

Serial No. R. 990

UNITED STATES DEPARTMENT OF LABOR

Frances Perkins, *Secretary*

BUREAU OF LABOR STATISTICS

Isador Lubin, *Commissioner*



EMPLOYMENT AND PAY ROLLS

Prepared by

DIVISION OF EMPLOYMENT STATISTICS

Lewis E. Talbert, *Chief*

and

DIVISION OF CONSTRUCTION AND

PUBLIC EMPLOYMENT

Herman B. Byer, *Chief*

JULY 1939

UNITED STATES GOVERNMENT PRINTING OFFICE • WASHINGTON • 1939

CONTENTS

	Page
Summary of employment reports for July 1939:	
Total nonagricultural employment.....	1
Industrial and business employment.....	1
Public employment.....	5
Detailed tables for July 1939:	
Industrial and business employment.....	7
Public employment.....	22

Tables

SUMMARY

TABLE 1.—All manufacturing industries combined and nonmanufacturing industries—employment, pay rolls, and weekly earnings, July 1939.....	4
TABLE 2.—Federal employment and pay rolls—summary, July 1939.....	6

INDUSTRIAL AND BUSINESS EMPLOYMENT

TABLE 3.—Manufacturing and nonmanufacturing industries—employment, pay rolls, hours, and earnings, July 1939.....	8
TABLE 4.—Manufacturing and nonmanufacturing industries—employment, pay rolls, hours, and earnings, May through July 1939.....	12
TABLE 5.—Manufacturing and nonmanufacturing industries—indexes of employment and pay rolls, July 1938 through July 1939...	17
TABLE 6.—Geographic divisions and States—comparison of employment and pay rolls in identical establishments in June and July 1939.....	19
TABLE 7.—Principal metropolitan areas—comparison of employment and pay rolls in identical establishments in June and July 1939..	21

PUBLIC EMPLOYMENT

TABLE 8.—Executive service of the Federal Government—employment and pay rolls in June and July 1939.....	22
TABLE 9.—Construction projects financed by Public Works Administration funds—employment, pay rolls, and man-hours worked, July 1939, by type of project.....	23
TABLE 10.—Housing projects of the U. S. Housing Authority—employment, pay rolls, and man-hours worked, July 1939, by geographic division.....	26
TABLE 11.—Projects financed by the Work Projects Administration—employment, pay rolls, and man-hours worked, July 1939, by type of project.....	27

	Page
TABLE 12.—Employment and pay rolls on projects operated by the Works Progress Administration, by type of project, for the second quarter of 1939.....	28
TABLE 13.—National Youth Administration work projects and Student Aid—employment, pay rolls, and man-hours worked from beginning of the program.....	28
TABLE 14.—Civilian Conservation Corps—employment and pay rolls, June and July 1939.....	29
TABLE 15.—Construction projects financed by the Reconstruction Finance Corporation—employment, pay rolls, and man-hours worked, July 1939, by type of project.....	29
TABLE 16.—Construction projects financed from regular Federal appropriations—employment, pay rolls, and man-hours worked, July 1939, by type of project.....	30
TABLE 17.—Construction and maintenance of State roads—employment and pay-roll disbursements, July 1939, June 1939, and July 1938.....	31

Employment and Pay Rolls

SUMMARY OF REPORTS FOR JULY 1939

Total Nonagricultural Employment

AGGREGATE employment in nonagricultural industries in July showed virtually no change from the preceding month's level although the experience of individual industries differed widely. The net decrease of 30,000 workers was due largely to the seasonal decline in retail trade, which was less than the average July decrease reported for the past 10 years. Several of the service industries also showed seasonal employment recessions and anthracite and metal mines reported decreased employment. These losses were offset to a large extent by employment gains in construction, transportation, and public utilities. The declines in manufacturing and wholesale trade were negligible. Comparisons of total nonagricultural employment in July 1939 with July 1938 showed an increase of approximately 1,200,000 workers over the year interval.

These figures do not include emergency employment which decreased 280,300 in July. Decreases of 294,700 on projects operated by the Work Projects Administration and 5,300 on work projects of the National Youth Administration were partly offset by an increase of 19,700 in the Civilian Conservation Corps.

Industrial and Business Employment

Employment gains from June to July were reported for 50 of the 87 manufacturing industries surveyed monthly by the Bureau of Labor Statistics and for 8 of the 16 nonmanufacturing industries covered. Pay rolls were larger for 34 of the manufacturing and 5 of the non-manufacturing industries.

The over-all declines of 0.1 percent or 8,000 wage earners in manufacturing employment and 2.3 percent or \$3,800,000 in weekly factory wage disbursements were smaller than the usual decreases for this month of 0.2 percent and 3.7 percent, respectively. Factory employment in July 1939 was 10.5 percent above the level of a year ago and corresponding pay rolls were 18.8 percent higher than a year ago.

Most of the employment gains over the month interval in the manufacturing industries were contraseasonal or larger than seasonal. Among the industries showing such increases were men's clothing (8,500 workers), cotton goods (7,000 workers), book and job printing (3,600 workers), woolen and worsted goods (2,900 workers), aircraft (2,700 workers), radios and phonographs (2,600 workers), dyeing and finishing textiles (2,300 workers), furniture (2,200 workers), meat packing (1,700 workers), cane sugar refining (900 workers), petroleum refining (800 workers), structural metalwork (800 workers), and machine tools (700 workers).

Gains of about seasonal proportions were shown in the following manufacturing industries: canning (40,000 workers), shoes (13,000 workers), rayon and allied products (1,700 workers), silk and rayon goods (1,600 workers), and flour (1,000 workers).

Seasonal employment losses were reported by firms manufacturing women's clothing (17,300 workers), millinery (3,300 workers), glass (1,700 workers), steel (1,600 workers), pottery (1,300 workers), confectionery (1,100 workers), and stamped and enameled ware (1,100 workers).

Firms manufacturing rubber footwear reported a contraseasonal decline (2,800 workers), while larger than seasonal recessions were reported by establishments manufacturing automobiles, bodies, and parts (65,300 workers), agricultural implements (2,500 workers), wirework (2,200 workers), and electric- and steam-railroad cars (1,800 workers). The decline in the automobile industry was due in part to strikes in certain key plants.

The employment gain of 7.4 percent in aircraft factories continued the unbroken series of monthly increases, which began in October of last year, and brought the employment level to nearly $2\frac{1}{2}$ times the 1929 figure. Employment in shipbuilding showed a slight decline in July following the uninterrupted succession of monthly increases which began in September of last year. The employment level in July for this industry was still above the level of every month since April 1923 except June 1939. The employment index for the machine tool industry was higher in July than in any month since February 1938.

The employment decline of 3.2 percent or 108,500 workers in retail trade was slightly less than the average mid-summer loss shown in the last 10 years. The more important lines or groups under retail trade showing decreases were general merchandising, apparel, furniture, lumber and building materials, farmers' supplies, and jewelry. Retail lines showing increases were coal-wood-ice, with an employment gain of 4.2 percent, and hardware, automobiles and automobile supplies, and food, with gains of 0.6 percent or less each.

Wholesale trade establishments as a whole reported a slight loss in number of workers in July as compared with the preceding month.

Decreases were reported by wholesalers of lumber and building materials, farm products, and automobiles and automobile supplies. Gains were registered by dealers in groceries and food products; petroleum products; machinery, equipment, and supplies; and dry goods and apparel.

A contraseasonal employment increase of 1.8 percent in bituminous-coal mining was coupled with a pay-roll decrease of 2.8 percent because of generally decreased production and shut-downs for the July 4 holiday. Quarries and oil wells increased their forces slightly, while anthracite operators reduced the number of their workers somewhat more than seasonally (12.1 percent). Employment in metal mines fell off 2.0 percent. On the other hand, public utilities increased the number of workers on their rolls slightly, while the seasonal gain of 1.3 percent in laundries brought the employment level for this industry to the highest point since September 1937. Insurance firms reported an increase of 0.8 percent in employment, but brokerage houses decreased their personnel by 1.6 percent. Employment in hotels and dyeing and cleaning plants fell 2.8 percent and 3.2 percent, respectively.

Employment in private building construction showed an increase of 4.5 percent from June to July, according to reports from 14,218 builders and contractors employing 140,434 wage earners in July. Corresponding pay rolls increased 4.6 percent. Building employment in the East North Central States increased 10.7 percent and in the South Atlantic area 10.1 percent. All of the States in these two regions shared in the increased employment except Delaware, which showed virtually no change. An increase in Connecticut of 7.6 percent offset slight decreases in the remaining five New England States and resulted in a gain of 0.6 percent for the New England group as a whole. The West North Central and Pacific divisions showed increases of 4.2 percent and 2.3 percent respectively, while the Middle Atlantic area showed a gain of 1.7 percent, and the East South Central States an increase of 0.4 percent. Two geographic divisions, the West South Central and the Mountain, registered decreases of 1.1 percent and 1.0 percent, respectively. The reports on which these figures are based do not cover construction projects financed by the Works Progress Administration, the Public Works Administration, and the Reconstruction Finance Corporation, or by regular appropriations of the Federal, State, or local governments.

A preliminary report of the Interstate Commerce Commission showed a gain since June of 1.0 percent persons in the number employed by class I railroads. The total number working in July was 1,002,135. Corresponding pay-roll figures were not available when this report was prepared. For June they were \$154,436,650, an increase of 2.4 percent over the \$150,858,242 figure for May.

Hours and earnings.—The average hours worked per week by wage earners in manufacturing industries were 36.6 in July, a decrease of

1.5 percent since June. The average hourly earnings of these workers were 64.3 cents, a decrease of 0.7 percent as compared with the preceding month. Average weekly earnings of factory workers fell 2.2 percent to \$23.70.

Of the 14 nonmanufacturing industries for which man-hour data are available, 3 showed increases in average hours worked per week, and 9 showed gains in average hourly earnings. Four of the sixteen nonmanufacturing industries surveyed reported higher average weekly earnings.

Employment and pay-roll indexes, and average weekly earnings in July 1939 for all manufacturing industries combined, for selected non-manufacturing industries, and for class I railroads, with percentage changes over the month and year intervals are presented in table 1.

TABLE 1.—Employment, Pay Rolls, and Earnings in All Manufacturing Industries Combined and in Nonmanufacturing Industries, July 1939

Industry	Employment			Pay roll			Average weekly earnings		
	Index July 1939	Percentage change from—		Index July 1939	Percentage change from—		Average in July 1939	Percentage change from—	
		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938
All manufacturing industries combined ¹	(1923-25=100) 90.5	-0.1	+10.5	(1923-25=100) 83.9	-2.3	+18.8	\$23.70	-2.2	+7.5
Class I steam railroads ²	56.1	+1.0	+7.8	(³)	(³)	(³)	(³)	(³)	(³)
Coal mining:	(1929=100)			(1929=100)					
Anthracite ⁴	45.0	-12.1	+9	25.3	-30.0	+25.1	18.65	-20.4	+23.9
Bituminous ⁴	79.7	+1.8	+1.5	64.6	-2.8	+13.8	22.11	-4.5	+12.1
Metallic mining.....	60.4	-2.0	+21.6	47.8	-11.2	+25.7	25.11	-9.4	+3.3
Quarrying and nonmetallic mining.....	47.5	+3	+7.7	40.8	-2.1	+10.4	21.66	-2.5	+2.5
Crude-petroleum producing.....	67.5	+7	-6.7	62.4	-1	-6.5	33.29	-8	+2
Public utilities:									
Telephone and telegraph.....	75.4	+1	+0.7	94.6	+1.1	4.2	\$ 31.06	+9	+3.4
Electric light and power and manufactured gas.....	93.2	+1.0	+1.1	100.1	-1	+1.8	\$ 33.64	-1.2	+8
Electric-railroad and motor-bus operation and maintenance.....	69.7	-3	-6	70.8	-6	+2.6	\$ 33.15	-3	+3.1
Trade:									
Wholesale.....	87.9	-2	+1.3	75.9	+0	+3.1	\$ 29.97	+3	+1.8
Retail.....	83.6	-3.2	+3.1	70.9	-2.3	+4.1	\$ 21.58	+1.0	+1.0
General merchandising.....	91.7	-5.8	+4.4	83.8	-4.9	+4.2	\$ 18.25	+9	-2
Other than general merchandising.....	81.5	-2.4	+2.7	68.2	-1.6	+3.9	\$ 24.16	+8	+1.2
Hotels (year-round) ⁵	90.2	-2.8	-5	79.2	-3.5	+2.3	\$ 15.05	-7	+2.8
Laundries ⁴	100.0	+1.3	+2.2	87.9	+1.1	+6.0	17.92	-2	+3.7
Dyeing and cleaning ⁴	106.6	-3.2	-1.9	77.1	-8.4	-6	19.92	-5.4	+1.3
Brokerage.....	(⁶)	-1.6	-7.2	(⁶)	-2.2	-6.4	\$ 35.52	-6	+9
Insurance.....	(⁶)	+8	+1.2	(⁶)	+2	+1.5	\$ 34.38	-6	+3
Building construction.....	(⁶)	+4.5	+8.9	(⁶)	+4.6	+14.3	30.85	+0	+4.4

¹ Revised indexes—Adjusted to 1935 Census of Manufactures.

² Preliminary—Source: Interstate Commerce Commission.

³ Not available.

⁴ Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of this pamphlet.

⁵ Average weekly earnings not strictly comparable with figures published in issues of this pamphlet dated earlier than April 1938, as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

⁶ Less than 1/10 of 1 percent.

⁷ Cash payments only; the additional value of board, room, and tips cannot be computed.

Public Employment

Because many construction projects financed from funds provided by the Public Works Administration have passed the peak of employment, the number of men at work on these projects decreased from 293,100 in June to 273,800 for the month ending July 15, a decrease of 19,300. As compared with the same month in 1938, employment showed a gain of 155,100. Pay-roll disbursements of \$23,077,000 were \$2,879,000 less than in June.

Employment on projects of the United States Housing Authority increased from 8,700 in June to 13,000 in the month ending July 15. Pay rolls for July were \$1,426,000, an increase of \$308,000 over June. These figures cover new construction and demolition and pertain only to those projects started under the United States Housing Authority; those formerly under the Public Works Administration are shown under the Public Works Administration building construction projects in this report.

For the fourth consecutive month, more men were working on projects financed from regular Federal appropriations than in the preceding month. During the month ending July 15, 265,200 men were employed on these projects, a gain of 16,600 over June. Increases were reported in ship construction; water and sewerage; construction of locks and dams; forestry; and rural electrification projects; while decreases occurred in building construction; heavy engineering; dredging, dike, and revetment; and street and road projects. Pay rolls for the month were \$25,776,000.

Approximately 2,500 men were working on projects financed by the Reconstruction Finance Corporation, a slight decrease from the preceding month. Pay rolls for the month ending July 15 were \$266,000.

The release of workers employed continuously for a period of 18 months or more on work-relief projects operated by the Work Projects Administration (formerly the Works Progress Administration) caused employment to drop from 2,438,300 in June to 2,143,600 in July, a decrease of 294,700. Pay-roll disbursements of \$119,637,000 for July were \$13,604,000 less than in June. Employment also decreased on Federal projects financed by the Work Projects Administration and on work projects of the National Youth Administration. The Student Aid program was not in operation during July.

During July, the number of workers in camps of the Civilian Conservation Corps was 19,700 greater than in June and 5,800 greater than in July 1938. Of the 322,100 in camps during the month, 284,700 were enrollees, 4,400 Reserve officers, 300 nurses, 1,600 educational advisers, and 31,100 supervisory and technical employees.

In the regular services of the Federal Government, employment increases were reported in the executive, legislative, and military services, and a decrease in the judicial service. Of the 928,000 employees in the executive service, 124,000 were working in the District of Columbia, and 804,000 outside the District. Force-account employees (employees who are on the Federal pay roll and are engaged on construction projects) were 9.5 percent of the total number of employees in the executive service. The Post Office Department and the War and Navy Departments reported increased employment in July.

Employment on roads financed wholly from State or local funds increased 4,500 in July. Of the 146,200 at work, approximately 20,000 were engaged in the construction of new roads and 126,200 on maintenance work. Pay-roll disbursements for both types of road work were \$10,522,000.

A summary of Federal employment and pay-roll data for July 1939 is given in table 2.

TABLE 2.—*Summary of Federal Employment and Pay Rolls, July and June 1939*¹
[Preliminary figures]

Class	Employment			Pay rolls		
	July	June	Per-centage change	July	June	Per-centage change
Federal Services:						
Executive ²	927,887	\$ 925,982	+0.2	\$138,953,657	\$140,217,974	-0.9
Judicial.....	2,192	2,292	-4.4	549,952	561,879	-2.1
Legislative.....	5,432	5,353	+1.5	1,232,150	1,218,290	+1.1
Military.....	376,326	363,734	+3.5	29,273,073	28,488,256	+2.8
Construction projects:						
Financed by P. W. A. ⁴	273,801	293,103	-6.6	23,077,354	25,956,205	-11.1
U. S. H. A. low-rent housing.....	13,020	8,679	+50.0	1,426,123	1,118,077	+27.6
Financed by R. F. C. ⁵	2,470	2,503	-1.3	266,391	290,517	-8.3
Financed by regular federal appropriations.....	265,168	248,525	+6.7	25,776,242	26,437,806	-2.5
Federal projects financed by the Work Projects Administration:	169,851	183,749	-7.6	6,058,225	8,590,116	-29.5
Projects operated by Works Projects Administration:	2,143,593	\$2,438,255	-12.1	119,637,011	\$ 133,241,302	-10.2
National Youth Administration:						
Work projects.....	207,357	212,607	-2.5	2,570,078	3,962,582	-35.1
Student Aid.....	(6)	281,116	-----	(6)	1,944,272	-----
Civilian Conservation Corps:	322,058	302,339	+6.5	14,459,934	14,132,205	+2.3

¹ Includes data on projects financed wholly or partially from Federal funds.

² Includes force-account and supervisory and technical employees shown under other classifications to the extent of 121,189 employees and pay-roll disbursements of \$14,597,828 for July 1939, and 119,314 employees and pay-roll disbursements of \$15,634,335 for June 1939.

³ Revised.

⁴ Data covering P. W. A. projects financed from National Industrial Recovery Act funds, Emergency Relief Appropriation Acts of 1935, 1936, and 1937 funds, and Public Works Administration Appropriations Act of 1938 funds are included. These data are not shown under projects financed by the Work Projects Administration. Includes 16,396 wage earners and \$1,509,437 pay roll for July 1939; 19,146 wage earners and \$1,936,132 pay roll for June 1939, covering Public Works Administration projects financed from Emergency Relief Appropriation Acts of 1935, 1936, and 1937 funds. Includes 251,735 wage earners and \$20,914,518 pay roll for July 1939; 267,626 wage earners and \$23,272,006 pay roll for June 1939, covering Public Works Administration projects financed from funds provided by the Public Works Administration Appropriation Act of 1938.

⁵ Includes 639 employees and pay-roll disbursements of \$59,636 for July 1939; 689 employees and pay-roll disbursements of \$64,414 for June 1939 on projects financed by the RFC Mortgage Co.

⁶ Student Aid program not in operation during July.

DETAILED TABLES FOR JULY 1939

Industrial and Business Employment

MONTHLY reports on employment and pay rolls are available for the following groups: 87 manufacturing industries; 16 nonmanufacturing industries, including private building construction; and class I steam railroads. The reports for the first two of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on class I steam railroads are compiled by the Interstate Commerce Commission and are presented in the foregoing summary.

EMPLOYMENT, PAY ROLLS, HOURS, AND EARNINGS

The indexes of employment and pay rolls as well as average hours worked per week, average hourly earnings, and average weekly earnings in manufacturing and nonmanufacturing industries in July 1939 are shown in table 3. Percentage changes from June 1939 and July 1938 are also given.

Employment and pay-roll indexes, as well as average hours worked per week, average hourly earnings, and average weekly earnings for May, June, and July 1939, where available, are presented in table 4. The May and June figures, where given, may differ in some instances from those previously published, because of revisions necessitated primarily by the inclusion of late reports.

The average weekly earnings shown in tables 3 and 4 are computed by dividing the total weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As not all reporting establishments supply man-hours, average hours worked per week and average hourly earnings are necessarily based on data furnished by a smaller number of reporting firms. The size and composition of the reporting sample varies slightly from month to month. Therefore the average hours per week, average hourly earnings, and average weekly earnings shown are not strictly comparable from month to month. The sample, however, is believed to be sufficiently adequate in virtually all instances to indicate the general movement of earnings and hours over the period shown. The changes from the preceding month, expressed as percentages, are based on identical lists of firms for the 2 months, but the changes from July 1938 are computed from chain indexes based on the month-to-month percentage changes.

TABLE 3.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

[Indexes are based on 3-year average, 1923-25=100, and are adjusted to 1935 Census of Manufacturers. Not comparable to indexes published in pamphlets prior to August 1938. Comparable series available upon request]

Industry	Employment			Pay rolls			Average weekly earnings ¹			Average hours worked per week ¹			Average hourly earnings ¹		
	Index July 1939	Percentage change from—		Index July 1939	Percentage change from—		July 1939	Percentage change from—		July 1939	Percentage change from—		July 1939	Percentage change from—	
		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938
All manufacturing.....	90.5	-0.1	+10.5	83.9	-2.3	+18.8	\$23.70	-2.2	+7.5	38.6	-1.5	+5.2	Cents 64.3	-0.7	+1.5
Durable goods.....	82.1	-2.1	+16.8	76.6	-5.9	+30.7	26.40	-3.8	+11.9	38.1	-3.0	+9.2	71.8	-.8	+2.0
Nondurable goods.....	98.5	+1.5	+6.0	92.1	+1.2	+9.5	21.27	-.3	+3.3	37.0	-.3	+2.6	58.1	-.1	-.1
<i>Durable goods</i>															
Iron and steel and their products, not including machinery.....	86.7	-.9	+13.2	76.7	-5.0	+33.6	25.80	-4.0	+18.2	34.2	-4.1	+15.5	76.0	+.6	+1.3
Blast furnaces, steel works, and rolling mills.....	91.9	-.4	+11.8	79.6	-4.5	+40.3	27.12	-4.1	+25.4	32.1	-4.8	+23.5	84.9	+1.2	+1.3
Bolts, nuts, washers, and rivets.....	87.9	-.4	+13.9	75.3	-8.0	+28.7	21.79	-7.7	+12.9	31.8	-6.4	+17.4	68.5	-1.4	-3.6
Cast-iron pipe.....	69.3	+2.2	+12.4	61.8	+(?)	+19.0	21.28	-2.1	+5.9	36.6	-1.7	+6.7	57.8	-.4	-.7
Cutlery (not including silver and plated cutlery) and edge tools.....	79.8	-4.3	+24.9	68.4	-12.0	+31.3	21.59	-8.0	+5.2	37.6	-3.1	+11.4	61.2	+.2	-1.2
Forgings, iron and steel.....	48.0	+(?)	+24.6	44.9	-1.7	+55.2	27.43	-1.8	+24.6	36.2	-.8	+22.7	75.8	-1.0	+1.4
Hardware.....	65.6	-4.3	+16.1	63.3	-11.4	+31.2	23.38	-7.4	+13.0	37.4	-3.1	+17.9	62.5	-4.5	-4.1
Plumbers' supplies.....	75.6	+1.1	+4.2	65.5	-3.2	+18.5	24.70	-4.2	+13.8	36.8	-4.0	+11.2	67.3	-.2	+2.4
Stamped and enameled ware.....	131.4	-2.5	+25.0	123.4	-6.1	+34.1	22.68	-3.7	+7.3	36.4	-3.0	+8.3	62.8	+.4	+.6
Steam and hot-water heating apparatus and steam fittings.....	69.8	+.9	+4.0	56.1	-4.7	+8.9	24.23	-5.6	+4.7	35.1	-4.9	+5.2	69.1	-.8	-.2
Stoves.....	80.7	-2.4	+18.3	66.3	-5.7	+27.5	24.26	-3.3	+7.7	37.1	-2.4	+7.5	65.6	-.9	-(?)
Structural and ornamental metal work.....	69.5	+2.4	+17.6	60.8	+.3	+24.5	27.56	-2.0	+5.9	37.9	-3.0	+5.4	72.8	+1.0	+.3
Tin cans and other tinware.....	95.3	+2.5	+4.2	101.3	-.3	+7.3	23.12	-2.8	+2.9	38.1	-3.3	-(?)	60.5	+.3	+2.7
Tools (not including edge tools, machine tools, files, and saws).....	79.9	-4.8	+14.6	74.0	-9.1	+28.5	22.88	-4.5	+12.2	36.8	-5.2	+11.4	62.3	+.6	+.7
Wirework.....	132.3	-8.2	+20.7	136.5	-10.3	+49.0	24.72	-2.3	+23.5	36.2	-3.6	+18.3	68.4	+1.4	+4.6
Machinery, not including transportation equipment.....	95.7	+.1	+15.4	94.9	-1.6	+33.5	27.55	-1.6	+13.1	38.0	-1.5	+12.7	72.4	-.1	+.1
Agricultural implements (including tractors).....	108.1	-4.8	+7.4	114.6	-3.6	+16.3	29.20	+1.3	+8.4	37.4	+.7	+7.7	78.5	+.6	+.7
Cash registers, adding machines, and calculating machines.....	129.3	-.8	-5.9	122.0	-1.2	-.8	30.52	-.4	+5.3	37.5	-.3	+4.8	81.8	-.3	+.1
Electrical machinery, apparatus, and supplies.....	86.1	+.3	+18.0	87.4	-.7	+36.3	28.05	-1.0	+15.5	37.8	-1.1	+15.2	74.3	+.1	+.6
Engines, turbines, water wheels, and windmills.....	96.8	-2.8	+17.9	113.3	-3.6	+31.9	30.36	-.8	+11.8	39.2	-(?)	+13.1	77.9	-.5	-1.0

Foundry and machine-shop products.....	85.2	+1	+12.5	80.2	-2.7	+25.9	26.95	-2.8	+11.8	37.6	-2.0	+11.4	71.6	+(?)	+7
Machine tools.....	139.4	+1.8	+26.1	153.3	+1	+62.7	31.23	-1.7	+29.0	41.8	-1.4	+25.7	74.8	-2	+2.8
Radios and phonographs.....	117.3	+8.1	+43.7	103.5	+8.7	+43.0	21.71	+6	-6	37.7	+1.6	+3.7	57.6	-9	-4.1
Textile machinery and parts.....	74.9	+2.5	+39.0	76.8	+1.8	+69.5	25.63	-6	+22.0	40.5	-2	+23.0	65.8	-5	-1.0
Typewriters and parts.....	119.7	-3.5	+3.6	114.9	+5	+25.6	23.05	+4.2	+21.2	36.0	+4.2	+22.9	61.0	-(?)	-1.4
Transportation equipment.....	78.2	-13.0	+49.9	75.9	-14.9	+43.8	30.95	-2.1	+5.7	35.1	-1.0	+8.6	83.4	-1.1	-2
Aircraft.....	1,377.8	+7.4	+73.4	1,347.2	+2.8	+82.9	29.45	-4.2	+5.5	40.6	-3.1	+3.4	72.4	-1	+9
Automobiles.....	75.4	-17.7	+42.0	72.0	-18.7	+61.8	31.42	-1.2	+6.8	34.0	-7	+7.1	92.6	-6	-3
Cars, electric and steam-railroad.....	29.4	-8.9	+29.2	26.2	-17.7	+29.5	24.36	-9.7	+3	32.8	-10.0	+2	74.2	+3	+1
Locomotives.....	29.8	+10.4	+47.0	26.3	+8.0	+70.4	28.38	-2.2	+15.8	37.2	-1.3	+16.0	76.3	-9	-2
Shipbuilding.....	120.3	-1.0	+25.6	127.8	-3.4	+28.0	31.71	-2.5	+1.9	37.6	-2.3	+1.4	83.2	+(?)	-3
Nonferrous metals and their products.....	91.9	+3	+16.2	88.1	-7	+23.5	35.41	-1.1	+10.6	37.8	-9	+9.9	87.1	-2	+2
Aluminum manufactures.....	160.2	+3.6	+31.3	152.2	-5.6	+36.5	24.20	-8.9	+4.0	36.0	-7.6	+6.2	67.0	-1.5	-2.2
Brass, bronze, and copper products.....	98.5	-2	+14.3	102.6	+3.6	+31.6	28.31	+3.9	+15.1	39.7	+2.8	+15.1	71.7	+1.1	+1
Clocks and watches and time-recording devices.....	79.8	-1	+8.4	79.8	+(?)	+33.9	21.34	+2	+23.7	36.3	-2	+20.5	58.7	+3	+2.7
Jewelry.....	91.1	+4.0	+15.1	72.4	-8	+18.4	22.31	-4.5	+3.0	37.6	-2.6	+4.6	58.3	-2.3	-1.5
Lighting equipment.....	75.4	-1.0	+20.0	64.3	-4.0	+29.8	24.66	-3.0	+8.1	35.8	-1.3	+7.4	68.9	-1.8	+7
Silverware and plated ware.....	60.5	-7.6	+19.3	51.7	-11.7	+35.8	23.44	-4.5	+13.9	37.0	-3.7	+16.1	64.0	-4	-1.5
Smelting and refining—copper, lead, and zinc.....	70.5	-6	+11.2	65.2	-1.8	+14.8	26.05	-1.1	+3.3	37.5	-1.7	+7	69.5	+5	+2.7
Lumber and allied products.....	67.2	+6	+10.7	58.8	-6.0	+16.6	19.61	-6.5	+5.4	36.8	-5.9	+7	53.7	-1.2	+4.2
Furniture.....	80.0	+1.7	+12.3	64.9	-(?)	+26.6	19.30	-1.7	+12.7	37.2	-1.7	+8.3	52.4	+4	+1.1
Lumber:															
Millwork.....	57.3	+2	+12.6	46.4	-4.6	+11.5	21.41	-4.8	-1.1	39.7	-4.1	-3	51.0	-8	-5
Sawmills.....	54.5	+2	+9.5	46.8	-9.8	+12.6	19.26	-10.0	+2.8	35.9	-8.4	-3.1	54.3	-2.1	+7.5
Stone, clay, and glass products.....	73.9	-8	+14.4	62.5	-6.6	+17.7	22.61	-5.8	+2.9	35.3	-5.6	-2	64.6	+(?)	+2.8
Brick, tile, and terra cotta.....	57.3	+3	+17.3	42.8	-7.4	+20.9	19.58	-7.6	+3.1	36.6	-7.1	-1.3	53.1	-1.3	+4.0
Cement.....	72.0	+1.2	+2.4	69.5	-4	+5.2	26.84	-1.6	+2.7	38.0	-3.0	+5	70.6	+1.5	+2.2
Glass.....	90.5	-2.6	+21.2	87.4	-9.0	+26.3	23.27	-6.5	+4.2	32.5	-7.0	+1.4	71.5	+4	+2.6
Marble, granite, slate, and other products.....	48.0	+4.6	+8.9	36.4	-3	+8.7	25.83	-4.7	-2	35.7	-5.6	-2.1	72.9	+9	+2.7
Pottery.....	76.1	-4.4	+9.4	62.1	-10.2	+17.0	20.30	-6.0	+6.9	35.8	-2.8	+10.4	61.7	-4	+1.1
<i>Nondurable goods</i>															
Textiles and their products.....	95.0	+1	+9.7	77.4	-3	+16.2	16.47	-4	+6.0	35.2	-9	+7.1	47.1	+4	-1.0
Fabrics.....	89.2	+1.6	+10.9	75.5	+1.3	+14.9	16.23	-4	+3.5	35.9	-1	+5.5	45.8	+2	-1.1
Carpets and rugs.....	79.3	+6	+26.3	64.6	-2	+44.6	21.61	-7	+14.4	33.9	-9	+13.6	63.7	+2	+7
Cotton goods.....	85.7	+1.9	+9.6	72.4	+2.2	+13.7	13.83	+3	+3.6	36.1	+3	+5.5	38.3	+4	-1.7
Cotton small wares.....	81.5	+3.2	+20.4	75.9	+3.9	+28.9	17.78	+6	+7.9	38.5	+1.5	+6.5	47.1	-2	+3
Dyeing and finishing textiles.....	109.1	+2.5	+12.5	89.3	+8	+14.0	19.78	-1.6	+1.2	37.6	+3	+3.7	52.4	-1.4	-1.9
Fats, fur-felt.....	83.7	+4.9	+4.9	82.8	+10.8	+10.5	24.53	+5.6	+5.4	34.4	+3.3	+2.8	72.3	+7	+1.8
Knit goods.....	113.1	+1	+8.1	107.6	-1.6	+9.6	16.90	-1.8	+1.3	34.9	-1.2	+6.8	49.5	+5	-2.8
Hosiery.....	141.9	+2	+6.7	140.7	-2.3	+4.9	17.63	-2.4	-1.7	33.7	-1.9	+5.2	52.8	+1.0	-3.6
Knitted outerwear.....	77.3	+2.3	+11.7	69.6	+1.5	+22.6	16.76	-8	+9.7	36.9	+6	+4.1	45.3	-9	+5.4
Knitted underwear.....	73.5	-1.6	+10.4	65.6	-3.7	+21.0	14.90	-2.1	+9.6	37.1	-1.1	+15.2	40.2	-1.4	-3.6
Knitted cloth.....	153.1	+5	+11.6	126.9	+3.1	+13.8	18.34	+2.6	+2.4	39.2	+2.2	+4.2	46.1	+9	-2.5
Silk and rayon goods.....	57.7	+2.3	+4.8	46.0	+1.0	+8.8	15.15	-1.2	+3.8	35.3	-2	+5.0	42.5	-1.2	-1.3
Woolen and worsted goods.....	81.4	+2.1	+19.0	68.3	+2.4	+23.0	19.42	+3	+3.4	36.8	+1	+4.0	53.0	+5	-5
Wearing apparel.....	105.4	-2.7	+7.6	78.6	-2.8	+19.1	17.16	-1	+10.8	33.7	-2.7	+11.0	49.5	+1.0	-6
Clothing, men's.....	102.6	+4.7	+14.2	76.1	+6.1	+32.7	19.11	+1.3	+16.1	33.5	-1.5	+15.0	55.5	-5	-3.1
Clothing, women's.....	138.4	-8.9	+2.9	94.2	-8.7	+9.5	17.71	+2	+6.4	34.1	-4.1	+9.9	48.6	+3.7	-3.9
Corsets and allied garments.....	105.8	-8	+13.5	108.5	-5	+31.5	16.70	+2	+16.0	37.1	-2	+18.2	44.8	+2	-1.6

For footnotes see end of table.

TABLE 3.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries—Continued*

MANUFACTURING—Continued

[Indexes are based on 3-year average, 1923-25=100, and are adjusted to 1935 Census of Manufactures. Not comparable to indexes published in pamphlets prior to August 1933. Comparable series available upon request]

Industry	Employment			Pay rolls			Average weekly earnings			Average hours worked per week			Average hourly earnings		
	Index July 1939	Percentage change from—		Index July 1939	Percentage change from—		July 1939	Percentage change from—		July 1939	Percentage change from—		July 1939	Percentage change from—	
		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938		June 1939	July 1938
Nondurable goods—Continued															
Textiles and their products—Continued.															
Wearing apparel—Continued.															
Men's furnishings.....	125.7	-1.8	+4.3	109.9	-3.1	+16.9	13.22	-1.3	+12.2	34.4	0	+9.6	37.4	-0.3	+5.7
Millinery.....	47.7	-18.0	-4.3	33.0	-18.8	-9.4	18.06	-1.0	-5.4	30.4	+3.7	-2.5	59.8	-4.0	+4
Shirts and collars.....	114.6	-9	+6.6	94.0	-6.9	+20.8	12.38	-6.1	+13.4	32.5	-5.0	+5.4	38.3	-1.3	+5.1
Leather and its manufactures.....	93.6	+5.9	+4.8	77.8	+11.5	+12.1	19.70	+5.2	+6.9	37.5	+7.2	+2.6	52.1	-1.3	+1.9
Boots and shoes.....	94.0	+7.1	+2.8	74.3	+16.3	+10.9	18.74	+8.6	+7.8	37.7	+10.1	+4.7	48.8	-1.4	+1.7
Leather.....	81.3	+9	+14.1	84.1	-6	+16.7	23.87	-1.5	+2.3	37.8	-1.7	+1.8	63.0	-2	+5
Food and kindred products.....	129.6	+5.5	+8	130.4	+3.8	-1.5	24.61	-1.7	+7	40.1	-9	-2.7	61.5	-1.4	+2.9
Baking.....	147.1	+2	+1.4	146.2	+7	+2.3	26.05	+5	+1.0	42.1	-3	-2	62.4	+1.1	+2.1
Beverages.....	267.8	+1.0	+3.2	334.2	+1.0	+3.5	34.93	(-)	+3	40.7	-2	-1.4	86.8	(+)	+1.7
Butter.....	108.0	+7	-2.6	94.3	+1.8	-1.6	22.96	+1.0	+1.0	48.0	+3	+1.2	48.0	+1.2	+7
Canning and preserving.....	168.9	+39.5	-5.4	142.2	+39.3	-9.5	15.49	-1	-4.3	34.6	+1.2	-11.4	41.5	-3.7	+5.5
Confectionery.....	67.0	-2.5	-7	63.6	-7.2	+8	17.66	-4.7	+1.4	31.0	-7.9	-1.9	51.9	+2.8	+1.8
Flour.....	81.6	+4.1	+4.7	83.5	+8.2	+5.1	26.28	+4.0	+3	43.3	+3.2	-4.8	60.4	+1	+5.2
Ice cream.....	94.9	+5	+2	81.9	+2.4	+1.6	29.03	+1.9	+1.3	47.5	+8	-2.3	60.4	+2	+3.2
Slaughtering and meat packing.....	99.1	+1.3	+4.6	112.4	+2.3	+4.2	28.54	+1.0	-4	41.6	+1.7	-5	68.7	-6	+1
Sugar, beet.....	53.6	+5.6	+7	49.0	-11.0	-7.7	23.56	-15.7	-8.3	31.9	-22.4	-12.8	75.7	+7.7	+5.3
Sugar refining, cane.....	90.5	+7.6	+2.8	77.8	+4.3	-4.4	23.15	-3.0	-6.9	36.1	-2.5	-13.4	64.1	-5	+7.0
Tobacco manufactures.....	64.0	+3	+4.1	59.7	+1.4	+4.6	17.48	+1.1	+5	37.0	+1.1	-1.5	47.6	+3	+2.8
Chewing and smoking tobacco and snuff.....	57.6	-2.7	-3.7	67.9	-3.4	-1.4	18.52	+0.3	+2.4	35.3	+4.4	-8	52.4	+1.8	+3.0
Cigars and cigarettes.....	64.8	+6	+5.1	58.6	+1.0	+5.4	17.26	+4	+4	37.2	+8	-2.1	47.0	+1	+3.2
Paper and printing.....	105.2	+5	+6.6	100.8	-1.4	+5.1	27.57	-1.8	+1.4	37.5	-1.2	+1.5	77.0	-5	+3
Boxes, paper.....	101.0	+1.4	+9.2	104.5	-9	+12.3	21.19	-2.3	+2.8	38.9	-2.1	+4.2	54.8	-3	-1.2
Paper and pulp.....	105.8	-3	+4.2	101.1	-3.1	+4.4	23.40	-2.9	+2	38.0	-2.6	+4	61.6	-2	-2
Printing and publishing:															
Book and job.....	100.2	+2.7	+2.5	90.7	+2.3	+6.6	30.16	-5	+4.0	38.3	+6	+3.9	80.2	-9	+3
Newspapers and periodicals.....	103.7	-1.9	+1.5	103.4	-3.3	+2.3	36.78	-1.5	+7	35.5	-1.4	-1.2	100.1	+1	+2.2
Chemicals and allied products, and petroleum re-															
fining.....	109.4	+6	+4.7	118.7	-7	+6.8	28.99	-1.3	+2.6	37.9	-1.7	+2.4	77.0	+1.0	-2
Petroleum refining.....	120.6	+1.1	-1.0	131.4	-2.1	-2.9	33.91	-3.2	-1.9	34.7	-4.1	-1.8	98.5	+1.1	-1

Other than petroleum refining.....	106.6	+4	+5.5	114.8	-2	+10.7	26.71	-6	+4.9	39.1	-8	+3.9	68.5	+8	+7
Chemicals.....	115.1	+5	+6.7	128.4	-5	+12.2	30.74	-1.0	+5.1	39.3	-1.8	+4.9	78.3	+8	+2
Cottonseed—oil, cake, and meal.....	42.9	-9.1	-27.7	37.5	-8.2	-26.7	13.55	+1.0	+1.5	41.1	-2.7	-13.4	31.3	+1.9	+14.6
Druggists' preparations.....	104.6	-2.2	-2.4	118.2	-7	+6.1	23.92	+1.6	+8.8	40.5	+1.9	+8.0	59.5	+7	-8
Explosives.....	87.4	+1.7	+8.5	98.1	+1.8	+9.8	30.97	+2	+1.2	38.4	+1	+4.5	80.7	+(2)	-3.2
Fertilizers.....	65.5	-7.0	-2.4	63.2	-2.3	+2	17.65	+5.0	-2.1	36.4	+2.4	-3.0	48.5	+2.4	+5
Paints and varnishes.....	117.2	-1.7	+5.8	121.7	-3.7	+9.7	28.14	-2.1	+3.7	40.0	-2.5	+4.1	70.4	+5	-2
Rayon and allied products.....	309.8	+3.8	+14.5	309.4	+4.2	+24.0	24.27	+4	+8.3	38.3	+9	+9.0	63.9	-5	-6
Soap.....	92.0	+2.9	+5.0	95.2	+1.8	+9.3	29.42	-1.1	+4.0	39.6	-9	+2.6	74.4	-3	+1.5
Rubber products.....	78.8	-1.7	+14.7	83.3	-1.1	+30.0	38.22	+7	+13.3	38.4	-5	+15.9	77.3	+1.2	-1.7
Rubber boots and shoes.....	46.7	-19.4	+10.3	44.1	-23.3	+20.1	21.61	-4.8	+8.8	35.7	-4.2	+7.3	60.5	-5	+1.4
Rubber tires and inner tubes.....	67.2	+7	+10.7	79.1	+3.0	+31.8	33.84	+2.4	+19.1	35.6	+2.1	+18.7	95.6	+1.0	+1.4
Rubber goods, other.....	128.9	+1.1	+20.9	123.1	-1.0	+29.6	22.47	-2.1	+7.1	37.6	-2.2	+5.7	60.4	+2	+1.4

NONMANUFACTURING

[Indexes are based on 12-month average, 1929=100]

Coal mining:															
Anthracite ³	45.0	-12.1	+0.9	25.3	-30.0	+25.1	\$18.65	-20.4	+23.9	20.1	-20.9	+36.5	93.1	+0.1	+1.5
Bituminous ³	79.7	+1.8	+1.5	64.6	-2.8	+13.8	22.11	-4.5	+12.1	21.3	-4.7	+12.6	90.3	+7	-5
Metalliferous mining.....	60.4	-2.0	+21.6	47.8	-11.2	+25.7	25.11	-9.4	+3.3	36.4	-8.9	-7	69.4	-5	+4.2
Quarrying and nonmetallic mining.....	47.5	+3	+7.7	40.8	-2.1	+10.4	21.60	-2.5	+2.5	39.2	-3.2	-2.1	55.2	+5	+5.0
Crude-petroleum producing.....	67.5	+7	-6.7	62.4	-1	-6.5	33.20	-8	+2	38.0	-2.2	-4.4	88.3	+1.6	+4.2
Public utilities:															
Telephone and telegraph ⁴	75.4	+1	+7	94.6	+1.1	+4.2	31.06	+9	+3.4	39.4	+8	+2.3	81.5	+1	+4
Electric light and power and manufactured gas ⁴	93.2	+1.0	+1.1	100.1	-1	+1.8	33.64	-1.2	+8	38.6	-3.9	-1.8	86.9	+2.5	+2.6
Electric-railroad and motorbus operation and maintenance ⁴	69.7	-3	-6	70.8	-6	+2.6	33.15	-3	+3.1	45.9	-9	+3.1	71.4	+5	+2
Trade:															
Wholesale ⁴	87.9	-2	+1.3	75.9	+(2)	+3.1	29.97	+3	+1.8	41.4	-1.8	-1.1	72.5	+1.9	+3.7
Retail ⁴	83.6	-3.2	+3.1	70.9	-2.3	+4.1	21.58	+1.0	+1.0	42.6	-1	-5	55.7	+1.0	+1.1
General merchandising ⁴	91.7	-5.8	+4.4	83.8	-4.9	+4.2	18.25	+9	-2	38.5	-1.7	-8	49.9	+2.4	+1
Other than general merchandising ⁴	81.5	-2.4	+2.7	68.2	-1.6	+3.9	21.16	+8	-1.2	43.9	+2	-4	57.5	+6	+1.4
Hotels (year-round) ^{3,4,5}	90.2	-2.8	-5	79.2	-3.5	+2.3	15.05	-7	+2.8	46.8	+4	+(2)	31.9	-1.5	+1.7
Laundries ³	100.0	+1.3	+2.2	87.9	+1.1	+6.0	17.92	-2	+3.7	43.3	-(2)	+1.2	41.9	-1	+1.9
Dyeing and cleaning ³	106.6	-3.2	-1.9	77.1	-8.4	-6	19.92	-5.4	+1.3	42.1	-3.2	-1	48.5	-1.0	+2
Brokerage ⁴	(9)	-1.6	-7.2	(9)	-2.2	-6.4	35.52	-6	+9	(9)	(9)	(9)	(9)	(9)	(9)
Insurance ⁴	(9)	+8	+1.2	(9)	+2	+1.5	34.38	-6	+3	(9)	(9)	(9)	(9)	(9)	(9)
Building construction.....	(9)	+4.5	+8.9	(9)	+4.6	+14.3	30.85	+(2)	+4.4	33.6	+6	+4	92.0	-6	+4.4

¹ Average weekly earnings are computed from figures furnished by all reporting establishments. Average hours and average hourly earnings are computed from data supplied by a smaller number of establishments, as not all reporting firms furnish man-hours. The figures are not strictly comparable from month to month because of changes in the size and composition of the reporting sample. Hours and earnings for manufacturing industries now relate to 87 industries instead of 89 which were covered in the July and prior issues of the pamphlet. The two industries excluded are electric and steam-railroad repair shops. The averages for the durable-goods group have also been affected by this exclusion.

² Less than 1/10 of 1 percent.

³ Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of this pamphlet.

⁴ Average weekly earnings, hourly earnings, and hours not strictly comparable with figures published in pamphlets prior to January 1938 as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

⁵ Cash payments only; the additional value of board, room, and tips cannot be computed.

⁶ Not available.

TABLE 4.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

[Indexes are based on 3-year average, 1923-25=100, and are adjusted to 1935 Census of Manufactures. Not comparable to indexes published in pamphlets prior to August 1938. Comparable series available upon request]

Industry	Employment index			Pay-roll index			Average weekly earnings ¹			Average hours worked per week ¹			Average hourly earnings ¹		
	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939
All manufacturing.....	90.5	90.6	90.1	83.9	85.9	84.4	\$23.70	\$24.25	\$23.90	39.6	37.2	36.7	<i>Cents</i> 61.3	<i>Cents</i> 64.8	<i>Cents</i> 61.9
Durable goods.....	82.1	83.9	83.3	78.6	81.4	79.5	26.40	27.36	26.92	36.1	37.4	36.7	71.8	72.4	72.4
Nondurable goods.....	98.5	97.0	96.7	92.1	91.0	89.9	21.27	21.34	21.11	37.0	37.1	36.7	53.1	58.2	58.4
<i>Durable goods</i>															
Iron and steel and their products, not including machinery.....	86.7	87.5	87.3	76.7	80.7	78.4	25.87	26.89	26.17	34.2	35.6	34.9	76.0	75.7	75.3
Blast furnaces, steel works, and rolling mills.....	91.9	92.3	91.3	79.6	83.4	79.9	27.12	23.30	27.40	32.1	33.6	32.8	84.9	84.2	83.5
Bolts, nuts, washers, and rivets.....	87.9	88.2	89.0	75.3	81.9	81.8	21.79	23.59	23.46	31.8	34.0	33.7	63.5	69.5	69.6
Cast-iron pipe.....	69.3	67.8	67.9	61.8	61.8	63.6	21.28	21.73	22.32	36.6	37.2	38.2	57.8	58.0	58.1
Cutlery (not including silver and plated cutlery) and edge tools.....	79.8	83.4	80.2	68.4	77.7	72.0	21.59	23.56	22.65	37.6	38.8	38.1	61.2	61.4	60.4
Forgings, iron and steel.....	48.0	48.0	48.4	44.9	45.7	46.5	27.43	27.95	27.43	36.2	36.5	36.7	75.8	76.6	77.0
Hardware.....	65.6	68.5	76.1	63.3	71.4	75.1	23.38	25.21	23.87	37.4	38.5	36.7	62.5	65.5	65.1
Plumbers' supplies.....	75.6	74.8	73.9	65.5	67.7	67.2	24.70	25.56	25.81	36.8	38.1	38.2	67.3	67.1	67.6
Stamped and enameled ware.....	131.4	134.7	132.8	123.4	131.4	128.2	22.68	23.44	23.19	36.4	37.3	37.1	62.8	62.5	62.4
Steam and hot-water heating apparatus and steam fittings.....	69.8	69.1	68.6	56.1	58.9	56.7	24.23	25.66	24.92	35.1	36.9	35.7	69.1	69.6	69.6
Stoves.....	80.7	82.7	82.4	66.3	70.3	68.9	21.26	25.20	24.77	37.1	37.9	37.3	65.6	66.6	66.5
Structural and ornamental metalwork.....	69.5	67.8	67.2	60.8	60.6	59.1	27.56	23.13	27.71	37.9	39.1	38.2	72.8	72.1	72.7
Tin cans and other tinware.....	95.3	93.0	89.1	101.3	101.6	98.8	23.12	23.82	23.66	38.1	39.4	38.9	60.5	60.4	60.9
Tools (not including edge tools, machine tools, files, and saws).....	79.9	84.0	84.1	74.0	81.4	80.9	22.88	24.05	23.83	36.8	39.0	38.8	62.3	61.8	61.5
Wirework.....	132.3	144.2	154.7	136.5	152.2	153.3	24.72	25.25	23.91	36.2	37.6	35.9	68.4	67.3	66.8
Machinery, not including transportation equipment.....	95.7	95.6	94.9	94.9	96.4	94.9	27.55	27.97	27.86	38.0	38.6	38.3	74.4	72.5	72.5
Agricultural implements (including tractors).....	108.1	113.6	117.5	114.6	118.9	126.0	29.20	28.85	29.53	37.4	37.1	37.7	73.5	73.0	78.7
Cash registers, adding machines, and calculating machines.....	129.3	130.4	129.5	122.0	123.5	121.4	30.52	30.62	30.29	37.5	37.6	37.3	81.8	82.1	82.0
Electrical machinery, apparatus, and supplies.....	86.1	85.8	85.9	87.4	98.0	87.0	28.05	28.42	28.11	37.8	38.3	37.8	74.3	74.1	74.4
Engines, turbines, water wheels, and windmills.....	96.8	99.6	98.0	113.3	117.5	117.2	30.35	30.57	30.95	39.2	39.2	39.5	77.9	78.2	78.7
Foundry and machine-shop products.....	85.2	85.1	84.6	80.2	82.4	80.4	26.95	27.71	27.23	37.6	38.7	38.3	71.6	71.6	71.0
Machine tools.....	139.4	137.0	133.6	153.3	153.2	140.3	31.23	31.78	31.70	41.8	42.4	42.4	74.8	75.0	74.9
Radios and phonographs.....	117.3	108.5	96.4	103.5	95.2	84.1	21.71	21.63	21.73	37.7	37.2	36.9	57.9	58.3	58.9

Textile machinery and parts.....	74.9	73.1	72.7	76.8	75.5	71.8	26.63	26.70	25.65	40.5	40.5	38.7	65.8	66.1	66.4
Typewriters and parts.....	119.7	124.0	126.0	114.9	114.3	128.5	23.05	22.13	24.49	36.0	34.5	37.1	64.0	64.0	66.0
Transportation equipment.....	78.2	89.9	90.3	75.9	82.2	87.6	30.96	31.73	31.04	35.1	36.3	34.9	88.4	89.3	89.5
Aircraft.....	1,377.8	1,283.4	1,183.9	1,347.2	1,310.6	1,165.2	29.45	31.17	30.04	40.6	42.0	41.2	72.4	73.6	73.7
Automobiles.....	75.4	91.6	93.3	72.0	88.6	88.0	31.42	31.94	31.18	34.0	34.3	33.5	92.6	93.3	93.1
Cars, electric- and steam-railroad.....	29.4	32.2	33.7	26.2	31.8	33.5	24.36	26.94	27.21	32.8	36.5	36.7	74.2	73.8	74.0
Locomotives.....	29.8	27.0	22.4	26.3	24.4	19.6	28.38	29.01	28.15	37.2	37.7	36.6	76.3	77.0	77.0
Shipbuilding.....	120.3	121.5	118.0	127.8	132.4	127.6	31.71	32.53	32.29	37.6	38.5	38.9	83.2	83.2	82.1
Nonferrous metals and their products.....	91.9	91.6	92.4	86.1	86.7	86.8	25.41	25.52	25.38	37.8	38.2	37.7	67.1	67.0	67.2
Aluminum manufactures.....	160.2	154.7	152.2	152.2	161.2	156.8	24.20	26.65	26.31	36.0	39.1	38.7	67.0	68.0	68.1
Brass, bronze, and copper products.....	98.5	98.7	99.1	102.6	99.0	99.4	28.31	27.32	27.18	39.7	38.8	38.5	71.7	70.7	70.8
Clocks and watches and time-recording devices.....	79.8	79.9	82.2	79.8	79.8	81.8	21.34	21.30	21.03	36.3	36.4	35.6	58.7	58.5	59.1
Jewelry.....	91.1	87.7	85.1	72.4	73.0	69.3	22.31	23.12	22.46	37.6	38.8	37.3	58.3	59.1	59.9
Lighting equipment.....	75.4	76.2	81.2	64.3	67.0	70.9	24.66	24.79	24.63	35.8	35.6	35.1	68.9	69.7	70.1
Silverware and plated ware.....	60.5	65.5	66.2	51.7	58.4	59.8	23.44	24.53	24.80	37.0	39.5	39.2	64.0	64.0	63.7
Smelting and refining—copper, lead, and zinc.....	70.5	71.0	71.3	65.2	66.4	66.6	26.05	26.34	26.29	37.5	38.1	38.0	69.5	69.1	69.2
Lumber and allied products.....	67.2	66.8	65.3	58.8	60.4	58.2	19.61	20.96	20.73	36.8	39.1	38.6	53.7	54.3	54.3
Furniture.....	80.0	78.7	77.0	64.9	64.0	63.1	19.30	19.91	19.86	37.2	38.0	37.5	52.4	52.7	53.0
Lumber:															
Millwork.....	57.3	57.2	53.9	46.4	48.6	45.0	21.41	22.45	21.99	39.7	41.4	41.0	54.0	54.3	53.8
Sawmills.....	54.5	54.4	53.7	46.8	51.9	50.3	19.26	21.26	21.00	35.9	39.2	38.6	54.3	55.2	55.2
Stone, clay, and glass products.....	73.9	74.5	72.7	62.5	68.9	64.1	22.61	23.94	23.47	35.3	37.2	36.4	64.6	64.7	64.6
Brick, tile, and terra cotta.....	57.3	57.1	53.6	42.8	46.2	40.4	19.58	21.25	19.91	36.6	39.5	37.4	53.1	53.8	53.4
Cement.....	72.0	71.2	67.4	69.5	69.7	64.0	26.84	27.31	26.50	38.0	39.0	38.0	70.6	70.0	69.8
Glass.....	90.5	93.0	91.5	87.4	96.0	91.7	23.27	24.86	24.15	32.5	35.0	34.2	71.5	71.1	70.6
Marble, granite, slate, and other products.....	48.0	45.9	47.5	36.4	36.5	40.4	25.83	26.76	28.63	35.7	37.5	39.5	72.9	71.8	72.7
Pottery.....	76.1	79.6	80.7	62.1	69.2	73.1	20.30	21.50	22.46	35.8	36.2	36.6	61.7	63.1	62.3
<i>Nondurable goods</i>															
Textiles and their products.....	95.0	94.9	96.1	77.4	77.6	77.8	16.47	16.49	16.35	35.2	35.4	34.8	47.1	47.2	47.7
Fabrics.....	89.2	87.8	88.3	75.5	74.5	74.2	16.23	16.18	16.01	35.9	35.9	35.5	45.8	45.8	45.9
Carpets and rugs.....	79.3	78.9	79.9	64.6	64.7	64.8	21.61	21.77	21.53	33.9	34.3	33.8	63.7	63.6	63.7
Cotton goods.....	85.7	84.1	85.2	72.4	70.8	72.2	13.83	13.69	13.78	36.1	35.8	35.7	38.3	38.3	38.6
Cotton small wares.....	81.5	79.0	82.3	75.9	73.0	74.8	17.78	17.75	17.34	38.5	37.9	37.6	47.1	47.4	46.7
Dyeing and finishing textiles.....	109.1	106.4	112.7	89.3	88.6	94.3	19.78	20.29	20.29	37.6	37.4	37.6	52.4	53.7	53.5
Hats, fur-felt.....	83.7	79.8	76.6	82.8	74.7	61.3	24.53	23.24	21.33	34.4	33.4	30.9	72.3	70.9	70.0
Knit goods.....	113.1	113.0	114.1	107.6	109.4	109.3	16.90	17.17	16.93	34.9	35.3	34.9	49.5	49.1	49.4
Hosiery.....	141.9	141.7	145.4	140.7	144.0	146.6	17.63	17.95	17.75	33.7	34.3	34.1	52.8	52.0	52.4
Knitted outerwear.....	77.3	75.5	73.0	69.6	68.6	66.7	16.76	16.96	16.98	36.9	36.7	37.0	45.3	46.1	46.1
Knitted underwear.....	73.5	74.8	74.3	65.6	68.1	65.6	14.90	15.13	14.74	37.1	37.5	36.2	40.2	40.5	40.7
Knitted cloth.....	153.1	152.3	144.1	126.9	123.0	110.8	18.34	17.87	17.07	39.2	38.3	36.6	46.1	45.8	46.1
Silk and rayon goods.....	57.7	56.4	58.7	46.0	45.5	46.5	15.15	15.38	15.19	35.3	35.4	35.1	42.5	43.0	42.9
Woolen and worsted goods.....	81.4	79.8	75.0	68.3	66.7	60.9	19.42	19.32	18.77	36.8	36.7	35.7	52.6	52.6	52.6
Wearing apparel.....	106.4	109.3	112.2	78.6	80.9	82.1	17.16	17.40	17.43	33.7	34.6	33.6	49.5	49.8	51.0
Clothing, men's.....	102.6	97.9	96.7	76.1	71.7	66.6	19.11	19.04	18.04	33.5	33.8	31.9	55.5	56.8	57.4
Clothing, women's.....	138.4	151.9	159.7	94.2	103.1	110.4	17.71	18.06	19.03	34.1	35.6	34.7	48.6	47.8	50.1
Corsets and allied garments.....	105.8	106.6	106.8	108.5	190.1	111.8	16.70	17.09	17.57	37.1	38.0	38.9	44.8	45.1	45.3
Men's furnishings.....	125.7	128.1	127.3	109.1	113.4	104.9	13.22	13.83	12.88	34.4	35.7	33.8	37.4	37.7	36.7
Millinery.....	47.7	58.2	70.2	33.0	40.6	52.5	18.06	18.43	19.99	30.4	28.8	31.1	59.8	63.0	64.0
Shirts and collars.....	114.6	115.6	118.0	94.0	100.9	102.2	12.38	13.33	13.40	32.5	34.2	34.3	38.3	39.4	39.5

For footnotes see end of table.

TABLE 4.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries—Continued*

MANUFACTURING—Continued

[Indexes are based on 3-year average, 1923-25=100, and are adjusted to 1935 Census of Manufactures. Not comparable to indexes published in pamphlets prior to August 1933. Comparable series available upon request]

Industry	Employment index			Pay-roll index			Average weekly earnings ¹			Average hours worked per week ¹			Average hourly earnings ¹		
	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939	July 1939	June 1939	May 1939
<i>Nondurable goods—Continued</i>															
<i>Leather and its manufactures</i>	93.6	88.4	87.0	77.8	69.8	64.2	19.70	18.65	17.43	37.5	35.1	32.8	<i>Cents</i> 52.1	<i>Cents</i> 52.7	<i>Cents</i> 52.0
Boots and shoes.....	9.40	8.77	86.4	74.3	63.9	57.9	18.74	17.28	15.93	3.77	34.5	31.8	4.8	50.4	50.4
Leather.....	84.3	83.5	82.0	84.1	84.6	81.0	23.87	24.30	23.78	37.8	38.7	37.9	93.0	63.0	62.9
<i>Food and kindred products</i>	129.6	122.8	118.8	130.4	125.6	123.9	24.61	25.13	25.43	40.1	40.5	41.7	61.5	62.2	63.2
Baking.....	147.1	146.7	145.4	146.2	145.1	143.4	20.05	20.96	20.91	42.1	42.2	42.2	62.4	61.8	61.7
Beverages.....	267.8	265.1	246.4	334.2	330.8	301.3	34.93	34.78	33.92	40.7	40.8	40.0	86.8	85.5	85.8
Butter.....	108.0	107.2	101.4	94.3	92.7	87.0	22.96	22.63	22.53	48.0	47.7	46.7	48.0	47.3	48.3
Canning and preserving.....	168.9	121.1	92.9	142.2	102.0	85.6	15.49	15.54	17.01	34.6	34.2	34.9	44.5	46.4	50.0
Confectionery.....	67.0	68.8	70.6	63.6	68.4	69.6	17.66	18.52	18.33	34.0	36.6	36.7	51.9	50.5	50.0
Flour.....	81.6	78.4	77.0	83.5	77.2	75.0	26.28	25.40	25.29	43.3	42.0	42.0	60.4	60.3	60.0
Ice cream.....	94.9	94.4	87.1	81.9	80.0	75.2	29.03	28.42	29.02	47.5	47.1	47.1	60.4	59.9	61.5
Slaughtering and meat packing.....	98.1	97.8	95.4	112.4	109.8	107.7	28.54	28.25	28.39	41.6	40.9	41.2	68.7	69.1	68.9
Sugar, beet.....	53.6	50.8	48.3	49.0	55.0	52.2	23.56	27.89	27.71	31.9	41.1	40.5	75.7	70.0	70.9
Sugar refining, cane.....	80.5	84.2	81.0	77.8	74.5	70.2	23.15	23.87	23.36	30.1	37.0	36.6	64.1	64.5	63.8
<i>Tobacco manufactures</i>	64.0	68.8	62.8	59.7	59.9	55.8	17.48	17.19	16.60	37.0	38.6	35.3	47.6	47.4	47.2
Chewing and smoking tobacco and snuff.....	57.6	59.2	59.5	67.9	65.7	65.6	18.52	17.25	17.26	35.3	33.8	33.8	52.4	51.0	51.1
Cigars and cigarettes.....	64.8	64.4	63.2	58.6	58.0	54.5	17.26	17.17	16.45	37.2	36.9	35.5	47.0	47.0	46.7
<i>Paper and printing</i>	105.2	104.7	106.0	100.8	102.2	103.9	27.57	28.10	28.22	37.5	38.1	38.2	77.0	77.0	77.2
Boxes, paper.....	101.0	99.5	100.1	104.5	105.5	104.2	21.19	21.75	21.28	39.9	39.8	39.1	54.8	55.1	55.0
Paper and pulp.....	105.8	106.1	106.7	101.1	104.4	105.5	23.40	24.13	24.25	38.0	39.0	39.4	61.6	61.8	61.6
Printing and publishing:															
Book and job.....	100.2	97.5	99.8	90.7	88.7	90.9	30.16	30.28	30.31	38.3	38.1	38.5	80.2	80.9	80.2
Newspapers and periodicals.....	103.7	105.6	106.9	103.4	107.0	109.2	36.73	37.28	37.62	35.5	36.0	36.3	100.1	99.9	100.1
<i>Chemicals and allied products, and petroleum refining</i>	109.4	102.7	111.5	118.7	119.5	120.4	28.99	29.37	28.81	37.9	38.5	38.4	77.0	76.2	74.9
Petroleum refining.....	120.6	119.2	117.0	131.4	134.3	132.1	33.91	34.99	35.10	34.7	36.1	36.3	98.5	97.2	97.0
Other than petroleum refining.....	106.6	106.2	110.1	114.8	115.0	116.8	26.71	26.79	28.11	39.1	39.5	39.1	68.5	68.0	68.8
Chemicals.....	115.1	114.5	114.5	128.4	129.1	128.9	30.74	31.07	31.60	39.3	40.0	39.9	78.3	77.7	77.6
Cottonseed—oil, cake, and meal.....	42.9	47.2	64.9	37.5	40.9	52.0	13.53	13.37	12.39	41.1	42.2	40.5	31.3	30.5	30.0
Druggists' preparations.....	104.6	107.0	106.8	118.2	119.0	118.5	23.92	24.95	24.85	40.5	39.8	39.3	59.5	59.2	59.7
Explosives.....	87.4	85.9	82.0	98.1	96.3	91.2	30.97	30.92	30.68	38.4	38.4	38.3	80.7	80.6	80.0
Fertilizers.....	65.5	70.4	110.4	63.2	64.7	105.2	17.65	16.79	17.61	36.4	35.4	38.5	48.5	47.5	45.8

Paints and varnishes.....	117.2	119.3	118.4	121.7	126.4	127.3	28.14	28.62	29.12	40.0	41.1	41.5	70.4	69.7	70.1
Rayon and allied products.....	309.8	298.5	308.5	309.4	297.0	298.3	24.47	24.38	23.70	38.3	37.9	36.6	63.9	64.3	64.7
Soap.....	92.0	89.4	87.7	95.2	93.5	90.3	29.42	29.74	29.23	39.6	40.0	39.0	74.4	74.5	75.1
Rubber products.....	78.8	80.2	81.4	88.3	84.2	82.1	28.22	27.88	26.78	38.4	38.5	38.7	77.3	76.5	74.2
Rubber boots and shoes.....	46.7	58.0	61.0	44.1	57.5	56.8	21.61	22.69	21.35	35.7	37.3	35.8	60.5	60.8	59.7
Rubber tires and inner tubes.....	67.2	66.7	67.2	79.1	76.8	73.5	33.84	33.06	31.46	35.6	34.9	33.2	95.5	94.7	94.4
Rubber goods, other.....	128.9	127.5	128.7	123.1	121.3	124.2	22.47	22.77	22.65	37.6	38.1	38.1	60.4	60.3	60.1

NONMANUFACTURING

[Indexes are based on 12-month average, 1929=100]

Coal mining:																		
Anthracite ¹	45.0	51.2	52.6	25.3	36.1	57.0	\$18.65	\$23.30	\$35.84	20.1	25.4	38.8	Cents	Cents	Cents			
Bituminous ²	79.7	78.3	47.9	64.6	66.5	20.4	22.11	22.75	11.32	24.3	25.2	14.1	90.3	88.6	86.0			
Metalliferous mining.....	60.4	61.6	61.9	47.8	53.8	54.1	25.11	27.26	27.60	36.4	39.4	40.0	69.4	69.5	69.1			
Quarrying and nonmetallic mining.....	47.5	47.3	45.6	40.8	41.7	39.7	21.06	22.15	21.74	39.2	40.1	40.0	55.2	54.9	54.5			
Crude-petroleum producing.....	67.5	67.0	66.1	62.4	62.5	61.2	33.29	34.38	34.04	38.0	38.8	38.8	88.3	86.7	86.1			
Public utilities:																		
Telephone and telegraph ³	75.4	75.3	74.7	94.6	93.7	93.7	31.06	30.79	31.05	39.4	39.1	39.2	81.5	81.4	81.8			
Electric light and power and manufactured gas ³	93.2	92.3	91.0	100.1	100.2	98.8	33.64	33.89	33.82	38.6	40.2	40.1	86.9	84.4	84.6			
Electric-railroad and motorbus operation and maintenance ³	69.7	69.9	69.6	70.8	71.2	70.1	33.15	33.21	32.89	45.9	46.2	45.6	71.4	71.1	71.2			
Trade:																		
Wholesale ³	87.9	88.1	87.2	75.9	75.8	74.9	29.97	29.90	29.72	41.4	42.0	42.1	72.5	71.5	71.1			
Retail ³	83.6	86.4	85.7	70.9	72.5	71.5	21.58	21.36	21.19	42.6	42.7	42.4	56.7	55.1	55.0			
General merchandising ³	91.7	97.4	96.8	83.8	88.1	86.7	18.25	18.05	17.90	38.5	39.2	38.9	49.9	48.7	48.8			
Other than general merchandising ³	81.5	83.5	82.8	68.2	69.3	68.3	24.16	24.00	23.86	43.9	43.8	43.5	57.5	57.1	56.9			
Hotels (year-round) ^{2, 3, 4}	90.2	92.8	93.9	79.2	82.0	82.4	15.05	15.30	15.22	46.8	46.8	46.6	31.9	32.6	32.4			
Laundries ²	100.0	98.7	95.5	87.9	86.9	83.9	17.92	17.95	18.07	43.3	43.2	43.0	41.9	41.9	42.4			
Dyeing and cleaning ²	106.6	110.1	107.0	77.1	81.2	83.0	19.92	21.00	21.12	42.1	43.4	43.9	48.5	49.1	49.1			
Brokerage ^{3, 5}	-1.6	-2.0	-1.4	-2.2	-2.4	-1.1	35.52	35.71	36.08	(6)	(6)	(6)	(6)	(6)	(6)			
Insurance ^{3, 5}	+4.8	+4.4	+3.3	+2.2	+5.5	+6.6	34.38	36.75	36.82	(6)	(6)	(6)	(6)	(6)	(6)			
Building construction ⁵	+4.5	+1.4	+6.7	+4.6	-7.7	+11.9	30.85	30.87	31.40	33.6	33.4	33.5	92.0	92.8	94.1			

¹ Average weekly earnings are computed from figures furnished by all reporting establishments. Average hours and average hourly earnings are computed from data supplied by a smaller number of establishments, as not all reporting firms furnish man-hours. The figures are not strictly comparable from month to month because of changes in the size and composition of the reporting sample. Hours and earnings for all manufacturing industries now relate to 87 industries instead of 89 which were covered in the July and prior issues of the pamphlet. The 2 industries excluded are electric- and steam-railroad repair shops. The averages for the durable-goods group have also been affected by this exclusion.

² Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of this publication.

³ Average weekly earnings, hourly earnings, and hours not strictly comparable with figures published in pamphlets prior to January 1938 as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

⁴ Cash payments only; the additional value of board, room, and tips cannot be computed.

⁵ Indexes of employment and pay rolls are not available, percentage changes from preceding month substituted.

⁶ Not available.

**INDEXES OF EMPLOYMENT AND PAY ROLLS, JULY 1938
THROUGH JULY 1939**

Indexes of employment and pay rolls are given in table 5 for all manufacturing industries combined, for the durable- and nondurable-goods groups of manufacturing industries, and for each of 13 non-manufacturing industries, including 2 subgroups under retail trade, by months, from July 1938 to July 1939, inclusive. The accompanying chart indicates the trend of factory employment and pay rolls from January 1919 to July 1939.

The indexes of factory employment and pay rolls are based on the 3-year average 1923-25 as 100. They relate to wage earners only and are computed from reports supplied by representative manufacturing establishments in 87 manufacturing industries. These reports cover more than 55 percent of the total wage earners in all manufacturing industries of the country and more than 65 percent of the wage earners in the 87 industries included in the monthly survey of the Bureau of Labor Statistics.

The indexes for the nonmanufacturing industries are based on the 12-month average for 1929 as 100. Figures for mining, laundries, and dyeing and cleaning cover wage earners only, but the figures for public utilities, trade, and hotels relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum production they cover wage earners and the clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from approximately 25 percent for wholesale trade and dyeing and cleaning to approximately 80 percent for quarrying and nonmetallic mining, anthracite mining, and public utilities.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the pay period ending nearest the 15th of the month.

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Manufacturing ¹ and Non-manufacturing ² Industries, July 1938 to July 1939, Inclusive*

Industry	Employment													
	A. v. 1938	1938						1939						
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
<i>Manufacturing</i>														
All industries.....	86.8	81.9	85.7	88.8	89.5	90.5	91.2	89.5	90.7	91.4	91.1	90.1	90.6	90.5
Durable goods ³	77.3	70.3	71.7	75.3	79.0	82.1	83.1	81.6	82.6	83.5	84.1	83.3	83.9	82.1
Nondurable goods ⁴	96.0	92.9	99.0	101.7	99.4	98.4	93.8	97.1	98.4	98.9	97.8	96.7	97.0	98.5
<i>Nonmanufacturing</i>														
Anthracite mining.....	52.3	44.6	37.6	46.4	52.4	51.0	51.3	50.0	52.2	51.7	53.0	52.6	51.2	45.0
Bituminous-coal mining.....	86.7	78.5	80.1	83.4	87.2	88.6	89.3	88.7	88.6	87.4	25.9	47.9	78.3	79.7
Metalliferous mining.....	59.0	49.7	51.4	55.2	57.9	61.9	62.3	62.6	60.9	61.0	61.5	61.9	61.6	60.4
Quarrying and nonmetallic mining.....	42.3	44.1	44.6	44.6	44.4	44.4	41.4	38.3	37.9	40.1	43.0	45.6	47.3	47.5
Crude-petroleum producing.....	72.1	72.3	72.4	71.5	69.5	68.3	67.8	67.0	66.4	66.2	65.8	66.1	67.0	67.5
Telephone and telegraph.....	75.1	74.9	74.8	74.9	74.7	74.4	74.3	74.1	73.3	73.4	74.1	74.7	75.3	75.4
Electric light and power, and manufactured gas.....	92.3	92.3	92.7	92.5	92.5	91.9	91.4	90.0	89.6	89.5	90.3	91.0	92.3	93.2
Electric-railroad and motorbus operation and maintenance.....	70.3	70.1	69.5	69.3	69.9	69.5	69.4	69.2	69.3	69.5	69.1	69.6	69.9	69.7
Wholesale trade.....	88.8	86.8	87.6	88.5	89.1	89.8	90.0	88.3	87.9	87.4	87.3	87.2	88.1	87.9
Retail trade.....	85.2	81.1	80.0	84.7	85.9	86.9	98.1	82.2	81.5	83.8	85.5	85.7	96.4	83.6
General merchandising.....	98.0	87.0	86.4	97.0	99.4	104.5	144.1	90.7	88.8	93.2	96.9	96.8	97.4	91.7
Other than general merchandising.....	81.8	79.3	78.3	81.5	82.3	82.3	86.0	80.0	79.6	81.3	82.5	82.8	83.5	81.5
Year-round hotels.....	92.7	90.7	90.4	91.8	92.9	92.5	92.0	91.8	92.6	92.7	93.2	93.9	92.8	90.2
Laundries.....	95.7	97.8	97.5	96.5	94.4	93.7	93.4	93.3	92.8	92.0	93.5	95.5	98.7	100.0
Dyeing and cleaning.....	104.3	108.6	105.0	107.8	106.8	102.5	97.9	94.2	92.1	95.4	102.2	107.0	110.1	106.6
<i>Pay rolls</i>														
All industries.....	77.5	70.6	76.9	81.0	83.8	84.1	86.5	83.4	85.5	86.9	84.9	84.4	85.9	83.9
Durable goods ³	68.2	58.6	63.7	68.7	75.2	78.3	80.4	76.6	78.5	80.1	80.2	79.5	81.4	76.6
Nondurable goods ⁴	88.0	84.1	91.7	94.9	93.1	90.6	93.4	91.0	93.3	94.6	90.2	89.9	91.0	92.1
<i>Nonmanufacturing</i>														
Anthracite mining.....	38.2	20.2	20.0	29.4	43.4	36.2	42.5	38.0	45.2	34.2	43.4	57.0	36.1	25.3
Bituminous-coal mining.....	67.9	56.8	64.2	71.9	78.3	81.4	80.9	78.2	81.2	77.8	17.6	20.4	66.5	64.6
Metalliferous mining.....	50.4	38.0	43.7	46.1	49.2	52.3	51.1	55.3	53.4	53.6	52.6	54.1	53.8	47.8
Quarrying and nonmetallic mining.....	35.1	37.0	39.2	38.4	39.2	37.2	33.7	30.2	29.7	33.1	35.9	39.7	41.7	40.8
Crude-petroleum producing.....	66.5	66.7	66.8	66.5	63.7	63.3	62.5	60.9	62.7	61.3	60.8	61.2	62.5	62.4
Telephone and telegraph.....	92.1	90.9	91.3	92.6	95.3	93.0	92.5	92.0	91.7	91.9	92.1	93.7	93.7	94.6
Electric light and power, and manufactured gas.....	98.5	98.2	98.9	98.4	99.9	98.6	98.2	95.9	96.4	96.7	96.9	98.8	100.2	100.1
Electric-railroad and motorbus operation and maintenance.....	69.7	69.0	69.5	68.4	68.9	68.8	69.7	71.1	69.9	70.5	69.6	70.1	71.2	70.8
Wholesale trade.....	74.7	73.6	73.7	74.3	75.1	75.4	75.7	75.5	74.6	74.7	74.8	74.9	75.8	75.9
Retail trade.....	70.4	68.1	66.8	69.4	70.8	71.5	79.2	69.7	68.4	69.6	71.3	71.5	72.5	79.9
General merchandising.....	87.8	80.4	78.8	85.3	88.3	91.8	122.9	84.0	81.0	83.4	86.6	86.7	88.1	83.8
Other than general merchandising.....	66.8	65.6	64.3	66.1	67.2	67.3	70.1	66.7	65.8	66.8	68.1	68.3	69.3	68.2
Year-round hotels.....	80.3	77.4	77.4	78.9	80.8	81.3	81.1	80.2	82.8	81.1	81.9	82.4	82.0	79.2
Laundries.....	80.6	83.0	83.1	81.4	79.5	79.3	80.0	79.6	78.6	79.3	79.9	83.9	86.9	87.9
Dyeing and cleaning.....	75.3	77.5	74.3	81.7	78.0	73.9	68.3	65.8	62.2	67.7	73.3	83.0	84.2	77.1

¹ 3-year average, 1923-25=100—adjusted to 1935 Census of Manufactures. Comparable indexes for earlier months are in August 1938 issue of pamphlet and November 1938 issue of Monthly Labor Review.

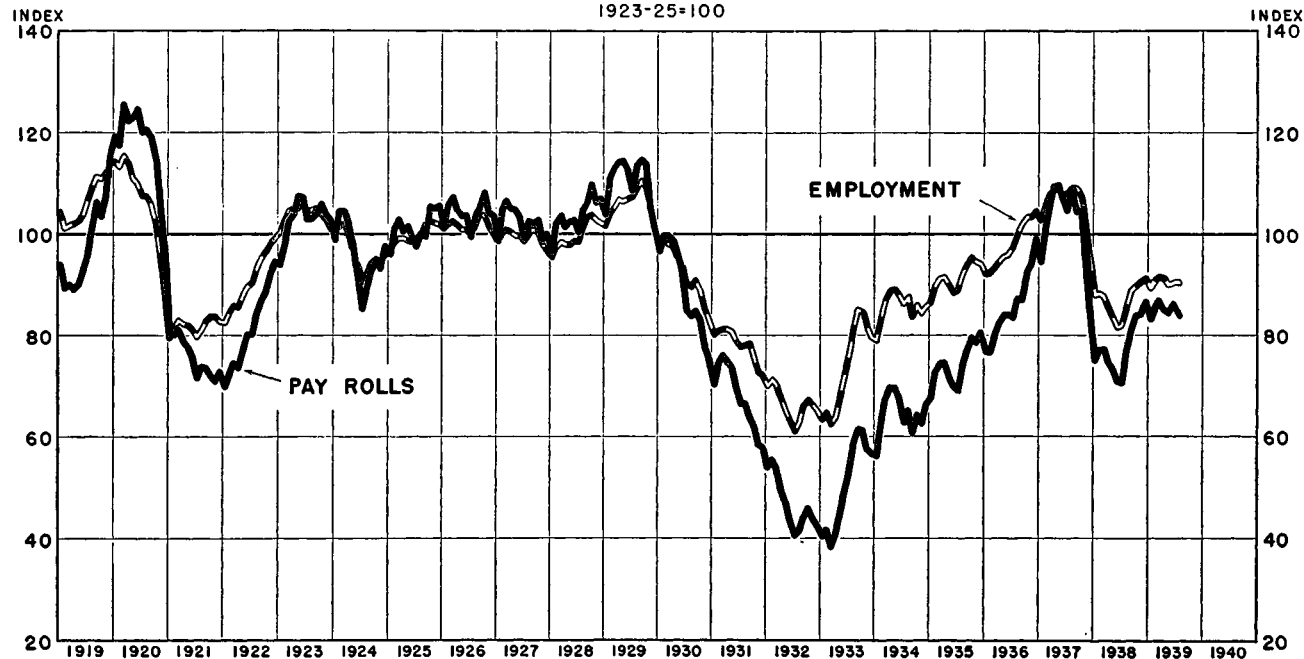
² 12-month average for 1929=100. Comparable indexes are in November 1934 and subsequent issues of Employment and Pay Rolls, or in February 1935 and subsequent issues of Monthly Labor Review, except for anthracite and bituminous-coal mining, year-round hotels, laundries, and dyeing and cleaning. Indexes for these industries from January 1929 forward have been adjusted to the 1935 census and are presented in the January 1938 and subsequent issues of Employment and Pay Rolls.

³ Includes: Iron and steel, machinery, transportation equipment, nonferrous metals, lumber and allied products, and stone, clay, and glass products.

⁴ Includes: Textiles and their products, leather and its manufactures, food and kindred products, tobacco manufactures, paper and printing, chemicals and allied products, products of petroleum and coal, rubber products, and a number of miscellaneous industries not included in other groups.

EMPLOYMENT AND PAY ROLLS ALL MANUFACTURING INDUSTRIES

1923-25=100



UNITED STATES BUREAU OF LABOR STATISTICS

TREND OF INDUSTRIAL AND BUSINESS EMPLOYMENT, BY STATES

A comparison of employment and pay rolls, by States and geographic divisions, in June and July 1939 is shown in table 6 for all groups combined and for all manufacturing industries combined based on data supplied by reporting establishments. The percentage changes shown, unless otherwise noted, are unweighted—that is, the industries included in the manufacturing group and in the grand total have not been weighted according to their relative importance.

The totals for all manufacturing industries combined included figures for miscellaneous manufacturing industries in addition to the 87 manufacturing industries presented in table 3. The totals for all groups combined include all manufacturing industries, each of the nonmanufacturing industries presented in table 3 (except building construction), and seasonal hotels.

Similar comparisons showing only percentage changes are available in mimeographed form for "All groups combined," for "All manufacturing," for anthracite mining, bituminous-coal mining, metalliferous mining, quarrying and nonmetallic mining, crude-petroleum producing, public utilities, wholesale trade, retail trade, hotels, laundries, dyeing and cleaning, and brokerage and insurance.

TABLE 6.—*Comparison of Employment and Pay Rolls in Identical Establishments in July 1939, by Geographic Divisions and by States*

Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

Geographic division and State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll July 1939	Percentage change from June 1939	Amount of pay roll (1 week) July 1939	Percentage change from June 1939	Number of establishments	Number on pay roll July 1939	Percentage change from June 1939	Amount of pay roll (1 week) July 1939	Percentage change from June 1939
				<i>Dollars</i>					<i>Dollars</i>	
New England.....	12, 852	852, 705	+0.2	19, 779, 042	+0.9	3, 603	590, 091	+0.8	13, 433, 208	+1.5
Maine.....	777	57, 047	+2.6	1, 134, 005	+5.0	284	48, 162	+1.9	932, 243	+5.1
New Hampshire.....	620	39, 734	+2.4	827, 906	+5.0	215	33, 827	+2.7	691, 769	+5.6
Vermont.....	453	17, 356	+1.9	387, 720	+2.0	145	10, 985	+2.3	243, 638	+1.5
Massachusetts.....	¹ 7, 810	<i>464, 300</i>	+1.0	<i>11, 100, 179</i>	+1.9	<i>1, 811</i>	<i>266, 836</i>	+2.9	<i>5, 980, 819</i>	+3.9
Rhode Island.....	849	88, 660	+2	1, 873, 309	+3	423	74, 464	+1.1	1, 524, 859	+6
Connecticut.....	2, 343	185, 008	-3.1	4, 453, 833	-2.9	725	155, 808	-3.6	3, 664, 880	-3.4
Middle Atlantic.....	30, 377	1, 993, 662	-1.2	51, 741, 989	-2.4	6, 689	1, 204, 632	+1	30, 579, 604	-1.4
New York.....	18, 939	873, 937	-1.6	24, 181, 536	-1.3	² 2, 671	<i>426, 031</i>	-5.1	<i>5, 645, 293</i>	-2
New Jersey.....	3, 878	348, 206	-1.1	9, 017, 579	-1.6	1, 638	286, 912	-1.3	7, 300, 784	-1.9
Pennsylvania.....	7, 660	770, 519	-7	18, 542, 874	-4.3	2, 380	<i>491, 639</i>	+1.5	<i>11, 755, 527</i>	-2.6
East North Central.....	24, 782	1, 983, 224	-2.6	52, 679, 152	-4.6	8, 394	1, 389, 205	-2.5	39, 300, 603	-6.5
Ohio.....	6, 841	500, 159	-1.1	13, 006, 079	-3.8	2, 393	386, 732	-8	10, 239, 432	-4.1
Indiana.....	2, 870	250, 850	-1.9	6, 231, 486	-4.3	1, 078	199, 879	-1.1	5, 078, 615	-4.6
Illinois.....	⁴ 6, 849	<i>562, 225</i>	-1	<i>15, 626, 610</i>	-5	2, 421	<i>391, 701</i>	+2	<i>10, 269, 634</i>	-1.0
Michigan.....	3, 823	401, 780	-9.8	11, 894, 558	-10.9	1, 042	<i>247, 972</i>	-11.4	<i>9, 706, 857</i>	-16.2
Wisconsin.....	⁵ 4, 399	<i>233, 210</i>	-4	<i>5, 920, 419</i>	-3.1	⁶ 1, 460	<i>162, 921</i>	+2.3	<i>4, 016, 065</i>	-3.3

For footnotes see end of table.

TABLE 6.—Comparison of Employment and Pay Rolls in Identical Establishments in July 1939, by Geographic Divisions and by States—Continued

Geographic division and State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll July 1939	Percentage change from June 1939	Amount of pay roll (1 week) July 1939	Percentage change from June 1939	Number of establishments	Number on pay roll July 1939	Percentage change from June 1939	Amount of pay roll (1 week) July 1939	Percentage change from June 1939
				<i>Dollars</i>					<i>Dollars</i>	
West North Central.	11,751	429,490	+0.6	10,465,417	-0.6	2,440	215,198	+1.7	5,186,737	-0.6
Minnesota.....	¹ 2,802	130,311	+1.9	3,153,415	- .2	613	54,967	+4.2	1,397,358	+ .1
Iowa.....	1,924	59,290	-1.7	1,383,379	-4.2	365	35,651	-2.0	840,999	-6.7
Missouri.....	2,610	147,957	+ .8	3,451,729	- .3	784	88,375	+2.0	2,013,519	+ .5
North Dakota.....	482	4,442	-2.1	109,149	-2.8	27	463	0	11,622	- .5
South Dakota.....	434	7,771	+ .9	211,564	+3.7	32	2,539	+2.8	68,869	+2.7
Nebraska.....	1,090	25,682	- .1	585,901	+ .2	137	9,000	+1.4	228,635	+ .9
Kansas.....	² 2,439	54,087	³ +7.6	1,270,280	⁴ 0	452	24,203	+ .9	625,755	+2.3
South Atlantic.	10,413	816,920	+ .1	15,738,405	- .9	2,916	569,502	+ .6	9,991,648	- .6
Delaware.....	240	15,142	- .2	364,022	-3.4	80	10,640	+ .5	245,922	-4.6
Maryland.....	1,590	138,448	+ .8	3,454,671	+ .8	647	98,295	⁵ + .9	2,437,269	⁶ - .1
District of Columbia.....	1,008	35,566	-2.6	959,434	-2.7	39	3,092	0	104,798	-2.2
Virginia.....	1,922	109,942	+ .7	2,052,474	+ ⁽¹⁰⁾	454	76,787	+1.6	1,377,496	+ .9
West Virginia.....	995	119,654	- .2	2,822,916	-4.9	213	44,997	-2.5	994,980	-10.7
North Carolina.....	1,546	155,731	+1.5	2,324,337	+2.0	654	142,405	+1.8	2,090,519	+2.2
South Carolina.....	777	90,576	- .2	1,278,897	- .4	247	83,158	- .2	1,138,941	- .5
Georgia.....	1,380	112,838	- ⁽¹⁰⁾	1,770,180	- .4	390	89,439	+ .1	1,268,728	- .5
Florida.....	955	39,023	-4.6	709,474	-2.0	192	20,629	-3.2	332,995	-1.3
East South Central.	4,246	277,138	+1.2	4,985,887	+ .1	1,027	184,290	+1.6	3,148,591	+ .9
Kentucky.....	1,242	75,130	+1.2	1,568,390	-1.5	288	35,734	+ .9	724,617	- .6
Tennessee.....	1,163	97,292	+ .4	1,679,583	- .6	362	73,227	+1.4	1,238,659	- .2
Alabama.....	1,373	86,761	+1.8	1,482,780	+2.4	256	62,695	+1.8	1,020,640	+3.0
Mississippi.....	462	17,955	+3.0	255,134	+2.5	91	12,634	+3.3	164,675	+3.0
West South Central.	5,725	216,783	- .4	4,765,764	-1.3	1,293	107,542	+ .1	2,366,187	-1.8
Arkansas.....	¹¹ 860	27,094	+1.5	446,445	+3.6	264	18,440	+3.4	297,185	+5.8
Louisiana.....	948	51,616	- .7	1,016,694	-1.4	231	28,116	- .7	518,161	-2.5
Oklahoma.....	1,287	36,630	+ .7	904,732	- .3	137	10,374	+3.9	255,678	+2.0
Texas.....	¹² 630	101,443	-1.1	2,397,895	-2.5	661	50,612	¹³ - .6	1,195,163	¹⁴ -4.2
Mountain.	3,789	113,688	+2.9	2,711,618	-2.8	556	37,224	+9.9	874,085	+ .2
Montana.....	554	14,814	- .1	381,604	-4.3	72	4,790	+2.7	122,018	- .7
Idaho.....	480	10,531	+4.9	251,288	-1.6	62	3,727	+10.5	88,268	+7.0
Wyoming.....	299	7,834	+ .3	204,518	-5.0	37	1,350	-2.6	40,481	-8.4
Colorado.....	1,111	36,620	+2.8	877,879	-1.9	192	14,898	+4.8	369,884	-2.8
New Mexico.....	279	5,864	-2.7	119,337	+1.3	31	870	-16.1	15,570	-15.7
Arizona.....	362	13,370	-3.6	342,206	-9.0	38	2,746	-2.1	62,706	-6.3
Utah.....	543	22,118	+12.3	463,382	+1.5	108	8,503	+36.2	166,343	+13.1
Nevada.....	161	2,517	- .4	71,404	-3.2	16	340	+5.3	8,815	-7.0
Pacific.	10,381	481,511	+2.8	13,236,832	-2.0	2,670	255,427	+5.3	6,575,762	-4.3
Washington.....	2,461	88,340	-1.2	2,305,062	-6.7	527	51,824	- .6	1,298,239	-11.0
Oregon.....	1,209	45,978	- .9	1,121,604	-6.3	292	20,407	-2.4	682,115	-10.4
California.....	¹⁵ 6,711	547,193	+4.4	9,810,166	- .3	1,851	174,196	+8.7	4,695,408	-1.1

¹ Includes banks and trust companies; construction, municipal, agricultural, and office employment; amusement and recreation; professional services; and trucking and handling.

² Includes laundering and cleaning; and water, light, and power.

³ Weighted percentage change.

⁴ Includes automobile and miscellaneous services; restaurants; and building and contracting.

⁵ Includes construction but not public works.

⁶ Does not include logging.

⁷ Includes banks; real estate; pipe-line transportation; motor transportation (other than operation and maintenance); water transportation; hospitals and clinics; and personal, business, mechanical repair, and miscellaneous services.

⁸ Includes financial institutions, miscellaneous services, and restaurants.

⁹ Weighted percentage change, including hired farm labor.

¹⁰ Less than 1/10 of 1 percent.

¹¹ Includes automobile dealers and garages; and sand, gravel, and building stone.

¹² Includes banks, insurance, and office employment.

INDUSTRIAL AND BUSINESS EMPLOYMENT IN PRINCIPAL METROPOLITAN AREAS

A comparison of employment and pay rolls in June and July 1939 is made in table 7 for 13 metropolitan areas each of which had a population of 500,000 or over in 1930. Cities within these areas, but having a population of 100,000 or over, are not included. Footnotes to the table specify which cities are excluded. Data concerning them have been prepared in a supplementary tabulation which is available on request. The figures represent reports from cooperating establishments and cover both full- and part-time workers in the manufacturing and nonmanufacturing industries presented in table 3, with the exception of building construction, and include also miscellaneous industries.

Revisions made in the figures after they have gone to press, chiefly because of late reports by cooperating firms, are incorporated in the supplementary tabulation mentioned above. This supplementary tabulation covers these 13 metropolitan areas as well as other metropolitan areas and cities having a population of 100,000 or more, according to the 1930 Census of Population.

TABLE 7.—*Comparison of Employment and Pay Rolls in Identical Establishments in June and July 1939, by Principal Cities—Metropolitan Areas*

Metropolitan area	Number of establishments, July 1939	Number on pay roll, July 1939	Percentage change from June 1939	Amount of pay roll (1 week), July 1939	Percentage change from June 1939
New York ¹	13,595	575,635	-2.5	\$15,591,816	-2.4
Chicago ²	4,294	413,758	- .5	11,577,134	- .1
Philadelphia ³	2,069	195,385	- .4	5,279,248	- .1
Detroit.....	1,573	253,407	-10.0	8,160,333	-9.3
Los Angeles ⁴	2,803	149,414	- .7	4,331,283	-1.4
Cleveland.....	1,604	104,892	-2.6	2,759,242	-5.9
St. Louis.....	1,360	116,416	+ .7	2,833,306	- .9
Baltimore.....	1,141	104,948	+1.7	2,635,251	+1.3
Boston ⁵	2,875	165,532	+1.4	4,115,973	+1.3
Pittsburgh.....	1,035	161,377	-1.8	4,220,700	-6.3
San Francisco ⁶	1,513	76,548	+ .6	2,103,197	-3.7
Buffalo.....	745	61,521	-1.4	1,660,416	-1.2
Milwaukee.....	1,004	93,001	-2.2	2,535,970	-4.0

¹ Does not include Elizabeth, Jersey City, Newark, or Paterson, N. J., or Yonkers, N. Y.

² Does not include Gary, Ind.

³ Does not include Camden, N. J.

⁴ Does not include Long Beach, Calif.

⁵ Does not include Cambridge, Lynn, or Somerville, Mass.

⁶ Does not include Oakland, Calif.

Public Employment

Employment created by the Federal Government includes employment in the regular agencies of the Government, employment on the various construction programs wholly or partially financed by Federal funds, and employment on relief-work projects.

EXECUTIVE SERVICE OF THE FEDERAL GOVERNMENT

Statistics of employment and pay rolls for the executive service of the Federal Government in June and July 1939 are given in table 8.

TABLE 8.—Employment and Pay Rolls for the Executive Service of the United States Government, July and June 1939 ¹

[Subject to revision]

Class	Employment			Pay rolls		
	July	June ²	Percentage change	July	June ²	Percentage change
Entire service:						
Total	927, 887	925, 982	+0.2	\$138, 953, 657	\$140, 217, 974	-0.9
Regular appropriation	779, 039	772, 979	+ .8	120, 703, 575	120, 620, 380	+ .1
Emergency appropriation	60, 643	66, 717	-9.1	8, 073, 910	8, 703, 644	-7.2
Force-account (regular and emergency)	88, 205	86, 286	+2.2	10, 176, 172	10, 893, 950	-6.6
Inside the District of Columbia:						
Total	123, 876	123, 541	+ .3	21, 982, 813	22, 179, 112	-.9
Regular appropriation	108, 951	107, 736	+1.1	19, 729, 297	19, 610, 280	+ .6
Emergency appropriation	9, 120	10, 131	-10.0	1, 407, 079	1, 598, 296	-12.0
Force-account (regular and emergency)	5, 805	5, 674	+2.3	846, 437	970, 536	-12.8
Outside the District of Columbia:						
Total	804, 011	802, 441	+ .2	116, 970, 844	118, 038, 862	-.9
Regular appropriation	670, 088	665, 243	+ .7	100, 974, 278	101, 010, 100	(³) -6.2
Emergency appropriation	51, 523	56, 586	-8.9	6, 666, 831	7, 105, 348	
Force-account (regular and emergency)	82, 400	80, 612	+2.2	9, 329, 735	9, 923, 414	-6.0

¹ Data include number of employees receiving pay during the last pay period of the month.

² Revised.

³ Less than $\frac{1}{10}$ of 1 percent.

CONSTRUCTION PROJECTS FINANCED BY THE PUBLIC WORKS ADMINISTRATION

Details concerning employment, pay rolls, and man-hours worked during July on construction projects financed by Public Works Administration funds are given in table 9, by type of project.

TABLE 9.—Employment and Pay Rolls on Projects Financed From Public Works Administration Funds, July 1939 ¹

[Subject to revision]

Type of project	Wage earners		Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
	Maximum number employed ²	Weekly average				
Federal projects financed from National Industrial Recovery Act funds						
All projects	³ 1, 254	1, 148	\$84, 247	145, 187	\$0. 580	\$211, 571
Building construction.....	83	70	9, 485	6, 977	1. 359	2, 928
Naval vessels.....	29	29	3, 622	3, 912	. 926	2, 042
Public roads ⁴	(⁵)	368	25, 201	44, 960	. 561	31, 300
Reclamation.....	337	298	32, 798	41, 883	. 783	92, 329
River, harbor, and flood control.....	227	182	7, 758	14, 431	. 538	28, 818
Water and sewerage.....	200	200	5, 233	32, 784	. 160	54, 154
Miscellaneous.....	1	1	150	240	. 625	0
Federal projects financed from Public Works Administration Appropriation Act 1938 funds						
All projects	33, 152	28, 843	\$3, 007, 595	3, 373, 315	\$0. 892	\$3, 410, 441
Airport construction (exclusive of buildings).....	642	607	49, 014	86, 930	. 564	108, 382
Building construction.....	24, 662	21, 283	2, 295, 954	2, 428, 393	. 945	2, 704, 029
Electrification.....	844	792	66, 582	84, 311	. 790	108, 329
Reclamation.....	2, 209	2, 012	186, 993	256, 009	. 730	130, 184
River, harbor, and flood control.....	807	664	85, 768	94, 304	. 909	127, 567
Ship construction.....	1, 255	1, 082	94, 675	111, 762	. 847	55, 776
Streets and roads.....	433	371	34, 178	43, 579	. 784	67, 206
Water and sewerage.....	476	429	25, 099	35, 158	. 714	40, 506
Miscellaneous.....	915	867	66, 714	94, 721	. 704	59, 040
Professional, technical, and clerical.....	909	736	102, 618	138, 148	. 743	9, 422
Non-Federal projects financed from National Industrial Recovery Act funds						
All projects ⁶	4, 416	3, 383	\$569, 152	400, 289	\$1. 422	\$673, 973
Building construction ⁶	3, 084	2, 278	475, 367	281, 930	1. 680	373, 963
Streets and roads.....	218	162	7, 618	13, 339	. 571	30, 080
Water and sewerage.....	556	447	56, 407	41, 256	1. 367	53, 453
Miscellaneous.....	558	496	29, 760	63, 764	. 467	216, 477
Projects financed from Emergency Relief Appropriation Act 1935, 1936, and 1937 funds ⁷						
All projects	16, 396	13, 864	\$1, 509, 437	1, 722, 930	\$0. 876	\$5, 912, 846
Building construction.....	6, 377	5, 189	555, 872	568, 226	. 978	932, 399
Electrification.....	645	542	43, 542	58, 828	. 740	502, 360
Heavy engineering.....	3, 802	3, 274	382, 965	475, 210	. 806	2, 694, 357
Reclamation.....	1, 538	1, 444	138, 100	207, 844	. 664	62, 923
Streets and roads.....	612	514	24, 922	36, 346	. 686	65, 504
Water and sewerage.....	3, 422	2, 901	364, 036	376, 476	. 967	476, 474
Miscellaneous.....	0	0	0	0	0	1, 178, 829

For footnotes see end of table.

TABLE 9.—Employment and Pay Rolls on Projects Financed From Public Works Administration Funds, July 1939—Continued

Type of project	Wage earners		Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
	Maximum number employed	Weekly average				
	Non-Federal projects financed from Public Works Administration Appropriation Act 1938 funds					
All projects.....	218, 583	182, 022	\$17, 906, 923	20, 606, 127	\$0. 865	\$34, 433, 798
Building construction.....	134, 586	111, 572	11, 045, 473	11, 804, 096	. 931	18, 108, 002
Electrification.....	2, 337	1, 922	165, 772	216, 698	. 765	818, 971
Heavy engineering.....	10, 545	9, 187	1, 381, 410	1, 241, 307	1. 113	3, 585, 717
Reclamation.....	400	392	35, 988	55, 564	. 648	102, 009
River, harbor, and flood control.....	708	612	66, 427	84, 009	. 791	131, 542
Streets and roads.....	39, 274	32, 221	2, 635, 835	3, 861, 354	. 683	4, 778, 707
Water and sewerage.....	30, 093	25, 650	2, 540, 130	3, 321, 979	. 765	5, 026, 321
Miscellaneous.....	550	466	35, 888	51, 120	. 702	1, 882, 529

¹ Data are for the month ending on the 15th.

² Maximum number employed during any 1 week of the month by each contractor and Government agency doing force-account work.

³ Includes weekly average for public roads.

⁴ Under the jurisdiction of the Bureau of Public Roads.

⁵ Not available: weekly average included in total for all projects.

⁶ Includes data for workers engaged in construction of a tunnel who, because of the additional risk involved, were paid at rates higher than those usually paid for building construction.

⁷ These data are also included in separate tables covering projects financed by The Works Program.

Construction projects financed by the Public Works Administration are those projects authorized by title II of the National Industrial Recovery Act of June 16, 1933. This program of public works was extended to June 30, 1937, by the Emergency Relief Appropriation Act of 1935 and title II of the First Deficiency Appropriation Act of 1936. The First Deficiency Appropriation Act of 1936, cited as the Emergency Relief Appropriation Act of 1936, reappropriated unobligated funds originally made available under the Emergency Relief Appropriation Act of 1935 and authorized the use of \$300,000,000 from funds on hand or received from the sale of securities. The Public Works Administration was continued until July 1, 1939, by the Public Works Administration Extension Act of 1937 and the Public Works Administration Appropriation Act of 1938 further continued the program to June 30, 1941. On July 1, 1939, pursuant to the provisions of Reorganization Plan No. 1, the Public Works Administration was transferred to the Federal Works Agency.

Federal construction projects for which data are included in table 9 are financed by allotments made by the Public Works Administration to the various agencies and departments of the Federal Government from funds provided under the National Industrial Recovery Act. The major portion of the low-rent housing program of the Public Works Administration, however, was financed by funds provided under the Emergency Relief Appropriation Act of 1935. Federal construction projects are also financed by allotments from funds provided under the Public Works Administration Appropriation Act

of 1938. The work is performed either by commercial firms which have been awarded contracts, or by day labor hired directly by the Federal agencies.

Non-Federal projects are financed by allotments made by the Public Works Administration from funds available under either the National Industrial Recovery Act, the Emergency Relief Appropriation Act of 1935, the First Deficiency Appropriation Act of 1936, the Public Works Administration Extension Act of 1937, or the Public Works Administration Appropriation Act of 1938. Most of the allotments have been made to the States and their political subdivisions, but occasionally allotments have been made to commercial firms. In financing projects for the States or their political subdivisions from funds appropriated under the National Industrial Recovery Act, the Public Works Administration makes a direct grant of not more than 30 percent of the total labor and material cost. When funds provided under the Emergency Relief Appropriation Act of 1935, the First Deficiency Appropriation Act of 1936, the Public Works Administration Extension Act of 1937, or the Public Works Administration Appropriation Act of 1938 are used to finance a non-Federal project, as much as 45 percent of the total cost may be furnished in the form of a grant. The remaining 55 percent or more of the cost is financed by the recipient. When circumstances justify such action, the Public Works Administration may provide the grantee with the additional funds by means of a loan. Allotments to commercial enterprises are made only as loans. All loans made by the Public Works Administration carry interest charges and have a definite date of maturity. Collateral posted with the Public Works Administration to secure loans may be offered for sale to the public. In this way a revolving fund is provided which enlarges the scope of the activities of the Public Works Administration.

Commercial loans have been made, for the most part, to railroads. Railroad work financed by loans made by the Public Works Administration falls under three headings: First, construction work in the form of electrification, the laying of rails and ties, repairs to buildings, bridges, etc.; second, the building and repairing of locomotives and passenger and freight cars in shops operated by the railroads; and third, locomotive and passenger- and freight-car building in commercial shops.

UNITED STATES HOUSING AUTHORITY

The United States Housing Authority was created by Public, No. 412, Seventy-fifth Congress, approved September 1, 1937 as a corporate body of the Department of the Interior for the purpose of assisting the States and their political subdivisions in remedying the unsafe

and insanitary housing conditions and the acute shortage of decent, safe, and sanitary dwellings for families of low income, and in alleviating present and recurring unemployment.

Executive Order No. 7732, dated October 27, 1937, transferred to the Authority all the housing and slum-clearance projects of the Federal Emergency Administration of Public Works and all assets, contracts, records, applications, libraries, research materials, and other property held in connection with such projects or with the housing or slum-clearance activities of the Public Works Administration, together with the unexpended balance of funds allocated to the Public Works Administration for the construction of any housing or slum-clearance projects. This executive order was modified by Executive Order No. 7839, dated March 12, 1938, under which the two Puerto Rico projects were transferred to the Puerto Rico Reconstruction Administration. The President's Reorganization Plan No. 1, effective July 1, 1939, transferred the U. S. Housing Authority from the Department of the Interior to the Federal Works Agency.

Table 10 shows data for July 1939 on projects of the U. S. Housing Authority. These figures pertain only to new projects under the U. S. Housing Authority and not to those formerly under the Public Works Administration.

TABLE 10.—Employment and Pay Rolls on Low-Rent Housing Projects Operated by the United States Housing Authority, July 1939

[Subject to revision]

Geographic division	Employment		Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
	Maximum number employed ¹	Weekly average				
Six divisions.....	13,020	10,837	\$1,426,123	1,310,345	\$1.088	\$2,726,126
Middle Atlantic.....	7,262	6,252	981,768	771,659	1.272	1,666,932
East North Central.....	1,730	1,440	177,835	169,496	1.049	325,360
West North Central.....	269	159	16,387	19,268	.850	22,706
South Atlantic.....	1,539	1,244	99,027	151,362	.654	306,148
East South Central.....	1,337	1,084	102,345	128,268	.798	186,736
West South Central.....	883	658	48,761	70,292	.694	218,244

¹ Maximum employed during any 1 week of the month.

THE WORKS PROGRAM

By authority of Public Resolution No. 11, Seventy-fourth Congress, approved April 8, 1935, the President, in a series of Executive orders, inaugurated a broad program of work to be carried out by 61 units of the Federal Government. The Works Program was continued by title II of the First Deficiency Appropriation Act of 1936, cited as the Emergency Relief Appropriation Act of 1936, and was further continued by the Emergency Relief Appropriation Act of 1937. The program was extended to June 30, 1939, by the Emergency Relief Appropriation Act of 1938 and to June 30, 1940, by the Emergency

Relief Appropriation Act of 1939. Employment created by this program includes employment on Federal projects and employment on projects operated by the Work Projects Administration. In accordance with the provisions of Reorganization Plan No. 1, effective July 1, 1939, the name of this agency was changed from Works Progress Administration to Work Projects Administration and it became a part of the Federal Works Agency. Federal projects are those conducted by Federal agencies which have received allotments from the Work Projects Administration. Projects operated by the Work Projects Administration are those projects conducted under the supervision of that agency with the cooperation of States, cities, or counties.

A record of employment, pay rolls, and man-hours worked on projects financed by the Work Projects Administration in July is shown in table 11, by type of project.

TABLE 11.—Employment and Pay Rolls on Projects Financed by the Work Projects Administration, July 1939 ¹

[Subject to revision]

Type of project	Wage earners		Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
	Maximum number employed	Weekly average				
Federal projects						
All projects.....	2 169,851	155,623	\$6,058,225	14,553,049	\$0.416	\$849,768
Airport construction (exclusive of buildings).....	204	204	12,097	26,312	.460	1,811
Building construction.....	65,360	61,220	2,113,505	4,484,061	.471	306,637
Electrification.....	95	89	5,597	14,175	.395	174
Forestry ¹	17,376	15,842	730,290	1,818,442	.402	130,633
Grade-crossing elimination ⁴	1,043	863	58,783	108,274	.543	65,704
Hydroelectric power plants ⁵	137	127	5,099	14,924	.342	11,138
Plant, crop, and livestock conservation ⁶	17,682	16,766	882,232	2,172,112	.406	14,158
Professional, technical, and clerical.....	6,153	5,944	378,945	616,171	.615	13,836
Public roads ⁴	690	580	43,488	70,603	.616	87,968
Reclamation.....	37,103	36,693	1,347,596	3,594,330	.375	105,677
River, harbor, and flood control.....	2,030	1,212	52,048	88,848	.586	22,382
Streets and roads.....	12,073	8,669	212,799	904,383	.235	23,066
Water and sewerage.....	2,104	1,475	14,613	51,304	.285	2,973
Miscellaneous.....	7,771	6,029	201,133	589,110	.341	63,611
Projects operated by Work Projects Administration ⁶						
All projects.....	2 2,143,593	\$119,637,011	260,219,185	\$0.460	(⁷)

¹ Unless otherwise noted data are for the month ending on the 15th.

² Maximum number employed during any 1 week of the month by each contractor and Government agency doing force-account work.

³ The data for the Bureau of Entomology and Plant Quarantine, under plant, crop, and livestock conservation, and the Bureau of Forest Service, under forestry, are for the calendar month.

⁴ These data are for projects under the jurisdiction of the Public Roads Administration.

⁵ These data are for projects under construction in Puerto Rico.

⁶ Data are for the calendar month. Not available by type of project.

⁷ Represents number of names on pay roll for week ending July 29, 1939.

⁸ Data on a monthly basis are not available.

Table 12 shows employment, pay rolls, and man-hours worked for the second quarter of 1939 on projects operated by the Works Progress Administration, by type of project.

TABLE 12.—Employment and Pay Rolls on Projects Operated by the Works Progress Administration, by Type of Project for the Second Quarter of 1939

[Subject to revision]

Type of project	Number employed ¹	Pay-roll disbursements	Number of man-hours worked	Average earnings per hour
All projects.....	2, 438, 255	\$420, 483, 653	833, 704, 793	\$0. 504
Conservation.....	103, 379	18, 014, 239	35, 139, 526	.513
Highway, road, and street.....	1, 040, 496	160, 910, 419	356, 766, 317	.451
Professional, technical, and clerical.....	315, 448	63, 634, 363	115, 851, 271	.575
Public buildings ²	224, 885	40, 871, 147	65, 211, 248	.627
Publicly owned or operated utilities.....	228, 017	42, 662, 317	77, 052, 621	.554
Recreational facilities ³	172, 868	32, 415, 538	55, 133, 389	.588
Sanitation and health.....	47, 355	7, 528, 180	18, 890, 996	.399
Sewing, canning, and gardening, etc.....	211, 277	31, 966, 535	79, 266, 134	.403
Transportation.....	47, 270	10, 190, 760	13, 585, 398	.750
Not elsewhere classified.....	47, 260	9, 290, 155	16, 807, 893	.553

¹ Data are for the week ending June 24, 1939.

² Separate data for housing projects are not available.

³ Exclusive of buildings.

Employment, pay rolls, and man-hours worked on work projects of the National Youth Administration from the beginning of the program in January 1936 to July 1939, inclusive, are shown in table 13. Similar data for Student Aid are shown from September 1935, the starting date, to July 1939, inclusive.

TABLE 13.—Employment and Pay Rolls on National Youth Administration Projects, From the Beginning of Program Through July 1939 ¹

[Subject to revision]

Year and month	Number of persons employed	Pay-roll disbursements	Number of man-hours worked	Average earnings per hour	Value of material orders placed
Work projects					
January 1936 to July 1939, inclusive.....	-----	\$131, 482, 604	303, 577, 715	\$0. 362	² \$16, 636, 992
January to December 1936.....	-----	28, 883, 589	75, 827, 799	.381	-----
January to December 1937.....	-----	32, 663, 342	874, 242, 108	.374	-----
January to December 1938.....	-----	41, 558, 174	117, 910, 043	.352	-----
January 1939.....	237, 468	4, 346, 711	12, 637, 013	.344	-----
February 1939.....	241, 623	4, 456, 772	13, 061, 419	.341	-----
March 1939.....	234, 018	4, 437, 479	12, 018, 481	.343	-----
April 1939.....	227, 113	4, 332, 830	12, 455, 047	.348	-----
May 1939.....	223, 892	4, 271, 347	12, 267, 080	.348	-----
June 1939.....	212, 607	3, 962, 582	11, 224, 825	.353	-----
July 1939.....	207, 357	2, 570, 078	8, 033, 000	.320	-----
Student Aid					
September 1935 to July 1939, inclusive.....	-----	\$90, 387, 400	306, 993, 490	\$0. 294	(³)
September to December 1935.....	-----	6, 363, 503	19, 612, 976	.324	-----
January to December 1936.....	-----	25, 914, 836	85, 517, 290	.303	-----
January to December 1937.....	-----	24, 368, 503	83, 874, 409	.291	-----
January to December 1938.....	-----	19, 681, 126	68, 750, 836	.286	-----
January 1939.....	370, 183	2, 252, 755	7, 952, 452	.283	-----
February 1939.....	376, 209	2, 424, 409	8, 577, 293	.283	-----
March 1939.....	378, 692	2, 443, 022	8, 624, 637	.283	-----
April 1939.....	383, 344	2, 495, 400	8, 813, 437	.283	-----
May 1939.....	372, 885	2, 499, 574	8, 737, 676	.286	-----
June 1939.....	281, 116	1, 944, 272	6, 532, 418	.298	-----
July 1939 ⁴	-----	-----	-----	-----	-----

¹ Data are for a calendar month.

² Data on a monthly basis are not available. This total represents expenditures through March 31, 1939, and includes rentals and services and some sponsors' contributions.

³ No expenditures for materials on this type of project.

⁴ Student Aid program not in operation.

CIVILIAN CONSERVATION CORPS

The Civilian Conservation Corps was created by an act of Congress approved June 28, 1937, and succeeded the Emergency Conservation Work which had been set up in April 1933. On July 1, 1939, the Civilian Conservation Corps lost its status as an independent agency and was transferred to the Federal Security Agency.

Employment and pay-roll data for the Civilian Conservation Corps are collected by the Bureau of Labor Statistics from the War Department, the Department of Agriculture, the Department of Commerce, and the Department of the Interior. The monthly pay of the enrolled personnel is \$30 per month. Assistant leaders, not to exceed 10 percent of the total number of enrollees, may receive up to \$36 per month, and leaders, not to exceed 6 percent, may receive up to \$45 per month.

Employment and pay rolls in the Civilian Conservation Corps in June and July 1939 are presented in table 14.

TABLE 14.—Employment and Pay Rolls in the Civilian Conservation Corps, June and July 1939 ¹

[Subject to revision]

Group	Number of employees		Amount of pay rolls	
	July	June	July	June
All groups.....	322,058	302,339	\$14,459,934	\$14,132,205
Enrolled personnel ²	284,661	264,532	8,854,417	8,276,996
Reserve officers.....	4,413	4,779	1,183,861	1,114,824
Nurses ³	297	312	35,190	32,662
Educational advisers ³	1,593	1,576	266,419	267,694
Supervisory and technical ³	31,094	31,140	4,120,038	4,440,029

¹ Data on number of employees refer to employment on last day of month. Amount of pay rolls are for the entire month.

² July data include 4,002 enrollees and pay roll of \$87,004 outside continental United States; in June the corresponding figures were 3,898 enrollees and pay roll of \$88,189.

³ Included in executive service, table 2.

CONSTRUCTION PROJECTS FINANCED BY RECONSTRUCTION FINANCE CORPORATION

Statistics of employment, pay rolls, and man-hours worked on construction projects financed by the Reconstruction Finance Corporation in July are presented in table 15, by type of project.

TABLE 15.—Employment and Pay Rolls on Projects Financed by the Reconstruction Finance Corporation, by Type of Project, July 1939 ¹

[Subject to revision]

Type of project	Maximum number of wage earners ²	Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
All projects.....	2,470	\$266,391	324,111	\$0.822	\$391,766
Building construction ³	1,854	162,350	212,322	.765	345,242
Water and sewerage.....	616	104,041	111,789	.931	46,524

¹ Data are for the month ending on the 15th.

² Maximum number employed during any 1 week of the month by each contractor.

³ Includes 639 employees; pay-roll disbursements of \$39,636; 72,176 man-hours worked, and material orders placed of \$47,530 on projects financed by the RFC Mortgage Co.

CONSTRUCTION PROJECTS FINANCED FROM REGULAR FEDERAL APPROPRIATIONS

When a construction contract is awarded or force-account work is started by a department or agency of the Federal Government, the Bureau of Labor Statistics is immediately notified, on forms supplied by the Bureau, of the name and address of the contractor, the amount of the contract, and the type of work to be performed. Blanks are then mailed by the Bureau to the contractor or Government agency doing the work. These reports are returned to the Bureau and show the number of men on pay rolls, the amounts disbursed for pay, the number of man-hours worked on the project, and the value of the different types of materials for which orders were placed during the month.

Data concerning employment, pay rolls, and man-hours worked on construction projects financed from regular Federal appropriations during July are given in table 16, by type of project.

TABLE 16.—*Employment and Pay Rolls on Construction Projects Financed From Regular Federal Appropriations, by Type of Project, July 1939*¹

[Subject to revision]

Type of project	Number of wage earners		Monthly pay-roll disbursements	Number of man-hours worked during month	Average earnings per hour	Value of material orders placed during month
	Maximum ² number employed	Weekly average				
All projects.....	265, 168	250, 307	\$25, 776, 242	35, 208, 444	\$0. 732	\$36, 801, 737
Building construction.....	16, 224	12, 952	1, 315, 010	1, 431, 085	. 919	2, 331, 980
Electrification:						
Rural Electrification Admin- istration projects ⁴	14, 008	11, 640	751, 083	1, 555, 918	. 483	3, 262, 505
Other than R. E. A. projects.....	54	44	3, 605	4, 073	. 885	0, 512
Forestry.....	206	141	5, 489	111, 111	. 494	411
Heavy engineering.....	227	210	33, 927	25, 033	1. 355	79, 129
Public roads ³	(6)	97, 403	7, 623, 086	12, 543, 858	. 608	12, 661, 180
Reclamation.....	19, 701	18, 932	2, 780, 399	3, 050, 169	. 912	3, 157, 430
River, harbor, and flood control: Dredging, dikes, revetments, etc.....	30, 967	26, 697	2, 864, 357	4, 375, 311	. 655	2, 825, 788
Locks and dams.....	10, 368	9, 361	1, 219, 227	1, 620, 515	. 752	1, 710, 462
Ship construction:						
Naval vessels.....	55, 991	54, 665	7, 272, 451	8, 180, 738	. 889	6, 352, 412
Other than naval vessels.....	15, 681	14, 341	1, 636, 670	1, 945, 758	. 841	4, 098, 096
Streets and roads.....	2, 920	2, 693	185, 209	340, 155	. 544	231, 230
Water and sewerage.....	418	347	26, 338	37, 692	. 699	32, 513
Miscellaneous.....	1, 000	881	59, 391	87, 028	. 682	52, 089

¹ Data are for the month ending on the 15th.

² Maximum number employed during any 1 week of the month by each contractor, and Government agency doing force-account work.

³ Includes weekly average for public-road projects.

⁴ Financed by Rural Electrification Administration loans.

⁵ Under the jurisdiction of the Bureau of Public Roads.

⁶ Not available, weekly average included in the total for all projects.

STATE-ROADS PROJECTS

A record of employment and pay-roll disbursements in the construction and maintenance of roads financed wholly from State or local funds in July 1939, compared with June 1939 and July 1938, is presented in table 17.

TABLE 17.—*Employment and Pay Rolls on Construction and Maintenance of State Roads, July 1939, June 1939, and July 1938*¹

[Subject to revision]

Item	Number of employees ²			Pay-roll disbursements		
	July 1939	June 1939	July 1938	July 1939	June 1939	July 1938
Total.....	146, 202	141, 750	199, 470	\$10, 521, 530	\$10, 743, 330	\$12, 982, 940
New roads.....	20, 045	20, 177	30, 564	1, 310, 890	1, 417, 300	1, 940, 490
Maintenance.....	126, 157	121, 573	168, 906	9, 210, 640	9, 326, 030	11, 042, 450

¹ Data are for the month ending on the 15th and are for projects financed wholly from State or local funds

² Average number working during month.

