

EMPLOYMENT and payrolls

**DETAILED REPORT
JANUARY 1951**

**UNITED STATES DEPARTMENT OF LABOR
Maurice J. Tobin - Secretary
BUREAU OF LABOR STATISTICS
Ewan Clague - Commissioner**

IMPORTANT NOTICE

Information on total employment in two industries of the Transportation and Public Utilities industry division, "Gas Utilities" and "Electric Light and Gas Utilities Combined," is presented for the first time in Table 2 on page A:4. A summary table showing the series from January 1950 to date is available upon request.

March 30, 1951

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

EMPLOYMENT AND PAY ROLLS

Detailed Report

January 1950

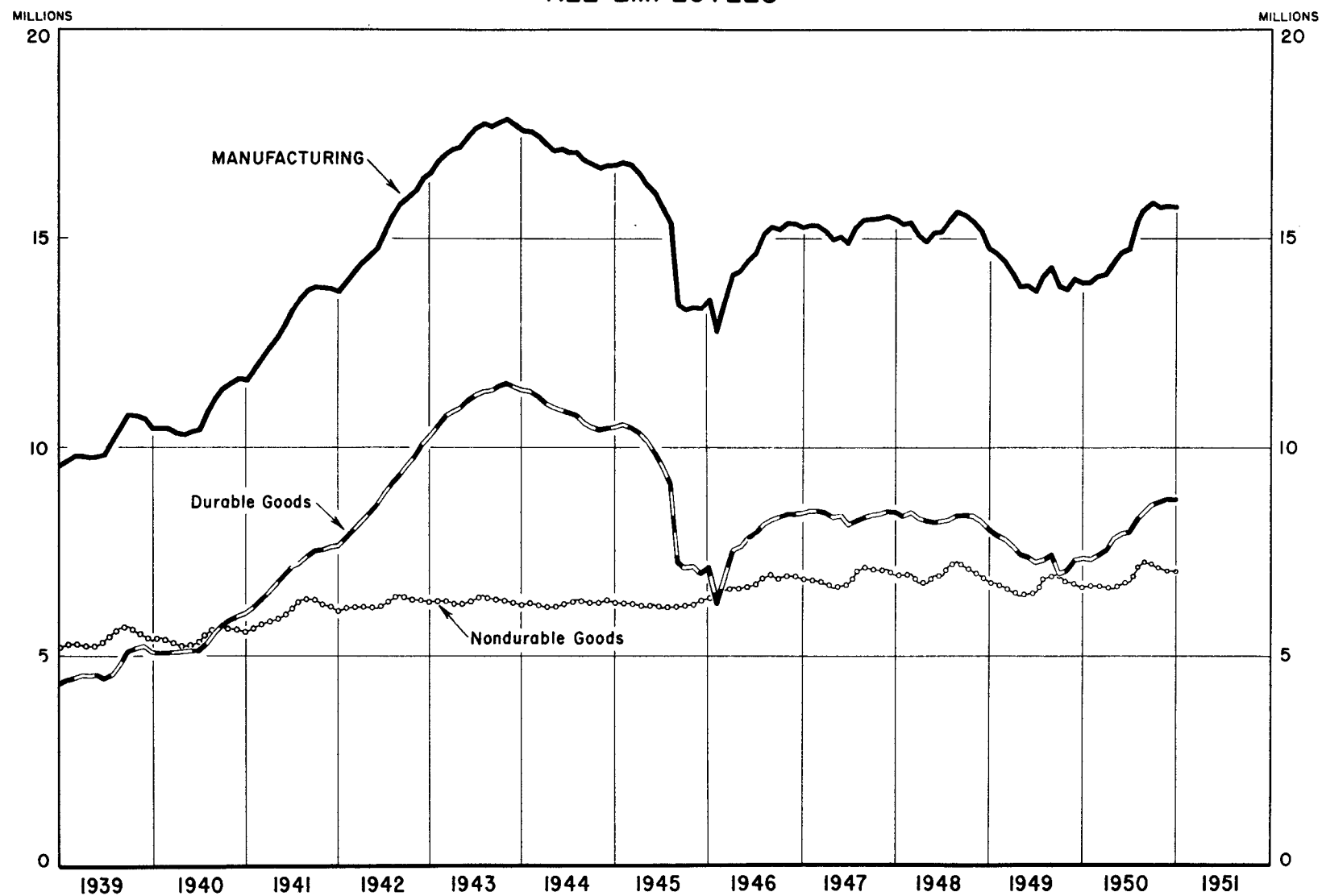
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EMPLOYMENT IN MANUFACTURING INDUSTRIES ALL EMPLOYEES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

PETROLEUM REFINING

. . . employment expected to rise.

The petroleum refining industry was operating at record levels at the beginning of 1951, turning unprecedented quantities of crude petroleum into useable end-products such as gasoline, kerosene, fuel oil, and other basic products. The Nation's 370 refineries employed more than 200,000 wage and salary workers, and further increases in employment are expected. This industry is of particular current significance due to its vital importance in the mobilization effort. In addition to a growing demand from the armed forces, the industry must be able to supply a greatly stepped-up industrial machine and unusually heavy domestic transportation requirements. During 1950, refinery output and domestic consumption of petroleum products broke all previous records by a wide margin. Yet, stocks of refined products were growing in anticipation of still greater civilian and defense needs, and plans were being made to expand the industry's capacity further.

Recent Employment and Production Trends

Employment in refining rose steadily between 1939 and 1949 with the exception of minor fluctuations during World War II. In the last quarter of 1949, the trend was briefly interrupted by a moderate downward movement which reached a low of 186,000 in April 1950. By January 1951, employment was back to 202,000, not far below the all-time peak of 205,000 reached in August 1948, and double the 1939 level (see Table 1).

Both refinery production and capacity have increased steadily over the past decade. During 1950, crude runs to stills (the amount of crude petroleum that entered refineries for processing) and refinery capacity reached record levels. Between 1939 and 1950, crude runs increased about 70 percent; and from the end of World War II through 1950, they rose nearly 25 percent.

As of January 1, 1951, operating capacity of the Nation's refineries was estimated at about 6,500,000 barrels of crude oil daily and the industry had another 340,000 barrels daily capacity which was shut down, according to reports of the U. S. Bureau of Mines. Much of this shut-down capacity was in small or older and less efficient plants. In addition, an estimated 145,000 barrels daily of new capacity was under construction (see Table 2).

Factors Influencing Recent Trends

Many factors have contributed to the rapid growth of the petroleum industry. Although population growth has contributed to rising demand, it has been less important than the intensified use of petroleum in our

Table 1
EMPLOYMENT IN PETROLEUM REFINING INDUSTRY, 1939-1950
(in thousands)

<u>Period</u>	<u>All Employees</u>	<u>Production Workers</u>
1939	103.7	73.2
1940	111.0	79.1
1941	121.1	88.4
1942	129.6	99.2
1943	132.6	105.2
1944	145.5	110.0
1945	159.6	126.4
1946	173.5	134.8
1947	189.3	141.5
1948	199.1	148.9
1949	198.7	148.8
1950 January	195.4	145.4
February	195.1	144.0
March	194.8	142.8
April	185.7	135.6
May	186.2	136.1
June	187.8	137.8
July	189.0	138.5
August	200.5	147.4
September	198.1	144.6
October	199.3	146.5
November	201.5	147.7
December	201.6	147.5
1951 January	201.8	147.3

Table 2
REFINERY CAPACITY AND PRODUCTION
(thousands of barrels daily)

<u>Year</u>	<u>Capacity, operating, January 1</u>	<u>Crude runs to stills (average for year)</u>
1939	3,933,785	3,391,000
1940	4,196,694	3,536,000
1941	4,180,588	3,861,000
1942	4,496,843	3,655,000
1943	4,409,013	3,917,000
1944	4,709,382	4,551,000
1945	5,077,690	4,711,000
1946	5,086,165	4,740,000
1947	5,336,399	5,075,000
1948	5,825,566	5,549,000
1949	6,230,505	5,327,000
1950	6,222,998	5,739,000
1951	6,500,000 ^p	6,148,000*

^p Preliminary

* Estimated by the Bureau of Mines

Source: Bureau of Mines, U. S. Department of the Interior.

economy. Probably the most important single element has been the rapid increase in the number of motor vehicles. Another factor of great importance has been the increased demand for heating fuels for use in homes and buildings and for industrial heating and power generation. The demand for aviation gasoline has also risen rapidly over the past ten years. In addition, there has been a steady rise in the number of tractors in use on farms, in the amount of asphalt needed for road construction, and in the number of Diesel locomotives.

During World War II, demand reached unprecedented heights; vast quantities of petroleum products were required by the Armed Forces and by war industries. Following the war, a further sharp increase in demand occurred. During 1947 and 1948, domestic consumption exceeded all previous records and many in the industry expected demand to rise even further in 1949. The industry had been caught with insufficient stocks towards the end of 1947, creating temporary shortages in some petroleum products. As a result, production in 1948 was permitted to out-strip demand, thus rapidly building up stocks of refined products. New refinery production records were established. By December the industry's operating ratio had climbed to 97.7 percent of total installed capacity.

In 1949, however, demand fell off, chiefly because of an 11 percent decline in exports of refined products. A trend has developed towards heavier imports and lower exports. In 1939, exports accounted for 13 percent of total output; in 1949 for only 5 percent. While domestic demand actually increased in 1949, the increase was much less than had been generally expected. As the year passed, stocks continued to rise while production and operating ratios were lowered. Production generally exceeded demand until the last few months in the year. Even then, an unusually mild winter caused a lower demand for heating fuels than had been expected.

The lower level of refinery activity in the latter part of 1949 and in the first half of 1950 reflected efforts to reduce refinery stocks, and expectations that demand would tend to level off somewhat. However, a considerable part of the fall in refinery employment in the summer of 1950 is attributable to a strike in one of the larger refineries.

In mid-1950, this downward trend was reversed and employment, production, and stocks of refined products began to climb. Operating ratios were increased. Demand turned up sharply once more. The advent of the Korean War, the quickened pace of mobilization, and heavier defense orders made it necessary to revise estimates of future requirements. It was felt safer to maintain larger stocks of refined and crude oils. During 1950, total demand rose 11 percent over 1949.

Prospective Demand for Petroleum Products

The Bureau of Mines forecasts a demand in 1951 of 2,614 million barrels, including exports.^{1/} The estimate for the first half of 1951 of 1,275 million barrels, 7 percent greater than the comparable period of 1950, is believed to approximate actual requirements, according to the Bureau of Mines. In the light of current developments, the estimate for the second half of 1951 may be understated. All indications point to much higher demand over the next few years. Both the needs of our military forces and of defense production are expected to expand. Meanwhile, domestic requirements are growing, particularly for heating fuels and gasoline.

New Capacity Being Added

During the past four years, the refining industry has been undergoing a period of rapid expansion, particularly in 1948 and 1949 when new construction records were set. This expansion of capacity has occurred through the construction of new plants, additions to existing plants, and the modernization of existing facilities. Construction and improvements will continue to be substantial in 1951 and 1952. While much of the increase in capacity will be achieved by additions and improvements, a substantial program for new plant construction seems essential to meet the expected growth in demand during the next few years.

Much of the present building program consists of new cracking units for producing regular and higher octane gasoline. Other construction is calculated to serve the synthetic rubber industry and to increase returns of kerosene and fuel oil. New facilities are being built in Texas at Port Arthur, Taylor, Baytown, Houston, Tyler, and Abilene. Sizeable refinery construction is also taking place in Cleveland, Ohio, and Perth Amboy, New Jersey. Superior, Wisconsin, and Portland, Oregon, are getting new refineries. Other points of refinery construction include Lake Charles, and Chalmette, Louisiana; Neodesha and Wichita, Kansas; Ponca City and Cleveland, Oklahoma; and Wood River, Illinois.

Relation of Capacity to Employment

Refinery employment is more closely related to changes in operating capacity than to fluctuations in output, since individual refinery units may be operated at widely varying rates without greatly affecting the number of workers needed. Processing jobs involve mainly tending equipment, which requires a relatively fixed number of workers; while maintenance jobs, which form the largest segment of employment, also tend to be stable in

^{1/} Monthly Petroleum Forecast No. 185, United States Department of the Interior, Bureau of Mines.

comparison to the rate of production since such work must continue as long as the refinery is in operation. Employment in administrative, technical, and clerical jobs varies even less. Hence, growth of refinery employment will depend largely upon additions to capacity through new construction. Although long-run production and employment trends move together, in the short-run there is less correlation between the two.

Employment Outlook

The rising demand for petroleum products and increasing capacity indicate that new employment records will be set in the industry in 1951 and 1952. In addition to increasing employment, there will be many job openings resulting from the need to replace workers who die, retire, and transfer to other industries. Labor turnover rates in refining are among the lowest in industry. Both accessions and separations were less than a fourth as high in 1950 as the average for all manufacturing industries.

Most new plant workers will start as laborers, since the usual practice in refineries is to fill the more skilled jobs by promoting from within. There will also be opportunities in technical jobs, especially for chemists, chemical engineers, mechanical engineers, and laboratory technicians. Refinery stillmen, who have the responsibility of running the various distillation and cracking units, treaters, who operate purification units, and engineers have been placed on the Department of Labor's List of Critical Occupations.

Refineries are located with reference to two factors: proximity to markets and nearness to the supply of crude petroleum (near oil fields, at the terminals of oil pipelines, at deep water ports where tankers can dock). New jobs will open up at the new refineries being built at locations listed above. The bulk of present refinery employment is concentrated in the Gulf Coast of Texas and Louisiana, California, the inland areas of Texas and Oklahoma, the Philadelphia area, the New Jersey Coast around Bayonne, the Chicago area, and Kansas.

Earnings and Working Conditions

Earnings in petroleum refining are among the highest in industry. In December 1950, production workers in petroleum refining earned, on the average, \$82.05 for a workweek of 40.7 hours. In the same month, the average for all manufacturing industries was \$63.80 for 41.4 hours of work. Working conditions in refineries compare favorably with those in manufacturing industry generally. Most refinery jobs do not require great physical effort. Some workers, however, climb stairs and ladders to considerable heights in the course of their duties. Others work in hot places or are exposed to unpleasant odors. Refineries are relatively safe places in which to work; accident frequency is barely half the average for manufacturing as a whole. Because refineries operate 24 hours a day, 7 days a week, many of the process workers are on night shifts and many work on week ends. Plant jobs in refineries are filled almost exclusively by men; there are jobs for women in the laboratories and offices. There is little seasonal variation in refinery employment; nearly all the workers have year-round jobs (see table 3).

Table 3
EARNINGS AND HOURS OF PRODUCTION WORKERS

Period	All manufacturing industries	Petroleum refining		
	Average weekly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
Average 1947	\$49.97	\$62.95	40.2	\$1.566
1948	54.14	72.06	40.3	1.788
1949	54.92	75.33	40.2	1.874
<u>1950</u>				
January	56.29	77.41	40.7	1.902
February	56.37	78.84	39.6	1.890
March	56.53	74.82	39.6	1.891
April	56.93	77.11	40.5	1.904
May	57.54	75.73	39.9	1.898
June	58.85	76.82	40.2	1.911
July	59.21	78.93	41.0	1.925
August	60.32	75.29	39.4	1.911
September	60.68	80.45	41.6	1.934
October	61.99	80.93	41.1	1.969
November	62.38	81.80	40.8	2.005
December	63.80	82.05	40.7	2.016

EMPLOYMENT AND PAY ROLLS

Detailed Report

January 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 con- struction	Manufac- turing	Transporta- tion and public utilities	Trade	Finance	Service	Govern- ment
<u>Annual average:</u>									
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	4,622
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
<u>1949</u>									
Nov..	42,784	917	2,244	13,807	3,892	9,607	1,766	4,768	5,783
Dec..	43,694	940	2,088	14,031	3,930	10,156	1,770	4,738	6,041
<u>1950</u>									
Jan..	42,125	861	1,919	13,980	3,869	9,246	1,772	4,701	5,777
Feb..	41,661	595	1,861	13,997	3,841	9,152	1,777	4,696	5,742
Mar..	42,295	938	1,907	14,103	3,873	9,206	1,791	4,708	5,769
Apr..	42,926	939	2,076	14,162	3,928	9,346	1,803	4,757	5,915
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	15,683	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..	46,601	938	2,393	15,785	4,125	10,459	1,830	4,695	6,376
<u>1951</u>									
Jan..	45,254	933	2,278	15,768	4,072	9,616	1,833	4,666	6,088

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			1949
	January	December	November	January	December
TOTAL	45,254	46,601	45,873	42,125	43,694
MINING	933	938	938	861	940
Metal mining	103.9	103.7	102.5	97.7	96.6
Anthracite	73.3	73.2	74.3	75.6	76.3
Bituminous coal	402.1	405.0	404.3	347.7	419.7
Crude petroleum and natural gas production	256.4	256.8	254.8	251.1	253.4
Nonmetallic mining and quarrying	97.0	98.9	101.9	88.9	93.6
CONTRACT CONSTRUCTION	2,278	2,393	2,571	1,919	2,088
NONBUILDING CONSTRUCTION	382	428	505	327	378
Highway and street	139.8	164.9	208.6	117.1	147.7
Other nonbuilding construction	242.3	262.6	296.3	209.6	230.7
BUILDING CONSTRUCTION	1,896	1,965	2,066	1,592	1,710
GENERAL CONTRACTORS	805	838	892	663	733
SPECIAL-TRADE CONTRACTORS	1,091	1,127	1,174	929	977
Plumbing and heating	285.8	289.7	294.0	249.7	254.3
Painting and decorating	124.3	133.4	147.4	97.6	113.2
Electrical work	137.7	139.6	138.7	119.5	125.1
Other special-trade contractors	542.9	563.9	593.9	462.3	484.2
MANUFACTURING	15,768	15,785	15,765	13,980	14,031
DURABLE GOODS	8,734	8,716	8,664	7,342	7,303
NONDURABLE GOODS	7,034	7,069	7,101	6,638	6,728
TRANSPORTATION AND PUBLIC UTILITIES	4,072	4,125	4,123	3,869	3,930
Transportation	2,859	2,908	2,911	2,676	2,732
Interstate railroads	1,426	1,460	1,465	1,316	1,333
Class I railroads	1,253	1,277	1,292	1,148	1,149
Local railways and bus lines	145	145	145	153	154
Trucking and warehousing	619	622	617	540	566
Other transportation and services	669	681	684	667	679
Air transportation (common carrier)	75.1	74.6	74.2	74.5	75.2
Communication	668	670	664	657	660
Telephone	618.6	620.4	614.8	609.1	611.7
Telegraph	48.3	48.6	48.0	47.1	47.7

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			1949
	January	December	November	January	December
TRANSPORTATION AND PUBLIC UTILITIES (Continued)					
Other public utilities	545	547	548	536	538
Gas and electric utilities	520.9	522.5	523.5	511.5	513.0
Electric light and power utilities	231.7	232.6	233.2	232.0	232.7
Gas utilities*	116.6	117.4	117.6	110.9	*
Electric light and gas utilities combined*	172.6	172.5	172.7	168.6	*
Local utilities, not elsewhere classified	24.0	24.6	24.7	24.8	24.6
TRADE	9,616	10,459	9,896	9,246	10,156
Wholesale trade	2,592	2,619	2,618	2,511	2,542
Retail trade	7,024	7,840	7,278	6,735	7,614
General merchandise stores	1,477	2,063	1,654	1,392	1,987
Food and liquor stores	1,242	1,262	1,242	1,187	1,217
Automotive and accessories dealers	742	753	746	701	717
Apparel and accessories stores	529	644	565	513	632
Other retail trade	3,034	3,118	3,071	2,942	3,061
FINANCE	1,833	1,830	1,820	1,772	1,770
Banks and trust companies	441	439	436	415	416
Security dealers and exchanges	62.2	61.5	61.1	56.1	55.4
Insurance carriers and agents	655	656	651	630	630
Other finance agencies and real estate	675	673	672	671	669
SERVICE	4,666	4,695	4,723	4,701	4,738
Hotels and lodging places	429	431	433	428	443
Laundries	353.6	353.1	353.1	346.9	346.7
Cleaning and dyeing plants	145.3	146.8	149.2	141.1	142.7
Motion pictures	242	242	243	235	238
GOVERNMENT	6,088	6,376	6,037	5,777	6,041
Federal	2,027	2,333	1,980	1,804	2,101
State and local	4,061	4,043	4,057	3,973	3,940

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

* New series; data are available from January 1950.

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

(In thousands)

Industry group and industry	All employees			Production workers		
	1951	1950		1951	1950	
	January	December	November	January	December	November
MINING	933	938	938	--	--	--
METAL MINING	103.9	103.7	102.5	92.4	92.0	90.9
Iron mining	35.7	35.9	36.1	32.5	32.5	32.6
Copper mining	28.8	28.7	28.4	25.3	25.2	24.9
Lead and zinc mining	21.0	20.8	20.3	18.4	18.1	17.7
ANTHRACITE	73.3	73.2	74.3	68.9	68.8	69.8
BITUMINOUS-COAL	402.1	405.0	404.3	376.7	380.7	379.6
CRUDE PETROLEUM AND NATURAL GAS PRODUCTION	256.4	256.8	254.8	--	--	--
Petroleum and natural gas production (except contract services)	--	--	--	124.1	124.8	124.1
NONMETALLIC MINING AND QUARRYING	97.0	98.9	101.9	84.3	86.5	89.4
MANUFACTURING	15,768	15,785	15,765	13,017	13,058	13,044
DURABLE GOODS	8,734	8,716	8,664	7,256	7,256	7,210
NONDURABLE GOODS	7,034	7,069	7,101	5,761	5,802	5,834
ORDNANCE AND ACCESSORIES	30.5	29.5	29.0	24.4	23.7	23.3
FOOD AND KINDRED PRODUCTS	1,494	1,534	1,576	1,117	1,154	1,196
Meat products	311.2	314.4	305.7	249.9	253.1	244.3
Dairy products	134.1	136.1	139.6	94.9	97.0	100.4
Canning and preserving	155.4	167.5	197.4	131.4	143.1	171.4
Grain-mill products	127.0	124.9	125.2	94.9	92.8	93.2
Bakery products	287.5	289.5	290.9	188.6	191.1	193.4
Sugar	30.8	45.0	51.8	26.0	39.9	46.5
Confectionery and related products	99.6	105.6	110.2	83.4	88.9	93.5
Beverages	212.0	212.5	215.4	146.3	146.0	148.8
Miscellaneous food products	136.3	138.0	139.8	101.1	102.4	104.4
TOBACCO MANUFACTURES	88	90	91	80	83	84
Cigarettes	25.8	26.1	26.3	23.2	23.5	23.7
Cigars	41.2	42.2	43.3	39.0	40.2	41.2
Tobacco and snuff	12.0	12.0	12.1	10.6	10.5	10.5
Tobacco stemming and redrying	8.5	9.4	9.3	7.4	8.3	8.3

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	1950		1951	1950	
	January	December	November	January	December	November
TEXTILE-MILL PRODUCTS	1,351	1,350	1,355	1,257	1,258	1,262
Yarn and thread mills	172.3	170.7	171.5	161.8	160.1	160.9
Broad-woven fabric mills	632.3	632.9	637.5	601.3	603.2	606.3
Knitting mills	251.9	254.1	253.9	232.0	234.0	233.9
Dyeing and finishing textiles	93.5	93.1	93.3	83.3	83.3	83.4
Carpets, rugs, other floor coverings	62.3	62.5	62.4	54.6	55.0	55.0
Other textile-mill products	138.6	137.1	136.7	123.9	122.7	122.3
APPAREL AND OTHER FINISHED TEXTILE PRODUCTS	1,190	1,182	1,175	1,071	1,065	1,056
Men's and boys' suits and coats	151.8	151.1	151.2	137.5	136.6	137.0
Men's and boys' furnishings and work clothing	268.2	269.1	271.8	250.3	251.1	253.3
Women's outerwear	336.8	328.4	308.4	302.1	295.3	274.8
Women's, children's under garments	103.5	106.7	110.9	93.6	96.7	100.5
Millinery	24.4	21.5	18.4	21.7	19.0	15.9
Children's outerwear	67.9	65.8	65.2	61.9	60.1	59.6
Fur goods and miscellaneous apparel	88.7	92.1	97.4	77.1	80.0	85.3
Other fabricated textile products	148.5	147.7	151.7	126.3	125.7	130.0
LUMBER AND WOOD PRODUCTS (EXCEPT FURNITURE)	795	816	838	732	752	773
Logging camps and contractors	66.5	71.3	77.5	62.0	66.7	73.0
Sawmills and planing mills	455.0	470.8	484.3	424.1	439.2	452.3
Millwork, plywood, and prefabricated structural wood products	127.5	129.0	129.9	111.2	113.0	113.8
Wooden containers	82.2	80.9	82.3	76.6	75.3	76.5
Miscellaneous wood products	64.1	63.7	63.8	57.8	57.4	57.4
FURNITURE AND FIXTURES	370	373	376	321	325	327
Household furniture	264.1	266.7	270.5	234.5	238.3	241.5
Other furniture and fixtures	105.9	106.3	105.8	86.8	86.7	85.7

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	1950		1951	1950	
	January	December	November	January	December	November
PAPER AND ALLIED PRODUCTS	497	501	500	423	428	427
Pulp, paper, and paperboard mills	242.1	244.4	242.8	208.9	212.2	210.7
Paperboard containers and boxes	139.2	140.9	141.9	119.6	121.3	122.0
Other paper and allied products	115.5	115.2	114.9	94.6	94.6	94.3
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES	755	764	759	511	518	515
Newspapers	294.0	299.4	295.9	149.4	152.7	150.3
Periodicals	53.2	53.2	53.3	34.6	34.9	35.0
Books	48.3	48.6	48.4	35.9	36.7	36.6
Commercial printing	206.3	207.0	205.3	170.4	170.8	170.2
Lithographing	40.8	42.0	42.4	31.6	32.9	33.3
Other printing and publishing	112.7	114.0	113.7	88.8	89.8	89.6
CHEMICALS AND ALLIED PRODUCTS	729	724	720	526	523	521
Industrial inorganic chemicals	78.0	77.5	77.1	57.1	56.9	56.5
Industrial organic chemicals	215.8	214.3	211.3	162.9	162.0	160.2
Drugs and medicines	101.1	101.3	100.2	67.5	67.5	66.4
Paints, pigments, and fillers	73.6	74.1	73.7	47.5	48.3	48.2
Fertilizers	37.3	32.9	32.1	30.8	26.5	25.7
Vegetable and animal oils and fats	57.0	58.7	60.9	45.1	47.1	49.6
Other chemicals and allied products	166.1	165.3	164.6	115.1	114.7	114.6
PRODUCTS OF PETROLEUM AND COAL	253	254	254	190	191	191
Petroleum refining	201.8	201.6	201.5	147.3	147.4	147.5
Coke and byproducts	21.3	21.2	21.2	18.5	18.4	18.4
Other petroleum and coal products	30.1	31.2	30.8	24.3	25.1	24.6
RUBBER PRODUCTS	275	273	272	223	223	222
Tires and inner tubes	115.9	116.8	117.2	92.1	93.0	93.4
Rubber footwear	30.1	29.1	28.5	24.9	23.9	23.2
Other rubber products	128.6	127.5	126.6	106.1	105.6	105.0
LEATHER AND LEATHER PRODUCTS	402	397	399	363	359	360
Leather	51.8	51.9	51.8	47.2	47.3	47.2
Footwear (except rubber)	256.2	251.2	248.4	233.7	229.1	225.8
Other leather products	94.4	93.6	98.6	82.5	82.3	86.9

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	1950		1951	1950	
	January	December	November	January	December	November
STONE, CLAY, AND GLASS PRODUCTS	546	547	550	472	473	477
Glass and glass products	144.3	144.3	145.6	127.7	127.6	128.9
Cement, hydraulic	41.9	42.4	42.7	36.0	36.4	36.7
Structural clay products	86.8	87.1	88.6	78.6	79.0	80.5
Pottery and related products	60.6	60.8	60.9	54.7	55.1	55.1
Concrete, gypsum, and plaster products	97.2	97.9	98.3	83.0	83.4	84.4
Other stone, clay, and glass products	114.8	114.4	113.7	91.8	91.6	91.1
PRIMARY METAL INDUSTRIES	1,323	1,315	1,301	1,149	1,142	1,126
Blast furnaces, steel works, and rolling mills	636.8	636.1	635.6	557.8	556.0	553.6
Iron and steel foundries	271.1	267.1	262.5	241.0	238.3	232.8
Primary smelting and refining of nonferrous metals	57.0	56.6	54.8	47.5	47.3	45.4
Rolling, drawing, and alloying of nonferrous metals	103.8	104.0	102.9	87.1	87.2	85.9
Nonferrous foundries	109.8	109.6	106.6	94.3	93.9	91.3
Other primary metal industries	144.1	141.7	138.9	121.0	119.4	116.9
FABRICATED METAL PRODUCTS (EXCEPT ORDNANCE, MACHINERY, AND TRANSPORTATION EQUIPMENT)	1,015	1,020	1,017	845	852	850
Tin cans and other tinware	49.8	51.2	50.2	44.0	45.3	44.2
Cutlery, hand tools, and hardware	169.0	169.4	168.0	143.5	143.6	142.9
Heating apparatus (except electric) and plumbers' supplies	157.9	161.2	163.4	129.9	132.8	135.3
Fabricated structural metal products	220.9	220.6	219.3	173.0	173.0	171.7
Metal stamping, coating, and engraving	186.7	186.8	185.6	161.5	161.6	160.9
Other fabricated metal products	230.3	231.1	230.7	193.4	195.2	195.2
MACHINERY (EXCEPT ELECTRICAL)	1,527	1,492	1,459	1,191	1,163	1,133
Engines and turbines	83.9	82.0	78.8	63.8	62.2	60.3
Agricultural machinery and tractors	186.4	175.1	164.4	146.1	135.5	124.8
Construction and mining machinery	114.0	112.4	110.9	84.8	83.8	82.3
Metalworking machinery	267.9	258.8	251.5	211.4	204.7	197.2
Special-industry machinery (except metalworking machinery)	189.3	184.3	180.6	143.5	140.4	137.6
General industrial machinery	216.0	212.2	207.1	157.0	154.5	150.1
Office and store machines and devices	99.5	99.2	97.9	84.4	83.2	81.9
Service-industry and household machines	180.7	182.1	185.5	146.5	147.5	151.2
Miscellaneous machinery parts	189.0	186.1	182.4	153.1	150.7	148.0

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	1950		1951	1950	
	January	December	November	January	December	November
ELECTRICAL MACHINERY	922	935	929	710	724	721
Electrical generating, transmission, distribution, and industrial apparatus	348.1	348.7	344.7	256.5	257.7	254.4
Electrical equipment for vehicles	77.2	77.4	75.9	62.9	63.1	61.8
Communication equipment	345.5	355.8	354.6	266.4	277.9	278.4
Electrical appliances, lamps, and miscellaneous products	151.3	153.4	154.1	123.9	125.3	126.2
TRANSPORTATION EQUIPMENT	1,437	1,410	1,380	1,189	1,165	1,139
Automobiles	900.8	897.1	887.7	771.7	768.5	760.4
Aircraft and parts	362.0	341.6	323.4	272.6	254.9	239.3
Aircraft	244.4	230.4	217.5	185.0	172.6	161.4
Aircraft engines and parts	69.9	66.8	63.4	51.4	49.2	46.3
Aircraft propellers and parts	9.3	9.1	8.9	6.2	6.1	5.9
Other aircraft parts and equipment	38.4	35.3	33.6	30.0	27.0	25.7
Ship and boat building and repairing	95.7	91.8	88.9	81.9	78.7	76.1
Ship building and repairing	81.7	77.6	75.5	69.7	66.2	64.4
Boat building and repairing	14.0	14.2	13.4	12.2	12.5	11.7
Railroad equipment	66.0	66.0	65.9	52.0	51.9	51.7
Other transportation equipment	12.2	13.1	13.6	10.4	11.2	11.8
INSTRUMENTS AND RELATED PRODUCTS	280	280	277	211	212	209
Ophthalmic goods	27.1	26.9	26.7	22.2	22.0	21.8
Photographic apparatus	55.3	55.2	55.1	40.9	40.9	40.7
Watches and clocks	33.4	33.9	33.7	28.2	28.8	28.8
Professional and scientific instruments	164.3	164.1	161.1	119.9	120.3	117.8
MISCELLANEOUS MANUFACTURING INDUSTRIES	488	498	508	412	424	432
Jewelry, silverware, and plated ware	57.1	57.2	58.2	46.8	47.0	47.8
Toys and sporting goods	73.1	78.0	82.0	63.7	68.6	73.0
Costume jewelry, buttons, notions	63.2	62.4	64.3	54.3	53.1	54.9
Other miscellaneous manufacturing industries	294.8	299.9	303.1	247.0	255.0	256.4

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
<u>Annual averages:</u>		
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
<u>1949</u>		
November	137.8	313.9
December	140.4	329.3
<u>1950</u>		
January	139.8	329.2
February	139.9	330.0
March	141.0	333.5
April	141.6	337.2
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	425.8
<u>1951</u>		
January	158.9	423.3

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

TABLE 5: Employees in the Shipbuilding and Repairing Industry, by Region ^{1/}

(In thousands)

Region	1951	1950		1949	
	January	December	November	January	December
ALL REGIONS	179.7	166.9	160.2	138.1	142.5
PRIVATE	81.7	77.6	75.5	68.9	72.3
NAVY	98.0	89.3	84.7	69.2	70.2
NORTH ATLANTIC	82.3	77.1	74.4	65.7	68.2
Private	38.9	38.8	38.2	36.3	38.9
Navy	43.4	38.3	36.2	29.4	29.3
SOUTH ATLANTIC	31.5	30.1	29.2	22.8	22.9
Private	11.9	11.4	11.0	9.0	9.1
Navy	19.6	18.7	18.2	13.8	13.8
GULF:					
Private	11.6	11.6	11.7	10.5	10.9
PACIFIC	44.4	39.3	37.6	32.0	34.1
Private	9.4	7.0	7.3	6.0	7.0
Navy	35.0	32.3	30.3	26.0	27.1
GREAT LAKES:					
Private	5.6	4.3	2.9	3.5	2.9
INLAND:					
Private	4.3	4.5	4.4	3.6	3.5

^{1/} 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. 1/

(In thousands)

Area and branch	Employment (as of first of month)			Pay rolls (total for month)		
	1951	1950		1951	1950	
	January	December	November	January	December	November
<u>All Areas</u>						
TOTAL FEDERAL	2,204.3	2,508.9	2,152.0	\$737,044	\$672,724	\$621,491
Executive	2,192.3	2,496.9	2,139.9	732,068	667,988	616,609
Defense agencies	1,017.3	995.9	970.0	319,592	275,681	273,633
Post Office Department	486.5	811.8	482.2	186,012	185,732	129,869
Other agencies	688.5	689.2	687.7	226,464	206,575	213,107
Legislative	8.1	8.1	8.2	3,306	3,207	3,292
Judicial	3.9	3.9	3.9	1,670	1,529	1,590
<u>Continental United States</u>						
TOTAL FEDERAL	2,047.4	2,352.8	2,000.3	694,504	634,577	583,978
Executive	2,035.5	2,340.9	1,988.3	689,572	629,885	579,140
Defense agencies	905.1	885.6	862.9	290,975	250,323	248,667
Post Office Department	484.7	808.9	480.4	185,324	185,044	129,413
Other agencies	645.7	646.4	645.0	213,273	194,518	201,060
Legislative	8.1	8.1	8.2	3,306	3,207	3,292
Judicial	3.8	3.8	3.8	1,626	1,485	1,546
<u>Washington, D. C.</u>						
TOTAL GOVERNMENT	253.7	256.2	247.9	94,601	85,285	85,380
D. C. government	20.5	20.3	20.4	5,848	5,558	5,796
Federal	233.2	235.9	227.5	88,753	79,727	79,584
Executive	224.4	227.1	218.7	85,131	76,228	75,991
Defense agencies	74.8	74.1	72.4	28,164	24,786	24,545
Post Office Department	7.8	12.7	7.6	3,852	3,835	2,888
Other agencies	141.8	140.3	138.7	53,115	47,607	48,558
Legislative	8.1	8.1	8.2	3,306	3,207	3,292
Judicial	.7	.7	.7	316	292	301

See the glossary for definitions.

1/ Data for Central Intelligence Agency are excluded.

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

State	Total			Mining			Contract Construction		
	1951	1950		1951	1950		1951	1950	
	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.
Alabama				23.9	25.0	22.2			
Arizona	169.3	170.3	153.6	12.3	12.3	11.8	14.2	14.0	9.6
Arkansas	298.3	307.4	275.8	6.8	6.8	7.0	19.2	18.7	14.2
California	3,289.2	3,390.2	3,031.5	33.9	34.0	33.3	225.3	227.2	194.3
Colorado	358.4	357.2	327.1	10.3	10.3	10.5	27.2	26.7	18.4
Connecticut	789.1	808.4	712.4	2/	2/	2/	35.8	38.3	28.4
Delaware*									
District of Columbia				3/	3/	3/			
Florida				6.2	6.3	5.9	66.4	67.4	50.2
Georgia	808.2	826.2	745.1	4.4	4.4	4.3	46.9	45.0	32.0
Idaho	126.7	132.8	114.6	5.8	5.7	5.3	9.5	11.2	5.9
Illinois									
Indiana	1,265.2	1,294.9	1,150.4	14.0	14.0	13.7	47.0	48.3	39.9
Iowa	595.3	605.3	569.5	3.4	3.6	3.3	27.2	29.5	21.9
Kansas	469.0	482.2	431.8	15.9	17.0	16.5	28.8	31.5	22.9
Kentucky 1/				62.5	62.5	62.3			
Louisiana 1/				25.4	25.2	25.8			
Maine 1/	253.0	261.4	239.8	.6	.7	.6	8.0	10.0	7.2
Maryland*	712.1	722.3	664.8	2.0	1.5	2.9	51.2	54.9	45.9
Massachusetts 1/	1,769.6	1,826.7	1,662.0	3/	3/	3/	61.2	73.5	61.3
Michigan									
Minnesota	802.3	820.9	757.6	16.1	16.4	15.0	39.9	41.4	31.6
Mississippi 1/									
Missouri 1/	1,176.1	1,215.4	1,107.8	9.4	9.4	9.0	46.9	49.2	38.8
Montana	143.9	149.9	133.2	11.2	11.2	9.6	8.2	9.8	5.2
Nebraska 1/	314.1	326.0	295.7	3/	3/	3/	14.6	16.9	12.8
Nevada	53.9	55.1	46.4	3.4	3.3	2.6	4.2	4.5	3.6
New Hampshire	166.1	168.8	160.2	.2	.2	.2	6.0	6.7	6.5
New Jersey	1,659.5	1,689.9	1,532.6	3.8	3.8	3.3	79.3	84.4	67.3
New Mexico	147.8	150.0	136.0	11.6	11.5	9.7	14.4	15.0	15.7
New York	N.A.	N.A.	5,424.1	N.A.	N.A.	10.1	N.A.	N.A.	194.3
North Carolina 1/	918.0	937.9	867.4	3.4	3.3	3.1	49.3	49.1	39.8
North Dakota	110.6	115.4	102.8	.8	.8	.7	7.3	8.2	3.9
Ohio									
Oklahoma	480.4	492.3	454.8	44.1	44.0	42.4	32.5	33.3	26.5
Oregon	423.3	451.2	369.3	1.5	1.4	.9	23.9	26.4	15.4
Pennsylvania	3,647.7	3,737.1	3,375.9	185.3	185.7	160.2	140.3	150.0	126.6
Rhode Island 1/	304.6	310.8	279.4	3/	3/	3/	14.6	15.7	11.2
South Carolina	410.1	409.7	431.1	1.0	1.0	1.0	24.8	24.4	19.9
South Dakota	114.6	113.6	113.2	2.4	2.7	2.5	4.5	6.1	4.6
Tennessee	734.1	756.4	79.2	13.0	13.0	12.1	42.4	42.3	33.3
Texas	1,936.2	1,989.5	1,807.6	107.2	107.1	98.2	145.4	149.6	118.0
Utah	125.6	202.2	171.3	13.6	13.7	12.0	12.0	13.0	7.3
Vermont	38.0	39.5	31.0	1.0	1.0	1.0	3.9	4.5	3.1
Virginia				23.1	23.4	23.7			
Washington	665.5	693.6	590.6	3.1	3.1	2.9	40.6	43.4	24.5
West Virginia	525.4	539.3	498.4	127.7	126.8	124.1	17.0	17.9	14.3
Wisconsin	1,024.9	1,050.2	950.5	3.1	3.4	3.1	38.2	40.3	35.4
Wyoming	76.4	81.2	71.7	8.9	9.2	8.5	6.1	6.6	4.7

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	Manufacturing			Trans. & Public Util.			Trade		
	1951	1950		1951	1950		1951	1950	
	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.
Alabama	220.9	222.0	208.1	51.6	51.7	49.5	120.4	129.0	114.7
Arizona	16.4	16.1	13.4	22.5	22.1	21.4	42.3	43.7	39.1
Arkansas	76.5	76.7	67.0	31.6	31.8	29.9	69.3	75.9	66.9
California	804.4	810.7	670.7	305.6	311.6	299.5	785.7	848.2	762.8
Colorado	60.3	63.3	52.3	42.2	42.8	39.7	94.7	97.5	89.6
Connecticut	403.8	404.0	348.2	41.4	41.7	40.9	129.5	140.5	120.7
Delaware	48.7	48.3	42.9						
District of Columbia	16.9	16.4	16.1	28.5	28.7	29.0	91.1	98.1	89.1
Florida	103.5	102.5	100.3	68.3	67.3	65.5			
Georgia	290.4	289.9	269.8	69.3	68.7	64.4	178.4	192.4	166.3
Idaho	19.5	20.5	16.3	16.5	17.0	15.1	33.8	36.2	31.8
Illinois									
Indiana	598.0	596.7	523.2	112.5	114.6	100.3	235.5	256.3	226.0
Iowa	158.2	152.0	145.8	60.8	62.6	58.4	163.3	170.7	160.1
Kansas	103.2	101.8	84.5	62.2	62.6	58.6	116.1	123.2	111.8
Kentucky	154.0	154.0	133.9	57.6	57.9	56.6	111.0	119.5	110.6
Louisiana	136.5	140.8	131.9	79.8	79.5	75.8	146.5	159.0	140.3
Maine	109.1	108.5	98.8	10.3	18.5	18.2	48.6	52.9	47.7
Maryland	224.4	227.5	203.0	75.2	75.4	70.1	125.0	134.9	119.3
Massachusetts	741.6	742.5	668.8	127.4	127.0	120.6	361.3	390.4	350.9
Michigan	1,140.7	1,138.8	999.1						
Minnesota	199.7	203.3	181.6	90.8	88.4	83.5	211.9	222.7	206.6
Mississippi	87.7	89.5	77.7						
Missouri	363.8	364.9	329.7	125.3	126.6	119.1	300.9	325.1	291.1
Montana	17.2	18.4	16.0	22.0	22.5	20.6	35.3	37.0	33.7
Nebraska	52.5	53.0	46.9	40.5	41.1	37.9	91.1	96.5	87.3
Nevada	3.3	3.3	3.0	8.5	8.5	7.9	10.8	11.2	9.9
New Hampshire	81.2	80.3	75.3	10.5	10.6	10.3	28.0	29.7	28.0
New Jersey	771.1	777.9	687.5	138.1	137.4	131.4	270.7	289.1	263.8
New Mexico	12.2	12.3	9.8	16.1	16.1	14.6	34.3	35.3	31.8
New York	N.A.	N.A.	1,753.8	N.A.	N.A.	496.8	N.A.	N.A.	1,202.4
North Carolina	430.6	431.1	406.2	57.4	56.8	53.2	165.8	182.8	159.2
North Dakota	6.3	6.5	5.5	13.5	14.0	13.1	36.0	38.1	34.4
Ohio	1,273.5	1,270.7	1,100.3						
Oklahoma	68.7	68.6	61.6	49.1	49.6	48.5	121.2	128.0	118.5
Oregon	128.4	139.8	99.0	47.5	48.0	43.4	97.9	107.3	92.7
Pennsylvania	1,495.0	1,495.2	1,333.1	341.1	346.0	318.6	670.8	729.8	652.7
Rhode Island	156.9	155.2	135.2	15.3	15.4	15.5	52.9	56.9	50.7
South Carolina	215.9	215.1	202.9	25.9	26.1	25.0	83.7	92.2	80.0
South Dakota	11.3	11.1	10.9	11.1	11.3	10.5	35.2	37.4	36.8
Tennessee	257.2	256.1	235.2	59.0	59.6	56.6	162.6	176.1	161.6
Texas	375.4	374.6	338.9	217.4	221.3	211.9	565.9	540.3	484.1
Utah	23.3	30.3	25.3	21.4	21.5	19.9	43.5	46.1	40.8
Vermont	38.5	37.5	32.8	8.9	9.0	9.1	17.6	18.9	16.9
Virginia	237.6	237.5	219.8	80.0	80.0	76.1	173.9	189.1	162.0
Washington	171.6	173.3	143.0	61.8	63.4	58.6	153.0	168.1	144.8
West Virginia	137.8	138.6	125.8	52.6	52.8	48.5	84.9	93.9	82.3
Wisconsin	447.0	447.4	391.6	75.6	76.8	72.4	206.3	220.4	203.8
Wyoming	6.2	6.9	5.6	14.2	14.9	13.6	17.2	17.5	15.5

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	
	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.	Jan.	Dec.	Jan.
Alabama	17.5	17.4	16.6	51.5	50.7	51.5	102.7	105.6	94.9
Arizona	5.3	5.2	5.0	20.8	20.3	19.7	35.5	36.6	33.6
Arkansas	7.9	7.9	7.7	34.4	34.6	33.7	52.6	55.0	49.4
California	148.3	148.0	140.3	435.0	438.2	422.5	550.0	572.3	511.1
Colorado	13.9	13.9	13.0	43.4	43.8	42.4	66.4	68.9	61.3
Connecticut	36.8	37.0	36.3	76.6	77.2	73.7	65.2	69.7	64.2
Delaware							10.4	11.0	9.6
District of Columbia	23.2	22.9	21.4	57.1	56.3	57.8	253.3	256.2	238.9
Florida	31.0	31.2	28.1				115.9	119.6	111.9
Georgia	24.2	24.3	23.6	71.3	74.4	71.8	123.3	127.1	113.9
Idaho	3.7	3.7	3.4	14.3	14.3	13.7	23.5	24.2	23.1
Illinois									
Indiana	34.2	34.2	33.1	89.5	89.6	88.1	134.4	141.3	126.1
Iowa	23.4	23.4	22.6	63.8	63.6	64.6	95.5	100.2	92.9
Kansas	18.3	18.0	15.0	46.1	46.8	45.6	79.4	83.3	76.8
Kentucky	15.0	15.0	14.4	55.0	55.5	53.9	83.5	86.6	77.0
Louisiana	19.3	19.3	18.5	74.0	74.0	66.6	92.7	95.7	90.8
Maine	6.7	6.8	6.6	22.3	22.8	22.6	39.4	41.2	38.1
Maryland	31.0	31.3	29.8	105.4	105.7	105.1	97.9	100.7	88.7
Massachusetts	79.6	79.5	75.8	185.2	189.7	183.9	210.3	224.1	200.7
Michigan							223.7	235.2	214.6
Minnesota	36.2	36.2	35.0	96.0	96.5	93.9	111.8	116.1	110.4
Mississippi							63.0	65.0	62.5
Missouri	52.6	52.6	49.9	136.1	136.0	134.3	141.1	151.6	135.9
Montana	4.0	3.9	3.7	18.5	18.7	17.5	27.4	28.4	26.9
Nebraska	16.4	16.3	15.6	38.2	39.2	37.5	60.2	63.1	57.8
Nevada	1.3	1.2	1.1	11.1	11.4	10.3	11.5	11.7	10.2
New Hampshire	4.5	4.5	4.4	16.2	16.2	16.2	19.6	20.7	19.3
New Jersey	56.9	58.0	55.9	161.9	162.8	158.7	177.7	186.5	164.7
New Mexico	4.3	4.3	4.1	22.4	22.3	21.3	32.6	33.3	31.2
New York	N.A.	N.A.	380.3	N.A.	N.A.	743.0	N.A.	N.A.	643.5
North Carolina	21.7	21.7	20.9	84.2	83.8	82.6	105.6	109.3	102.4
North Dakota	4.2	4.2	3.8	13.5	13.6	12.9	23.1	30.1	28.5
Ohio							300.8	316.1	283.8
Oklahoma	17.8	17.9	16.9	49.5	50.0	50.2	97.5	100.9	90.2
Oregon	14.3	14.5	13.7	46.8	48.1	43.0	63.0	65.7	61.2
Pennsylvania	116.3	116.6	113.9	343.7	343.7	339.8	347.2	365.0	330.9
Rhode Island	10.3	10.5	10.1	23.2	23.4	24.5	31.3	32.7	29.2
South Carolina	8.8	8.6	8.0	35.0	35.0	34.7	65.0	66.3	59.6
South Dakota	4.1	4.1	3.9	14.4	14.2	13.9	31.8	33.0	30.2
Tennessee	22.9	23.1	21.8	75.1	75.5	75.0	106.9	110.7	103.6
Texas	74.9	75.5	68.5	227.4	223.4	222.7	231.6	231.7	265.3
Utah	6.2	6.3	5.8	1.2	19.5	18.3	51.2	49.8	42.0
Vermont	2.9	2.8	2.8	10.4	10.2	10.8	14.9	15.7	14.5
Virginia	26.0	25.8	25.2				143.5	146.3	130.5
Washington	25.3	25.9	24.3	72.7	75.5	71.8	137.5	141.1	120.9
West Virginia	9.6	9.7	9.4	39.5	39.4	37.9	56.2	58.2	56.2
Wisconsin	31.5	31.6	31.1	98.0	98.6	92.1	125.2	131.7	121.0
Wyoming	1.8	1.8	1.6	8.5	9.2	8.1	14.7	15.1	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.

* The manufacturing series for these States are based on the 1942 Social Security Board Classification (others are on the 1945 Standard Industrial Classification).

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

2/ Mining combined with contract construction.

3/ Mining combined with service.

N.A. - Not available.

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

	Number of Employees				Number of Employees		
	1951		1950		1951		1950
	Jan.	Dec.	Jan.		Jan.	Dec.	Jan.
ARIZONA				CONNECTICUT (Cont'd.)			
<u>Phoenix</u>				<u>Hartford (Cont'd.)</u>			
Mining	N.A.	N.A.	.1	Trade	36.4	39.1	N.A.
Manufacturing	N.A.	N.A.	8.9	Finance	23.4	23.3	N.A.
Trans. & Pub. Ut. 1/	N.A.	N.A.	7.5	Service	10.3	10.4	N.A.
Trade	N.A.	N.A.	19.2				
Finance	N.A.	N.A.	3.0	<u>New Britain</u>			
Service	N.A.	N.A.	9.6	Cont. Const. 2/	.9	1.0	N.A.
				Manufacturing	28.1	28.2	N.A.
<u>Tucson</u>				Trans. & Pub. Ut.	1.3	1.3	N.A.
Mining	N.A.	N.A.	1.4	Trade	4.7	5.2	N.A.
Manufacturing	N.A.	N.A.	1.7	Finance	.5	.5	N.A.
Trans. & Pub. Ut. 1/	N.A.	N.A.	2.1	Service	1.3	1.2	N.A.
Trade	N.A.	N.A.	3.0				
Finance	N.A.	N.A.	.9	<u>New Haven</u>			
Service	N.A.	N.A.	5.0	Cont. Const. 2/	5.5	5.8	N.A.
				Manufacturing	43.1	43.5	N.A.
ARKANSAS				Trans. & Pub. Ut.	12.9	13.0	N.A.
<u>Little Rock</u>				Trade	20.2	21.5	N.A.
Total	63.4	65.9	59.9	Finance	4.8	4.8	N.A.
Cont. Const.	5.5	6.1	4.8	Service	8.4	8.4	N.A.
Manufacturing	11.7	11.8	10.6				
Trans. & Pub. Ut.	6.5	6.5	6.2	<u>Waterbury</u>			
Trade	17.3	18.7	15.4	Cont. Const. 2/	1.8	1.9	N.A.
Finance	3.5	3.5	3.3	Manufacturing	43.8	43.6	N.A.
Service 2/	8.5	8.6	8.2	Trans. & Pub. Ut.	2.5	2.5	N.A.
Government	10.5	10.8	10.6	Trade	8.6	9.1	N.A.
				Finance	1.0	1.0	N.A.
CALIFORNIA				Service	2.6	2.6	N.A.
<u>Los Angeles</u>							
Manufacturing	450.6	458.7	379.9	FLORIDA			
				<u>Jacksonville</u>			
<u>San Diego</u>				Manufacturing	15.2	15.0	14.2
Manufacturing	33.5	31.0	21.1	Trans. & Pub. Ut.	14.9	15.2	14.4
				Trade	31.2	31.6	30.7
<u>San Francisco-Oakland</u>				Finance	5.9	5.9	5.6
Manufacturing	171.1	171.3	146.2	Service 2/	11.7	11.6	11.1
				Government	13.4	13.3	13.0
<u>San Jose</u>							
Manufacturing	18.5	19.4	15.0	<u>Miami</u>			
				Manufacturing	16.2	16.4	13.7
COLORADO				Trans. & Pub. Ut.	21.9	21.6	20.9
<u>Denver</u>				Trade	58.2	56.4	51.5
Mining	1.0	1.0	1.1	Finance	8.9	8.9	8.1
Cont. Const.	18.5	18.0	11.6	Service 2/	36.1	32.4	32.7
Manufacturing	40.8	40.5	34.1	Government	26.7	17.4	17.5
Trans. & Pub. Ut.	24.7	24.9	23.0				
Trade	57.1	56.5	53.8	<u>Tampa-St. Petersburg</u>			
Finance	9.6	9.6	8.7	Total	110.3	110.2	108.1
				Cont. Const.	9.4	9.4	9.5
CONNECTICUT				Manufacturing	21.6	21.6	21.6
<u>Bridgeport</u>				Trans. & Pub. Ut.	9.7	9.6	9.5
Cont. Const. 2/	4.1	4.3	N.A.	Trade	37.0	37.7	35.4
Manufacturing	63.0	61.8	N.A.	Finance	5.1	5.1	4.5
Trans. & Pub. Ut.	5.0	4.9	N.A.	Service 2/	15.1	14.1	15.6
Trade	17.0	17.9	N.A.	Government	12.6	12.9	12.2
Finance	2.1	2.1	N.A.				
Service	5.7	5.7	N.A.	GEORGIA			
				<u>Atlanta</u>			
<u>Hartford</u>				Manufacturing	61.7	61.8	57.8
Cont. Const. 2/	7.0	7.5	N.A.				
Manufacturing	71.2	70.2	N.A.	<u>Savannah</u>			
Trans. & Pub. Ut.	7.0	6.9	N.A.	Manufacturing	13.2	13.3	11.9

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)

	Number of Employees				Number of Employees		
	1951		1950		1951		1950
	Jan.	Dec.	Jan.		Jan.	Dec.	Jan.
INDIANA				MINNESOTA (Cont'd.)			
<u>Fert Wayne</u>				<u>Duluth (Cont'd.)</u>			
Total	77.7	79.9	67.5	Manufacturing	10.8	11.4	10.6
Manufacturing	41.6	42.0	33.4	Trans. & Pub. Ut.	6.2	6.2	5.9
Nonmanufacturing	36.1	38.0	34.1	Trade	10.2	11.0	10.1
<u>Indianapolis</u>				Finance	1.4	1.4	1.4
Total	264.6	268.2	235.6	Service 2/	5.1	5.1	4.9
Cont. Const.	11.8	12.2	9.8	Government	4.1	4.2	4.1
Manufacturing	109.6	108.7	86.8	<u>Minneapolis</u>			
Trans. & Pub. Ut.	25.1	25.0	23.5	Total	257.1	266.8	240.8
Trade	59.9	63.9	57.1	Cont. Const.	15.0	15.4	11.9
Finance	13.3	13.3	12.7	Manufacturing	70.5	71.2	60.2
Other Nonmfg. 3/	44.9	45.1	45.7	Trans. & Pub. Ut.	26.0	26.4	25.3
IOWA				Trade	76.9	82.1	75.7
<u>Des Moines</u>				Finance	16.5	16.5	15.8
Manufacturing	N.A.	17.7	18.0	Service 2/	20.0	20.9	20.2
				Government	23.3	26.4	23.6
KANSAS				<u>St. Paul</u>			
<u>Topeka</u>				Total	143.9	147.4	136.3
Total	38.7	39.1	36.8	Cont. Const.	7.1	7.5	6.1
Mining	.1	.1	.1	Manufacturing	40.5	41.9	38.0
Cont. Const.	1.7	1.7	1.6	Trans. & Pub. Ut.	20.6	20.7	19.8
Manufacturing	6.3	6.3	5.9	Trade	36.4	38.2	34.6
Trans. & Pub. Ut.	7.0	7.0	6.7	Finance	3.3	8.3	8.2
Trade	8.5	9.0	8.0	Service 2/	14.6	14.4	13.8
Finance	2.0	2.0	1.9	Government	16.3	16.3	15.8
Service	4.2	4.1	4.2	MISSOURI			
Government	9.1	9.0	8.5	<u>Kansas City (including</u>			
<u>Wichita</u>				<u>Kansas City, Kansas) 4/</u>			
Total	90.5	89.2	73.9	Total	319.9	327.3	303.9
Mining	1.2	1.1	1.2	Mining	.8	.9	.7
Cont. Const.	4.7	4.8	3.7	Cont. Const.	15.4	16.8	11.9
Manufacturing	35.8	33.4	23.3	Manufacturing	93.3	93.8	85.7
Trans. & Pub. Ut.	6.9	6.9	6.5	Trans. & Pub. Ut.	39.7	39.8	38.7
Trade	22.8	23.6	20.7	Trade	91.0	96.3	88.4
Finance	3.6	3.7	3.5	Finance	18.8	18.7	17.8
Service	6.7	8.7	8.4	Service	40.0	40.1	40.4
Government	7.0	7.1	6.7	Government	20.9	20.9	20.3
LOUISIANA				<u>St. Louis</u>			
<u>New Orleans 4/</u>				Manufacturing	208.9	210.1	190.2
Manufacturing	49.0	49.3	45.4	NEVADA			
MAINE				<u>Reno</u>			
<u>Portland</u>				Cont. Const.	2.0	2.2	1.2
Total	45.2	46.3	43.2	Manufacturing 2/	1.5	1.5	1.4
Cont. Const.	1.9	2.1	1.6	Trans. & Pub. Ut.	2.9	2.9	2.8
Manufacturing	11.6	11.8	10.6	Trade	5.3	5.7	4.8
Trans. & Pub. Ut.	5.4	5.5	5.7	Finance	.9	.8	.8
Trade	13.1	13.7	12.3	Service	4.6	4.9	4.1
Finance	2.4	2.4	2.3	NEW HAMPSHIRE			
Service 2/	7.5	7.4	7.5	<u>Manchester</u>			
Government	3.3	3.4	3.2	Manufacturing	21.3	20.8	19.3
MINNESOTA				NEW JERSEY			
<u>Duluth</u>				<u>Newark-Jersey City</u>			
Total	40.1	41.5	38.8	Manufacturing	364.0	364.2	320.0
Cont. Const.	2.4	2.2	1.9				

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)

	Number of Employees				Number of Employees		
	1951		1950		1951		1950
	Jan.	Dec.	Jan.		Jan.	Dec.	Jan.
NEW JERSEY (Cont'd.)				OREGON			
Trouton				Portland			
Manufacturing	46.0	45.8	40.5	Manufacturing	57.2	58.3	45.7
NEW MEXICO				RHODE ISLAND			
Albuquerque				Providence			
Cont. Const.	5.7	5.9	5.7	Manufacturing	162.5	161.3	141.2
Manufacturing	5.7	5.6	4.3				
Trans. & Pub. Ut.	4.7	4.6	4.2	SOUTH CAROLINA			
Trade	11.4	11.7	10.3	Charleston			
Finance	2.3	2.4	2.1	Manufacturing	9.5	9.3	8.3
Service 2/	5.9	6.0	5.8				
NEW YORK				Columbia			
Albany-Schenectady-Troy				Manufacturing	7.8	7.7	7.1
Manufacturing	82.6	83.0	73.6	SOUTH DAKOTA			
				Sioux Falls			
Binghamton-Endicott-				Manufacturing	5.0	4.9	5.0
Johnson City							
Manufacturing	37.0	36.9	35.7	TENNESSEE			
				Chattanooga			
Buffalo				Mining	.2	.2	.2
Manufacturing	195.0	197.0	171.8	Manufacturing	44.1	43.9	36.4
				Trans. & Pub. Ut.	5.3	5.3	4.9
Elmira				Trade	15.5	17.6	14.2
Manufacturing	15.3	16.4	12.1	Finance	2.5	2.5	2.4
				Service	9.3	9.2	9.2
New York City				Government	7.8	8.0	7.2
Manufacturing	1034.3	1035.2	947.3				
Trade	837.2	901.1	823.1	Knoxville			
				Mining	2.4	2.4	2.5
Rochester				Manufacturing	41.0	40.5	34.5
Manufacturing	105.6	106.1	93.7	Trans. & Pub. Ut.	7.2	7.2	6.6
				Trade	18.7	20.6	17.0
Syracuse				Finance	3.5	3.5	3.2
Manufacturing	58.4	58.6	48.0	Service	8.6	8.6	8.7
				Government	12.6	12.5	12.2
Utica-Rome-Herkimer-				Memphis			
Little Falls				Mining	.4	.4	.4
Manufacturing	46.9	47.0	41.0	Manufacturing	40.2	40.2	38.2
				Trans. & Pub. Ut.	17.3	17.5	17.2
NORTH CAROLINA				Trade	41.5	44.6	41.0
Charlotte 4/				Finance	5.9	5.9	5.4
Manufacturing	22.6	22.8	20.6	Service	21.7	21.8	22.1
				Government	17.5	17.0	12.9
OKLAHOMA				Nashville			
Oklahoma City				Manufacturing	35.0	34.3	32.4
Mining	5.6	5.5	5.2	Trans. & Pub. Ut.	10.8	10.8	10.9
Manufacturing	13.8	14.0	12.6	Trade	21.6	23.1	21.1
Trans. & Pub. Ut.	11.0	10.9	10.6	Finance	5.6	5.7	5.3
Trade	35.1	36.1	31.2	Service	13.8	13.9	13.7
Finance	6.9	7.1	6.5	Government	13.0	13.5	13.1
Service	13.3	13.4	12.2				
Tulsa				UTAH			
Mining	9.7	9.6	9.2	Salt Lake City			
Manufacturing	18.1	18.2	15.3	Mining	6.0	5.9	6.0
Trans. & Pub. Ut.	10.7	10.8	10.3	Cont. Const.	7.7	8.2	4.9
Trade	24.6	25.3	22.7	Manufacturing	14.5	15.1	12.6
Finance	4.2	4.5	4.0	Trans. & Pub. Ut. 1/	5.8	5.8	6.5
Service	9.6	9.4	10.0	Trade	26.6	30.0	25.3
				Finance	4.6	4.7	4.4

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)

	Number of Employees				Number of Employees		
	1941	1950			1951	1950	
	Jan.	Dec.	Jan.		Jan.	Dec.	Jan.
VERMONT				WASHINGTON (Cont'd.)			
<u>Burlington</u>				<u>Tacoma (Cont'd.)</u>			
Manufacturing	5.8	5.5	5.2	Manufacturing	16.0	16.0	16.1
WASHINGTON				Trans. & Pub. Ut.	6.5	6.7	6.1
<u>Seattle</u>				Trade	14.2	15.5	13.4
Total	245.8	253.9	223.8	Finance	2.4	2.4	2.2
Cont. Const.	12.6	13.3	8.8	Service 2/	6.6	6.8	6.2
Manufacturing	63.2	61.9	54.2	Government	17.6	17.6	13.0
Trans. & Pub. Ut.	25.1	25.3	24.2				
Trade	63.7	68.5	60.9	WEST VIRGINIA			
Finance	14.0	14.4	13.3	<u>Charleston</u>			
Service 2/	31.6	32.5	30.5	Total	27.0	29.2	22.9
Government	35.7	37.9	31.8	Mining	22.5	22.8	24.2
				Cont. Const.	4.3	5.1	3.6
<u>Spokane</u>				Manufacturing	27.1	26.9	23.3
Total	62.8	65.6	58.5	Trans. & Pub. Ut.	9.1	9.0	7.9
Cont. Const.	3.4	3.6	2.1	Trade	16.1	17.2	16.3
Manufacturing	12.2	12.5	11.5	Finance	2.7	2.7	2.5
Trans. & Pub. Ut.	10.3	10.7	9.9	Service	6.9	7.1	6.9
Trade	17.6	18.8	15.7	Government	3.4	3.6	3.4
Finance	2.9	2.9	2.7				
Service 2/	9.3	9.3	8.8	WISCONSIN			
Government	7.1	7.5	6.8	<u>Milwaukee</u>			
				Manufacturing	132.2	132.1	134.7
<u>Tacoma</u>							
Total	69.1	71.2	59.7	<u>Racine</u>			
Cont. Const.	3.9	4.2	2.7	Manufacturing	24.0	24.1	21.0

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

1/ Excludes interstate railroads.

2/ Includes mining and quarrying.

3/ Includes mining and quarrying, service, and government.

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

TABLE 9: Production Workers in Selected Manufacturing Industries

(In thousands)

Industry	1951	1950	
	January	December	November
FOOD AND KINDRED PRODUCTS:			
Meat packing, wholesale	175.8	177.7	170.5
Prepared meats	34.9	34.4	34.1
Concentrated milk	11.6	11.6	12.1
Ice cream and ices	17.4	17.9	18.5
Flour and meal	27.3	26.8	26.6
Cane-sugar refining	14.3	14.0	14.5
Beet sugar	7.7	18.2	23.1
Confectionery products	63.9	68.2	71.6
Malt liquors	57.3	57.5	58.5
Distilled liquors, except brandy	25.0	24.2	24.8
TEXTILE-MILL PRODUCTS:			
Yarn mills, wool (except carpet), cotton and silk systems	113.7	112.8	114.1
Cotton and rayon broad-woven fabrics	426.1	426.5	425.3
Woolen and worsted fabrics	105.4	106.8	110.8
Full-fashioned hosiery mills	67.3	68.1	68.1
Seamless hosiery mills	57.3	57.7	58.2
Knit underwear mills	35.7	35.7	34.5
Wool carpets, rugs, and carpet yarn	39.2	39.6	39.3
Fur-felt hats and hat bodies	9.3	9.4	9.2
APPAREL AND OTHER FINISHED TEXTILE PRODUCTS:			
Men's dress shirts and nightwear	84.5	86.0	87.8
Work shirts	11.9	11.6	11.6
FURNITURE AND FIXTURES:			
Wood household furniture, except upholstered	126.0	128.3	129.9
Mattresses and bedsprings	28.2	28.5	29.3
CHEMICALS AND ALLIED PRODUCTS:			
Plastics materials	21.6	21.5	21.3
Synthetic rubber	7.1	7.0	6.7
Synthetic fibers	56.2	56.5	56.3
Soap and glycerin	20.3	20.0	20.0
STONE, CLAY, AND GLASS PRODUCTS:			
Glass containers	41.6	41.2	41.1
Pressed and blown glass, not elsewhere classified	36.4	36.8	38.0
Brick and hollow tile	27.8	28.8	29.4
Sewer pipe	8.6	8.7	9.0

See explanatory notes, section A.

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

(In thousands)

Industry	1951	1950	
	January	December	November
PRIMARY METAL INDUSTRIES:			
Gray-iron foundries	160.8	160.5	157.6
Malleable-iron foundries	27.0	25.6	25.1
Steel foundries	55.3	54.9	52.9
Primary copper, lead, and zinc	26.5	26.6	25.3
Primary aluminum	9.5	9.4	9.3
Iron and steel forgings	32.8	32.3	31.0
Wire drawing	43.9	43.5	43.2
FABRICATED METAL PRODUCTS (EXCEPT ORDNANCE, MACHINERY, AND TRANSPORTATION EQUIPMENT):			
Cutlery and edge tools	25.1	25.6	25.5
Hand tools, not elsewhere classified, files, hand saws, and saw blades	38.0	37.8	37.2
Hardware, not elsewhere classified	76.5	76.2	76.2
Metal plumbing fixtures and fittings	31.7	31.7	31.7
Oil burners, heating and cooking apparatus, not elsewhere classified	78.4	81.4	84.1
Structural and ornamental products	62.0	61.9	61.0
Boiler shop products	54.1	54.2	54.0
Metal stampings	120.4	120.8	120.9
MACHINERY (EXCEPT ELECTRICAL):			
Tractors	69.7	65.3	58.1
Farm machinery, except tractors	73.2	67.0	63.7
Machine tools	53.3	51.2	48.9
Metalworking machinery, not elsewhere classified	41.0	40.6	40.0
Cutting tools, jigs, fixtures, etc.	82.6	79.9	76.4
Computing and related machines	39.4	38.9	37.7
Typewriters	20.7	20.6	20.7
Refrigeration machinery	103.3	103.8	107.8
Ball and roller bearings	44.5	43.6	42.7
Machine shops	42.9	42.1	41.4
ELECTRICAL MACHINERY:			
Radios and related products	179.5	189.8	192.0
Telephone and telegraph equipment and communication equipment, not elsewhere classified	36.7	36.6	35.9
TRANSPORTATION EQUIPMENT:			
Locomotives and parts	23.7	23.6	23.0
Railroad and streetcars	29.3	29.3	29.8
MISCELLANEOUS MANUFACTURING INDUSTRIES:			
Silverware and plated ware	17.8	18.3	18.3

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 50 series. Production-worker employment is also presented for most of the industry components of the mining division.

Table 9 shows production-worker data for 60 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 1947 levels indicated by data from the social insurance programs.

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 persons, 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 period 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, Department of Labor, 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 - Unemployment Compensation 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 5.
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 of 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 foremen 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, Philippine Alien Property Administration, Philippine War Damage Commission, 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 tables 1 and 2 because they presumably have other major jobs; they are included, however, in table 6.

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, product 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.