay rolls of Federal, State, and local government, public utilities, and private establishments, are excluded from contract construction and included in the employment for such establishments.

Defense Agencies - Covers civilian employees of the Department of Defense (Secretary of Defense; Army, Air Force, and Navy), National Advisory Committee for Aeronautics, The Panama Canal, Selective Service System, National Security Resources Board, National Security Council.

Durable Goods - The durable goods subdivision includes the following major groups: ordnance and accessories; lumber and wood products (except furniture); furniture and fixtures; stone, clay, and glass products; primary metal industries; fabricated metal products (except ordnance, machinery, and transportation equipment); machinery (except electrical); electrical machinery; transportation equipment; instruments and related products; and miscellaneous manufacturing industries.

Federal Government - Executive Branch - Includes Government corporations (including Federal Reserve Banks and mixed-ownership banks of the Farm Credit Administration) and other activities performed by Government personnel in establishments such as navy yards, arsenals, hospitals, and on force-account construction. Data, which are based mainly on reports to the Civil Service Commission, are adjusted to maintain continuity of coverage and definition with information for former periods.

Finance - Covers establishments operating in the fields of finance, insurance, and real estate; excludes the Federal Reserve Banks and the mixed-ownership banks of the Farm Credit Administration which are included under Government.

Government - Covers Federal, State, and local governmental establishments performing legislative, executive, and judicial functions, as well as all government-operated establishments and institutions (arsenals, navy yards, hospitals, etc.), government corporations, and government force-account construction. Fourth class postmasters are excluded from table 2, because they presumably have other major jobs; they are included, however, in table 6. State and local government employment excludes as nominal employees paid volunteer firemen, employees hired to conduct elections, and elected officials of small local government.

Indexes of Manufacturing Production-Worker Employment - Number of production workers expressed as a percentage of the average employment in 1939.

Indexes of Manufacturing Production-Worker Weekly Pay Rolls - Production-worker weekly pay rolls expressed as a percentage of the average weekly pay roll for 1939.

Manufacturing - Covers only privately-operated establishments; governmental manufacturing operations such as arsenals and navy yards are excluded from manufacturing and included with government.

Mining - Covers establishments engaged in the extraction from the earth of organic and inorganic minerals which occur in nature as solids, liquids, or gases; includes various contract services required in mining operations, such as removal of overburden, tunnelling and shafting, and the drilling or acidizing of oil wells; also includes ore dressing, beneficiating, and concentration.

Nondurable Goods - The nondurable goods subdivision includes the following major groups: food and kindred products; tobacco manufactures; textile-mill products; apparel and other finished textile products; paper and allied products; printing, publishing, and allied industries; chemicals and allied products; products of petroleum and coal; rubber products; and leather and leather products.

Pay Rolls - Private pay rolls represent weekly pay rolls of both full- and part-time production and related workers who worked during, or received pay for, any part of the pay period ending nearest the 15th of the month, before deductions for old-age and unemployment insurance, group insurance, withholding tax, bonds, and union dues; also, includes pay for sick leave, holidays, and vacations taken. Excludes cash payments for vacations not taken, retroactive pay not earned during period reported, value of payments in kind, and bonuses, unless earned and paid regularly each pay period. Federal civilian pay rolls cover the working days in the calendar month.

Production and Related Workers - Includes working foremen and all nonsupervisory workers (including lead men and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, watchman services, products development, auxiliary production for plant's own use (e.g., power plant), and record-keeping and other services closely associated with the above production operations.

Service - Covers establishments primarily engaged in rendering services to individuals and business firms, including automobile repair services. Excludes all government-operated services such as hospitals, museums, etc., and all domestic service employees.

Trade - Covers establishments engaged in wholesale trade, i.e., selling merchandise to retailers, and in retail trade, i.e., selling merchandise for personal or household consumption, and rendering services incidental to the sales of goods.

Transportation and Public Utilities - Covers only privately-owned and operated enterprises engaged in providing all types of transportation and related services; telephone, telegraph, and other communication services; or providing electricity, gas, steam, water, or sanitary service. Government operated establishments are included under government.

Washington, D. C. - Data for the executive branch of the Federal Government also include areas in Maryland and Virginia which are within the metropolitan area, as defined by the Bureau of the Census.