

EMPLOYMENT TRENDS

In contrast to the generally sustained uptrend in nonfarm employment during the first three quarters following the outbreak of Korean hostilities, reports for April and May reflect significant cross currents in the National employment situation. An upward movement continued in activities closely allied to the defense effort. This was offset, however, by moderate curtailments in certain consumer durable goods industries, including automobiles and television manufacturing, where employment declined by about 100,000 between March and May, partly reflecting the initial impact of metals limitations orders. In addition, there was a pronounced off-season slackening in other consumer goods industries, including apparel, textiles, leather products and furniture, where some easing in demand has been noted in recent months. As a result, there has been little net change in the over-all level of nonfarm employment since March, apart from normal seasonal movements.

Employment up sharply since Korea

The recent pause, however, has occurred at an unprecedented level of activity. The number of employees in nonagricultural establishments totaled 46.1 million in May, nearly 2.8 million above the relatively high level prevailing in May 1950, shortly before the outbreak of Korean hostilities. (See tables 1 and 2.) This increase over the year was, moreover, accomplished despite the simultaneous withdrawal of more than 1- $\frac{1}{2}$ million young men from civilian life into the armed forces.

In its initial phases, during the Summer and Fall of 1950, the post-Korean employment expansion was due in large measure to sharply accelerated demand for a wide range of civilian-type goods by consumers and businessmen in anticipation of future shortages and of rising prices. Although employment gains were widespread, the greatest increases occurred in the metal and metal products industries and in construction activities, partly because anticipations of shortages were most widespread in these industries. Particularly significant, too, was the sharp rise in employment in the machinery and related producers goods industries as industry expanded and accelerated its new plant and equipment programs and as tooling-up for defense production got under way.

The initial direct impact of the expanded defense production program upon employment was relatively moderate during the first half-year after Korea and was largely limited to industries such as aircraft, ordnance, and chemicals and to the National Military Establishment.

The relatively large addition of workers to plants in the metal and metal products industries, although mainly stimulated by the increased demand for civilian-type goods, had the effect of making available to these industries a large additional labor supply which could be drawn upon as they began to shift to defense production. Employment increases continued in this group of industries through the first quarter of 1951, although at a somewhat slower rate, and were followed by a leveling-off in April and May as further employment gains in aircraft, machinery, primary metals, and other industries were offset by the initial effects of cutbacks in consumer goods production.

During the past few months, sizable shifts of workers from nondefense to defense activities have probably occurred within individual plants and industries. Detailed information on the changing composition of manufacturing output is not yet available for recent months. However, data on construction activity indicate the extent to which this important sector of the economy has already moved from civilian to defense and related activity. New construction expenditures were at an annual rate (seasonally adjusted) of \$2.5 billion in May 1951, about 10 percent higher than a year ago. However, private nonfarm residential building activity in May---after a sharp rise during 1950---had declined by nearly one-fifth from the level a year earlier, largely because of the effects of credit restrictions, whereas very sharp increases had been reported in construction of defense plants, military installations and related work.

Unemployment at postwar low; "extra" workers entering labor force.

The change-over within the construction industry illustrates one of the major ways in which experienced workers have been made available for the progressively expanding needs of defense production. As conversion proceeds during the balance of the current year, shifts of workers from nondefense to defense activity will become an increasingly important source of manpower supply. During the past 12 months, however, the bulk of the additional manpower required by nonagricultural industries and by the military establishment was largely obtained from two sources: reductions in unemployment and labor force growth.

The rapid expansion in job opportunities over the year, combined with the effects of armed forces inductions, resulted in a sharp reduction in unemployment, from 3.1 million in May 1950 to 1.6 million in May 1951, according to Census Bureau estimates. By the latter month, the number of unemployed had declined to the lowest comparable level since the end of World War II, and consisted very largely of workers idle for relatively short periods between jobs or during their slack season. About 900,000 or three-fifths of the jobseekers in May 1951 had been seeking work for 1 month or less, whereas only about 300,000 had been unemployed for 3 months or more.

The reduction in unemployment was matched by the growth in the total labor force (including the armed forces) over the year. The civilian labor force totaled 62.8 million in May 1951, or about the same as a year ago, according to Census data. At the same time, the armed forces were expanding from less than 1.5 million in May 1950 to an announced level of 2.9 million in March 1951 and to a scheduled goal of over 3.3 million by the end of June 1951. This suggests that the total labor force in May 1951 had risen by 1-1/2 million or more over the year--or by about one-half million more than would "normally" be expected from population growth and a continuation of previous labor force trends. A relatively heavy flow of women and young persons into the labor force largely accounts for the greater-than-normal rise.

Additional labor supply was provided for nonagricultural industry through the continued movement of workers away from the farm. Agricultural employment, in the Spring of 1951, averaged about one-half million lower than the comparable level a year ago, according to Census Bureau estimates. Part of the reduction was due to unfavorable weather conditions in early Spring; however, the pull of increased job opportunities in nonfarm employment was probably an important contributing factor.

Labor supply tight but generally adequate

The expansion in manpower needs during the past year has resulted in a tighter over-all balance between labor supply and demand than at any time since the end of World War II. Spot occupational shortages have appeared in particular skills and in particular areas where the defense program has had the greatest initial impact. However, no general manpower shortages of the type prevailing in the latter phases of World War II, have appeared nor are they anticipated under the current defense program.

Changes in hours of work are a significant indicator of changes in relative labor supply for different industries. Shortly after the Korean outbreak, the average workweek in manufacturing industries rose from a level of about 40 hours per week in the first half of 1950 to an average of about 41 hours between July 1950 and April 1951. Increases in the average workweek were most pronounced in the durable goods industries and, specifically, in industries such as machinery, aircraft and instruments, where spot shortages of key workers had been reported. Between April and May 1951, average manufacturing hours declined to 40.6 hours, partly reflecting the effects of production cutbacks in the consumer metal goods industries, as well as a greater-than-seasonal slackening in other consumer goods industries. The May 1951 level was approximately the same as in June 1950 and only about one-half hour above the average in the first half of 1950.

Over the year, it is significant that hours of work have risen only moderately. This indicates that, in general, employers have expanded production by adding new employees, rather than by substantially increasing hours of work for their existing staff.

Labor turn-over rates in manufacturing industries also indicate a moderate tightening in labor supply, without any evidence of major recruitment difficulties. The hiring rate in manufacturing industries rose sharply after Korea and through April 1951, the latest month for which data are currently available, continued generally higher than the rate in the preceding year. Factory lay-off rates dropped sharply and were at postwar lows for the month in March and April 1951. Quit rates, on the other hand, more than doubled over year-ago levels. This is a typical pattern in a tightening labor market situation: As job opportunities develop, more workers are likely to shift jobs voluntarily, and employers tend to retain workers on their payrolls when possible, even during temporary slack periods. The average quit rate in manufacturing — .7 per 100 employees in April 1951 — was, however, still well below the comparable rates in earlier postwar years such as 1947 and 1948, indicating that labor turn-over had not, as yet, become a problem of major dimensions.

TABLE 1: Employees in Nonagricultural Establishments, by Industry Division and Selected Groups

(In thousands)

Industry division and group	1951			1950	Net change	
	May <u>1/</u>	April	March	May	Apr. 1951 to May 1951	May 1950 to May 1951
TOTAL	46,068	45,975	45,856	43,311	+ 93	+2,757
MANUFACTURING	15,806	15,942	16,031	14,413	- 136	+1,393
MINING	904	908	924	940	- 4	- 36
Metal mining	105	105	106	100	0	+ 5
Bituminous coal	374	382	397	413	- 8	- 39
Nonmetallic mining and quarrying	106	103	99	97	+ 3	+ 9
CONTRACT CONSTRUCTION	2,582	2,478	2,330	2,245	+ 104	+ 337
TRANSPORTATION AND PUBLIC UTILITIES	4,134	4,132	4,110	3,885	+ 2	+ 249
Transportation	2,907	2,908	2,891	2,685	- 1	+ 222
Communication	682	679	675	659	+ 3	+ 23
Other public utilities	545	545	544	541	0	+ 4
TRADE	9,601	9,613	9,707	9,326	- 12	+ 275
Wholesale trade	2,571	2,576	2,587	2,479	- 5	+ 92
Retail trade	7,030	7,037	7,120	6,847	- 7	+ 183
General merchandise stores	1,430	1,444	1,510	1,412	- 14	+ 18
Food and liquor stores	1,252	1,261	1,264	1,204	- 9	+ 48
Automotive and accessories dealers	738	738	735	714	0	+ 24
Apparel and accessories stores	549	543	573	533	+ 6	+ 16
Other retail trade	3,061	3,051	3,038	2,984	+ 10	+ 77
FINANCE	1,877	1,866	1,854	1,812	+ 11	+ 65
SERVICE	4,787	4,744	4,683	4,790	+ 43	- 3
GOVERNMENT	6,377	6,292	6,217	5,900	+ 85	+ 477
Federal	2,244	2,201	2,146	1,890	+ 43	+ 354
State and local	4,133	4,091	4,071	4,010	+ 42	+ 123

1/ Preliminary

TABLE 2: Employees in Manufacturing Industry Groups

(In thousands)

Industry group	1951			1950	Net change	
	May 1/	April	March	May	Apr. 1951 to May 1951	May 1950 to May 1951
MANUFACTURING	15,806	15,942	16,031	14,413	-136	+1393
DURABLE GOODS	8,938	8,985	8,975	7,809	-47	+1129
Ordnance and accessories	37.8	37.6	35.6	23.2	+0.2	+14.6
Lumber and wood products (except furniture)	816	814	796	784	+2	+32
Furniture and fixtures	354	367	374	348	-13	+6
Stone, clay, and glass products	561	559	555	501	+2	+60
Primary metal industries	1,345	1,341	1,339	1,190	+4	+155
Fabricated metal products (except ordnance, machinery, and transportation equipment)	1,021	1,030	1,028	894	-9	+127
Machinery (except electrical)	1,601	1,587	1,576	1,328	+14	+273
Electrical machinery	928	938	944	800	-10	+128
Transportation equipment	1,492	1,515	1,528	1,269	-23	+223
Instruments and related products	295	295	291	238	0	+57
Miscellaneous manufacturing industries	487	501	508	434	-14	+53
NONDURABLE GOODS	6,868	6,957	7,056	6,604	-89	+264
Food and kindred products	1,482	1,468	1,476	1,461	+14	+21
Tobacco manufactures	82	83	85	83	-1	-1
Textile-mill products	1,286	1,313	1,322	1,252	-27	+34
Apparel and other finished textile products	1,119	1,167	1,229	1,091	-48	+28
Paper and allied products	500	500	498	459	0	+41
Printing, publishing, and allied industries	753	756	759	736	+2	+22
Chemicals and allied products	741	747	747	671	-6	+70
Products of petroleum and coal	260	259	258	236	+1	+24
Rubber products	272	271	272	241	+1	+31
Leather and leather products	363	393	410	374	-25	-6

1/ Preliminary.



INDUSTRY HIGHLIGHTS

AUTOMOBILES

Employment in the automobile industry declined by nearly 23,000 production workers between March and April 1951. This was in sharp contrast to a steady increase throughout the first quarter of 1951 which boosted employment to a postwar peak of 799,600 workers in March. This decline is indicative of cutbacks in employment which may be anticipated as restrictions on the volume of materials available for the production of passenger cars become effective. Average weekly hours declined throughout the first quarter, although employment was increasing. The first quarter average of about 39 hours a week represents a drop of 2 hours from the 1950 average.

Current estimates indicate that the industry will produce about 5.4 million passenger cars this year--a decline of 1.2 million from the 1950 record level of 6.7 million cars. Truck production in 1950 totaled 1.3 million vehicles, and no limitations on materials for this segment of the industry have been announced. If military orders for trucks are added to civilian requirements, it appears that employment in this part of the industry may increase during the second half of 1951.

Temporary shut-downs and a shortened workweek will characterize employment in the industry as a whole in the remainder of 1951, and a decline is expected in the number of workers producing passenger cars.

Declines in some plants will be offset by an increase in the number of workers making defense items such as tanks and aircraft parts. The volume of defense contracts awarded firms in the automobile industry stood at about \$4 billion in February 1951. In addition a large percentage of the \$10 billion in defense orders which had at that time been placed for aircraft will be produced by workers in plants now included in the automobile industry. Plants having such orders will retain workers whenever possible while doing preliminary engineering work and re-tooling.

RAILROAD AND STREET CARS

Employment in the railroad and street car industry increased from 51,300 production workers in March 1951 to 51,600 in April. This represents a continuation of the slow upward employment trend which has carried employment to a point 28 percent higher than in April 1950. Although a previous downward trend, in which employment declined from 53,100 in February 1949 to 24,700 in April 1950, has been reversed, there are still about 37 percent fewer production workers in the industry than during the peak postwar years of 1947 and 1948.

Continued heavy demand for freight cars, the major product of the industry, is expected to result in further substantial increases in employment. The NPA's freight car program calls for an estimated tripling of production over 1950. In the first quarter of 1951, 18,802 cars were built, an average of 6,267 a month. It is expected that the goal of 10,000 freight cars a month (which includes about 25 percent produced outside the industry by railroad shops) will be achieved by the fall of 1951.

RAILROADS

Railroad employment in April 1951 was 1,462,000, an increase of 13,000 over March and 8 percent higher than in April 1950. A downward trend in employment beginning with the end of World War II was reversed in June 1950. Since then the class I railroads have reported more workers each month than in the same month of the preceding year. The biggest yearly gain was from October 1949 to October 1950, when class I railroads registered an 18 percent increase in employment.

These gains reflect an increase in railroad freight traffic. Ton miles on class I roads were 17 percent greater in March 1951 than in March 1950. For the year 1950, ton miles were 11.8 percent greater than in 1949. The trend in passenger traffic, on the other hand, has not been as greatly affected by the defense program, although in recent months there have been gains over the corresponding months of 1950. For the year 1950, class I roads reported 9.5 percent fewer passenger miles than for 1949.

ELECTRONICS

The electronics industry is still converting from civilian to military production. Employment in the radio and related products industry has declined from a postwar peak of 192,000 production workers in November 1950 to 171,000 in April 1951. Employment variations within the industry have been much more marked. Radio and television manufacturers reduced their employment sharply while military electronics manufacturers increased theirs. Declines in employment in the radio and television industry have been due almost entirely to cut backs in television receiver production. Radio production is still continuing at high levels. More radio receivers were produced during the first 4 months of 1951 than during the comparable period of 1950.

Television receiver production has exceeded sales since December 1950 and manufacturers and retailers have accumulated large inventories. Inventories were still increasing at the end of April despite sharp cut backs in production.

Recent lay offs in television receiver manufacturing are attributable to excessive inventory accumulations rather than to material shortages. However, material shortages have caused lay offs in components manufacturing.

Until expanding defense production compensates for this decline in civilian production, employment in radio and television receiver and components manufacturing will be subject to conversion uncertainties. By late fall, defense production may reach a volume which will require

an increase in the industry's total labor force. Moreover, receiving set manufacturers and retailers may have liquidated their inventories by then and again be producing to the limit of available materials.

GRAY IRON FOUNDRIES

Production worker employment in gray iron foundries reached 163,300 in April 1951, about the same as the record peak established in March. There has been a steady upward trend from a postwar low of 118,000 in July 1949. The rate of employment growth has slowed in recent months, however. In 1950, 30,600 workers were added; in the first 4 months of 1951, employment has risen by only 2,800. It is expected that very little further increase in employment will occur and that by the end of the summer the trend may possibly be reversed. A reduction in the demand for castings for construction and for production of automobiles and other consumers metal goods is likely to offset increased requirements for such industries as machine tools, steel (ingot molds), ordnance, and shipbuilding. As a result, production in the second half of 1951 is at or below current levels and some shifts in importance among different types of castings may occur.

AGRICULTURAL MACHINERY AND TRACTORS

Agricultural machinery and tractor plants have shown an uninterrupted rise in employment during the first 4 months of 1951 and the last quarter of 1950. The April employment of 193,000 was about 12 percent above the 1950 average and near the all-time peak reached in 1948. The recent increase has been proportionately higher in tractor plants than in farm machinery plants, although both have risen steadily.

The United States Department of Agriculture has asked American farmers for the greatest agricultural production in our history to meet the food and fiber requirements for the defense program. To achieve these goals, farm machinery and tractor production must be maintained at or above recent postwar levels. The National Production Authority has authorized steel for farm machinery production during the third quarter of 1951 equal to that used in the same quarter of 1949, an amount slightly less than was consumed in the first quarter of 1951. The industry will be permitted to produce a larger number of units, however, by using less steel per unit.

METAL MINING

Employment in metal mining in April 1951 was 104,600 a slight decline from the 105,900 reported in March but an increase of 6.2 percent over the same month in 1950. The largest gains in employment over the year were in iron mining and in lead and zinc mining, each of which increased 10.8 percent, iron from 33,800 to 36,800 workers, and lead and zinc from 19,100 to 20,600 workers. Despite the critical importance of copper to the defense production program, copper mining showed a gain of only about a thousand over the 28,000 employed in April 1950.

Working hours have also increased from an average of 41.7 hours a week for all metal mining in the first quarter of 1950 to 43.4 hours for the same period of 1951. The longest workweek is in copper mining where average weekly hours have been more than 46 for the last 6 months.

Increases in employment in all metals in the next 6 months of this year will probably bring employment up to about 110,000. This total is still well below the World War II peak of 136,000.

ELECTRIC LIGHT AND POWER

Employment in the electric light and power industry in April 1951 was 231,400, about the same as the preceding month in April 1950. In contrast, productive capacity in the industry has increased approximately 11 percent over the past year.

Electric utility systems are currently engaged in a large expansion program which by 1953 is expected to increase generating capacity about 30 percent over the 1950 level. Employment, however, is not expected to increase greatly, mainly because of the greater efficiency of the new facilities being installed. Large increases in output without corresponding rises in employment are characteristic of the electric light and power industry. Between 1940 and 1950 generating capacity was increased almost 75 percent while employment rose only about 15 percent. Productivity indexes show an increase in output per man-hour from 54.1 in 1929 to 171.0 in 1950. During World War II productivity was even higher, largely because existing equipment was used intensively and a relatively small amount of manpower was used on new construction in the industry.

INDUSTRY EMPLOYMENT REPORTS

IRON AND STEEL

. . . capacity expansion will add jobs

The iron and steel industry^{1/} employed an all-time high of 643,100 wage and salary workers in April 1951 to produce the huge quantities of steel needed by the American economy. Further increases in employment are expected in the next two years. During the first quarter of 1951 the industry was producing steel at an annual rate of 104 million tons, considerably more than at the peak of World War II. Even this tremendous production is not sufficient to supply the combined demands of the mobilization program and civilian needs. New facilities now planned or under construction are expected to raise the capacity of the industry about 15 percent by early 1953. Thousands of new workers will be required to man the new facilities and to replace workers leaving the industry.

Recent Production Trends

Wide fluctuations in output have been an important aspect of steel activity for many years. To a high degree, the fluctuations are associated with changes in general business conditions. War, with its tremendous requirements for steel (for ships, aircraft, ordnance, and new factories and production equipment) leads to a sharp rise in steel output. At the peak of World War II, production rose to an annual rate of almost 90,000,000 tons, nearly 70 percent higher than in 1939 (table 1). After reaching the wartime peak in 1944, production fell off somewhat in 1945 and 1946. As the peacetime economy expanded, the demand for steel rose, and output increased steadily during 1947 and 1948. New production records were set during the first quarter of 1949, but demand fell off sharply during the rest of that year.

During the first part of 1950 there was an increase in steel-making activity because of improvement in general business conditions, and a steel shortage which resulted from the steel strike

^{1/} Includes only blast furnaces, steel works and rolling mills.

in October and November 1949. At the beginning of the Korean hostilities, the industry was operating at peak capacity and output had reached a level higher than at any time during World War II. Steel production continued to increase slowly throughout the last half of 1950 and in the first quarter of 1951. In order to satisfy the needs of the mobilization program and essential civilian activities, limitation orders on the use of steel in many products were issued. New plants and additions to present facilities are now being constructed, or are planned. It is estimated that in early 1953 steel capacity may reach 120,000,000 tons, 15 percent above present levels.

Recent Employment Trends

Employment has fluctuated less than production, primarily because the workweek has increased or decreased as production rose or fell. During World War II, employment reached its peak in 1942 when an average of 547,000 production workers were employed (table 2). This was a rise of 34 percent over 1939. The production peak, which did not occur until 1944, was 70 percent above the 1939 level. After 1942, employment fell off steadily, reaching a low of less than 438,000 production workers in September 1945. Employment rose steadily from this low point until February 1949 when nearly 553,000 production workers were turning out steel. This was almost as many workers as at the wartime peak of 557,000 in July 1942. A sharp drop in employment occurred during the summer and fall of 1949; the number of production workers declined by more than 65,000. This downward trend was reversed at the beginning of 1950 and employment increased each month during the year. By October, employment had reached the 1949 high. Further increases in employment have occurred during the first few months of 1951, bringing production worker employment up to 561,500, a new all-time high.

Employment Outlook

Employment is expected to continue to rise during the next two years as output expands. Although a 15-percent increase in capacity and production is anticipated by early 1953, employment is expected to increase by less than one-half this amount. Several factors account for this difference in rate of growth. One important factor is the possible change in the length of the workweek. World War II experience clearly illustrates this point. In 1944 the industry, with 8.5 percent fewer workers, was able to produce about 40 percent more steel than in 1942, principally because average weekly hours rose from 41.1 to 47.3. During the next few years the average workweek is expected to increase over the March 1951 level of 41.0 hours. However, this increase is expected to be much less than that of World War II. Another factor which influences the number of workers needed to produce a given amount of steel is the "product mix" -- the kinds of steel products made in the mills. Heavier products such as

plate, plate bars, and structural shapes require fewer man-hours to produce than do the "lighter" steel products such as tin plate, pipes, and tubes. Shifts in the relative importance of the two classes of products during the mobilization period are expected to increase the number of tons produced per man-hour worked. A third factor expected to limit the employment gain is the general increase in productivity, a major characteristic in the history of steel-making. Increasing efficiency of equipment and more expert technical knowledge are expected to result in greater output per man-hour.

Even though the increase in employment is not expected to be as great as the rise in production and capacity, many new workers will be needed to man new facilities. In addition, thousands of new workers will be required because of replacement needs resulting from (1) normal deaths and retirements which should provide from 12 to 15 thousand jobs annually, (2) the yearly shifting of thousands of steel workers to other fields of employment, and (3) the entrance of workers into the armed forces.

Location of the Industry

Most new jobs will be in the present principal steel-producing areas in the northern and eastern parts of the United States. The Pittsburgh-Youngstown area is the leading steel center. Farther east are large plants in Buffalo, N. Y., Johnstown and Bethlehem, Pa., and Sparrows Point (near Baltimore, Md.). The Great Lakes region has many important steel centers, particularly in the Chicago and Cleveland areas. Much of the steel-making in the South is done in the Birmingham area. In the far West, mills are located in Geneva and Provo, Utah, and Fontana, Calif.

About three-fourths of the workers in the industry are employed in five States: Pennsylvania, Ohio, Indiana, Illinois, and New York. Pennsylvania alone employs nearly one-third of the workers. It is not expected that the present expansion will alter this distribution since almost all new facilities will be additions to existing plants. An integrated plant at Morrisville, Pa., which will have a capacity of 1,700,000 tons, is the only complete plant being built at present.

The Labor Force

Four thousand or more separate and distinct jobs are found in the plants and offices of the basic iron and steel industry. Many of these occupations are found in no other industry. Because this is a highly mechanized industry, a large share of the jobs are concerned with the operation of a great variety of machines and equipment. Another large group of workers is employed in the maintenance departments of the steel plants. This group keeps the machinery and equipment in good operating condition. The highly technical nature of steel-making requires also technically trained personnel, such as engineers, chemists, and metallurgists. Finally, there are many administrative and clerical jobs.

The working force of the industry is predominantly male, reflecting in part the heat and great physical demands of much of the production work. About 3 percent of the workforce are women who are in offices and in the less physically demanding plant jobs such as sorting and inspecting tinplate. The proportion of Negroes in iron and steel plants is higher than in most manufacturing industries; they constitute about one-eighth of the plant workers. Although a large number work on the labor gang and in other unskilled jobs, many are employed in semiskilled and skilled occupations.

Earnings in the iron and steel industry compare favorably with other manufacturing industries. In March 1951, production workers in blast furnaces, steel works and rolling mills earned on the average of \$75.77 for a workweek of 41.0 hours. In the same month, the average for all manufacturing industries was \$64.33 for 41.0 hours of work. Average hourly earnings in iron and steel and in manufacturing generally were \$1.85 and \$1.57, respectively.

Table 1.

STEEL PRODUCTION AND CAPACITY^{1/}, 1939-1951

(Net Tons)

Period	Production	Capacity	Production as percent of capacity
1939	52,798,714	81,828,958	64.5
1940	66,982,686	81,619,496	82.1
1941	82,839,259	85,158,150	97.1
1942	86,031,931	88,886,550	96.8
1943	88,836,512	90,589,190	98.1
1944	89,641,600	93,854,420	95.5
1945	79,701,648	95,505,280	83.5
1946	66,602,724	91,890,560	72.5
1947	84,894,071	91,241,250	93.0
1948	88,640,470	94,243,460	94.1
1949	77,978,176	96,120,930	81.1
1950	96,954,186		97.0
January	7,930,372	99,392,800	93.9
February	6,793,245		89.1
March	7,487,036		88.7
April	8,212,672		100.4
May	8,551,887		101.3
June	8,131,515		99.4
July	8,071,294	100,563,500	94.7
August	8,230,317		96.3
September	8,200,020		99.3
October	8,718,978		102.3
November	8,012,000		97.0
December	8,343,000		98.0
1951			
January	8,843,000	104,229,650	99.9
February	7,765,701		97.1
March	9,050,000		102.4
April	8,884,521		103.1

^{1/} Openhearth, Bessemer and electric furnace ingots and steel for castings. Capacity is computed semi-annually.

SOURCE: American Iron and Steel Institute

Table 2.

EMPLOYMENT, HOURS AND EARNINGS IN BLAST FURNACES, STEEL WORKS AND ROLLING MILLS
1939 - 1951

Period	Production worker employment	Average weekly hours	Average weekly earnings
1939	407.7	35.3	29.58
1940	468.6	37.0	31.23
1941	538.9	39.7	37.36
1942	547.4	41.1	41.84
1943	539.1	45.3	50.55
1944	500.3	47.4	54.84
1945	474.2	45.0	53.06
1946	463.5	37.1	47.53
1947	517.6	39.0	56.12
1948	536.8	39.5	62.41
1949	476.7	38.3	63.04
1950	535.6	39.9	67.47
January	510.5	39.3	65.83
February	512.3	39.3	64.81
March	506.9	37.5	61.84
April	522.5	40.0	66.08
May	529.3	39.7	65.86
June	538.1	39.8	66.63
July	542.5	39.9	67.83
August	550.4	40.1	67.37
September	552.2	40.2	69.30
October	552.0	41.0	69.13
November	553.6	40.8	69.03
December	556.4	41.1	75.21
1951			
January	559.0	40.6	76.41
February	559.6	39.9	73.18
March	561.5	41.0	75.77
April	560.8	N.A.	N.A.

EMPLOYMENT TRENDS

JUNE 1951

The general employment situation at mid-year 1951 was characterized by overall stability as expansion in defense-related sectors of the economy offset some slackening in the demand for labor in certain other sectors. Total employment in commerce, industry, and government was at an all-time high, and remained stable through the second quarter of the year, except for minor seasonal changes. Lay-offs rose significantly and hours of work were reduced somewhat in industries affected by a falling off in consumer demand or by restrictions on metals supply. However, continued moderate tightness of the labor market, on an overall national basis, was evidenced by the lowest level of unemployment for the season since World War II, by the high rate of voluntary job shifting on the part of employed workers, and by extensive overtime work in defense-related industries.

Employment declines in consumer goods industries

Continued employment declines were reported in a number of consumer goods industries between mid-May and mid-June, whereas employment in defense-related industries showed further gains. In addition, employment increases were reported in construction, food-processing, and other seasonal activities. As a result, the number of employees in nonfarm establishments rose slightly over the month, to 46.4 million, about 2-1/2 million higher than at the start of the Korean War in June 1950. (See Tables 1&2)

Among the industries showing declines in employment over the month were textiles, apparel, television, furniture, and automobiles, where labor turn-over reports for May revealed a significant rise in lay-offs. In these industries, June employment was at or below the level of a year ago, in contrast to an over-all gain of 1.2 million in the number of factory jobs. Some slackening in employment in many consumer goods industries has been reported since early spring, reflecting reduced consumer demand as well as restrictions on the use of metals in certain industries.

The growing volume of defense orders brought further employment gains between May and June in such industries as aircraft, shipbuilding, and metalworking machinery. Since June 1950, employment has risen by approximately 190,000 in the aircraft industry, by 80,000 in metalworking machinery plants and by 50,000 in private shipyards.

Employment in contract construction rose seasonally between May and June, reaching an all-time high of 2.7 million. In recent months, a less-than-seasonal gain in housebuilding activity has been offset by sharp expansion in industrial, military, and other heavy construction.

Employment in Federal defense activities, including arsenals, military bases, and naval shipyards rose by about 20,000 over the month. This was only about half the average monthly gain since the Korean outbreak.

Unemployment continues at seasonal low in June

Unemployment totaled 2.0 million in early June, according to Bureau of the Census estimates; the number of jobless had risen by 400,000 from early May. All of the net increase occurred among young people entering the labor force at the end of the school year. However, the number of unemployed adult males did not show the moderate drop usually noted at this time of the year. This may have reflected recent cut-backs in the output of certain civilian goods. Nevertheless, unemployment remained at a postwar low for the season for the fourth consecutive month, indicating continued strength in the general employment situation despite the rise in lay-offs in certain industries. The unemployment total in June 1951 was 200,000 lower than in June 1948 (the previous postwar low for the month and 1.4 million below the pre-Korea level of June 1950).

Claims for State unemployment insurance benefits continued at very low levels through the second quarter of this year. Continued claims averaged about 900,000 during the second quarter, or about 10 percent below the 1948 level for the corresponding period. Initial claims - representing the first filing for benefits by a newly unemployed worker - were slightly over 200,000, approximately equal to the 1948 level. These figures pointed to a volume of lay-offs comparable with the most favorable postwar experience and indicates an even more rapid rate of absorption of laid-off workers into employment.

In the first week of July 1951, however, initial claims for State unemployment insurance benefits rose to approximately 270,000, almost two-fifths higher than in the corresponding week in 1948 and approximately the same as in the comparable period of 1950, before the post-Korea boom got under way. According to reports of State employment security agencies, the sharp rise in initial claims resulted, in large part, from vacation shut-downs. The increase in claims, however, was greater than usually experienced at this time of year and may reflect the fact that plants have taken on especially large numbers of workers during the past year. Many of these workers may not be eligible for vacation pay when their plant shuts down. There have been indications, also, of somewhat earlier and more extensive vacation shut-downs this year.

Factory layoff rate increases

Lay-offs of workers in manufacturing industries rose in May for the second straight month, largely because of cut-backs in automobile production and reduced activity in certain other consumer goods manufacturing industries. The factory lay-off rate per 1,000 employees

rose to 13 in May from 10 in April and 8 in March. The May rate however, was still at approximately the same level as in the earlier postwar years of high employment of 1947 and 1948.

One of the sharpest rises in lay-offs over the month was in the automobile industry, where the rate increased from 20 per 1,000 in April, to 52 in May. Sizable increases in lay-offs were also reported in the textile, apparel, leather products, and furniture industries.

Despite the rise in lay-offs, factories continued to hire workers in May at about the same rate as in the three preceding months - 45 per 1,000 employees. Compared with year-ago levels, the hiring rate has continued relatively high in a number of industries closely allied to defense activity, including ordnance, primary metals, machinery, and instruments.

The quit rate of factory workers, at 28 per 1,000 in May was unchanged from the April rate and continued substantially above the rate of 16 per 1,000 in May 1950. Over the year the quit rate has increased in every industry group and most pronouncedly in defense-related industries, where expanded job opportunities have made job shifting between plants easier.

Factory hours level off

The workweek of production workers in manufacturing averaged 40.8 hours in June, virtually unchanged from the preceding month, and less than half an hour above the level of a year ago. Largely as a result of reduced activity during the past few months, the average workweek in June 1951 was lower than a year ago in plants producing automobiles, furniture, household appliances, apparel, rubber products, textiles, and leather products. On the other hand, sizable gains in weekly hours over the year were reported by most of the metals and metals products industries. The greatest increases, of 2 hours or more, were in the metalworking machinery, aircraft, shipbuilding, heavy electrical equipment, and basic steel industries. Most of these gains occurred in the last half of 1950, however; the workweek has been relatively stable in recent months. The average workweek in June 1951 exceeded 41 hours in nearly all of the metals and metals producing industries, indicating that many plants in these industries were scheduling extensive overtime work.

Average weekly earnings of the Nation's 13 million production workers in manufacturing totaled \$65.44 in June 1951, an increase of 89 cents since May and \$6.59 since June 1950. Durable goods industries showed the major gain over the month, \$1.21, as compared with 62 cents in nondurable industries. The rise in earnings in durable goods manufacturing was the result both of increases in hours in certain industries and of some cost-of-living adjustments in wage rates.

Average gross hourly earnings - including overtime and other premium pay - were \$1.60 in June 1951, up by 2 cents over the month, and 15 cents over the year.

TABLE 1

5.

Employees in Nonagricultural Establishments, by Industry Division and Selected Groups,
June, May, April 1951 and June 1950

(In thousands)

Industry division and group	1951			1950	Net change	
	June <u>1/</u>	May	April	June	May 1951 to June 1951	June 1950 to June 1951
TOTAL	46,410	46,191	45,960	43,945	+219	+2,465
MANUFACTURING	15,864	15,839	15,928	14,666	+ 25	+1,198
MINING	917	912	910	946	+ 5	- 29
Metal mining	105	104	104	102	+ 1	+ 3
Bituminous-coal	379	377	381	410	+ 2	- 31
Nonmetallic mining and quarrying	107	106	104	100	+ 1	+ 7
CONTRACT CONSTRUCTION	2,674	2,592	2,472	2,414	+ 82	+ 260
TRANSPORTATION AND PUBLIC UTILITIES	4,164	4,139	4,132	4,023	+ 25	+ 141
Transportation	2,924	2,912	2,907	2,813	+ 12	+ 111
Communication	685	681	680	662	+ 4	+ 23
Other public utilities	555	546	545	548	+ 9	+ 7
TRADE	9,695	9,670	9,618	9,411	+ 25	+ 284
Wholesale trade	2,577	2,567	2,579	2,502	+ 10	+ 75
Retail trade	7,118	7,103	7,039	6,909	+ 15	+ 209
General merchandise stores	1,459	1,465	1,446	1,411	- 6	+ 48
Food and liquor stores	1,270	1,267	1,262	1,205	+ 3	+ 65
Automotive and accessories dealers	746	742	738	733	+ 4	+ 13
Apparel and accessories stores	546	551	543	536	- 5	+ 10
Other retail trade	3,097	3,078	3,050	3,024	+ 19	+ 73
FINANCE	1,893	1,875	1,865	1,827	+ 18	+ 66
SERVICE	4,830	4,787	4,743	4,826	+ 43	+ 4
GOVERNMENT	6,373	6,377	6,292	5,832	- 4	+ 541
Federal	2,271	2,244	2,201	1,851	+ 27	+ 420
State and local	4,102	4,133	4,091	3,981	+ 31	+ 121

1/ Preliminary

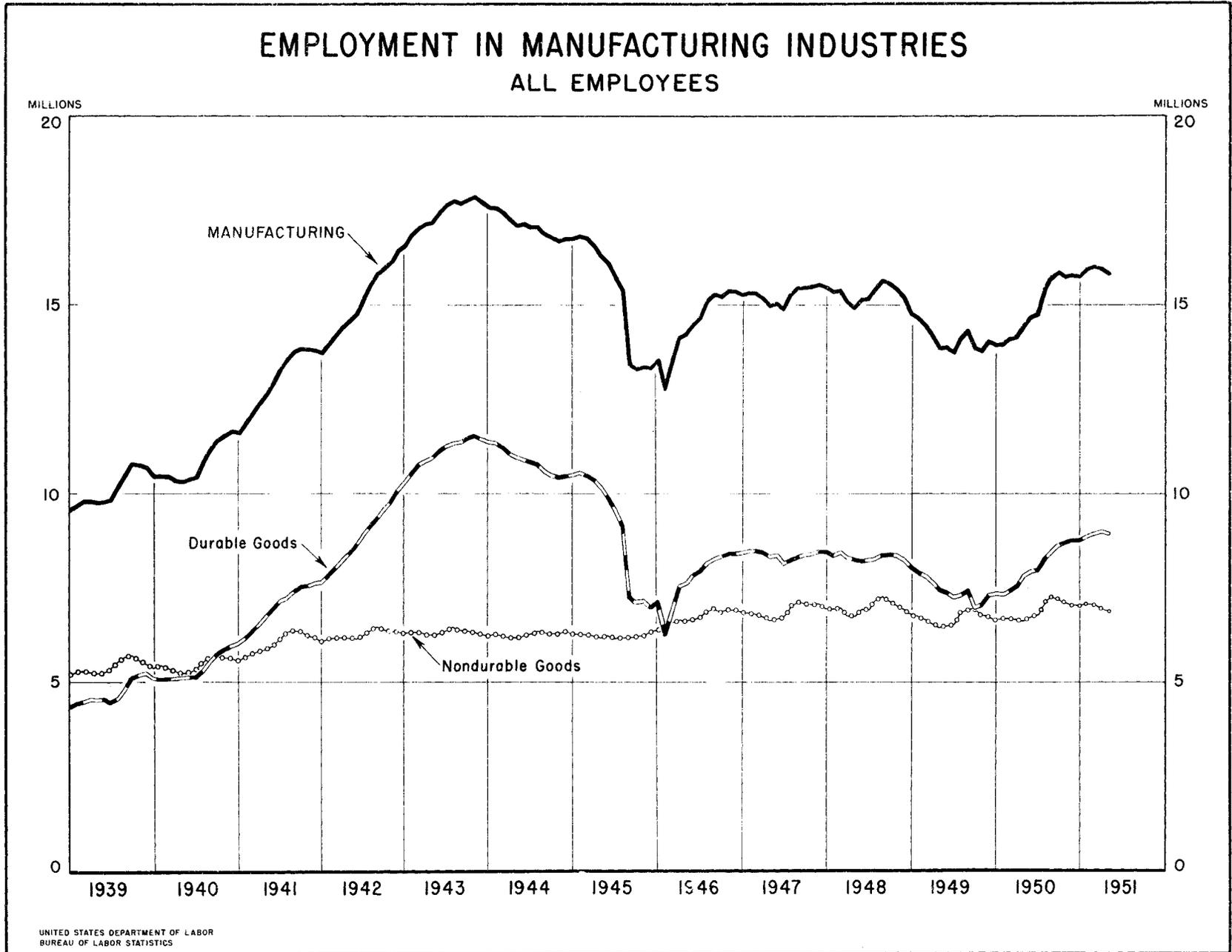
TABLE 2

Employees in Manufacturing Industry Groups
June, May, April 1951 and June 1950

(In thousands)

Industry Group	1951			1950	Net change	
	June <u>1/</u>	May	April	June	May 1951 to June 1951	June 1950 to June 1951
MANUFACTURING	15,864	15,839	15,928	14,666	+ 25	+1,198
DURABLE GOODS	8,960	8,959	8,977	7,964	+ 1	+ 996
Ordnance and accessories	41.8	39.7	37.6	23.7	+ 2.1	+ 13.1
Lumber and wood products (except furniture)	824	822	803	803	+ 2	+ 21
Furniture and fixtures	340	350	367	340	- 10	- 9
Stone, clay, and glass products	559	559	559	511	0	+ 48
Primary metal industries	1,347	1,343	1,343	1,216	+ 4	+ 131
Fabricated metal products (except ordnance, machinery, and transportation equipment)	1,019	1,025	1,034	923	- 6	+ 96
Machinery (except electrical)	1,611	1,598	1,588	1,341	+ 13	+ 270
Electrical machinery	912	928	937	810	- 16	+ 102
Transportation equipment	1,531	1,512	1,514	1,305	+ 19	+ 226
Instruments and related products	298	296	294	243	+ 2	+ 55
Miscellaneous manufacturing industries	477	436	500	439	- 9	+ 38
NONDURABLE GOODS	6,904	6,880	6,951	6,702	+ 24	+ 202
Food and kindred products	1,526	1,433	1,463	1,519	+ 43	+ 7
Tobacco manufactures	81	81	83	82	0	- 1
Textile-mill products	1,271	1,301	1,309	1,264	- 30	+ 7
Apparel and other finished textile products	1,103	1,118	1,166	1,093	- 15	+ 10
Paper and allied products	501	498	500	467	+ 3	+ 34
Printing, publishing, and allied industries	760	757	757	739	+ 3	+ 21
Chemicals and allied products	745	742	748	670	+ 3	+ 75
Products of petroleum and coal	261	259	257	239	+ 2	+ 22
Rubber products	276	271	270	247	+ 5	+ 29
Leather and leather products	380	370	393	382	+ 10	- 2

1/ Preliminary



SUMMARY REPORT ON EMPLOYMENT TRENDS FOR 72 METROPOLITAN AREAS NOW AVAILABLE . . .

NEW ANNUAL PUBLICATION The Bureau of Labor Statistics has recently released a new publication entitled "Area Employment, 1950". This publication is one in a series of 5 volumes, each with the general title "Employment, Hours, and Earnings--State and Area Data". All five volumes will be prepared annually. The names of the other volumes are as follows: Hours and Earnings in Manufacturing by State, Nonagricultural Employment by State, Manufacturing Employment by State, and Summary Volume--State and Area Data.

The current volume, "Area Employment, 1950" includes employment trend data in varying detail for 72 metropolitan areas. For all 72 areas there are estimates of employment in manufacturing industries for 1950, by month, and for all but four there are comparable figures for 1949. For 20 areas complete statistics for 1950 are available, i.e., estimates of total non-agricultural employment and employment in each of the major industry divisions. For 15 areas, there is a manufacturing series starting in 1947.

Data on employment trends will eventually be provided for 114 major metropolitan areas, the population of which comprises half the United States total. The area employment series are prepared by State agencies cooperating with the Bureau of Labor Statistics. Each State is scheduled to participate by preparing estimates for at least one area; 14 States will eventually contribute data on three or more areas. Information for several areas is now compiled by State agencies in addition to the basic group and this number may expand as the program advances.

DATA HAVE MANY USES Manufacturing trends in urban areas frequently are a significant barometer of the economic health of the community. Factory workers usually comprise the largest single segment in a metropolitan workforce. Many of the other industries, such as trade and service, derive their prosperity from the level of factory employment and payrolls. It is not surprising, therefore, that changes in manufacturing employment in each city are followed with the keenest interest. In many cities where public officials or citizens' groups are actively engaged in attracting new industry, manufacturing employment is one of the more important indexes in gauging success or failure of their efforts.

Distribution of employment by industry in metropolitan areas affords insight into the character of our major population centers. It highlights the extent to which cities are manufacturing centers, financial centers, government centers, or resort centers. Government administrators are provided the basis for a more complete evaluation of public welfare activity. Management is given an invaluable tool for market analysis.

SUMMARY OF FINDINGS Approximately 6 out of every 7 reporting areas showed an upward trend in manufacturing employment between 1949 and 1950. Areas in which durable goods are relatively important generally had a more favorable employment experience than those where soft goods predominated. From the data available, it was obvious that manufacturing employment in areas of less than 200,000 was subject to more violent fluctuations than those in the larger metropolitan centers which tend to have more diversified industries.

Urban areas differ greatly in their industrial composition. This was illustrated by the wide variation in the proportion of workers engaged in manufacturing in each of the areas. Approximately 1 out of every 2 workers in Providence, Fort Wayne, and Evansville, for example, are engaged in factory work. At the other extreme is Washington, D. C., where the bulk of the workers are in Government, trade, and service.

COPIES AVAILABLE TO PUBLIC Copies of the "Area Employment, 1950" volume may be obtained by writing to the Bureau of Labor Statistics, Department of Labor, Washington 25, D. C. Current employment data for the 72 metropolitan areas are available monthly in the Bureau's regular report "Employment and Payrolls--Detailed Report" (They appear on page A:17 of the present issue). Requests for more detailed industry information should be directed to the Bureau of Labor Statistics or to the appropriate State agency. Names and addresses of these agencies appear on page iv.

INDUSTRY HIGHLIGHTS

Electrical Power & Industrial Apparatus

Substantial increases in employment have occurred in the manufacture of electrical generating, transmission, distribution and industrial apparatus since the beginning of 1950. Gains in employment were noted in the early part of 1950 and were accelerated after the beginning of hostilities in Korea. The 270,800 production workers employed in May 1951 marked a 22 percent gain since June 1950. This recent upsurge has carried employment above the previous postwar peak of 266,000 in 1947.

Current plans call for an expansion of 40 percent in electric power capacity by 1953. Achievement of this goal will require a substantial output of generating, transmission and distribution equipment. Large quantities of metals are being allocated for this program, and as a result, continued expansion of employment in this industry is expected.

RUBBER PRODUCTS

High levels of employment in the rubber products industry continued into May 1951, when 220,000 production workers were reported. The demands of the mobilization program, a generally favorable tire market, and the development of new rubber products, such as mattresses, pillows and upholstery, have all contributed to the upswing of employment from a postwar low of 167,000 in September 1949.

The outlook for the industry is affected by the efforts of the Federal Government to guard against a possible repetition of World War II experience, when the cutting off of Far Eastern natural rubber drastically curtailed production. Synthetic rubber plants built during World War II are being reopened and natural rubber is being stock piled by the Government. Military and civilian orders for rubber products will keep employment high for at least the next several months. Passenger-car tire production will probably decrease somewhat owing to a decline in automobile production.

RETAIL TRADE

Employment in retail trade in May 1951 stood at 7,103,000 compared with 6,847,000 a year ago. In the first 5 months of 1951 employment in this field has averaged 7,046,000 -- about 4 percent higher than the corresponding period in 1950. This increase reflects, mainly, higher consumer incomes which have resulted from expanding employment and increasing wage rates. A heavy advance buying of goods in which the defense program was expected to cause shortages, has also helped to boost sales volume and employment in retail establishments. This factor, however, has decreased in importance in the past few months as continued high volume production of some products has caused inventory accumulations to appear. Employment in retail trade is considerably above the wartime years and is slightly higher than in 1947 and 1948.

Under the conditions of partial mobilization which are expected to continue for the next several years, employment in retail trade is likely to remain at relatively high levels. Production of most civilian goods will continue at rates considerably above that of World War II. However, as expanding defense production causes a general tightening of the labor market, turn over will increase since many workers will leave retail trade for better paying jobs in other industries. The average hourly earnings of \$1.25 in April 1951 were 9 cents higher than in April 1950. There was little change in average weekly hours over the same period, 40.0 in April 1951 compared with 40.1 in April 1950.

CONSTRUCTION & MINING MACHINERY

The construction and mining machinery industry has had an uninterrupted rise in employment during the past 12 months. May 1951 employment of 119,100 was about 24 percent above May 1950 but slightly below 1947 and 1948 levels. A lengthening workweek has accompanied rising employment. The average weekly hours have increased from 41.8 hours in May 1950 to 44.4 in April 1951. Heavy demands for construction and mining machinery are expected to continue during the next several years, and production levels will depend on the availability of steel.

STEEL FOUNDRIES

Production worker employment in steel foundries has almost doubled since the beginning of 1950, jumping from 33,300 in January to 62,100 in May 1951. About two-thirds of this gain has been made since the start of the Korean War. A further substantial growth in employment is expected, by 1953, but the number of jobs will remain below the peak levels of World War II.

In peacetime, steel castings are mainly used for industrial machinery, railroad equipment, construction, and construction machinery. Demands from these industries will continue at relatively high levels, and there will be a sharp increase in the requests for steel castings for heavy guns, tanks and ships.

THE TELEPHONE INDUSTRY

Employment in the telephone industry increased by about 21,000 between May 1950 and May 1951, but the number of jobs remained below the postwar peak which was reached in 1948. A slight rise in employment is expected in the next 6 months. Telephone employment has increased by 70 percent since 1940 while the number of telephones jumped from 22 million to 43 million. This growth in the number of telephones is largely the result of population growth and the higher levels of industrial activity and consumer income. The high employment levels in 1948 reflected the large volume of installations of new central stations, lines and phones.

INDUSTRY EMPLOYMENT REPORTS

SHIPBUILDING AND REPAIRS

. . . employment rises to meet defense needs

Shipyard employment has increased over 60 percent since the outbreak of hostilities in Korea. In May 1950, employment in the yards had declined to a postwar low of 132,400 workers and these were equally divided between Navy yards and private yards. By May 1951, shipyard employment had risen to 216,900 with 55 percent of this total in Navy yards. (See table 1.)

There is no general shortage of shipyard workers at the present time although local shortages in some individual occupations have appeared. The List of Critical Occupations issued by the United States Department of Labor includes the following shipyard occupations: marine loftsmen, ship-riggers, shipfitters, marine boilermakers, and marine lay-out men. Shortages in these key occupations, which are employed mainly on new construction, may become more serious when the shipbuilding programs of the Navy and Maritime Administration reach their peak.

Shipyard employment is expected to increase during the next few years. It is estimated that about 40,000 more workers will be added by the middle of 1952. These new workers will be engaged largely in Navy and Merchant Marine construction.

Past Trends in Production and Employment

Shipbuilding activity is subject to very wide fluctuations. During both World Wars, the United States engaged in huge shipbuilding programs. After each war the volume of shipping which had been produced proved greater than could be utilized in peacetime commerce and excess ships were placed in reserve anchorages. These large stand-by fleets had a depressing effect upon new construction and shipyards were limited almost entirely to repair activities for several years.

Since shipyards often engage in both construction and repair and since ships take an appreciable time to construct, employment is a better measure of shipyard activity than tonnage completed or other measures of production. Shipyard employment reached an all-time high in December 1943 when 1,723,000 workers were employed. Thereafter, employment declined steadily until May 1950 when only 132,400 workers were employed in American shipyards. As table 1 indicates, employment in private yards declined more precipitously than employment in Navy yards.

TABLE 1

EMPLOYMENT IN PRIVATE AND NAVY SHIPYARDS, 1939-51

Year and month	Total	Private ^{1/}	Navy
1939	119,900	72,500	47,400
1940	180,300	102,700	77,500
1941	377,000	236,000	141,000
1942	1,004,000	761,700	242,300
1943	1,655,500	1,336,900	318,600
1944	1,568,600	1,242,500	326,100
1945	1,033,900	741,900	292,000
1946	354,100	210,000	144,100
1947	224,000	137,300	86,600
1948	213,900	124,200	89,700
1949	171,800	88,100	83,700
1950:	144,900	71,300	73,600
May	132,400	66,200	66,200
June	134,800	66,400	68,400
July	137,500	67,400	70,100
August	153,000	78,400	74,600
September	153,700	75,800	76,900
October	156,300	75,300	81,000
November	160,200	75,500	84,700
December	167,100	77,800	89,300
1951:			
January	180,400	82,400	98,000
February	198,800	94,400	104,400
March	210,700	95,000	115,700
April	214,700	93,700	121,000
May	216,900	94,200	122,700

^{1/} Shipbuilding and repairing industry. Excludes boatbuilding.

Since the outbreak of hostilities in Korea there has been an acceleration of construction activities and a withdrawal of naval and merchant ships from reserve fleets. The Maritime Administration and the Military Sea Transportation Service have removed approximately 200 vessels from the reserve fleets. As a result, the increase in employment was most marked in the segment of the industry engaged in repair and reconditioning.

Nature of the Industry

Although shipbuilders utilized some mass production techniques during World War II, these methods are generally not adaptable to shipbuilding, especially during periods of low activity when there is a limited demand for ships of similar specifications. Ships are usually designed for the requirements of a particular customer and often differ in basic structure. Tankers, for example, are quite different from dry cargo ships or passenger ships.

During peacetime the private shipbuilding market is small and highly competitive. American shipbuilders also face keen competition in world markets. Other industries compete successfully in world markets despite higher wages because their large domestic markets enable them to use mass production techniques and machinery and thereby reduce total labor costs. The nature of the productive processes used in shipbuilding, however, does not permit the substitution of machines for labor to the extent possible in other industries. Labor costs comprise a large proportion of shipbuilding costs and these higher wages place American shipbuilders at a disadvantage in competing with foreign shipbuilders. Besides lower labor costs, foreign shipbuilders often receive government subsidies. The United States Maritime Administration has provided various subsidies to the maritime industries in an attempt to equalize cost differences and offset the effects of foreign subsidies.

As a further aid to the American shipbuilding industry, shipping laws require that coastal, intercoastal, and inland waterways commerce be carried in American made vessels. Thus, a large proportion of peacetime ship construction in private yards consists of tankers, ore vessels, barges, and various types of inland waterways craft used in domestic commerce.

Private shipyards also participate in construction, modification, and repair of naval vessels. However, these yards are usually heavily loaded with orders for merchant vessels during wartime when peak naval construction occurs. In peacetime, since the Navy needs a smaller fleet, surplus warships remaining after the war are placed in reserve. This stand-by fleet tends to limit postwar naval construction in the same way that the existence of surplus merchant vessels limits commercial construction.

Although the primary function of Navy yards is the repair and maintenance of the fleet, Navy yards also construct and modify naval vessels as only a small number of private yards have long enough ways to construct

battle cruisers or large aircraft carriers. Moreover, the Vinson-Trammell Act of 1934 requires that the first and each alternate combat vessel must be built in Navy yards. The President can lift this restriction in the interest of national defense during an emergency. At the present time, naval construction is almost equally divided between private and Navy yards. Naval modification and repair is heavily concentrated in Navy yards.

Location of the Industry

Shipyards located along the Atlantic seaboard employ the largest number of shipyard workers. Almost two-thirds of the workers in Navy yards and about 60 percent of the workers in private yards are employed in Atlantic shipyards. (See table 2.) During World War II, Atlantic yards also employed the greatest number of workers and accounted for almost half of the total shipbuilding labor force.

Pacific Coast yards employed 35 percent of all shipyard workers during the height of the wartime shipbuilding program in 1943, but currently employ less than a quarter of the industry's total labor force. This decline in relative importance is attributable to the lack of new construction. Only 17 percent of Pacific Coast shipyard workers were employed in private yards during May 1951, and these workers were engaged almost entirely in ship repair activities.

Employment in shipyards located along the Great Lakes increased during 1950. Increased demand for iron ore has stimulated the construction of additional ore vessels. Employment on new construction doubled during 1950 and partially offset the normal seasonal decline in Great Lakes ship repair during the summer months. Only 8 percent of all shipyard workers are employed in Gulf Coast yards, and these are engaged largely in ship repair activities.

TABLE 2
SHIPBUILDING EMPLOYMENT BY REGION
(May 1951)

Region	Total	Private	Navy
North Atlantic	99,900	44,600	55,300
South Atlantic	37,200	14,100	23,100
Gulf of Mexico	16,600	16,600	-----
Pacific ..	53,400	9,100	44,300
Great Lakes	5,400	5,400	----
Inland	4,400	4,400	----
TOTAL	216,900	94,200	122,700

Atlantic seaboard yards only employed more workers on new construction than on repair in December 1950. (See table 3.) Only 2 percent of Pacific Coast shipyard workers were employed on new construction. Since Atlantic seaboard yards employ more workers than all other regions combined, employment on new construction is highly concentrated in these yards. Over 80 percent of all workers engaged in new construction were employed in Atlantic yards in December 1950.

TABLE 3
PERCENT OF PRODUCTION WORKERS EMPLOYED
IN VARIOUS PRIVATE SHIPYARD ACTIVITIES, BY REGION,
(December 1950)

Region	Total	New construction	Repair and modification	Other activities (includes some shipbuilding work not allocable between new construction and repair)
Atlantic	100	47	34	19
Gulf of Mexico ..	100	8	82	10
Pacific	100	2	79	19
Great Lakes and Inland	100	37	37	26
United States ...	100	35	47	18

During the past few years of low shipyard activity, many yards engaged in other activities in order to retain their skilled labor force. Approximately 7 percent of the industry's workers were engaged in activities other than ship construction or repair in December 1950. These activities included the fabrication of steel products, boiler and machine shop products, large turbine casings, heavy industrial machinery, bridge caissons, and even wind tunnels for aeronautical research.

Outlook for the Industry

Shipyard employment depends upon the volume of ship construction, repair, and reconditioning. The size of the Navy and the Merchant Marine determines the level of repair and reconditioning activity and partially determines the volume of new construction. At the present time, the majority of ship construction, reconditioning, and repair is for the Navy.

Congress authorized a \$2 billion naval construction and re-conditioning program in March 1951. This authorization provides for 500,000 tons of naval vessels as follows:

1. Warships - 100,000 tons, including aircraft carriers
2. Landing craft and amphibious warfare vessels --
175,000 tons
3. Mine warfare vessels - 25,000 tons
4. Patrol vessels - 15,000 tons
5. Auxiliary vessels - 175,000 tons
6. Service craft - 9,000 tons
7. Experimental types - 1,000 tons

A large part of this anticipated new construction will probably be done in private shipyards, principally on the Atlantic Coast. Present naval construction is almost equally divided between Navy yards and private yards and over 90 percent of the total tonnage is being constructed in Atlantic yards.

Private shipbuilders had under construction or on order 62 large merchant vessels as of May 1, 1951. Of the 62 vessels under contract, 6 are scheduled for delivery in 1951, 48 in 1952, and 6 in 1953. Twenty-five of these merchant vessels are the new high-speed "Mariners" ordered by the Maritime Administration. Most of the remaining ships are tankers and bulk ore carriers.

In addition to the expanded naval construction program, the Navy plans to recondition and modernize a great many older ships. Although a large part of this work will probably be done in Navy yards, some of it will be sub-contracted to private shipbuilders. Moreover, another 100 cargo vessels are expected to be brought out of the reserve fleets in the near future. The reconditioning and repair of these vessels will continue to provide employment to private shipyard workers now engaged in repair work. Almost half of the 1,807 vessels in the USMA reserve fleet on May 31, 1949, were located in Atlantic anchorages, so Atlantic shipyards will probably receive the largest share of this work. The remainder will be almost equally divided between Pacific and Gulf Coast yards.

Commercial and Navy requirements for ship repair are difficult to forecast because the volume varies widely. Repair activity, however, generally increases with the size of the Navy and Merchant Marine. The Navy and some commercial shippers use a cycle system of repair whereby ships are docked for repairs after a specified length of service. Some other shippers repair their vessels only when necessary. A higher volume of ship repair activity is anticipated during the next few years because of the increased size of the Navy and Merchant Marine and the increased combat activity of naval vessels resulting from the Korean War. However, the resultant increase in employment will be small and will be divided between Navy and private yards.

The size of present shipbuilding, repair, and modification programs indicates that present shipyards are likely to receive all of the orders and stand-by shipyards will not be reactivated.

The Labor Force

Shipbuilding and repair requires a large proportion of skilled workers. During World War II, over half of all shipyard employees were classified as skilled workers or supervisory employees. About 40 percent were classified as semiskilled and less than 10 percent unskilled. Welders, shipfitters, machinists, carpenters, shipwrights, pipefitters, electricians, chippers and caulkers, and painters made up the largest shipyard occupations. At the present time, production workers comprise almost 90 percent of the industry's total work force although, in periods of lower activity, the ratio is usually lower.

Women comprise only a small percentage of shipyard workers. This is because of the physical requirements of the work and the large proportion of skilled trades required. During World War II, female participation in shipbuilding was encouraged and women reached a peak of 11 percent of all workers in the industry. Pacific Coast shipyards utilized a much larger proportion of women than other areas. More women were employed in new construction than in ship repair. At the present time, women comprise about 3 percent of the industry's employment and most of these are engaged in office work.

Hours and Earnings

In May 1951 average hourly earnings of shipyard workers were \$1.73 as compared with \$1.59 for all manufacturing industries and \$1.66 in durable goods industries. Weekly earnings in shipyards also have averaged higher than in durable goods or all manufacturing, but they fell below the durable goods average during the spring of 1951 as a result of a shorter workweek. In May shipyard weekly earnings were \$68.82 and the durable goods average was \$69.39. However, weekly earnings are expected to increase following the Wage Stabilization Board's recent approval of shipyard wage agreements which raised the pay of 25,000 workers.

TABLE 4
HOURS AND EARNINGS OF PRODUCTION WORKERS
IN
PRIVATE SHIPBUILDING AND REPAIR, 1947-51

Year and month	Average weekly earnings	Average hourly earnings	Average weekly hours
1947	\$ 57.59	\$1.458	39.5
1948	61.22	1.582	38.7
1949	61.88	1.637	37.8
1950	63.83	1.671	38.2
1951:			
January	64.73	1.677	38.6
February	69.41	1.718	40.4
March	69.33	1.729	40.1
April	69.19	1.734	39.9
May	68.89	1.731	39.8

There are marked regional variations in average hourly earnings. Hourly earnings in Pacific yards were substantially higher in December 1950 than earnings in other areas (table 5). Workers engaged in repair activities averaged slightly higher earnings than workers engaged in new construction, although this was not true in all regions.

TABLE 5
AVERAGE HOURLY EARNINGS IN PRIVATE SHIPBUILDING AND REPAIRING, BY REGION
December 1950

Region	Average Hourly Earnings
All regions	1.69
North Atlantic	1.68
South Atlantic	1.65
Gulf	1.52
Pacific	2.06
Great Lakes	1.63
Inland	1.67

Despite the 60 percent increase in employment since Korea, there has been only a moderate increase in the workweek. In June 1950, the average workweek was 37.8 hours and in May of this year it was 39.8. During World War II, the workweek ranged from 45 to 49 hours. Despite an average workweek below 40 hours an appreciable number of shipyard workers were employed on extra shift operations or engaged in Saturday or Sunday work in April. There are marked regional variations in the average workweek. Pacific Coast and Gulf Coast yards had an average workweek in December 1950, which was almost 2 hours less than the national average.

Turn-over

The turn-over rates in shipyard employment continue to be among the highest in manufacturing. Total accessions and separations in shipbuilding and repair are still several times the average for durable goods or all manufacturing industries. This high turn-over is due to the heavy lay-offs which are characteristic of the industry. Some trades are needed only during certain stages of construction, with the majority of the labor force required at the half-way point. Only special skills are required after the ship is launched. The construction of a series of vessels of identical specifications, as in World War II, can cause a drop in the lay-off rate because workers in specialized trades can move from one ship to the next. Another cause of high turn-over is the large variation in the volume of ship construction and repair.

TABLE 6

LABOR TURN-OVER RATES (PER 100 EMPLOYEES) IN SHIPBUILDING AND REPAIR, AND ALL DURABLE GOODS INDUSTRIES, 1947-51

Year and month	Shipbuilding				Durable Goods			
	Separations			Accessions	Separations			Accessions
	Total ^{1/}	Quits	Lay-offs		Total ^{1/}	Quits	Lay-offs	
1947	12.4	5.0	6.3	11.5	5.0	3.4	1.0	5.2
1948	13.7	3.1	9.8	11.1	4.8	2.8	1.3	4.5
1949	16.5	1.6	14.4	13.7	5.2	1.4	2.7	3.5
1950	16.4	2.2	13.2	17.4	3.6	2.0	1.1	4.9
1951:								
January	14.3	3.6	8.7	39.3	4.4	2.2	1.1	5.7
February	14.2	4.1	8.4	20.5	3.9	2.2	.7	5.0
March	17.9	5.1	11.0	14.7	4.4	2.7	.7	5.1
April	14.6	4.8	8.8	17.6	4.7	3.0	.8	5.2

^{1/} Includes discharges and miscellaneous separations.

EMPLOYMENT TRENDS

JULY 1951

The employment situation showed continued strength in the Nation as a whole in mid-Summer 1951, despite the recent declines in activity in certain sectors of the economy. Total employment in nonfarm activities in July was at an all-time high for the month and the unemployment level remained at a postwar low for the season. Although a moderate rise in industrial lay-offs in July was indicated by unemployment insurance reports, these lay-offs were largely of very short duration and had little apparent effect on the over-all unemployment total.

Employment and hours declines in consumer-durable goods industries

Employment and hours in most of the consumer durable goods industries have been declining since early Spring, as a result of restrictions on non-defense uses of metal as well as some slackening in consumer demand from the record levels of earlier months. Available production data indicate, however, that cutbacks in the output of civilian goods have been relatively greater than the employment reductions in these industries. In part, this may reflect the stepped-up flow of military procurement orders as the defense production program gained momentum. Reductions in the workweek also have served to lessen the effect of production cutbacks on employment.

The following table shows that appreciable declines in production worker employment and man-hours have occurred between March and June of this year in selected consumer durable goods industries, with the sharpest reductions occurring in plants producing furniture and radio and television sets. In fact, employment in all but 2 of the selected 7 industries in June 1951 was below the June 1950 level, in contrast to an over-all gain of 3 percent in total manufacturing employment over this period. Except in the radio and television industry, man-hours declined even more sharply than employment, because of decreases in the average workweek.

Changes in employment and manhours in
selected consumer durable goods industries,
June 1950 and March - June 1951

Industry	Production worker employment						
	Number (in thousands)			Percent change		Percent change in manhours	
	June: 1951	March: 1951	June: 1950	June 1950-: June 1951	March - June 1951	June 1950-: June 1951	March - June 1951
Automobiles	737.3	793.4	764.7	-3.6	-7.1	-11.9	-9.8
Household furniture	199.1	236.1	222.3	-10.4	-15.7	-14.5	-20.3
Radios and televis- ion	149.4	183.2	151.6	-1.5	-18.4	-0.7	-18.4
Service industry and household machines	139.9	148.4	147.9	-5.4	-5.7	-10.8	-10.9
Heating apparatus	128.6	133.9	121.9	5.5	-4.0	7.1	-5.3
Toys and sporting goods	65.5	68.9	63.6	3.0	-4.9	1.2	-6.6
Jewelry and silver- ware	41.4	47.2	42.5	-2.6	-12.3	-3.5	-16.4

Nonfarm employment dips seasonally in July

The number of employees in industry, commerce, and government declined by about 200,000 between mid-June and mid-July, but, at 46.4 million, was still at a record high for the season. Over the month, widespread vacation shut-downs in manufacturing industries and mid-summer reductions in such fields as retail trade and public school employment more than offset gains in canning, construction, and defense-related industries. (See Tables 1 and 2).

Factory employment, at 15.8 million in mid-July, was down by more than 100,000 over the month. Minor employment declines were reported in nearly every industry, partly reflecting short-term lay-offs of workers not eligible for vacation pay when their plants shut down. Somewhat greater reductions occurred in industries producing certain consumer durable goods, including radios and television sets, refrigerators and other household appliances, and automobiles.

Seasonal employment declines were reported in the textile, apparel, and lumber industries over the month. On the other hand, aircraft plants continued to add workers, and, by mid-July, had increased their employment by over 200,000, or 86 percent, since the start of the Korean War in June 1950.

Employment in contract construction was at an all-time high of 2.7 million in July, following a moderate seasonal gain of 40,000 over the month. Increases in expenditures for industrial and military construction were reported in July, continuing the sharp uptrend of recent months. However, private home-building expenditures failed to show the normal seasonal gain and commercial building began to drop, as the effects of restrictions on nondefense construction became more evident.

Employment in Federal defense agencies, including naval shipyards, arsenals, and military bases, rose by about 28,000 over the month. Federal defense employment in the continental U. S. totaled 1.1 million in July, up by nearly a half million from June 1950. Well over nine-tenths of this increase occurred in Government defense installations located outside of the Washington, D. C. area.

Factory workweek reduced to year-ago level

The average workweek of production workers in manufacturing plants declined by nearly a half hour between mid-June and mid-July, to 40.4 hours, or about the level of a year ago. The reduction in hours over the month occurred primarily among the durable goods industries, and was largely the result of widespread vacation shutdowns.

Over the year, decreases in the average workweek have been reported in many consumer durable goods industries, such as household appliances, furniture, and automobiles, where both hours and employment have been declining since early Spring of this year. Slackened consumer demand since Spring also has resulted in reductions in the average workweek below the level of a year ago in certain soft-goods industries, including textiles, leather, and men's and boys' clothing. However, significant over-the-year increases in hours have been reported in such defense-connected industries as metalworking machinery, aircraft, and shipbuilding.

Average weekly earnings of production workers in manufacturing declined 76 cents over the month but, at \$64.56 in July, were \$5.35 above a year ago. The June to July decrease resulted primarily from a reduction of nearly an hour in the average workweek in durable goods plants. Gross hourly earnings of factory workers, including overtime and other premium pay, averaged \$1.60 in July, unchanged over the month and up 14 cents over the year.

Factory hiring at pre-Korea level in June

Factories hired workers at a rate of 48 per 1,000 employees in June, the same rate as in June 1950. This contrasts with the pattern in earlier months of this year, when the hiring rate in manufacturing industries was substantially above the rate in the corresponding months of 1950, and reflects the recent easing in demand in many consumer goods industries. Hiring rates continued significantly higher than a year earlier, however,

in a number of industries related to defense production, including machinery, ordnance, instruments, chemicals, and petroleum products.

Between May and June, the hiring rate in manufacturing industries rose moderately, largely because of initial preparations for the Fall season in a number of soft goods industries. However, in the apparel, textiles, and furniture industries, the hiring rate in June was lower than the rate of separations due to quits, lay-offs, and other causes.

Lay-offs of manufacturing workers declined between May and June from 12 to 9 per 1,000 employees, and equalled the June 1950 rate -- a postwar low for the month. Seasonal declines in lay-offs were reported in most nondurable goods industries. Lay-off rates were highest in June in furniture and automobile plants. In the latter industry, curtailments of automobile production have resulted in relatively high lay-off rates in the past few months.

The quit rate of factory workers also declined between May and June, from 28 to 24 per 1,000 employees, but remained substantially above the June 1950 level of 17 per 1,000. However, the quit rate was above year-ago levels in every industry group, with increases most pronounced in defense-related industries, including primary metals, machinery, and ordnance. Relatively small increases in voluntary separations over the year were reported in most consumer goods industries, where employment opportunities have slackened in recent months.

Total unemployment continues at seasonal low

Unemployment totaled 1.9 million in July, or more than 300,000 below the previous postwar low for the month in 1948, according to Bureau of the Census estimates. This was the sixth consecutive month in which the unemployment total was below the previous postwar low point for the season. Most of those seeking work in July, moreover, had been unemployed only for brief periods accompanying recent entry into the labor force or voluntary job shifting. Only about one out of every eight job seekers had been unemployed for 15 weeks or more. A year ago, by way of contrast, one out of five jobless workers was in this group of long-term unemployed.

Between June and July 1951, unemployment dropped by 100,000 as young people who had entered the labor market with the close of the school year were rapidly absorbed into employment. Unemployment among adult workers, aged 25 years and over, remained substantially unchanged over the month and, at 1 million in July, was down to about half the level of a year earlier.

Continued claims for State unemployment insurance benefits showed a moderate contraseasonal rise in July, to about 1 million, or approximately the same as in the corresponding month in 1948. In the previous quarter, however, continued claims had averaged about 10 percent below 1948 levels for the corresponding period.

Reports from State employment security agencies indicated that both curtailments in certain consumer goods industries and widespread vacation shutdowns had been responsible for these increases in claims. Many of the workers added to plant payrolls in recent months and not eligible for vacation pay applied for unemployment benefits when their plants shut down. Short-term lay-offs of this type, with a specific date of return, generally are not reflected in the Census count of unemployed and may largely account for the difference in trend over the month between Census estimates and unemployment insurance claims data.

Employment of women rises over the year

In response to large-scale expansion in employment opportunities, relatively heavy inflows of women into the labor force have occurred over the past year. A net influx of 1.1 million women between July 1950 and July 1951 has offset a comparable decline in the number of men in the civilian labor force resulting from the large-scale build-up of the armed forces since the outbreak of the Korean war. As a result, the civilian labor force of 64.4 million in July of this year was at about the same level as in July 1950.

In March 1951, manufacturing plants reported a total of 4.2 million women on their payrolls, a net addition of a half million women over the year. This increase has been concentrated in industries where rapid expansion in total employment has occurred. In the metals and metals products industries, where total employment rose by 1.4 million over the year, 300,000 women were added to plant payrolls.

Over all, the relative importance of women workers in manufacturing plants remained unchanged over the year -- at 26 percent of total manufacturing employment in both March 1950 and March 1951. This reflects the fact that the heavy industries, which normally employ relatively few women, accounted for the bulk of the rise in total factory employment. Nevertheless, most industries showed an increase in the proportion of women employed over the year. Among the industries where the percentage of women workers rose significantly were household equipment, ophthalmic and photographic goods, aircraft, and communication equipment. The gains in the proportion of women workers were, however, much smaller than in the early World War II period when both inflows of women into the labor force and withdrawals of men to armed forces were on a considerably greater scale.

Despite the evidence of increased utilization of women workers in many industries, the basic pattern of their employment in manufacturing remains essentially unchanged. In March 1951, about half of the women working in manufacturing plants were employed in the food, textile, apparel and leather industries. The apparel industry alone employed over 900,000 women, constituting three-quarters of the industry's labor force.

TABLE 1

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

(In thousands)

Industry division and group	1951			1950	Net change	
	July 1/	June	May	July	June 1951 to July 1951	July 1950 to July 1951
TOTAL	46,389	46,563	46,232	44,096	-174	+2,293
MANUFACTURING	15,830	15,964	15,873	14,777	-134	+1,053
MINING	896	923	913	922	- 27	- 26
Metal mining	106	105	104	103	+ 1	+ 3
Bituminous-coal	356	379	377	382	- 23	- 26
Nonmetallic mining and quarrying	108	108	106	101	0	+ 7
CONTRACT CONSTRUCTION	2,726	2,683	2,592	2,532	+ 43	+ 194
TRANSPORTATION AND PUBLIC UTILITIES	4,166	4,161	4,138	4,062	+ 5	+ 104
Transportation	2,912	2,922	2,912	2,839	- 10	+ 73
Communication	690	686	680	667	+ 4	+ 23
Other public utilities	564	553	546	556	+ 11	+ 8
TRADE	9,656	9,728	9,676	9,390	- 72	+ 266
Wholesale trade	2,584	2,580	2,567	2,528	+ 4	+ 56
Retail trade	7,072	7,148	7,109	6,862	- 76	+ 210
General merchandise stores	1,397	1,457	1,472	1,372	- 60	+ 25
Food and liquor stores	1,276	1,269	1,269	1,203	+ 7	+ 73
Automotive and accessories dealers	753	748	742	746	+ 5	+ 7
Apparel and accessories stores	519	543	549	501	- 29	+ 18
Other retail trade	3,127	3,126	3,077	3,040	+ 1	+ 87
FINANCE	1,907	1,893	1,875	1,831	+ 14	+ 76
SERVICE	4,852	4,834	4,768	4,841	+ 18	+ 11
GOVERNMENT	6,356	6,377	6,377	5,741	- 21	+ 615
Federal	2,313	2,271	2,244	1,820	+ 42	+ 493
State and local	4,043	4,106	4,133	3,921	- 63	+ 122

1/ Preliminary

TABLE 2

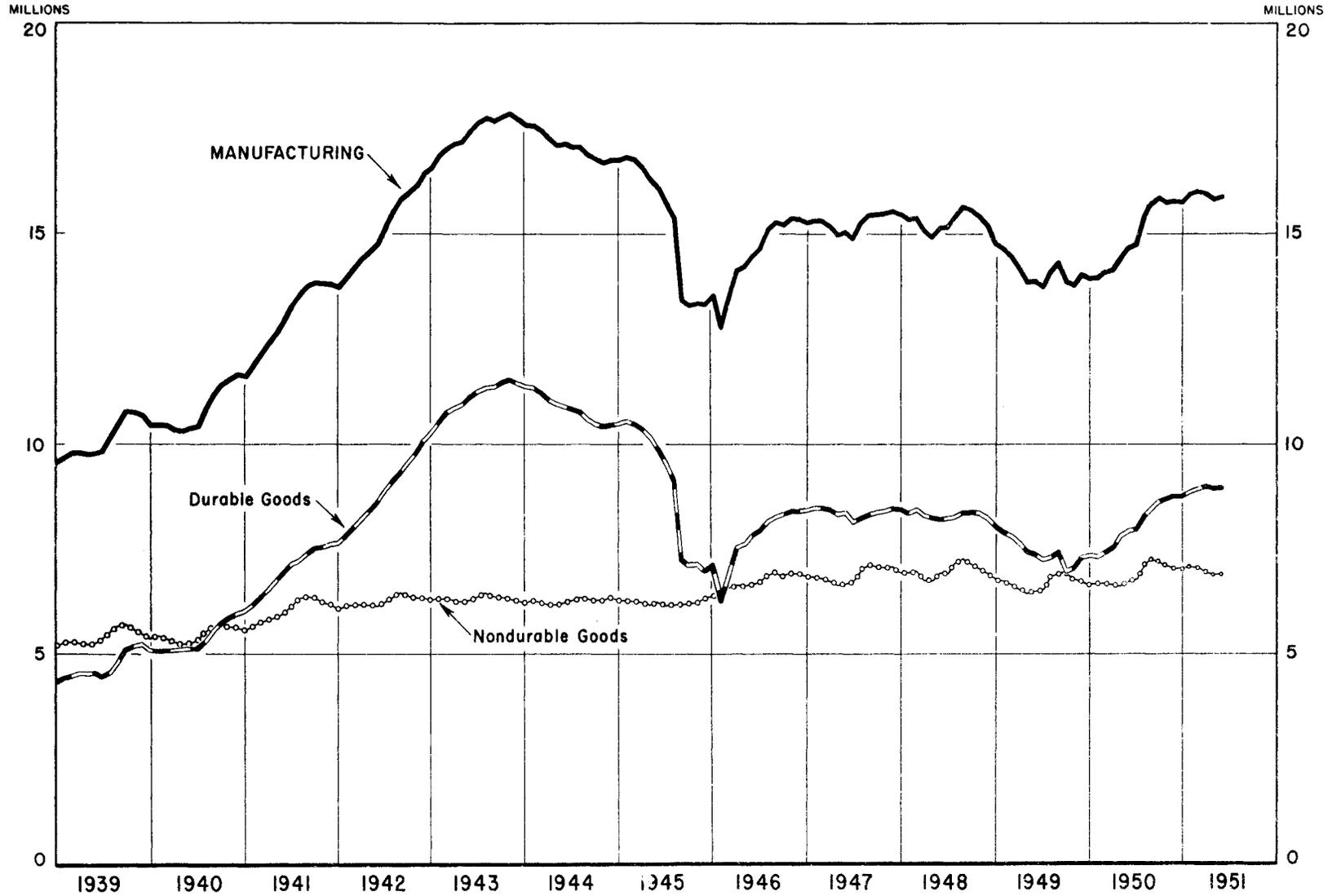
Employees in Manufacturing Industry Groups
July, June, May 1951 and July 1950

(In thousands)

Industry Group	1951			1950	Net change	
	July 1/	June	May	July	June 1951 to July 1951	July 1950 to July 1951
MANUFACTURING	15,830	15,964	15,873	14,777	-134	+1,053
DURABLE GOODS	8,858	9,006	8,987	7,976	-148	+ 830
Ordnance and accessories	44.5	41.9	39.9	23.7	+ 2.6	+ 20.8
Lumber and wood products (except furniture)	819	843	835	812	- 24	+ 7
Furniture and fixtures	330	335	349	350	- 5	- 20
Stone, clay, and glass products	553	562	560	512	- 9	+ 41
Primary metal industries	1,349	1,354	1,345	1,222	- 5	+ 127
Fabricated metal products (except ordnance, machinery, and transportation equipment)	985	1,019	1,026	929	- 34	+ 56
Machinery (except electrical)	1,602	1,620	1,604	1,343	- 18	+ 259
Electrical machinery	903	934	932	817	- 31	+ 86
Transportation equipment	1,521	1,519	1,512	1,297	+ 2	+ 224
Instruments and related products	293	299	297	242	- 6	+ 51
Miscellaneous manufacturing industries	458	479	487	430	- 21	+ 28
NONDURABLE GOODS	6,972	6,958	6,886	6,799	+ 14	+ 173
Food and kindred products	1,615	1,538	1,483	1,617	+ 77	- 2
Tobacco manufactures	82	82	81	82	0	0
Textile-mill products	1,256	1,295	1,301	1,250	- 39	+ 6
Apparel and other finished textile products	1,111	1,119	1,120	1,097	- 8	+ 14
Paper and allied products	426	502	498	465	- 6	+ 31
Printing, publishing, and allied industries	759	761	760	739	- 2	+ 20
Chemicals and allied products	742	742	742	669	0	+ 73
Products of petroleum and coal	266	264	260	241	+ 2	+ 25
Rubber products	268	273	271	249	- 5	+ 19
Leather and leather products	377	382	370	390	- 5	- 13

1/ Preliminary

EMPLOYMENT IN MANUFACTURING INDUSTRIES ALL EMPLOYEES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

INDUSTRY EMPLOYMENT REPORTS

AUTOMOBILES

...cut-backs in employment expected

Employment in the automobile industry¹ declined during the second quarter of 1951 from the record-breaking levels attained since the outbreak of Korean hostilities. June employment showed a net decline of over 56,000 production workers from the 1951 high of 793,400 in March. During the third and fourth quarter fewer workers will be employed to produce the limited number of cars and trucks scheduled under the Controlled Materials Plan. Anticipated employment declines on civilian products may reach 100,000 workers, but will be partly offset by increasing employment on defense production of such items as jet aircraft engines and tanks, for which the automobile industry already holds contracts.

Employment Trends and Outlook

Month by month declines in employment characterized the second quarter of 1951 in contrast to the all-time high quarterly average of 784,000 production workers during the first quarter. In June 737,300 production workers were employed, a net decline of over 56,000 workers from the 1951 high of 793,400 in March. Some plants have shut down completely for a week or two. In other plants, the second shift has been eliminated or assembly line production halted for 1 or 2 days during the week.

By the end of 1951, automobile employment is expected to show a decline of about 100,000 production workers from second quarter levels, if the workweek remains close to the present average of about 40 hours. This estimate is based upon an output in the fourth quarter, under the Controlled Materials Plan, of 1.1 million passenger cars and 275,000 trucks, and a small increase in the production of replacement parts over 1950 levels. (See table II.)

1. The automobile industry includes establishments primarily engaged in manufacturing motor vehicles, passenger-car bodies, truck and bus bodies, motor vehicle parts and accessories, and truck and automobile trailers.

Statements in early July by several spokesmen for the automobile industry indicate that only a small percentage of their workers were actually engaged in producing military equipment at that time although a growing volume of defense contracts had been obtained. Large increases in the number of automobile workers in defense production are not anticipated until 1952; only a moderate rise in employment on military orders is expected during the second half of 1951. As these increases occur, they will partly offset employment declines in motor-vehicle production.

Estimates of declining employment for the second half of 1951 contrast sharply with the 1950 pattern. In May 1950, automobile employment began a steady upward climb, rising to an all-time peak in October of nearly 795,000 production workers. The 1950 employment average of 713,500 exceeded all previous levels for the industry by more than 50,000, even though there was a long work stoppage at one of the major producers.

The trend of employment has been upward throughout most of the post World War II period despite wide monthly fluctuations. Employment for the years 1947 to 1949 averaged about 14 percent higher than the prewar peak of 571,000 production workers in 1941. Increases in employment during World War II reflect conversion of the industry to defense production with only a small proportion of total manhours devoted to the output of motor vehicles.

TABLE I

PRODUCTION WORKER EMPLOYMENT - AUTOMOBILE INDUSTRY, 1932-51
(In thousands)

<u>Period</u>	<u>Total</u>	<u>Period</u>	<u>Total</u>
1932...	257	1950: January.....	675.4
1933...	257	February.....	567.1
1934...	380	March.....	575.6
1935...	408	April.....	595.3
1936...	430	May.....	736.3
1937...	505	June.....	764.7
1938...	306	July.....	756.7
1939...	402	August.....	780.9
1940...	465	September.....	787.8
1941...	571	October.....	794.8
1942...	490	November.....	760.4
1943...	642	December.....	767.3
1944...	663		
1945...	538	1951: January.....	767.3
1946...	544	February.....	790.6
1947...	648.8	March.....	793.4
1948...	657.6	April.....	774.1
1949...	643.5	May.....	752.6
1950...	713.5	June.....	737.3

Production Trends

Output of motor vehicles in the United States in 1950 surpassed all previous levels. The total production of over 8 million units included 6.6 million passenger cars. Although the first quarter total was only 1.6 million vehicles, the industry produced well over 2 million vehicles in each of the last three quarters of the year. Capacity operations throughout the entire year would have resulted in an even higher total output. Part of this huge demand for motor vehicles was the result of advance buying in anticipation of future shortages. However, the American market has absorbed about 3 million passenger cars each 6 months since the beginning of 1949.

Production during the first quarter of 1951 was close to the 1950 level with a total of about 1,980,000 vehicles -- 1.6 million passenger cars and 378,000 trucks. Total output during the second quarter declined by more than 72,000 units from the first quarter rate. Passenger car production dropped over 106,000 units, but an increase in truck production partially offset the decline. Truck production in the second quarter of 1951 reached nearly 413,000 units -- the highest on record. The previous peak level was attained in the second quarter of 1948 when 362,000 trucks were produced.

Materials restrictions were applied to the production of passenger cars but not to truck production in the second quarter. Steel, copper, and aluminum were allocated to manufacturers of passenger cars on the basis of their use of these metals during the period of January-June 1950, with some modification for inequities. Steel consumption was held to slightly less than 80 percent of base period use, copper to 70 percent, and aluminum to 65 percent. Materials limitations in the second quarter resulted in a smaller unit decline than these percentages indicate, although by the end of the period some plants were forced to close down for short periods of time because of the lack of materials.

In July, the National Production Administration began to allocate the three basic metals -- steel, copper and aluminum -- to both military and civilian claimants, under the Controlled Materials Plan. Under present controls, producers of passenger cars are permitted only enough steel to make about 1.2 million units in the third quarter. Individual producers, although limited in the amounts of material available, have discretion as to actual output during the period, and may use their supplies to produce a larger number of light-weight cars or a smaller number of heavier ones. Truck production of 275,000 units in the third quarter is provided for under the Controlled Materials Plan. Output by individual producers is based on a percentage of this total.

T A B L E I I

MOTOR VEHICLE OUTPUT BY QUARTERS, 1949-51
(In thousands)

Type Vehicle and Period	Number of Vehicles		
	1949	1950	1951
Passenger cars:			
First quarter	1,053	1,343	1,602
Second quarter	1,325	1,751	1,495
Third quarter	1,575	1,895	<u>1/</u> 1,200
Fourth quarter	1,162	1,677	<u>1/</u> 1,100
Total	5,115	6,666	<u>1/</u> 5,397
Average	1,279	1,666	<u>1/</u> 1,349
Trucks and busses:			
First quarter	323	294	378
Second quarter	293	360	413
Third quarter	288	352	<u>1/</u> 275
Fourth quarter	225	326	<u>1/</u> 275
Total	1,129	1,332	<u>1/</u> 1,341
Average	282	333	<u>1/</u> 335
TOTAL:			
First quarter	1,376	1,637	1,980
Second quarter	1,618	2,113	1,908
Third quarter	1,863	2,248	<u>1/</u> 1,475
Fourth quarter	1,387	2,005	<u>1/</u> 1,375
Total	6,244	8,003	<u>1/</u> 6,738
Average	1,561	2,001	<u>1/</u> 1,685

1/ Estimated

Source: U. S. Department of Commerce, Survey of Current Business.
Data include total factory sales of motor vehicles produced in
plants in the United States.

Fourth quarter allocations have not yet been announced for trucks, although it appears likely that some upward adjustment may be made, particularly if larger quantities of trucks are scheduled for military deliveries. A further cutback in passenger car production for the fourth quarter has been announced, limiting output to about 1.1 million cars. These estimates indicate that in 1951 total motor vehicle output will be slightly higher than in 1949 -- down about 1.2 million units from the 8 million peak achieved in 1950. Production of passenger cars will total 5.4 million in contrast to last year's total of 6.6 million, but truck output will be about the same as in 1950 -- 1.3 million units.

Replacement parts sales which took a declining proportion of total dollar sales of the automobile industry in 1950, increased during the first quarter of 1951. The 1951 production is expected to be about 10 percent higher than the 1950 total. Limitations on output of new vehicles tend to stimulate demand for replacement parts as the average age of vehicles in use increases. No limitation has been made on metal supplies for the production of replacement parts.

Military Output by the Automobile Industry

Currently defense contracts for military items to be produced by the automobile industry are estimated to total well over \$7 billion. In addition, many aircraft contracts are being subcontracted to plants now turning out automobile engines and parts. Output of military equipment by the automobile industry is increasing. The large expansion, however, is not expected until well into 1952. The increase in employment resulting from military contracts has thus far been obscured by the downward trend of employment in the production of civilian items.

The situation today under partial mobilization differs from the Nation's experience in World War II. At that time automobile and truck production for civilian use was completely curtailed, and existing facilities were converted to the manufacture of military items. At the height of World War II motor vehicles and parts, including combat vehicles, represented only about 32 percent of the industry's total dollar volume of shipments. Aircraft and parts accounted for 16 percent of total shipments and aircraft engines nearly 14 percent. Remaining shipments by the industry between July 1943 - June 1944 included such diverse items as tanks, guns and mounts, ammunition, bombs, depth charges, mines and torpedoes, amphibian combat vehicles and parts, and marine engines. Present mobilization plans call for the production of many of these same items by the automobile industry.

Several factors tend to create a longer time lag between the awarding of a military contract and the delivery date of the scheduled item. One factor is the complexity of design of most equipment introduced since World War II, requiring a longer period of engineering and tooling-up before assembly line production can be started. Since no complete curtailment of civilian automobile production is anticipated, plant facilities must be increased if both military and civilian output are to be achieved simultaneously. The shortage of machine tools for these plants has also slowed the transition to defense production.

Location of the Industry

About three-fourths of all workers in the automobile industry are employed in the three East North Central States of Michigan, Ohio, and Indiana. More than half of all automobile employment is concentrated in Michigan. However, this represents a decline from the prewar level when nearly two-thirds of all automobile workers were employed in that state.

Other States in which a substantial number of automobile workers are employed include New York, Wisconsin, Pennsylvania, California and Illinois.

Industry Employment Reports

MERCHANT MARINE

. . . employment leveling off after rapid expansion

Employment in the American merchant marine has increased almost one-third since the outbreak of hostilities in Korea. It climbed from a post-war low of about 75,000 in June 1950, to about 100,000 by July 1951.

This rapid growth in employment has created a tight balance between labor supply and demand. As a result, shortages have appeared in the following occupations: radio operator, high pressure marine engineer, able seaman, and in the skilled engine department occupations such as oiler, fireman, water tender, and electrician. To date, however, there have been no manpower shortages comparable to those of World War II. Moreover, the industry is approaching the peak of its anticipated peacetime expansion so that few new jobs will be added during the next few years. During this period the main manpower problem will be to find replacements for the thousands of men who leave the industry each year.

Merchant Marine Vital to National Defense

The American merchant marine is a vital link in the Nation's transportation system. In time of war it becomes an indispensable auxiliary to our Armed Forces. In time of peace it carries cargo and passengers to and from other countries and our offshore possessions.

In July 1951, the active American merchant marine consisted of about 1,900 deep-sea vessels of 1,000 gross tons or over. Most of the ships are dry cargo vessels and tankers. About 1,300 of these vessels are privately owned and operated and the remainder government owned. With the exception of about 160 vessels operated by the Military Sea Transport Service and government owned ships are operated by private steamship lines.

Activity Greatest Along Atlantic Coast

Shipping operations are scattered along 7,000 miles of coast line in 70 ports with more than half of the Nation's shipping activity limited to 16 principal deep sea ports along the Atlantic, Gulf, and Pacific Coasts. Greatest sea-borne commerce flows through the Atlantic ports, with New York the busiest port in the Nation. Other important Atlantic ports are those in the Philadelphia harbor area, Baltimore, Boston, Norfolk, Charleston, and Savannah. The Gulf ports handle a substantial volume of cargo, much of which is petroleum and petroleum products. Chief ports in the Gulf area are Houston and Galveston, New Orleans, Port Arthur, Mobile and Tampa. On the West Coast the principal ports are those in the San Francisco Bay area, the San Pedro-Wilmington area, and the Puget Sound and Columbia River ports.

Shipping Rises Sharply to Meet Defense Needs

The outbreak of war in Korea on June 25, 1950, marked a turning point in the shipping outlook. Shipping activity declined during the period following World War II. While war-stimulated business was declining, the world merchant fleet grew steadily. This brought intensified competition which forced down world shipping rates. By the fall of 1949 and the first half of 1950 many American operators found it more difficult than usual to compete with lower cost foreign operators. As a result charters were canceled and American vessels were laid up. By June 1950 the American flag fleet had shrunk to about 1,400 vessels, from the more than 4,000 American flag vessels in operation during World War II.

Korean hostilities created a sharp demand for additional shipping space. Ships were needed to transport troops and supplies to the Korean fighting fronts, to bolster our European defenses, and to help our allies stock pile strategic materials. Direct military requirements arising from the war in Korea were not the only reasons for the shipping boom. A large volume of coal, grain, and foodstuffs had also begun to move to Europe in the latter part of 1950, some of it Economic Cooperation Administration aid and much of it financed by European countries with their own funds. On the import side the United States began to make substantial imports of petroleum and strategic ores and minerals to build up our stock piles.

The increased volume of world trade resulted in a shortage of available ships. This was reflected in the sharp increase of freight rates, particularly in the unscheduled service. For example, coal moves to Europe at a rate of \$12 per ton compared with \$4 per ton before the outbreak of hostilities in Korea. To meet the demand for shipping space the active, American flag, oceangoing fleet increased from about 1,400 vessels in June 1950 to about 1,900 in July 1951.

The outlook for the latter part of 1951 and for 1952 is dependent upon many unpredictable factors. If the present tempo of the limited mobilization program continues through 1952, military and economic requirements throughout the world will necessitate the addition of another 50 to 100 American flag vessels. Economic Cooperation Administration is carrying on a heavy coal shipment program this summer and in the fall world grain shipments will pick up. In addition the military requirements for a European build-up will strengthen the industry's position. By early 1952 the American fleet will level off at about 1,950 to 2,000 ships. This will probably represent the peak of maritime expansion. In the event of full mobilization the number of ships required would of course greatly exceed this estimate.

TABLE 1
ESTIMATED AVERAGE MONTHLY EMPLOYMENT ON AMERICAN FLAG MERCHANT VESSELS
1929-51 ^{1/}

<u>Year</u>	<u>Average monthly employment ^{2/}</u>
1929	63,825
1930	62,360
1931	57,180
1932	52,600
1933	54,620
1934	56,295
1935	56,575
1936	53,025
1937	57,170
1938	50,905
1939	52,445
1940	50,975
1941	50,225
1942	47,650
1943	76,800
1944	125,755
1945	158,755
1946	127,175
1947	115,000
1948	^{3/} 90,000
1949	^{3/} 80,000
1950	^{3/} 62,000
July 1951	^{3/} 87,000

^{1/} Represents personnel on active merchant steam and motor vessels of 1,000 gross tons and over, engaged in deep-sea trades. Includes only combination passenger and freight, freight, and tank vessels.

^{2/} Excludes personnel employed on vessels under bareboat charter, or owned by Army or Navy.

^{3/} Includes personnel employed on vessels under bareboat charter.

Source: United States Maritime Administration

Employment Up One-Third Since Korean War

Since the outbreak of hostilities in Korea, employment has increased substantially. By July 1951, shipboard employment had climbed to about 100,000. It is expected that by early 1952 the industry will have 1,950 to 2,000 vessels in active operation, a gain of from 50 to 100 ships over the July 1951 figure. From 2,000 to 4,000 seamen will be needed to man these additional ships based on an average crew of 40.

Wide fluctuations in employment are characteristic of the ocean shipping industry. These ups and downs in employment are associated with changes in world political and economic conditions and particularly with war and national defense needs. War, with its tremendous requirements for shipping space, causes a sharp rise in maritime employment. Table 1 shows that at the peak of World War II employment on American flag merchant vessels rose to almost 160,000, compared with 50,000 prior to the attack on Pearl Harbor. The volume of shipping produced for war was far greater than could be utilized in peacetime commerce and excess ships were sold or put into reserve anchorages. Employment declined steadily to a level of about 75,000 in June 1950.

Employment Outlook Favorable

Employment levels are expected to remain high for the next few years if international conditions remain tense. The long-range employment trend, however, will be downward. Many nations are expanding their merchant fleet. This will intensify world shipping competition and force rates down. Any substantial drop in the current rate structure will result in the laying-up of a number of privately owned American flag vessels. Moreover, any reductions in military shipping needs and Economic Cooperation Administration requirements would cut down the size of the active government owned fleet. But for the next few years at least, despite the levelling off of employment, the industry will offer favorable employment opportunities because of high labor turn over.

Labor Turn Over High

Ocean voyages are generally long, confining, and hazardous so that seamen customarily take time off between trips for relaxation ashore. Such time off may be for a week or more. Others leave the sea for short periods of time because of illness or for personal or business reasons. Many more tire of sea life and the frequent spells of unemployment and permanently leave the industry for shore employment. On the average, seamen work about 8 or 9 months in the year, and there is constant movement into and out of the industry at all times.

To replace men who temporarily or permanently leave the industry there must be a reserve of seamen for manning purposes. The size of this reserve is estimated at about 25 to 30 percent of the total number of men employed. Actually this reserve force varies from time to time. In bad times the reserve force is generally larger than 30 percent because of the number of men looking for work, but it is much smaller than 25 percent when maritime employment rises sharply.

The pool of potential seamen is far greater than that which was available at the outset of World War II, when nearly 100,000 experienced workers were brought back to sea according to a Maritime Commission estimate. Moreover, the active labor force today is almost twice as large as that existing in December 1941.

World War II experience leaves little doubt that in time of grave national peril many experienced seamen would return to the sea to help meet wartime shipping needs. During the present period of limited mobilization, however, it has been extremely difficult to persuade experienced men to return. They can be given no assurance of long-term employment and are thus naturally reluctant to give up secure, year-round, shore jobs. As a result, whenever ship sailings are stepped up it is difficult to recruit experienced men.

EMPLOYMENT TRENDS

AUGUST 1951

JULY - AUGUST EMPLOYMENT INCREASE LESS THAN SEASONAL

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

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

NONDURABLES FALL BELOW 1950 LEVEL

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

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

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

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

TABLE 1

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

(In thousands)

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

1/ Preliminary

TABLE 2

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

(In thousands)

Industry group	1951			1950	Net Change	
	August	July	June	August	July 1951 to Aug. 1951	Aug. 1950 to Aug. 1951
	<u>1/</u>					
MANUFACTURING	15,970	15,829	15,950	15,450	+141	+520
DURABLE GOODS	8,900	8,855	8,996	8,294	+ 45	+606
Ordnance and accessories	49.4	44.0	42.2	25.0+	5.4	+24.4
Lumber and wood products (except furniture)	823	814	837	845	+ 9	- 22
Furniture and fixtures	330	332	335	367	- 2	- 37
Stone, clay, and glass products	561	553	562	532	+ 8	+ 29
Primary metal industries	1,353	1,341	1,357	1,256	+ 12	+ 97
Fabricated metal products (except ordnance, machinery, and transportation equipment)	993	993	1,019	972	0	+ 21
Machinery (except electrical)	1,576	1,598	1,615	1,374	+ 22	+202
Electrical machinery	927	919	932	853	+ 8	+ 74
Transportation equipment	1,505	1,502	1,520	1,347	+ 3	+158
Instruments and related products	309	299	299	252	+ 10	+ 57
Miscellaneous manufacturing industries	474	460	478	471	+ 14	+ 3
NONDURABLE GOODS	7,070	6,974	6,954	7,156	+ 96	- 86
Food and kindred products	1,654	1,624	1,533	1,718	+ 30	- 64
Tobacco manufactures	95	81	83	89	+ 14	+ 6
Textile-mill products	1,240	1,256	1,296	1,316	- 16	- 76
Apparel and other finished textile products	1,147	1,106	1,117	1,208	+ 41	- 61
Paper and allied products	496	493	501	479	+ 3	+ 17
Printing, publishing, and allied industries	757	758	761	741	- 1	+ 16
Chemicals and allied products	756	745	742	684	+ 11	+ 72
Products of petroleum and coal	266	266	264	254	0	+ 12
Rubber products	275	272	275	253	+ 3	+ 17
Leather and leather products	384	373	382	409	+ 11	- 25

1/ Preliminary



SECOND VOLUME ON STATE AND AREA EMPLOYMENT DATA NOW AVAILABLE

NEW ANNUAL PUBLICATION

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

SCOPE OF THE DATA

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

DATA HAVE MANY USES

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

SUMMARY OF FINDINGS

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

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

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

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

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

COPIES
AVAILABLE
TO PUBLIC

Copies of the volume "Nonagricultural Employment by State, 1950" (as well as the previous volume "Area Employment, 1950") may be obtained by writing to the Bureau of Labor Statistics, Department of Labor, Washington 25, D. C. Current employment data for the series contained in the foregoing volumes are available monthly in the Bureau's regular report EMPLOYMENT AND PAYROLLS, appearing on page A:13 and A:17 of the present issue. Requests for more detailed industry information should be directed to the Bureau of Labor Statistics or to the appropriate State agency. Names and addresses of these agencies appear on page iv.

INDUSTRY HIGHLIGHTS

PRIMARY ALUMINUM

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

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

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

CRUDE PETROLEUM AND NATURAL GAS PRODUCTION

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

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

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

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

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

INDUSTRIAL CHEMICALS

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

TEXTILE MILL PRODUCTS

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

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

INDUSTRY EMPLOYMENT REPORTS

METAL MINING

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

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

Nature of the Industry

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

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

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

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

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

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

SOURCE: United States Bureau of Mines

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

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

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

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

Mining Operations

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

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

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

Work Force.

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

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

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

Trends in Production and Employment

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

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

Trends in Hours and Earnings

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

The average workweek of 46.2 hours reported for copper mining was even greater than the average of 45.4 hours reported for this metal for the war years 1942-1944. However, iron mining with 42.4 and lead-zinc with 43.1 average weekly hours during January-June 1951 fell short of their 1942-1944 average weekly hours of 42.7 and 45.8 respectively.

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

Table 2

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

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

1/ Source: United States Bureau of Mines

2/ Source: United States Bureau of Labor Statistics

n/a: Not available

Table 3
Production, Employment, Hours, and Output Per Man-Hour
in Copper Mining

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

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

n/a: Not available

Table 4

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

Year	Crude ore lead and zinc: short tons (000's) 1/	Recoverable metal lead and zinc short tons (000's) 1/	All employaes 2/ (000's)	Production workers 2/ (000's)	Average weekly hours 2/	Indexes of ore output per man-hour (1939 = 100)	
						Copper ore	Recoverable metal
1939 . .	24,568	972	n/a	16.3	38.7	100.0	100.0
1940 . .	28,582	1,095	n/a	18.7	39.4	99.6	96.6
1941 . .	32,850	1,182	n/a	19.5	40.0	108.1	98.3
1942 . .	35,458	1,236	n/a	20.5	43.3	102.5	90.5
1943 . .	37,457	1,171	n/a	23.0	44.0	95.1	78.3
1944 . .	38,829	1,112	n/a	20.8	44.2	108.4	78.7
1945 . .	35,451	976	n/a	18.2	44.3	113.0	78.7
1946 . .	33,177	880	n/a	19.5	41.7	104.8	70.3
1947 . .	29,029	1,005	22.9	20.7	41.3	87.2	76.4
1948 . .	23,786	1,002	21.7	19.2	41.3	77.0	82.1
1949 . .	25,099	984	20.6	18.1	41.4	86.0	85.5
1950 . .	n/a	1,044	19.7	17.2	41.6	n/a	94.9

1/ Source: United States Bureau of Mines

2/ Source: United States Bureau of Labor Statistics

n/a: Not available

Output Per Man-Hour

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

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

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

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

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

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

Manpower Demand and Supply

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

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

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

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

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

Today it is much more difficult to recruit and hold workers than it was in the period immediately preceding World War II. There are virtually no reserves of unemployed workers such as were available in 1940 and 1941. Further, the industry now has a higher proportion of workers who are likely to leave the mines when the outside job market is good. In the past, a large proportion of the miners in certain types of mines were foreign born men who, once in the mines, tended to stay there. Younger, native-born men, many of whom have had experience in the armed forces or in other types of work are more likely to leave the mines for more pleasant jobs. Moreover, the groups in the population from which most "extra" workers are drawn when the labor supply is tight—women, teenagers, physically handicapped, and older workers—are groups which cannot be used in mine work. State laws forbid the employment of women in mines, except in a few surface and technical operations. Most States require a minimum age of 18 for underground mine work. The work is generally too strenuous for the physically handicapped and older workers who are not accustomed to such labor. Many young men physically qualified for mine work are also subject to military service.

EMPLOYMENT TRENDS

SEPTEMBER 1951

NONFARM EMPLOYMENT RECORDS LESS-THAN- USUAL AUG-SEPT GAIN

Employment in nonfarm establishments rose by 180,000 between mid-August and mid-September, contrasting with an average August-September gain of nearly a half million during the past five years, according to preliminary estimates of the U. S. Department of Labor's Bureau of Labor Statistics. Defense-related industries continued to add workers, and employment increased seasonally in retail stores and public school systems. However, many consumer goods industries reported employment reductions over the month, instead of the gains usually recorded at this time of year, and employment in contract construction declined slightly. (See Tables 1 and 2.)

The number of employees in nonfarm establishments, despite the less-than seasonal gain over the month, was at an all-time peak of 46.9 million in September, and nearly 1.2 million higher than a year earlier. With unemployment in September about 300,000 below the previous postwar low for the month, according to Census Bureau estimates, the overall employment situation continued favorable in the Nation as a whole.

SOFT-GOODS FALL TO POSTWAR LOW

Over the month, employment in nondurable goods manufacturing declined by about 40,000, in contrast to an average August-September increase of 100,000 in recent years. This resulted largely from contraseasonal employment reductions in the textile, apparel, and leather industries, where a slackening in consumer demand since early Spring has led to decreased output. Employment this September in these three industry groups, taken together, was 230,000, or 8 percent, below the high levels of a year earlier, and the lowest for the month since 1945.

Employment in durable goods manufacturing rose slightly over the month, and, at almost 9 million this September, was a half million higher than in September 1950. In industries related to the defense production program, such as aircraft, metalworking machinery, instruments, and shipbuilding, employers continued to expand their workforce. In most of the consumer durable goods industries, employment remained below the levels of a year ago, as a result of curtailed metals supplies and decreased demand for many consumer products since the Spring of 1951.

SOME CONSUMER DURABLES RISE However, the downtrend in employment in certain consumer durable goods industries was checked in September, indicating that a growing volume of defense work may have offset cutbacks in the output of civilian goods. Employment in automobile plants increased slightly between August and September, the first over-the-month gain recorded since March of this year. On the other hand, plants making jewelry, silverware, and electrical appliances reported continued employment reductions.

Employment in contract construction declined by about 90,000 between August and September, reflecting metals shortages and restrictions on housing and commercial construction. Although this was a considerably greater August-to-September reduction than in any previous postwar year, contract construction employment - at 2.7 million - was still at an all-time high for the season as expenditures for new industrial and military facilities continued to increase.

GOVT EMPLOYMENT UP AS SCHOOLS REOPEN Employment in State and local governments increased by about 140,000 between August and September, with the reopening of schools at the end of the Summer vacation period. The number of workers on Federal payrolls rose only slightly over the month, as increased civilian employment in Federal defense activities, such as naval yards and military bases, offset a small employment decline in nondefense agencies. The August-to-September gain of 10,000 in Federal defense employment was less than one-third the average monthly increase since the outbreak of the Korean War.

TABLE 1

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

(In thousands)

Industry division and group:	1951			1950	Net Change	
	Sept.	Aug.	July	Sept.	Aug. to Sept. 1951	Sept. to Sept. 1950
	1/					
TOTAL	46,870	46,689	46,437	45,684	+ 181	+ 1,186
MANUFACTURING	16,026	16,010	15,837	15,685	+ 16	+ 341
MINING	925	928	909	946	- 3	- 21
Metal mining	104	106	105	103	- 2	+ 1
Bituminous-coal	371	371	360	407	0	- 36
Nonmetallic mining and quarrying	109	110	108	103	- 1	+ 6
CONTRACT CONSTRUCTION	2,703	2,791	2,747	2,626	- 88	+ 77
TRANSPORTATION AND PUBLIC UTILITIES	4,180	4,189	4,177	4,139	- 9	+ 41
Transportation	2,926	2,928	2,919	2,913	- 2	+ 13
Communication	698	700	698	671	- 2	+ 27
Other public utilities	556	561	560	555	- 5	+ 1
TRADE	9,777	9,623	9,653	9,641	+ 154	+ 136
Wholesale trade	2,598	2,596	2,592	2,605	+ 2	- 7
Retail trade	7,179	7,027	7,061	7,036	+ 152	+ 143
General merchandise stores	1,481	1,397	1,405	1,474	+ 84	+ 7
Food and liquor stores	1,265	1,256	1,266	1,210	+ 9	+ 55
Automotive and accessories dealers	756	757	755	743	- 1	+ 13
Apparel and accessories stores	534	495	509	540	+ 39	- 6
Other retail trade	3,143	3,122	3,126	3,069	+ 21	+ 74
FINANCE	1,892	1,911	1,907	1,827	- 19	+ 65
SERVICE	4,822	4,837	4,851	4,816	- 15	+ 6
GOVERNMENT	6,545	6,400	6,356	6,004	+ 145	+ 541
Federal	2,337	2,329	2,313	1,916	+ 8	+ 421
State and local	4,208	4,071	4,043	4,088	+ 137	+ 120

1/ Preliminary.

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TABLE 2

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

(In thousands)

Industry Group	1951			1950	Net Change	
	Sept. 1/	Aug.	July	Sept.	Aug. 1951 to Sept. 1951	Sept. 1950 to Sept. 1951
MANUFACTURING	16,026	16,010	15,837	15,685	+ 16	+ 341
DURABLE GOODS	8,940	8,885	8,859	8,423	+ 55	+ 517
Ordnance and accessories	48.5	47.0	44.2	26.6	+ 11.5	+ 21.9
Lumber and wood products (except furniture)	805	817	814	853	- 12	- 48
Furniture and fixtures	337	333	331	376	+ 4	- 39
Stone, clay and glass products	551	556	553	532	- 5	+ 19
Primary metal industries	1,349	1,352	1,341	1,276	- 3	+ 73
Fabricated metal products (except ordnance, machinery, and transportation equipment)	987	996	994	996	- 9	- 9
Machinery (except electrical)	1,586	1,568	1,595	1,368	+ 18	+ 218
Electrical machinery	951	933	920	872	+ 18	+ 79
Transportation equipment	1,549	1,515	1,508	1,365	+ 34	+ 184
Instruments and related products	306	301	299	265	+ 5	+ 41
Miscellaneous manufacturing industries	470	467	460	493	+ 3	- 23
NONDURABLE GOODS	7,086	7,125	6,978	7,262	- 39	- 176
Food and kindred products	1,704	1,699	1,623	1,739	+ 5	- 35
Tobacco manufactures	95	91	81	96	+ 4	- 1
Textile-mill products	1,225	1,246	1,261	1,347	- 21	- 122
Apparel and other finished textile products	1,150	1,161	1,107	1,218	- 11	- 68
Paper and allied products	489	494	493	488	- 5	+ 1
Printing, publishing, and allied industries	761	761	758	746	0	+ 15
Chemicals and allied products	763	752	745	701	+ 11	+ 62
Products of petroleum and coal	265	266	265	251	- 1	+ 14
Rubber products	268	273	271	265	- 5	+ 3
Leather and leather products	366	382	374	411	- 16	- 45

1/ Preliminary.



VOLUME ON HOURS AND EARNINGS FOR STATES AND AREAS JUST RELEASED

NEW ANNUAL PUBLICATION

The third release in the Bureau of Labor Statistics' series on State and area data, entitled "Hours and Earnings in Manufacturing by State and Area, 1947-1950," is now available for distribution. It follows the two earlier volumes "Area Employment, 1950" and "Nonagricultural Employment by State, 1950," descriptions of which can be found in the May 1951 and July 1951 issues, respectively, of EMPLOYMENT AND PAYROLLS.

These publications comprise 3 of a series of 5 volumes under the general title "Employment, Hours, and Earnings--State and Area Data." The names of the remaining volumes, to be released shortly, are as follows: Manufacturing Employment by State and Summary Volume--State and Area Data. All five volumes, containing data prepared by State agencies cooperating with the Bureau of Labor Statistics, will be prepared annually.

SCOPE OF THE DATA

The 1950 volume on "Hours and Earnings in Manufacturing by State and Area" includes monthly data on hours and earnings for 40 States and 66 metropolitan areas. The States for which data were not available at the time this publication went to press included Colorado, Illinois, Maryland, Montana, Nevada, Ohio, West Virginia, and the District of Columbia. Also included in the current volume are all the hours and earnings series prepared by States and areas since 1947. Statistics collected prior to 1949, however, have a more limited coverage; fewer than 25 States and 30 areas contributed on a regular monthly basis up to that time.

Hours and earnings data for 114 basic areas will be included in future publications. Population in these areas comprises half the total population of the United States. Each State is scheduled to participate by preparing estimates for at least one area. Fourteen States will contribute data on three or more areas. Information for several areas is compiled by State agencies in addition to the basic group, and this number may expand as the program advances.

DATA SERVE MANY USES

Information on the hours and earnings of factory workers is a basic indicator of the economic well-being of State and local areas. Changes in manufacturing industries, one of the more dynamic segments of the economy, have secondary effects on trends in trade, services, transportation, and other industries and consequently are important as a measure of changes in the community's welfare. Earnings in each locality are not only an approximate measure of the worker's return for his labor,

but also of the amount he most likely will spend on goods and services. Information on earnings in conjunction with consumer prices affords an opportunity to measure changes in the purchasing power of the worker's income.

These data are, therefore, highly useful to business men and merchants in analyzing markets, in setting sales quotas, and in assessing areas for plant locations. Banks, universities, and fact-finding organizations use data on factory hours and earnings in compiling local business indexes. State and local government officials make use of such statistics in administering unemployment compensation programs and in estimating income tax revenues. Information on State and area earnings is important in the analysis of defense manpower mobilization problems.

SUMMARY More workers were employed in the United States as a
OF FINDINGS whole in 1950 than in 1949 and they worked substantially longer hours. The workweek increased in virtually all States and particularly in those where durable goods industries were located. From December 1949 to December 1950, for example, the New England, Middle Atlantic, and Great Lakes regions generally reported gains in excess of 4 percent. The South and South Central States most typically averaged gains of approximately 2 percent.

Only four metropolitan areas of the 66 reporting--New York City, San Diego, Calif., Johnstown, Pa., and Manchester, N.H.--reported workweeks in 1950 which, on the average, indicated little or no overtime work (fewer than 38 hours weekly). Many areas, on the other hand, indicated average scheduled overtime of 4 hours weekly for the year (average workweek of at least 42 hours).

While average factory hourly earnings rose steadily during 1950, there was considerable diversity of movement among the States. Weekly earnings reached an all-time high of \$63.88 in December 1950; almost every State in the Pacific, Great Lakes and Mountain regions exceeded the national average while the reverse was generally true in the New England, South Atlantic and South Central regions.

COPIES Copies of the volume "Hours and Earnings in Manufacturing
AVAILABLE by State and Area, 1947-1950" (as well as the two previous
TO PUBLIC volumes "Area Employment 1950" and "Nonagricultural
Employment by State 1950") may be obtained by writing to the Bureau of Labor Statistics, Department of Labor, Washington 25, D. C. Current employment data for the series contained in the foregoing volumes are available monthly in the Bureau's regular report HOURS AND EARNINGS. Requests for more detailed industry information should be directed to the Bureau of Labor Statistics or to the appropriate State agency. Names and addresses of these agencies appear on page iv of this report.

INDUSTRY HIGHLIGHTS

BITUMINOUS COAL MINING

The Nation's bituminous coal mines reported employment of 372,000 in August 1951, a slight seasonal gain over July when many miners were on vacation. However, the August 1951 employment was about 36,000 below the level of a year earlier and almost 50,000 below August 1949. This decline represents a continuation of a long-term downward trend in coal mining employment. Coal production in 1951 is at about the same level as in 1925, but employment has declined by about 217,000 between these years because of rising labor productivity, extensive use of machinery, and a gradual shift to open-pit mining which requires fewer workers per ton mined. Soft coal production in 1952 is expected to be slightly higher than in 1951 and there probably will be little change in employment.

ELECTRICAL APPLIANCES AND LAMPS*

Employment in plants manufacturing electrical appliances, lamps, and miscellaneous electrical products has been gradually declining since the beginning of 1951. Production-worker employment dropped from 125,400 at the beginning of the year to 118,900 in August, a decrease of 5 percent. This recent downward trend has partially canceled the employment gains reported between the start of the military action in Korea and the end of 1950 when production-worker employment rose from 110,600 to 125,400.

A period of continued declining employment is forecast for the industry. The limitation of scarce materials under the Controlled Materials Program and reduced consumer demand have combined to lower the employment and production levels. The current critical shortage of scarce metals has resulted in a fourth quarter allocation to the industry of about one-half the amount of metals consumed in the second quarter of 1950. Despite reduced supplies of metals, the industry has experienced only slight decreases in employment because it has been able to substitute less critical materials, utilize inventories of materials on hand, and partially convert to military production. It is expected, however, that sharper declines in employment will occur during the coming months.

- * This industry includes plants making small appliances, such as toasters and mixers, electric light bulbs and a variety of other electrical products including batteries and x-ray equipment. The production of refrigerators, home washing machines and certain other devices often termed appliances, is excluded.

PRINTING AND PUBLISHING

Printing, publishing, and allied industries reported 511,000 production workers for August 1951, an increase of 3,000 from the previous month. Beginning in August 1950 when 504,000 workers were reported, employment increased steadily, in response to the favorable business situation, to a high of 518,000 in December 1950. It dropped to 510,000 in January 1951 and since then has not varied by more than 2,000 from this figure.

Employment is expected to rise slightly in the months ahead because of a growing volume of advertising. The recent slowing down of consumer purchases in many lines has induced many manufacturers and retailers to invest more heavily in advertising and sales promotion, and the advertising industry expects total expenditures in 1951 to exceed those of record-breaking 1950.

IRON AND STEEL FORGINGS

Employment in independent ferrous forge shops has been rising steadily since late 1949. Since June 1950 the work force has increased by 6,000 production workers. In August 1951 nearly 35,000 production workers were turning out crankshafts, connecting rods, drive shafts, locomotive wheels, and other parts requiring great strength and toughness.

Employment will continue to rise and is expected to exceed the World War II peak level of 45,000 production workers. Expanded production of railroad equipment, aircraft, ships, and ordnance will result in greatly increased requirements for forgings. During World War II, the average workweek rose to 49.2 hours. In the current mobilization period, however, the workweek is not expected to approach this length.

INDUSTRY EMPLOYMENT REPORTS

AGRICULTURAL MACHINERY AND TRACTORS*

. . . . Defense conversion will aid in holding employment at high levels

During the first 7 months of 1951, employment in the agricultural machinery and tractor industry was maintained at postwar peak levels. Production-worker employment of 151,000 in July 1951 was only slightly below the all-time peak established in March 1948--more than 65 percent greater than the highest employment reached before World War II. In August 1951, employment dropped to 129,900 as the result of a strike in a major tractor-producing plant. Employment is expected to continue at the mid-1951 level over the coming year. Declining employment on regular agricultural machinery products will be offset by increasing employment on military products.

About half of the workers in the industry are employed in the approximately 90 plants whose principal product is tractors. The other 1,600 plants in the industry make a variety of farm equipment, such as plows, harrows, mowers, harvesters, threshers, combines, binders, and milking machines.

World War II and Postwar Experience

The agricultural machinery and tractor industry has experienced rapid growth in the past 10 years. It has been estimated that the amount of mechanical power and machinery on farms doubled in the 1940-1950 decade. This increase resulted from high farm income, and from farm labor shortages or the fear of such shortages. This rapid mechanization has been an important factor in the large increase in output per worker in agriculture during the past decade. Although farm employment declined by over a million, over-all farm production increased more than 20 percent between 1939 and 1949.

Employment in the agricultural machinery and tractor industry rose slowly just prior to and in the early part of World War II. During the first part of the war, a large share of the industry's facilities was converted to the production of military items. A change in policy in late 1942 reversed the trend back to the production of regular agricultural machinery products which had been determined vital to the war-food program. Production-worker employment rose from less than 90,000 in 1942 to 125,000 in mid-1944, and remained at about this level until the end of the war.

TABLE 1
PRODUCTION-WORKER EMPLOYMENT
AGRICULTURAL MACHINERY AND TRACTOR INDUSTRY
(In thousands)

Period	Number	Period	Number
1939 -----	61.2	1951: January -----	146.5
1940 -----	70.2	February -----	149.7
1941 -----	86.2	March -----	151.0
1942 -----	88.5	April -----	151.8
1943 -----	102.5	May -----	151.6
1944 -----	121.4	June -----	153.1
1945 -----	113.6	July -----	151.3 ^p
1946 -----	107.3	August -----	129.9 ^p
1947 -----	140.3		
1948 -----	151.7		
1949 -----	142.4		
1950 -----	133.5		

p - preliminary

After a temporary drop in employment in the immediate postwar period, there was a rapid and steady increase in employment and the volume of production. This increase continued through 1948. The production of agricultural machinery and tractors reached an all-time peak in 1948 when value of output was more than three times the 1940 level (table 2). Employment reached an all-time high of 158,000 production workers in March 1948. This was more than double the number in 1940. After 3 years of heavy postwar output and with net farm income falling off after 1948, employment in the industry declined somewhat in 1949.

TABLE 2
DOMESTIC SHIPMENTS OF AGRICULTURAL MACHINERY AND TRACTORS 1939-1950
(millions of dollars)

Period	Amount	Period	Amount
1939 -----	358	1945 -----	613
1940 -----	429	1946 -----	763
1941 -----	596	1947 -----	1133
1942 -----	601	1948 -----	1514
1943 -----	302	1949 -----	1551
1944 -----	549	1950 -----	1565

Source: U. S. Bureau of Census

Recent Trends and Employment Outlook

The downward trend in employment was reversed beginning in 1950. Employment rose slowly during that year and the first half of 1951, except for a temporary decline in the latter part of 1950 resulting from labor disputes in two large firms. Production-worker employment in the first 7 months of 1951 was only slightly less than the highest level ever attained by the industry.

Indications are that employment in the industry in the coming year will remain near its present high level. A Nation-wide survey made by the United States Department of Agriculture indicates that farmers will need, in 1952, 15 percent more farm machinery and 20 percent more replacement parts than they received in 1949 in order to meet the food and fiber requirements during the mobilization period. Despite the expected heavy demand for agricultural machinery and tractors to meet food and fiber requirements, a cutback in production is anticipated because of the limitations on the use of steel and other basic materials under the Controlled Materials Plan. Decreasing employment as a result of cutbacks in the production of farm machinery and tractors will be offset by employment of workers in the production of tanks, guns, and other military goods for which the industry already holds contracts. Output of military items by the industry is increasing, but the large expansion is not expected until mid-1952.

Location of the Industry

Although there are farm machinery plants in almost every state, production is concentrated in the Great Lakes area. Four states accounted for

two-thirds of the total value of shipment of farm machinery and tractors in 1950. Illinois, the largest producer, had one-third of the total shipments in 1950. Wisconsin, Iowa, and Michigan were the next largest producing states and together provided another one-third of the total output. Other important producing states include Indiana, Minnesota, Kentucky, New York, Ohio, and Pennsylvania.

Earnings in the Industry

Earnings in agricultural machinery and tractor plants compare favorably with other manufacturing industries. In July 1951, production workers in plants primarily engaged in making tractors earned, on the average, \$74.09 for a workweek of 40.4 hours. Production workers in plants making other farm machinery made \$71.93 for a workweek of 41.1 hours. This compares with an average of \$64.56 for all manufacturing industries in the same month. Average hourly earnings were \$1.83 in tractor plants, \$1.75 in other agricultural machinery plants, and \$1.60 for all manufacturing industries (table 3).

TABLE 3
EARNINGS AND HOURS OF PRODUCTION WORKERS

Period	Average Weekly Earnings			Average Weekly Hours		Average Hourly Earnings	
	All Mfg. Industries	Agricultural Mach. (except tractors)	Tractors	Agricultural Mach. (except tractors)	Tractors	Agricultural Mach. (except tractors)	Tractors
Average							
1947	\$49.97	\$53.43	\$57.69	40.6	40.8	\$1.316	\$1.414
1948	54.14	58.62	62.05	40.4	40.5	1.451	1.532
1949	54.92	59.93	61.86	39.3	39.2	1.525	1.578
1950	59.33	62.57	66.09	39.8	40.3	1.572	1.640
1951:							
January	63.76	68.06	74.70	40.2	41.8	1.693	1.787
February	63.84	68.47	73.50	40.3	41.2	1.699	1.784
March	64.57	71.23	74.52	41.1	40.9	1.733	1.822
April	64.70	71.25	75.74	40.9	41.3	1.742	1.834
May	64.55	70.39	75.73	40.5	41.2	1.738	1.838
June ^{p1}	65.32	72.64	75.95	41.2	41.1	1.763	1.848
July ^{p1}	64.56	71.93	74.09	41.1	40.4	1.750	1.834

p - preliminary

EMPLOYMENT TRENDS

OCTOBER 1951

NONFARM EMPLOYMENT CONTINUES AT PEAK

The number of employees in industry, commerce, and government - at 46.8 million in mid-October - continued at a record high for the season. However, employment of production workers in manufacturing plants this October was 150,000 lower than a year earlier, as reductions in consumer goods industries outweighed gains in defense-connected industries. (Tables 1 to 3)

MFG PRODUCTION WORKERS DECLINE OVER THE YEAR

The largest decreases in production worker employment over the year occurred in the consumer soft goods industries - textiles, apparel, and leather - where contra-seasonal reductions were reported between September and October. A downtrend in employment in these industries has been evident since the early Spring of 1951, as a result of reduced sales and high inventories. Production worker employment in the textile, leather, and apparel industries this October was the lowest for the month since the end of World War II, and over a quarter million, or 10 percent, below the level of a year earlier.

In the consumer durable goods industries, employment reductions have resulted both from limitations on nondefense uses of metals and from slackened consumer buying during the past 6 months. Production worker employment in automobile plants this October was down by about 140,000 from a year earlier. Other consumer durable goods industries reporting relatively large over-the-year reductions included furniture, refrigerators and washing machines, toys, and jewelry and silverware.

OVER-THE-YEAR GAINS IN DEFENSE EMPLOYMENT

In contrast to the declines in consumer goods manufacturing, factories producing military goods and industrial equipment needed for the defense program continued to add production workers to their payrolls. Production worker employment in aircraft plants was expanded by approximately 140,000, or about 60 percent, between October 1950 and October 1951. Relatively large gains also were reported in such industries as metal-working machinery and other industrial equipment, shipbuilding, ordnance, and chemicals.

FEDERAL GOVT EMPLOYMENT REDUCED FROM SEPT TO OCT

Employment in the Federal Government was reduced slightly between September and October, the first decrease since the start of the Korean War, except for a seasonal decline at the beginning of the year. Employment in nondefense Federal agencies showed a small decline, and the number of employees in Federal defense agencies remained substantially unchanged over the month, in contrast to an average monthly gain of over 35,000 in the year following the Korean outbreak.

Employment in contract construction, at 2.7 million in October, about the same as in the previous month, continued at an alltime peak for the season. A gain of over 100,000 workers over the month was reported in retail trade, as stores began to expand their sales staffs for the Christmas shopping season.

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TABLE 1

Employees in Nonagricultural Establishments, by Industry Division and Selected Groups, October, September, August 1951 and October 1950

(In thousands)

Industry division and group:	1951			1950	Net Change	
	Oct.	Sept.	Aug.	Oct.	Sept. : 1951 : to : Oct. : 1951	Oct. : 1950 : to : Oct. : 1951
	<u>1/</u>					
TOTAL	46,819	46,887	46,679	46,898	- 68	✓921
MANUFACTURING	15,926	16,004	15,980	15,827	- 78	✓99
MINING	913	917	925	939	- 4	- 26
Metal mining	105	105	106	102	0	✓3
Bituminous-coal	365	368	371	406	- 3	- 41
Nonmetallic mining and quarrying	109	110	110	102	- 1	✓7
CONTRACT CONSTRUCTION	2,738	2,752	2,799	2,631	- 14	✓107
TRANSPORTATION AND PUBLIC UTILITIES	4,156	4,177	4,187	4,132	- 21	✓24
Transportation	2,912	2,925	2,926	2,912	- 13	0
Communication	694	696	700	670	- 2	✓24
Other public utilities	550	556	561	550	- 6	0
TRADE	9,894	9,769	9,637	9,752	✓125	✓142
Wholesale trade	2,616	2,598	2,598	2,625	✓18	- 9
Retail trade	7,278	7,171	7,039	7,127	✓107	✓151
General merchandise stores	1,545	1,485	1,399	1,539	✓60	✓6
Food and liquor stores	1,273	1,269	1,258	1,219	✓9	✓59
Automotive and accessories dealers	751	753	757	741	- 2	✓10
Apparel and accessories stores	561	545	498	555	✓16	✓6
Other retail-trade	3,148	3,119	3,127	3,073	✓24	✓70
FINANCE	1,890	1,891	1,912	1,821	- 1	✓69
SERVICE	4,770	4,832	4,839	4,757	- 62	✓13
GOVERNMENT	6,532	6,545	6,400	6,039	- 13	✓493
Federal	2,322	2,357	2,329	1,948	- 15	✓374
State and Local	4,210	4,208	4,071	4,091	✓2	✓119

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TABLE 2

**Employees in Manufacturing Industry Groups,
October, September, August 1951
and October 1950
(In thousands)**

Industry division and group:	1951			1950	Net Change	
	Oct.	Sept.	Aug.	Oct.	Sept. : 1951 : to : Oct. : 1951	Oct. : 1950 : to : Oct. : 1951
	<u>1/</u>					
MANUFACTURING	15,926	16,004	15,980	15,827	-78	/ 99
DURABLE GOODS	8,913	8,893	8,866	8,618	/20	/295
Ordnance and accessories	53.8	52.2	49.4	27.7	/ 1.6	/ 26.1
Lumber and wood products (except furniture)	801	807	817	849	- 6	- 48
Furniture and fixtures	337	334	333	378	/ 3	- 41
Stone, clay, and glass products	559	560	560	544	- 1	/ 15
Primary metal industries	1,345	1,349	1,352	1,289	- 4	/ 56
Fabricated metal products (except ordnance, machinery, and transportation equipment)	982	988	994	1,013	- 6	- 31
Machinery (except electrical)	1,608	1,578	1,570	1,426	/30	/182
Electrical machinery	954	942	927	915	/12	/ 39
Transportation equipment	1,493	1,507	1,496	1,394	-14	/ 99
Instruments and related products	308	305	301	272	/ 3	/ 36
Miscellaneous manufacturing industries	472	471	467	510	/ 1	- 38
NONDURABLE GOODS	7,013	7,111	7,114	7,209	-98	-196
Food and kindred products	1,638	1,708	1,689	1,643	-70	- 5
Tobacco manufactures	95	96	91	96	- 1	- 1
Textile-mill products	1,226	1,232	1,246	1,357	- 6	-131
Apparel and other finished textile products	1,132	1,155	1,165	1,221	-23	- 89
Paper and allied products	487	491	494	491	- 4	- 4
Printing, publishing, and allied industries	769	764	759	754	/ 5	/ 15
Chemicals and allied products	770	761	749	720	/ 9	/ 50
Products of petroleum and coal	267	265	266	252	/ 2	/ 15
Rubber products	267	273	273	269	- 6	- 2
Leather and leather products	362	366	382	406	- 4	- 44

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TABLE 3

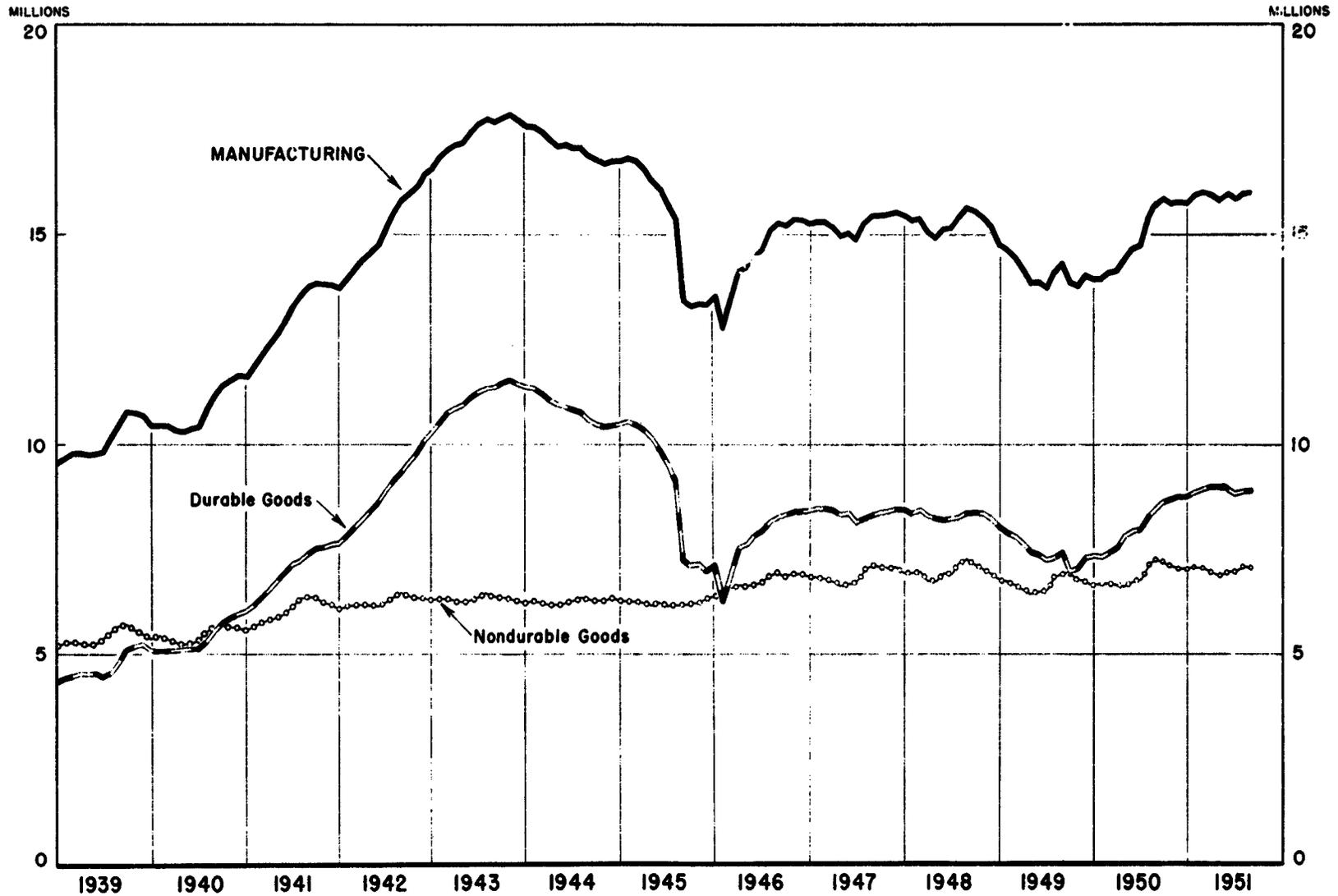
Production Workers in Manufacturing Industry Groups, October,
September, August 1951 and October 1950

(In thousands)

Industry division and group:	1951			1950	Net Change	
	Oct.	Sept.	Aug.	Oct.	Sept. 1951 to Oct. 1951	Oct. 1950 to Oct. 1951
	<u>1/</u>					
MANUFACTURING	12,983	13,070	13,055	13,133	-87	-150
DURABLE GOODS	7,286	7,275	7,252	7,186	✓11	✓100
Ordnance and accessories	43.6	42.3	40.2	22.3	✓1.3	✓21.3
Lumber and wood products (except furniture)	738	743	751	785	- 5	- 47
Furniture and fixtures	289	285	284	329	✓4	- 40
Stone, clay and glass products	479	482	481	471	- 3	✓ 8
Primary metal industries	1,154	1,159	1,165	1,117	- 5	✓37
Fabricated metal products (except ordnance, machinery, and transportation equipment)	808	811	816	850	- 3	- 42
Machinery (except electrical)	1,243	1,219	1,211	1,104	✓24	✓139
Electrical machinery	718	709	695	710	✓ 9	✓ 8
Transportation equipment	1,193	1,210	1,197	1,157	-17	✓36
Instruments and related products	227	224	223	205	✓ 3	✓22
Miscellaneous manufacturing industries	393	391	389	436	✓ 2	- 43
NONDURABLE GOODS	5,697	5,795	5,803	5,947	-98	-250
Food and kindred products	1,249	1,317	1,301	1,260	-68	- 11
Tobacco manufactures	88	89	84	89	- 1	- 1
Textile-mill products	1,132	1,137	1,153	1,264	- 5	-132
Apparel and other finished textile products	1,014	1,036	1,047	1,100	-22	- 86
Paper and allied products	412	417	419	421	- 5	- 9
Printing, publishing, and allied industries	519	515	510	514	✓ 4	✓ 5
Chemicals and allied products	551	542	530	523	✓ 9	✓28
Products of petroleum and coal	199	197	198	190	✓ 2	✓ 9
Rubber products	212	218	219	219	- 6	- 7
Leather and leather products	321	327	342	367	- 6	- 46

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EMPLOYMENT IN MANUFACTURING INDUSTRIES ALL EMPLOYEES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

FOURTH VOLUME IN STATE AND AREA SERIES - "MANUFACTURING EMPLOY- MENT BY STATE" - NOW AVAILABLE

NEW ANNUAL PUBLICATION

The fourth release in the Bureau of Labor Statistics' series on State and area employment data, entitled "Manufacturing Employment by State, 1950", is now available for distribution. It follows three earlier volumes "Area Employment, 1950", "Nonagricultural Employment by State, 1950", and "Hours and Earnings in Manufacturing by State and Area, 1947-1950". Description of these volumes can be found in the May 1951, July 1951, and August 1951 issues, respectively, of **EMPLOYMENT AND PAYROLLS**.

These publications comprise 4 volumes of a series under the general title "Employment, Hours, and Earnings -- State and Area Data". The data are prepared by State agencies cooperating with the Bureau of Labor Statistics.

SCOPE OF THE DATA

The relative ease with which statistics on manufacturing industries can be collected, as compared with data on other industrial segments, makes the current volume on "Manufacturing Employment by State" more complete than any of the other volumes compiled under the State and Area Program. Although the amount of industrial detail shown under manufacturing varies from State to State, for every State there are estimates of total employment in manufacturing for every month since January 1947.

The Standard Industrial Classification (SIC) code divides manufacturing into 21 broad industry groups. In selecting the industries within each industry division for publication, preference is given to the detail that most nearly describes the important activities in the State. Industry coverage for each of 20 major manufacturing subdivisions (excluding only the ordnance industry) is substantial. The major limitation in the data is the absence of detailed industry statistics for Michigan, the fifth largest State in terms of workers employed. For half of the 20 major industry groups the States which provide estimates cover 90 percent or more of the industry's total employment, and in 8 others they represent at least 80 percent of the industry's employment.

USES OF
THE DATA

Manufacturing employment is the largest industrial segment in the economy, accounting for about one-third of the total nonfarm labor force. It has also proven, over the last two decades, to be - next to the construction industry - the most dynamic of all the industries - with respect to change in employment levels. Because of its size, volatility, and the relatively high wages which it pays, manufacturing has a strong secondary effect on employment trends in trade, service, transportation, and other industries. Its movements, therefore, are an important gauge of the economic welfare of the State and its communities. Continuous over the years, the statistics measure changes in the economic structure of States and indicate the general direction of State developments.

Manufacturing industries buy and sell billions of dollars worth of goods and services annually. The distribution of employment, by industry and by State, therefore, is a key to the location of markets which businessmen can use in distributing sales forces, setting sales quotas, and planning advertising expenditures. The employment trend in specific industries is useful to businessmen who want a measure of changing levels for comparison with their own plant performance.

SUMMARY OF
FINDINGS

Manufacturing employment is highly concentrated within a few States. Three of them--New York, Pennsylvania, and Ohio--accounted for 3 out of every 10 of the country's manufacturing workers in 1950. When Illinois, Michigan, and California, each with more than 5 percent of the country's total, are added, the six States in combination account for half of all the manufacturing workers in the United States. The first five States mentioned each have more than 1 million manufacturing workers. At the other end of the range, 25 States together employed only 10 percent of the country's manufacturing workers.

Manufacturing frequently dominates a State's economy. In such compact and industrialized States as Rhode Island and Connecticut, manufacturing accounts for half of the nonfarm employment. At the end of the distribution is the District of Columbia where government, trade, and service completely overshadow other fields of employment.

Most of the major industry groups in manufacturing are also concentrated in relatively few States. Outstanding examples of industry concentration are tobacco manufactures, textiles, apparel, products of petroleum and coal, leather products, machinery, and professional and scientific instruments. The more dispersed industries include food and kindred products and lumber and wood products.

The distribution of manufacturing industries within a State may be one in which a single industry group dominates or strongly influences a State's manufacturing economy. Lumber, food products, and textiles are the industries which most clearly tend to follow this pattern. In Oregon, employment in lumber and wood products in 1950 comprised 60 percent of the State's manufacturing total. Textiles accounted for 64 percent of the total in South Carolina, and food products, 54 percent in Nebraska. Because of their diversified industrial composition, the large industrial States

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(excluding Michigan) were never dominated by one industry to the extent that the less industrialized States were. Nevertheless, there was a heavy concentration of apparel in New York, machinery in Ohio and Illinois, primary metals in Pennsylvania and Ohio, and food products in California.

Another aspect of concentration is the extent to which a State's manufacturing labor force is clustered in the large cities. In California and New York in 1950, for example, 55 percent of all the manufacturing workers were found in Los Angeles and New York City, respectively. Five metropolitan areas in California and nine in New York accounted for 84 percent of the manufacturing workers in their respective States. In Maryland, three out of every four manufacturing workers were located in Baltimore.

COPIES
AVAILABLE
TO PUBLIC

Copies of the volume "Manufacturing Employment by State, 1950" (as well as the three previous volumes "Area Employment 1950", "Nonagricultural Employment by State 1950", and "Hours and Earnings in Manufacturing by State and Area, 1947 - 1950") may be obtained by writing to the Bureau of Labor Statistics, Department of Labor, Washington 25, D. C. Current employment data for the series contained in the foregoing volumes are available monthly in the Bureau's regular report EMPLOYMENT AND PAYROLLS. Requests for more detailed industry information should be directed to the Bureau of Labor Statistics or to the appropriate State agency. Names and addresses of these agencies appear on page IV of this report.

INDUSTRY HIGHLIGHTS

LEATHER AND LEATHER PRODUCTS

Employment in September 1951 in leather and leather products establishments totaled 327,000 production workers. This figure constituted a drop of 15,000 from the previous month, was 45,000 less than that for September 1950, and was the lowest figure reported since November 1945. Demand for shoes and other leather products has fallen off from the high levels reached in the months immediately following the outbreak of hostilities in Korea.

The long-term outlook for the shoe industry is generally favorable because the demand for a necessity such as shoes expands with increases in population and income. Synthetic materials, including certain types of plastics, however, are making heavy inroads on the markets of the leather tanneries. An increasing proportion of shoe soles, ladies handbags, luggage, and many other articles formerly made of leather are now made of synthetics.

FURNITURE AND FIXTURES

Manufacturers of furniture and fixtures reported in September a total of 334,000 workers. This represented a slight seasonal gain from the previous month, although employment was about 12 percent lower than in September 1950, and reflected a drop in furniture production from the record level reached in the fall of 1950. Even though employment is lower than in 1950, it is still 14 percent higher than the postwar low of 295,000 in July 1949.

PAPER AND ALLIED PRODUCTS

Employment in the paper and allied products plants in September was slightly below the all-time high of 500,000 reached in the spring of 1951. During the summer months, demand slackened somewhat and there was a small drop in production. Compared with previous years, however, production is at a high level, and for the year 1951 the industry will establish new production and employment records. Currently, there are about 50 percent more workers in the industry than in 1939.

MALLEABLE-IRON FOUNDRIES

Employment in independent malleable iron foundries has been rising gradually during 1950 and 1951, recovering from a postwar low of 19,700 production workers in July 1949, which was almost down to 1939 levels. In September 1951 a total of over 28,000 production workers were employed in this industry, about 15 percent more than in September 1950. As the industry expands to produce more malleable iron castings for the mobilization program, employment will continue to rise.

In mid-1951 production was at an annual rate of about 1,100,000 tons. It is estimated that the use of malleable iron castings in military and civilian products will require an annual output of 1,500,000 tons by early 1953. Although production for the automobile industry (normally the largest single user of malleable castings) will decrease, growing military requirements for castings in such items as shells, machine guns, tanks, and military trucks should more than offset this loss. In addition, demands for malleable castings will continue high in such industries as plumbing supplies, railroads, and machinery.

TIN CANS AND OTHER TINWARE

Employment in the tin cans and other tinware industry fluctuated relatively little throughout 1951. There were about 45,000 production workers in September, only slightly more than in February, the low month of 1951, when employment totaled about 42,000. The fluctuation was much greater in 1950 however, when employment ranged from about 50,000 production workers in September to a low of about 36,000 in January.

Production of tin cans, which accounts for nearly 95 percent of the industry's total value of shipments, has been at high levels throughout 1951. Limitations on the amount of metal available for tin cans were imposed in the first quarter of 1951. Amendments to the original order have further limited their use for such items as pet food, beer, cleaning compounds, insecticides, paint, and other chemical products. Many producers have substituted other types of containers, particularly glass, for their products.

The chief effect of the limitation orders has been to channel metal cans into the packaging of essential food products. Over-all production of cans has increased slightly during the first half of 1951 as compared with the same period of 1950. Production of cans for packing nonfood items during the second quarter declined, however, by about 12 percent from the similar period in 1950.

Continued high demand for metal containers and present plans for allocating tin plate indicate that production and employment in this industry will remain at high levels.

U. S. DEPARTMENT OF LABOR
MAURICE J. TOBIN, SECRETARY

Bureau of Labor Statistics

Ewan Clague, Commissioner

INDUSTRY EMPLOYMENT REPORTS

MILITARY TANKS

. . . defense requirements expand employment

An estimated 15,000 workers were employed in the assembly of military tanks in July 1951. This represents a substantial increase since the period just before the outbreak of the Korean conflict when tank activity was limited to overhauling and reconditioning of World War II tanks. By late 1952, employment (in tank assembly) is expected to reach 45,000^{1/} in order to attain a scheduled sevenfold increase^{2/} in production according to a study made by the Bureau of Labor Statistics. By this time, major tank assemblers will be engaged in quantity production and their facilities will be expanded to the extent that they can produce 35,000 tanks a year, if required.

Trend in Employment

Upon our entrance into World War II, approximately 22,000 workers were turning out tanks. Tank assemblers, who were already producing for our allies when the United States entered World War II, more than doubled their employment between Pearl Harbor and the latter part of 1943 when tank production and employment reached a peak with more than 50,000 workers on the payrolls.

1/ Some of these workers will be engaged in the manufacture of other combat vehicles (armored utility carriers, motor carriages for self-propelled artillery, and cargo tractors) which will be made in tank assembly plants. The great majority of workers, however, will be engaged in tank assembly.

2/ Statement of Charles E. Wilson in Third Quarterly Report to the President by the Director of Defense Mobilization, October 1, 1951, that: "The tank-automotive program will increase sevenfold in deliveries in the next year."

* This report is reprinted from the Bureau's monthly publication, Employment and Payrolls Detailed Report, September 1951.

Tank producers now have greater capacity and experience in making military equipment than at the beginning of World War II. Consequently, conversion to military output and the build-up in employment in the coming year is expected to be at a more rapid rate than in 1941-1943, despite the increased size and complexity of modern tanks. Tanks now coming off the production lines weigh about 50 percent more than the comparable models produced during World War II and contain far more complex weapons and fire control equipment.

Although the railroad equipment industry was the principal tank producer at the time of our entering World War II, the automotive industry soon assumed production leadership and eventually employed the greatest number of workers in the industry. The automotive industry will be the leading tank producer in the current program and will employ about half the workers in non-Government tank assembly plants. The remainder of the non-Government workers will be divided between manufacturers of railroad equipment and agricultural machinery.

Production Trends

The scheduling of large quantity tank production for the Defense program began soon after June 1950. Initial efforts were devoted to the procurement of plant space, machinery, and personnel. A substantial number of moth-balled World War II tanks were also rebuilt or overhauled as a temporary measure to meet immediate needs for military tanks. This program is continuing, but, in addition, new tanks are now rolling off the assembly lines in increasing numbers. Tooling-up has already been completed for about a third of the military program and preparations for production are well advanced on the remainder of the program.

Working at full capacity during the war years 1941-1945, the Nation's factories turned out approximately 86,000 tanks in addition to thousands of other combat vehicles (table 1). Present programs call for the development of greater capacity than that achieved during World War II, although scheduled production rates are below peak wartime production rates.

Military tanks are mainly produced by automotive, railroad equipment, and agricultural machinery companies because these firms have the manufacturing experience, plant facilities, heavy metal fabricating equipment, and skilled labor required for tank production. The companies holding tank contracts do not plan to convert many of their present facilities and assembly lines. A large part of their production will be placed in new plants or reconditioned wartime plants. In

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Table 1
 Combat Vehicle Production,
 Selected Groups,
 1940 - 1945

	Total	1940	1941	1942	1943	1944	1945
Total tanks							
(new) - - -	85,933	331	4,352	24,694	29,493	17,565 ^{1/}	9,498
Light - - -	28,323	325	2,591	10,947	8,212	4,043	2,205
Medium - - -	56,272	6	1,761	13,746	21,246	13,246	6,267
Heavy - - -	1,115	0	0	0	35	54	1,026
Self-propelled							
mounts - -	48,000	0	87	11,420	21,194	12,584	2,715

^{1/} Actual production - January through May 1945.

SOURCE: The Industry-Ordnance Team by Lt. Gen. Levin H. Cambell, Jr., Whittlesey House, New York, 1946.

view of these plans, the build-up by tank assemblers will not directly necessitate a drastic reduction in their civilian production.

Location of Employment

The greater part of tank assembly capacity is now located in the Great Lakes region and the Middle Atlantic States which are the established centers of transportation equipment and machinery manufacturing. Current planning calls for the division of the Nation into five tank-producing areas which correspond to the present location of heavy industry. For strategic reasons, these areas would be as self-sufficient as possible. Prime contractors and subcontractors, all located within the same area, would act as fully integrated tank-building units.

As production expands, employment will become more widely distributed geographically than at present. However, Michigan will continue to employ more workers in tank assembly than any other State, even at peak production, and employment will be heavily concentrated in the Great Lakes region. This will be similar to the World War II pattern.

At the peak of the Defense Program, it is expected that all the workers engaged in tank assembly will be employed in the following States:

Michigan
 New York
 Delaware
 Ohio
 Illinois
 California
 Pennsylvania
 Indiana
 Wisconsin

Labor Force

Tank production is still in a preliminary stage and occupational requirements have not become clearly established. However, there is considerable evidence that the occupational patterns in tank assembly plants will be similar to those of World War II. During that war, after several years of production, tank assembly plants employed about 40 percent skilled, 25 percent semiskilled, and 15 percent unskilled workers. The remaining 20 percent of the industry's employment consisted of professional, executive, administrative, and clerical occupations. In 1943, engineers, draftsmen, and other professional and subprofessional workers comprised less than 3 percent of the industry's labor force. In 1941 and 1942, the percentages of professional and skilled workers were somewhat higher.

Significant in determining the occupational pattern in tank assembly during World War II was the widespread practice of adapting existing labor force and plant facilities to tank assembly. For example, railroad equipment companies using custom methods of manufacture maintained a higher percentage of skilled workers after conversion to tank assembly than the mass production automobile industry. Although some of these differences resulted from variations in the use of subcontracting, they were also caused by the use of different techniques and processes which these industries carried over into tank manufacture from their civilian production experience.

These differences had a marked effect upon the occupational distribution of workers employed in the various segments of the industry. Former railroad equipment manufacturers used a higher proportion of workers who were trained for more than one operation and who set up their own tools. Automotive manufacturers used a higher proportion of specialized skilled workers, such as job setters, die setters, and tool makers, to set up machines for less skilled machine tool operators. As

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a result, they were able to employ a higher proportion of semiskilled workers than the former locomotive and railroad car builders.

Similar factors will probably influence the occupational requirements of the various tank assemblers during the present Defense Program. Since tank assembly requires a fairly high proportion of skilled labor, tank assembly plants already face shortages of professional and skilled workers similar to those faced by other defense industries. Shortages have been especially severe in occupations such as those of engineers, engineer draftsmen, tool and die makers, heat treaters, molders and coremakers, and machinists, which are included in the United States Department of Labor's list of critical occupations. Workers in these occupations comprise almost a tenth of tank assembly employment; some of these workers are urgently needed during the development and tooling-up phase of production. As tanks roll off the assembly lines in increasing numbers, other shortages may develop in production occupations.

The principal plant workers in tank assembly are: assemblers, machine tool operators, welders, machinists, and inspectors. Although all of these occupational groups contain large numbers of skilled workers, assemblers, machine tool operators, and inspectors are predominantly semi-skilled workers who require only a limited training time. As the defense tank program reaches quantity production, increased numbers of these less skilled workers will be required.

Women hold only a small proportion of the jobs in tank assembly plants because of the strenuous nature of the work and the high proportion of skilled trades required. During World War II, women accounted for only 17 percent of the plant workforce. Most of them were employed in office occupations and in semiskilled and unskilled jobs. At present, women comprise approximately 7 percent of all the employees working in non-Government tank assembly plants.

Tank Components and Spare Parts

A military tank is essentially an armored automotive vehicle carrying weapons. Like an automobile, it is composed of thousands of individual pieces that must be machined, subassembled, and assembled. Important subassemblies include hulls, transmissions, engines, turrets, and fire control equipment. The assembly of tanks and the manufacture of their component parts are usually done in separate plants. Most of the hulls and turrets for modern tanks are fabricated by the steel castings industry, which does not assemble tanks.

Because most tank assembly and the manufacture of tank sub-assemblies are done by companies in the automobile, railroad

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equipment, farm machinery, and steel foundries industries, data for these industries may be indicative of the hours and earnings of workers engaged in the production of tanks, subassemblies, and components. Table 2 shows the average hourly earnings and the average weekly hours for these industries.

Table 2

Hours and Earnings of Production Workers in Selected Durable Goods Industries August 1951 and June 1950

Industry	Average Weekly Earnings		Average Weekly Hours		Average Hourly Earnings	
	1951	1950	1951	1950	1951	1950
	August	June	August	June	August	June
Agricultural machinery and tractors	\$71.68	\$63.84	40.0	40.2	\$1.792	\$1.588
Automobiles	76.71	75.76	39.6	42.8	1.937	1.770
Railroad equipment	76.13	64.56	40.3	39.2	1.889	1.647
Steel foundries	76.25	65.65	43.3	41.5	1.761	1.582
All Durable Goods Industries	69.68	62.86	41.4	41.3	1.683	1.522

INDUSTRY EMPLOYMENT REPORTS

TRUCKING

. . . . trucking employment at record high

Trucks play a major role in our domestic transportation system. They carry almost all city freight plus a substantial portion of intercity freight and thus actually transport more tonnage than all other forms of transportation combined. The railroad industry, however, carries the bulk of intercity freight.

Employment in establishments primarily engaged in local or long distance trucking or warehousing reached an all-time high of 629,000 workers^{1/} in September 1951. This represents an 18 percent increase over employment in January 1947. In addition, the trucking industry estimates that there are over 4 million other workers engaged in trucking including many who may be only incidentally performing trucking duties such as driver salesmen (milkmen, bread deliverymen, etc.), and repairmen (plumbers, telephone servicemen, etc.)

Table 1.-- Employment in Trucking and Warehousing, by Year and Month^{1/}
1947-51
(In thousands)

Month	Year				
	1947	1948	1949	1950	1951
Average	551	566	548	584	--
Jan. - - - -	532	555	549	540	616
Feb. - - - -	532	576	544	545	624
Mar. - - - -	540	567	538	550	626
Apr. - - - -	531	554	532	554	624
May - - - -	531	558	532	562	620
June - - - -	538	563	540	577	619
July - - - -	538	565	537	589	614
Aug. - - - -	551	564	539	614	620
Sept. - - - -	561	564	555	621	629
Oct. - - - -	580	580	568	621	--
Nov. - - - -	583	579	571	617	--
Dec. - - - -	595	571	566	622	--

^{1/} The employment level is based on data from Social Insurance Programs, fluctuated by monthly employment samples. These estimates necessarily exclude many industry workers such as self-employed persons and proprietors.

Growth of the Industry

The trucking industry has grown rapidly since about 1903, when trucks began to replace horse-drawn wagons. In 1910 there were only 10,000 trucks in use, all of them engaged in local delivery work. Today, four decades later, about 8-3/4 million trucks serve American farms, homes, and industries.

Table 2.-- Truck Registration of Commercial Vehicles in the United States by Type of Operation
September 1951

<u>Type of operation</u>	<u>Number of trucks</u>	<u>Percent of total</u>
Total - - - - -	8,720,000	100.0
Private - - - - -	7,510,000	86.1
Agriculture - - - - -	3,050,000	35.0
Government agencies - - - - -	420,000	4.8
Extractive - - - - -	175,000	2.0
Construction - - - - -	785,000	9.0
Manufacturing distribution - - - - -	355,000	4.1
Wholesale distribution - - - - -	685,000	7.6
Consumer distribution - - - - -	1,475,000	18.9
Other public utilities - - - - -	160,000	1.8
Business, professional and service personnel - - - - -	225,000	2.6
Institutional agencies - - - - -	35,000	.4
Tank trucks - - - - -	165,000	1.9
For-hire - - - - -	1,210,000	13.9
Inter-city common carrier - - - - -	300,000	3.4
Local common carrier - - - - -	230,000	2.6
All contract carriers - - - - -	650,000	7.5
Tank trucks - - - - -	30,000	.3

Source: Preliminary Defense Transportation Administration estimates.

In the early years of the century, trucking was confined mainly to local hauling because highways were few and generally bad, and trucks were crude, mechanically unreliable, and heavier than the loads they could carry. In the 1920's the trucking industry began to compete with the railroads and inland water transportation for intercity traffic as a result of the development of pneumatic tires, better truck design and construction, and a constantly expanding network of usable highways. By 1925 there were almost 2-1/2 million trucks registered; 11 years later, that figure had jumped to about 4 million. Preliminary estimates for September 1951 show about 8,720,000 trucks registered in the United States.

Table 3.-- Truck Registration of Privately Owned Vehicles
in the United States by Year
1910-51

<u>Year</u>	<u>Truck registration</u>	<u>Year</u>	<u>Truck registration</u>
1910 - - -	10,123	1930 - - -	3,518,747
1911 - - -	20,773	1931 - - -	3,489,756
1912 - - -	42,404	1932 - - -	3,256,776
1913 - - -	67,667	1933 - - -	3,245,505
1914 - - -	99,015	1934 - - -	3,430,396
1915 - - -	158,506	1935 - - -	3,675,865
1916 - - -	250,048	1936 - - -	4,001,464
1917 - - -	391,057	1937 - - -	4,249,219
1918 - - -	605,496	1938 - - -	4,210,477
1919 - - -	897,755	1939 - - -	4,406,702
1920 - - -	1,107,639	1940 - - -	4,590,386
1921 - - -	1,281,508	1941 - - -	4,859,244
1922 - - -	1,569,523	1942 - - -	4,608,086
1923 - - -	1,849,086	1943 - - -	4,450,176
1924 - - -	2,176,838	1944 - - -	4,513,340
1925 - - -	2,483,215	1945 - - -	4,834,742
1926 - - -	2,807,354	1946 - - -	5,725,692
1927 - - -	2,969,780	1947 - - -	6,512,628
1928 - - -	3,171,542	1948 - - -	7,227,380
1929 - - -	3,408,088	1949 - - -	7,692,569
		1950 - - -	8,272,153

Source: U. S. Bureau of Public Roads.

About 87 percent of the American truck fleet is engaged exclusively in hauling the property of the owners. These owners include the thousands of bakeries, dairies, meat packers and distributors, chain stores, oil companies, and retail stores of all kinds. Also included in this 87 percent are the fleets of trucks operated by companies providing telephone, gas, electric, and water service; the trucks owned and operated by Federal, State, and local governments; and the millions of farm trucks.

The remaining 13 percent of the American truck fleet are "for-hire" carriers that haul varied commodities for shippers who desire a trucking service. There are more than 1 million for-hire trucks in operation today, carrying general freight, household goods, heavy machinery, farm products, motor vehicles, building materials, forest products, ores, and many other kinds of goods. In 1944, 87.7 percent of all trucks were operated in local service and 12.3 percent were operated in intercity service, while 38.2 percent of the for-hire fleet was engaged in local service. Applying these percentages to the 1951 trucking fleet would result in figures of 7,500,000 for local service and about 1,100,000 for intercity service, 420,000 of them for-hire trucks.

Trucking Trends

Truck transport accounted for 12.4 percent of intercity ton-mileage in 1950, compared with 8.4 percent in 1940. The growth occurred in the post-war period. During World War II, the proportion of intercity traffic carried by trucks declined to 4.5 percent in 1944. But by 1950, ton-mile performance reached an all-time high of 126 billion, an increase of one-third over 1949. Total intercity ton-mile traffic carried by all forms of transportation rose 15.2 percent in this same period to a total of 1,017,0 billion ton-miles, only 4.4 percent below the wartime peak carried in 1944.

Table 4.-- Volume of Intercity Freight Traffic in Ton-Miles,
by Kind of Transportation,
1949-50

Transport agency	Ton-miles (billions)		Percent of increase 1950 over 1949	Percent of annual total	
	1949	1950 ^{1/}		1949	1950
Railways, steam and electric including mail and express - -	534.7	596.9	11.6	60.6	58.7
Highways, for hire and pri- vate trucks - - - - -	93.7	126.0	34.5	10.6	12.4
Inland waterways, including Great Lakes - - - - -	139.4	164.6	18.1	15.8	16.2
Pipe lines (oil) - - - - -	114.9	129.2	12.4	13.0	12.7
Airways (domestic revenue serv- ice, including express and mail) - - - - -	.2	.3	<u>2/31.3</u>	(3)	(3)
Grand total - - - - -	882.9	1,017.0	15.2	100.0	100.0

^{1/} Preliminary estimates.

^{2/} Airway ton-miles used in computing percentage totaled 306 million in 1950, and 235 million in 1949.

^{3/} Represents about .03 of 1 percent of 1949, and .03 of 1 percent in 1950.

Source: Interstate Commerce Commission.

For the first quarter of 1951, class I highway carriers reported a 25 percent increase in tonnage over the same period in 1950. A 10 percent increase was registered for the second quarter. The rearmament program in the months ahead will require deliveries of an anticipated \$4 billion per month in military "end-products" alone. To that will be added the transportation of supplies to and from defense plants and the ordinary movement of civilian goods. Even if the rearmament program causes a curtailment in civilian production, it will be more than offset by greatly expanded defense production. The trucking industry probably will carry a greater volume of freight in 1952 than in 1951.

Employment Outlook

Employment prospects are bright. The ever-increasing demand for trucking service has created a sharp demand for workers. In recent months the industry has noted difficulties in obtaining experienced and qualified driver, maintenance, and clerical personnel. Employment is expected to continue to rise in 1952, making manpower an increasingly serious problem.

Work Force

The trucking industry offers a wide variety of employment opportunities in most communities. The largest occupational group are drivers and helpers who comprise 67.7 percent of the industry's work force. They are engaged in a number of specialized jobs, such as those of local deliveryman, long distance hauler, household mover, oil field hauler, and the tank truck driver, to name but a few. Another group of workers, about 7.1 percent of the work force, are employed in maintenance shops of trucking companies as mechanics, oilers, greasers, washers, and in a number of other service type occupations. This group keeps equipment in safe and efficient operating condition. The industry also requires many unskilled laborers who work as freight handlers, loading and unloading trucks.

Trucking jobs are becoming more specialized and colleges and other schools are expanding their transportation courses to include truck driving and management. Some schools give courses especially designed to train the highly skilled personnel needed in the industry, such as traffic and rate men, safety supervisors, and insurance men. Finally, there are many administrative and clerical jobs.

Table 5.-- Occupational Structure in Selected For-Hire Trucking Companies, 1951

<u>Occupational groups</u>	<u>Percent</u>
Drivers and helpers - - - - -	67.7
Administrative and clerical - - - - -	13.5
Maintenance - - - - -	7.1
Platform and dock workers - - - - -	5.9
Sales, advertising, and tariff - - - - -	2.1
Insurance and salary - - - - -	.2
Other - - - - -	3.5
Total - - - - -	<u>100.0</u>

Source: American Trucking Associations Inc.

The working force of the industry is predominantly male, reflecting, in part, the physical demands of such work. Of the small proportion of women in the industry, most work in offices. The proportion of Negroes in the industry is relatively high. Although many work as freight handlers and in the other unskilled jobs, many more are employed as drivers.

EMPLOYMENT TRENDS

NOVEMBER 1951

NONFARM EMPLOYMENT CONTINUES AT PEAK

The number of employees on business and Government payrolls declined by 100,000 between mid-October and mid-November but, at 46.7 million, remained at a record high for the season, according to preliminary estimates of the U. S. Department of Labor's Bureau of Labor Statistics. Over the month, pre-Christmas employment gains in retail trade and continued expansion in defense-connected industries were outweighed by employment reductions in construction and in food canneries.

CONSTRUCTION JOBS DROP BY 110,000

Employment in contract construction declined by about 110,000, more than twice the average October-November reduction recorded in the previous 5 years. This greater-than-average decrease resulted from both severe weather conditions in many areas early in November and reduced supplies of structural steel and other scarce materials for nondefense construction. However, the 2.6 million level this November was slightly higher than in November 1950, the previous record high for the month. Expenditures for new housebuilding, commercial facilities, and non-defense public construction were down over the year, but military and industrial construction expenditures continued well above the levels of a year earlier.

Factory employment totaled 15.9 million in November, down by about 80,000 from the previous month. This represented mainly seasonal reductions in the lumber, canning, apparel, and shoe industries. Further decreases also were reported in consumer durable goods industries affected by restrictions on nondefense uses of metal. On the other hand, the aircraft, metalworking machinery, and shipbuilding industries continued to expand their workforce to meet defense production goals.

CONSUMER GOODS INDUSTRIES DOWN

Over the year, factory employment recorded a net gain of about 100,000. However, employment expansion has been largely limited to industries producing military goods and industrial equipment. Pronounced over-the-year decreases in employment have been reported in nearly all consumer goods industries, reflecting both decreased sales and curtailed metals supplies. In the consumer soft goods industries--textiles, leather, and apparel--employment this November was 225,000 (about 8 percent) lower than a year earlier. For the fourth consecutive month, employment in these industries was at a postwar low for the season.

In a wide range of consumer metal goods industries--such as automobiles, household appliances, and jewelry and silverware--relatively large over-the-year reductions in employment also have been reported. Curtailed output of passenger cars has resulted in a reduction of over 100,000 between November 1950 and November 1951 in the number of employees in automobile plants,

FEDERAL DEFENSE
EMPLOYMENT DIPS

The number of workers on Government payrolls declined by 35,000 between October and November, mainly because of seasonal curtailment of highway construction activity by State and local Governments. Employment in Federal defense activities dropped slightly over the month, in contrast to the sharp gains recorded throughout most of the period since the Korean outbreak.

Employment in retail trade rose by about 140,000 between October and November, as stores continued to add to their sales staffs for the Christmas shopping season. Over the year, retail trade employment recorded a relatively small net gain--about 120,000, or 2 percent.

TABLE 1

Employees in Nonagricultural Establishments, by Industry Division and Selected Groups, November, October and September 1951

(In thousands)

Industry division and group	1951			1950	Net change	
	Nov. 1/	Oct.	Sept.	Nov.	Oct. 1951 to Nov. 1951	Nov. 1950 to Nov. 1951
TOTAL	46,736	46,841	46,921	45,873	+105	+863
MANUFACTURING	15,861	15,940	16,020	15,765	- 79	+ 96
MINING	916	911	916	938	+ 5	- 22
Metal mining	106	105	105	103	+ 1	+ 3
Bituminous-coal	371	367	367	404	+ 4	- 33
Nonmetallic mining and quarrying	108	109	109	102	- 1	+ 6
CONTRACT CONSTRUCTION	2,637	2,750	2,761	2,571	-113	+ 66
TRANSPORTATION AND PUBLIC UTILITIES	4,167	4,167	4,170	4,123	0	+ 44
Transportation	2,914	2,917	2,926	2,911	- 3	+ 3
Communication	699	697	696	664	+ 2	+ 35
Other public utilities	554	553	556	548	+ 1	+ 6
TRADE	10,024	9,871	9,774	9,896	+153	+ 128
Wholesale trade	2,626	2,611	2,596	2,618	+ 15	+ 8
Retail trade	7,398	7,260	7,178	7,278	+138	+120
General merchandise stores	1,649	1,545	1,485	1,654	+104	- 5
Food and liquor stores	1,289	1,277	1,270	1,242	+ 12	+ 47
Automotive and accessories dealers	755	748	754	746	+ 7	+ 9
Apparel and accessories stores	585	567	548	565	+ 18	+ 20
Other retail trade	3,120	3,123	3,121	3,071	- 3	+ 49
FINANCE	1,901	1,898	1,894	1,820	+ 3	+ 81
SERVICE	4,733	4,772	4,834	4,723	- 39	+ 10
GOVERNMENT	6,497	6,532	6,544	6,037	- 35	+460
Federal	2,325	2,322	2,336	1,980	+ 3	+345
State and local	4,172	4,210	4,208	4,057	- 38	+115

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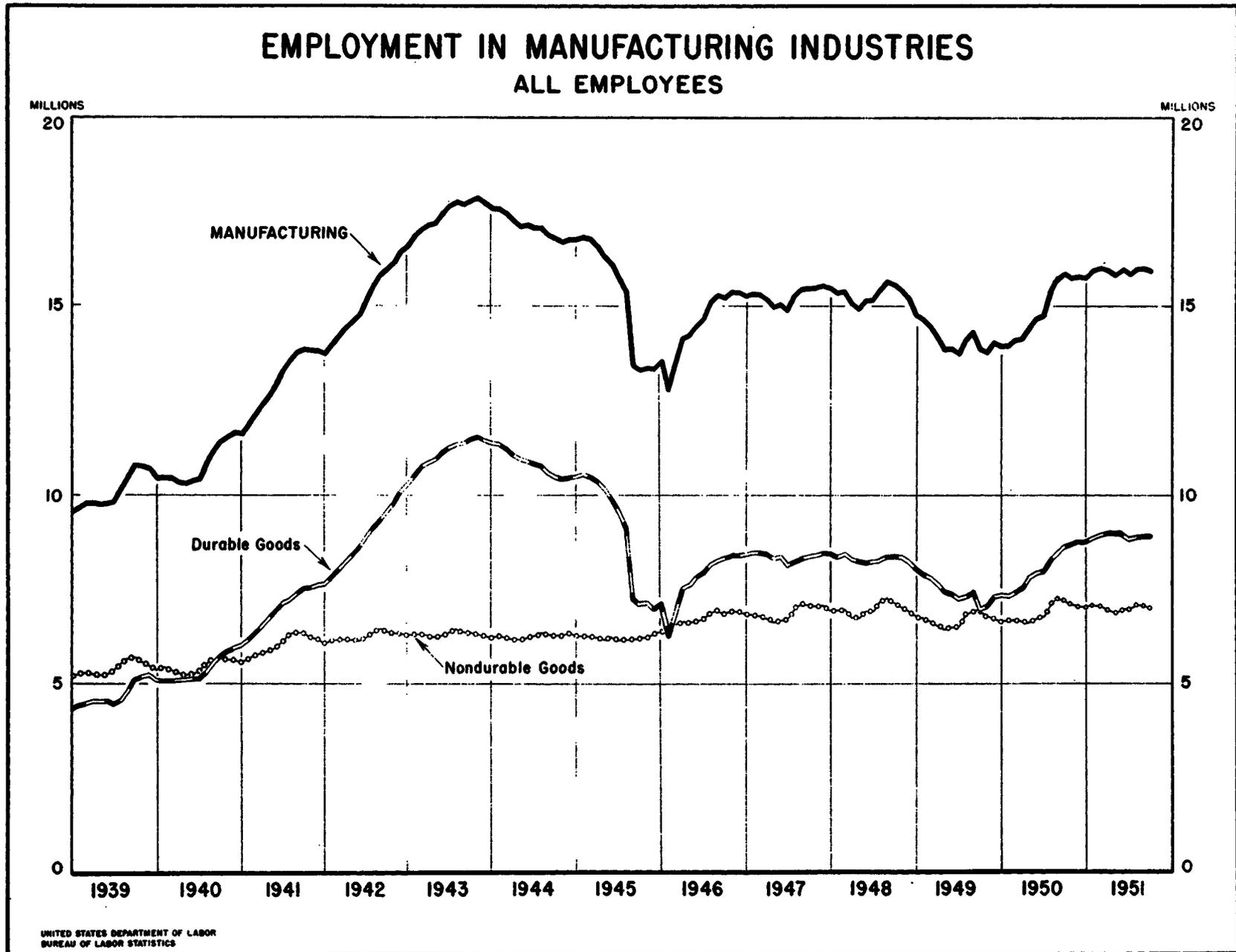
TABLE 2

Employees in Manufacturing Industry Groups
November, October and September 1951

(In thousands)

Industry group	1951			1950	Net change	
	Nov. 1	Oct.	Sept.	Nov.	Oct. 1951 to Nov. 1951	Nov. 1950 to Nov. 1951
MANUFACTURING	15,361	15,940	16,020	15,765	- 79	+ 96
DURABLE GOODS	8,914	8,922	8,902	8,664	+ 22	+200
Ordnance and accessories	59.5	57.5	53.7	29.0	+ 2.4	+ 30.9
Lumber and wood products (except furniture)	769	803	610	630	- 14	- 49
Furniture and fixtures	340	337	334	376	+ 3	- 36
Stone, clay and glass products	556	561	563	550	- 5	+ 6
Primary metal industries Fabricated metal products (except ordnance, machinery, and transportation equipment)	1,342	1,342	1,345	1,301	0	+ 41
Machinery (except electrical)	982	990	991	1,017	- 8	- 35
Electrical machinery	1,316	1,605	1,579	1,459	+ 11	+157
Transportation equipment	955	954	943	929	+ 1	+ 26
Instruments and related products	1,526	1,494	1,509	1,300	+ 32	+146
Miscellaneous manufacturing industries	311	309	306	277	+ 2	+ 34
Miscellaneous manufacturing industries	467	469	468	508	- 2	- 41
NONDURABLE GOODS	6,917	7,018	7,118	7,101	-101	-184
Food and kindred products	1,567	1,634	1,714	1,576	- 67	- 9
Tobacco manufactures	92	96	96	91	- 4	+ 1
Textile-mill products	1,231	1,231	1,231	1,355	0	-124
Apparel and other finished textile products	1,120	1,130	1,155	1,175	- 16	- 55
Paper and allied products	487	489	491	500	- 2	- 13
Printing, publishing, and allied industries	750	760	763	759	0	+ 9
Chemicals and allied products	762	756	764	720	- 4	+ 42
Products of petroleum and coal	267	267	266	254	0	+ 13
Rubber products	270	270	272	272	0	- 2
Leather and leather products	353	359	366	399	- 6	- 46

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INDUSTRY HIGHLIGHTS

RAILROADS

Employment on class I railroads declined steadily from 1945 through 1949. The downward trend was arrested in June 1950, with the beginning of hostilities in Korea. Employment began to rise as rail traffic increased and maintenance programs were stepped up, and average monthly employment in 1950 was 1,221,000, 2.5 percent higher than in 1949.

For the first 5 months of 1951 employment was considerably higher than in the corresponding period of 1950, but has leveled off in recent months. For October the figure was 1,272,000. Although employment is expected to decline seasonally for the remainder of 1951, the year's average is expected to be almost 5 percent higher than that of 1950. Anticipated heavy defense production in 1952 will mean a high level of rail traffic and employment probably will be at least as high as in 1951.

SYNTHETIC RUBBER

Synthetic-rubber plants had a total of 7,500 production workers in October 1951, 60 percent more than in January 1950, when employment began a slow, steady climb. This small work force produced more synthetic rubber in the first 10 months of 1951 than the country's total rubber consumption in any year prior to 1941. Nearly all synthetic rubber is produced by private companies in government-owned plants. These plants are currently producing at near capacity, and substantial increases in employment are unlikely.

Until the beginning of Korean hostilities the price of synthetic rubber was a few cents a pound higher than natural rubber. Today, however, the price of synthetic is only a third of the price of natural rubber, which has skyrocketed as a result of international tension. Besides making the Nation more independent of foreign rubber sources, the synthetic rubber industry provides a price stability that is beneficial to the manufacturers of rubber products.

TOBACCO

Tobacco manufacturing establishments reported 88,000 production workers for October 1951 a drop of a thousand from September, the seasonal peak of the year. The average work week for October was 39.4 hours, and average hourly earnings were \$44.77.

Although present employment is considerably below the peak of 105,000 production workers reported in October 1947, this year's cigarette output, which accounts for most of the employment, is expected to be the highest on record. Production of cigarettes has increased considerably in recent years because of the greater demand for this form of tobacco. However, with the constantly improving methods of cigarette manufacture it may be possible to meet the increased demand without adding to the work force.

COPPER, LEAD, & ZINC

Employment in plants refining and smelting ores of copper, lead, and zinc has remained stable over the past 2 years fluctuating around the October 1951 level of 26,200 production workers. The range during this period has been only 3,300, from the October 1949 low of 23,200 to the June 1951 high of 26,500. Even this post-Korean high, however, is lower than the annual averages of 28,200 in 1947 and 27,500 in 1948. The mobilization period has not resulted in great employment changes primarily because of ore shortages. In 1947 and 1948 primary refineries operated to a considerable extent on imported ores and concentrates, which have not been available since the world-wide expansion occasioned by the Korean war. Development of domestic mines will not result in any substantial improvements before the end of 1952, at which time employment in the industry is expected to rise moderately.

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Table 2

Number of Radios and Television Sets Produced and
Television Set Inventories by month, 1950-51 ^{1/}
(In thousands of units)

Year and month	Production		Television set inventories at end of month	
	Radio Sets	Television Sets	Factory	Distributor
1950: January	935	439	47	377
February	1,059	480	21	355
March ^{2/}	1,350	637	31	378
April	1,254	543	53	449
May	1,245	486	163	485
June ^{2/}	1,491	503	201	594
July	666	328	183	465
August	1,304	721	107	510
September ^{2/}	1,336	844	83	461
October	1,230	838	47	554
November	1,216	739	78	518
December ^{2/}	1,506	859	144	440
1951: January	1,172	646	155	395
February	1,282	679	182	444
March ^{2/}	1,680	875	269	623
April	1,312	469	459	650
May	1,349	339	594	622
June ^{2/}	1,069	327	724	633
July	548	152	769	640
August	563	147	655	631
September ^{2/}	1,100	337	463	613
October	875	412	354	645
November	(3)	(3)	256	(3)

^{1/} Source: Radio and Television Manufacturers Association

^{2/} 5 weeks

^{3/} Information not available

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Meanwhile radio and television manufacturers increased their output of television sets in a race for production leadership before impending materials shortages curtailed output. Employment and hours of work increased in most electronics manufacturing areas and shortages of skilled workers and engineers became more widespread. Production continued at high levels during the first quarter of 1951 with employment and average weekly hours only slightly below the December 1950 high (table 1).

The anticipated shortages of materials did not develop during the first quarter of 1951. However, large inventories of television sets accumulated as the demand declined drastically (table 2). Unlike radio production which has been geared to a replacement market for several years, the high television production rate was dependent upon a continuously expanding market. Because the great majority of workers in receiver manufacturing were engaged in television manufacturing, not even continued demand for radio receivers could sustain employment. In the face of steadily rising inventories, manufacturers curtailed production during the second quarter of 1951 and laid off large numbers of workers.

Military electronics production, although gaining momentum and employing increasing numbers of workers, could only partially offset the drastic decline in receiver employment. In March 1951, over 70 percent of electronics employment was in plants engaged in manufacturing radio and television receivers or their components. As a result of the decline in television sales during the spring and summer of 1951, electronics employment reached its lowest level since Korea in July 1951. In the same month, the average workweek fell below 40 hours for the first time since 1949.

The Chicago, New York, and Philadelphia areas with their heavy concentration of radio and television manufacturing, were especially hard hit. Many component manufacturers made severe cut-backs in production and employment whereas others with large military orders succeeded in increasing production and employment. Employment in electronic tube manufacturing increased steadily during this whole period.

Lay-offs were largely confined to unskilled and semiskilled workers because manufacturers retained their skilled workers in anticipation of improved business or military orders. Some firms continued recruiting engineers, skilled metalworkers, and electronic technicians even in the face of heavy lay-offs and shut-down production lines. Workers laid off in the principal radio and television manufacturing centers provided a labor reserve from which many manufacturers expected

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Table 3

Indexes of Electronics Employment Compared with Radio and Television Receiver Production, by month, 1950-51

(1st qtr. 1950 Average = 100)

Year and month	Electronics Employment ^{1/}	Television receiver Production ^{2/}	Radio receiver production ^{2/}
1950: January	98	90	91
February	100	98	104
March	102	112	105
April	106	111	123
May	108	100	121
June	112	83	116
July	113	67	65
August	123	147	127
September	127	139	104
October	136	172	120
November	140	152	119
December	140	141	117
1951: January	136	133	114
February	138	139	125
March	140	143	130
April	136	96	128
May	128	70	132
June	126	53	84
July	120	31	54
August	123	30	55
September	129	55	86
October	135	84	86

^{1/} Index constructed from the BLS all-employees series for radio, television, and related products industry and the electron tube industry combined.

^{2/} Indexes constructed from production figures of Radio and Television Manufacturers Association.

to draw their labor requirements for the rest of the year. Many of these workers found other jobs and will not return although those with considerable seniority usually return to those plants offering substantial fringe benefits.

Electronics employment began to recover after July 1951. Set manufacturers gradually reduced their inventories and increased production during the fall of 1951. At the same time, producers of military electronics equipment were completing research, development, and tooling in preparation for large scale production. These manufacturers are now hiring increasing numbers of production workers and many set manufacturers are engaged in some form of military production. This has helped stabilize their employment although military production only occupies a small part of their work force. Table 3 presents indexes of set production and electronics employment, based on the first quarter of 1951, which show that total electronics employment declined only moderately despite the sharp drop in receiver production.

The Impact of the Defense Program

Shortages of critical materials will require further cut-backs in radio and television set production during 1952. Television production is expected to decline from over 410,000 television sets a month in October 1951, to an estimated 300,000 sets a month by June 1952. Radio production will suffer a corresponding reduction. Receiver and components manufacturers did not use all of their second and third quarter 1951 materials allocations because of buyer resistance during the second quarter and inventory reductions during the third quarter. Manufacturers and retailers reduced their inventories, leaving manufacturers' inventories with the equivalent of less than 3 weeks' production at the end of November 1951. Employment in set and set components manufacturing will be determined by materials allocations. With declining availability of materials, employment in this segment of the electronics industry will be increasingly dependent upon military contracts.

A large part of the production capacity of the electronics industry is in radio and television assembly plants designed for the mass production of sets and components. Many receiver manufacturers are primarily assemblers with only limited numbers of skilled workers and engineers, and are best equipped to engage in subcontracting or the mass production of standard military equipment.

A relatively small number of high cost complex radar systems account for 60 percent of the electronics defense dollar. These large units are not adaptable to mass production in the quantities in which they are being ordered and require research and development beyond the

Table 4

Employment in Principal Electronics Manufacturing Areas by percent of Output
March 1951

	All electronics	Military commercial mfg	Radio and television	Parts	Tubes
Chicago, Ill.	13.6	8.3	20.6	18.0	1.9
Philadelphia, Pa., Camden, N. J.	10.3	10.6	13.5	11.6	3.8
New York, N. Y.	6.8	15.5	9.0	3.7	1.6
Newark, N. J.	5.9	.7	(2)	4.6	19.9
Boston, Mass.	5.6	8.3	.5	2.1	15.4
Indianapolis, Ind.	4.0	(2)	5.3	5.1	3.7
Syracuse, N. Y.	3.7	9.1	6.6	(1)	1.3
Los Angeles, Calif.	3.0	2.0	2.8	1.9	(2)
Fort Wayne, Ind.	2.1	.6	4.4	2.4	(2)
Baltimore, Md.	1.9	6.4	2.9	(1)	(2)
Buffalo, N. Y.	1.9	3.1	3.7	.2	1.2
Patterson-Passaic, N. J.	1.7	1.4	2.2	1.1	2.2
Cincinnati, Ohio	1.4	(2)	4.6	.1	(2)
Milwaukee, Wisc.	1.1	(2)	.4	3.0	(2)
Cleveland, Ohio	1.0	.6	.8	1.8	(2)
All other	36.0	13.0	12.7	34.9	30.9
Total	100	100	100	100	100

(1) Included in "All other" so as not to reveal employment in individual plants or firms. For the same reason, 8 areas containing 1.0 to 1.7 percent of total electronics employment are included in "All other."

(2) Less than 0.1 percent of total.

resources of many receiver manufacturers. Even at the peak of the defense period, there will be far less mass production of standard equipment than in World War II and research and development will constitute a greater proportion of the total value of output.

A large part of the defense electronics program consists of mechanical components or accessories for military electronics equipment. Electronic control devices which are integral parts of guided missiles, artillery, aircraft, and other weapons also comprise a large part of the program. A substantial part of the employment provided by the billions of dollars being spent for military electronics equipment will appear in aircraft, ordnance, electrical equipment, and other industries which are already employing appreciable numbers of electronics workers.

Although defense officials estimate that 65 percent of the value of prime contracts will be subcontracted, manufacturers of radios, television sets, and components have experienced difficulty in obtaining sufficient defense orders to compensate for declines in civil production. Some receiver and component manufacturers will have idle capacity and an excess labor force even at the peak of the defense effort. At the same time, firms which have long specialized in manufacturing military and commercial equipment and manufacturers of specialized components such as electron tubes will expand their productive facilities and add large numbers of production workers. These firms will register the greatest increase in electronics employment. In addition, aircraft, electrical equipment, ordnance and other non-electronics manufacturing firms and some receiver manufacturing firms with large contracts will also hire large numbers of electronics workers.

The Electronics Labor Force

The electronics labor force has been composed primarily of semiskilled and unskilled workers with women comprising over half the plant work force. Prior to Korea, almost two-thirds of electron tube workers were women. On the other hand, manufacturers of military and commercial equipment have always employed a higher proportion of men and skilled workers although the majority of workers in this type of manufacture are also semiskilled or unskilled.

Electronics employment and production are presently concentrated in northern industrial centers like New York, Philadelphia, Chicago, Boston, and Syracuse, where there is normally an ample supply of female labor (table 4). Even during periods of general manpower shortages, the nature and location of electronics employment permit the addition of workers normally out of the labor market. A substantial pro-

portion of the industry is located in areas which still had moderate labor surpluses in November 1951, although Chicago, Indianapolis, Syracuse, Baltimore, and several other important electronic centers did not have a labor surplus.

The conversion to military production is changing the electronics industry's occupational patterns. Many components must be especially designed for individual equipment. Complex military equipment requires more research, development, and design activity than set production and is produced in shorter runs with constant changes in specifications. This requires more engineers and other professional workers, draftsmen, engineering aides, laboratory technicians, and workers in occupations used in retooling. Additional engineers and skilled workers are required for quality control because of the more exacting military specifications. Some large military articles are produced in such small quantities that they must be wired by skilled workers who are able to work from wiring diagrams and blueprints than by assemblers trained in a limited number of operations.

Increased Labor Requirements

Recruiting and training large numbers of semiskilled and unskilled workers for military production will be less of a problem than recruiting necessary professional, semiprofessional, and skilled workers. In areas where defense hiring is concentrated and the labor market is generally tight, electronics plants may experience difficulty in competing with higher wage industries for unskilled workers when the full impact of the defense program is felt. Present production trends towards miniaturization of components and tubes may require more selective recruiting even of unskilled labor, because greater manual dexterity is required.

During the past year, engineers, tool and die makers, draftsmen, electronic technicians, and other key occupations required for research and development and tooling up have been in greatest demand. All of these workers have been in short supply although the shortage of engineers, especially experienced project engineers, has been particularly acute. Although set manufacturers probably now have as many professional and skilled workers as they ever had, many of these workers are engaged in either military production or the research and development necessary to compete for contracts or subcontracts and are not available for transfer to military production. Moreover, military production requires some skills which are rarely encountered in receiver production.

Table 5

**Average Hours and Earnings in Radio, Television,
and Related Products Manufacturing,
by year 1947-49, and by month 1950-51**

Year and month	Average weekly hours		Average hourly earnings	
	All manufacturing	Radio, TV, and related products	All manufacturing	Radio, TV, and related products
Average: 1947 - - - - -	40.4	39.2	\$1.237	\$1.133
Average: 1948 - - - - -	40.1	39.2	1.350	1.238
Average: 1949 - - - - -	39.2	39.5	1.401	1.283
1950: January - - - - -	39.7	41.0	1.418	1.294
February - - - - -	39.7	40.6	1.430	1.296
March - - - - -	39.7	40.6	1.424	1.294
April - - - - -	39.7	40.6	1.434	1.286
May - - - - -	39.9	40.2	1.442	1.289
June - - - - -	40.5	40.1	1.453	1.295
July - - - - -	40.5	40.5	1.462	1.293
August - - - - -	41.2	40.5	1.464	1.306
September - - - - -	41.0	40.9	1.479	1.331
October - - - - -	41.3	41.6	1.501	1.371
November - - - - -	41.1	40.9	1.514	1.377
December - - - - -	41.4	41.1	1.543	1.386
1951: January - - - - -	41.0	40.8	1.555	1.405
February - - - - -	40.9	40.5	1.561	1.415
March - - - - -	41.1	40.4	1.571	1.414
April - - - - -	41.0	40.1	1.578	1.415
May - - - - -	40.7	40.2	1.586	1.428
June - - - - -	40.7	40.4	1.599	1.446
July - - - - -	40.2	39.2	1.593	1.463
August ^{1/} - - - - -	40.4	39.9	1.597	1.438
September ^{1/} - - - - -	40.6	40.9	1.612	1.462
October ^{1/} - - - - -	40.4	-	1.613	-

^{1/} Preliminary

Additional professional and skilled workers will have to come from training and upgrading less skilled workers, job dilution, or recruitment outside the industry rather than transfers from receiver production. Engineers, skilled machine tool operators, production machinists, and electronic technicians who are needed for production activities will be in greatest demand during the next few months. Because military electronics production requires considerably more metalworking than does receiver production, manufacturers must increase their employment of these workers in competition with other expanding defense industries for the limited supply of trained workers.

Hours, Earnings, and Turn-over

Average weekly hours in the radio, television, and related products industry dropped below the all-manufacturing average after the outbreak of the Korean war. During July and August 1951, the industry's workweek dropped below 40 hours for the first time since 1949 (table 5). Preliminary figures for September 1951, show that the electronics workweek is now above the all-manufacturing average. Many plants producing military electronics equipment, electron tubes, and other components are now operating additional shifts.

Average hourly earnings in radio, television, and related products manufacturing are still below the all-manufacturing average despite substantial wage increases since Korea. Between June 1950 and September 1951, average hourly earnings in radio, television, and related products manufacturing increased almost 18 percent whereas the all-manufacturing average increased less than 12 percent.

The electronics manufacturing industry is at some disadvantage in recruiting workers because earnings have been traditionally below the average for all-manufacturing. One of the prime reasons for the lower earnings, however, is the high proportion of unskilled women workers. Therefore, the industry's competitive position in recruiting workers is not as unfavorable as the low average earnings indicate.

Turn-over rates continue to exceed the all-manufacturing average. Job separations increased sharply during the fall of 1950, tapered off during the winter of 1950-51, and increased sharply in the spring of 1951 (table 6). Except in December 1950, January 1951, and the spring and summer of 1951, when lay-offs were heavy, separations were mostly voluntary. High turn-over rates impose additional recruiting and training burdens upon the industry and will be a problem during the defense period.

Table 6

Labor Turn-over Rates in the Radio, Television, and
Related Products Industry Compared with the All-Manufacturing Average

Year and month	All manufacturing		Radio, television, and related products	
	Total accessions ^{1/}	Total separations ^{2/}	Total accessions ^{1/}	Total separations ^{2/}
1950: January - - -	3.6	3.1	6.5	4.7
February - - -	3.2	3.0	6.3	4.4
March - - - -	3.6	2.9	6.6	4.9
April - - - -	3.5	2.8	6.1	3.7
May - - - - -	4.4	3.1	6.7	4.5
June - - - - -	4.8	3.0	7.2	3.4
July - - - - -	4.7	2.9	8.8	2.7
August - - - -	6.6	4.2	12.7	4.1
September - - -	5.7	4.9	9.6	5.6
October - - - -	5.2	4.3	9.0	6.2
November - - -	4.0	3.8	5.4	5.9
December - - -	3.0	3.6	2.9	6.1
1951: January - - -	5.2	4.1	6.5	7.0
February - - -	4.5	3.8	6.5	4.9
March - - - -	4.6	4.1	6.6	6.2
April - - - -	4.5	4.6	4.4	10.9
May - - - - -	4.5	4.8	5.6	8.1
June - - - - -	4.9	4.3	5.5	6.8
July - - - - -	4.2	4.4	4.3	6.3
August - - - -	4.5	5.3	6.5	6.2
September - - -	4.3	5.1	7.5	4.7
October - - - -	-	-	-	-

^{1/} Number of additions to employment per 100 employees during the calendar month.

^{2/} Number of terminations of employment per 100 employees during the calendar month, including quits, discharges, lay-offs, and miscellaneous separations.

EMPLOYMENT TRENDS

DECEMBER 1951

NONFARM EMPLOYMENT
REACHES RECORD HIGH

The number of workers in industry, commerce, and Government reached a record high of 47.5 million in mid-December, after a seasonal gain of almost 700,000 workers from the November level, according to preliminary estimates of the U. S. Department of Labor's Bureau of Labor Statistics. Seasonal employment reductions in construction and other outdoor activities were outweighed by the Christmas-season addition of a half-million employees in retail stores and by the hiring of nearly 350,000 temporary workers in Federal post offices.

Nonfarm employment in December was up by about 900,000 from the level of a year earlier, mainly because of gains in defense-related manufacturing industries and in Federal defense agencies. The 1951 average level of 46.4 million nonfarm employees was the highest achieved in any year, and almost two and one-half million higher than 1950.

CONSUMER GOODS MFG
DOWNTRENDS CONTINUE

Employment in manufacturing industries declined slightly between November and December, largely as a result of seasonal reductions in canning and lumbering operations, but, at 15.9 million, remained \$5,000 above the level of a year ago. Further reductions of employment in many consumer goods industries affected by restricted metals allotments or reduced consumer buying were also reported over the month. However, most defense-related industries, including aircraft, ordnance, and industrial equipment, continued to add workers to their payrolls.

Small employment gains were reported in the textile, apparel, and leather industries between November and December, suggesting a possible halt in the downtrend in employment reported since last Spring because of slackened consumer demand and high inventories. However, despite over-the-month increases, total employment in these industries remained, for the fourth consecutive month, at the lowest level recorded for the season since 1945.

SEASONAL DECLINE IN
CONTRACT CONSTRUCTION

Employment in contract construction declined seasonally by 120,000 between November and December. However, total construction employment in December, at 2.5 million, continued at a record level for the season, up by 100,000 over the year despite reduced supplies of structural steel and other materials for nondefense construction.

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TABLE 1

**Employees in Nonagricultural Establishments, by Industry Division
and Selected Groups, December, November and October 1951**

(In thousands)

Industry division and group	1951			1950	Net change	
	Dec. 1/	Nov.	Oct.	Dec.	Nov. 1951 to Dec. 1951	Dec. 1950 to Dec. 1951
TOTAL	47,482	46,822	46,868	46,595	+660	+887
MANUFACTURING	15,874	15,899	15,948	15,789	- 25	+ 85
MINING	915	919	915	937	- 4	- 22
Metal mining	105	106	104	104	- 1	+ 1
Bituminous-coal	368	369	367	405	- 1	- 37
Nonmetallic mining and quarrying	105	108	109	98	- 3	+ 7
CONTRACT CONSTRUCTION	2,502	2,622	2,756	2,403	-120	+ 99
TRANSPORTATION AND PUBLIC UTILITIES	4,147	4,166	4,168	4,125	- 19	+ 22
Transportation	2,893	2,912	2,916	2,908	- 19	- 15
Communication	703	701	697	670	+ 2	+ 33
Other public utilities	551	553	555	547	- 2	+ 4
TRADE	10,598	10,078	9,878	10,443	+520	+155
Wholesale trade	2,639	2,635	2,609	2,616	+ 4	+ 23
Retail trade	7,959	7,443	7,269	7,827	+516	+132
General merchandise stores	2,061	1,691	1,547	2,052	+370	+ 9
Food and liquor stores	1,303	1,295	1,281	1,264	+ 8	+ 39
Automotive and accessories dealers	766	759	748	753	+ 7	+ 13
Apparel and accessories stores	644	579	563	642	+ 65	+ 2
Other retail trade	3,185	3,119	3,130	3,116	+ 66	+ 69
FINANCE	1,917	1,907	1,901	1,828	+ 10	+ 89
SERVICE	4,698	4,734	4,770	4,694	- 36	+ 4
GOVERNMENT	6,831	6,497	6,532	6,376	+334	+455
Federal	2,677	2,325	2,322	2,333	+352	+344
State and local	4,154	4,172	4,210	4,043	- 18	+111

1/ Preliminary

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TABLE 2

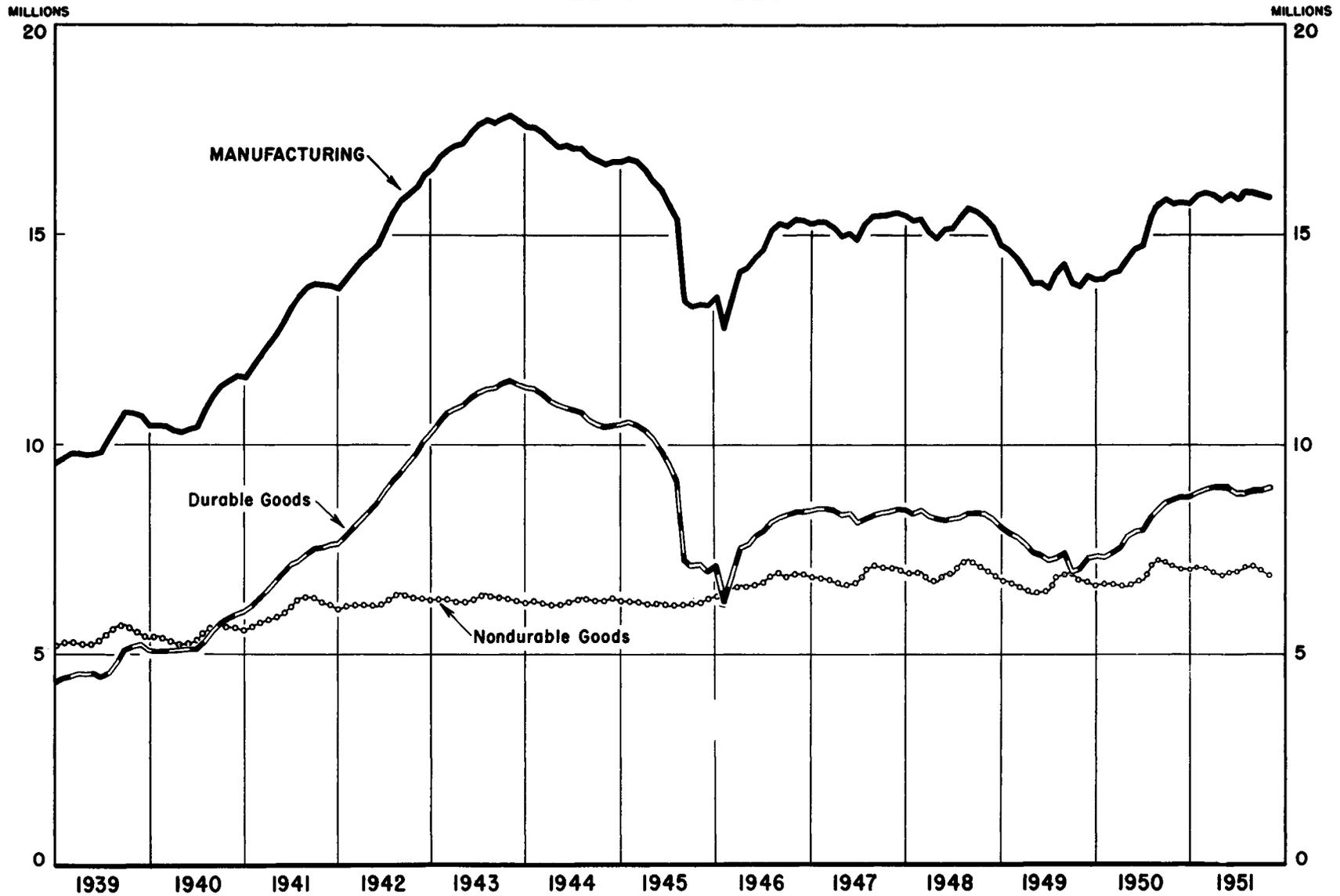
Employees in Manufacturing Industry Groups
December, November and October 1951

(In thousands)

Industry group	1951			1950	Net change	
	Dec. 1/	Nov.	Oct.	Dec.	Nov. 1951 to Dec. 1951	Dec. 1950 to Dec. 1951
MANUFACTURING	15,874	15,899	15,948	15,789	+25	+85
DURABLE GOODS	8,988	8,987	8,928	8,717	+1	+271
Ordnance and accessories	63.9	62.9	59.0	29.7	+1.4	+34.2
Lumber and wood products (except furniture)	763	785	803	817	+22	+54
Furniture and fixtures	341	342	337	374	-1	-33
Stone, clay, and glass products	546	551	558	548	-5	-2
Primary metal industries	1,361	1,354	1,347	1,318	+7	+43
Fabricated metal products (except ordnance, machinery, and transportation equipment)	987	984	988	1,018	+3	-31
Machinery (except electrical)	1,629	1,624	1,609	1,492	+5	+137
Electrical machinery	969	963	952	936	+6	+33
Transportation equipment	1,552	1,547	1,500	1,404	+5	+148
Instruments and related products	315	312	310	280	+3	+35
Miscellaneous manufacturing industries	461	462	465	500	-1	-39
NONDURABLE GOODS	6,886	6,912	7,020	7,072	-26	-186
Food and kindred products	1,489	1,549	1,638	1,534	-60	-45
Tobacco manufactures	90	93	96	90	-3	0
Textile-mill products	1,237	1,229	1,229	1,352	+8	-115
Apparel and other finished textile products	1,152	1,123	1,138	1,184	+29	-32
Paper and allied products	484	486	489	499	-2	-15
Printing, publishing, and allied industries	773	772	767	765	+1	+8
Chemicals and allied products	760	765	766	724	-5	+36
Products of petroleum and coal	266	268	268	254	+2	+12
Rubber products	270	272	270	272	-2	-2
Leather and leather products	365	355	359	398	+10	-33

1/ Preliminary

EMPLOYMENT IN MANUFACTURING INDUSTRIES ALL EMPLOYEES



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

INDUSTRY HIGHLIGHTS

Blast Furnaces, Steel Works, & Rolling Mills

The basic iron and steel industry closed 1951 with record levels of employment and production. During the year the industry produced 105,133,000 ingot tons of steel, the first time in United States history that more than 100,000,000 tons had been produced in 1 year. Production worker employment in November 1951 was over 572,000, a gain of 34,000 over the number employed at the beginning of the Korean hostilities in June 1950.

The industry now in the midst of an expansion program, expects to reach an annual capacity of 120,000,000 tons of steel by the end of 1953. Scrap shortages in the coming year may result in some temporary drops, but as the industry expands its capacity, employment is expected to continue its upward trend.

SYNTHETIC FIBERS

Establishments making synthetic fibers reported employment of 54,000 workers in November, about the same as in November 1950. Output of synthetic fibers has increased almost continuously since just after World War I when quantity production of rayon began. Currently, production of rayon, nylon, orlon, and other synthetic fibers is at an all-time peak. Employment has not expanded as rapidly as production. Since 1939, production has increased 253 percent, but employment only 23 percent. Consequently, the output per man-hour has risen 186 percent, one of the greatest gains in industrial productivity recorded in the last decade.

In recent years, synthetics have made major inroads in all of the major textile fields. In addition to their continually growing acceptance in clothing and home furnishings, industrial uses have increased greatly. The use of synthetics in tire cord, for example, has increased over 300 percent since 1939. Military requirements take about 10 percent of total production; exports were at an all-time peak in 1950, accounting for 10 percent of the output. Imports of special types of synthetics were also at an all-time high, but were far smaller than exports.

The South Atlantic States account for three-fourths of total employment. In 1951, there were 62 plants in the industry, all east of the Mississippi.

AIRCRAFT

Employment in the aircraft manufacturing industry (air frames only) totaled 365,000 in November 1951. This represents more than a doubling of the 170,500 employed in June 1950. Expansion of the workforce will continue and employment will probably reach a peak by the middle of 1953.

Production schedules have been extended over a longer period than was previously planned in order to keep in line with anticipated engine shipments. As a result, peak shipments of completed aircraft will probably occur in the latter part of 1953. Backlogs of aircraft on order in September 1951 were more than double the June 1950 level and were particularly concentrated in establishments located in California, New York, Washington, Kansas, and Maryland.

PETROLEUM REFINING

Employment in petroleum refining has increased over 14 percent since the outbreak of the Korean conflict. In November 1951 about 215,000 wage and salary workers were employed by the Nation's 325 refineries. Over the same period, production (crude runs to stills) increased approximately 14 percent, to a daily average of 6,446,000 barrels in October, 1951.

Since the outbreak of hostilities in Korea operating capacity has increased about 6 percent, from 6,421,000 barrels daily in June 1950 to 6,795,000, in October 1951; at the same time, the industry's operating ratio increased from 88.1 to 94.9. (Operating ratio is derived by dividing daily runs to stills by total installed capacity.) Increasing employment is expected during the next 2 years. A large building program is now under way in the industry and daily refining capacity is expected to increase by 1 million barrels (about 15 percent) between January 1, 1951, and January 1, 1954.

GENERAL INDUSTRIAL MACHINERY

Employment in the general industrial machinery industry, which produces such products as power-transmission equipment, pumps, compressors, and industrial furnaces and ovens, increased about 32 percent during the first 16 months of the Korean conflict. Production-worker employment rose from 130,100 in June 1950 to 172,400 in November 1951. During this period the industry experienced a steady growth with increases in the output of all products. In recent months the proportion of goods earmarked for defense uses has grown steadily.

Material shortages will limit further production expansion, and employment is likely to drop somewhat in the first part of 1952. Metals allocations to the industry for the first quarter of 1952 were below fourth-quarter 1951 allotments, and further cuts are expected in the second quarter. There are differences in the outlook for the various parts of the industry. Employment is expected to decline in plants producing pumps and compressors, elevators and escalators, conveyors, industrial fans and blowers, and industrial trucks. On the other hand, some increase in employment is expected in power-transmission equipment and mechanical stoker producing plants.

INDUSTRY EMPLOYMENT REPORTS

AIRCRAFT ENGINES

. . . jet engine program increases employment needs

Aircraft engines are now being developed and produced for the transonic and supersonic aircraft needed to maintain and increase our air power. At the same time, the aircraft engine industry is in the midst of a substantial expansion of plant and workforce. ^{1/} Orders have been placed for thousands of turbo-jet, turbo-prop, and reciprocating engines. These will power airplanes in the growing United States Air Force, the expanding Naval, Marine, and Army Air Forces, and the military forces of countries receiving aircraft under the Mutual Defense Assistance Program. A substantial number of engines are also required for the commercial transports ordered by domestic and foreign airlines. Another major goal of the industry's expansion is the construction of facilities capable of producing 18,000 jet engines a month.

The industry has added 54,500 employees since the beginning of the defense program. Between June 1950 and November 1951, employment rose from 52,100 to 106,600--more than a 100 percent increase. Recruitment continues and will accelerate as new plants come into operation. The engine industry will probably have to double its November 1951 employment by the middle of 1953 to meet present delivery schedules.

Large facility expansions are in progress to provide capacity for the production of the thousands of engines on order, especially the new types being placed in production. Unlike World War II, when only reciprocating engines were in use, large numbers

^{1/} Includes establishments primarily engaged in manufacturing aircraft engines and engine parts.

of turbo-jet and turbo-prop engines also are required. New assembly and fabricating plants must be built to produce the large numbers of jet engines required and in addition to provide capacity for large scale production in the event of a full emergency. Present facilities for producing reciprocating engines must be expanded to meet production goals for this type of engine.

Jet engines are being ordered in greater volume than reciprocating engines for several reasons. Jet power plants have now generally superseded the reciprocating engine in fighter planes. The same trend is current in bombers. Moreover, jet planes require at least two or three times as many spare engines as do piston-powered planes. Overhaul time for jet engines occurs after 150-200 hours of operation compared with about 1,000 hours for reciprocating engines. Furthermore, all major overhauls of jet engines are made in the United States. This requires the transportation of engines to and from the widely scattered foreign military bases of the United States. The increased number of engines used per plane requires additional jet and other type engines. During World War II, multi-engined planes had 2 or 4 engines. Today they often have 6 or 8 and 1 bomber in current use has 10 engines. More twin-engined fighters also are in operation today.

The industry has accelerated production as quickly as possible to meet the need for this increased volume of engines. But the huge jet production program is highly dependent on new facilities, and is not yet fully underway. Besides the time consumed in new construction, there has been a delay in obtaining necessary machine tools. Expansion has also been hindered by a shortage of skilled manpower which will probably be intensified over the next year.

Structure and Location of the Industry

The aircraft engine industry consisted of approximately 60 manufacturing establishments before the rearmament program began. Nine of these employed 1,000 or more employees. Only five establishments produced complete engines for large aircraft. Of these five, three - Pratt and Whitney, Wright Aeronautical Corporation, and the Allison Division of General Motors - were producing engines in 1940. The other two, General Electric and Westinghouse Electric Corporation, entered the industry toward the end or after the war and specialized in jet engine production.

In June 1950, most of the industry was concentrated on the East Coast in the States of Connecticut, Massachusetts, New Jersey and Pennsylvania. Indiana and Ohio contained other important

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engine-manufacturing centers, although a small concentration existed in California. The industry had a similar geographic distribution in 1940 when about 85 percent of its employment was concentrated along the East Coast. The State of Indiana also was a center of production at that time. During World War II, the industry became less highly concentrated. By 1943, only 30 percent of the industry's employment was on the East Coast. On the other hand, Michigan and Ohio, which had had only about 2 to 5 percent of engine employment in 1940, increased their share to 36 percent. This reflected the large conversion of the automobile industry to aircraft engine production.

The current rearmament program is responsible for a similar shift in the distribution of employment. It is anticipated that within a year, Michigan and Ohio will again be major engine-manufacturing centers and that Connecticut, New York, Illinois, Indiana, and New Jersey also will show substantial gains in engine employment. Automobile manufacturers which are again producing aircraft engines are not, as in World War II, converting their existing plants, but for the most part they are building new facilities or reactivating wartime plants. This is in accord with the national policy of maintaining as much civilian production as possible during the rearmament.

Table 1

Employment in the Aircraft Engine and Engine Parts Industry
1947 - 1951
(in thousands)

Month	Year				
	1947	1948	1949	1950	1951
Average	47.8	46.7	51.8	54.5	
January	50.7	44.3	52.1	50.1	70.4
February....	49.4	44.2	52.2	50.2	74.6
March.....	49.8	44.0	52.8	50.6	77.2
April.....	49.0	44.3	53.0	50.7	81.1
May.....	47.5	45.6	53.8	50.7	84.5
June.....	47.6	46.3	53.1	52.1	89.6
July.....	47.2	46.9	52.3	52.8	92.9
August.....	46.8	46.8	46.2	54.1	95.4
September...	46.5	48.2	52.4	52.5	99.8
October.....	46.9	49.3	52.1	60.1	89.6 p
November....	46.4	49.9	51.2	63.5	106.6 p
December....	46.0	50.4	50.5	66.9	-

p - preliminary

Trends in Employment and Shipments

Employment in the aircraft engine industry has generally reflected the military aircraft needs of the United States. During 1939, employment averaged only 11,300. Engine shipments totaled 11,170 and the major share of these were small horsepower models for light civilian planes. World War II caused a vast expansion in the industry. By 1944, employment averaged 330,000, and the aircraft engine industry shipped 257,000 reciprocating engines. The industry also manufactured a very small number of jet engines.

Employment dropped sharply in 1946 as a result of the almost complete disappearance of military orders. The average of 47,600 workers for 1946 was, however, more than four times the prewar level. It varied little from this level until the outbreak of hostilities in Korea. (See Table 1.)

The demand changed for types of engines produced between 1946 and 1950. In 1946, the greatest demand was for small engines for light civilian aircraft. This reflected the early postwar boom in the production of personal airplanes (those for fewer than 4 passengers). After a couple of years, the demand for small engines declined sharply. The importance of the jet engine has grown slowly and steadily since 1946. In that year, jets comprised 35 percent of total military engine shipments. By 1949, however, the proportion had increased to 63 percent, and it is still increasing. (See Table 2.)

Employment has risen sharply since June 1950 as a result of the defense program. In November 1951, 106,600 workers were employed in the industry. This figure does not include employment in all of the new and converted plants that have entered jet production. The full impact of these additions will begin to appear in the first half of 1952.

In World War II, women comprised 30 percent of the work-force during peak engine employment. After the war, the employment of women dropped sharply; however, since hostilities began in Korea, there has been a small increase and the proportion of women employed in the industry rose from 13 percent in June 1950 to 17 percent in October 1951. The increase was greatest in Connecticut and California.

The large expansion in jet engine manufacturing may permit a substantial increase in the employment of women. The trend in piston engine production is toward heavier and more exacting work and, thus is a limited area for increased use of women. On the other hand, jet production requires more sheet metal work which offers jobs more suitable for women.

Table 2
Number of Aircraft Engines Shipped

Year	Military Engines		Civil Engines
	Reciprocating	Jet	
1940.....	22,667	-	-
1944.....	256,911	-	-
1946.....	1,695	929	40,822
1947.....	2,683	1,878	16,351
1948.....	2,495	2,493	9,032
1949.....	2,981	5,009	3,982

Source: Civil Aeronautics Administration

Employment Outlook

By the middle of 1953, aircraft engine employment may double the 106,600 reported for November 1951. This estimate includes only plants classified in the industry under the Standard Industrial Classification Code and does not include employment in some plants manufacturing aircraft engine accessories. For example, employment in plants making magnetos, spark plugs, electric starters, and piston rings is classified in the automobile industry because these plants supply similar items to automobile manufacturers. Plants primarily engaged in casting or forging engine parts are classified in the foundry and forgings industries.

Skeleton staffs for many of the plants currently coming into operation consist of workers being transferred from existing plants. The bulk of manpower needs, however, must be satisfied from local labor supplies. The new plants in Michigan and Ohio will be able to hire some workers from the manpower pool available because of the reduced automobile assembly activity. In areas of labor shortage, plants will have to increase their employment of women and lengthen the scheduled workweek.

Actual labor needs of the industry are somewhat greater than the difference between current and projected employment figures. Maintenance of any specific level of employment requires continuing replacement of a certain number of workers who leave their jobs for various reasons. Currently, the quit rate in the aircraft engine industry is about the same as the rate for all durable goods industries. (See Table 3.) However, it is somewhat above the level that prevailed during the 1941 and 1942 period of expansion. In any

period of heavy hiring (and an accompanying shrinking labor supply), "quits" tend to increase as people leave their jobs to accept alternative employment opportunities or because they find themselves unadaptable to the type of work.

Table 3

Labor Turnover in Aircraft Engine and
Durable Goods Manufacturing
1950 and 1951

(rate per 100 employees)

Year and month	Aircraft engines		Durable goods	
	Accessions	Quits	Accessions	Quits
1950: January	1.6	.6	4.1	1.0
February.....	1.7	.6	3.6	.9
March.....	1.6	.6	4.2	1.1
April.....	1.6	.7	4.0	1.3
May.....	2.3	.8	5.1	1.7
June.....	3.0	.8	5.2	1.9
July.....	3.8	.7	5.0	1.9
August.....	6.5	1.4	7.2	3.0
September.....	7.1	2.0	6.4	3.6
October.....	6.4	1.4	6.2	2.9
November.....	6.2	1.4	4.6	2.4
December.....	6.4	1.4	3.4	1.8
1951: January.....	8.5	1.5	5.2	2.2
February.....	6.3	1.9	4.5	2.2
March.....	6.3	2.4	4.6	2.7
April.....	6.7	2.2	4.5	3.0
May.....	7.6	2.5	4.5	3.0
June.....	9.3	2.0	4.9	2.7
July.....	7.6	2.5	4.2	2.4
August.....	7.1	3.0	4.7	3.2
September.....	7.3	3.6	4.5	3.2
October p.....	6.6	2.6	4.8	2.6
November p.....	6.3	2.2	3.8	1.9
p - preliminary				

United States Department of Labor
Bureau of Labor Statistics

If international relations remain unsettled, employment levels in the industry will continue high after 1953. There will be a substantial need for replacement engines, especially jets. In addition, the industry will be producing new types of power plants for both aircraft and guided missiles.

Occupational Requirements

Because jet engines are still in a relatively early stage of development, new models are continually being developed and production models undergo frequent changes. Work on new types of jet and atomic-powered engines is also underway. These activities require a large staff of professional, scientific, and technical employees. Engineering is the largest occupation in this group and in July 1951, engineers comprised about 5 percent of the industry's total employees.

Although most plant workers are semiskilled or unskilled, large numbers of highly skilled craftsmen are employed. The aircraft engine industry is currently in need of the following skills:

- * Engineers (all types)
- * Draftsmen (all types)
- * Metallurgists
- * Tool and die makers
- * Chemists
- * Tool designers
- * Machinists
 - Engine lathe operators
 - Milling machine operators
- * Patternmakers
 - Tool grinders

* On the United States Department of Labor's List of Critical Occupations.

Trend in Workweek and Earnings

In the postwar period, average weekly hours fluctuated in a narrow range around 40, until 1950. Since the current emergency began, weekly hours have increased from 41.5 in June 1950 to 44.4 in November 1951. (See Table 4.)

Weekly earnings of production workers have increased more than 20 percent between June 1950 and October 1951. This is due to the increased length of the workweek and to wage increases during this period.

Table 4

Hours and Earnings of Production Workers
in the Aircraft Engine Industry
1947 - 1951

Year and month	Average weekly earnings	Average weekly hours	Average hourly earnings
1947.....	\$ 56.30	39.9	\$ 1.411
1948.....	63.40	40.9	1.550
1949.....	65.24	40.7	1.603
1950: June.....	67.85	41.5	1.635
September....	74.59	43.8	1.703
December.....	83.63	43.4	1.842
1951 March.....	86.19	43.7	1.886
June.....	88.06	46.3	1.902
September ...	85.61	44.8	1.911
October p ...	81.00	42.3	1.915
November p...	85.34	44.4	1.922
p - preliminary			

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