

EMPLOYMENT and PAY ROLLS

**DETAILED REPORT
JULY 1947**

**United States Department of Labor
Bureau of Labor Statistics**

ESTIMATES OF MANUFACTURING EMPLOYMENT - NEW SERIES

Industries in the Paper and Rubber Groups

In this detailed report the Bureau presents a new series of production-worker estimates for the individual industries comprising the paper and rubber groups. The new estimates, adjusted to 1945 bench-mark data from the Bureau of Employment Security of the Social Security Administration, correct the downward bias which has accumulated since 1939 and are, therefore, more representative of the true levels of employment.

The estimates and indexes for all industries within these two groups have been adjusted. Because of the lapse of several years without any adjustment to levels other than the 1939 Census of Manufactures, some of the changes are rather large.

This report shows the new production-worker employment estimates and indexes of employment and pay rolls for the months currently presented. A set of summary sheets presenting comparable data from January 1939 to date will be provided upon request.

U. S. Department of Labor
Bureau of Labor Statistics
Employment and Occupational Outlook Branch
Employment Statistics Division

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

<u>TABLE</u>	<u>CONTENTS</u>	<u>PAGE</u>
1.	Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by Industry Division.....	2
2.	Estimated Number of Wage and Salary Workers in Manufacturing Industries, by Major Industry Group.....	3
3.	Federal Employment and Pay Rolls in All Areas and in Continental United States, and Total Government Employment and Pay Rolls in Washington, D. C.....	4
4.	Personnel and Pay of the Military Branch of the Federal Government.....	5
5.	Estimated Number of Wage and Salary Workers in Nonagricultural Establishments, by State.....	6
6.	Estimated Number of Production Workers in Manufacturing Industries.....	8
7.	Estimated Employment in Selected Nonmanufacturing Industries.....	14
8.	Indexes of Production-Worker Employment and Pay Rolls in Manufacturing Industries.....	15
9.	Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries.....	21
	Explanatory Notes.....	i
	Glossary.....	v

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

2.

Table 1. - Estimated Number of Wage and Salary Workers in
Nonagricultural Establishments, by Industry Division

(In thousands)

Industry division	1947			1946	
	July	June	May	July	June
TOTAL	42,139	42,361	41,919	40,877	40,680
Manufacturing	15,170	15,327	15,237	14,526	14,371
Mining	864	893	884	873	864
Contract construction	1,853	1,768	1,685	1,627	1,532
Transportation and public utilities	4,139	4,115	3,970	4,051	3,996
Trade	8,556	8,581	8,545	8,337	8,342
Finance	1,590	1,567	1,561	1,549	1,531
Service	4,686	4,711	4,590	4,426	4,430
Federal, State, and local government	5,281	5,399	5,447	5,488	5,614

See explanatory notes, sections A - H

Table 2. - Estimated Number of Wage and Salary Workers
in Manufacturing Industries, by Major Industry Group

(In thousands)

Major industry group	1947			1946	
	July	June	May	July	June
ALL MANUFACTURING	15,170	15,327	15,237	14,526	14,371
<u>Durable goods</u>	7,655	7,863	7,781	7,307	7,172
Iron and steel and their products	1,822	1,839	1,829	1,704	1,663
Electrical machinery	719	746	718	695	688
Machinery, except electrical	1,437	1,528	1,532	1,385	1,362
Transportation equipment, except automobiles	512	583	587	618	624
Automobiles	963	967	926	894	853
Nonferrous metals and their products	450	467	479	457	440
Lumber and timber basic products	721	730	715	620	612
Furniture and finished lumber products	502	510	507	469	467
Stone, clay, and glass products	479	493	488	465	463
<u>Nondurable goods</u>	7,515	7,464	7,456	7,219	7,199
Textile-mill products and other fiber manufactures	1,271	1,293	1,310	1,281	1,296
Apparel and other finished textile products	1,195	1,195	1,192	1,121	1,152
Leather and leather products	390	387	385	396	399
Food	1,646	1,557	1,516	1,512	1,435
Tobacco manufactures	98	97	96	98	99
Paper and allied products	453	462	461	442	445
Printing, publishing, and allied industries	692	692	690	656	650
Chemicals and allied products	731	726	744	685	689
Products of petroleum and coal	235	231	228	221	218
Rubber products	264	271	276	264	272
Miscellaneous industries	540	553	558	543	544

See explanatory notes, sections A - H

Table 3.--Federal Employment and Pay Rolls in All Areas and in Continental United States and Total Government Employment and Pay Rolls in Washington, D.C.
(In thousands)

	Employment (as of first of month)			Pay rolls (total for month)		
	1947		July 1946	1947		July 1946
	July	June		July	June	
<u>Total (including areas outside U.S.)</u>						
Total Federal	2,102.1	2,168.9	2,689.9	\$513,423	\$519,555	\$561,423
Executive	2,061.1	2,127.7	2,646.7	503,917	510,332	552,335
Defense agencies	935.4	996.2	1,547.9	231,175	243,430	282,855
Post Office Department	439.6	437.3	420.7	95,092	93,506	95,601
Other agencies	686.1	694.2	678.1	177,650	173,396	173,879
Legislative	7.3	7.2	6.7	2,462	2,425	2,169
Judicial	3.1	3.1	3.1	1,329	1,149	1,041
Government corporations	30.6	30.9	33.4	5,715	5,649	5,878
<u>Continental United States</u>						
Total Federal	1,847.4	1,905.1	2,266.8	466,153	472,168	523,580
Executive	1,814.1	1,871.9	2,231.0	457,325	463,608	515,212
Defense agencies	717.4	769.3	1,159.1	192,129	203,594	252,237
Post Office Department	438.1	435.8	419.3	94,766	93,185	95,298
Other agencies	658.6	666.8	652.6	170,430	166,829	167,677
Legislative	7.3	7.2	6.7	2,462	2,425	2,169
Judicial	3.0	3.0	3.0	1,292	1,114	1,005
Government corporations	23.0	23.0	26.1	5,074	5,021	5,194
<u>Washington, D.C.</u>						
Total government	230.3	237.9	259.8	63,837	63,389	68,063
District of Columbia						
Government	17.6	18.5	17.4	3,326	4,204	3,136
Federal	212.7	219.4	242.4	60,511	59,185	64,927
Executive	204.8	211.6	235.1	57,839	56,564	62,567
Defense agencies	67.9	71.2	87.4	17,818	17,837	21,077
Post Office Dept.	7.1	7.3	7.5	2,276	2,179	2,289
Other agencies	129.8	133.1	140.2	37,745	36,548	39,201
Legislative	7.3	7.2	6.7	2,462	2,425	2,168
Judicial6	.6	.6	210	196	192

See Glossary for definitions.

Table 4.--Personnel and Pay of the Military Branch of the Federal Government

(In thousands)

Personnel and pay	1947		July 1946	Average monthly personnel and total annual pay	
	July	June		1943	1939
Personnel, total as of first of month including those on active duty and those on terminal leave	1,592	1,631	3,050	3,944	345
Army	990	1,021	1,890	6,733	192
Navy	491	495	977	1,744	124
Marine Corps	93	94	156	311	19
Coast Guard	18	21	27	156	10
Men	1,571	1,608	2,991	8,833	1/
Women	21	23	59	111	1/
Pay, total	\$740,095	\$835,261	\$618,255	\$11,173,186	\$331,523
Army	203,290	203,764	332,006	8,143,833	155,482
Navy	113,967	109,117	244,320	2,408,736	143,258
Marine Corps	16,332	17,072	33,543	392,140	16,877
Coast Guard	6,506	5,308	8,387	228,477	15,926
Pay rolls 2/	261,696	262,504	459,891	10,140,852	331,523
Mustering-out pay	12,227	12,265	115,689	-	-
Family allowances	23,922	24,529	42,676	1,032,334	-
Leave payments	42,250	35,963	-	-	-
Cash	3,718	3,697	-	-	-
Bonds	38,532	32,266	-	-	-

1/ Data not available.

2/ Includes cash payments for clothing-allowance balances to Navy proper and Coast Guard personnel in July.

See Glossary for definitions.

Table 5. - Estimated Number of Wage and Salary Workers in Manufacturing Industries, by State
(In thousands)

Region and State	1947			1946	
	June	May	April	June	May
New England	1,513	1,525	1,553	1,512	1,491
Maine	108	108	109	114	111
New Hampshire	79.3	78.7	81.1	79.3	78.9
Vermont	39.4	39.4	42.0	40.5	40.1
Massachusetts	725	734	750	741	738
Rhode Island	147	148	151	145	144
Connecticut	414	417	420	392	379
Middle Atlantic	4,049	4,057	4,117	3,974	3,877
New York	1,819	1,835	1,871	1,814	1,803
New Jersey	743	727	738	736	728
Pennsylvania	1,487	1,495	1,508	1,424	1,346
East North Central	4,476	4,427	4,522	4,164	4,094
Ohio	1,244	1,239	1,255	1,161	1,148
Indiana	551	550	554	512	495
Illinois	1,238	1,232	1,248	1,160	1,131
Michigan	1,013	980	1,035	943	939
Wisconsin	430	426	430	388	381
West North Central	838	829	837	782	781
Minnesota	194	193	195	183	185
Iowa	146	145	147	136	135
Missouri	355	351	356	330	326
North Dakota	6.9	6.8	6.5	5.8	6.1
South Dakota	11.5	11.3	11.5	10.3	10.2
Nebraska	43.1	42.5	41.9	42.0	42.4
Kansas	81.0	79.5	79.3	74.8	76.2
South Atlantic	1,504	1,513	1,530	1,484	1,462
Delaware	45.2	45.4	44.9	44.7	43.3
Maryland	224	229	228	234	224
District of Columbia	17.2	17.1	17.2	16.1	16.2
Virginia	208	209	209	197	193
West Virginia	132	131	133	128	129
North Carolina	365	366	372	362	358
South Carolina	189	189	190	180	178
Georgia	246	250	254	245	243
Florida	77.1	76.6	81.9	76.8	77.9

Table 5. - Estimated Number of Wage and Salary Workers in Manufacturing Industries, by State - Continued
(In thousands)

Region and State	1947			1946	
	June	May	April	June	May
East South Central	684	682	693	643	635
Kentucky	124	124	130	123	121
Tennessee	245	246	249	235	232
Alabama	224	223	224	202	201
Mississippi	90.9	88.5	90.4	83.4	81.4
West South Central	603	585	588	556	551
Arkansas	71.5	71.4	72.7	65.5	66.0
Louisiana	139	137	135	133	133
Oklahoma	53.5	53.0	54.1	52.8	51.8
Texas	339	324	326	305	300
Mountain	150	147	145	135	132
Montana	17.8	17.1	16.6	15.7	15.4
Idaho	20.1	19.2	18.4	20.8	19.5
Wyoming	6.3	6.1	5.9	5.7	5.3
Colorado	54.6	53.8	54.1	50.0	49.2
New Mexico	9.9	10.0	9.9	10.1	9.9
Arizona	13.2	13.1	13.6	11.1	11.1
Utah	24.7	23.6	22.7	19.0	* 18.1
Nevada	3.8	3.6	3.7	3.0	3.0
Pacific	977	978	978	954	930
Washington	170	168	164	171	163
Oregon	119	117	115	118	112
California'	688	693	699	665	655

* Revised

See explanatory notes, section I.

8.

Table 6. - Estimated Number of Production Workers in Manufacturing Industries

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
ALL MANUFACTURING	12,276	12,404	12,341	11,767	11,623
Durable goods	6,309	6,488	6,426	5,984	5,865
Nondurable goods	5,967	5,916	5,915	5,783	5,758
<u>Durable Goods</u>					
IRON AND STEEL AND THEIR PRODUCTS	1,547	1,562	1,555	1,445	1,403
Blast furnaces, steel works, and rolling mills	499.7	497.0	491.1	469.5	453.1
Gray-iron and semisteel castings	83.7	85.3	85.7	80.7	78.2
Malleable-iron castings	25.1	26.5	25.8	23.6	23.7
Steel castings	47.6	48.7	49.5	50.2	50.8
Cast-iron pipe and fittings	20.2	20.4	20.5	18.3	16.2
Tin cans and other tinware	43.9	42.4	41.8	43.4	41.9
Wire drawn from purchased rods	30.3	30.7	26.3	28.7	28.6
Wirework	39.6	39.6	39.2	36.5	34.3
Cutlery and edge tools	21.3	23.3	25.6	25.4	25.5
Tools (except edge tools, machine tools, files, and saws)	23.7	25.2	24.7	24.3	25.3
Hardware	48.2	49.5	50.1	44.8	45.1
Plumbers' supplies	28.5	29.0	30.0	25.8	25.6
Stoves, oil burners, and heating equipment not elsewhere classified	61.6	62.8	63.0	54.0	51.9
Steam and hot-water heating apparatus and steam fittings	45.0	47.6	48.5	47.7	46.2
Stamped and enameled ware and galvanizing	81.0	82.7	83.8	75.4	73.0
Fabricated structural and ornamental metalwork	58.5	58.7	59.0	53.2	50.9
Metal doors, sash, frames, molding, and trim	9.3	9.3	9.1	8.8	7.7
Bolts, nuts, washers, and rivets	20.7	21.2	21.5	17.6	17.4
Forgings, iron and steel	26.6	27.2	26.8	25.5	25.9
Wrought pipe, welded and heavy-riveted	12.4	12.7	13.4	11.5	11.2
Screw-machine products and wood screws	26.7	27.7	28.0	26.8	27.2
Steel barrels, kegs, and drums	6.2	6.1	6.3	5.8	5.5
Firearms	14.3	14.2	14.1	13.3	12.6
ELECTRICAL MACHINERY	557	574	554	526	521
Electrical equipment	306.5	314.7	307.8	282.5	276.9
Radios and phonographs	78.3	81.8	85.7	76.7	76.8
Communication equipment	77.8	80.9	67.7	85.4	85.7

See explanatory notes, section A, C, and G.

9.
Table 6. - Estimated Number of Production Workers in Manufacturing Industries - Cont'd

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
MACHINERY, EXCEPT ELECTRICAL	1,152	1,185	1,194	1,066	1,049
Machinery and machine-shop products	373.3	381.8	383.6	351.5	347.6
Engines and turbines	43.0	43.1	44.4	43.5	40.8
Tractors	56.8	56.9	55.5	52.4	49.3
Agricultural machinery, excluding tractors	49.0	51.4	50.2	40.8	40.6
Machine tools	50.1	53.4	55.1	59.2	59.3
Machine-tool accessories	42.0	44.9	46.2	47.5	47.4
Textile machinery	36.1	38.7	38.4	31.7	32.1
Pumps and pumping equipment	56.4	58.6	59.0	54.6	54.7
Typewriters	16.2	18.1	23.8	18.2	18.4
Cash registers, adding and calculating machines	37.2	37.7	40.7	33.5	33.0
Washing machines, wringers and driers, domestic	14.5	14.8	14.5	10.3	10.7
Sewing machines, domestic and industrial	11.9	10.7	10.5	9.8	9.5
Refrigerators and refrigeration equipment	76.4	78.3	74.3	59.2	57.4
TRANSPORTATION EQUIPMENT, EXCEPT AUTOMOBILES	395	463	466	476	479
Locomotives	23.7	24.3	23.8	26.2	26.5
Cars, electric- and steam-railroad	55.1	54.9	55.2	45.5	42.8
Aircraft and parts, excluding aircraft engines	129.3	133.9	138.2	128.6	125.5
Aircraft engines	26.8	26.9	27.0	26.5	26.0
Shipbuilding and boatbuilding	87.8	140.9	140.3	173.9	183.2
Motorcycles, bicycles, and parts	13.0	13.3	12.3	10.4	10.3
AUTOMOBILES	785	789	751	725	693
NONFERROUS METALS AND THEIR PRODUCTS	385	401	412	392	378
Smelting and refining, primary, of nonferrous metals	40.4	40.1	39.6	35.4	29.7
Alloying and rolling and drawing of nonferrous metals except aluminum	53.8	57.1	59.8	59.5	57.2
Clocks and watches	24.5	27.3	27.6	26.1	26.7
Jewelry (precious metals) and jewelers' findings	16.0	16.5	16.7	16.7	17.1
Silverware and plated ware	15.5	15.9	15.8	13.7	13.9
Lighting equipment	30.5	31.1	31.7	29.1	28.1
Aluminum manufactures	39.7	42.8	46.2	48.6	47.6
Sheet-metal work, not elsewhere classified	25.0	25.4	25.4	25.0	24.8

See explanatory notes, sections A, C, and G.

Table 6. - Estimated Number of Production Workers in Manufacturing Industries - Cont'd

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
LUMBER AND TIMBER BASIC PRODUCTS <u>1/</u>	658	665	651	561	553
Sawmills and logging camps	531.1	534.7	523.8	454.1	447.2
Planing and plywood mills	127.0	128.6	126.1	107.1	106.2
FURNITURE AND FINISHED LUMBER PRODUCTS <u>1/</u>	419	426	425	392	391
Mattresses and bedsprings	28.5	29.9	29.8	27.1	26.4
Furniture	223.9	227.0	225.9	211.1	209.8
Wooden boxes, other than cigar	35.1	36.2	36.3	32.5	32.3
Caskets and other morticians' goods	18.9	19.2	19.3	17.2	17.5
Wood preserving	18.8	18.6	18.2	16.0	15.4
Wood, turned and shaped	30.2	30.2	30.5	28.8	29.9
STONE, CLAY, AND GLASS PRODUCTS <u>1/</u>	411	423	418	401	398
Glass and glassware	113.1	120.3	122.1	118.2	119.3
Glass products made from purchased glass	12.2	12.4	12.8	11.5	11.9
Cement	35.7	35.3	29.7	33.8	32.7
Brick, tile, and terra cotta	73.3	73.0	72.1	69.6	65.5
Pottery and related products	54.2	55.5	56.0	50.9	50.5
Gypsum	6.2	6.1	5.7	5.5	5.1
Wallboard, plaster (except gypsum), and mineral wool	11.4	11.2	11.0	8.8	10.5
Lime	9.2	9.3	9.4	8.8	8.7
Marble, granite, slate, and other products	16.8	16.5	16.6	16.9	16.6
Abrasives	17.1	18.7	19.4	18.8	18.6
Asbestos products	19.6	21.1	20.9	19.3	19.2
<u>Nondurable Goods</u>					
TEXTILE-MILL PRODUCTS AND OTHER FIBER MANUFACTURES	1,158	1,179	1,197	1,175	1,191
Cotton manufactures, except smallwares	444.7	453.3	460.2	445.0	447.7
Cotton smallwares	11.8	12.4	13.2	13.7	14.1
Silk and rayon goods	89.1	90.8	91.9	90.9	91.8
Woolen and worsted manufactures, except dyeing and finishing	142.3	146.7	148.1	155.0	160.1
Hosiery	109.2	108.0	111.9	113.3	114.3
Knitted cloth	9.0	9.1	9.3	11.1	11.2
Knitted outerwear and knitted gloves	23.5	24.2	25.7	30.0	31.3
Knitted underwear	37.9	38.0	37.6	34.9	35.3
Dyeing and finishing textiles, including woolen and worsted	61.4	64.0	64.6	63.0	63.7
Carpets and rugs, wool	28.4	28.5	28.3	23.7	24.0
Hats, fur-felt	10.7	11.2	11.0	10.7	11.0
Jute goods, except felts	3.6	3.8	3.8	3.8	3.9
Cordage and twine	13.2	13.8	14.1	14.4	15.3

See explanatory notes, sections A, C, and G.

Table 6. - Estimated Number of Production Workers in Manufacturing Industries - Cont'd

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
APPAREL AND OTHER FINISHED TEXTILE PRODUCTS <u>1/</u>	1,040	1,040	1,037	983	1,013
Men's clothing, not elsewhere classified	278.2	284.5	280.5	257.7	260.8
Shirts, collars, and nightwear	71.4	74.3	73.2	64.8	64.2
Underwear and neckwear, men's	15.3	16.8	17.4	15.9	16.6
Work shirts	14.0	14.4	15.3	15.0	15.2
Women's clothing, not elsewhere classified	401.8	389.1	389.3	371.1	399.1
Corsets and allied garments	16.8	17.6	17.7	15.4	16.2
Millinery	20.5	20.2	20.3	21.1	19.8
Handkerchiefs	4.2	4.6	4.7	4.0	4.1
Curtains, draperies, and bedspreads	23.6	22.5	22.2	27.4	27.0
Housefurnishings, other than curtains, etc.	26.6	28.6	29.3	27.8	27.8
Textile bags	26.8	27.1	27.8	28.3	26.9
LEATHER AND LEATHER PRODUCTS <u>1/</u>	349	346	345	357	360
Leather	45.4	45.5	45.9	44.0	45.5
Boot and shoe cut stock and findings	18.8	18.0	18.3	20.1	20.5
Boots and shoes	216.8	214.4	212.6	219.4	220.4
Leather gloves and mittens	11.9	12.1	12.0	14.2	14.3
Trunks and suitcases	11.6	12.2	12.1	14.4	14.0
FOOD	1,203	1,114	1,077	1,119	1,033
Slaughtering and meat packing	149.7	145.9	143.3	123.4	128.3
Butter	25.7	25.6	25.0	26.4	26.1
Condensed and evaporated milk	15.7	15.7	15.0	15.7	15.7
Ice cream	22.3	22.1	20.1	20.9	19.8
Flour	30.8	29.5	28.8	28.3	26.9
Feeds, prepared	23.1	22.5	21.4	21.7	20.8
Cereal preparations	10.2	9.5	9.3	9.5	9.9
Baking	250.8	247.4	245.8	234.0	234.2
Sugar refining, cane	16.6	16.3	15.8	14.2	14.2
Sugar, beet	6.7	5.9	5.4	4.5	4.7
Confectionery	50.3	53.0	54.6	46.0	47.2
Beverages, nonalcoholic	29.6	26.8	25.0	25.7	24.9
Malt liquors	61.3	58.6	55.6	52.0	50.9
Canning and preserving	145.5	91.3	79.9	183.9	111.4
TOBACCO MANUFACTURES	84	84	83	85	86
Cigarettes	32.9	33.3	32.9	33.6	33.6
Cigars	37.9	38.0	37.0	37.6	39.2
Tobacco (chewing and smoking) and snuff	6.9	6.8	6.7	7.6	7.3

See explanatory notes, sections A, C, and G.

Table 6. - Estimated Number of Production Workers in Manufacturing Industries - Contd

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
PAPER AND ALLIED PRODUCTS <u>1/</u>	373	381	381	365	368
Paper and pulp	194.2	194.7	193.2	184.6	185.9
Paper goods, other	56.5	57.9	57.9	54.6	55.7
Envelopes	11.5	11.9	12.0	11.0	11.3
Paper bags	17.8	18.2	18.7	17.5	17.6
Paper boxes	92.6	97.0	98.2	96.0	96.9
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES <u>1/</u>	422	423	422	397	393
Newspapers and periodicals	142.2	142.0	141.2	130.1	129.9
Printing, book and job	176.3	175.8	175.1	169.2	166.0
Lithographing	31.5	32.4	32.7	30.8	30.6
Bookbinding	37.0	37.5	37.4	33.7	33.9
CHEMICALS AND ALLIED PRODUCTS	547	543	561	516	522
Paints, varnishes, and colors	35.9	37.0	37.4	35.6	35.3
Drugs, medicines, and insecticides	51.3	52.3	53.3	51.4	51.4
Perfumes and cosmetics	9.0	9.3	9.3	12.6	12.1
Soap	15.4	15.6	15.2	14.0	14.1
Rayon and allied products	58.0	50.0	58.5	57.0	58.4
Chemicals, not elsewhere classified	125.8	126.7	125.4	117.2	117.5
Explosives and safety fuses	12.8	13.8	13.9	12.3	12.2
Compressed and liquefied gases	6.2	6.3	6.2	5.8	5.8
Ammunition, small-arms	6.8	7.0	6.9	7.6	7.6
Fireworks	2.5	2.9	2.9	2.8	3.3
Cottonseed oil	9.7	9.9	11.0	8.4	9.0
Fertilizers	20.4	21.5	25.6	19.3	20.1
PRODUCTS OF PETROLEUM AND COAL	163	160	158	155	153
Petroleum refining	103.0	101.4	100.4	100.1	99.1
Coke and byproducts	27.1	26.7	26.3	25.6	24.7
Paving materials	1.9	1.8	1.9	2.1	2.1
Roofing materials	13.1	12.7	12.5	12.0	11.8

See explanatory notes, sections A, C, and G.

Table 6. - Estimated Number of Production Workers in Manufacturing Industries - Cont'd

(In thousands)

Industry group and industry	1947			1946	
	July	June	May	July	June
RUBBER PRODUCTS <u>1/</u>	212	219	223	214	221
Rubber tires and inner tubes	115.1	117.7	119.3	113.5	121.2
Rubber boots and shoes	20.0	21.4	22.8	20.3	20.9
Rubber goods, other	76.8	79.5	81.0	80.2	79.2
MISCELLANEOUS INDUSTRIES	416	427	431	417	418
Instruments (professional and scientific), and fire-control equipment	19.1	19.6	19.4	21.2	21.7
Photographic apparatus	26.7	26.1	25.8	25.2	24.5
Optical instruments and ophthalmic goods	19.4	20.2	20.6	21.1	21.3
Pianos, organs, and parts	10.4	10.6	10.6	9.1	9.0
Games, toys, and dolls	25.1	24.3	23.8	20.8	20.9
Buttons	7.4	8.2	8.6	10.1	10.3
Fire extinguishers	2.1	2.1	2.0	2.0	2.0

See explanatory notes, sections A, C, and G.

1/ Estimates for the individual industries comprising the major industry group have been adjusted to levels indicated by final 1945 data made available by the Bureau of Employment Security of the Federal Security Agency. Comparable series from January 1939 are available upon request. More recently adjusted data for the individual industries comprising the major industry group indicated below supersede data shown in publications dated prior to:

Major industry group	Mimeographed release	Monthly Labor Review
Lumber and timber basic products	July 1947	August 1947
Leather and leather products	July 1947	August 1947
Stone, clay, and glass products	August 1947	Sept. 1947
Printing, publishing, and allied industries	August 1947	Sept. 1947
Paper and allied products	Sept. 1947	Oct. 1947
Rubber products	Sept. 1947	Oct. 1947

Table 7. - Estimated Employment in
Selected Nonmanufacturing Industries

(In thousands)

Industry group and industry <u>1/</u>	1947			1946	
	July	June	May	July	June
MINING: <u>2/</u>					
Coal:					
Anthracite	65.2	66.5	67.1	67.5	65.5
Bituminous coal	303	329	326	332	332
Metal	78.6	79.8	78.9	68.8	65.6
Iron	29.8	29.6	29.0	27.4	26.8
Copper	24.3	24.3	23.9	20.4	14.7
Lead and zinc	14.6	16.0	16.0	11.5	14.7
Gold and silver	7.7	7.6	7.8	7.0	7.1
Miscellaneous	2.3	2.3	2.2	2.5	2.3
TRANSPORTATION AND PUBLIC UTILITIES:					
Class I steam railways <u>3/</u>	1,383	1,375	1,365	1,350	1,330
Street railways and busses <u>4/</u>	254	253	253	250	249
Telephone	614	605	506	565	545
Telegraph <u>5/</u>	38.2	38.5	38.7	42.3	42.2
Electric light and power	267	263	258	247	244
SERVICE:					
Hotels (year-round)	382	385	382	384	387
Power laundries <u>2/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>
Cleaning and dyeing <u>2/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>	<u>6/</u>

See explanatory notes, section G.

1/ Includes all employees unless otherwise noted.

2/ Includes production and related workers only.

3/ Includes all employees at middle of month. Excludes employees of switching and terminal companies. Class I steam railways include those with over \$1,000,000 annual revenue. Source: Interstate Commerce Commission.

4/ Includes private and municipal street railway companies and affiliated, subsidiary, or successor trolley-bus and motor-bus companies.

5/ Includes all land line employees except those compensated on a commission basis. Excludes general and divisional headquarters personnel, trainees in school, and messengers.

6/ The change in definition from "wage earner" to "production worker" in the power laundries and cleaning and dyeing industries results in the omission of driver-salesmen. This causes a significant difference in the data. New series are being prepared.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries
(1939 Average = 100)

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947			1946	1947			1946
	July	June	May	July	July	June	May	July
ALL MANUFACTURING	149.9	151.4	150.6	143.6	313.9	319.6	312.2	267.1
Durable goods	174.7	179.7	178.0	165.7	350.6	365.9	353.8	296.3
Nondurable goods	130.3	129.1	129.1	126.2	277.9	274.2	271.5	238.5
Durable Goods								
IRON AND STEEL AND THEIR PRODUCTS	156.1	157.5	156.8	145.7	304.4	316.1	306.7	247.5
Blast furnaces, steel works, and rolling mills	128.6	128.0	126.4	120.9	234.2	247.0	236.2	191.8
Gray-iron and semisteel castings	143.3	146.0	146.7	138.1	313.7	326.3	325.8	264.0
Malleable-iron castings	139.1	146.9	143.2	131.0	314.9	329.2	324.7	267.1
Steel castings	158.1	161.7	164.4	167.0	315.1	321.8	316.6	277.1
Cast-iron pipe and fittings	122.2	123.7	124.2	110.5	292.3	310.7	309.7	221.7
Tin cans and other tinware	138.1	133.4	131.7	136.6	294.7	263.7	250.4	248.7
Wire drawn from purchased rods	137.7	139.9	119.6	130.5	238.1	263.7	219.3	206.3
Wirework	130.4	130.3	129.0	120.2	270.8	270.3	255.5	237.2
Cutlery and edge tools	138.4	151.4	165.8	164.8	311.1	350.0	370.4	340.4
Tools (except edge tools, machine tools, files, and saws)	154.5	164.6	161.6	158.6	315.0	347.7	340.0	303.6
Hardware	135.2	138.9	140.5	125.7	296.6	304.8	306.3	244.9
Plumbers' supplies	115.5	117.8	121.8	104.8	231.2	231.7	230.1	175.4
Stoves, oil burners, and heating equipment not elsewhere classified	133.5	136.2	136.6	117.0	275.5	283.1	279.4	210.7
Steam and hot-water heating apparatus and steam fittings	148.5	157.2	159.9	157.3	295.4	321.0	312.7	279.7
Stamped and enameled ware and galvanizing	145.9	148.9	150.9	135.8	316.6	325.8	329.1	253.5
Fabricated structural and ornamental metalwork	164.8	165.3	166.1	149.8	317.0	325.5	315.2	250.8
Metal doors, sash, frames, molding, and trim	120.7	120.3	117.1	114.1	265.2	249.0	247.9	207.4
Bolts, nuts, washers, and rivets	144.4	148.1	150.0	122.9	281.5	303.7	302.3	190.5
Forgings, iron and steel	173.3	176.7	174.0	165.9	337.8	359.9	346.2	272.1
Wrought pipe, welded and heavy-riveted	148.1	151.5	160.3	137.0	297.7	300.5	302.7	218.6
Screw-machine products and wood screws	157.6	163.7	165.6	158.5	327.8	345.5	346.1	300.5
Steel barrels, kegs, and drums	102.2	100.7	104.1	95.6	251.6	251.2	251.4	187.2
Firearms	286.7	283.3	282.8	266.9	615.2	616.9	604.5	515.9
ELECTRICAL MACHINERY	215.0	221.5	213.8	203.2	422.3	432.6	407.1	351.0
Electrical equipment	169.6	174.1	170.3	156.3	333.0	343.8	327.8	264.3
Radios and phonographs	180.1	188.1	196.9	176.2	389.3	390.1	413.0	332.1
Communication equipment	242.1	251.9	210.7	265.9	436.0	445.0	349.3	459.2

See explanatory notes, sections A, C, F, and G.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries - Continued

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947			1946	1947			1946
	July	June	May	July	July	June	May	July
MACHINERY, EXCEPT ELECTRICAL	217.9	224.2	225.9	201.8	420.7	434.6	429.5	346.2
Machinery and machine-shop products	184.5	188.7	189.6	173.7	356.1	367.9	362.6	299.4
Engines and turbines	230.7	231.3	238.3	233.1	493.6	502.7	502.2	446.8
Tractors	181.7	181.9	177.6	167.5	312.9	310.2	302.8	248.4
Agricultural machinery, excluding tractors	176.3	184.9	180.6	146.8	361.5	371.9	344.3	247.5
Machine tools	136.8	145.9	150.5	161.5	239.9	262.6	263.6	262.3
Machine-tool accessories	166.8	178.4	183.4	188.7	281.8	305.4	311.6	293.2
Textile machinery	164.9	176.7	175.3	144.7	349.6	370.9	363.7	265.3
Pumps and pumping equipment	232.6	242.0	243.3	225.2	479.2	494.4	490.7	413.2
Typewriters	100.1	111.7	146.7	112.2	206.2	233.5	309.1	216.5
Cash registers, adding and calculating machines	188.8	191.6	206.9	170.0	386.5	394.2	417.3	314.2
Washing machines, wringers and driers, domestic	193.6	198.6	193.9	137.8	391.7	404.2	392.7	234.6
Sewing machines, domestic and industrial	151.4	136.1	134.4	124.8	327.8	297.4	280.2	229.6
Refrigerators and refrigeration equipment	217.4	222.6	211.4	168.4	422.1	427.5	394.5	272.2
TRANSPORTATION EQUIPMENT, EXCEPT AUTOMOBILES	248.9	291.8	293.7	299.9	479.6	560.3	561.3	558.7
Locomotives	366.0	376.0	367.4	405.1	757.2	774.7	757.0	836.0
Cars, electric- and steam-railroad	224.8	223.9	224.9	185.7	482.1	471.1	465.2	341.5
Aircraft and parts, excluding aircraft engines	326.0	337.4	348.4	324.2	607.7	621.5	639.2	605.6
Aircraft engines	301.1	302.5	303.4	298.3	485.1	481.5	477.0	468.9
Shipbuilding and boatbuilding	126.7	203.5	202.7	251.2	245.7	396.4	395.6	468.8
Motorcycles, bicycles, and parts	185.8	190.5	183.6	148.6	377.6	381.8	363.1	239.8
AUTOMOBILES	195.0	196.2	186.5	180.2	347.8	357.0	329.0	292.8
NONFERROUS METALS AND THEIR PRODUCTS	168.2	175.1	179.6	171.2	326.6	346.2	349.0	303.9
Smelting and refining, primary, of nonferrous metals	146.3	145.0	143.2	128.2	296.5	296.3	285.4	227.8
Alloying and rolling and drawing of nonferrous metals except aluminum	138.6	147.2	154.0	153.2	260.1	279.7	283.4	268.7
Clocks and watches	120.5	134.6	135.9	128.5	260.0	299.5	296.0	251.4
Jewelry (precious metals) and jewelers' findings	111.0	114.1	115.8	115.5	194.5	212.4	215.4	201.6
Silverware and plated ware	127.5	130.8	130.6	112.6	281.0	290.4	287.4	213.7
Lighting equipment	149.1	152.0	154.7	142.1	270.1	289.4	295.5	239.2
Aluminum manufactures	168.6	181.6	196.1	206.4	299.0	327.0	348.1	340.4
Sheet-metal work, not elsewhere classified	133.2	135.5	135.5	133.1	276.2	282.0	278.7	246.1

See explanatory notes, sections A, C, F, and G.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries - Continued

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947		1946		1947		1946	
	July	June	May	July	July	June	May	July
LUMBER AND TIMBER BASIC PRODUCTS <u>1/</u>	156.5	158.2	154.8	133.5	358.4	374.9	351.4	252.1
Sawmills and logging camps	169.3	170.5	167.0	144.8	395.4	412.2	384.7	276.1
Planing and plywood mills	160.5	162.6	159.4	135.3	345.2	366.5	350.5	242.0
FURNITURE AND FINISHED LUMBER PRODUCTS <u>1/</u>	127.8	129.8	129.5	119.6	281.4	290.4	285.1	231.9
Mattresses and bedsprings	139.2	145.7	145.2	132.3	287.3	291.6	282.0	241.7
Furniture	125.9	127.6	127.0	118.7	274.4	284.7	278.9	228.0
Wooden boxes, other than cigar <u>2/</u>	123.9	127.7	128.3	114.5	304.1	315.8	304.0	238.7
Caskets and other morticians' goods	136.0	138.1	138.8	123.5	260.6	275.8	278.0	214.2
Wood preserving	149.4	147.9	144.7	127.2	392.7	391.2	387.6	287.3
Wood, turned and shaped	123.0	122.9	124.3	117.3	268.5	272.3	274.9	234.7
STONE, CLAY, AND GLASS PRODUCTS <u>1/</u>	140.2	144.0	142.6	136.6	294.6	298.2	286.9	242.2
Glass and glassware	158.5	168.6	171.1	165.7	339.2	341.1	333.0	275.2
Glass products made from purchased glass	122.1	124.3	127.6	114.8	246.9	259.5	259.4	205.5
Cement	146.5	145.0	121.8	138.8	283.5	278.9	202.5	230.1
Brick, tile, and terra cotta	126.3	125.8	124.3	119.9	276.4	278.9	276.4	229.7
Pottery and related products	160.2	164.1	165.6	150.5	307.5	322.4	323.8	250.0
Gypsum	126.4	123.6	115.2	111.4	262.5	244.8	228.4	197.6
Wallboard, plaster (except gypsum), and mineral wool <u>2/</u>	140.9	137.6	135.9	108.6	335.6	327.6	315.6	215.7
Lime	97.5	98.6	99.3	93.1	230.4	237.8	232.5	201.0
Marble, granite, slate, and other products	90.5	88.9	89.5	91.2	156.7	155.3	158.7	147.0
Abrasives	223.4	242.2	250.4	243.4	366.2	413.8	440.6	444.5
Asbestos products	123.5	132.7	131.3	121.3	299.2	314.2	299.8	253.4
<u>Non-durable Goods</u>								
TEXTILE-MILL PRODUCTS AND OTHER FIBER MANUFACTURES	101.2	103.1	104.6	102.8	237.5	242.5	248.3	213.3
Cotton manufactures, except smallwares	112.3	114.5	116.2	112.4	288.7	293.5	303.2	246.1
Cotton smallwares	88.8	92.8	98.8	103.0	190.7	195.8	212.6	207.6
Silk and rayon goods	74.4	75.8	76.7	75.9	191.3	194.3	200.4	166.3
Woolen and worsted manufactures, except dyeing and finishing	95.4	98.3	99.2	103.9	231.1	240.2	240.5	228.6
Hosiery	68.7	67.9	70.4	71.2	135.3	130.8	139.6	130.9
Knitted cloth	82.4	83.5	85.4	101.2	176.9	176.5	180.4	209.0
Knitted outerwear and knitted gloves	83.4	86.2	91.3	106.8	170.8	182.8	195.6	216.7
Knitted underwear	98.2	98.5	97.4	90.6	229.7	232.4	232.1	189.7
Dyeing and finishing textiles, including woolen and worsted	91.9	95.7	96.7	94.2	195.1	211.4	211.2	178.8
Carpets and rugs, wool	110.9	111.2	110.4	92.7	239.3	236.3	231.3	165.2
Hats, fur-felt	73.9	76.9	75.3	73.7	147.6	163.3	153.3	152.0
Jute goods, except felts	101.3	104.6	106.8	104.9	218.4	244.7	256.0	217.2
Cordage and twine	109.0	113.9	116.4	118.8	237.5	244.4	255.4	229.3

See explanatory notes, sections A, C, F, and G.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries - Continued

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947			1946	1947			1946
	July	June	May	July	July	June	May	July
APPAREL AND OTHER FINISHED TEXTILE PRODUCTS 1/	131.7	131.7	131.4	124.5	278.9	274.9	272.1	240.3
Men's clothing, not elsewhere classified	121.1	123.9	122.2	112.2	260.0	273.0	270.5	215.3
Shirts, collars, and nightwear	96.5	100.5	98.9	87.7	216.2	229.0	228.8	178.2
Underwear and neckwear, men's	90.2	99.2	102.4	93.8	233.2	248.3	249.9	210.8
Work shirts	99.1	102.1	108.2	106.2	241.4	237.5	253.6	219.0
Women's clothing, not elsewhere classified	140.4	135.9	136.0	129.6	284.6	264.1	260.3	254.2
Corsets and allied garments	89.4	93.5	94.2	82.2	186.3	199.2	198.0	154.4
Millinery	80.4	79.3	79.3	82.9	146.9	128.4	119.2	144.9
Handkerchiefs	83.1	90.3	93.1	78.0	196.6	205.9	221.7	157.6
Curtains, draperies, and bedspreads	132.8	126.9	124.7	154.3	290.1	253.9	257.4	319.6
Housefurnishings, other than curtains, etc.	238.5	256.2	262.0	248.9	494.1	553.4	560.8	492.3
Textile bags	212.5	214.6	220.6	224.6	437.8	422.4	427.8	382.5
LEATHER AND LEATHER PRODUCTS 1/	100.6	99.8	99.4	103.0	211.2	211.5	207.0	198.7
Leather	90.7	91.0	91.6	87.9	187.2	185.2	183.7	156.2
Boot and shoe cut stock and findings	94.4	90.1	91.7	100.9	182.4	172.9	170.0	179.9
Boots and shoes	93.9	92.9	92.1	95.0	200.7	201.7	197.0	190.4
Leather gloves and mittens	118.9	121.0	120.4	141.7	227.2	226.9	223.4	271.3
Trunks and suitcases	139.0	147.0	145.8	173.0	273.9	298.1	281.6	303.6
FOOD	140.8	130.3	126.0	131.0	290.8	267.8	252.8	235.1
Slaughtering and meat packing	124.2	121.1	118.9	102.4	259.9	241.2	231.9	179.9
Butter	143.4	142.3	139.1	146.9	289.7	293.1	274.3	267.6
Condensed and evaporated milk	161.8	162.1	154.5	162.1	351.4	354.7	330.5	305.9
Ice cream	141.9	140.7	127.9	132.7	257.4	250.2	221.3	221.7
Flour	124.4	119.0	116.1	114.3	286.0	264.2	240.4	221.1
Feeds, prepared	150.2	146.1	139.3	140.6	316.5	306.4	285.0	251.0
Cereal preparations	136.3	127.6	124.4	127.4	287.4	253.9	242.7	219.5
Baking	108.7	107.2	106.5	101.4	208.2	203.9	199.7	178.5
Sugar refining, cane	117.3	115.3	111.6	100.0	244.7	250.7	206.2	167.5
Sugar, beet	64.6	56.7	51.6	43.6	122.5	109.2	91.9	73.8
Confectionery	101.1	106.5	109.9	92.5	209.3	225.7	229.1	169.7
Beverages, nonalcoholic	139.0	126.1	117.4	120.8	239.6	210.9	190.3	186.1
Malt liquors	169.8	162.5	154.2	144.0	324.7	296.4	268.3	222.3
Canning and preserving	108.2	67.9	59.4	136.8	265.2	163.8	143.4	325.8
TOBACCO MANUFACTURES	89.8	90.2	88.4	90.7	200.0	194.8	182.8	178.3
Cigarettes	120.1	121.5	119.8	122.5	253.7	239.6	220.9	211.1
Cigars	74.5	74.7	72.7	73.9	163.4	168.0	163.9	160.1
Tobacco (chewing and smoking) and snuff	74.9	74.1	73.2	83.1	164.6	147.7	125.7	140.5

See explanatory notes, sections A, C, F, and G.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries - Continued

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947			1946	1947			1946
	July	June	May	July	July	June	May	July
PAPER AND ALLIED PRODUCTS <u>1/</u>	140.7	143.4	143.5	137.4	298.7	298.0	291.1	246.4
Paper and pulp	140.9	141.3	140.3	134.0	309.6	302.1	289.4	242.1
Paper goods, other	149.7	153.6	153.4	144.8	296.0	301.8	306.8	253.9
Envelopes	131.5	136.6	137.6	126.2	249.8	265.2	262.9	214.4
Paper bags	160.5	164.0	168.1	157.5	343.2	340.9	338.4	293.7
Paper boxes	133.6	139.9	141.6	138.4	273.6	283.8	282.9	248.8
PRINTING, PUBLISHING, AND ALLIED INDUSTRIES <u>1/</u>	128.8	129.1	128.6	121.1	233.6	235.9	234.2	193.3
Newspapers and periodicals	119.8	119.7	119.0	109.6	208.9	210.0	209.3	163.7
Printing, book and job	138.1	137.8	137.2	132.6	259.8	258.1	255.4	220.2
Lithographing	119.8	123.3	124.6	117.1	207.4	216.6	216.1	183.1
Bookbinding	143.6	145.6	145.3	130.6	299.2	324.7	320.2	259.9
CHEMICALS AND ALLIED PRODUCTS	189.8	188.5	194.8	178.9	378.7	373.3	381.5	315.5
Paints, varnishes, and colors	127.7	131.6	132.9	126.6	229.1	233.9	234.1	199.5
Drugs, medicines, and insecticides	187.2	190.9	194.4	187.5	347.6	354.6	358.7	307.0
Perfumes and cosmetics	87.1	89.9	89.3	121.4	159.3	168.9	166.1	191.4
Soap	113.1	114.7	112.2	103.2	223.3	233.2	217.2	170.2
Rayon and allied products	120.1	103.6	121.3	118.0	238.2	205.3	239.0	197.6
Chemicals, not elsewhere classified	180.8	182.1	180.3	168.4	341.8	338.9	334.9	289.2
Explosives and safety fuses	176.6	190.9	191.8	169.8	324.9	341.1	333.8	264.5
Compressed and liquefied gases	156.4	159.6	155.4	145.9	277.3	284.7	269.5	238.8
Ammunition, small-arms	159.4	163.4	161.7	178.0	355.7	358.9	351.7	335.7
Fireworks	214.3	247.6	253.5	244.4	540.3	685.3	686.6	622.1
Cottonseed oil	63.6	65.2	72.3	55.6	162.1	169.0	184.7	119.8
Fertilizers	108.6	114.4	136.3	102.7	288.0	301.8	365.0	246.4
PRODUCTS OF PETROLEUM AND COAL	153.7	150.8	149.3	146.7	295.6	286.2	275.7	251.0
Petroleum refining	141.4	139.2	137.9	137.4	265.4	253.8	243.8	228.0
Coke and byproducts	125.1	123.2	121.4	117.8	248.3	256.2	248.0	215.1
Paving materials	79.2	73.8	77.1	86.7	169.5	159.0	147.6	171.4
Roofing materials	163.1	157.9	155.3	149.4	357.7	339.5	336.3	279.5

See explanatory notes, sections A, C, F, and G.

Table 8. - Indexes of Production-Worker Employment and Pay Rolls
in Manufacturing Industries - Continued

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947		1946		1947		1946	
	July	June	May	July	July	June	May	July
RUBBER PRODUCTS ^{1/}	175.2	180.7	184.5	177.0	352.7	361.9	367.2	321.4
Rubber tires and inner tubes	212.3	217.0	220.0	209.3	393.8	396.1	399.3	347.8
Rubber boots and shoes	134.4	143.9	153.6	136.8	289.1	317.1	331.2	261.9
Rubber goods, other	148.0	153.2	156.3	154.7	304.9	320.1	325.5	295.7
MISCELLANEOUS INDUSTRIES	170.2	174.4	176.3	170.5	341.5	355.4	356.6	314.2
Instruments (professional and scientific), and fire-control equipment	172.6	177.6	175.6	191.6	319.3	335.1	317.0	327.0
Photographic apparatus	154.7	151.3	149.2	145.9	275.0	280.7	275.2	240.0
Optical instruments and ophthalmic goods	167.2	173.7	177.6	181.8	309.1	331.2	331.2	314.9
Pianos, organs, and parts	136.7	139.8	139.1	118.9	286.6	298.3	300.2	213.7
Games, toys, and dolls	134.5	130.4	127.5	111.3	295.9	282.9	277.6	222.1
Buttons	67.5	74.7	78.4	92.2	147.0	162.4	168.6	195.2
Fire extinguishers	207.3	206.7	203.6	202.1	434.1	420.0	396.9	397.1

See explanatory notes, sections A, C, F, and G.

^{1/} Indexes for the individual industries comprising the major industry group have been adjusted to levels indicated by final 1945 data made available by the Bureau of Employment Security of the Federal Security Agency. Comparable series from January 1939 are available upon request. More recently adjusted data for the individual industries comprising the major industry group indicated below supersede data shown in publications dated prior to:

Major industry group	Mimeographed release	Monthly Labor Review
Lumber and timber basic products	July 1947	August 1947
Leather and leather products	July 1947	August 1947
Stone, clay, and glass products	August 1947	September 1947
Printing, publishing, and allied industries	August 1947	September 1947
Paper and allied products	September 1947	October 1947
Rubber products	September 1947	October 1947

^{2/} Revisions have been made as follows in the indexes for earlier months:
Wallboard, plaster (except gypsum), and mineral wool - April 1947 pay roll to 305.9.

Table 9. - Indexes of Employment and Pay Rolls in
Selected Nonmanufacturing Industries

(1939 Average = 100)

Industry group and industry	Employment indexes				Pay-roll indexes			
	1947		1946		1947		1946	
	July	June	May	July	July	June	May	July
MINING:								
Coal:								
Anthracite	78.7	80.3	81.1	81.4	171.8	194.6	186.3	156.5
Bituminous coal	81.8	88.7	88.1	89.5	194.9	252.3	244.6	198.4
Metal	89.1	90.4	89.4	78.0	171.9	181.8	172.1	132.4
Iron	148.0	147.2	143.8	135.6	295.4	309.4	284.7	247.1
Copper	101.8	101.8	100.2	85.6	209.6	214.1	201.8	153.0
Lead and zinc	93.8	102.9	102.9	74.2	198.0	228.1	223.3	128.5
Gold and silver	31.1	30.6	31.4	28.5	46.8	49.5	49.3	38.5
Miscellaneous	57.6	58.0	56.5	62.5	99.1	100.3	95.8	96.7
Quarrying and nonmetallic	106.0	105.7	104.3	101.2	251.2	251.3	241.7	213.6
Crude petroleum production <u>1/</u>	97.2	95.5	95.3	95.4	173.9	175.3	163.4	151.3
TRANSPORTATION AND PUBLIC UTILITIES:								
Class I steam railways <u>2/</u>	140.0	139.2	138.2	136.6	3/	3/	3/	3/
Street railways and busses	130.9	130.4	130.7	128.9	222.1	222.1	220.0	206.7
Telephone	193.3	190.4	159.2	177.7	302.2	292.5	202.9	268.8
Telegraph	101.5	102.3	102.8	112.4	215.2	218.8	226.9	178.6
Electric light and power	109.3	107.5	105.7	101.2	178.4	177.5	168.2	150.2
TRADE: <u>4/</u>								
Wholesale	111.1	110.5	109.7	107.5	196.5	198.0	191.4	174.5
Retail	110.2	111.4	111.3	106.2	198.6	201.2	195.3	172.6
Food	113.0	113.7	113.9	101.3	213.8	212.1	206.0	171.5
General merchandise	116.5	120.6	121.2	117.7	214.4	218.9	212.3	187.1
Apparel	106.8	114.9	114.3	107.9	192.5	207.2	200.9	177.5
Furniture and housefurnishings	86.0	85.1	84.6	78.1	156.1	156.6	151.9	129.6
Automotive	104.2	100.6	99.4	93.4	184.8	184.3	177.7	156.8
Lumber and building materials	121.4	119.5	117.5	111.1	218.8	219.7	209.9	180.1
SERVICE:								
Hotels (year-round) <u>5/</u>	118.3	119.4	118.4	119.1	222.0	226.4	221.1	204.9
Power laundries	112.8	112.2	110.2	113.6	210.3	211.1	203.8	193.3
Cleaning and dyeing	123.4	127.7	123.7	130.0	227.6	241.9	231.5	231.3

See footnotes, table 7, and explanatory notes, sections F and G.

1/ Does not include well drilling or rig building.2/ Source: Interstate Commerce Commission.3/ Not available.4/ Includes nonsupervisory workers and working supervisors only.5/ Money payments only; additional value of board, room, uniforms, and tips, not included.

EXPLANATORY NOTES

Sec. A. Revisions of Employment Estimates - The employment estimates shown in this report for the industry divisions (e.g., mining, manufacturing, etc.) and industry groups (e.g., iron and steel, electrical machinery, etc.) have been adjusted to levels indicated by final 1945 benchmark data and supersede data shown in mimeographed releases dated prior to April 1947 and in the Monthly Labor Review dated prior to May 1947.

Sec. B. Sources of Benchmark Data - The chief purpose of recent revisions, published in the February 1947 DETAILED REPORT, is to adjust the levels of employment estimates to 1945 benchmark data. In preparing estimates for employment prior to 1939, the various industrial censuses taken by the Bureau of the Census were used as sources of benchmark data. Data obtained from unemployment compensation agencies and the Bureau of Old Age and Survivors Insurance are the main bases for 1945 benchmarks, although there are some important exceptions. Benchmarks for State and local government, for example, are based on data compiled by the Bureau of the Census, while data on Federal Government employment are made available by the U. S. Civil Service Commission. The Interstate Commerce Commission is the source for railroads, and the U. S. Maritime Commission for water transportation.

Sec. C. Scope of Employment Revisions - Recent revisions also include a new type of estimate for employment in construction based upon establishment report. This estimate is more consistent with the estimating procedure used for other industry divisions. In addition, federal force account construction employment has been transferred from the construction segment to government.

Each of the industry divisions was affected by the recent revisions. Adjustments have also been made in each of the 20 major groups comprising the manufacturing industry division. To be consistent with the estimates for these major industry groups, and more representative of the true level of employment, estimates for the individual manufacturing industries, formerly based on the 1939 Census of Manufactures, are now being revised. As these revisions are completed, they are published in this Report and indicated by appropriate footnotes. Since the revised employment estimates shown in this Report cover only the current month, a set of summary sheets presenting comparable figures from January 1939 to date, by month, for each industry will be provided upon request.

Sec. D. How Employment Estimates Are Made - Estimates of 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 an accurate base be established from which estimates may be carried forward. This base or "benchmark" is either a complete count or an estimate with a satisfactory degree of accuracy. When a new benchmark becomes available, estimates prepared since the last benchmark are reviewed to determine if any adjustment of level is required. This is the basic principle of employment estimating used by the BLS. It yields a satisfactory compromise between a slow but highly accurate complete count on the one hand, and a rapid but less accurate sample count on the other.

Briefly, the Bureau of Labor Statistics computes employment estimates as follows: first, a benchmark 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 benchmark to determine the monthly estimates c

employment between benchmark periods. For example, if the latest complete data on employment for an industry were 40,200 in September 1945, and if the industry has a reporting sample of 13 establishments employing 23,200 workers in September and 23,800 in October, the October estimate would be prepared as follows:

$$40,200 \times \frac{23,800}{23,200} = 41,240$$

In general data showing month-to-month changes in employment reflect the fluctuations shown by establishments reporting to the Bureau of Labor Statistics. However, the usual estimating method is inadequate in the finance and service industries, which have a preponderance of small establishments. A special sampling procedure has been introduced, involving the scientific selection of a sample of cities and of a representative list of blocks in these cities. Data obtained from the establishments in these blocks yield substantially better estimates of month-to-month changes in employment in the service and finance industries. For railroads, complete reports of employment are available.

Why Revisions are Necessary - Because reports are not immediately available from new firms, they are frequently introduced into the Bureau of Labor Statistics sample after they have been in operation for some time. This lapse of time produces a rather consistent understatement which becomes larger from year to year. It is important, therefore, that estimates not be allowed to go uncorrected for too long a period. During the war period adjustment of many of the nonmanufacturing industry divisions was unavoidably postponed for several years. Consequently, the most recent revision corrects for the downward bias that had accumulated in the non-manufacturing series since 1941. Revisions in some industry divisions have been carried back to 1939 in order to incorporate greater refinements in methodology and new source materials that have become available. For example, improved data on the small firm component of the trade and service industries, supplied by the Bureau of Old Age and Survivors Insurance, made possible refinements in these series back to 1939.

Sec. E. Comparability With Other Types of Employment Data - The Bureau of Labor Statistics employment estimates are based upon reports submitted by cooperating establishments and therefore differ from employment information obtained by household interviews, such as the Monthly Report of the Labor Force. The Bureau of Labor Statistics estimates of employment in nonagricultural establishments differ from the Monthly Report of the Labor Force total nonagricultural employment estimates in several important respects. For example: (1) The Bureau of Labor Statistics estimates cover all full- and part-time wage and salary workers in non-agricultural establishments who worked or received pay during the pay period ending nearest the 15th of the month. Persons who worked in more than one establishment during the reporting period would be counted more than once; (2) Proprietors, self-employed persons, domestic servants, and unpaid family workers are excluded.

Sec. F. Pay Roll Indexes - Cooperating establishments are instructed to report pay rolls of production or nonsupervisory workers prior to deduction for old age and unemployment insurance, withholding taxes, bonds, and union dues. Pay for sick leave, holidays, and vacations taken is included. Respondents are instructed to exclude pay for vacations not taken as well as cash estimates of any payments in kind. Bonuses, unless earned and paid regularly each pay period, are also excluded.

The methodology for obtaining pay roll estimates is similar to that for employment estimates. Sample changes showing monthly movements are used in projecting established benchmarks to secure current pay roll estimates. These pay roll estimates are converted into indexes, using the 1939 average as a base.

Sec. G. Source of Data - Employment and pay roll estimates are based on reports from cooperating establishments. The approximate number of establishments, and workers covered, for each of the industry divisions are shown below.

Approximate Coverage of BLS Employment
and Pay Rolls Sample

Industry Division :	Number of Establishments :	Employees or production workers	
		Number	Percent of Total
Manufacturing	33,000	7,500,000	60
Mining	2,700	354,000	40
Public Utilities	7,000	832,000	75
Wholesale Trade	11,400	326,000	20
Retail Trade	45,000	1,300,000	25
Hotels (year-round)	1,300	137,000	35
Power laundries and cleaning and dyeing	1,700	74,000	20

Sec. H. Coverage of Employment Estimates - The employment estimates shown in Tables 1, 2, 3, and 5 cover all full- and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. Proprietors, self-employed persons, domestic servants, and personnel of the armed forces are excluded. Production worker estimates as shown in Tables 6 and 8 are limited to working foremen and all nonsupervisory workers except administrative, office, and sales personnel.

Sec. I. State Estimates - State estimates are prepared in cooperation with various State Agencies, as indicated below. The estimates for manufacturing have been adjusted to recent data made available under the Federal Social Security program. Since some states have adjusted to more recent benchmark data than others and because varying methods of computation are used, the total of the state estimates differs from the national total (see Table 1). Because of these recent revisions the state estimates for manufacturing are not consistent with the unrevised data shown for total employment in nonagricultural establishments, by state. Comparable series of manufacturing estimates for each state, January 1943 to date, and also for nonagricultural employment by state, through December 1946, are available upon request to the cooperating state agency or the appropriate Bureau of Labor Statistics regional office.

Cooperating State Agencies

Arizona - Employment Security Commission, P. O. Box 111, Phoenix.
California - Division of Labor Statistics and Research, San Francisco 2.
Connecticut - Employment Security Division, Hartford 15.
Delaware - Federal Reserve Bank of Philadelphia, 925 Chestnut Street, Philadelphia 1.
Florida - Florida Industrial Commission, Tallahassee.
Georgia - Employment Security Administration, Atlanta 3.
Illinois - Dept. of Labor, Division of Statistics and Research, Chicago 6.
Indiana - Employment Security Division, Indianapolis 12.
Kansas - Kansas State Labor Department, Topeka.
Louisiana - Bureau of Business Research, College of Commerce, Louisiana State University, Baton Rouge 3.
Maryland - Dept. of Labor and Industry, Baltimore 2.
Massachusetts - Dept. of Labor and Industries, State House, Boston 33.
Michigan - Dept. of Labor and Industry, Lansing 13.
Minnesota - Division of Employment and Security, St. Paul 1.
Montana - Unemployment Compensation Commission of Montana, Helena.
Nevada - Employment Security Department, Carson City.
New Jersey - Dept. of Labor, Trenton 8.
New York - Dept. of Placement and Unemployment Insurance, 342 Madison Avenue, New York 17.
North Carolina - North Carolina Dept. of Labor, Raleigh.
Oklahoma - Oklahoma Employment Security Commission, American National Bldg., Oklahoma City 2.
Pennsylvania - Federal Reserve Bank of Philadelphia, 925 Chestnut Street, Philadelphia 1. (Manufacturing)
Dept. of Labor and Industry, Harrisburg. (Nonmanufacturing)
Rhode Island - Dept. of Labor, Division of Census and Statistics, Providence 2.
Texas - Bureau of Business Research, University of Texas, Austin 12.
Utah - Dept. of Employment Security, Salt Lake City 13.
Virginia - Division of Research and Statistics, State Dept. of Labor and Industry, Richmond 21.
Washington - Office of Unemployment Compensation and Placement, P.O. Box 367, Olympia
Wisconsin - Industrial Commission of Wisconsin, Madison 3.

BLS Regional Offices

New England - Regional Director, U. S. Bureau of Labor Statistics, Old South Bldg., 294 Washington St., Boston 8, Massachusetts (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
North Atlantic - Regional Director, U. S. Bureau of Labor Statistics, 1000 Parcel Post Bldg., 341 Ninth Avenue, New York 1, New York (Delaware, Pennsylvania, New Jersey, New York)
North Central - Regional Director, U. S. Bureau of Labor Statistics, 312 National War Agencies Bldg., 226 W. Jackson Blvd., Chicago 6, Illinois (Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, Ohio, North Dakota, South Dakota, Wisconsin)
Southern - Regional Director, U. S. Bureau of Labor Statistics, 6th Floor Silvey Bldg., 114 Marietta Street, N.W., Atlanta 3, Georgia (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas)
Pacific-Rocky Mountain - Regional Director, U. S. Bureau of Labor Statistics, 546 Federal Office Bldg., San Francisco 2, California (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming)

Technical advice and assistance on employment statistics in the states of Virginia, West Virginia, Maryland, and the District of Columbia will be given by the Bureau's Washington office.

GLOSSARY

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 governments, public utilities, and private establishments, are excluded.

Defense Agencies - Covers the National military establishment, Maritime Commission, National Advisory Committee for Aeronautics, The Panama Canal, Office of Temporary Controls, Philippine Alien Property Administration, Philippine War Damage Commission, Price Decontrol Board, Office of Selective Service Records, War Assets Administration, Office of Defense Transportation, Office of Scientific Research and Development.

Family Allowances - Represents the Government's contribution; the amount contributed by the personnel is included under pay rolls.

Federal Government-Executive branch - Includes U. S. Navy Yards, Federal arsenals, and force-account construction. Employment shown here for the executive branch differs from data published by the U. S. Civil Service Commission in the following respects: (1) Substitute rural mail carriers are excluded here; (2) Seamen and trainees who are hired and paid by private steamship companies having contracts with the Maritime Commission are excluded here; (3) The Panama Railroad Company is shown here under Government corporations but is included under the executive branch by the Civil Service Commission; (4) Employment collected and published by the Civil Service Commission as of the last day of the month, is here presented as of the 1st day of the next month.

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

Government - Covers Federal, State, and local governmental establishments performing legislative, administrative, and judicial functions, as well as all government owned and operated establishments and institutions (arsenals, navy yards, hospitals, Federal Reserve District Banks, etc.) and government force-account construction.

Government corporations - Covers only three corporations: The Panama Railroad Company, the Federal Reserve banks, and the mixed-ownership banks of the Farm Credit Administration. All other corporations are included under the executive branch.

Indexes of production worker employment - Estimates of production worker employment expressed as a percentage of the average employment in 1939.

Indexes of production worker pay rolls - Estimates of production worker pay rolls expressed as a percentage of the average pay roll for 1939.

Leave payments - Payments authorized by Public Law 704 of the 79th Congress to enlisted personnel who were discharged prior to September 1946 for accrued and unused leave and to present officers and enlisted personnel for leave accrued in excess of 60 days. Value of bonds represents face value; interest will be paid in addition to the face value at the time the bonds are cashed. The payment of present personnel while on terminal leave is included in the pay rolls.

Manufacturing - Covers only privately owned establishments; governmental manufacturing operations such as arsenals and navy yards are excluded.

Military pay rolls - For the Navy and Marine Corps and for the current months for the Army, pay rolls are computed on the basis of the average personnel count for the month, including enlisted persons on terminal leave beginning September 1946, and excluding the retired and the inactive reserves. Pay rolls for the Coast Guard and for earlier years for the Army represent actual expenditures.

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.

Nonagricultural establishments - Governmental or private business establishments:
(1) that are physically located within continental United States; and
(2) whose principal activity can be classified under one of the following industry divisions--mining, contract construction, manufacturing, transportation and public utilities, wholesale and retail trade, finance, service, or government.

Pay rolls - Represent pay rolls of production and related workers (nonsupervisory) before deductions for old-age and unemployment insurance, group insurance, withholding tax, bonds, and union dues, but after deductions for damaged work. 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.

Production 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. Excludes supervisory employees (above the working foreman level) and their clerical staffs, routemen, salesmen, and other groups of nonproduction workers defined below under wage and salary workers.

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

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 sale of goods. Includes auto repair services.

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 services. Government owned and operated establishments are excluded.

Wage and salary workers - In addition to production and related workers as defined above, 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), and other workers not included as production workers. 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).

Wage earner - See production workers.

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.